

**WASHINGTON TOWNSHIP
Berks County, Pennsylvania**

ACT 537 PLAN UPDATE

April 2009

Last Revised November 2009

Prepared By:



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1.0 PLAN UPDATE EXECUTIVE SUMMARY

The Washington Township Municipal Authority (Authority or WTMA) owns and operates the existing municipal sanitary sewerage system in Washington Township. Generally the southeastern portion of the Township has public sewer facilities which includes the WTMA owned and operated 250,000 gpd sewage treatment plant located on Niantic Road.

In October 1993, the Washington Township Board of Supervisors adopted an Act 537 Sewage Facilities Management Plan prepared by Systems Design Engineering, Inc. Subsequent revisions were made to this Plan in 1994. This Plan Update is specifically concerned with the future size of the existing treatment plant, the future size of the Swamp Creek Pump Station, the amount of reserve capacity at the Bally Borough treatment plant, and the extent of the 537 Plan public sewer service area.

Washington Township is currently experiencing growth. This is evidenced by the expected increase in equivalent dwelling units (EDUs) and hydraulic flows as documented in the 2008 Chapter 94 Wasteload Management Report. As of December 2008, 603 EDUs were connected to the WTMA sanitary sewer system. In accordance with anticipated development projects, it is projected that approximately 923 EDUs will be connected by 2013. Additional EDUs associated with anticipated development projects may connect sooner if the pace of planned development increases. At this time, essentially all of the remaining capacity of the sewage treatment plant is allotted to various projects.

In addition to the WTMA owned and operated sewage treatment plant, the WTMA has reserved 100,000 gpd of capacity at the Bally Borough owned and operated sewage treatment plant. This plant is located on Gehman Road in the northeastern area of the Township. There are currently 49 EDUs within the Township that discharge sewage to the Bally Borough sewage treatment plant. All of the reserved capacity at the Bally Borough treatment plant is currently reserved for future, but as yet undefined, development projects.

Alternatives available for consideration were limited to no action, and expansion of WTMA capacity via purchase of additional capacity from Bally Borough and expansion of the WTMA treatment plant and Swamp Creek Pump Station. The no action alternative was determined to be unsatisfactory since it does not provide for the sewage management needs of the Township through the 10 year planning period.

The selected alternative includes the expansion of the WTMA sewage treatment plant from 250,000 gpd to 500,000 gpd, the expansion of the Swamp Creek Pump Station from 121,000 gpd to 234,000 gpd, and the reservation of additional capacity from 100,000 gpd to 117,000 gpd at the Bally Borough sewage treatment plant. The additional capacity gained from this alternative is expected to be adequate for the 10 year planning period.

The capital cost associated with the selected alternatives is projected to be approximately \$4,600,000 in 2009 dollars. Projected financial contributions from developers are expected to allow the Authority to maintain use fees at current levels.

2.0 INTRODUCTION

Washington Township is a municipality of approximately 3,300 people located near the northeastern corner of Berks County. The Township is approximately fourteen (14) square miles in area. Generally the southeastern portion of the Township has public sewer facilities, with service provided by the Washington Township Municipal Authority. The Authority owns and operates a 250,000 gpd sewage treatment plant located on Niantic Road in the eastern area of the Township. The Authority has also reserved 100,000 gpd of capacity in the Bally Borough owned and operated sewage treatment plant located on Gehman Road in the northeastern area of the Township.

Along with representatives of Washington Township and the WTMA, Gilmore & Associates, Inc. met with representatives of PADEP during October 2006. This meeting was held to discuss the development trends within the Township and to assess what the requirements would be to update the current 537 Plan such that provisions for the expansion of the treatment plant and revision of the 537 Plan public sewer service area could be made. As agreed upon by all parties at that meeting, the Plan of Study for the Washington Township Act 537 Plan Update will focus only upon those areas currently seweraged or likely to be seweraged during the study planning period. Therefore, only public sewer service options will be considered within the study area boundary. The study area includes the Township's current 537 Plan Sewer Service Area as well as adjacent potential development areas tributary to both the Authority sewage treatment plant and Borough of Bally sewage treatment plant. Refer to Figure 1 for information regarding the study area.

This Update contains ten (10) sections including this Introduction. It is consistent with the Guide for Preparing Act 537 Update Revisions as published by the PADEP in February 1998, updated January 2003. The subsequent sections of this Update include the following:

Section 3: Previous Wastewater Planning

This section provides information identifying and briefly analyzing existing wastewater planning previously undertaken by the Township under the Sewage Facilities Act (Act 537). Additionally, information is provided regarding Township and county planning documents utilized in the generation of this Act 537 Plan Update for Washington Township.

Section 4: Physical and Demographic Analysis

This section identifies the planning area, municipal boundaries and Authority and Bally service area boundaries. This section identifies physical characteristics of the planning area. Areas serviced by public water supplies are also identified.

Section 5: Existing Sewage Facilities in the Planning Area

This section identifies, maps and describes municipal and non-municipal, individual and community sewer systems. This section does not address on lot disposal systems other than to identify the areas in which they are used; this section focuses on the Authority's sewage collection and

treatment system and extensions thereto. Sludge and septage generation, transport and disposal methods are identified.

Section 6: Future Growth and Land Development

This section provides information regarding land development activities, zoning and future growth areas within the Study Area. Sewage planning needs for the future are described relating to both five and ten year planning periods for public sewage treatment growth areas. Municipal and county planning documents are identified and briefly summarized.

Section 7: Identification of Alternatives

This section identifies the alternatives available for providing new or improved wastewater disposal facilities to meet the Township's growth needs. The first alternative identified includes conventional collection, conveyance, treatment and discharge alternatives. Expansion of the Authority's sewage treatment plant and continued use of the Borough of Bally's sewage treatment plant are focused on. A no action alternative including short and long term impacts is also discussed.

Section 8: Evaluation of Alternatives

This section includes a detailed analysis of alternatives evaluated for the Study Area. Alternatives are evaluated for technical feasibility and consistency with other programs. Previously identified inconsistencies are resolved. Alternatives are evaluated with regard to technical, administrative or legal requirements. Cost estimates and analysis of funding methods are provided for alternatives. The needs for immediate or phased implementation of alternatives are analyzed. Alternatives are evaluated with regard to administrative organizations and legal authority necessary for plan implementation.

Section 9: Institutional Evaluation

This section discusses the organization responsible for implementation of the selected alternative including necessary administrative and legal activities. A discussion of the Washington Township Municipal Authority is also included.

Section 10: Implementation Schedule and Justification for Selected Alternative

This section concludes the Update, and provides a discussion of the selected alternative which best meets the sewage management needs of the Study Area. This section designates and describes the capital financing plan chosen to implement the selected alternative. The implementation schedule for the recommended alternative is designated and described.

3.0 PREVIOUS WASTEWATER PLANNING

The Washington Township Board of Supervisors adopted an Act 537 Sewage Facilities Management Plan (Plan) prepared by Systems Design Engineering, Inc. on October 14, 1993.

On February 24, 1994 the Washington Township Board of Supervisors adopted Resolution #1994-4 which provided for future enactment of a Well Ordinance and Sewage Management Ordinance within six (6) months of the Act 537 Plan. Map 18b was also added to the Plan to depict an alternate sewage plant location on what was known as the Lipton property.

Resolution #1994-5, dated March 24, 1994, was adopted by the Washington Township Board of Supervisors which revised the ultimate capacity of the sewage treatment plant to 0.45 MGD. The request for alteration of the plant rating was consistent with an alternative originally presented in the Plan. The resolution provided for sewerage County Line Road south of Weinstein Road as well as the Passmore Road, Fry Road, and Miller Road area.

Ordinance #1994-11, dated September 22, 1994, and Ordinance #1995-1, dated February 9, 1995, dealt with on-lot wells and on-lot sewage disposal.

Taken together, the 1993 Act 537 Plan and subsequent resolutions and ordinances through 1994 established the Township's sewage management program to date. That program established the basic outlines of the current public sewer service area in the southeastern portion of the Township with the treatment plant on Niantic Road. The bulk of the Township would remain with private on-lot sewage disposal systems subject to a sewage management program to be implemented by the Township.

All of the planning has been adopted and carried out according to the approved schedule as described in the various planning documents.

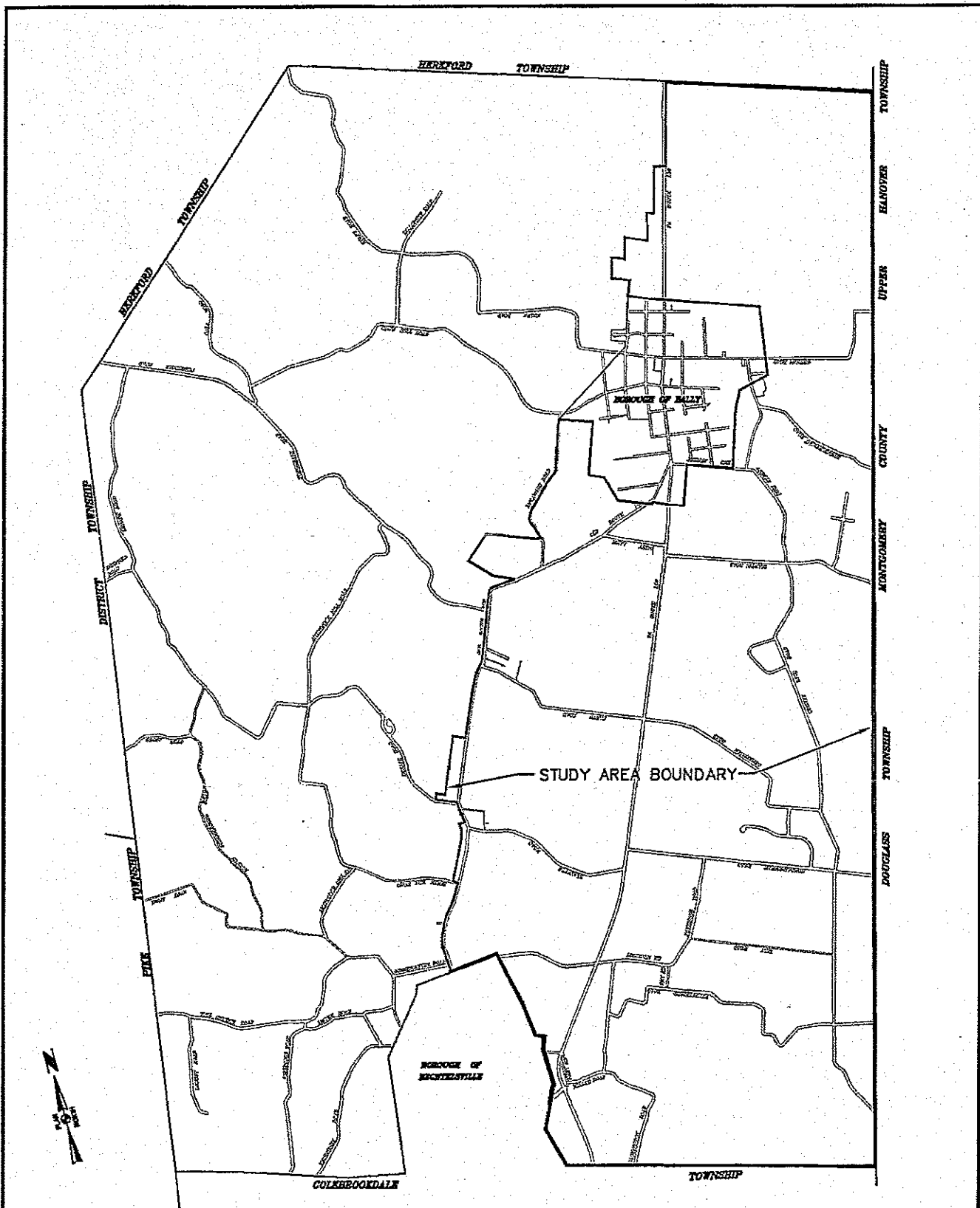
4.0 PHYSICAL AND DEMOGRAPHIC ANALYSIS

Washington Township is a municipality of approximately 3,300 people located near the northeastern corner of Berks County. The Township and surrounding areas are primarily rural communities. Development is principally residential, with a commercial corridor located along Route 100.

The Township is approximately fourteen (14) square miles in area. Surrounding municipalities include Douglass and Upper Hanover Townships in Montgomery County; only Hereford Township lies between Washington Township and Lehigh County. In addition to Hereford, Washington Township is bordered by District, Pike, and Colebrookdale Townships in Berks County. The Township completely surrounds the Borough of Bally and borders the Borough of Bechtelsville. Figure 1, entitled "Act 537 Plan Update Study Area", shows the location of the Township and the study area.

The study area is approximately 6.25 square miles in area and contains the majority of the Township's population. Figure 2, entitled "Act 537 Plan Update Physical Features Map", divides the Study Area into four (4) sub-areas. The southwestern portion of the study area drains to Swamp Creek. The southern portion of the study area drains to an unnamed tributary of Swamp Creek. The central portion of the study area drains to the West Branch of the Perkiomen Creek. The northeastern portion of the study area drains to a tributary of the West Branch of the Perkiomen Creek.

Generally the southeastern portions of the Township have public sewer facilities, with service provided by the Washington Township Municipal Authority (WTMA). The WTMA also operates a small consecutive water system fed by Bally Borough. The service area of the water system is restricted to Washington Elementary School and the Victoria Commons residential development to the south of Bally Borough and a small cul-de-sac located just to the north of the Borough.

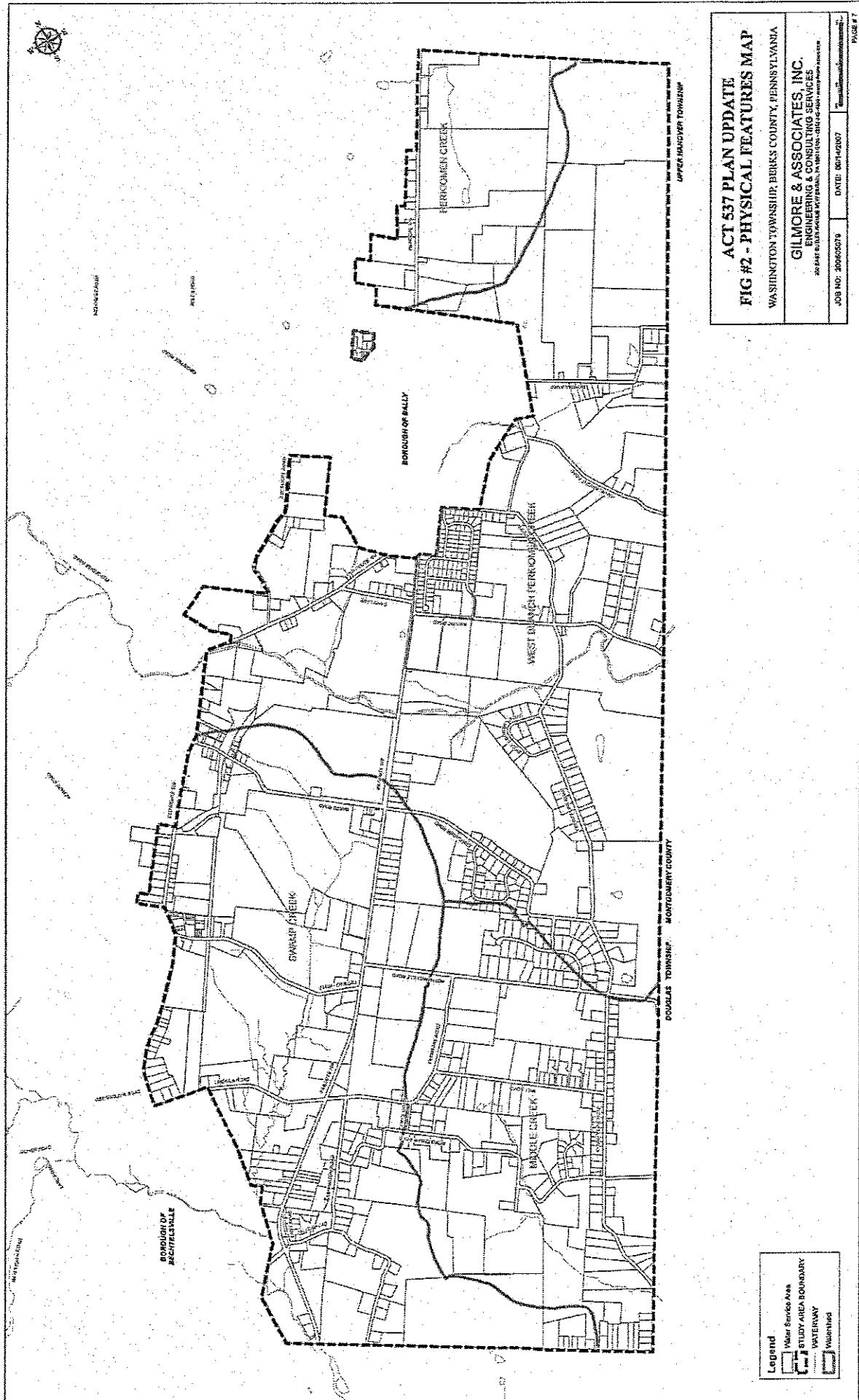


SCALE: 1"=3000'

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FIGURE 1 – STUDY AREA ACT 537 PLAN UPDATE

WASHINGTON TOWNSHIP, BERKS COUNTY, PENNSYLVANIA



5.0 EXISTING SEWAGE FACILITIES IN THE PLANNING AREA

5.1 Description of Existing Public Sewage Conveyance Systems

5.1.1 General

The WTMA sewer system consists of approximately 84,000 linear feet of gravity sewer, 4,000 linear feet of six (6) inch force main, 7,000 linear feet of eight (8) inch force main, and two (2) pump stations whose locations can be seen in Figure 3, entitled "Act 537 Plan Update Existing Sewage Facilities".

5.1.2 Interceptors

The WTMA sewer system contains two (2) major interceptors. The Swamp Creek Interceptor connects the southwestern portion of the study area to the Swamp Creek Basin Pump Station. The Perkiomen Creek Interceptor connects the western and central portion of the study area to the WTMA Treatment Plant.

5.1.3 Pump Stations

The WTMA operates two (2) pump stations. Most sewage from the Study Area is pumped by one of these facilities to gravity lines which flow to the wastewater treatment plant.

A description of each pump station is included below.

Swamp Creek Pump Station

This pump station is located off Route 100 near Limekiln Road. It is equipped with two (2) submersible pumps, each with a rated capacity of 320 gpm. Wastewater is discharged through an eight (8) inch force main that ties into the existing sewer system at a manhole located within the West Tract land development.

Weinsteiger Road Pump Station

This pump station is located on Weinsteiger Road near Fronheiser Lane. It is equipped with two (2) submersible pumps, each with a rated capacity of 180 gpm. Wastewater is discharged through a six (6) inch force main that ties into the existing sewer system at a manhole on County Line Road.

5.2 Description of WTMA Treatment Plant

The WTMA's treatment plant is located on Niantic Road near PA Route 100. The treatment process begins with a comminutor chamber, followed by a pump station, which pumps the influent into one of two (2) Sequential Batch Reactors (SBR), which treat the sewage in a three-phase cycle. Settled sludge is pumped into one of two (2) sludge digesters. Supernatant (clarified effluent) from the SBRs flows through a chlorine flash mixer and chlorine contact tank, before being aerated and discharged to the West Branch of the Perkiomen Creek.

Sludge digester supernatant is decanted back to the SBRs. Settled, digested sludge is periodically removed by a private contractor for off-site disposal. A standby emergency generator is available in case of power outages.

The Washington Township Municipal Authority wastewater treatment plant currently has a hydraulic capacity of 250,000 gpd and an organic capacity of 625 lbs. BOD₅ per day. The wastewater treatment plant operates under NPDES Permit No. PA 0086142. A schematic diagram of the treatment plant is shown as Figure 4, titled "Act 537 Plan Update Treatment Plant Schematic".

5.3 Performance of WTMA Treatment Plant

The WTMA's NPDES Permit sets standards for conventional pollutants only including CBOD₅, Suspended Solids, Ammonia as N and Phosphorous. The permit also sets requirements for total residual chlorine, pH, fecal coliform and dissolved oxygen as outlined in Table 1. As outlined in the Chapter 94 report for 2008, the treatment plant operated satisfactorily and within all permit effluent limits. The phosphorous limit of 1.0 mg/L is being met through the addition of aluminum chloride to the treatment process. There are no operational or capacity problems or overloads.

TABLE 1
DISCHARGE LIMITATIONS NPDES PERMIT NO. PA 0086142
(WTMA TREATMENT FACILITY)

DISCHARGE LIMITATIONS

Discharge Parameter	Maximum Concentrations (mg/l) Average Monthly
pH (S.U.)	From 6.0 to 9.0 inclusive
D.O.	Minimum of 5.0 mg/l at all times
Total Residual Chlorine	1.0
Total Suspended Solids	30
CBOD ₅	25
NH ₃ -N (5/1 to 10/31)	7.5
NH ₃ -N (11/1 to 4/30)	20
Total Phosphorus	1.0
Fecal Coliform (5/1 to 9/30)	200
Fecal Coliform (10/1 to 4/30)	10,000

The 2008 Chapter 94 Report includes projections for sewage flows through the year 2013. At the time that the report was prepared, it was projected that by December 2013 the treatment plant would experience a hydraulic loading of approximately 240,000 gallons per day and an organic loading of 237 lbs/day. Longer-term projected growth was expected to exceed the permitted capacity.

5.4 Bally Borough Treatment Plant

In addition to the WTMA owned and operated sewage treatment plant, the WTMA has reserved 100,000 gpd of capacity at the Bally Borough owned and operated sewage treatment plant. This plant is located on Gehman Road in the northeastern area of the Township. There are currently 49 EDUs within the Township, all located adjacent to the Borough, that discharge sewage to the Bally Borough sewage treatment plant. All of the reserved capacity at the Bally Borough treatment plant is currently reserved for future, but as yet undefined, development projects.

5.5 Private Sewage Systems

Spring Valley Village, a 344 unit age restricted manufactured housing community currently under construction, will include a private sewage collection system discharging to the WTMA collection system. All other sewers in the study area are or will be owned by the WTMA.

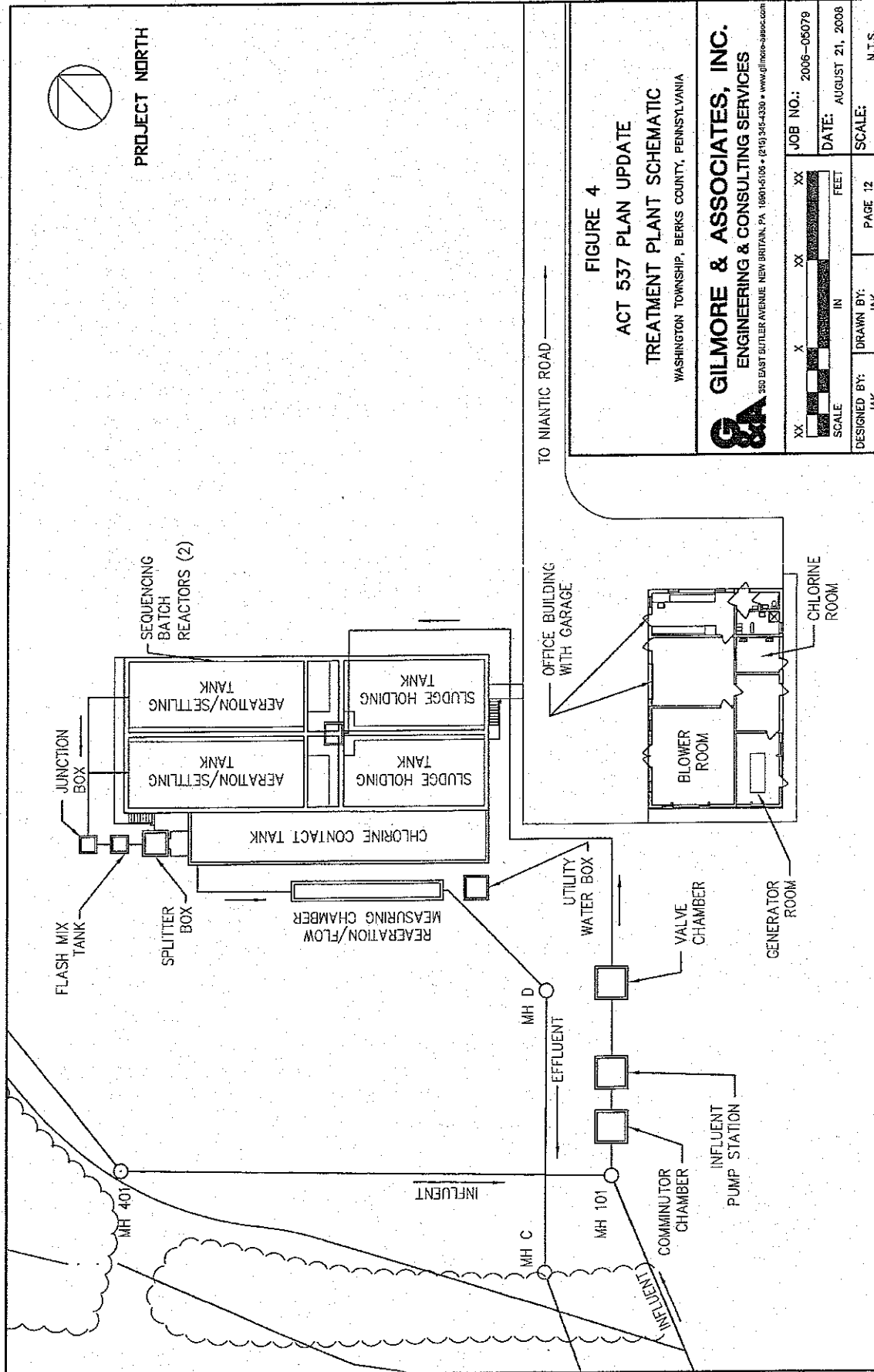


FIGURE 4
ACT 537 PLAN UPDATE
TREATMENT PLANT SCHEMATIC
 WASHINGTON TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

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JOB NO.: 2006-08079 DATE: AUGUST 21, 2008			SCALE: 1" = 10'				

6.0 FUTURE GROWTH AND LAND DEVELOPMENT

6.1 Introduction

Washington Township is currently experiencing significant growth. This is evidenced by the expected increase in equivalent dwelling units (EDUs) and hydraulic flows as documented in the 2008 Chapter 94 Wasteload Management Report. As of December 2008, 603 EDUs were connected to the WTMA sanitary sewer system. In accordance with anticipated development projects included in the Chapter 94 Report, it was projected that approximately 998 EDUs would be connected by 2013. Subsequent communications with several developers has resulted in some modifications to those projections. It is currently anticipated that approximately 923 EDUs will be connected to the WTMA system by the end of 2013. Additional EDUs associated with anticipated development projects may connect sooner if the pace of planned development increases. Some 99 EDUs are currently projected for connection to the Bally system by 2013.

6.2 Zoning

Zoning in Washington Township is established by Chapter 131 of the Washington Township Code, the "Washington Township Zoning Ordinance of 1982, as comprehensively revised by amendment of 1993". A zoning map is included as Figure 5, "Act 537 Plan Update Zoning Map". The zoning is further supplemented by Chapter 99, Stormwater management, and Chapter 107, Subdivision and Land Development, of the Washington Township Code.

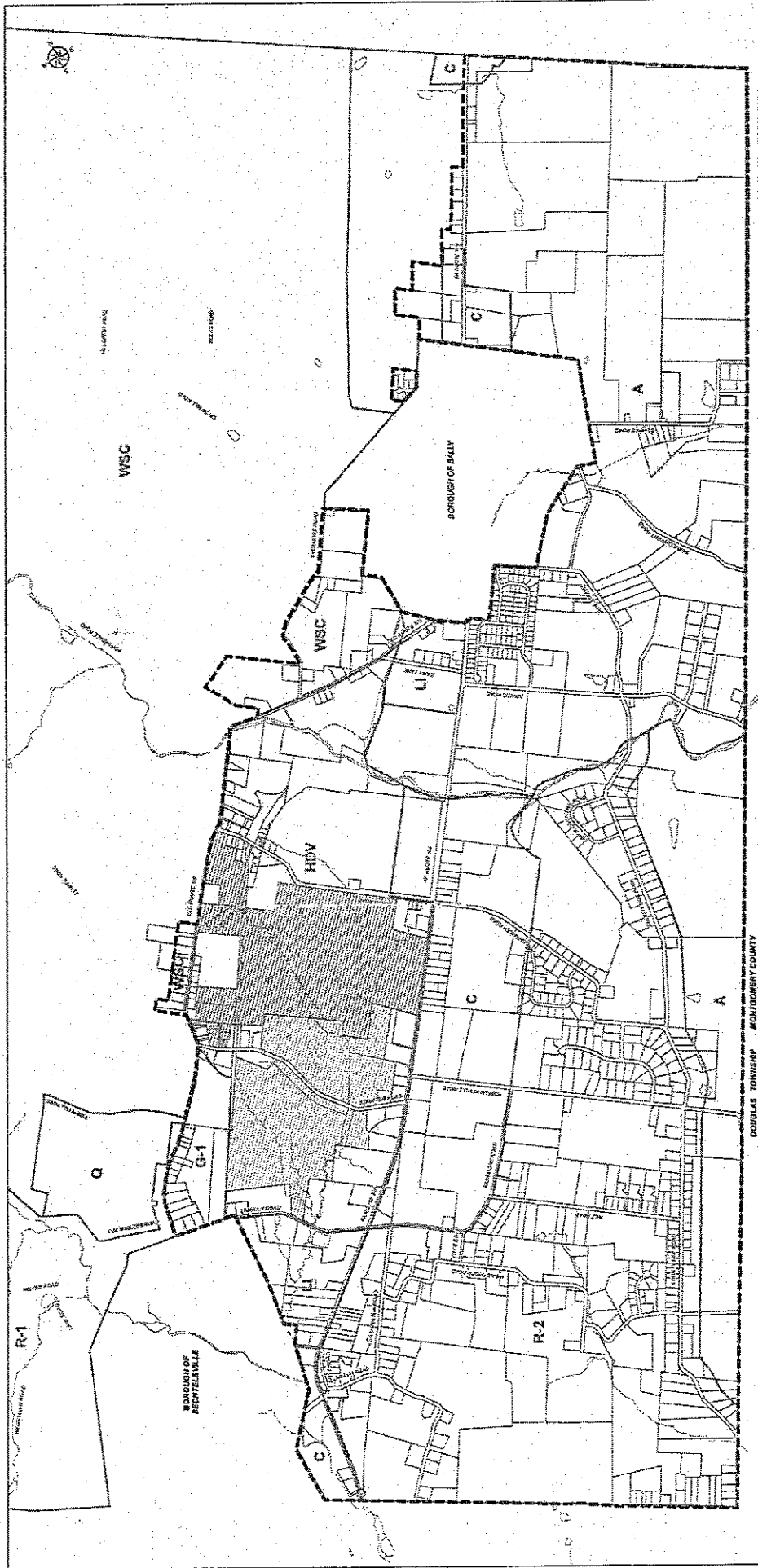
6.3 Identified Future Growth and Development

There are currently eight (8) projects, either under construction or pending, for which developers are desirous of public sanitary sewer service. These projects consist primarily of residential developments, along with some mixed use. These development projects are outlined on Table 2 titled "Study Area Proposed and Under Construction Development (WTMA Treatment Plant)".

There are also currently three (3) projects which would be served by the Authority's reserved capacity in the Bally Borough Treatment Plant. These projects are outlined on Table 3 titled "Study Area Proposed and Under Construction Development (Bally Treatment Plant)".

The projects shown in the tables and identified as "Under construction", "Under review", "Approved", or "Tentative approval" are projects which carry a high degree of certainty as to their eventual construction. The projects identified as "Proposed" are projects which have had concept plans submitted but have not moved any farther through the approval process and are less certain to be constructed.

All proposed, approved, and under construction projects are shown and identified on Figure 6, titled "Act 537 Plan Update Future Land Development".



Legend

	WSC - Wetland Conservation
	R-1 - Rural Residential
	R-2 - Residential Medium Density
	G-1 - General Industrial
	G - General Industrial
	A - Agricultural
	LI - Light Industrial
	HDV - High Density Residential
	STUDY AREA BOUNDARY
	WATERWAY
	STUDY AREA PARCELS

**ACT 537 PLAN UPDATE
FIGURE #5 - ZONING MAP**

WASHINGTON TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

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JOB NO: 200902079 DATE: 07/25/2008 PAGE 8 OF 14

TABLE 2
STUDY AREA PROPOSED AND UNDER CONSTRUCTION DEVELOPMENT (WTMA TREATMENT PLANT)

Name	Description	Status	Future EDUs	Flow (GPD)
5 Year Planning Period				
Reserve at Bally Spring	Residential subdivision	Under construction	35	6,720
Spring Valley Village	Residential land development	Under construction	125	24,000
West Tract	Planned residential development	Under construction	115	22,080
Melcher Tract	Residential subdivision	Under review	35	6,720
Miscellaneous Growth			10	1,920
		Subtotal:	320	61,440
10 Year Planning Period				
Reserve at Bally Spring	Residential subdivision	Under construction	60	11,520
Spring Valley Village	Residential land development	Under construction	148	28,416
West Tract*	Planned residential development	Tentative approval	645	123,840
Melcher Tract	Residential subdivision	Under review	61	11,712
West Tract*	Commercial development	Tentative approval	64	12,288
Hoffman Subdivision**	Residential subdivision	Proposed	82	15,744
Sternmer Subdivision**	Residential subdivision	Proposed	36	6,720
Clover Hill Subdivision**	Residential subdivision	Proposed	36	6,912
Padre Pio**	Mixed use development	Proposed	365	70,080
Miscellaneous Growth			50	9,600
		Subtotal:	1,546	296,832
		TOTAL:	1,866	358,272
		Totals without Speculative Projects:	1,348	258,816

EDU figures based on data provided by Washington Township as of December 2008

*Balance of PRD; all EDUs listed may not be connected within 10 year planning period, but are counted herein for planning purposes.

**These flow figures are speculative.

TABLE 3
STUDY AREA PROPOSED AND UNDER CONSTRUCTION DEVELOPMENT (BALLY TREATMENT PLANT)

Name	Description	Status	Future EDUs	Flow (GPD)
<u>5 Year Planning Period</u>				
Melcher Tract	Residential subdivision	Under review	6	1,152
Washington Mews	Residential subdivision	Under review	40	7,680
Miscellaneous Growth			4	768
		Subtotal:	50	9,600
<u>10 Year Planning Period</u>				
Washington Mews	Residential subdivision	Under review	41	7,872
Shuler Farm*	Residential land development	Proposed	450	86,400
Miscellaneous Growth			20	3,840
		Subtotal:	511	98,112
		TOTAL:	561	107,712
		Totals without Speculative Projects:	111	21,312

EDU figures based on data provided by Washington Township as of December 2008.

*These flow numbers are speculative.



- Legend**
- Approved Sanitary Manholes
 - Existing Sanitary Manholes
 - Approved Sanitary Sewer Mains
 - Wastewater Treatment Facility
 - Existing Force Mains
 - Existing (Gravity) Sanitary Sewers
 - Study Area Boundary
 - Land Development

ACT 537 PLAN UPDATE
FIG# 6 - FUTURE LAND DEVELOPMENT

WASHINGTON TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

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 REVISION DATE: 08/20/2009

SCALE: 1" = 100'

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6.4 WTMA Treatment Plant Projections

As shown in the 2008 Chapter 94 Report, the WTMA Treatment Plant presently treats flows of approximately 164,000 gallons per day. Based on the identified future projects shown in Table 2, it is projected the treatment plant will ultimately receive additional flow of approximately 358,000 gallons per day. This projection consists of additional flows of approximately 61,000 gallons per day during the zero to five year planning period and approximately 297,000 gallons per day during the five to ten year planning period. This results in a total projected flow of approximately **522,000 gallons per day** at the end of the ten year planning period.

While the above projections are based on the eventual construction of all identified projects, it is important to note the highly tentative nature of the projects identified as "proposed." If these prospective projects are not realized, the future flows may be reduced by as much as approximately 100,000 gallons per day, resulting in a total projected flow of approximately **423,000 gallons per day** at the end of the ten year planning period.

6.5 Bally Borough Treatment Plant Projections

As shown in the 2008 Chapter 94 Report, forty-nine (49) EDUs within the Township currently discharge sewage to the Bally Treatment Plant. At 192 gallons per day per EDU, the treatment plant receives approximately 9,400 gallons per day. Based on the identified future projects shown in Table 3, it is projected the treatment plant will ultimately receive additional flow of approximately 108,000 gallons per day. This projection consists of additional flows of approximately 9,600 gallons per day during the zero to five year planning period and approximately 98,000 gallons per day during the five to ten year planning period. This results in a total projected flow of approximately **117,000 gallons per day** at the end of the ten year planning period. This projected flow will exceed the 100,000 gallons per day of capacity the Authority has reserved in the Bally Treatment Plant and this capacity requirement will need to be addressed. Bally has already confirmed, through its consulting engineer, that additional capacity is available in the Borough treatment plant. Documentation of this is presented in Appendix 2.

While the above projected flows will exceed the reserved capacity in the Bally Treatment Plant, it is important to note the speculative nature of the Shuler Farm project, which will greatly reduce future flows if the project changes or is not constructed.

7.0 IDENTIFICATION OF WASTEWATER DISPOSAL ALTERNATIVES

7.1 Introduction

As stated in the previous chapter, Washington Township is set to undergo substantial growth in the next ten years. The portion of the Township that is expecting this growth is currently served by a public sewer system, and flows go to the WTMA wastewater treatment facility or the Bally Borough wastewater treatment facility. According to the plan of study approved by PA DEP, the scope of this 537 Plan Update is limited to review of conventional collection, conveyance, treatment and discharge, and no action alternatives.

7.2 Regional Wastewater Treatment

The existing WTMA wastewater treatment facility has a rated capacity of 250,000 gpd. The current (2008) flow to the WTMA treatment plant is 164,000 gpd. At the end of the five (5) year planning period the flow is expected to be approximately 225,000 gpd, and at the end of the ten (10) year planning period the flow may range from approximately 423,000 gpd to 522,000 gpd.

Additional flows are also proposed for the Bally Borough treatment plant. The current (2008) flow from Washington Township to the Bally Borough treatment plant is estimated to be 9,400 gpd based on 49 connected EDUs. At the end of the five (5) year planning period the flow is expected to be approximately 19,000 gpd based on 99 connected EDUs, and at the end of the ten (10) year planning period the flow may be approximately 117,000 gpd based on 610 connected EDUs.

The WTMA and Bally treatment plants are relatively close to each other, but not close to any other municipal sewer systems. Construction of a regional wastewater treatment facility will not be considered due to the numerous technical and administrative issues that would need to be overcome.

7.3 Extension of Existing Sewage Facilities

This Act 537 Plan Update is limited to the parts of Washington Township already sewerred or likely to be sewerred. The construction of extensions to the existing sewer system will be driven entirely by the needs of the developments identified in Chapter 6.0. Development plans will be reviewed as submitted for compliance with WTMA standards and conformity with Township public sewer planning goals. The consideration of specific sewer extension alternatives will not be part of the evaluations herein.

7.4 Continued Use of Existing Facilities Through Repair, Upgrade, Reduction of Flow, or Improved O&M.

The WTMA system is relatively new, constructed in the mid 1990s, and it is unlikely that there are repairs or operations and maintenance changes that would appreciably reduce flow or increase capacity at the treatment plant. (Some infiltration/inflow exists in the system, which is being addressed by the WTMA on an as needed basis.) In addition, the primary flows to the facility are domestic

sanitary flows; therefore options for reducing hydraulic or organic loadings at the sources are virtually non-existent.

The most reasonable alternative herein is two fold; the expansion and upgrade of the Washington Township Municipal Authority wastewater treatment plant and purchase of additional capacity from Bally Borough. The required capacity at the WTMA treatment plant in 10 years could be as much as 522,000 gpd. However, several of the projects listed in the Table 2 capacity projection, as already stated, are speculative. If these projects do not proceed, the required capacity could be as low as 423,000 gpd. In order to be sensitive to this projection range in the future sizing of the WTMA treatment plant, and also recognize the need for some reserve capacity as well as an allowance for infiltration/inflow, it is recommended that the plant be expanded to 500,000 gpd. The sizing also simplifies future construction since the current 250,000 gpd facility is already configured for a doubling of capacity.

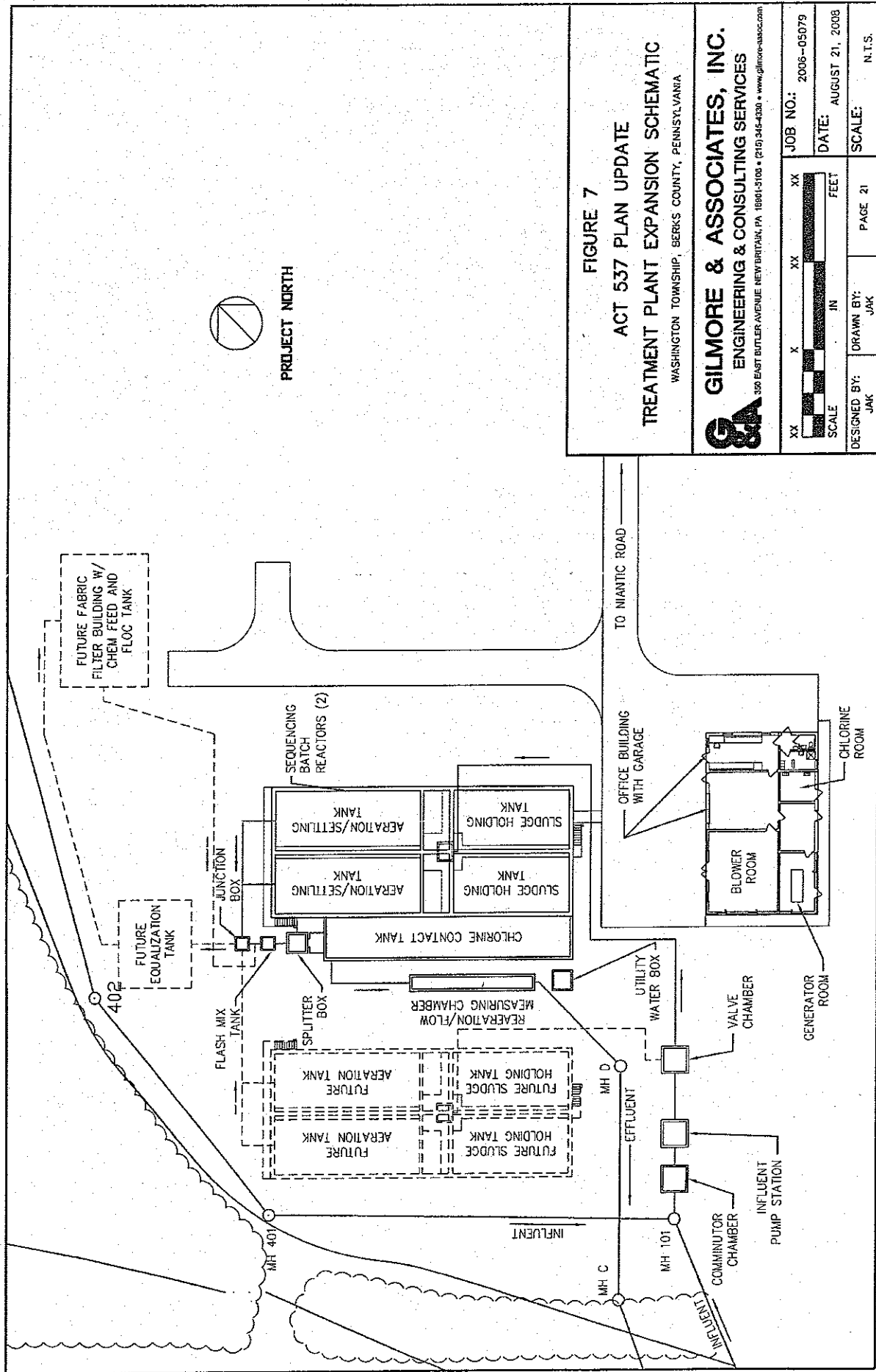
The capacity requirement at the Bally treatment plant would be 117,000 gpd, which is 17,000 gpd more than the WTMA's current capacity reservation. Additional capacity is available in the existing Bally treatment plant as documented in Appendix 2.

Initial design of the WTMA wastewater treatment plant expansion would be to 0.5 MGD. A schematic diagram of the treatment plant expansion is shown as Figure 7, titled "Act 537 Plan Update Treatment Plant Expansion Schematic". It is expected that the NPDES discharge limits will change with the expansion of the treatment plant as shown on Table 4. The projected standards are a result of the total maximum daily loading (TMDL) analysis conducted by EPA for the watersheds tributary to the Green Lane Reservoir.

TABLE 4
ANTICIPATED FUTURE NPDES PERMIT DISCHARGE LIMITS

	EXISTING LIMITS AT 0.25 MGD	EXPECTED LIMITS FOR EXPANDED CAPACITY FLOW (0.50 MGD)
Discharge Parameter	Average Monthly (mg/l)	Average Monthly (mg/l)
Flow (mgd)	0.25	0.50
pH (S.U.)	6.0 to 9.0	6.0 to 9.0
D.O. (mg/l)	Min 5.0 mg/l	Min 5.0 mg/l
Total Residual Chlorine (mg/l)	1.0	0.5
Total Suspended Solids (mg/l)	30	30
CBOD ₅ (mg/l)	25	25
NH ₃ -N (5/1 to 10/31) (mg/l)	7.5	7.5
NH ₃ -N (11/1 to 4/30) (mg/l)	20	20
Total Phosphorus (mg/l)	1	0.25
Fecal Coliform (5/1-9/30)/100 ml	200	200
Fecal Coliform (10/1-4/30)/100 ml	10,000	2,000

Note: Anticipated future limits based upon email communication dated August 27, 2008, from Byron Davis, P.E., Permits Engineer, PA Department of Environmental Protection.



PROJECT NORTH

FIGURE 7

ACT 537 PLAN UPDATE
TREATMENT PLANT EXPANSION SCHEMATIC

WASHINGTON TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
335 EAST BUTLER AVENUE NEW BRITAIN, PA 18801-5108 • (215) 345-4330 • www.gilmore-associates.com

XX	X	XX	XX	JOB NO.: 2006-05079
XX	X	XX	XX	DATE: AUGUST 21, 2008
XX	X	XX	XX	SCALE: N.T.S.
XX	X	XX	XX	DESIGNED BY: JAK
XX	X	XX	XX	DRAWN BY: JAK
XX	X	XX	XX	PAGE 21

As a result of projected changes in effluent standards, particularly the phosphorus limitation, the treatment facility will need to provide tertiary treatment. Pending further study and design, a fabric filter with chemical feed and flocculation tank is proposed to meet the expected standards.

There are two existing wastewater pump stations in the WTMA system. The Swamp Creek Pump Station is the larger pump station and serves the Swamp Creek drainage basin. The current firm pumping capacity is 320 gpm, which equates to 121,000 gpd using a peaking factor of 3.8. Currently the pump station pumps approximately 36,000 gpd. Assuming that all proposed development in the Swamp Creek Basin (Spring Valley Village; West Tract) takes place, the average flow will increase to 82,000 gpd within the next five (5) years and 234,000 gpd within the next ten (10) years. The proposed alternative includes expansion of this pump station to manage the additional future capacity requirements as development occurs.

The Weinsteiger Road Pump Station is located in the Middle Creek drainage basin. The current firm capacity of the pump station is 180 gpm which equates to 66,000 gpd using a peaking factor of 3.9. Currently the pump station pumps approximately 39,000 gpd with a maximum expected required capacity of 46,000 gpd at the end of the ten year planning period. The proposed alternative includes no action at the Weinsteiger Road Pump Station.

7.5 Repair or Replacement of Existing Collection and Conveyance System Components

As previously stated, all of the WTMA facilities are relatively new. Some infiltration/inflow exists, but repair or replacement of the existing facilities in order to reduce flow or expand capacity is not expected to create appreciable changes in the system capacity needs. Activities to locate and eliminate sources of infiltration/inflow will continue in order to maintain system integrity.

The Swamp Creek Interceptor will receive future hydraulic load from Spring Valley Village and the West Tract. Review of the existing pipes shows that the interceptor has enough capacity to accept the additional flows expected within the next five (5) and ten (10) years. The proposed alternative for the interceptor to manage the additional future capacity requirements as development occurs would be no action.

7.6 Construction of a New Community Sewage System Including Sewer Systems and/or Treatment Facilities

New community sewage collection systems leading to existing facilities will be required for the proposed developments and will be the responsibility of the various developers to construct. Construction of new treatment facilities is not being considered since proposed development is located within easy access to the existing collection system.

7.7 Use of Innovative/Alternative Methods for Collection and Conveyance to Serve Areas Using Existing Wastewater Treatment Facilities

There are no issues within the collection or conveyance systems for areas that are currently directing flow to either treatment plant that would indicate the need to consider I/A alternatives. Individual developments may need to consider pump stations or low pressure sewer systems for conveyance to the nearest existing gravity sewer, but these are project specific issues that are not being considered herein.

7.8 No Action Alternative

The no-action alternative is viable only over the five (5) year planning period. The WTMA treatment plant has adequate capacity for all of the projected flows during the five (5) year planning period, leaving approximately 25,000 gpd of capacity for other connections. In addition, the Swamp Creek Basin Pump Station has adequate capacity for the five (5) year planning period leaving a reserve capacity of 39,000 gpd for other connections. There would not be adequate capacity in the pump station or the treatment plant for the ten (10) year planning period.

The no-action alternative for the Bally Treatment Plant would allow adequate capacity for all of the proposed flows for the five (5) year planning period leaving approximately 81,000 gpd of capacity unused. There would not be adequate capacity for the ten (10) year planning period.

Should the no-action alternative be implemented there would be no impacts on water quality or public health because growth would be limited to existing system capacities. It is not expected that the no-action alternative would create a negative or positive impact regarding local recreational opportunities. Likewise, impacts to drinking water sources and other environmental concerns would not be affected by the no-action alternative.

Over the short term growth potential and community economic conditions would not be adversely impacted by the no-action alternative. Over the ten (10) year planning period growth would be stopped creating negative economic conditions.

7.9 Summary

Washington Township is expecting to see significant growth within the next ten years requiring expanded capacity of its wastewater conveyance and treatment systems. Viable alternatives to meet this need that are identified in this chapter would include the following:

1. Expansion of WTMA treatment facility to 500,000 gpd
2. Expansion of capacity share at Bally treatment facility to 117,000 gpd
3. Expansion of Swamp Creek Pump Station to 234,000 gpd average

8.0 EVALUATION OF ALTERNATIVES

8.1 Introduction

There are two alternatives for the collection and treatment of wastewater in Washington Township that are technically feasible. The first is expansion of existing facilities including expansion of the WTMA treatment plant, Swamp Creek Pump Station, and purchase of additional capacity at the Bally Borough treatment plant ("expansion alternative"). The second is no-action.

Section 8.0 Evaluation of Alternatives requires that each technically feasible alternative be evaluated for consistency with respect to the following items.

8.2 Plans Developed and Approved Under Sections 4 and 5 of the Clean Streams Law or Section 208 of the Clean Water Act

A COWAMP/208 Water Quality Management Report was prepared in September, 1977 for the Pennsylvania portion of the Lower Delaware River Basin (Study Area 1). The study was further divided into thirteen (13) sub-basins and Washington Township was included in Sub-basin 5: Perkiomen Sub-basin. The COWAMP/208 Plan makes no specific recommendations nor does it identify any alternatives for sewage treatment facilities in Washington Township.

8.3 Chapter 94 Report

There are no recommendations made in the 2008 Chapter 94 Report. Growth projections contained in that report indicate no projected overload within the five (5) year projection period. Therefore, both alternatives are consistent with the Chapter 94 Report.

8.4 Title II of the Clean Water Act

No plans have been completed in the past for projects under Title II.

8.5 Comprehensive Plans

The Washington Township Comprehensive Plan establishes five goals for the Township which have been set down as policy statements as follows:

Goal I: Preserve agriculture as a viable industry in Washington Township by guiding non-farm development away from prime agricultural soils and by protecting the land-related assets of farm owners.

Goal II: Regulate development in rural non-farm areas (the "watershed area") to minimize erosion and to enhance or preserve existing quality of groundwater and surface water.

Goal III: Enhance vehicular movement through and within the Township.

Goal IV: Assure that community facilities and services keep pace with growth.

Goal V: Maintain the current commitment to good community planning, citizen involvement, and plan implementation.

In order to work within the mandates set forth in the Comprehensive Plan, the Township continues to discourage the extension of public sewers which are in the immediate vicinity of the Perkiomen Creek headwaters, and prime agricultural soils. All five (5) and ten (10) year proposed developments are located adjacent or near to existing public sewer facilities east of Old Route 100 where development has already occurred.

The proposed expansion of the pump station and treatment plant shall take place on existing WTMA property or property adjacent to existing WTMA property. The proposed expansion alternative allows the WTMA to maintain Goal IV of assuring that community facilities and services keep pace with growth, and will have little to no impact on the remaining goals. The no action alternative fails to meet Goal IV.

8.6 Antidegradation Requirements

The WTMA facility and the Bally Borough facility currently discharge treated effluent to the West Branch of the Perkiomen Creek. The West Branch of the Perkiomen Creek is designated "CWF" (protected for cold water fish) under Chapter 93. Due to the high level of treatment required and increasing flows, the no action alternative is not acceptable. It is expected that the expansion alternative will meet the current and future treatment standards and therefore will not degrade the receiving waters.

8.7 State Water Plans

The Pennsylvania State Water Plan has not been updated since 1979. In its current form, the State Water Plan has few details regarding Washington Township. The mechanical upgrade of an existing pump station and expansion of an existing treatment plant are expected to have minimal impact on state waters. Likewise, the no action alternative is expected to have minimal impact on state waters.

8.8 Pennsylvania Prime Agricultural Land Policy

Direct impacts on Prime Agricultural Land are expected to be minimal or non-existent, considering that the alternative is not proposing any construction beyond the mechanical upgrade of an existing pump station, and the limited expansion of an existing treatment plant. For the most part, intensive growth requiring public sewage facilities will be constrained to areas east of Old Route 100 where such growth is already concentrated. However, as noted by the Berks County Planning Commission, several proposed development projects listed herein are located in areas designated for agricultural preservation. These proposed projects are generally speculative, and their impacts will be considered by Washington Township when and if they proceed through the land development review process. The no action alternative is expected to have even less impact on Prime Agricultural Land, since it will further constrain the availability of sewage capacity for future development.

8.9 County Stormwater Management Plans

Berks County has adopted a Stormwater Management Plan for the Swamp Creek Watershed. Spring Valley and the West Tract are located in the Swamp Creek Watershed, as is the Swamp Creek Pump Station. The alternatives considered herein are not in conflict with that plan.

8.10 Wetland Protection

Impact on wetlands is expected to be minimal considering that the alternative does not involve any construction beyond the mechanical upgrade of an existing pump station, and the limited expansion of an existing treatment plant. Intensive growth requiring public sewage facilities will be constrained to areas east of Old Route 100 where such growth is already concentrated. The no action alternative is expected to have even less impact on wetlands, since it will further constrain the availability of sewage capacity for future development.

8.11 Protection of Rare, Endangered or Threatened Plant and Animal Species

Pennsylvania Natural Diversity Inventories for the pump station site and the treatment plant site returned zero known impacts.

8.12 Historical and Archeological Resource Protection

A request for an evaluation for consistency with Historical and Archeological Protection was submitted and returned no known impacts at the site.

8.13 Resolution of Any Inconsistencies

There are no inconsistencies with any of the above programs.

8.14 Evaluation of Alternatives Identified in Section V

The chosen alternative includes the expansion of the WTMA Treatment Plant, expansion of the Swamp Creek Pump Station, and the purchase of a greater share of the capacity at the Bally Treatment Plant. The no action alternative would limit development. As designed, the treatment plant will not be able to meet expected effluent quality requirements. The preferred alternative expansion includes the addition of tertiary treatment at the WTMA Treatment Plant. The additional processes are designed to treat the wastewater to the expected effluent standards.

8.15 Cost Estimate

Table 5 presents the opinion of probable cost for the expansion of the Swamp Creek Pump Station, expansion of the WTMA treatment plant and the purchase of additional capacity at the Bally Borough treatment plant, all as previously described. Costs include so called soft costs for engineering, legal and contingency. All costs are in 2009 dollars and assume routine construction requirements.

In summary, the cost opinions for the expansion alternative are as follows:

Swamp Creek Pump Station Expansion:	\$ 287,000
WTMA Treatment Plant Expansion:	\$4,082,000
Bally Treatment Plant Capacity Purchase:	<u>\$ 245,000</u>
Total	\$4,614,000

The WTMA is exploring the possibility of eliminating the capital cost impact of the purchase of new Bally treatment plant capacity by "swapping" facilities with the Borough. In this scenario, certain water distribution facilities currently owned by the WTMA will be transferred to the Borough in exchange for the required treatment plant capacity. As initial communications on the matter have been positive, the cost to be financed shall be reduced by \$245,000 to \$4,369,000.

8.16 Funding Methods

Several funding methods for the construction of the expansion alternative are available. These methods include developer financing, tapping fees, PennVEST loans, and public financing through WTMA.

Developer Financing

The opinion of probable cost included on Table 4 could be reduced by funding contributions which may be made by prospective project developers. All of the new developer financed projects are expected to include the construction of conveyance and pump stations as necessary to connect to existing WTMA facilities. Additional developer financing cannot be assumed with regard to the upgrade of the pump station or the expansion of the treatment plant.

Tapping Fees

Anyone connecting to the WTMA sewage conveyance and treatment system is required to pay for the portion of the facilities they will be using via a tapping fee. Advance sales of EDUs lowers the amount of additional financing the WTMA is required to provide to fund selected projects. The WTMA is following a policy of collecting tapping fees in advance from developers undertaking major projects. Accumulated tapping fees will be applied to the cost of new facilities to the extent those fees are available and approved by the WTMA's financial advisors.

PennVEST Loans

Low interest loans are available through PennVEST to Pennsylvania municipalities after submission of applications during both the design and construction phases. The amount of interest charged varies, depending upon the county unemployment rate. Project applications are ranked according to need by the PennVEST reviewers so funding is not guaranteed. Pursuit of PennVEST loans may be a viable option depending on the general economy and the interest rate situation at the time this project is ready for construction.

TABLE 5
OPINION OF PROBABLE COST
WASTEWATER PUMP STATION AND TREATMENT PLANT EXPANSION

<u>ITEM NO. & DESCRIPTION</u>	<u>ESTIMATED COST</u>
1.0 Swamp Creek Pump Station	
1.1 Demolition of ex. Pumps/Controls	\$ 6,000
1.2 Bypass Pumping	\$ 6,000
1.3 New Pumps/Controls w/ VFDs (600GPM +/-)	\$ 70,000
1.4 Electrical Upgrade	\$ 13,000
1.5 Genset w/ ATS	\$ 30,000
1.6 Building	\$ 35,000
1.7 Site Work	\$ 5,000
Construction Subtotal	\$ 165,000
Bonds, Insurance, Mobilization & Demobilization (5%)	\$ 8,250
Overhead & Profit (15%)	\$ 24,750
Total Construction Cost	\$ 198,000
Contingency (20%)	\$ 39,600
Engineering, Inspection, Legal, Financial (25%)	\$ 49,500
Total Pump Station Cost	\$ 287,100
2.0 Wastewater Treatment Plant Expansion	
2.1 Replace Raw Sewage Pump Station Impellers	\$ 6,000
2.2 Biological Process Equipment	\$ 537,000
2.3 Biological Process Concrete (CY)	\$ 594,000
2.4 Biological Process Excavation, Backfill & Stone	\$ 126,000
2.5 Biological Process Piping & Valves	\$ 126,000
2.6 Biological Process Replace ex Sludge Blowers (3)	\$ 63,000
2.7 Biological Process Piping Modifications at Sludge Blowers	\$ 13,000
2.8 Biological Process Distribution Box & Piping	\$ 63,000
2.9 Biological Process Erosion Control	\$ 6,000
2.10 Biological Process Paving	\$ 50,000
2.11 Biological Process Grading & Seeding	\$ 13,000
2.12 Biological Process Electrical	\$ 63,000
2.13 Effluent Equalization Tank	\$ 150,000
2.14 Tertiary Treatment Site Work	\$ 150,000
2.15 Filtration Building & Site Work	\$ 386,000
Construction Subtotal	\$ 2,346,000
Bonds, Insurance, Mobilization & Demobilization (5%)	\$ 117,300
Overhead & Profit (15%)	\$ 351,900
Total Construction Cost	\$ 2,815,200
Contingency (20%)	\$ 563,000
Engineering, Inspection, Legal, Financial (25%)	\$ 703,800
Total Wastewater Treatment Plant Upgrade Cost	\$ 4,082,000
3.0 Expanded Share of Bally Treatment Plant Capacity	
3.1 Purchase of 17,000 GPD of Capacity	\$ 204,000
Contingency (10%)	\$ 20,400
Legal, Financial (10%)	\$ 20,400
Total Expanded Share of Bally Treatment Plant Cost	\$ 244,800
Total Project Cost	\$ 4,613,900

Notes:

1. Prices represent January 2009 dollars.

Sewer Revenue Bonds

Municipal bonds are often used to finance construction of public works projects. The WTMA could issue Sewer Revenue Bonds. Revenue bonds are paid off from monies collected from the use of the sewer system. The advantages of these bonds are that the interest rates are low and the income is tax exempt for the purchasers.

Selected Funding Method

The selected funding method is the issuance of sewer revenue bonds, in the amount of \$4,369,000, the debt service of which would be paid through the collection of user fees and tapping fees. (An additional 15% will be added for inflation and closing costs and is included in the debt service listed on Table 7.) Based on current development projections, the expanded facilities would need to be constructed and operational by the end of 2014. Therefore, funding would be required to be in place in 2013. Tables 6 and 7 present annual development and cash flow projections, through 2015, based upon the expenses projected herein and the projected annual growth. Based on this analysis, user fees and tapping fees can remain at current levels.

The contingency financing plan would be a PennVEST loan.

8.17 Need for Immediate or Phased Implementation of Each Alternative

The selected alternative shall be implemented as required by the pace of development. In order to prevent public health problems, connections to existing sewage facilities shall not be made prior to adequate capacity of the conveyance and treatment systems. The primary purpose of the timeline in Section 10.9 is to minimize the amount of time between expansion of the system and use of the expanded capacity. Due to the layout of the pumping and treatment facilities, and the relatively rapid pace of projected development, phasing construction of the proposed facilities will not be practical.

8.18 Administrative Organizations and Legal Authority Necessary for Plan Implementation

The WTMA has been in existence since 1993, and owns and operates the existing municipal sanitary sewerage system in Washington Township. All planned sewerage facilities will be the responsibility of the WTMA to implement including design, funding, construction and operation. The WTMA is also the established legal entity for contracting with Bally Borough for acquisition of additional treatment capacity.

TABLE 6
PROJECTED DEVELOPMENT BY YEAR

1. CONNECTIONS TO BALLY BOROUGH SYSTEM:

Project Name	Actual (12/08)		-2009-		-2010-		-2011-		-2012-		-2013-		-2014-		-2015-	
	Bought	Connect	Bought	Connect	Bought	Connect	Bought	Connect	Bought	Connect	Bought	Connect	Bought	Connect	Bought	Connect
Washington Mews							10	10	15	15	15	15	15	15	15	15
Melcher Tract							1	1	6	6	1	1	1	1	1	1
Miscellaneous Growth									1	1	1	1	1	1	1	1
ANNUAL TOTAL TO BALLY	0	0	0	0	1	1	11	11	22	22	16	16	16	16	10	16
CUMULATIVE TOTAL TO BALLY	49	0	49	1	50	12	61	61	34	83	50	99	66	115	82	131

2. CONNECTIONS TO WTMA SYSTEM:

Project Name	Actual (12/08)		-2009-		-2010-		-2011-		-2012-		-2013-		-2014-		-2015-	
	Bought	Connect	Bought	Connect	Bought	Connect	Bought	Connect	Bought	Connect	Bought	Connect	Bought	Connect	Bought	Connect
Melcher Tract	18				5				10	10	25	25	25	25	26	26
Reserve at Bally Spring	30				30		30	30	30	30	60	60	62	62	30	30
Spring Valley Village	57				58		42	25	10	25	25	25	10	25	50	25
West Tract	2				2		2	2	2	2	2	2	2	2	2	2
Miscellaneous Growth																
ANNUAL TOTAL TO WTMA	107	37	90	47	74	67	74	67	52	77	87	92	99	92	78	83
CUMULATIVE TOTAL TO WTMA	603	107	640	187	687	271	754	754	323	831	410	923	508	1015	587	1108
3. CUMULATIVE TOTAL (BALLY+WTMA)	652	107	689	198	737	283	815	815	357	914	460	1022	575	1130	669	1239
ANNUAL TOTALS (BALLY + WTMA)	107	37	91	48	85	76	76	76	74	99	103	108	115	108	84	109

Notes:

1. First column reflects total system EDU purchases and connections as of end of December 2008, per Authority records.
2. All projections based on information provided by developers via officially submitted plans. EDU purchase agreements with the WTMA, and recent consultations as modified by engineer, and reflect year end totals.
3. Purchase of EDUs generally assumed to track closely with construction of units except where agreements with developers set specific requirements. Based on said agreements, several developers have pre-purchased EDUs, or are committed to purchase in future years. Specifically, projected EDU purchases associated with the West Tract are based on variable annual cash payments to the Authority to delay budget shortfalls.
4. EDUs for Hoffman, Stamer and Clover Hill subdivisions, and Padre Pic land development, not included in projections due to speculative nature of projects.

**TABLE 7
ANNUAL CASH FLOW PROJECTION**

Revenues	2009	2010	2011	2012	2013	2014	2015
Sewer Rentals	\$ 530,000	\$ 659,525	\$ 717,800	\$ 799,663	\$ 895,400	\$ 985,300	\$ 1,095,663
Tapping Fees	\$ 709,410	\$ 603,330	\$ 563,560	\$ 490,620	\$ 682,890	\$ 762,450	\$ 623,220
Other Income	\$ 54,650	\$ 54,650	\$ 54,650	\$ 54,650	\$ 54,650	\$ 54,650	\$ 54,650
Total Revenues	\$ 1,294,060	\$ 1,317,505	\$ 1,336,000	\$ 1,344,933	\$ 1,632,940	\$ 1,812,400	\$ 1,773,533
Expenses							
O&M Expenses	\$ 276,349	\$ 286,699	\$ 295,300	\$ 304,159	\$ 313,284	\$ 387,683	\$ 399,313
Bally Treatment Charge	\$ 30,000	\$ 30,900	\$ 31,827	\$ 32,782	\$ 33,765	\$ 34,778	\$ 35,822
Minor Capital Expenses	\$ 20,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
Bally Debt Service	\$ 48,953	\$ 47,953	\$ 46,933	\$ 50,913	\$ 44,638	\$ 48,588	\$ 52,275
2004 Bond Series Debt Service	\$ 914,438	\$ 910,438	\$ 915,638	\$ 914,588	\$ 911,088	\$ 912,088	\$ 912,338
New Bond Series Debt Service	\$ -	\$ -	\$ -	\$ -	\$ 163,500	\$ 327,000	\$ 327,000
Total Expenses	\$ 1,291,740	\$ 1,315,990	\$ 1,329,698	\$ 1,342,442	\$ 1,506,276	\$ 1,750,137	\$ 1,766,748
Annual Surplus/Deficit	\$ 2,320	\$ 1,515	\$ 6,302	\$ 2,490	\$ 126,664	\$ 62,263	\$ 6,785
Fund Balance	\$ 2,320	\$ 3,835	\$ 10,136	\$ 12,626	\$ 139,291	\$ 201,554	\$ 208,338

Projected New EDUs (bought)	107	91	85	74	103	115	94
Total EDUs (connected)	689	737	815	914	1022	1130	1239
Projected Cost/EDU/Year	\$ 925	\$ 925	\$ 925	\$ 925	\$ 925	\$ 925	\$ 925
Projected Tapping Fee	\$ 6,630	\$ 6,630	\$ 6,630	\$ 6,630	\$ 6,630	\$ 6,630	\$ 6,630

Notes:

1. Revenues and O&M expenses based upon 2009 budget, provided by the Washington Township Municipal Authority, escalated for inflation (3%/year) and additional connections. Treatment expenses increased additional \$85,000 in 2014 to account for expanded and upgraded treatment plant.
2. New Bond Series Debt Service (2013) based on projected 30 year amortization at 5% per year of capital expenses in the amount of \$4,369,000 plus an additional 15% for closing costs and inflation.
3. Capital expenses include the expansion of the WTMA wastewater treatment plant to 500,000 gpd, and the expansion of Swamp Creek PS, as per Table 5, with design and permitting in 2012 and 2013 and construction in 2013 and 2014.
4. Minor Capital Expenses include upgrades to Weinsteiger PS, I/I location and removal, and other ongoing system improvements.
5. Bally Debt Service based upon Authority's share of Borough's General Obligation Bonds Series of 1998 as per repayment schedule prepared by First Union Capital Markets, dated December 9, 1998.
6. Projected Sewer Rental Income based upon previous year's connected EDU projection plus one-half of EDU projection for subject year. Rental income from EDUs connected to the Bally system are included in total but kept by Bally up to the amount necessary to offset the annual Bally Debt Service.
7. Projected tapping fee income based on development projections for both Bally and WTMA systems as documented on Table 6. Tapping fee income includes annual cash contributions from developer of West Tract
8. EDU totals and fund balances as of year ends.

9.0 INSTITUTIONAL EVALUATION

9.1 Introduction

The WTMA has been in existence since 1993, and owns and operates the existing municipal sanitary sewerage system in Washington Township. The WTMA consists of a five (5) member board and operates in accordance with the Pennsylvania Municipality Authorities Act. The WTMA also operates a small consecutive water system fed by Bally Borough, but the principal purpose and responsibility of the WTMA remains the sewer system. The WTMA utilizes a contracted operations firm for the operation of the sewerage system.

All future sewerage facilities will be the responsibility of the WTMA to implement including design, funding, construction and operation. No further evaluation of institutional approaches is necessary.

9.2 Financial and Debt Status

The WTMA had 2008 operating revenues of \$620,507 from 652 (year-end) EDUs and a net budget shortfall of \$185,086. This shortfall was made up by the advance purchase of EDUs by the developer of the West Tract, in accordance with an ongoing contractual commitment to the WTMA. (These EDU advance purchases are expected to continue and are included in Table 7 as tapping fee revenue.) As of the end of 2008, the total amount of debt owed by the WTMA is \$12,355,000. This debt includes \$11,810,000 owed through Guaranteed Sewer Revenue Bonds (Series of 2004) and \$545,000 owed separately to Bally Borough (General Obligation Bonds Series of 1998).

9.3 Available Staff and Administrative Resources

The WTMA has the necessary staff and administrative resources required to implement the expansion alternative.

9.4 Existing Legal Authority

The legal actions taken to form the Washington Township Municipal Authority afford it the full legal right and power to:

- Implement wastewater planning recommendations
- Set fees
- Prosecute violators
- Issue bonds to finance the construction, operation, and maintenance of the system
- Operate and maintain the system.

9.5 Necessary Administrative and Legal Activities to be Completed and Adopted to Ensure Implementation of Recommended Alternative

There are no necessary administrative or legal activities that must be completed prior to implementation of the selected alternative. The WTMA in conjunction with the Township has already developed and implemented ordinances, regulations,

standards and intermunicipal agreements. The proposed alternative recommends expansion of an existing treatment plant and upgrade of an existing pump station, therefore the alternative is not expected to require any additional rights-of-way, easements, or land transfers. Implementation of the selected alternative is not expected to require adoption of any other municipal sewage facilities plans or other legal documents. Should any of the above be required the current WTMA structure shall ensure that any required legal activities are completed as required to implement the selected alternative.

9.6 Proposed Institutional Alternative

It is proposed that the WTMA implement the selected alternative. The WTMA has the experience, staff and administrative resources, and legal authority to implement the selected alternative.

10.0 IMPLEMENTATION SCHEDULE AND JUSTIFICATION FOR SELECTED ALTERNATIVE

10.1 Introduction

The wastewater management alternative which best meets the needs of the study area is the expansion alternative, which includes expansion of the WTMA treatment plant and Swamp Creek Pump Station, and the purchase of additional capacity at the Bally Borough treatment plant. The expansion alternative is consistent with existing plans and programs as documented in Chapter 8.0 and provides sufficient treatment capacity for the study area through the 10 year planning period. The no action alternative does not adequate capacity.

10.2 Existing and Future Wastewater Disposal Needs

The current wastewater disposal system has adequate capacity for the study area's current needs. Table 1 shows the future need for additional capacity at the WTMA treatment plant and Table 2 shows the future need for additional capacity at the Bally Borough treatment plant.

10.3 Operation and Maintenance Considerations

Contract operations staff would be responsible for operation and maintenance of the expanded WTMA treatment plant and pump station along with the balance of the sewage collection and conveyance system. Bally Borough would not experience any additional operation and maintenance since the selected alternative utilizes available capacity and the treatment plant will not require expansion.

10.4 Cost Effectiveness

The proposed alternative is the most cost effective alternative that allows the WTMA to manage the proposed development sewage demands.

10.5 Available Management and Administrative Systems

Chapter 9.0 of this document explains why no changes to the existing WTMA management structure will be required to implement the selected alternative.

10.6 Available Financing Methods

Issuance of sewer revenue bonds, as documented in Section 8.16, is the best available financing method for this project. Debt service will be defrayed by projected user and tapping fees.

10.7 Environmental Soundness

The proposed alternative involves the expansion of existing facilities only. The expansion of facilities on already developed land is not expected to adversely impact the existing environmental conditions at the sites.

10.8 Capital Financing Plan

The chosen capital financing plan is the issuance of sewer revenue bonds, in the projected amount of \$4,369,000 plus allowance for closing costs and inflation. Financing will be secured no sooner than necessary, but is projected in 2013 for construction projected in 2014. The back-up financing plan will be application for a PennVEST loan.

10.9 Implementation Schedule

The proposed alternative shall be implemented as required to keep pace with development demands. It is projected that the implementation of the treatment facilities and pump station described in this 537 Plan Update will meet the following schedule:

<u>Activity</u>	<u>Projected Dates</u>
Issue Draft 537 Plan Update	May, 2009
Township 537 Plan Update Adoption	November, 2009
PADEP 537 Plan Update Approval	March, 2010
Submit Part 1 NPDES Application	April, 2011
PADEP Part 1 Approval	September, 2011
Submit Part 2 Water Quality Management Application	December, 2012
PADEP Part 2 Approval	June, 2013
Issue Bid Documents	September, 2013
Award Construction Contracts	December, 2013
Complete Construction/Start Up	December, 2014

The schedule will change as necessary to reflect the actual pace of development. PADEP will be notified, in writing, of any changes in the schedule.

APPENDIX 1



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER STANDARDS AND FACILITY REGULATION

Act 537 Plan Content and Environmental Assessment Checklist

PART 1 GENERAL INFORMATION

A. Project Information

1. Project Name Washington Township Act 537 Plan Update
2. Brief Project Description Update Township Act 537 Plan to address future sewage management needs in public sewer portion of Township.

B. Client (Municipality) Information

Municipality Name	County	City	Boro	Twp
Washington Township	Berks	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Municipality Contact Individual - Last Name	First Name	MI	Suffix	Title
Krestynick	Michael	E		Chairman
Additional Individual Last Name	First Name	MI	Suffix	Title
Municipality Mailing Address Line 1	Mailing Address Line 2			
P.O. Box 52	120 Barto Road			
Address Last Line -- City	State	ZIP+4		
Barto	PA	19504		
Phone + Ext.	FAX (optional)	Email (optional)		
(610) 845-7760		info@washtwpberks.org		

C. Site Information

Site (or Project) Name	(Municipal Name)
Washington Township Act 537 Plan Update	Washington Township
Site Location Line 1	Site Location Line 2

D. Project Consultant Information

Last Name	First Name	MI	Suffix
Rosenthal	Stuart	L	P.E.
Title	Consulting Firm Name		
Vice President	Gilmore & Associates, Inc.		
Mailing Address Line 1	Mailing Address Line 2		
65 East Butler Avenue			
Address Last Line -- City	State	ZIP+4	Country
New Britain	PA	18901	USA
Email	Phone + Ext.	FAX	
srosenthal@gilmore-assoc.com	(215) 345-4330	(215) 345-8606	

PART 2 ADMINISTRATIVE COMPLETENESS CHECKLIST

DEP Use Only	Indicate Page #(s) in Plan	In addition to the main body of the plan, the plan must include items one through eight listed below to be accepted for formal review by the department. Incomplete Plans will be returned unless the municipality is clearly requesting an advisory review.
_____	<u>TOC</u>	1. Table of Contents
_____		2. Plan Summary
_____	<u>5-6, 13-18</u>	A. Identify the proposed service areas and major problems evaluated in the plan. (Reference - Title 25, §71.21.a.7.i).
_____	<u>26-29</u> <u>32-33</u>	B. Identify the alternative(s) chosen to solve the problems and serve the areas of need identified in the plan. Also, include any institutional arrangements necessary to implement the chosen alternative(s). (Reference Title 25 §71.21.a.7.ii).
_____	<u>26-31</u>	C. Present the estimated cost of implementing the proposed alternative (including the user fees) and the proposed funding method to be used. (Reference Title 25, §71.21.a.7.ii).
_____	<u>32-33</u>	D. Identify the municipal commitments necessary to implement the Plan. (Reference Title 25, §71.21.a.7.iii).
_____	<u>35</u>	E. Provide a schedule of implementation for the project that identifies the MAJOR milestones with dates necessary to accomplish the project to the point of operational status. (Reference Title 25, §71.21.a.7.iv).
_____	<u>Appendix</u> <u>11</u>	3. Municipal Adoption: Original, signed and sealed Resolution of Adoption by the municipality which contains, at a minimum, alternatives chosen and a commitment to implement the Plan in accordance with the implementation schedule. (Reference Title 25, §71.31.f) Section V.F. of the Planning Guide.
_____	<u>Appendix</u> <u>4</u>	4. Planning Commission / County Health Department Comments: Evidence that the municipality has requested, reviewed and considered comments by appropriate official planning agencies of the municipality, planning agencies of the county, planning agencies with area wide jurisdiction (where applicable), and any existing county or joint county departments of health. (Reference Title 25, §71.31.b) Section V.E.1. of the Planning Guide.
_____	<u>Appendix</u> <u>3</u>	5. Publication: Proof of Public Notice which documents the proposed plan adoption, plan summary, and the establishment and conduct of a 30-day comment period. (Reference Title 25, §71.31.c) Section V.E.2. of the Planning Guide.
_____	<u>Appendix</u> <u>6-7</u>	6. Comments and Responses: Copies of ALL written comments received and municipal response to EACH comment in relation to the proposed plan. (Reference Title 25, §71.31.c) Section V.E.2. of the Planning Guide.
_____	<u>35</u>	7. Implementation Schedule: A complete project implementation schedule with milestone dates specific for each existing and future area of need. Other activities in the project implementation schedule should be indicated as occurring a finite number of days from a major milestone. (Reference Title 25, §71.31.d) Section V.F. of the Planning Guide. Include dates for the future initiation of feasibility evaluations in the project's implementation schedule for areas proposing completion of sewage facilities for planning periods in excess of five years. (Reference Title 25, §71.21.c).
_____	<u>Appendix</u> <u>2,4,5,9,10</u>	8. Consistency Documentation: Documentation indicating that the appropriate agencies have received, reviewed and concurred with the method proposed to resolve identified inconsistencies within the proposed alternative and consistency requirements in 71.21.(a)(5)(I-III). (Reference Title 25, §71.31.e) Appendix B of the Planning Guide.

PART 3 GENERAL PLAN CONTENT CHECKLIST

DEP Use Only	Indicate Page #(s) in Plan	Item Required
_____	<u>4</u>	I. Previous Wastewater Planning
_____		A. Identify, describe and briefly analyze all past wastewater planning for its impact on the current planning effort:
_____	<u>4</u>	1. Previously undertaken under the Sewage Facilities Act (Act 537). (Reference-Act 537, Section 5 §d.1).
_____	<u>4</u>	2. Has not been carried out according to an approved implementation schedule contained in the plans. (Reference-Title 25, §71.21.a.5.i.A-D). Section V.F of the Planning Guide.
_____	<u>4</u>	3. Is anticipated or planned by applicable sewer authorities or approved under a Chapter 94 Corrective Action Plan. (Reference-Title 25, §71.21.a.5.i.A&B). Section V.D. of the Planning Guide.
_____	<u>4</u>	4. Through planning modules for new land development, planning "exemptions" and addenda. (Reference-Title 25, §71.21.a.5.i.A).
_____	<u>5-7</u>	II. Physical and Demographic Analysis utilizing written description and mapping (All items listed below require maps, and all maps should show all current lots and structures and be of appropriate scale to clearly show significant information).
_____	<u>5-6</u>	A. Identification of planning area(s), municipal boundaries, Sewer Authority/Management Agency service area boundaries. (Reference-Title 25, §71.21.a.1.i).
_____	<u>5, 7</u>	B. Identification of physical characteristics (streams, lakes, impoundments, natural conveyance, channels, drainage basins in the planning area). (Reference-Title 25, §71.21.a.1.ii).
_____	<u>NA</u>	C. Soils - Analysis with description by soil type and soils mapping for areas not presently served by sanitary sewer service. Show areas suitable for in-ground onlot systems, elevated sand mounds, individual residential spray irrigation systems, and areas unsuitable for soil dependent systems. (Reference-Title 25, §71.21.a.1.iii). Show Prime Agricultural Soils and any locally protected agricultural soils. (Reference-Title 25, §71.21.a.1.iii).
_____	<u>NA</u>	D. Geologic Features - (1) Identification through analysis, (2) mapping and (3) their relation to existing or potential nitrate-nitrogen pollution and drinking water sources. Include areas where existing nitrate-nitrogen levels are in excess of 5 mg/L. (Reference-Title 25, §71.21.a.1.iii).
_____	<u>NA</u>	E. Topography - Depict areas with slopes that are suitable for conventional systems; slopes that are suitable for elevated sand mounds and slopes that are unsuitable for onlot systems. (Reference-Title 25, §71.21.a.1.ii).
_____	<u>5</u>	F. Potable Water Supplies - Identification through mapping, description and analysis. Include public water supply service areas and available public water supply capacity and aquifer yield for groundwater supplies. (Reference-Title 25 §71.21.a.1.vi). Section V.C. of the Planning Guide.

_____	<u>NA</u>	G. Wetlands-Identify wetlands as defined in Title 25, Chapter 105 by description, analysis and mapping. Include National Wetland Inventory mapping and potential wetland areas per USDA, SCS mapped hydric soils. Proposed collection, conveyance and treatment facilities and lines must be located and labeled, along with the identified wetlands, on the map. (Reference-Title 25, §71.21.a.1.v). Appendix B, Section II.I of the Planning Guide.
_____	<u>8-12</u>	III. Existing Sewage Facilities in the Planning Area - Identifying the Existing Needs
_____	<u>8-9</u>	A. Identify, map and describe municipal and non-municipal, individual and community sewerage systems in the planning area including:
_____	<u>8, 10-12</u>	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. (Reference-Title 25, §71.21.a.2.i.A).
_____	<u>10</u>	2. A narrative and schematic diagram of the facility's basic treatment processes including the facility's NPDES permitted capacity, and the Clean Streams Law permit number. (Reference-Title 25, §71.21.a.2.i.A).
_____	<u>10-11</u>	3. A description of problems with existing facilities (collection, conveyance and/or treatment), including existing or projected overload under Title 25, Chapter 94 (relating to municipal wasteload management) or violations of the NPDES permit, Clean Streams Law permit, or other permit, rule or regulation of DEP. (Reference-Title 25, §71.21.a.2.i.B).
_____	<u>NA</u>	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. (Reference-Title 25, §71.21.a.4.i & ii).
_____	<u>NA</u>	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. (Reference-Title 25, §71.21.a.2.i.C).
_____	<u>NA</u>	6. Disposal areas, if other than stream discharge, and any applicable groundwater limitations. (Reference-Title 25, §71.21.a.4.i & ii).
_____	<u>NA</u>	B. Using DEP's publication titled <i>Sewage Disposal Needs Identification</i> , identify, map and describe areas that utilize individual and community onlot sewage disposal and, unpermitted collection and disposal systems ("wildcat" sewers, borehole disposal, etc.) and retaining tank systems in the planning area including:
_____	<u>NA</u>	1. The types of onlot systems in use. (Reference-Title 25, §71.21.a.2.ii.A).
_____	<u>NA</u>	2. A sanitary survey complete with description, map and tabulation of documented and potential public health, pollution, and operational problems (including malfunctioning systems) with the systems, including violations of local ordinances, the Sewage Facilities Act, the Clean Stream Law or regulations promulgated thereunder. (Reference-Title 25, §71.21.a.2.ii.B).
_____	<u>NA</u>	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). (Reference-Title 25, §71.21.a.2.ii.C).

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|-------|------------------|---|
| _____ | <u>NA</u> | 4. An individual water supply survey to identify possible contamination by malfunctioning onlot sewage disposal systems consistent with DEP's <i>Sewage Disposal Needs Identification</i> publication. (Reference-Title 25 §71.21.a.2.ii.B). |
| _____ | <u>NA</u> | 5. 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 and any other requirements relating to sewage management programs. (Reference-Title 25, §71.21.a.2.i.C). |
| _____ | <u>10</u> | C. Identify wastewater sludge and septage generation, transport and disposal methods. Include this information in the sewage facilities alternative analysis including: |
| _____ | <u>10</u> | 1. Location of sources of wastewater sludge or septage (Septic tanks, holding tanks, wastewater treatment facilities). (Reference-Title 25 §71.71). |
| _____ | <u>10</u> | 2. Quantities of the types of sludges or septage generated. (Reference-Title 25 §71.71). |
| _____ | <u>10</u> | 3. Present disposal methods, locations, capacities and transportation methods. (Reference-Title 25 §71.71). |
| _____ | <u>13-18</u> | IV. Future Growth and Land Development |
| _____ | | A. Identify and briefly summarize all municipal and county planning documents adopted pursuant to the Pennsylvania Municipalities Planning Code (Act 247) including: |
| _____ | <u>13-14</u> | 1. All land use plans and zoning maps that identify residential, commercial, industrial, agricultural, recreational and open space areas. (Reference-Title 25, §71.21.a.3.iv). |
| _____ | <u>13-14</u> | 2. Zoning or subdivision regulations that establish lot sizes predicated on sewage disposal methods. (Reference – Title 25§71.21.a.3.iv). |
| _____ | <u>13-14</u> | 3. All limitations and plans related to floodplain and stormwater management and special protection (Ch. 93) areas. (Reference-Title 25 §71.21.a.3.iv) Appendix B, Section II.F of the Planning Guide. |
| _____ | | B. Delineate and describe the following through map, text and analysis. |
| _____ | <u>13-17</u> | 1. Areas with existing development or plotted subdivisions. Include the name, location, description, total number of EDU's in development, total number of EDU's currently developed and total number of EDU's remaining to be developed (include time schedule for EDU's remaining to be developed). (Reference-Title 25, §71.21.a.3.i). |
| _____ | <u>13-14</u> | 2. Land use designations established under the Pennsylvania Municipalities Planning Code (35 P.S. 10101-11202), including residential, commercial and industrial areas. (Reference-Title 25, §71.21.a.3.ii). Include a comparison of proposed land use as allowed by zoning and existing sewage facility planning. (Reference-Title 25, §71.21.a.3.iv). |
| _____ | <u>13, 15-17</u> | 3. Future growth areas with population and EDU projections for these areas using historical, current and future population figures and projections of the municipality. Discuss and evaluate discrepancies between local, county, state and federal projections as they relate to sewage facilities. (Reference-Title 25, §71.21.a.1.iv). (Reference-Title 25, §71.21.a.3.iii). |

_____	<u>13-14</u>	4. Zoning, and/or subdivision regulations; local, county or regional comprehensive plans; and existing plans of any other agency relating to the development, use and protection of land and water resources with special attention to: (Reference-Title 25, §71.21.a.3.iv). --public ground/surface water supplies --recreational water use areas --groundwater recharge areas --industrial water use --wetlands
_____	<u>18</u>	5. Sewage planning necessary to provide adequate wastewater treatment for five and ten year future planning periods based on projected growth of existing and proposed wastewater collection and treatment facilities. (Reference-Title 25, §71.21.a.3.v).
_____	<u>19-23</u>	V. Identify Alternatives to Provide New or Improved Wastewater Disposal Facilities
		A. Conventional collection, conveyance, treatment and discharge alternatives including:
_____	<u>19</u>	1. The potential for regional wastewater treatment. (Reference-Title 25, §71.21.a.4).
_____	<u>19</u>	2. The potential for extension of existing municipal or non-municipal sewage facilities to areas in need of new or improved sewage facilities. (Reference-Title 25, §71.21.a.4.i).
_____	<u>19-22</u>	3. The potential for the continued use of existing municipal or non-municipal sewage facilities through one or more of the following: (Reference-Title 25, §71.21.a.4.ii).
_____	<u>19-22</u>	a. Repair. (Reference-Title 25, §71.21.a.4.ii.A).
_____	<u>19-22</u>	b. Upgrading. (Reference-Title 25, §71.21.a.4.ii.B).
_____	<u>19-22</u>	c. Reduction of hydraulic or organic loading to existing facilities. (Reference-Title 25, §71.71).
_____	<u>19-22</u>	d. Improved operation and maintenance. Reference-Title 25, §71.21.a.4.ii.C).
_____	<u>19-22</u>	e. Other applicable actions that will resolve or abate the identified problems. (Reference-Title 25, §71.21.a.4.ii.D).
_____	<u>22</u>	4. Repair or replacement of existing collection and conveyance system components. (Reference-Title 25, §71.21.a.4.ii.A).
_____	<u>22</u>	5. The need for construction of new community sewage systems including sewer systems and/or treatment facilities. (Reference-Title 25, §71.21.a.4.iii).
_____	<u>23</u>	6. Use of innovative/alternative methods of collection/conveyance to serve needs areas using existing wastewater treatment facilities. (Reference-Title 25, §71.21.a.4.ii.B).
_____	<u>NA</u>	B. The use of individual sewage disposal systems including individual residential spray irrigation systems based on:
_____	<u>NA</u>	1. Soil and slope suitability. (Reference-Title 25, §71.21.a.2.ii.C).
_____	<u>NA</u>	2. Preliminary hydrogeologic evaluation. (Reference-Title 25, §71.21.a.2.ii.C).
_____	<u>NA</u>	3. The establishment of a sewage management program. (Reference-Title 25, §71.21.a.4.iv). See also Part "F" below.
_____	<u>NA</u>	4. The repair, replacement or upgrading of existing malfunctioning systems in

areas suitable for onlot disposal considering: (Reference-Title 25, §71.21.a.4).

____ NA

a. Existing technology and sizing requirements of Title 25 Chapter 73. (Reference-Title 25, §73.31-73.72).

____ NA

b. Use of expanded absorption areas or alternating absorption areas. (Reference-Title 25, §73.16).

____ NA

c. Use of water conservation devices. (Reference-Title 25, §71.73.b.2.iii).

____ NA

C. The use of small flow sewage treatment facilities or package treatment facilities to serve individual homes or clusters of homes with consideration of: (Reference-Title 25, §71.64.d).

____ NA

1. Treatment and discharge requirements. (Reference-Title 25, §71.64.d).

____ NA

2. Soil suitability. (Reference-Title 25, §71.64.c.i).

____ NA

3. Preliminary hydrogeologic evaluation. (Reference-Title 25, §71.64.c.2).

____ NA

4. Municipal, Local, Agency or other controls over operation and maintenance requirements through a Sewage Management Program. (Reference-Title 25, §71.64.d). See Part "F" below.

____ NA

D. The use of community land disposal alternatives including:

____ NA

1. Soil and site suitability. (Reference-Title 25, §71.21.a.2.ii.C).

____ NA

2. Preliminary hydrogeologic evaluation. (Reference-Title 25, §71.21.a.2.ii.C).

____ NA

3. Municipality, Local Agency or Other Controls over operation and maintenance requirements through a Sewage Management Program (Reference-Title 25, §71.21.a.2.ii.C). See Part "F" below.

____ NA

4. The rehabilitation or replacement of existing malfunctioning community land disposal systems. (See Part "V", B, 4, a, b, c above). See also Part "F" below.

____ NA

E. The use of retaining tank alternatives on a temporary or permanent basis including: (Reference-Title 25, §71.21.a.4).

____ NA

1. Commercial, residential and industrial use. (Reference-Title 25, §71.63.e).

____ NA

2. Designated conveyance facilities (pumper trucks). (Reference-Title 25, §71.63.b.2).

____ NA

3. Designated treatment facilities or disposal site. (Reference-Title 25, §71.63.b.2).

____ NA

4. Implementation of a retaining tank ordinance by the municipality. (Reference-Title 25, §71.63.c.3). See Part "F" below.

____ NA

5. Financial guarantees when retaining tanks are used as an interim sewage disposal measure. (Reference-Title 25, §71.63.c.2).

____ NA

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

____ NA

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. (Reference-Title 25, §71.21.a.4.iv).

____ NA

2. Required inspection of sewage disposal systems on a schedule established by the municipality. (Reference-Title 25, §71.73.b.1.).

____ NA

3. Required maintenance of sewage disposal systems including septic and aerobic treatment tanks and other system components on a schedule

established by the municipality. (Reference-Title 25, §71.73.b.2).

____ NA

4. Repair, replacement or upgrading of malfunctioning onlot sewage systems. (Reference-Title 25, §71.21.a.4.iv) and §71.73.b.5 through:

____ NA

- a. Aggressive pro-active enforcement of ordinances that require operation and maintenance and prohibit malfunctioning systems. (Reference-Title 25, §71.73.b.5).

____ NA

- b. Public education programs to encourage proper operation and maintenance and repair of sewage disposal systems.

____ NA

5. Establishment of joint municipal sewage management programs. (Reference-Title 25, §71.73.b.8).

____ NA

6. Requirements for bonding, escrow accounts, management agencies or associations to assure operation and maintenance for non-municipal facilities. (Reference-Title 25, §71.71).

____ NA

- G. Non-structural comprehensive planning alternatives that can be undertaken to assist in meeting existing and future sewage disposal needs including: (Reference-Title 25, §71.21.a.4).

1. Modification of existing comprehensive plans involving:

____ NA

- a. Land use designations. (Reference-Title 25, §71.21.a.4).

____ NA

- b. Densities. (Reference-Title 25, §71.21.a.4).

____ NA

- c. Municipal ordinances and regulations. (Reference-Title 25, §71.21.a.4).

____ NA

- d. Improved enforcement. (Reference-Title 25, §71.21.a.4).

____ NA

- e. Protection of drinking water sources. (Reference-Title 25, §71.21.a.4).

____ NA

2. Consideration of a local comprehensive plan to assist in producing sound economic and consistent land development. (Reference-Title 25, §71.21.a.4).

____ NA

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. (Reference-Title 25, §71.21.a.4).

____ NA

4. Evaluation of existing local agency programs and the need for technical or administrative training. (Reference-Title 25, §71.21.a.4).

____ 23

- H. A no-action alternative which includes discussion of both short-term and long-term impacts on: (Reference-Title 25, §71.21.a.4).

____ 23

1. Water Quality/Public Health. (Reference-Title 25, §71.21.a.4).

____ 23

2. Growth potential (residential, commercial, industrial). (Reference-Title 25, §71.21.a.4).

____ 23

3. Community economic conditions. (Reference-Title 25, §71.21.a.4).

____ 23

4. Recreational opportunities. (Reference-Title 25, §71.21.a.4).

____ 23

5. Drinking water sources. (Reference-Title 25, §71.21.a.4).

____ 23

6. Other environmental concerns. (Reference-Title 25, §71.21.a.4).

____ 24-31

VI. Evaluation of Alternatives

- A. Technically feasible alternatives identified in Section V of this check-list must be evaluated for consistency with respect to the following: (Reference-Title 25, §71.21.a.5.i.).

____ 24

1. Applicable plans developed and approved under Sections 4 and 5 of the Clean Streams Law or Section 208 of the Clean Water Act (33 U.S.C.A. 1288). (Reference-Title 25, §71.21.a.5.i.A). Appendix B, Section II.A of the

Planning Guide.

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2. **Municipal wasteload management Corrective Action Plans or Annual Reports** developed under PA Code, Title 25, Chapter 94. (Reference-Title 25, §71.21.a.5.i.B). The municipality's recent Wasteload Management (Chapter 94) Reports should be examined to determine if the proposed alternative is consistent with the recommendations and findings of the report. Appendix B, Section II.B of the Planning Guide.

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3. **Plans developed under Title II of the Clean Water Act** (33 U.S.C.A. 1281-1299) or **Titles II and VI of the Water Quality Act of 1987** (33 U.S.C.A. 1251-1376). (Reference-Title 25, §71.21.a.5.i.C). Appendix B, Section II.E of the Planning Guide.

24-25

4. **Comprehensive plans** developed under the Pennsylvania Municipalities Planning Code. (Reference-Title 25, §71.21.a.5.i.D). The municipality's comprehensive plan must be examined to assure that the proposed wastewater disposal alternative is consistent with land use and all other requirements stated in the comprehensive plan. Appendix B, Section II.D of the Planning Guide.

25

5. **Antidegradation requirements** as contained in PA Code, Title 25, Chapters 93, 95 and 102 (relating to water quality standards, wastewater treatment requirements and erosion control) and the Clean Water Act. (Reference-Title 25, §71.21.a.5.i.E). Appendix B, Section II.F of the Planning Guide.

25

6. **State Water Plans** developed under the Water Resources Planning Act (42 U.S.C.A. 1962-1962 d-18). (Reference-Title 25, §71.21.a.5.i.F). Appendix B, Section II.C of the Planning Guide.

25

7. **Pennsylvania Prime Agricultural Land Policy** contained in Title 4 of the Pennsylvania Code, Chapter 7, Subchapter W. Provide narrative on local municipal policy and an overlay map on prime agricultural soils. (Reference-Title 25, §71.21.a.5.i.G). Appendix B, Section II.G of the Planning Guide.

26

8. **County Stormwater Management Plans** approved by DEP under the Storm Water Management Act (32 P.S. 680.1-680.17). (Reference-Title 25, §71.21.a.5.i.H). Conflicts created by the implementation of the proposed wastewater alternative and the existing recommendations for the management of stormwater in the county Stormwater Management Plan must be evaluated and mitigated. If no plan exists, no conflict exists. Appendix B, Section II.H of the Planning Guide.

26

9. **Wetland Protection**. Using wetland mapping developed under Checklist Section II.G, identify and discuss mitigative measures including the need to obtain permits for any encroachments on wetlands from the construction or operation of any proposed wastewater facilities. (Reference-Title 25, §71.21.a.5.i.I) Appendix B, Section II.I of the Planning Guide.

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Appendix
9

10. **Protection of rare, endangered or threatened plant and animal species** as identified by the Pennsylvania Natural Diversity Inventory (PNDI). (Reference-Title 25, §71.21.a.5.i.J). Provide DEP with a copy of the completed Request For PNDI Search document. Also provide a copy of the response letter from the Department of Conservation and Natural Resources' Bureau of Forestry regarding the findings of the PNDI search. Appendix B, Section II.J of the Planning Guide.

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Appendix
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11. **Historical and archaeological resource protection** under P.C.S. Title 37, Section 507 relating to cooperation by public officials with the Pennsylvania Historical and Museum Commission. (Reference-Title 25, §71.21.a.5.i.K). Provide the department with a completed copy of a Cultural Resource Notice

request of the Bureau of Historic Preservation (BHP) to provide a listing of known historical sites and potential impacts on known archaeological and historical sites. Also provide a copy of the response letter from the BHP. Appendix B, Section II K of the Planning Guide.

26 B. Provide for the resolution of any inconsistencies in any of the points identified in Section VI.A. of this checklist by submitting a letter from the appropriate agency stating that the agency has received, reviewed and concurred with the resolution of identified inconsistencies. (Reference-Title 25, §71.21.a.5.ii). Appendix B of the Planning Guide.

26 C. Evaluate alternatives identified in Section V of this checklist with respect to applicable water quality standards, effluent limitations or other technical, legislative or legal requirements. (Reference-Title 25, §71.21.a.5.iii).

26-31 D. Provide cost estimates using present worth analysis for construction, financing, on going administration, operation and maintenance and user fees for alternatives identified in Section V of this checklist. Estimates shall be limited to areas identified in the plan as needing improved sewage facilities within five years from the date of plan submission. (Reference-Title 25, §71.21.a.5.iv).

27-29 E. Provide an analysis of the funding methods available to finance the proposed alternatives evaluated in Section V of this checklist. Also provide documentation to demonstrate which alternative and financing scheme combination is the most cost-effective; and a contingency financial plan to be used if the preferred method of financing cannot be implemented. The funding analysis shall be limited to areas identified in the plan as needing improved sewage facilities within five years from the date of the plan submission. (Reference-Title 25, §71.21.a.5.v).

29 F. Analyze the need for immediate or phased implementation of each alternative proposed in Section V of this checklist including: (Reference-Title 25, §71.21.a.5.vi).

29 1. A description of any activities necessary to abate critical public health hazards pending completion of sewage facilities or implementation of sewage management programs. (Reference-Title 25, §71.21.a.5.vi.A).

29 2. A description of the advantages, if any, in phasing construction of the facilities or implementation of a sewage management program justifying time schedules for each phase. (Reference-Title 25, §71.21.a.5.vi.B).

29 G. Evaluate administrative organizations and legal authority necessary for plan implementation. (Reference - Title 25, §71.21.a.5.vi.D.).

32-33 VII. Institutional Evaluation

A. Provide an analysis of all existing wastewater treatment authorities, their past actions and present performance including:

32 1. Financial and debt status. (Reference-Title 25, §71.61.d.2).

32 2. Available staff and administrative resources. (Reference-Title 25, §71.61.d.2)

32 3. Existing legal authority to:

32 a. Implement wastewater planning recommendations. (Reference-Title 25, §71.61.d.2).

32 b. Implement system-wide operation and maintenance activities. (Reference-Title 25, §71.61.d.2).

32 c. Set user fees and take purchasing actions. (Reference-Title 25, §71.61.d.2).

32 d. Take enforcement actions against ordinance violators. (Reference-Title 25,

§71.61.d.2).

_____	<u>32</u>	e. Negotiate agreements with other parties. (Reference-Title 25, §71.61.d.2).
_____	<u>32</u>	f. Raise capital for construction and operation and maintenance of facilities. (Reference-Title 25, §71.61.d.2).
_____	<u>NA</u>	B. Provide an analysis and description of the various institutional alternatives necessary to implement the proposed technical alternatives including:
_____	<u>NA</u>	1. Need for new municipal departments or municipal authorities. (Reference-Title 25, §71.61.d.2).
_____	<u>NA</u>	2. Functions of existing and proposed organizations (sewer authorities, onlot maintenance agencies, etc.). (Reference-Title 25, §71.61.d.2).
_____	<u>NA</u>	3. Cost of administration, implementability, and the capability of the authority/agency to react to future needs. (Reference-Title 25, §71.61.d.2).
_____	<u>32-33</u>	C. Describe all necessary administrative and legal activities to be completed and adopted to ensure the implementation of the recommended alternative including:
_____	<u>32-33</u>	1. Incorporation of authorities or agencies. (Reference-Title 25, §71.61.d.2).
_____	<u>32-33</u>	2. Development of all required ordinances, regulations, standards and inter-municipal agreements. (Reference-Title 25, §71.61.d.2).
_____	<u>32-33</u>	3. Description of activities to provide rights-of-way, easements and land transfers. (Reference-Title 25, §71.61.d.2).
_____	<u>32-33</u>	4. Adoption of other municipal sewage facilities plans. (Reference-Title 25, §71.61.d.2).
_____	<u>32-33</u>	5. Any other legal documents. (Reference-Title 25, §71.61.d.2).
_____	<u>32-33</u>	6. Dates or timeframes for items 1-5 above on the project's implementation schedule.
_____	<u>33</u>	D. Identify the proposed institutional alternative for implementing the chosen technical wastewater disposal alternative. Provide justification for choosing the specific institutional alternative considering administrative issues, organizational needs and enabling legal authority. (Reference-Title 25, §71.61.d.2).
_____	<u>34-35</u>	VIII. Implementation Schedule and Justification for Selected Technical & Institutional Alternatives
_____		A. Identify the technical wastewater disposal alternative which best meets the wastewater treatment needs of each study area of the municipality. Justify the choice by providing documentation which shows that it is the best alternative based on:
_____	<u>34</u>	1. Existing wastewater disposal needs. (Reference-Title 25, §71.21.a.6).
_____	<u>34</u>	2. Future wastewater disposal needs (five and ten years growth areas). (Reference-Title 25, §71.21.a.6).
_____	<u>34</u>	3. Operation and maintenance considerations. (Reference-Title 25, §71.21.a.6).
_____	<u>34</u>	4. Cost-effectiveness. (Reference-Title 25, §71.21.a.6).
_____	<u>34</u>	5. Available management and administrative systems. (Reference-Title 25, §71.21.a.6).
_____	<u>34</u>	6. Available financing methods. (Reference-Title 25, §71.21.a.6).

- | | | |
|-------|-----------|--|
| _____ | <u>34</u> | 7. Environmental soundness and compliance with natural resource planning and preservation programs. (Reference-Title 25, §71.21 a.6) |
| _____ | <u>35</u> | B. Designate and describe the capital financing plan chosen to implement the selected alternative(s). Designate and describe the chosen back-up financing plan. (Reference-Title 25, §71.21.a.6) |
| _____ | <u>35</u> | C. Designate and describe the implementation schedule for the recommended alternative, including justification for any proposed phasing of construction or implementation of a Sewage Management Program. (Reference – Title 25 §71.31d) |
| | | IX. Environmental Report (ER) generated from the Uniform Environmental Review Process (UER) |
| _____ | <u>NA</u> | A. Complete an ER as required by the UER process and as described in the DEP Technical Guidance 381-5511-111. Include this document as "Appendix A" to the Act 537 Plan Update Revision. <i>Note: An ER is required only for Wastewater projects proposing funding through any of the funding sources identified in the UER.</i> |

ADDITIONAL REQUIREMENTS FOR PENNVEST PROJECTS

Municipalities that propose to implement their official sewage facilities plan updates with PENNVEST funds must meet six additional requirements to be eligible for such funds. See A Guide for Preparing Act 537 Update Revisions (362-0300-003), Appendix N for greater detail or contact the DEP regional office serving your county listed in Appendix J of the same publication.

DEP Use Only	Indicate Page #(s) in Plan	Item Required
_____	_____	1. Environmental Impact Assessment. (Planning Phase) The Uniform Environment Review (UER) replaces the Environmental Impact Assessment that was a previous requirement for PENNVEST projects.
_____	_____	2. Cost Effectiveness (Planning Phase) The cost-effectiveness analysis should be a present-worth (or equivalent uniform annual) cost evaluation of the principle alternatives using the interest rate that is published annually by the Water Resources Council. Normally, for PENNVEST projects the applicant should select the most cost-effective alternative based upon the above analysis. Once the alternative has been selected the user fee estimates should be developed based upon interest rates and loan terms of the selected funding method.
_____		3. Second Opinion Project Review. (Design Phase)
_____		4. Minority Business Enterprise/Women's Business Enterprise (Construction Phase)
_____		5. Civil Rights. (Construction Phase)
_____		6. Initiation of Operation/Performance Certification. (Post-construction Phase)

I/A TECHNOLOGIES

PARTIAL LISTING OF INNOVATIVE AND ALTERNATIVE TECHNOLOGIES

TREATMENT TECHNOLOGIES

Aquaculture
Aquifer Recharge
Biological Aerated Filters
Constructed Wetlands
Direct Reuse (NON-POTABLE)
Horticulture
Overland Flow
Rapid Infiltration
Silviculture
Microscreens
Controlled Release Lagoons
Swirl Concentrator

SLUDGE TREATMENT TECHNOLOGIES

Aerated Static Pile Composting
Enclosed Mechanical Composting (In vessel)
Revegetation of Disturbed Land
Aerated Windrow Composting

ENERGY RECOVERY TECHNOLOGIES

Anaerobic Digestion with more than 90 percent
Methane Recovery
Cogeneration of Electricity
Self-Sustaining Incineration

INDIVIDUAL & SYSTEM-WIDE COLLECTION TECHNOLOGIES

Cluster Systems
Septage Treatment
Small Diameter Gravity Sewers
Step Pressure Sewers
Vacuum Sewers
Variable Grade Sewers
Septic Tank Effluent Pump with
Pressure Sewers

APPENDIX 2

06-05079



Systems Design Engineering, Inc.

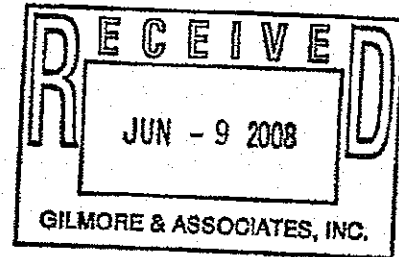
Engineers • Surveyors • Planners • Construction Managers

June 5, 2008

Gilmore and Associates
350 E. Butler Avenue
New Britain, PA 18901

Attn: Stuart L. Rosenthal, P.E.

Re: Washington Township 537 Plan Update



Dear Mr. Rosenthal:

Systems Design Engineering, Inc. on behalf of Bally Borough addresses your request for information regarding your request for additional sewer capacity in your February 25, 2008 letter.

Limited capacity may be available in the existing wastewater treatment above and beyond the 100,000 capacity currently under contract with Washington. This capacity is predicated on the sewage flow directly to the plant through a new gravity or pressure line. Currently the Borough is working under a Corrective Action Plan on its collection system and is limited on flow through the existing collection system.

Potential capacity at this time could be in the 50,000 to 100,000 gpd range. Bally's current tapping fee is based on a wastewater treatment plant cost of \$12.00 per gallon. This figure does not include the collection system component.

Currently there are no plans for rerating or expanding the plant. The plant may be capable of a rerate or expansion with the addition of a third clarifier. Additional study is required to make those determinations. The above information is to be considered preliminary and further study is required to make a final determination.

Bally Borough Council at its June 3, 2008 meeting authorized the professional staff to work with Washington Township in further discussion.

Respectfully Submitted
Systems Design Engineering, Inc.

A handwritten signature in black ink, appearing to read 'Gregory T. Unger'.

Gregory T. Unger, P.E.
Borough Engineer

Cc: Bally Borough
Jeff Karver, Esq.

APPENDIX 3

THE MERCURY

Publishers of The Mercury, The Penny Pincher and Real Estate Today

PROOF OF PUBLICATION OF NOTICE

Under Act No. 587, Approved May 6, 1929

STATE OF PENNSYLVANIA
COUNTY OF MONTGOMERY SS:

Mary Ann Matalavage, of The Mercury, of the County and State aforesaid, being duly sworn, deposes and says that THE MERCURY, a newspaper of general circulation published at 24 N. Hanover Street, Borough of Pottstown, County and State aforesaid, was established September 29, 1931 since which time, THE MERCURY has been regularly issued in said County, and that the printed notice of publication attached hereto is exactly the same as printed and published in the regular editions and issues of the said THE MERCURY on the following dates; viz.

September 22, 2009

Affiant further deposes that he/she is duly authorized by THE MERCURY, a newspaper of general circulation, to verify the foregoing statement under oath, and affiant is not interested in the subject matter of the aforesaid notice of advertisement, and that all allegations in the foregoing statements as to time, place and character of publication are true.

Copy of Notice or Publication

LEGAL NOTICE

Notice is hereby given that the Washington Township Board of Supervisors is considering the adoption of an Act 537 Plan Update. The Act 537 Plan Update study area includes approximately 6.25 square miles of Washington Township, generally to the east of Old Route 100 and Route 100. This study area encompasses portions of the township already publicly sewered and adjacent areas subject to land development proposals desiring public sewer service. The study area includes all or part of the drainage areas of Swamp Creek, Middle Creek and the West Branch of Perkiomen Creek. Zoning in the study area is predominantly R-2 Residential and Agricultural, with significant Commercial and High-Density Residential components.

The Act 537 Sewage Facilities Plan for Washington Township was originally adopted by the Board of Supervisors on October 14, 1993. The 2009 Plan Update generally continues the original plan in that it proposes the expansion of existing pumping and treatment facilities to accommodate projected residential and commercial growth in the study area. The Plan Update proposes the expansion of capacity at the Swamp Creek Station from 121,000 gallons per day to

294,000 gallons per day, the expansion of capacity at the Washington Township Municipal Authority Wastewater Treatment Plant from 250,000 gallons per day to 500,000 gallons per day, and the acquisition of an additional 17,000 gallons per day of capacity at the Baily Wastewater Treatment Plant.

It is projected that this project should not impact sewer user fees in Washington Township, so long as the advance purchase of capacity and development construction occur as projected.

A public review and comment period will extend for thirty (30) days from the date of publication of this legal notice. The Washington Township Act 537 Plan Update, which describes the proposed sanitary sewer modifications in detail, can be viewed during this period at the Washington Township Administration Building at 120 Barto Road, Barto, PA during regular business hours (8:00 am to 4:00 pm). Written comments should be directed to: Jason S. Ganster, Township Manager/Secretary, Washington Township, 120 Barto Road, P.O. Box 52, Barto, PA 19504.

Mary Ann Matalavage
Mary Ann Matalavage, Classified Manager

Sworn to and subscribed before me this 5th

day of October, 2009.

Cindy L. Eisenhauer
Notary Public

My Commission Expires: _____

COMMONWEALTH OF PENNSYLVANIA

NOTARIAL SEAL

Cindy L. Eisenhauer, Notary Public
Pottstown Borough, Montgomery County
My commission expires March 09, 2013

APPENDIX 4



GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

June 8, 2009

File No. 06-05079

Shannon L. Rossman
Intergovernmental Affairs Planner
Berks County Planning Commission
Berks County Services Center
633 Court Street, 14th Floor
Reading, PA 19601-4309

Reference: Washington Township Act 537 Plan Update

Dear Ms. Rossman:

On behalf of Washington Township, I am responding to the questions raised in your memorandum dated May 29, 2009 regarding the Washington Township Act 537 Plan Update.

1. The Sterner, Hoffman and Clover Hill subdivision proposals have been inactive for some time but have not been withdrawn by the project sponsors. Therefore these projects have been shown in the 537 Plan Update draft as "proposed" since they have not been officially withdrawn from Township consideration. The report states that these projects are speculative and unlikely to proceed. They have not been included in the sewer demand growth projections. The Washington Mews subdivision has received Township conditional final approval, and is expected to proceed once economic conditions improve. There are no current land development or subdivision plans related to the Shuler Farm, however capacity for these properties have been reserved in the Washington Township Municipal Authority's system on behalf of Barto Industries Inc. Therefore, these properties have been included in future projections of sewage capacity needs.
2. Mapping of the Shuler Farm on Figure 6 is incorrect. This is simply a mapping error and will be corrected.
3. There are numerous parcels within the sewer service area that have and will continue to have onlot septic systems. Only those parcels with immediate access to a sanitary sewer are expected to connect. As the proposed land development and subdivision projects develop and extend sewers, existing homes and businesses that gain access to the new sewers will be expected to connect. These types of connections will, however, be small in number. There is no intent at this time for the Authority or Township to extend public sewers to unsewered areas within the sewer service area.

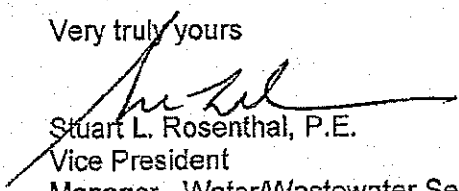
BUILDING ON A FOUNDATION OF EXCELLENCE

Shannon L. Rossman
Intergovernmental Affairs Planner
Berks County Planning Commission
Reference: Washington Township Act 537 Plan Update
File No. 06-05079
June 8, 2009

Page 2

We trust the preceding adequately responds to the questions raised in your May 29, 2009 memo. If you have any further comments or questions, please do not hesitate to contact us.

Very truly yours



Stuart L. Rosenthal, P.E.
Vice President
Manager - Water/Wastewater Services

SLR/si

cc: Michael E. Krestynick, Chairman
Jason Ganster, Manager
Michael A. Setley, Esq.



County of Berks
Planning Commission

(610) 478-6300
FAX: (610) 478-6316

Berks County Services Center
633 Court Street, 14th Floor
Reading, PA 19601-4309

Douglas Paul Rauch, Chairman
Joseph Griffin, Vice-Chairman
Peter F. Giorgi, Secretary
Lloyd W. Hopkins, Jr.
James L. Mason
James C. McCarthy
Clyde A.B. Myers
Barry L. Schlouch
Mark C. Scott

Glenn R. Knoblauch, Executive Director
Heidi B. Masano, Asst. County Solicitor

June 10, 2009

Mr. Timothy Wagner
PA DEP Water Management Program
909 Elmerton Avenue
Harrisburg, PA 17110-8200

Re: Washington Township Act 537 Plan
Update

Dear Mr. Wagner:

The Berks County Planning Commission has reviewed the Act 537 Plan Update for Washington Township. The Commission offers the following comments:

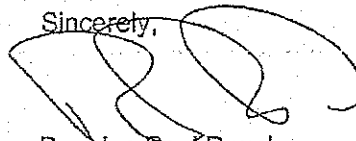
- 1.a. The Berks County Comprehensive Plan, Vision 2020 identifies some of the areas serviced and proposed for public sewer as agriculture preservation. Sewer service in the agricultural preservation areas is not consistent with the Plan. (See attached map)
- b. The remaining areas proposed for sewer services are designated as existing developed, designated growth, future growth, rural conservation, and environmental hazard. Service to these areas is consistent with Vision 2020.
2. Parcels that have sold their development rights for the purpose of agricultural preservation are not eligible for development. Figure #6 in the Act 537 Plan Update shows a parcel named "Shuler Farm" for future land development. This parcel is actually the Ehst tract and the parcel's development rights have been purchased by Berks County. According to the Township Engineer, the "Shuler Farm" properties do not have any current land development or subdivisions plans, however capacity for the properties has been reserved by Barto Industries Inc. The Township should correct figure #6 to reflect the correct location of the "Shuler Farm".
3. Tables 2 and 3 in the Act 537 Plan Update include edu's for developments that are speculative. The Commission recommends that the Township determine if the developments are viable and, if not, remove them from the calculations for future capacity needs.

4. Section 8.9 of the Plan Update states that there is no County Stormwater Management Plan. This is incorrect. A large portion of Washington Township is covered by the Swamp Creek Stormwater Management Plan that has been adopted by Berks County and approved by the PA Department of Environmental Protection. This section should be revised.
5. The Sewer and Water Regionalization Study of 1998 recommends upgrades and expansion of existing facilities where needed, therefore the project is consistent with the Study.

The Berks County Planning Commission does not undertake a technical or engineering review of the project nor does it address compliance with all municipal plans, ordinances or regulations; as such issues are the responsibility of the local municipal officials.

The Berks County Planning Commission thanks you for the opportunity to review this private request for an Act 537 revision and requests that a copy of the PaDEP approved be filed with our office.

Sincerely,



Douglas Paul Rauch
Chairman

BERKS COUNTY PLANNING COMMISSION

DPR/prk

cc: Washington Township
Stuart L. Rosenthal, P.E., Gilmore & Associates, Inc. ✓
Berks County Agricultural Land Preservation



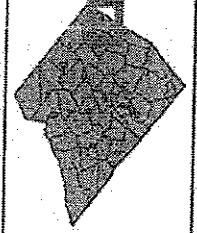
- Legend**
- quarry
 - airport
 - Industrial, January 2000
 - Highway
 - water
 - soil
 - Vision 2020
 - LAND USE**
 - Existing Development
 - Designated Growth
 - Future Growth
 - Agricultural Preservation
 - Rural Conservation
 - Environmental Hazard
 - Preserved Open Space
 - Roadway
 - Municipal Boundaries



Scale in inches to feet: 1:63,683

DISCLAIMER: This map and associated information are provided for informational purposes only. Any reliance placed on this map and associated information is at the user's sole risk. The map and associated information are not intended to be used for legal or other purposes. The map and associated information are not intended to be used for legal or other purposes. The map and associated information are not intended to be used for legal or other purposes. The map and associated information are not intended to be used for legal or other purposes.

Act 537 Plan



6-4-09
BCPC

Washington Twp

Comments:



MEMORANDUM

(610) 478-6300
FAX: (610) 478-6316

Berks County Planning Commission
Berks County Services Center
633 Court Street, 14th Floor
Reading, PA 19601-4309

TO: Washington Township
FROM: Shannon L. Rossman, Intergovernmental Affairs Planner
RE: Act 537 Draft Plan Update
DATE: May 29, 2009

Following are questions that have arose during the review of the Act 537 Draft Plan Update. We would appreciate if the Township could respond to these questions prior to the Planning Commission meeting.

1. What is the actual status of the subdivision/land development projects within the area zoned for agricultural protection? (Sterners, Hoffman, Clover Hill, Washington Mews and Shuler) Under Status, in table 2 of the Plan, they are listed as "proposed". Why would the Township want to service the agricultural area with public sewer?
2. Why is the Township identifying the Ehst tract along Route 100 as the Shuler Farm and a future land development project? The parcel identified on the map figure #6 of the Plan is actually the Ehst tract and the development easements were purchased through the Berks County Agricultural Preservation Program in 1998.
3. Does the Township have any parcels left within the service area that have on-lot septic systems that should be connected? It appears that the only connections shown are for new development.

www.co.berks.pa.us/planning

APPENDIX 5

**WASHINGTON TOWNSHIP PLANNING COMMISSION
MINUTES
AUGUST 6, 2009**

CALL TO ORDER

The meeting of the Planning Commission was called to order at 7:00 p.m. by Chairman, Russell Drabick on Thursday, August 6, 2009, at the Washington Township Municipal Building. The meeting opened with the Pledge of Allegiance.

ROLL CALL

The following members were present: David Moyer, Tom Jordan, Mark Bedle, David Heimbach, Rose Martin, Jennifer Cunningham, Susan Brown, Planning Commission Secretary, Steve Price, Esquire, representing Mogel, Speidel, Bobb & Kershner, Dwight Powell, Engineer representing Evirotech & Associates, Inc.; and seven (7) people in attendance.

Absent:

TAPING OF MEETING

The meeting was recorded as an aid in the preparation of the minutes. It was noted that no one was taping the meeting other than the Planning Commission Secretary this evening.

APPROVAL OF MAY 7, 2009 MEETING MINUTES

A motion was made by Mark Bedle and seconded by David Moyer to approve the minutes, as prepared, for the May 7, 2009 meeting of the Planning Commission. **No public comments received.**

All ayes

NEW SUBMITTAL

None

SUBDIVISION REVIEW

Gehringer Farms Phase I Revised:

Mr. Dave Shafkowitz and Mr. Nick Fiola were present this evening representing the Gehringer Farms Phase I Revised Plan. Mr. Shafkowitz stated the approval letter was received from WTMA for the sewer connections and the NPDS application is pending approval. Mr. Moyer questioned when Gehringer Road would be finished. Mr. Shafkowitz will check with John Backenstose and get an answer for Mr. Moyer tomorrow.

Ms. Cunningham questioned the status of the notices that were to have been mailed out by Bursich. It was noted at the May 7th meeting that some residents within 500 feet did not receive the notices that were sent out with respect to the four (4) additional homes. At that time it was stated the notices would be re-mailed. It was noted in the May 7, 2009 minutes that Mr.

August 6, 2009

Shafkowitz stated he would send notices out to all property owners within 500 feet. Mr. Shafkowitz committed to getting the notices out prior to the August 27th Board of Supervisors meeting.

Engineer Powell questioned the status of permits and approvals. Mr. Fiola stated the NPDS has been submitted, the sewage planning has been obtained and the water supply will be obtained.

A motion was made by Rose Martin and seconded by Mark Bedle recommending conditional approval based upon the July 12, 2009 Envirotech Review Letter, NPDS Permit approval, obtaining four (4) additional EDU's from WTMA, E & S approval, obtaining approval for the water supply and the timely mailing of the notices to residents within 500 feet. **No public comments received.**

All ayes

COMMUNICATIONS

Volunteer Barto Fire Company Letter regarding the West Tract. Chief Matt Bakes was present to answer any questions. Chief Bakes stated having access to a property is very important and saves a lot of time. The concern is only having access to the front of the buildings Mr. Mingey is going to build creates great concern for the fire department. Chief Bakes stated there will be cars in the front of the building since that is the location of the parking area which will make it even more difficult for the fire department to have access to the building in the event of an emergency. It was suggested by Mark Bedle that a copy of the letter be mailed to Mr. Mingey and Mr. Terry Parish and request a response from Mr. Mingey and/or Mr. Parrish to the Planning Commission, the Board of Supervisors and the Volunteer Barto Fire Company.

Mr. Bedle stated in the past the Volunteer Barto Fire Company expressed their concern that subdivision plans were being approved without the involvement of the fire department and wanted to know if that situation has been corrected. Chief Bakes stated the fire department has been receiving the subdivision plans and reviewing them for emergency management purposes. Mr. Price stated it is important that Mr. Mingey receive a copy of the letter outlining the fire departments concerns.

Mr. Price suggested taking a look at the Land Development Ordinance to see some general language with respect to emergency access.

ADDITIONAL ITEMS

Act 537 Plan Update:

Mr. Stuart Rosenthal, Gilmore & Assoc. Inc., Engineer for WTMA was present this evening to give a brief presentation of the Act 537 Plan Update and address any questions or concerns from the Planning Commission. Mr. Rosenthal stated this is a Township Plan and a Township responsibility and is ultimately adopted by the Board of Supervisors and is the guiding instrument for sewage management within the township. Mr. Rosenthal has been working on the Act 537 for about two (2) years now. Mr. Rosenthal briefly reviewed items within the Plan such as the existing 250,000 gallon per day capacity at the Treatment Plant, two pump stations, one located at Swamp Creek and one located on Weinstein Road. The Plant is currently handling approximately 180,000 gallons per day on average or about 2/3 capacity of its designed flow at

August 6, 2009

this time. The WTMA has rights to 100,000 gallons of capacity of the Bally Treatment Plant and at this time WTMA is using very little of that capacity. Chapter six (6) of the Plan is a key chapter which identifies and projects growth in the township. A need for two (2) expansions has been projected. The Treatment Plant expansion would take the current capacity from 250,000 gallons per day to 500,000 gallons per day with an increase in the level of treatment, which WTMA is on notice from DEP that will take place and will probably take place next year at the time of the renewal of the NPDS Permit. The NPDS Permit is up for renewal next year and DEP has already informed WTMA we will be expected to comply with higher standards of treatment. The cost estimate in this report includes the additional treatment to meet the new regulations. Mr. Rosenthal explained Washington Township would be going on record, provided the Act 537 goes to DEP before the renewal cycle, with the compliance schedule adopted by the Board of Supervisors and if DEP approves the Plan, it would become the overriding schedule.

It was asked if the 100,000 gallons of capacity at the Bally Treatment Plant would ever be used within ten (10) years. Mr. Rosenthal stated it would be a matter of whether or not there is a project on the Shuhler Farm. There are four hundred fifty (450) EDU's reserved for the Shuhler Farm for use in the Bally Treatment Plant. For the additional capacity at the Bally Treatment Plant there is a projected swap of facilities in the works so there would be no cost to the Authority for this capacity.

Ms. Cunningham asked if all this goes through and they expand the Plant and development stays slow and the Plant will then have over the capacity needed. Mr. Rosenthal explained that we do not want a repeat of what happened when the system was initially built, and that is the Plant was built in anticipation of development and the development never happened. This over anticipation put a huge financial burden on the Authority and continues to be a financial burden today. Ms. Cunningham stated that even though EDU's have been reserved by Developers currently WTMA is not receiving the usage fees for all those EDU's so how does the WTMA anticipate breaking the cycle of debt. Mr. Rosenthal stated the \$5 million expansion does not solve this problem. There are various financial options being considered to hopefully resolve the issues the WTMA is currently facing. Mr. Price explained the WTMA is trying to fix a fifteen (15) year old problem that has to be addressed and also meet the demands of the future and be fiscally prudent to build what is anticipated to accommodate the township. Mr. Rosenthal stated the need for construction will not be until 2012 or 2013 and if that appears to be too soon that can also be pushed back even further.

Mark Bedle asked how much interaction Mr. Rosenthal has had with the Developers of the various properties. Mr. Rosenthal explained that he has contact each Developer in order to get a sense of their rate of development and they are not committing to anything. Mr. Rosenthal contacts the Developers each year for information to be included in the annual Chapter 94 Operations Report which is a requirement of the DEP.

Mr. Bedle had the following questions:

- The West Tract will be connected to the public sewer and owned by WTMA. Yes
- There is discussion regarding the off-set of the cost for the additional EDU purchase from the Bally Municipal Authority in the amount of approximately \$380,000 in a trade off the public water supply, supplying Victoria Village and the Washington Elementary School

August 6, 2009

for the sewer capacity. **Yes, there has been communication between the Bally Borough Solicitor and the WTAM Solicitor and there is correspondence that the Bally Municipal Authority is agreeable but documentation is not finalized.**

- **Is the cul-de-sac west of Bally Borough on public sewer. Yes, it is on public sewer and the WTMA owns that sewer and it goes to the Bally Treatment Plant.**
- **Why were two (2) different peaking factors used when the calculations were done on the pumping stations. As the pump station increases in size the peaking factor goes down. The peaking factor reflects the size of the pump station.**
- **The Developer financing was an option turned down, why do we not have that option. There are a number of issues and constraints and Developers who do not have money. It is the Township and Municipal Authority responsibility to provide services that are adequate and compliant with DEP regulations.**
- **Ten years down the road are we going to be in this position again. Are we going to reach capacity in our township that we just can't develop any more. DEP will not let you do that, if you reach capacity of your system you must provide capacity for your customers and Developers who go through the approval process you cannot say you do not have the capacity. DEP is going to say you must take the Act 537 Plan and update it and come up with a plan for capacity.**
- **Is it realistic to think there will only be two (2) other hook ups per year in the entire township for the next ten (10) years. A lot of the land in the service area is already developed or is already in the projected projects.**
- **When sewer is run for the projected developments is there an ordinance in place that requires existing homes to connect to the system and does your miscellaneous projection include all the homes that will be hook up in addition to the already approved developments. There are six or seven homes that will be within 150' of the sewer main. Not all of the homes because sewers are internal to the project and they are included in the miscellaneous count.**
- **Is it realistic to think that magically in 2009 there will be a budget surplus. Up until recently the anticipated agreement with Barto Mall was they would make up the shortfall each year by purchasing EDU's. The magic is done on table six (6) reflecting Barto Mall making up the shortfall. The financing will be addressed at the Board of Supervisors meeting. The Township is ultimately responsible.**

Mr. Moyer asked if the projection remains at 2013 and the development doesn't happen would the Township be obligated to proceed with the expansion. Mr. Rosenthal stated the Township would need to go back to DEP and let them know the compliance schedule is no longer valid because development hasn't taken place and the township does not have the resources or the need to move forward.

Mr. Moyer asked about upgrades to the Weinstein Pump Station. Mr. Rosenthal explained upgrades to Weinstein are a maintenance issue and is not an Act 537 issue. There is no growth projected in the Weinstein service area. Mr. Bedle stated the cash flow projection should incorporate any maintenance expenses whether they are inside or outside the Act 537. Mr. Rosenthal agreed with Mr. Bedle. Mr. Moyer asked if the projection includes any new sewer lines and Mr. Rosenthal stated there are no new sewer lines all new sewer lines would be built by developers.

August 6, 2009

Mr. Bedle asked how much infiltration there is to the system. Mr. Rosenthal indicated there are some problems in the Weinstein service area particularly during heavy rain events. Mr. Moyer suggested adding the Weinstein upgrades to the capital expenses and Mr. Rosenthal stated he did make a note of Mr. Moyer's request.

Mr. Rosenthal explained the process now as DEP requires the Act 537 Plan Updated needs to be considered by the Township Planning Commission and either through minutes or correspondence it must be documented that the Planning Commission considered, reviewed and commented on the Plan and if necessary respond to any of the comments made this evening. Mr. Rosenthal stated he will take the minutes and specifically any recommendations or requests such as incorporating additional capital funds in the cash flow for a useful Weinstein Pump Station and put a response into the report itself. Mr. Rosenthal stated he would discuss with the WTMA Board Members what type of upgrades and equipment they would like in the cash flow. Mr. Rosenthal explained there needs to be a public comment period of thirty (30) days. Mr. Bedle requested for Mr. Rosenthal contact the Developers again to review their development plans.

Public Comments:

Jim Roma, 5 Apple Street-stated the facts and figures should be considered very carefully.

AUGUST MEETING SUBDIVISION EXTENSIONS

A motion was made by Rose Martin and seconded by Mark Bedle to ratify the actions taken at the June 25, 2009 Board of Supervisors meeting approving the following subdivision extensions:

Melcher/Quaker Homes	07/07/09 to 10/04/09
George Sterner Sketch Plan	07/07/09 to 10/04/09
Clover Hill Sketch Plan	07/07/09 to 10/04/09
Charles Hoffman Sketch Plan	07/07/09 to 10/04/09
Back Country Road	07/07/09 to 10/04/09
Bally Well #4	07/21/09 to 10/18/09
Gehring Farms Phase I Revised	05/16/09 to 08/14/09

Public Comment:

Jim Roma, 5 Apple Street-In the Code Book it states the applicants have to submit written extension letters, have they done that according to 107-14 (e). It was explained these are ninety (90) day extensions. A signed form is received within the ninety (90) day time period from developers. Mr. Price explained the developer is granting the township a ninety (90) day extension the township is not giving them an extension. Otherwise the Planning Commission would have to reject or approve the plan.

Mr. Roma stated these plans have had preliminary approval longer than five (5) years. Mr. Roma states it is also in the Code Book if they have received preliminary approval from the date of approval they have five (5) years to proceed with the plan and they have not met that. Mr. Price explained they have a five (5) year protection. If a plan is approved your plan is not subject to zoning changes and other changes for five (5) years. If you make substantial

August 6, 2009

improvements in that development you are grandfathered in. If someone received preliminary plan approval ten (10) years ago and the plan is sitting in limbo and many things have changed they don't have that protection. If they take the plan to the final stage they may be better off submitting another preliminary plan. Mr. Bedle questioned after five years the Planning Commission has the right to say the plan can be reviewed but it will be reviewed based on current zoning and Mr. Price stated yes that is correct. Mr. Moyer stated his concern is the Hoffman and Sterner plans since they are only sketch plans. Mr. Price stated if there are concerns with plans sitting in limbo the Township Engineer should review the status of the plans and provide a detailed report for each plan so the developers can be contacted and questioned as to what their intentions are. The following five plans should be reviewed by the Engineer for dates they were submitted, preliminary approval dates and what the current status is and have a report available at the September meeting:

- Melcher/Quaker Homes
- George Sterner
- Charles Hoffman
- Back Country Road
- Clover Hill

All ayes

A motion was made by Rose Martin and seconded by David Moyer to ratify the actions taken at the July 23, 2009 Board of Supervisors meeting approving the following subdivision extensions:

Stinley Subdivision	08/05/09 to 11/03/09
Gehring Farms Phase I Revised	08/15/09 to 11/12/09

No public comments received.

All ayes

A motion was made by Rose Martin and seconded by David Moyer approving the following subdivision extension:

West Side	08/28/09 to 12/27/09
------------------	-----------------------------

No public comments received.

All ayes

ANNOUNCEMENTS

Mr. Bedle stated correspondence was received from the water supplier for West Tract, Superior Water, has there been any resolution to this issue. Mr. Price stated he saw a litigation matter in the Berks County Law Journal but has not heard anything else. Mr. Price also stated this is an internal matter between Barto Mall and Superior Water.

Mr. Mark Stinley, Weinsteiger Road-asked if there is anything his Engineer needs to work on prior to next months meeting so they can keep things moving. Mr. Price stated John Aston should give him a call.

August 6, 2009

Jim Roma, 5 Apple Street-questioned if the Planning Commission will be getting the Alternative Energy Ordinance draft. Mr. Price stated they did get the draft and it was then put out for comment.

ADJOURNMENT

A motion was made by David Heimbach and seconded by Mark Bedle to adjourn the meeting at 8:55 p.m.

All ayes

Respectfully submitted,

Susan J. Brown
Planning Commission Secretary

APPENDIX 6

5 Apple Street
Barto, PA 19504
October 21, 2009

Mr. Jason S. Ganster, Twp. Manager/Secretary
Washington Twp.
120 Barto Road, PO Box 52
Barto, PA 19504

RE: Public comments – Act 537 Plan Update – September 2009 Revision

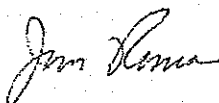
Dear Mr. Ganster,

Included in this memo are my questions regarding the September 2009 revision of the proposed, voluntary Act 537 Plan Update. These questions are being submitted during the public comment period advertised on the township website.

1. Section 1.0 – why is this report based on "anticipated projects and projections"? Why is it not based on existing, reliable data?
2. The developers will be the people who will profit from the sewer system. Why do we not allow them to expand the system, when needed, for the community? Why can't development projects build their own "mini-sewer" plants?
3. How can the capacity at the Bally plant be reserved for future projects if they are undefined?
4. Section 2.0 – Were meeting minutes published for the 10/06 meeting with Washington Twp, WTMA, and Gilmore Associates?
5. Section 6.1 – The Niantic plant has a capacity of 1303 EDUs. 923 EDUs are anticipated by 2013. We have "no activity" option for at least 5-7 years. Why was this option not chosen?
6. Which developer is pressuring township for the plan update to be initiated?
7. Figure 6 – Why does this figure and others include tracts to the north and northwest of the propose Melcher Tract, specifically along Sycamore Road?
8. The WTMA attorney stated at the 9/09 Board of Supervisors meeting that he does not see capacity levels rising to require plant expansion for at least 7 years. How does this comment affect the report? Is this report accurate after what has happened to the US economy in 2009?
9. Section 7.4 – Why can't the Swamp Creek pumping station expansion be separate from the plant expansion?
10. Section 7.5 – If infiltration exists, why is it not being fixed?
11. Section 7.8 – The no-action alternative will work for 5 years. Why can't the twp wait until closer to the end of the 5 year period until it updates its 537 plan? Wouldn't this be more feasible in the current economic times? See also section 8.3.
12. Section 8.5 – Goal IV will be met because data is speculative. Is not the last sentence of the section misleading?

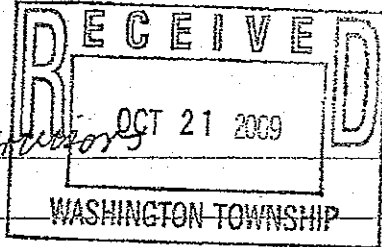
13. Section 8.14 - How much does it cost the twp to purchase the capacity at the Bally plant? How much are we paying for capacity that is not be used?
14. Section 8.16 - Why is only PennVEST loan discussed? What other programs, state and federal, are available?
15. Where in the financial section of the report does it state WTMA will be re-paying the township for current loans?
16. Section 9.1 - What is the annual cost of the WTMA contracted operations firm? What will costs increase to with larger facility?
17. Section 9.2 - The West Tract is receiving a \$3200 per EDU discount on the current \$9700 fee. How can such a discount be provided?
18. If the West Tract misses their due December due date for EDU payment, will the WTMA charge them the full price of \$9700 per EDU? If not, why?
19. Section 9.6 - What type of experience does the WTMA have? Please explain in detail. They have been unsuccessful to date by most measuring criteria.
20. Section 10.8 - What is the construction proposed in 2014?
21. Section 10.9 - The schedule states an 11/09 plan adoption date. The twp flier we received in the mail states 10/09. Which is correct?
22. Does the schedule read that monies cannot/shall not be spent until PADEP Part 2 approval is received?
23. Why is Appendix 3 missing? This is not a complete report to review.
24. Why is Appendix 6 missing? This is not a complete report to review.
25. Why is Appendix 7 missing? This is not a complete report to review.
26. Why is Appendix 11 missing? This is not a complete report to review.
27. Appendix 8 - What is the input to the Niantic plant from contracted haulers of private sewage systems? How much revenue is generated?

Thank you.



Jim Roma

Washington Township Board of Supervisors



WHY IS THE ACT 537 PLAN BEING PROPOSED
AT THIS TIME; WHEN THE W.T.M.A. ENGINEER STATED IN
THEIR REPORT THAT NOTHING NEEDS TO BE DONE AT THIS
TIME?

WHERE WOULD THE FUNDING FOR THIS COME FROM?
DO YOU EXPECT TO INSTITUTE FURTHER TAXATION
ON THE NON-SERVED RESIDENTS THAT YOU HAVE ALREADY
UNETHICALLY TAKED?

WHAT HAPPENED TO THE "EXTRA E.D.U.'S" THAT
THE W.T.M.A. HAS SAID, THROUGH ITS CHAIR PERSON,
"EVERY SEWER AUTHORITY HAS EXTRA CAPACITY"?

IF YOU FEEL MORE E.D.U.'S ARE NOW REQUIRED
THEN WHY DID YOU OVERSELL WHAT YOUR SUPPOSED
CAP WAS?

WHY, WHEN AN AGREEMENT WAS ON PAPER WOULD
YOU NOT INFORM OTHERS THAT NO E.D.U.'S EXIST
AND ANY DEVELOPMENT WOULD HAVE TO PAY FOR
INCREASES?

WHAT IS THE RESULT OF THIS PROPOSAL?

WHAT, MORE BORROWING TO INCREASE THE
CALAMITY ALREADY IN HAND?

RESPECTFULLY,

JOSEPH S. BACHKAI III

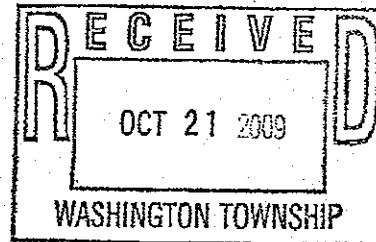
Joseph S. Bachkai III

34 SYCAMORE RD BARTO, PA 19504

Daniel A Stauffer
114 Sycamore Road
Barto, PA 19504

October 20, 2009

Jason S Ganster, Twp. Mgr./Secretary
Washington Twp, 120 Barto Road
P.O. Box 52, Barto PA 19504



To the Washington Township Board of Supervisors,

Upon reviewing the September 2009 revision of the proposed Act 537 Plan Update, I have the following questions and concerns:

1. Page 13, section 6.1 states, "Washington Township is currently experiencing significant growth." Given the current state of our economy and specifically the housing market crisis, this is obviously an inaccurate statement. Since the study has been prepared based on outdated or inaccurate information, will the Board either abandon its consideration of this plan or consider a new study factoring in realistic updated economic market conditions?
2. The August 27, 2009 Board of Supervisors meeting minutes reflect that when Michael Setley, solicitor for WTMA, was asked what percentage or number of projected EDU'S used for this study were based on speculative projections that may never materialize, Mr. Setley stated, "All of them", or 100%.
3. In Appendix 4, the June 10, 2009 letter from Berks County Planning Commission, paragraph 3 states that the Act 537 Plan Update includes EDU's for developments that are speculative. The Commission recommended removing speculative EDU projections from the calculations for future capacity needs. Why hasn't this been done as recommended by Berks County Planning Commission?
4. Page 34, Section 10.2 states, "The current waste water disposal system has adequate capacity for the study areas' current needs." Page 23, Section 7.8 states that the No Action Alternative would allow adequate capacity for all proposed flows for the five year planning period, leaving an excess, unused capacity. This section further states that if the No Action Alternative is implemented, there would be no negative impact on water quality, public health, recreational opportunities, drinking water sources, environmental concerns, or community economic conditions over the next five year period. At the September 24, 2009 Board of Supervisors meeting, WTMA solicitor Michael Setley stated we will not need the Act 537 sewer expansion for at least six years. Given these projections and considering that we are in one of the worst economic recessions of our country's history, why wouldn't the Board of Supervisors think it would be in our

residents' best interest to choose the No Action Alternative at this time? I request an answer to this question by each of the three individual supervisors.

5. Why does the Activity Schedule (page 35 Section 10.9) list construction start-up by December 2012 and completion by December 2013? This schedule is inaccurate or outdated and should be revised.

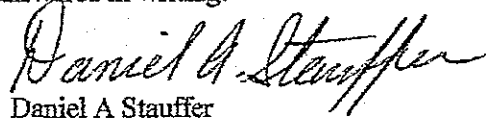
6. There are known Registered Archaeological Sites and known PNDI Impact hits regarding endangered species within the Act 537 Plan Study Area. How might these impact proposed developments and why haven't these areas been identified or shown on the Act 537 Plan Study Area Physical Features Map? Appendix 9 states, "PNDI-Update in Progress." Has it been completed? If so, where are the final reports?

7. Page 35, Section 8 states, "The chosen financing plan is the issuance of sewer revenue bonds in the amount of \$4,369,000. The back-up financing plan will be [an] application PennVest loan." Why wouldn't the Board or the WTMA first apply for a PennVest loan? Which of the two finance options will cost the WTMA more in interest, commissions, and administrative costs? What are these projected costs for the Sewer Revenue Bond Option vs. the PennVest loan option?

8. In Appendix 5 (August 6, 2009 Planning Commission minutes) the planning commission questioned the Developer Financing Option, which was turned down. Mr. Stuart Rosenthal, Engineer for WTMA stated, "There were a number of issues and constraints and Developers who do not have money." What was the Developer Financing Option? If we are not considering that option because developers do not have the money, why are we considering any option at this time since neither the WTMA nor Washington Township has the money? Also in Appendix 5 (page 4 of August 6, 2009 Planning Commission minutes), Mr. Stuart Rosenthal told the Planning Commission that if the Sewer System reaches capacity, the DEP will mandate updating the Act 537 Plan to increase capacity. Is this actually the law or a DEP requirement? I have been advised it is not.

In consideration of the aforementioned concerns, I request the Washington Township Board of Supervisors choose the No Action Alternative. Also, considering that the current Board will change as of January 1, 2010, I request that a decision of this magnitude be made by the future Board, as chosen by the voters at the November 3, 2009 general election. Since the new Board will be a fair representation of the residents and will be the Board who will have to deal with the cost of implementing and operation of the proposed expansion, they should make the decision of any Act 537 Plan updates or changes. The current Lame Duck Administration consists of one interim supervisor not chosen by the voters and one supervisor whose term expires this year. Both of these terms will be filled January 1, 2010 by the newly elected supervisors. No changes should be considered until after that time.

I respectfully request that each of my questions be answered in writing.


Daniel A Stauffer

October 18, 2009

Jason S. Ganster
Township Manager

Re: Act 537 Plan Update

Dear Jason,
Following are my comments and recommendations

Although Mike Setly, at a recent Supervisor's meeting, said that the Act 537 Plan Update "is nothing more than a planning document" other comments were made that indicated its approval also included automatic approval of \$4.4 million of incremental debt.

This is problematic from many standpoints, the most important of which is the five year projected shortfalls in debt service payment capability until 2013 totaling \$900,000. While the \$900,000 line of credit drawdown and the .62 debt service millage increase is in effect to address this shortfall, Act 537 update planning activity is concurrently taking place. Before any action is taken which commits the Township to \$4.4 million of incremented debt, an assessment of the status of the debt service shortfall problem must take place by the WTMA and Board of Supervisors and publically reported to the community.

Assuming this assessment proves satisfactory, then and only then should steps be activated leading to the need for incremental debt. Therefore page 35 section 10.9 should be amended accordingly. This could take place at the point that shows awaiting PADEP Part 2 approval, at which time this assessment needs to be completed.

Table 2, Annual Cash Flow Projection, should be amended to show the projected \$900,000 debt service shortfall and its projected resolution through EDU's coming on line. To incur projected incremental debt service in 2013 while the debt service shortfall remains unresolved because there are inadequate EDU's would be a cautionary trigger point that should delay further planning activities leading to the incurrence of incremental debt and sewer expansion.

These two issues are somewhat complex and I would be more than happy to make myself available to Stu Rosenthal or others for clarification.

Federal stimulus money not referenced as a fund source should be aggressively pursued with the outcome not prejudged. Sewer expansion leads to increased housing which benefits the local economy.

The Supervisors must adopt "out of the box" strategies to increase the EDU's. Tax abatement warrants relating to new residential housing should actively be pursued in collaboration with the School Board.

Respectfully Submitted ,

John P. Wynne Jr.
Founding Chairman
Spring Valley Village
Resident Association
610-367-4114

October 2 2009

Dear Washington Township Board of Supervisors,

Thank you for the opportunity afforded me to comment on the proposed Act 537. Please note the following overview.

1. The Act 537 appears to have been hastily drafted with unsubstantiated assumptions as to proposed growth.
2. The original township Act 537 was drafted to address current needs. This document and recent Board decisions are different in that the township is not addressing needs but promoting and facilitating growth.
3. The 537 update has been developed without addressing other very important and overdue needs of the township. The township should consider all of its planning documents as a package. The township should also consider all planning and infrastructure when planning sewage plant expansion and additional area coverage. Please consider the following:

A. Although a traffic study was completed in 1990 for the per hour vehicle count overload of the north/south corridor of RT 100; development has continued unabated and alternative traffic patterns have not been addressed. An increased vehicle count on the existing road network is unconscionable.

B. Since the early 1980s the interpretations of the exterior municipal boundary line along with the "cutout" incorporated towns of Bally and Bechtelsville boundaries have never been surveyed. Further development without marking the representative municipality of a given home or tract does not make sense from a management or taxing or planning perspective.

C. Funding for safety and protection from a regional police and full-time fire company has not been addressed or budgeted. Existing homes are already at risk.

D. The current proposal does not adequately protect the natural resources of this rural community. Please note that comments from the Berks County Conservancy and our local Lorax Foundation should be solicited and included.

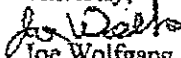
E. This Act 537 has designated areas planned for continued agricultural protection in the Hereford/Washington Joint Comprehensive Plan for promotion of high density growth.

4. Significant current funding problems with the WTMA must be addressed before expansion. Note that PennVest's help is being restricted because of budgetary problems with the state. Also, development projections should be scaled back because of the worsening economy and the lack of adequate employment opportunities in Berks County and surrounding areas.

5. The politicalization of the WTMA with supervisors serving on both boards, with the township promoting development projects and approving extensions and plan phases without public comment, with the current hasty architect of this Act 537 not standing for re-election, and with two of the three supervisor positions open in next month's municipal election; presents the likelihood that any planning decisions done by the 2009 Board of Supervisors will be immediately revisited in January 2010.

In summary I believe that no further sewage collection or treatment facility expansions should be authorized until the outstanding debt load is paid off and a thorough Act 537 study has been administered by the incoming Board of Supervisors.

Sincerely,


Joe Wolfgang
172 Kittowen Rd
Bally PA 19303

APPENDIX 7



WASHINGTON TOWNSHIP
Berks County

120 Barto Road
P.O. Box 52
Barto, PA 19504
Tel 610-845-7760
Fax 610-845-8499
[HTTP://www.washtwpberks.org/](http://www.washtwpberks.org/)

November 11, 2009

File No. 06-05079

Mr. Jim Roma
5 Apple Street
Barto, PA 19504

Reference: Washington Township Act 537 Plan Update

Dear Mr. Roma:

Thank you for your letter of October 21, 2009, commenting on Washington Township's Draft Act 537 Sewage Facilities Plan Update. In response to your comments, I offer the following:

1. The anticipated projects and projections you refer to are based on current reliable data. All the projections were based upon recent input from developers, along with review and adjustments in accordance with comments from the Board of Supervisors and the Washington Township Municipal Authority.
2. Act 537, and the rules and regulations associated therewith, require that Washington Township plan for proper sewage management within the Township boundaries. Whether or not developers make a profit from their activities is irrelevant, since they have a right to develop their properties and the Township has an obligation to provide proper sewage management. The projects identified in the Act 537 Plan Update are either already connected into the Authority sewer system or approved for connection. Construction of "mini sewer plants" as you put it, is not an option. Frankly, that would not be a smart option anyway since it would increase the pollutant potential in the Township's waterways and would add additional liability to the Township and Authority since they would continue to be responsible for those facilities through DEP mandated oversight agreements.
3. Although some of the projects that may connect into the Bally Treatment Plant are not yet defined, their capacity needs are well enough established through agreements between the Authority and developers that the reservation of a nominal amount of additional capacity is reasonable.
4. The October 2006 meeting you referred to was with the DEP to discuss the scope of the 537 Plan Update. There were no minutes from that meeting, but in response, a scope of study was presented to DEP which was ultimately approved and formed the basis for the 537 Plan Update we are now considering.

Mr. Jim Roma

Page 2

Reference: Washington Township Act 537 Plan Update

File No. 06-05079

November 11, 2009

5. The capacity of the Authority's treatment plant needs to be assessed based upon the actual flows measured at the plant. Subsection 6.4 of the report summarizes the 2008 measured wastewater flow and future flow demand based upon the projected new dwelling units connected to the system. As the report clearly states, the no action alternative will be adequate for the five (5) year time horizon but not for the ten (10) year planning horizon.
6. The 537 Plan Update was initiated at the request of the Washington Township Municipal Authority which recognized that developments under consideration by the Township would ultimately require more capacity than its pumping and treatment facilities could provide.
7. Figure 6 outlines the future land developments in Washington Township as they are documented in the most recent plan submissions to the Township. The Melcher Tract Subdivision is outlined in accordance with the plans submitted by Quaker Homes.
8. The projections contained in the 537 Plan Update are reflective of the current state of our economy and housing market. These projections indicated that current treatment plant capacity will be adequate only until about 2015.
9. The Swamp Creek Pump Station expansion is driven by the development of Spring Valley Village and the West Tract. These two (2) projects are also fundamental to the expansion requirements of the treatment plant. Although the timing of the two expansions could possibly be separated, it will not provide any benefit and could actually cause additional permitting, bidding and construction cost. The Authority will, however, monitor the flows at both facilities closely to see if one approaches capacity more quickly than the other.
10. As stated in Section 7.5, infiltration/inflow exists, but repair or replacement of the existing facilities will not create appreciable changes in the system capacity needs. Infiltration/inflow exists in every sewer system and the Washington Township Municipal Authority is no exception. Since the Authority sewer system is relatively new, infiltration/inflow is not a serious problem. The Authority will, however, be pursuing more aggressive infiltration/inflow identification and removal activities in the next several years.
11. You are correct in that the No Action alternative will work for five (5) years. Projections indicate, however, that added capacity will be necessary immediately thereafter. Planning, design, permitting and construction of sewage treatment facilities is a time consuming process. Planning for these needs now gives us more than adequate time to see the process through. The closer we get to the end of the first five (5) year period, the less time we have available to meet the capacity need when it arises. We all understand that economic times are currently very difficult. It

Mr. Jim Roma

Page 3

Reference: Washington Township Act 537 Plan Update

File No. 06-05079

November 11, 2009

is important to understand that the serious financial commitments discussed in the Plan Update report are several years into the future, if not more.

12. The last sentence of Section 8.5 is not misleading. Based upon the growth projections, the No Action alternative will not ensure that the community facilities and services keep pace with growth.
13. As documented in Table 5, the cost for 17,000 gallons per day of additional capacity at the Bally Treatment Plant will be approximately \$244,800. As stated in Section 8.15, this expense is expected to be defrayed by transfer of the Authority water mains to Bally, and therefore, has not been included in the financing needs. The so called "Annual Bally Treatment Charge" is documented on Table 7.
14. PENNVEST loans and sewer revenue bonds are the most available and common method of financing these types of facilities. Obviously, the Township and Authority will be pursuing all possible avenues of funding at the appropriate time. Within the context of this analysis, however, we cannot speculate on the availability of grants or other governmental programs to help defray the costs.
15. The millage increase recently instituted by the Township is not reflected in the 537 Plan Update financial analysis.
16. The annual cost of the Authority's contract operations is included in the O&M expenses listed in Table 7. In 2009, that expense is approximately \$50,000. The projected cost increases are documented in the O&M expense line on Table 7.
17. The developer of the West Tract contracted for sewage pumping and treatment capacity in 2003 at the then current tapping fee. The tapping fee was increased to \$9,700 in 2004.
18. By agreement that predates the 2004 tapping fee rate increase, the West Tract developer pays \$6,500 per EDU.
19. The Washington Township Municipal Authority Board members are citizens such as yourself, who volunteer their time as a public service. Several Board members over the years have had professional experience in the wastewater field. They rely on their professional consultants for technical advice.
20. The construction proposed in 2014 is the treatment plant and pump station expansion.
21. The anticipated Board of Supervisors' plan adoption date is November 2009.

Mr. Jim Roma

Page 4

Reference: Washington Township Act 537 Plan Update

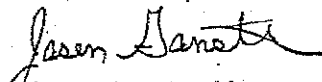
File No. 06-05079

November 11, 2009

22. The schedule is simply our best projection of project timing. Expanded treatment and pumping facilities cannot be constructed until the DEP Part II permit approval is issued. Prior to the Part II permit approval, the only expenses that will have been occurred will have been for project planning and engineering.
23. You should refer to the List of Appendices in the front of the report. Appendix 3 is missing because that appendix is the proof of public notice for the 30 day comment period. For obvious reasons, that notice was not received by the Township until after the beginning of the comment period and as such could not be included in the report that was made available for those public comments.
24. You should refer to the List of Appendices in the front of the report. Appendix 6 is missing because that appendix is intended to contain these public comments that you are currently supplying to us.
25. You should refer to the List of Appendices in the front of the report. Appendix 7 is missing because that appendix will contain the responses to the public comments, including this letter.
26. You should refer to the List of Appendices in the front of the report. Appendix 11 is missing because that appendix will contain the Township Board of Supervisors' plan adoption resolution. That resolution will not be considered until the November Board of Supervisors' meeting.
27. The Authority sewage treatment plant does not receive wastewater from contracted haulers of sewage from private sewer systems.

Thank you for your comments. Your letter as well as this response will become part of the permanent record that will be included in the final Act 537 Plan Update.

Very truly yours,


Jason Ganster, Manager
Washington Township

cc: Stuart L. Rosenthal, P.E., Vice President – Gilmore & Associates, Inc.



WASHINGTON TOWNSHIP
Berks County

120 Barto Road
P.O. Box 52
Barto, PA 19504
Tel 610-845-7760
Fax 610-845-8499

[HTTP://www.washtwpberks.org/](http://www.washtwpberks.org/)

November 11, 2009

File No. 06-05079

Mr. Joseph S. Bachkai, III
34 Sycamore Road
Barto, PA 19504

Reference: Washington Township Act 537 Plan Update

Dear Mr. Bachkai:

Thank you for your letter, which was received by Washington Township on October 21, 2009, commenting on Washington Township's Draft Act 537 Sewage Facilities Plan Update. In response to your comments, I offer the following:

1. The Act 537 Plan Update is being prepared at this time because of the length of time necessary for the planning, design and construction of sewage facilities. The Update Report does not say that nothing needs to be done at this time; it simply states that the increased capacity will not be needed for a little more than five (5) years. In order for the enlarged facilities to be available by the end of 2014, the planning, design/permitting and construction need to proceed more or less in accordance with the implementation schedule presented on Page 35 of the Report.
2. At present the anticipated method of funding for the project would be the issuance of sewer revenue bonds by the Washington Township Municipal Authority. The Township and Authority will also be exploring any and all available avenues of grant funding applicable to this project.
3. The Township has no expectation at the present time to further change the tax rate adjustments related to the sanitary sewer system.
4. I am not aware of the statement you attribute to the Authority Chairman regarding extra capacity. Washington Township Municipal Authority is in a position no different than many other sewer authorities in that its current capacity needs to be expanded to accommodate future connections.
5. The Authority is only projecting capacity needs for those projects that are already approved by the Township or in the advanced review stage. The Township is obligated by law to provide for the proper management of wastewater through the Act 537 process.

Mr. Joseph S. Bachkai, III

Page 2

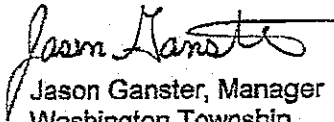
Reference: Washington Township Act 537 Plan Update

File No. 06-05079

November 11, 2009

Thank you for your comments. Your letter as well as this response will become part of the permanent record that will be included in the Final Act 537 Plan Update.

Very truly yours,



Jason Ganster, Manager
Washington Township

cc: Stuart L. Rosenthal, P.E., Vice President – Gilmore & Associates, Inc.



WASHINGTON TOWNSHIP
Berks County

120 Barto Road
P.O. Box 52
Barto, PA 19504
Tel 610-845-7760
Fax 610-845-8499

[HTTP://www.washtwpberks.org/](http://www.washtwpberks.org/)

November 11, 2009

File No. 06-05079

Daniel A. Stauffer
114 Sycamore Road
Barto, PA 19504

Reference: Washington Township Act 537 Plan Update

Dear Mr. Stauffer:

Thank you for your letter of October 20, 2009, commenting on Washington Township's Draft Act 537 Sewage Facilities Plan Update. In response to your comments, I offer the following:

1. The 537 Plan Update is based upon the best information currently available. It was updated with the latest information available from various developers, and the Authority's consulting engineers, as recently as September 2009. We feel that it is quite legitimate to say that, with over 300 additional housing units projected for construction in the next four (4) years, Washington Township is currently experiencing significant growth.
2. Obviously, any growth projection is, to some extent, speculative. We have a reasonable level of confidence in the projections contained in the 537 Plan Update since they are mostly associated with projects already under construction, and have been subjected to considerable scrutiny by the developers and Township officials.
3. The wastewater needs of the so called "speculative" projects have been removed from the capacity projections as suggested by the Bucks County Planning Commission. These projects are still listed on Table 2 since they are still in the Township records and have not been withdrawn by their respective sponsors.
4. The Board of Supervisors agrees that the current sewer system is adequate for the next five (5) years. To properly plan for the time after five (5) years when additional capacity will be necessary, we do not have the luxury to wait until the need is upon us. Therefore, we are proceeding with the planning necessary to establish the future needs of the sewer system and to move in a deliberate fashion over the next five (5) years, while capacity is still available, to design and build a system that will be ready when Washington Township needs it.
5. The implementation schedule on Page 35 of the Report is incorrect. It will be revised to reflect a December 2014 construction completion date.

Daniel A. Stauffer

Reference: Washington Township Act 537 Plan Update

File No. 06-05079

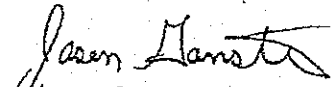
November 11, 2009

Page 2

6. As documented in Appendix 10, the Pennsylvania Historical and Museum Commission (PHMC) has reviewed the project and found no archeological or historical sites in the area of the proposed project. Individual development project sites within the study area are required to obtain their own clearances from the PHMC. The Pennsylvania Natural Diversity Inventory (PNDI) review, included in Appendix 9, has been updated. No PNDI impacts were identified in the updated review. The updated review will be included in the final draft of the Act 537 Plan Update.
7. Although sewer revenue bond financing is presented as the chosen capital financing plan of the report, we recognize that the need for financing is still four (4) or more years away. In today's marketplace, PENNVEST funds are extremely limited with interest rates only slightly better than the private marketplace. PENNVEST funding also carries with it numerous and costly administrative requirements. That being said, as the time for making a financing decision draws closer, the Township and Authority will consult with its financial advisors to ensure that the funding approach ultimately pursued will be the most cost-effective.
8. The Planning Commission minutes contained in Appendix 5 are an imperfect reconstruction of the lengthy presentation and questions and answers that took place at that meeting. The developer financing option that the minutes referred to probably refers to the developers identified in the 537 Plan Update directly paying for the treatment plant and pump station improvements. This approach was not so much rejected as it was superseded by the agreements in place between the developers and the Washington Township Municipal Authority. It is not a matter of whether or not the developers have money. Act 537 requires that each municipality in Pennsylvania provide for adequate sewage management. DEP can order a municipality to update its 537 Plan, as well as implement the 537 Plan already adopted, if DEP feels that the sewage management needs of the community are not being met. These requirements are clearly stated in Chapter 71 of the Pennsylvania Code, entitled "Administration of Sewage Facilities Planning Program".

Thank you for your comments. Your letter as well as this response will become part of the permanent record that will be included in the final Act 537 Plan Update.

Very truly yours,


Jason Ganster, Manager
Washington Township

cc: Stuart L. Rosenthal, P.E., Vice President - Gilmore & Associates, Inc.



WASHINGTON TOWNSHIP
Berks County

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October 20, 2009

File No. 06-05079

John P. Wynne Jr., Founding Chairman
Spring Valley Village Resident Association

Reference: Washington Township Act 537 Plan Update

Dear Mr. Wynne:

Thank you for your letter of October 18, 2009 commenting on Washington Township's Draft Act 537 Sewage Facilities Plan Update. In response to your comments, I offer the following:

1. Please be assured that, despite what may have been said at a recent Board of Supervisor's meeting, the adoption of the Act 537 Plan Update will not automatically approve the borrowing of \$4.4 million. Adoption of the plan commits the Township to implement its component parts, specifically expansion of the treatment plant and the Swamp Creek Pump Station, and identifies the most likely funding scenario to implement the plan. There is no automatic approval of new debt associated with the adoption of the Plan Update.
2. The \$900,000 borrowing authorized by the Board of Supervisors to assist the Washington Township Municipal Authority, was based upon a worst case scenario in which the only new tapping fees over the next five (5) years would come from Spring Valley Village and the West Tract (Meadowbrook). We don't expect this to occur, but the availability of this additional funding gives us the flexibility to weather the next several years. If development occurs as projected in the Act 537 Plan Update, the \$900,000 borrowing will not be used. This is why it is not included in the financial projections contained in the Act 537 Plan Update.
3. Demand for sewage treatment and pumping capacity is such that, if the projections hold true, expansion of the Authority's facilities will be required in about five (5) years. If that expansion need occurs as projected, that will mean the tapping fees will have been collected as projected, and the \$900,000 borrowing will not have been used. If development lags, expansion of the treatment plant and pump station will be delayed accordingly, thereby delaying the associated expenses.

John P. Wynne Jr., Founding Chairman
Spring Valley Village Resident Association
Reference: Washington Township Act 537 Plan Update
File No. 06-05079
October 20, 2009

Page 2

4. The Federal stimulus money was not referenced as a possible funding source since it will not be available for this project. Money from the American Recovery and Reinvestment Act has been targeted to so called "shovel ready" projects that are either under construction or can begin construction in the next couple of years. The schedule for this project puts it well beyond the period during which this type of funding will be available.

Thank you for your comments. Your letter as well as this response will become part of the permanent record that will be included in the final Act 537 Plan Update.

Very truly yours,


Jason Ganster
Township Manager

cc: Stuart L. Rosenthal, P.E., Vice President - Gilmore & Associates, Inc.



WASHINGTON TOWNSHIP
Berks County

120 Barto Road
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[HTTP://www.washtwpberks.org/](http://www.washtwpberks.org/)

October 19, 2009

File No. 06-05079

Mr. Joe Wolfgang
172 Kutztown Road
Bally, PA 19503

Reference: Washington Township Act 537 Plan Update

Dear Mr. Wolfgang:

Thank you for your letter of October 2, 2009 commenting on Washington Township's Draft Act 537 Sewage Facilities Plan Update. In response to your comments, I offer the following:

1. The Act 537 Plan Update has not been hastily drafted nor does it contain unsubstantiated assumptions. On the contrary, this project has been underway, with some downtime, for over two (2) years. The growth projections contained in the report are based upon the best available information obtained from developers, and has been reviewed and discussed with the Washington Township Board of Supervisors, the Washington Township Municipal Authority and the Washington Township Planning Commission. Considering the uncertainty inherent in projecting growth, particularly in today's economy, we feel the projections have been vetted to the greatest extent possible.
2. The 1993 Act 537 Plan addressed sewage issues facing the Township at that time, failing on-lot sewage disposal systems and projected development. The current document is purposely limited in scope to the area of the Township that is already served or may soon be served by public sewers. As such, it is focused on providing sewer service to projected developments that will be constructing public sewers. Our needs associated with on-lot sewage disposal systems will continue to be addressed by the Township's ongoing Sewage Management Program.
3. Although you raise a number of important issues such as traffic, police protection and natural resources, the purpose of the Act 537 Plan Update is sewage management. The Act 537 Plan Update must be consistent with other Township plans and programs, but cannot address perceived deficiencies in those other areas.

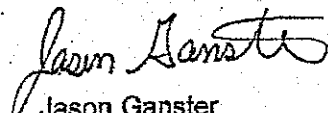
Mr. Joe Wolfgang
Reference: Washington Township Act 537 Plan Update
File No. 06-05079
October 19, 2009

Page 2

4. We acknowledge the funding challenges faced by the Washington Township Municipal Authority. These challenges are being addressed in a number of ways, including working with developers to secure the advance payment of tapping fees for their development projects. It is the immediacy of those development projects that is the key part of the solution to the Authority's financial problems. Financial analyses confirm that it will be the connection of new sewer users, and the payment of annual sewer fees, that will ultimately solve the financial crisis. The need for capacity at the sewage treatment plant requires that an expansion be undertaken so that the new customers necessary for the financial well-being of the system can be connected. The existing debt load cannot be reduced without these new connections, and they cannot be connected without the added capacity documented in the Act 537 Plan Update.

Thank you for your comments. Your letter, as well as this response, will become part of the permanent record and will be included in the final Act 537 Plan Update.

Very truly yours


Jason Ganster
Township Manager

cc: Stuart L. Rosenthal, P.E. Vice President -- Gilmore & Associates Inc.

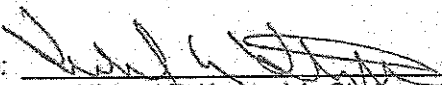
APPENDIX 8

WASHINGTON TOWNSHIP MUNICIPAL AUTHORITY
Berks County, Pennsylvania

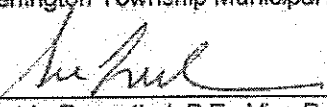
2008 WASTELOAD MANAGEMENT REPORT
(Chapter 94)

March 2009

Permittee:


Michael E. Krestynick, Chairman
Washington Township Municipal Authority

Preparer:


Stuart L. Rosenthal, P.E., Vice President
Gilmore & Associates, Inc.

Prepared By:



GILMORE & ASSOCIATES, INC.
Engineers ♦ Land Surveyors ♦ Planners ♦ GIS Consultants
65 E. Butler Avenue
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A Meter Certificate of Calibration	

1.0 INTRODUCTION

This report is written in compliance with The Pennsylvania Code; Title 25: Chapter 94: Municipal Wasteload Management. The information in this report is relative to the 2008 operations and maintenance of the public wastewater collection, conveyance and treatment systems located in Washington Township, Berks County. The wastewater systems are owned and operated by the Washington Township Municipal Authority (WTMA).

The treatment plant, as well as the two (2) pumping stations, all performed satisfactorily during 2008.

Subsequent sections will discuss current and projected hydraulic and organic loadings, treatment plant operations, and wastewater collection and conveyance systems operations.

2.0 HYDRAULIC LOADING

During 2008, the total flow through the wastewater treatment plant was 60.0 million gallons, with residential discharges being the primary source of wastewater contributions. This figure represents an increase in the flows over those reported for 2007 of approximately 8.4 million gallons (14.0%). On average, approximately 164,000 gallons per day of sewage was generated and treated. On occasion, daily peaks were noted which were higher. A peak monthly average flow of 233,000 gallons per day occurred during December. The three (3) month maximum flow occurred during the period from February through April and averaged approximately 201,000 gallons per day. As the capacity of the wastewater treatment plant is 250,000 gallons per day, the reported hydraulic loading does not represent an overload to the plant. Specifically, the reported average annual daily flow accounts for 66 percent of the treatment plant's rated capacity. Table 1, Hydraulic Loadings, details flow information.

TABLE 1
HYDRAULIC LOADINGS

<u>Month</u>	<u>Average</u> <u>Flow</u>	<u>Maximum Day</u> <u>Flow</u>
JANUARY	0.141	0.329
FEBRUARY	0.231	0.517
MARCH	0.225	0.449
APRIL	0.147	0.222
MAY	0.158	0.316
JUNE	0.140	0.219
JULY	0.142	0.231
AUGUST	0.125	0.182
SEPTEMBER	0.149	0.252
OCTOBER	0.133	0.274
NOVEMBER	0.144	0.209
DECEMBER	0.233	0.707
Total Flow (million gallons):	60.0	
Average Annual Daily Flow (mgd):	0.164	
Maximum Monthly Daily Flow (mgd):	0.233	(December)
3-Month Max Avg Daily Flow (mgd):	0.201	(February - April)

Source: 2008 Monthly Operator's Reports

As of December 2008, 603 EDUs were connected to the treatment plant. In accordance with anticipated development projects, it is projected that approximately 1068 EDUs will be serviced by the WTMA's wastewater treatment plant by December 2013. Table 2, "Projected Development", outlines the rate of increase of projected EDUs on an annual basis beginning in 2009 through 2013.

TABLE 2
PROJECTED DEVELOPMENT

1. CONNECTIONS TO BALLY BOROUGH SYSTEM:

Project Name	Projected EDUs					
	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
Washington Mews (Rotelle)		0	10	25	25	21
Melcher Tract (Quaker Homes)		0	0	6	0	0
Miscellaneous		0	1	1	1	1
ANNUAL TOTAL TO BALLY		0	11	32	26	22
CUMULATIVE TOTAL TO BALLY	49	49	60	92	118	140

2. CONNECTIONS TO WTMA SYSTEM:

Project Name	Projected EDUs					
	2008	2009	2010	2011	2012	2013
Reserve at Bally Spring (Rotelle)		5	15	25	25	25
Spring Valley Village		15	15	20	20	20
Meadowbrook (Barto Development)		15	20	40	40	40
Melcher Tract		0	0	0	20	25
Miscellaneous		2	2	2	2	2
ANNUAL TOTAL TO WTMA		37	52	87	107	112
CUMULATIVE TOTAL TO WTMA	603	640	692	779	886	998

3. CUMULATIVE GRAND TOTAL

Notes:

1. First column reflects total system connections at the end of 2008.
2. All projections based upon end of year totals.
3. Figures reflect number of EDUs projected for connection each year.

There are currently forty-nine (49) EDUs within the Township that discharge sewage to the Bally Wastewater Treatment Plant. Although this treatment plant is located within Washington Township, it is owned and operated by Bally Borough. By Agreement, the Washington Township Municipal Authority has reserved 100,000 gpd of capacity at the treatment plant. The Washington Mews project will contribute a total of 81 new EDUs, not including existing homes along Gehman Road that may also be serviced, to the Bally Wastewater Treatment Plant. By 2013, the Authority will have 140 EDUs going to the Bally facility. These EDUs will utilize approximately 27% of reserved capacity.

Based on an allocated average flow rate of 70,000 gallons per year per new EDU, the average daily flow at the WTMA wastewater treatment plant over the next five years is projected as follows:

**TABLE 3
PROJECTED AVERAGE DAILY FLOW**

Year	Total New EDUs	Total EDUs	Average Daily Flow From New EDUs (gpd)	Projected Total Average Daily Flow (gpd)
2008	--	603	--	164,000 (actual)
2009	37	640	7,123	171,123
2010	52	692	10,010	181,133
2011	87	779	16,748	197,880
2012	107	886	20,598	218,478
2013	112	998	21,560	240,038

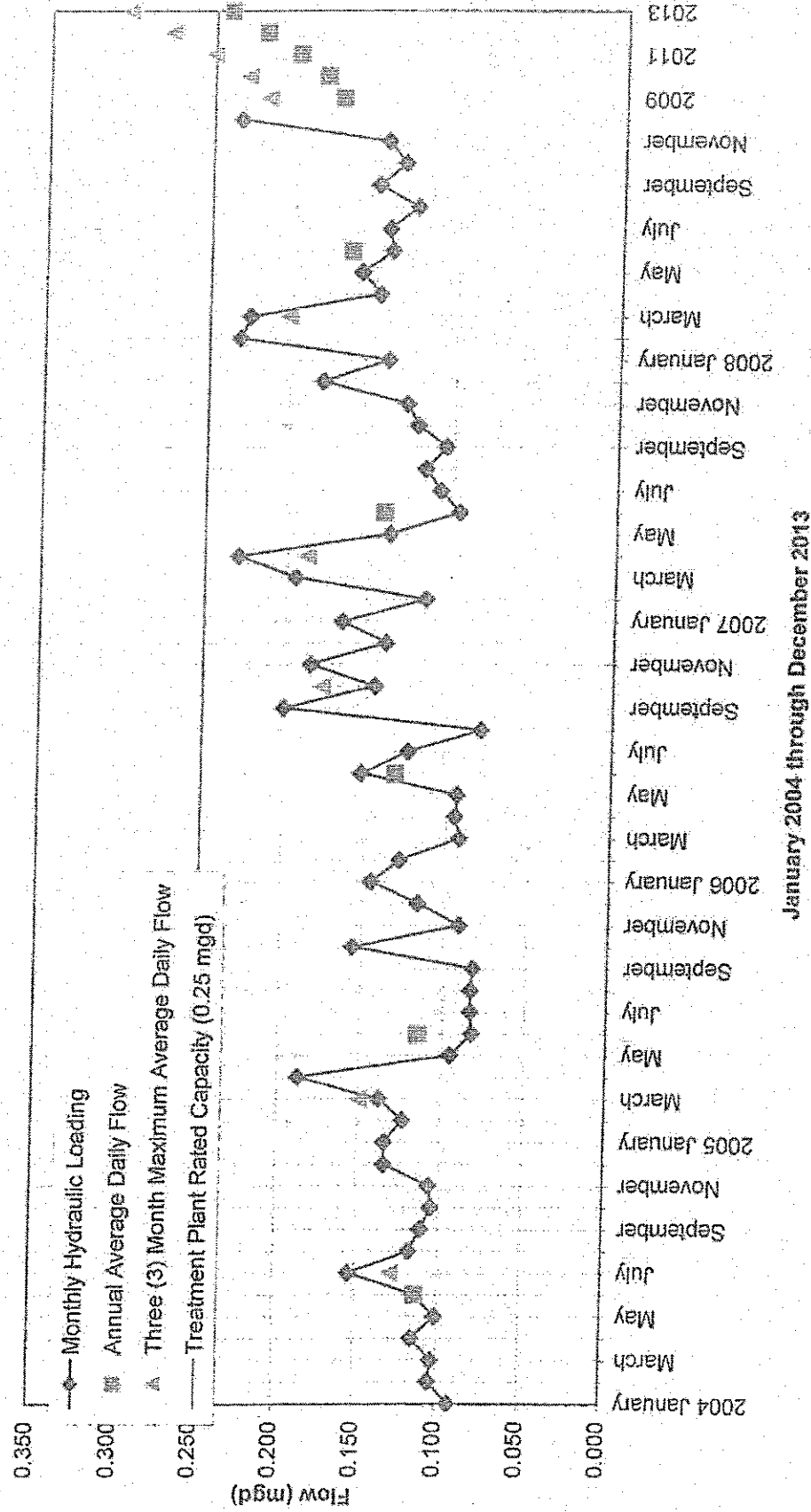
By December 2013, the average daily flow to the wastewater treatment plant is projected to be approximately 254,000 gallons.

Expansion of the treatment facilities to increase capacity may be required by 2013. The timing of this expansion will depend on the future pace of development activity. Washington Township is currently undertaking an Act 537 sewage facilities plan update revision which will determine the size and timing of any treatment plant expansion.

Figure 1 illustrates the hydraulic loading to the wastewater treatment plant from January 2004 through December 2008 on a monthly basis. Subsequent projections are illustrated on an average annual basis from 2009 through 2013.

Appendix A contains the Certificate of Calibration for the WTMA Wastewater Treatment Plant effluent flow meter.

FIGURE 1: WASHINGTON TOWNSHIP MUNICIPAL AUTHORITY
2008 WASTELOAD MANAGEMENT REPORT
(CHAPTER 94)
HISTORICAL & PROJECTED HYDRAULIC LOADINGS



3.0 ORGANIC LOADING

Table 4, Organic Loadings, outlines the 2008 annual average daily organic (BOD) loadings to the treatment plant. Four (4) influent BOD measurements were taken in 2008. The November measurement is outside of the expected range and not used in the average. Based on this data, the average daily organic loading to the treatment plant during 2008 was 102 lbs/day/EDU. Since these measurements are limited, and highly variable, an average of the average annual daily loadings for the past three (3) years was utilized as a starting point for the projections through 2013. This average daily organic loading from January 2006 through December 2008 is 143 lbs/day. Using this average influent BOD loading and number of EDUs serviced at the end of 2008 (603 EDUs), an average organic loading per EDU of 0.24 lbs/day/EDU was calculated. The projected future organic loadings to the wastewater (Table 4) on an annual basis for the next five years was based on this calculation and the projected number of EDUs for the corresponding year as outlined in Section 2.0, "Hydraulic Loading". By December 2013 it is projected that the average daily organic loading to the wastewater treatment plant will be 253 lbs/day. The organic loading capacity of the treatment plant is 625 lbs/day.

**TABLE 4
ORGANIC LOADINGS**

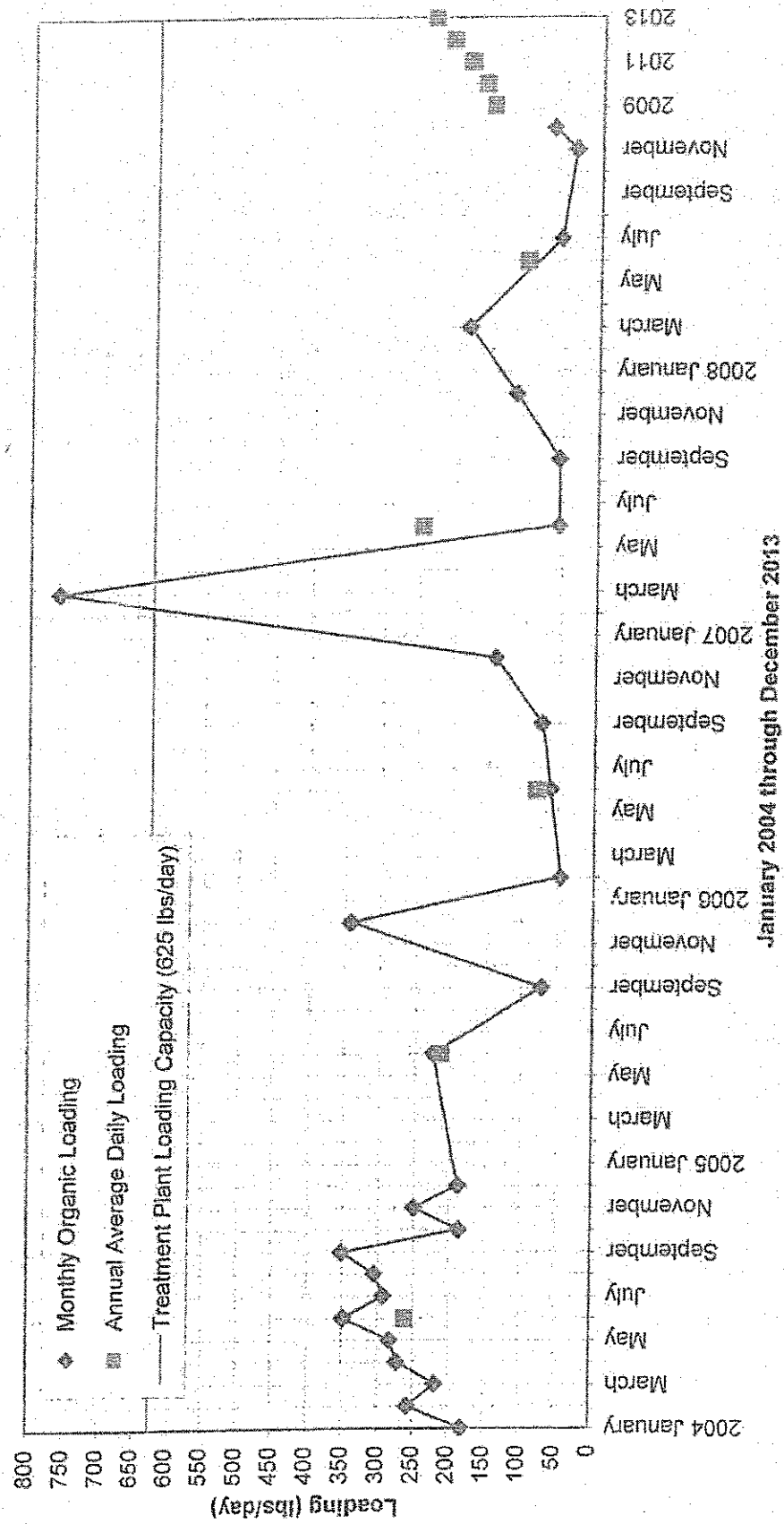
<u>Month</u>	<u>Daily Loading</u>
MARCH	184
JULY	55
NOVEMBER*	36
DECEMBER	68
Average Daily Organic Loading (lbs/day):	102
Note: * Not used to find average loading.	
Source: 2008 Monthly Operator's	

**TABLE 5
PROJECTED TOTAL AVERAGE DAILY ORGANIC LOADING**

Year	New EDUs	Total EDUs	Average Daily Loading from New EDUs (lbs/day)	Projected Total Average Daily Loading (lbs/day)
2008	-	603	-	143
2009	37	640	9	152
2010	52	692	12	164
2011	87	779	21	185
2012	107	886	25	210
2013	112	998	27	237

Figure 2 illustrates the historical organic loading to the plant from January 2004 through December 2008. Subsequent projections are also plotted on an annual basis from 2009 through 2013.

FIGURE 2: WASHINGTON TOWNSHIP MUNICIPAL AUTHORITY
2008 WASTELOAD MANAGEMENT REPORT
(CHAPTER 94)
HISTORICAL & PROJECTED ORGANIC LOADINGS



4.0 INDUSTRIAL WASTEWATER CONTRIBUTIONS

On May 26, 1993, The Washington Township Municipal Authority adopted sewer regulations, which address industrial wastewater contributions and establish specific guidelines to control industrial wastewater discharges. The regulations, which have been revised since adoption, contain provisions for a permitting program, review of proposed pretreatment plans, on-site inspection of industrial facilities by the WTMA or its representative and enforcement procedures to be implemented by the WTMA in the event of non-compliance with the regulations by an industrial discharger.

Currently, the number of industrial facilities located within the Township that may be affected by the regulations is minimal. As stated previously, residential discharges account for the greatest flow contribution to the sewer system. The Authority has identified only one (1) industrial facility that is discharging process wastewater into the sewer system. This facility is Longacre's Modern Dairy, located on Route 100. There are no specific problems in the Authority's sewer system that are known or suspected to be caused by this industrial operation.

The WTMA is not required to implement a Municipal Industrial Pretreatment Program (MIPP). However, WTMA has implemented a reporting and monitoring program for identified industrial facilities for information purposes and to prevent adverse impacts on the WTMA's collection, conveyance and treatment facilities.

5.0 WASTEWATER TREATMENT PLANT PERFORMANCE

The WTMA's treatment plant is designed to treat a maximum of 250,000 gallons of wastewater per day. The treatment process begins with a comminuter chamber, followed by a pump station, which pumps the influent into one of two (2) Sequential Batch Reactors (SBR), which treat the sewage in a three-phase cycle. Settled sludge is pumped into one of two (2) sludge digesters. Supernatant (clarified effluent) from the SBRs flows through a chlorine flash mixer and chlorine contact tank, before being aerated and discharged to the West Branch of the Perkiomen Creek. Sludge digester supernatant is decanted back to the SBRs. Settled, digested sludge is periodically removed by a private contractor for off-site disposal. A standby emergency generator is available in case of power outages.

Presently, the Washington Township Municipal Authority's NPDES Permit No. PA 0086142 sets standards for conventional pollutants only, which include CBOD₅, Suspended Solids, Ammonia as N and Phosphorous. The permit also sets monitoring requirements for total residual chlorine, pH, fecal coliform and dissolved oxygen. The phosphorous limit of 1.0 mg/L is being met through the addition of aluminum chloride to the treatment process.

During 2008, the wastewater treatment plant operated satisfactorily.

6.0 WASTEWATER COLLECTION SYSTEM

The Washington Township Municipal Authority sewage collection and conveyance system is comprised of approximately 92,200 linear feet of gravity sewer, 4,000 linear feet of six (6) inch force main and 7,000 linear feet of eight (8) inch force main.

No new sewer extensions were built during the year; therefore a comprehensive sewer plan is not required under Chapter 94 reporting requirements.

The sanitary sewer system can be generally described as being confined to the following areas:

1. East of Weinsteiner and Meitzler Roads
2. South of Old Route 100
3. West of Niantic Road
4. North of County Line Road

The present condition of the sewage collection and conveyance system is good with periodic inflow and infiltration events. System maintenance, such as cleaning, is performed on an as needed basis.

7.0 WASTEWATER PUMP STATIONS

Two (2) pump stations serve the collection system within the Township. Each of those stations is currently operating within its capacity. A description of each pump station is discussed below. The pumps in each pump station are controlled by bubbler systems.

Swamp Creek Pump Station

This pump station is located off Route 100 near Limekiln Road. It is equipped with two (2) submersible pumps, each with a rated capacity of 320 gpm. Wastewater is discharged through an eight (8) inch force main that ties into the existing sewer system at Manhole #129. This pump station may require expansion if the pace of development of the West Tract increases. The need for, and potential size of, any expansion will be determined when development plans are more fully understood.

During 2008, this pump station had a total run time of 690 hours resulting in approximately 13.25 million gallons pumped, or 36,000 gallons per day. By the end of 2010 (2 years), 183 additional EDUs are expected from various developments which would increase the flow at the pump station by 35,000 gallons per day to 71,000 gallons per day.

Weinsteiger Road Pump Station

This pump station is accessed from Weinsteiger Road near Fronheiser Lane. It is equipped with two (2) submersible pumps, each with a rated capacity of 180 gpm. Wastewater is discharged through a six (6) inch force main that ties into the existing sewer system at Manhole #531. This pump station has capacity for its projected demands.

During 2008, this pump station had a total run time of 1,325 hours resulting in approximately 14.32 millions gallons pumped, or 39,000 gallons per day. There are no new planned or proposed connections to the sewers tributary to this pump station in the next two years.

Each pump station is inspected on a regular basis, and Authority personnel perform any necessary maintenance. To date, each pump station is operating as designed. Minor maintenance items at both stations have been addressed throughout the course of the year, but overall the pump stations have operated in an efficient manner and should continue to do so, provided the level of routine inspection and maintenance remains the same.

APPENDIX A
METER CERTIFICATE OF CALIBRATION

W.G. MALDEN, INC.

P.O. BOX 99, NARVON, PA 17555
PHONE: (717) 768-0800 FAX: (717) 768-0802

of pages: 4 Date: 2/18/09
To:
Co./Dept:
Fax #: 215-345-8606
From:
W.G. Malden
Phone: 717-768-0800
Fax: 717-768-0802

*****SERVICE REPORT*****

BRENT WAGNER
BWM ECOLOGICAL SERVICES INC.
291 OLD STATE ROAD
BOYERTOWN, PA 19512

SERVICE DATE: 2/6/2008
METER#: C8250 AA
LOCATION: WASHINGTON TWP. WWTP EFFL.
SERIAL #: 154051-002-003
MANUFACTURER: FISCHER & PORTER
RECORDER: 1392 (2PEN)
TRANSMITTER: 50US
PRIMARY: 18" RECT. WEIR W/ END CONT.
MAXIMUM CAPACITY: 1.5 MGD
SERVICE CONTRACT: ANNUAL

WORK PERFORMED

CLEANED EQUIPMENT: X PRIMARY: X

RECORDER CALIBRATION CHECKED AT: 0, 50 & 100%
ERROR: + 1% CORRECTED ACCURACY: ± 1%

TOTALIZER CALIBRATION CHECKED AT: 0, 50 & 100%
ERROR: 0% CORRECTED ACCURACY: ± 1%

TRANSMITTER CALIBRATION
SIMULATED HEAD RISES
ERROR: 0% CORRECTED ACCURACY: ± 1%

COMMENTS: LEFT EQUIPMENT OPERATING PROPERLY.

SERVICE REPRESENTATIVE: *Jerry Lawrence* PERSON SEEN:
copies: *Dennis Weidner*

APPENDIX 9

1. PROJECT INFORMATION

Project Name: **WWTP Upgrade**

Date of review: **10/9/2009 1:57:03 PM**

Project Category: **Waste Transfer, Treatment, and Disposal, Liquid waste/Effluent, Wastewater treatment plant (construction, expansion or modification)**

Project Area: **8.8 acres**

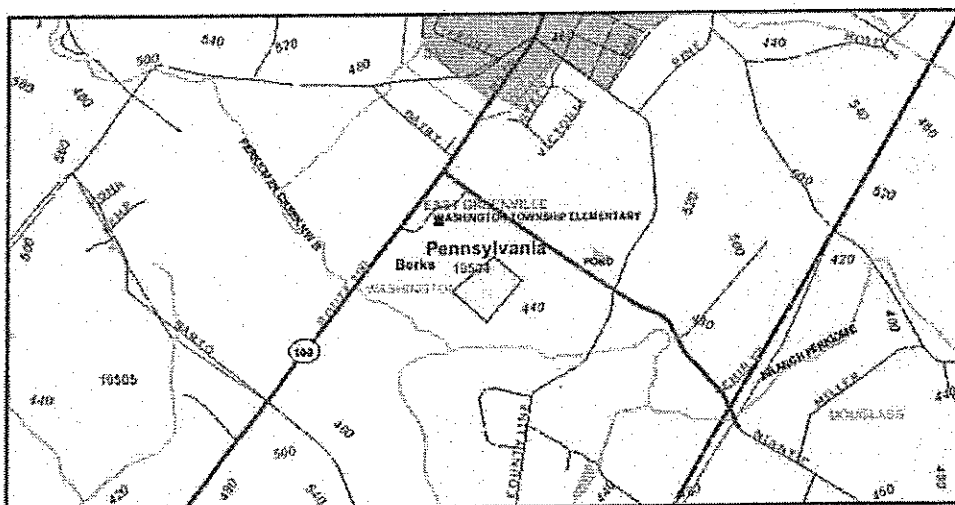
County: **Berks Township/Municipality: Washington**

Quadrangle Name: **EAST GREENVILLE**

ZIP Code: **19504**

Decimal Degrees: **40.38818 N, --75.59097 W**

Degrees Minutes Seconds: **40° 23' 17.5" N, -75° 35' 27.5" W**



2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	No Known Impact	No Further Review Required
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate no known impacts to threatened and endangered species and/or special concern species and resources within the project area. Therefore, based on the information you provided, no further coordination is required with the jurisdictional agencies. This response does not reflect potential agency concerns regarding impacts to other ecological resources, such as wetlands.

Note that regardless of PNDI search results, projects requiring a Chapter 105 DEP individual permit or GP 5, 6, 7, 8, 9 or 11 in certain counties (Adams, Berks, Bucks, Carbon, Chester, Cumberland, Delaware, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton, Schuylkill and York) must comply with the bog turtle habitat screening requirements of the PASPGP.

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for one year** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt.

PA Game Commission

RESPONSE: No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Department of Conservation and Natural Resources

RESPONSE: No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Fish and Boat Commission

RESPONSE: No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

U.S. Fish and Wildlife Service

RESPONSE: No impacts to federally listed or proposed species are anticipated. Therefore, no further consultation/coordination under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) is required. Because no take of federally listed species is anticipated, none is authorized. This response does not reflect potential Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. For cases where a "Potential Impact" to threatened and endangered species has been identified before the application has been submitted to DEP, the application should not be submitted until the impact has been resolved. For cases where "Potential Impact" to special concern species and resources has been identified before the application has been submitted, the application

should be submitted to DEP along with the PNDI receipt, a completed PNDI form and a USGS 7.5 minute quadrangle map with the project boundaries delineated on the map. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. DEP and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at <http://www.naturalheritage.state.pa.us>.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources

Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552, Harrisburg, PA.
17105-8552
Fax: (717) 772-0271

U.S. Fish and Wildlife Service

Endangered Species Section
315 South Allen Street, Suite 322, State College, PA.
16801-4851
NO Faxes Please.

PA Fish and Boat Commission

Division of Environmental Services
450 Robinson Lane, Bellefonte, PA. 16823-7437
NO Faxes Please

PA Game Commission

Bureau of Wildlife Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue, Harrisburg, PA. 17110-9797
Fax: (717) 787-6957

7. PROJECT CONTACT INFORMATION

Name: Scott Mullin
Company/Business Name: Gilmore & Associates
Address: 165 E. Butler Avenue
City, State, Zip: New Britain PA 18901
Phone: (215) 345-4330 Fax: (215) 345-8606
Email: SMULLIN@Gilmore-Assoc.com

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

Scott Mullin
applicant/project proponent signature

10/29/09
date

APPENDIX 10



06-05079

Commonwealth of Pennsylvania
Pennsylvania Historical and Museum Commission
Bureau for Historic Preservation
Commonwealth Keystone Building, 2nd Floor
400 North Street
Harrisburg, PA 17120-0093
www.phmc.state.pa.us

March 2, 2009

Justin A. Kirchdoerfer, PE
Gilmore & Associates, Inc.
65 E. Butler Avenue Suite 100
New Britain, PA 18901

TO EXPEDITE REVIEW USE
BHP REFERENCE NUMBER

Re: File No. ER 2008-2478-011-B
DEP, ACT 537 Plan Update,
Washington Twp., Berks Co.

Dear Mr. Kirchdoerfer:

The Bureau for Historic Preservation has reviewed the above named project under the authority of the Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 et seq. (1988). This review includes comments on the project's potential effect on both historic and archaeological resources.

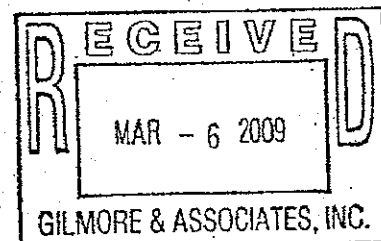
Based on our survey files, which include both archaeological sites and standing structures, there are no National Register eligible or listed historic or archaeological properties in the area of this proposed project.

However, should you encounter archaeological resources during construction, you must stop the project, notify the Bureau for Historic Preservation at (717) 783-8946 as well as the Department of Environmental Protection.

Sincerely,

Douglas C. McLearen, Chief
Division of Archaeology &
Protection

CC: DEP, Southcentral Region
DCM/lmm





GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

CERTIFIED MAIL RETURN RECEIPT

February 18, 2009

File No. 06-05079

Douglas C. McLearen
Pennsylvania Historical and Museum Commission
Commonwealth Keystone Building, 2nd Floor
400 North Street
Harrisburg, PA 17120-0093

Reference: PHMC File Number – ER 2008-2478-011-A
Act 537 Plan Update
Washington Township, Berks County

Dear Mr. McLearen:

In response to your letter dated September 3, 2008, I have attached two site plans, one showing the existing treatment plant, and the other showing a preliminary design for the treatment plant expansion. In response to the "Information Request Sheet" part D, the existing site has been significantly disturbed, including cut and fill.

Very truly yours,

Justin A. Kirchdoerfer, P.E.
Water/Wastewater Services

SLR/si

Enclosure: As Referenced

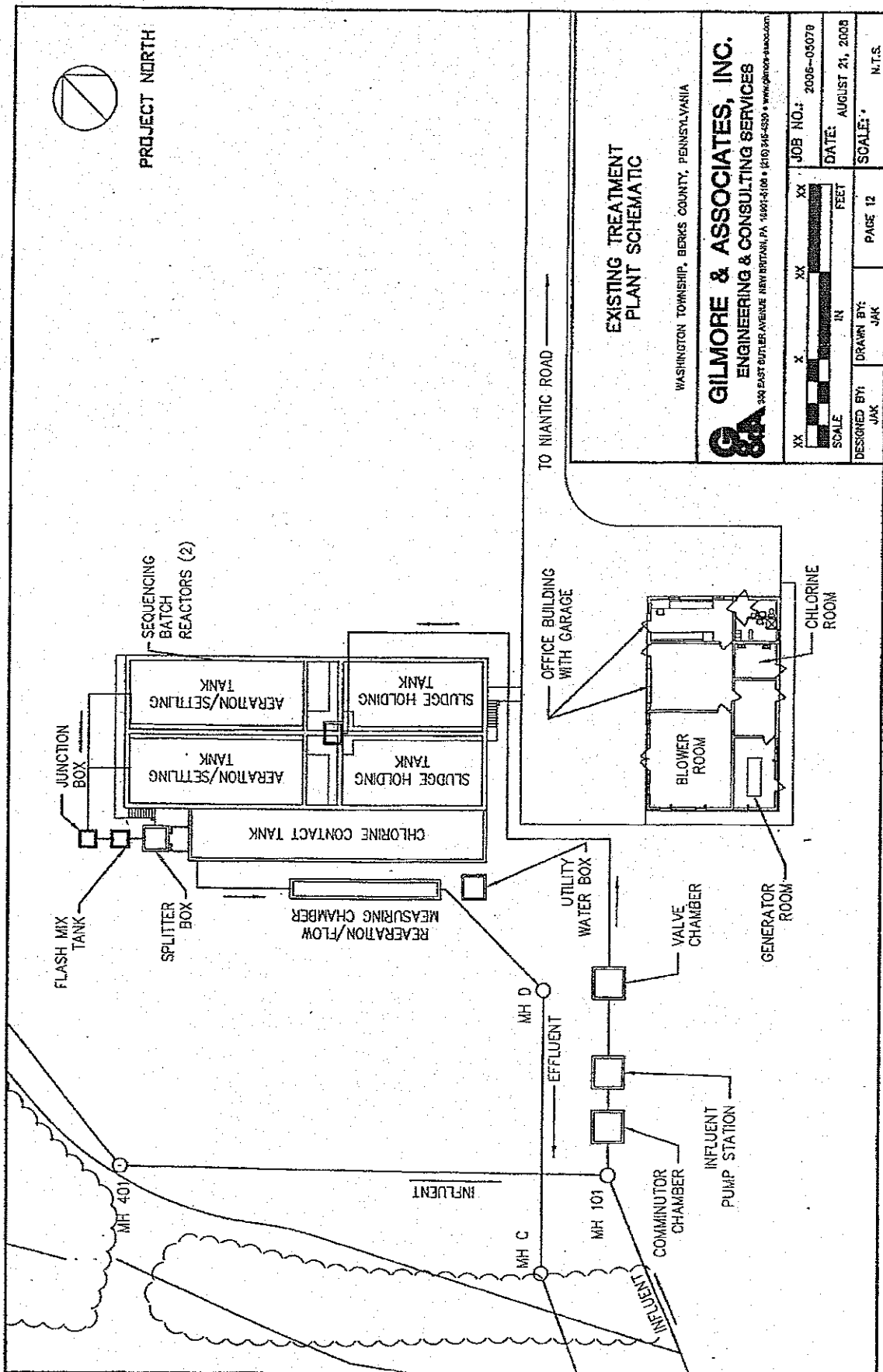
cc: Sue Brown, Administrator – Washington Township Municipal Authority (w/encl.)
Stuart L. Rosenthal, P.E., Vice President – Gilmore & Associates, Inc.

BUILDING ON A FOUNDATION OF EXCELLENCE

65 E. Butler Avenue, Suite 100 | New Britain, PA 18901

Phone: 215-345-4330 | Fax: 215-345-8606

www.gilmore-assoc.com





Commonwealth of Pennsylvania
Pennsylvania Historical and Museum Commission
Bureau for Historic Preservation
Commonwealth Keystone Building, 2nd Floor
400 North Street
Harrisburg, PA 17120-0093
www.phmc.state.pa.us

September 3, 2008

Justin A. Kirchdoerfer
Gilmore & Associates, Inc.
350 E. Butler Avenue
New Britain, PA 18901

TO EXPEDITE REVIEW USE
BHP REFERENCE NUMBER

Re: File No. ER 2008-2478-011-A
DEP, NPDES Erosion and
Sedimentation, Washington Township
537 Plan Update, Washington Twp.,
Berks Co.

Dear Mr. Kirchdoerfer:

The Bureau for Historic Preservation has reviewed the above named project under the authority of the Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 et seq. (1988). This review includes comments on the project's potential effect on both historic and archaeological resources.

MORE INFORMATION IS NEEDED

We are unable to proceed with our review until the additional information on the attached sheet is provided.

If you need further information regarding archaeological survey please contact Doug McLearen at (717) 772-0925. If you need further information concerning historic structures please consult Ann Safley at (717) 787-9121.

Sincerely,

Douglas C. McLearen, Chief
Division of Archaeology &
Protection

Attachment

CC: DEP, Southcentral Region
DCM/lmm

PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION
BUREAU FOR HISTORIC PRESERVATION

INFORMATION REQUEST SHEET

(Revised 4/07)

Please submit checked items for PHMC to proceed with review.

PROJECT INITIATION

A. FUNDING/PERMITTING/LICENSING/APPROVAL PROGRAM

- ☐ 1. Contact person for federal/state/local agency, address, phone number.
- ☐ 2. Letter from federal agency initiating consultation, or a letter from federal agency authorizing an alternate agency or a consultant to initiate consultation.
- ☐ 3. Identify the Federal/State Agency and funding program or permit/license.

B. PROJECT DESCRIPTION

- ☐ 1. Narrative description of the project and related actions resulting from the project.
- ☐ 2. Proposed boundary of the project's Area of Potential Effect (APE) (remember to consider visual impacts)
- ☐ 3. Description and Justification of selection of the Area of Potential Effect
- ☐ 4. Architectural plans of existing conditions (as-built or as-found)
- ☐ 5. Preliminary architectural drawings or plans (floor plans, elevations, specifications)
- ☐ 6. Work write-ups
- ☐ 7. Plans and specifications
- ☒ 8. Site plans of existing conditions
- ☒ 9. Site plans of proposed development

C. PROJECT LOCATION

- ☐ 1. U.S.G.S. 7.5 min. series quadrangle with the PROJECT LOCATION(S) AND LIMITS CLEARLY MARKED using a colored pen. Please include name of the quadrangle
- ☐ 2. U.S.G.S. 7.5 min. series quadrangle with Area of Potential Effect marked (potential area of direct effect can be delineated inside area of indirect effect)
- ☐ 3. Street map (for properties in densely populated areas)
- ☐ 4. Street map showing location and historic district boundaries (if appropriate)
- ☐ 5. Street address of property
- ☐ 6. Municipality in which project is located (not mailing address location)

D. PROJECT SIZE (supply as appropriate for project)

- ☐ 1. Acreage of project area
- ☐ 2. Miles/feet of project and right-of-way width
- ☒ 3. Extent and nature of ground disturbing activities (i.e. grading, trenching, foundation excavation)

*Is land to be expanded on already
cut and filled or (over) otherwise significantly
disturbed?*

E. PHOTOGRAPHS (no Polaroids, or photocopies. Clear, high resolution digital images accepted.)

- ☐ 1. Exterior of building(s) in project area
- ☐ 2. Interior of building(s) in project area
- ☐ 3. Interior of building(s) illustrating the proposed work areas/features
- ☐ 4. Buildings, streetscape, setting of features in Area of Potential Effect (APE)
- ☐ 5. Views of project site
- ☐ 6. Other _____

PUBLIC PARTICIPATION

- ☐ 1. Measures which will be/or have been taken to identify consulting parties.
- ☐ 2. List of proposed consulting parties.
- ☐ 3. Measures which will be/or have been taken to notify and involve the public.

RESOURCE IDENTIFICATION, EVALUATION AND PROJECT EFFECT

A. CULTURAL RESOURCE IDENTIFICATION

- ☐ 1. Description of methodology used for identification and sources examined.
- ☐ 2. Plan proposed for identification of historical (including historic districts, buildings, structures, objects) and archaeological resources and proposed methodology to be used.
- ☐ 3. Pennsylvania Historic Resource form(s) for all properties 50 years or older and potentially eligible for the National Register identified in the APE. (See our website at: www.phmc.state.pa.us/bhlp/inventories)
- ☐ 4. Historical background/context report/information for historic resources identified.

B. EFFECTS

- ☐ 1. How will the project affect building(s) over 50 years old?
- ☐ 2. National Register listed/eligible property(s) exists in project area. How will the project affect this historic property(s)?

C. Other: _____



GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

350 E. Butler Avenue
New Britain, PA 18901
(215) 345-4330
Fax (215) 345-8606
www.gilmore-assoc.com

LETTER OF TRANSMITTAL

Date: August 22, 2008
File No.: 06-05079
Reference: Washington Twp 537

PA Historical & Museum Commission
Bureau for Historic Preservation
400 North Street
Commonwealth Keystone Building 2nd Floor
Harrisburg, PA 17120-0033

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via _____ the following items:

☐ Shop Drawings/ Submittals ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of Letter ☐ Change Order ☒ Other

COPIES	DATE	DESCRIPTION
1		Request to Initiate Consultation in Compliance with the State History Code and Section 106 of the National Historic Preservation Act
1		Project Narrative
1		USGS Project Boundary & Area of Potential Effect

THESE ARE TRANSMITTED as checked below:

☒ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval
☐ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution
☐ As requested ☐ Returned for corrections ☐ Return _____ corrected prints
☐ For review and comment
☐ For BIDS DUE _____ 20____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS:

cc: Michael E. Krestynick, Chairman, Washington Township
Edmund C. Littlefield, Chairman, Washington Township
Municipal Authority
Stuart L. Rosenthal, E., Vice President, Gilmore & Associates, Inc.

Signed: Justin A. Kirchdoerfer

If enclosures are not included with this transmittal, kindly contact this office at once.

350 E. Butler Avenue | New Britain, PA 18901 | 215-345-4330 | 215-345-8606
184 W. Main Street, Suite 300 | Trappe, PA 19426 | 610-489-4949 | 610-489-8447
221B Gale Lane | Kennett Square, PA 19348 | 610-444-9006 | 610-444-7292
Bartles Corner Road | Suite 022 | Flemington, NJ 08822 | 908-237-0004 | 908-237-0005
100 Tilghman Street | Suite 150 | Allentown, PA 18104 | 610-366-8064 | 610-366-0433
30 E. Maple Avenue | Suite 201 | Langhorne, PA 19047 | 215-369-3955 | 215-369-3956

Pennsylvania Historical & Museum Commission
Bureau for Historic Preservation

BHP Use Only

ER #

**Request to Initiate Consultation in Compliance with the State History Code and
Section 106 of the National Historic Preservation Act**

Applicant Information (print neatly, this will be used in the return envelope)			
Applicant Name	Washington Township		
Street Address	120 Barto Road, PO Box 52		
City	Barto	Phone Number	(215) 345-4330
State/ZIP	PA, 19504		

Contact Person to Receive Response (if applicable) (print neatly, this will be used in the return envelope)			
Name/Company	Gilmore & Associates, Inc.	Justin A. Kirchdoerfer	
Street Address	350 East Butler Avenue		
City	New Britain	Phone Number	(215) 345-4330
State/ZIP	PA, 18901		

Project Information			
Project Title	Washington Township 537 Plan Update		
Project Location and/address	Washington Township	Swamp Creek Basin Pump station located on Rte 100 900 LF SW from Limekiln Road and 700 FT north west of the Rte 100	Washington Township Municipal Authority Treatment Facility located off of Niantic Road 1,500 LF SE of Rte 100 and 600 feet SW from Niantic Road
Municipality	Washington Township	County Name	Berks
If this project was ever reviewed before, include previous ER #			

Project Type (Check all that apply)			
Government Funded/Sponsored or On Government Land?			
<input type="checkbox"/> Yes <input type="checkbox"/> No Specify Agency and/or Program Name Below			
State Agency:		Local:	
Federal Agency:		Other:	
Permits or Approvals Required			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Specify Agency and/or Program Name Below			
Anticipated Permits:		NPDES, Erosion and Sedimentation	
State Agency:		PADEP, Local Conservation District	
Federal Agency:		Program:	
		Program:	
Agency Office to Receive Response (Check all that apply)			
Army Corps of Engineers: <input type="checkbox"/> Philadelphia <input type="checkbox"/> Baltimore <input type="checkbox"/> Pittsburgh			
DEP Office:		<input type="checkbox"/> Central Office <input checked="" type="checkbox"/> Regional Office: PADEP South Central Regional Office	
<input type="checkbox"/> District Mining Office:		<input type="checkbox"/> Oil & Gas Office:	
<input type="checkbox"/> Other: (provide address)			

Pennsylvania Historical & Museum Commission
Bureau for Historic Preservation

ER #

Required Project Information for BHP/SHPO Review

☒ Total Acres in the property under review: 1.25

☒ Total acres of earth disturbance for this proposed activity: 0.5

☐ Are there any buildings or structures within the project area? ☒ Yes ☐ No

Approximate age of buildings: 20 years

☐ Project located in or adjacent to a historic district? ☐ Yes ☒ No ☐ Unsure

Name of Historic District _____

Submissions Must Accompany:

☒ **MAP LOCATION:** A 7.5 USGS Map showing the project boundary and the Area of Potential Effect (APE). The APE should include indirect effects, such as visual and audible impacts. Federal Projects must provide an explanation of how the APE was determined.

☒ **PHOTOS:** Photos of all buildings or structures in the APE over 50 years old. If the property is over 50 years old submit a Historic Resource Form with this initial request. The forms are available at <http://www.phmc.state.pa.us/bhp/inventories>.

☒ **PROJECT DESCRIPTION NARRATIVE:** Provide a detailed project description describing the project, any ground disturbance, any previous land use, and age of all effected buildings in the project area. Attach a site map showing the location of all buildings in the project area.

☒ I have reviewed all DEP Permit Exemptions listed on the DEP website www.dep.state.pa.us.

In addition, federal agencies must provide:

☐ Measures that will be taken to identify consulting parties including Native Americans.

☐ Measures that will be taken to notify and involve the public.

The information on this form is needed to determine whether potential historic or archaeological resources are present. Additional historic information or investigation may be requested to determine the significance of the resources or the effects of the project on those resources. Form and attachments must be submitted by mail. Submissions via e-mail will not be accepted.

Signature Line:

Applicant's Signature

Date

Please Print and Mail Completed Form and Required Information to:

**PA Historical & Museum Commission
Bureau for Historic Preservation
400 North Street
Commonwealth Keystone Building 2nd Floor
Harrisburg, PA 17120-0093**

Narrative

Due to expected growth, Washington Township is having an Act 537 Plan Update prepared. Part of the Plan includes expansion of the WTMA Wastewater Treatment Facility from 250,000 gpd to 500,000 gpd and expansion of the Swamp Creek Basin Pump Station from 115,000 gpd to 260,000 gpd. The proposed expansions would only affect land already owned by the Washington Township Municipal Authority and would not alter or encroach upon any buildings that are over 50 years old.

The land at the site has already been cut and filled.

APPENDIX 11