

**The York Water Company**  
**Responses to Bureau of Technical Utility Services, Water/Wastewater Division**  
**Data Request 1**

Application of The York Water Company - Wastewater for approval of the acquisition of the  
wastewater system assets of the Felton Borough at Docket No. A-2019-3013113

**DISCOVERY A-1**

The York Water Company – Wastewater’s (York Water-WW’s) additional service territory requested by this Application is defined by the municipal boundaries of Felton Borough, York County. However, the Application’s Exhibit D, depicting the alignment and locations of Felton Borough’s (Felton’s) existing wastewater system assets (Wastewater System), verifies that only a portion of Felton Borough is provided public wastewater service by Felton’s Wastewater System. Considering that Felton’s Wastewater System is sized for and currently only serves a portion of the customers within the boundaries of Felton Borough, please either:

- a. Demonstrate that a need for public wastewater service exists within the areas not currently receiving public wastewater service, by providing evidence these properties are not currently receiving adequate wastewater service by other means;
- b. Provide evidence of any requests for public wastewater service within the areas not currently receiving public wastewater service;
- c. Provide evidence that the provision of public wastewater service throughout the entirety of Felton Borough is consistent with local zoning or land use ordinances; and
- d. Provide the detailed plan, including an estimated cost, source of funding and timeline, by which York Water-WW will construct the additional assets required to provide wastewater service to the areas of Felton Borough not currently receiving public wastewater service; or
- e. Revise the boundaries of the requested additional service territory to more closely outline only the area currently provided public wastewater service through Felton’s Wastewater System.

**RESPONDENT:**

Joseph T. Hand  
Chief Operating Officer

**RESPONSE:**

- a. As described in Felton’s PA DEP approved Act 537 plan (see Discovery A-4), the entirety of Felton Borough was included in the description of the planning area for Felton’s 1998 study. The same study established that the majority of the soils underlying the Borough were unsuitable for on-lot sewage disposal, in spite of the fact that the only sanitary treatment available at the

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time was on-lot sewage disposal (See Discovery A-4, Map 4). It was a direct result of failed/failing on-lot septic systems contained on small lots that Felton selected Alternative 1 as defined in the Act 537 Plan. The determining factor that limited the scope of the wastewater collection and treatment system from extending beyond the current limits was Felton Borough's available capital. By contrast, York Water can make the capital investments necessary to extend wastewater facilities to unserved properties in Felton Borough, consistent with the line extension rules of the Company's tariff. Thus, if the Application is approved, York Water would extend wastewater service consistent with its tariff to applicants for wastewater service, including those whose on-lot septic may fail. Given the ongoing potential for failure of on-lot septic systems, York Water seeks certification for the entire Borough. Absent such certification, York Water would be unable to act promptly to extend facilities to respond to a failed on-lot septic system in the uncertificated area of the Borough. This would result in a homeowner having to replace the system with a holding tank or another undesirable repair or reconstruction, because the customer could not wait the months needed for York Water to prepare and obtain approval of an application to expand its service territory in the Borough.

b. York Water has not yet sought requests for public wastewater service in Felton Borough and would only do so upon approval of the Application.

c. York Water-WW's provision of public wastewater service within the entirety of the Application's requested service territory is consistent with Felton's DEP-approved Act 537 Plan, consistent with Felton's approved Ordinance No. 2002-2 (Application, Exhibit "F") and consistent with York County's comprehensive plan (Application, Exhibit "J").

d. York Water has not prepared such a detailed plan. Upon the submission of an application for wastewater service within the proposed territory, York Water will extend public wastewater service consistent with the Company's tariff.

e. Not applicable. York Water's Application requests approval to serve the entirety of Felton Borough, which is a small municipality consisting only of approximately 400 acres. See subparts (a) and (c) of this response explaining why the Company is requesting the authority to serve the entirety of Felton Borough.

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**DISCOVERY A-2**

The bearing angle and distances listed in the boundary line table of the Application's Exhibit E are not clear. Please provide a legible copy of this table, revised if necessary, to align with the response to Data Request A-1 above.

**RESPONDENT:**

Joseph T. Hand  
Chief Operating Officer

**RESPONSE:**

A legible copy of the table providing the curves, bearing angles and distances for the proposed wastewater territory is attached. The table has not been revised from the Application's Exhibit E. See Discovery A-1.

**NOTE: THE METES AND BOUNDS DESCRIBED HEREIN ARE APPROXIMATE. THEREFORE, THIS DOCUMENT SHOULD NOT BE CONSIDERED A LEGAL DEED.**

ENCOMPASSING approximately 408 acres of land located in York County, Pennsylvania, the Felton Borough charter area is described by metes and bounds as follows:

From National Geodetic Survey Marker designated as *WINTERSTOWN 2 RM 1 AZIMUTH*, said Monument being located at NAD 83 (1992) Position: 39°49'55.11355" (N), 76°35'50.74018" (W). The reference mark is a standard disk stamped: WINTERSTOWN 2 NO 1 1934, set in the top of a 12-inch square concrete monument which projects about 1-inch, proceeding North 42°47'44" East, 10,475.65 feet to Point A, and thence along the following segments:

1. North 3°59'39" East, 1,046.33 feet;
2. North 14°2'2" East, 535.87 feet;
3. North 20°53'32" East, 1,646.21 feet;
4. North 5°9'8" West, 346.96 feet;
5. North 48°56'52" East, 613.35 feet;
6. South 40°57'21" East, 89.51 feet;
7. South 44°59'48" East, 81.82 feet;
8. South 49°42'22" East, 164.72 feet;
9. South 35°14'0" East, 117.18 feet;
10. South 25°44'41" East, 140.39 feet;
11. South 34°34'17" East, 144.64feet;
12. South 41°22'3" East, 138.28 feet;
13. South 33°19'41" East, 109.96 feet;
14. South 46°18'30" East, 92.35 feet;
15. South 39°45'28" East, 174.25 feet;
16. South 44°43'44" East, 126.31 feet
17. South 44°42'37" East, 65.86 feet
18. South 38°38'40" East, 114.40 feet
19. South 44°46'24" East, 155.19 feet
20. South 30°9'32" East, 41.81 feet
21. South 57°26'39" East, 48.82 feet
22. North 32°18'47" East, 71.12 feet
23. South 78°40'19" East, 584.88 feet
24. South 77°36'52" East, 421.34 feet
25. North 50°9'3" East, 489.12 feet
26. North 75°31'21" East, 1,581.94 feet
27. North 12°39'33" West, 794.62 feet
28. North 7°45'57" East, 270.40 feet
29. North 4°12'22" East, 148.84 feet
30. North 73°17'33" East, 760.73 feet
31. South 24°25'3" East, 165.06 feet
32. South 20°9'23" East, 281.29 feet

33. South 18°56'14" East, 393.75 feet
34. South 7°42'43" East, 473.90 feet
35. South 9°32'34" East, 468.89 feet
36. South 6°36'5" East, 1,438.70 feet
37. South 87°6'39" West, 123.42 feet
38. South 6°1'33" West, 234.34 feet
39. South 73°53'30" West, 388.74 feet
40. North 43°25'24" West, 971.57 feet
41. North 19°34'14" East, 154.49 feet
42. North 38°26'2" West, 128.97 feet
43. South 43°32'31" West, 3,839.65 feet
44. South 86°15'22" West, 340.98 feet
45. North 72°16'8" West, 558.32 feet
46. North 68°7'20" West, 929.80 feet
47. North 67°22'24" West, 969.29 feet

to Point A, the point and place of beginning.

Containing 408 acres of land, more or less.

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**DISCOVERY A-3**

Please identify the certified operator that will be assigned to the Felton wastewater treatment plant (Felton WWTP) following the close of this transaction and provide a copy of that certified operator's license.

**RESPONDENT:**

Joseph T. Hand  
Chief Operating Officer

**RESPONSE:**

York Water intends to assign Grover E. Buracker as primary operator of the Felton wastewater treatment plant. Mr. Buracker is a certified operator and employee of York Water. A copy of Mr. Buracker's operator's license is attached.

Discovery A-3, Data Request 1

# Commonwealth of Pennsylvania

## Department of Environmental Protection

*In accordance with the  
State Board for Certification of Water and Wastewater Systems Operators  
and the Regulations of the  
Department of Environmental Protection*

**GROVER E BURACKER**

*Is Hereby Authorized to Operate  
WASTEWATER SYSTEM*

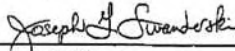
Class: A,E, Wastewater  
Subclass: 1,2,3,5,4

**Client ID: 317481**

GROVER E BURACKER  
2309 FAIRWAY DR  
YORK PA 17408-9454

Issue Date      Jan 01, 2018  
Expiration Date      Dec 31, 2020

Certificate No. S19041

  
\_\_\_\_\_  
Board Chairman

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**DISCOVERY A-4**

Provide a copy of Felton's Department of Environmental Protection (DEP) approved Act 537  
Official Sewage Facilities Plan (Act 537 Plan) including any amendments.

**RESPONDENT:**

Joseph T. Hand  
Chief Operating Officer

**RESPONSE:**

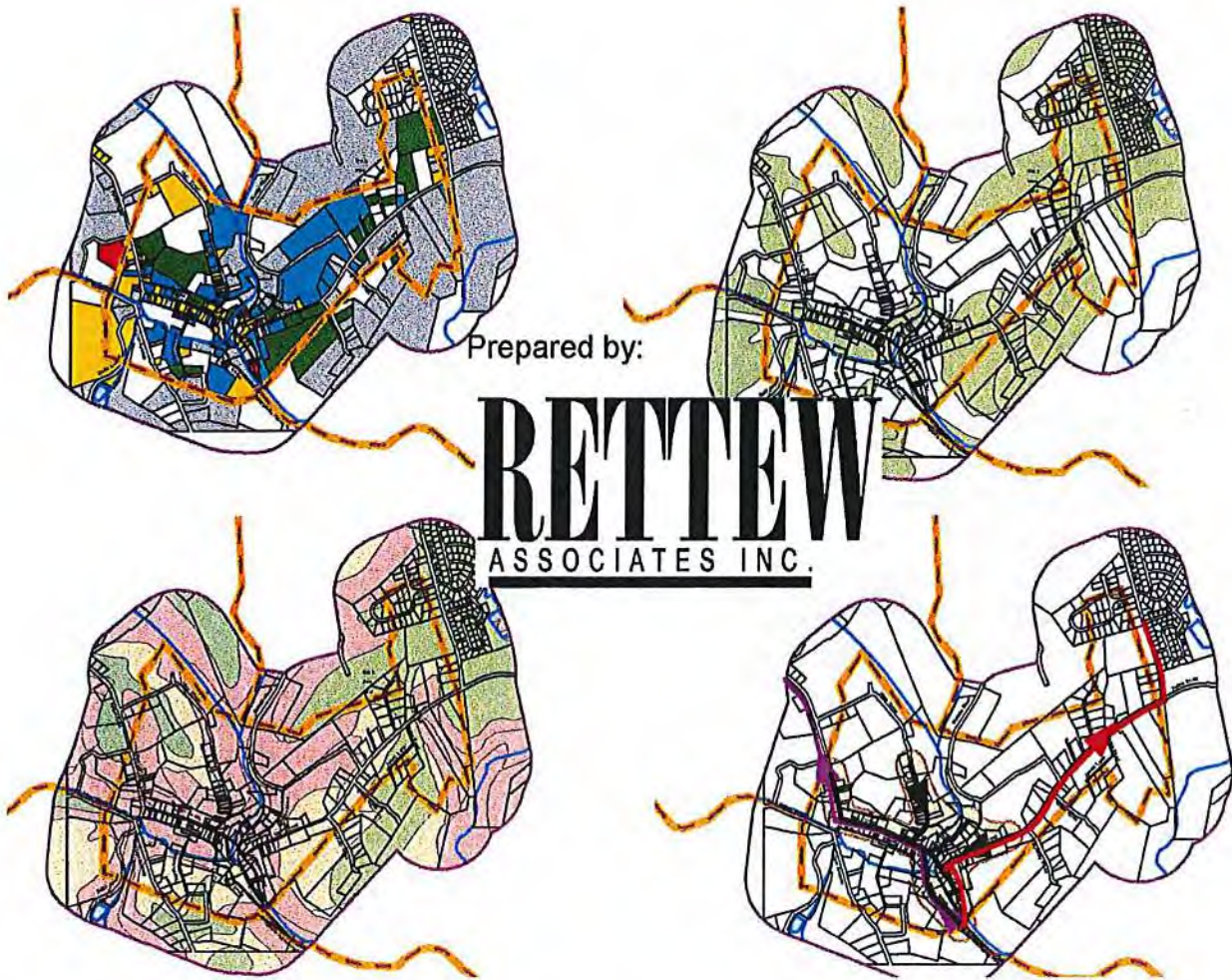
A copy of Felton's Department of Environmental Protection (DEP) approved 1998 Act 537 plan  
is attached.

# Act 537 Sewage Facilities Plan

for the

## Borough of Felton York County, Pennsylvania

1998



7/10/98

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7/10/98

RESOLUTION OF ADOPTION

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BOROUGH OF FELTON  
RESOLUTION NO. 98-1

A RESOLUTION OF THE FELTON BOROUGH COUNCIL, YORK COUNTY, PENNSYLVANIA, TO ADOPT AN OFFICIAL SEWAGE FACILITIES PLAN FOR THE BOROUGH OF FELTON.

WHEREAS, the Felton Borough Council of York County, Pennsylvania (the "Borough Council") authorized the preparation of an official sewage facilities plan ("Plan") for the entire Borough; and

WHEREAS, RETTEW Associates, Inc., was selected as the consultant to assist the Borough Council in the preparation of the Plan; and

WHEREAS, pursuant to the regulations of the Pennsylvania Department of Environmental Protection (the "Department"), the Borough Council advertised the preparation of the proposed Plan and provided a 30-day public comment period for such Plan; and

WHEREAS, the Borough Council provided a copy of the proposed Plan to the York County Planning Commission for review in accordance with the regulations of the Department; and

WHEREAS, the Borough Council desires to adopt the proposed Sewage Facilities Plan as the Borough's official Sewage Facilities Plan in accordance with the provisions and requirements of the Pennsylvania Sewage Facilities Act and the Regulations of the Department.

NOW, THEREFORE, BE IT RESOLVED by the Borough Council as follows:

**Section 1.** The Borough Council adopts the official sewage facilities plan entitled "Act 537 Sewage Facilities Plan for the Borough of Felton", prepared by RETTEW Associates, Inc. in the form and content presented at this public meeting, as the official sewage facilities plan for the Borough in accordance with the Pennsylvania Sewage Facilities Act and the regulations of the Department.

**Section 2.** The Plan as adopted by the Borough Council shall include the following chapters and all maps, charts, tables, diagrams, appendices, figures and textual matter contained there and appended thereto:

PLAN SUMMARY

CHAPTER 1 - PREVIOUS PLANNING AND LAND USE REGULATIONS

**RESOLUTION OF ADOPTION**

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BOROUGH OF FELTON  
RESOLUTION NO. \_\_\_\_\_

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- CHAPTER 2 - DESCRIPTION OF PLANNING AREA
- CHAPTER 3 - EVALUATION OF EXISTING WASTEWATER FACILITIES
- CHAPTER 4 - FUTURE GROWTH AND DEVELOPMENT
- CHAPTER 5 - IDENTIFICATION OF ALTERNATIVES
- CHAPTER 6 - EVALUATION OF ALTERNATIVES
- CHAPTER 7 - SELECTED ALTERNATIVES
- CHAPTER 8- PLAN IMPLEMENTATION
- APPENDICES

Section 3. The Borough Council adopts the following recommendations set forth in the Plan as the alternatives of choice which shall be implemented by the Borough in accordance with the implementation schedule set forth in Chapter 8 of the Plan. The Borough will continue public education efforts regarding the proper operation and maintenance of on-lot sewage disposal systems; permit the use of small flow treatment facilities; continue to allow the use of holding tanks subject to the Borough's Holding Tank Ordinance; require preliminary hydrogeologic studies for new land developments which propose on-lot sewage disposal in areas where groundwater has been found to exceed five milligrams per liter nitrate-nitrogen; require the testing and reservation of a replacement absorption area for each lot within all future subdivisions which propose the use of on-lot sewage disposal; require certain conditions for proposed wastewater disposal systems which require a permit from the DEP relating to the operation and maintenance of such facilities and the Borough will implement the construction of a sewage treatment plant and collection and conveyance facilities in accordance with Alternative 1 provided that adequate funding is available to result in a tapping fee not to exceed \$2,000 per equivalent dwelling unit (EDU) and an annual user rate not to exceed \$600 per EDU.

Section 4. This Resolution shall become effective and be in force immediately.

DULY ADOPTED this 6<sup>th</sup> day of July, 1998, by the Felton Borough Council, York County, Pennsylvania, in lawful session duly assembled.

BOROUGH OF FELTON  
York County, Pennsylvania

By: [Signature]  
President of Borough Council

Attest: [Signature]  
Secretary

[BOROUGH SEAL]

CHAPTER 2 - DESCRIPTION OF PLANNING AREA  
 CHAPTER 3 - EVALUATION OF EXISTING WASTEWATER FACILITIES  
 CHAPTER 4 - FUTURE GROWTH AND DEVELOPMENT  
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**Section 4.** This Resolution shall become effective and be in force immediately.

DULY ADOPTED this \_\_\_\_ day of \_\_\_\_\_, 1998, by the Felton Borough Council, York County, Pennsylvania, in lawful session duly assembled.

BOROUGH OF FELTON  
 York County, Pennsylvania

By: \_\_\_\_\_  
 President of Borough Council

Attest: \_\_\_\_\_  
 Secretary

[BOROUGH SEAL]

## SUMMARY OF PLAN

The purpose of this Act 537 Plan is to address the wastewater disposal needs of the Borough of Felton. The scope of work for this Plan was approved by the Pennsylvania Department of Environmental Protection (DEP) in the form of a letter dated February 13, 1997. A copy of this letter is included in Appendix A. The planning area for this Act 537 Plan is shown on Map 1.

The Plan includes an evaluation of groundwater samples, a Borough-wide survey of sewage needs and an evaluation of potential public wastewater treatment alternatives. The findings of the Plan can be summarized as follows:

- Soil conditions within the more densely populated portions of the Borough are typically marginal or unsuitable for on-lot sewage disposal.
- Groundwater testing of 41 samples in the Borough identified 27 wells (67%) which are not within the safe drinking water standards established by the DEP and EPA for total coliform, fecal coliform, or nitrate-nitrogen. Two of these samples contained fecal coliform bacteria.
- The existing sewage needs analysis identified the following categories of on-lot sewage disposal systems:

CATEGORY	NUMBER	% OF TOTAL
Confirmed Malfunctions	6	3.6%
Suspected Malfunctions	21	12.6%
Potential Malfunctions	113	68%
Holding Tank	7	4.2%
Adequate	20	12%
Parcels Classified	167	100.0%

- The most significant limitations for on-lot sewage disposal in Felton are the age of the

systems in use, unsuitable soils, and small lot sizes which limit the ability to repair malfunctioning systems according to modern standards. Such conditions do not alone result in an immediate risk to the health of Borough residents. However, it is evident that a public sewer alternative is the most advantageous long-term solution for the Borough.

- The Plan considered the following wastewater alternatives:

Alternative #	Description
1	Borough packaged treatment plant
1A	Borough packaged treatment plant with a reduced service area
2	Conveyance to Springettsbury Township treatment plant
3	Conveyance to Chanceford Crossings treatment plant
4	Borough community on-lot system
5	Borough aerated lagoon with spray irrigation system
6	Borough sequencing batch reactor treatment plant
7	Small flow treatment facilities to serve the proposed sewer area

- After careful consideration of the findings of the background studies and cost analysis of structural alternatives, the Borough Council determined that the construction of a public sewer system is the most preferable long-term sewage disposal alternative. The Borough Council also determined that it would pursue public sewers only if such project can be financed in a manner which results in a user rate which is affordable to its residents. An affordable user rate was determined by the Borough Council to be a maximum tapping fee of \$2,000 per equivalent dwelling unit and a maximum annual user fee of \$600.
- Alternative 1 was identified by the Borough Council as the selected structural alternative. The estimated total cost of this alternative is \$1,631,662. The proposed financing plan would utilize Rural Development funding including a grant of 45 percent of the project costs in combination with a 40-year loan at 4.875 percent. It is recognized that such grant funding is not anticipated to be available for three to five years. Estimated user fees include a tapping fee of \$2,000 per equivalent dwelling unit (EDU) and an annual user fee of \$585 per EDU.

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- The selected structural alternative will be implemented in accordance with the following schedule:

PROJECTED DATE(S)	TASK
July 1998	Borough adopts Act 537 and submits to DEP
November 1998	DEP approval of Act 537 Plan
January 1999	Borough submits funding application to Rural Development
March 1999	Rural Development responds to Borough's funding application
March 2002	Anticipated availability of sufficient grant funds from Rural Development
April 2002 - December 2002	Design of wastewater facilities
January 2003 - March 2003	Bid project
April 2003	Award project
April 2003 - September 2004	Construction
October 2004	Substantial Completion / Operational
December 2004	Final Completion

If adequate funding is not available by the final date of completion outlined above (December 2004) the Borough shall revise its Act 537 Plan to identify an alternative plan of action and shall submit its revised Act 537 Plan to the DEP within one year (December 2006).

- The selected structural alternative will be implemented in accordance with the following schedule:

<b>PROJECTED DATE(S)</b>	<b>TASK</b>
July 1998	Borough adopts Act 537 and submits to DEP
November 1998	DEP approval of Act 537 Plan
January 1999	Borough submits funding application to Rural Development
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April 2002 - December 2002	Design of wastewater facilities
January 2003 - March 2003	Bid project
April 2003	Award project
April 2003 - September 2004	Construction
October 2004	Substantial Completion / Operational
December 2004	Final Completion

- Upon the Borough's adoption of this Plan, the following nonstructural alternatives will be implemented. The Borough will:
  - ◊ Continue to educate its residents on proper on-lot sewage disposal methods through periodic mailings to Borough residents;
  - ◊ Permit the use of private small flow treatment facilities subject to specific conditions addressed in the Plan;
  - ◊ Continue to allow holding tanks subject to the Borough's Holding Tank Ordinance and applicable State regulations;

7/10/98

- Upon the Borough's adoption of this Plan, the following nonstructural alternatives will be implemented. The Borough will:
  - ◊ Continue to educate its residents on proper on-lot sewage disposal methods through periodic mailings to Borough residents;
  - ◊ Permit the use of private small flow treatment facilities subject to specific conditions addressed in the Plan;
  - ◊ Continue to allow holding tanks subject to the Borough's Holding Tank Ordinance and applicable State regulations;
  - ◊ Minimize the impact of future development on the groundwater by requiring preliminary hydrogeologic studies for Planning Modules for Land Development which are proposed within one quarter mile of a well which has been documented to contain greater than five milligrams per liter nitrate-nitrogen;
  - ◊ Require the testing and reservation of a replacement absorption area for each lot within all future subdivisions which propose the use of on-lot sewage disposal; and
  - ◊ Require certain conditons for proposed wastewater disposal systems which require a permit from the DEP relating to the operation and maintenance of such facilities.

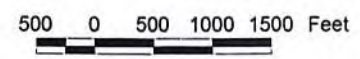
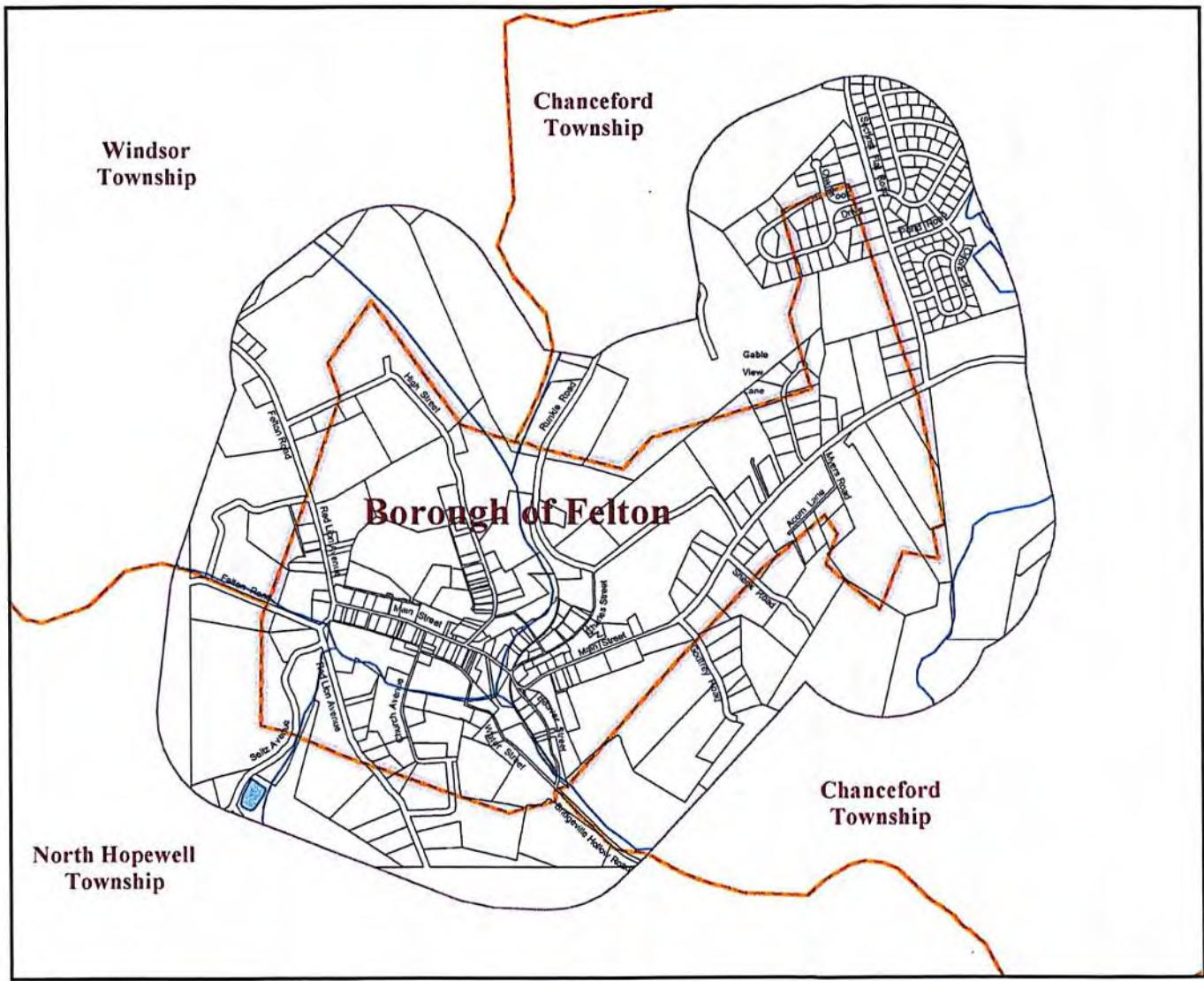
- ◇ Minimize the impact of future development on the groundwater by requiring preliminary hydrogeologic studies for Planning Modules for Land Development which are proposed within one quarter mile of a well which has been documented to contain greater than five milligrams per liter nitrate-nitrogen;
- ◇ Require the testing and reservation of a replacement absorption area for each lot within all future subdivisions which propose the use of on-lot sewage disposal; and
- ◇ Require certain conditons for proposed wastewater disposal systems which require a permit from the DEP relating to the operation and maintenance of such facilities.

# Map 1 Planning Area

Borough of Felton  
York County, PA

### Legend

- Municipal Boundary
- Parcels
- Streams
- Lakes and Ponds
- Planning Area



**RETTEW**  
ASSOCIATES INC.

## CHAPTER 1 PREVIOUS PLANNING AND LAND USE REGULATIONS

### 1.1 Previous Wastewater Planning

Previous planning conducted pursuant to the Sewage Facilities Act (Act 537) for the planning area is limited to the *York County Comprehensive Sewerage Study and Plan* dated May 1972. The County's plan identified the Borough as a problematic area for on-lot sewage disposal and recommended the installation of a sewage collection system and treatment plant to serve the sewage disposal needs of the Borough and the Chanceford Crossings development located adjacent to the northeast boundary of the Borough.

This Act 537 Plan Update represents all wastewater planning which is currently anticipated for the planning area.

### 1.2 Land Use Regulations and Planning

#### Comprehensive Planning

The York County Planning Commission has prepared a draft comprehensive planning document entitled the *York County Growth Management Plan* dated April, 1997. Other county-wide documents which supplement this Plan include *the York County Community Facilities* dated December 1995, *York County Growth Trends* dated October 1995, *1996 York County Natural Areas Inventory*, *York County Transportation* dated February 1996, and *York County Housing* dated May 1996.

The Borough has not adopted a comprehensive plan.

#### Special Protection Areas

The planning area does not contain any special protection areas as classified by Chapter 93 as "high quality" or "exceptional value" watersheds. The Federal Emergency Management Agency has identified the 100-year floodplain along the North Branch of the Muddy Creek, which flows from west to east through the southern portion of the Borough, and Pine Run which flows from north to south.

7/10/98

### Zoning and Subdivision and Land Development Regulations

The Borough does not have a zoning ordinance. However, the Borough does administer the County's Subdivision and Land Development Ordinance which requires that all subdivision and land development plats be submitted to the Borough Council for approval in accordance with the Pennsylvania Municipalities Planning Code. The County's Ordinance requires a 40,000 square foot minimum lot area for lots which are not served by public sewer.

### 1.3 Growth Areas Identified By Previous Planning

The draft *York County Growth Management Plan* contains a county-wide growth areas map which includes "primary growth areas" and "secondary growth areas". Such growth areas are currently preliminary but are intended to ultimately function as growth boundaries after being finalized between the County and affected municipalities through the Municipal Consulting Program. The Borough of Felton is clearly outside of both the primary and secondary growth areas identified by the County's Plan.

The County's growth boundaries are established to direct growth to areas which can be served by public facilities and to protect areas which are not suitable for growth. The growth boundaries are intended to protect environmentally sensitive areas such as public groundwater supplies, surface water supply sources, recreational water use areas, groundwater recharge areas, industrial water use, or wetlands.

Since the Borough does not have zoning, future development is not directed to specific tracts of land. However, growth in the Borough has been historically limited due to the Borough's remote location and natural constraints to development including floodplains, steep slopes, and shallow soils. The small size of the Borough coupled with the limited amount of vacant land has also resulted in little growth.

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The growth areas identified by the County's Comprehensive Plan do not include the Borough and therefore do not represent a conflict with the protection of environmentally sensitive areas such as public groundwater supplies, surface water supply sources, recreational water use areas, groundwater recharge areas, industrial water use, or wetlands.

Since the Borough does not have zoning, future development is not directed to specific tracts of land. However, growth in the Borough has been historically limited due to the Borough's remote location and natural constraints to development including floodplains, steep slopes, and shallow soils. The small size of the Borough coupled with the limited amount of vacant land has also resulted in little growth.

## **CHAPTER 2**

### **DESCRIPTION OF PLANNING AREA**

#### **2.1 Physical Description of the Planning Area**

The planning area for this Act 537 Plan is the entire Borough. Important physical characteristics which relate either directly or indirectly to sewage facilities planning within the planning area are discussed in the following sections of this Chapter.

#### **2.2 Topography**

The topography of the planning area is characterized by moderate to steep slopes. Elevations above sea level range between a low of 540 feet to a high of 820 feet. As presented on Map 2, the planning area's topography is drained by the North Branch of the Muddy Creek, which flows from west to east through the southern portion of the Borough, and Pine Run which flows from north to south.


Municipal floodplain mapping was conducted by the Federal Emergency Management Agency (FEMA) as part of the National Flood Insurance Program (NFIP). The purpose of the program is twofold. First, NFIP is intended to prevent the loss of life and property due to flooding. This is achieved through local government regulation of development in the floodplain. Second, NFIP makes low cost flood insurance available to homeowners and businesses.

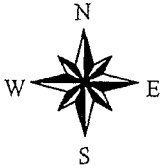
The focus of the NFIP is the 100-year floodplain. In this area, past experience and statistical probability indicate that destructive flooding has a high degree of probability to occur. The waterways with 100-year importance are shown on Map 3.

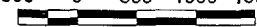
# Map 2 Topography & Wetlands

Borough of Felton  
York County, PA

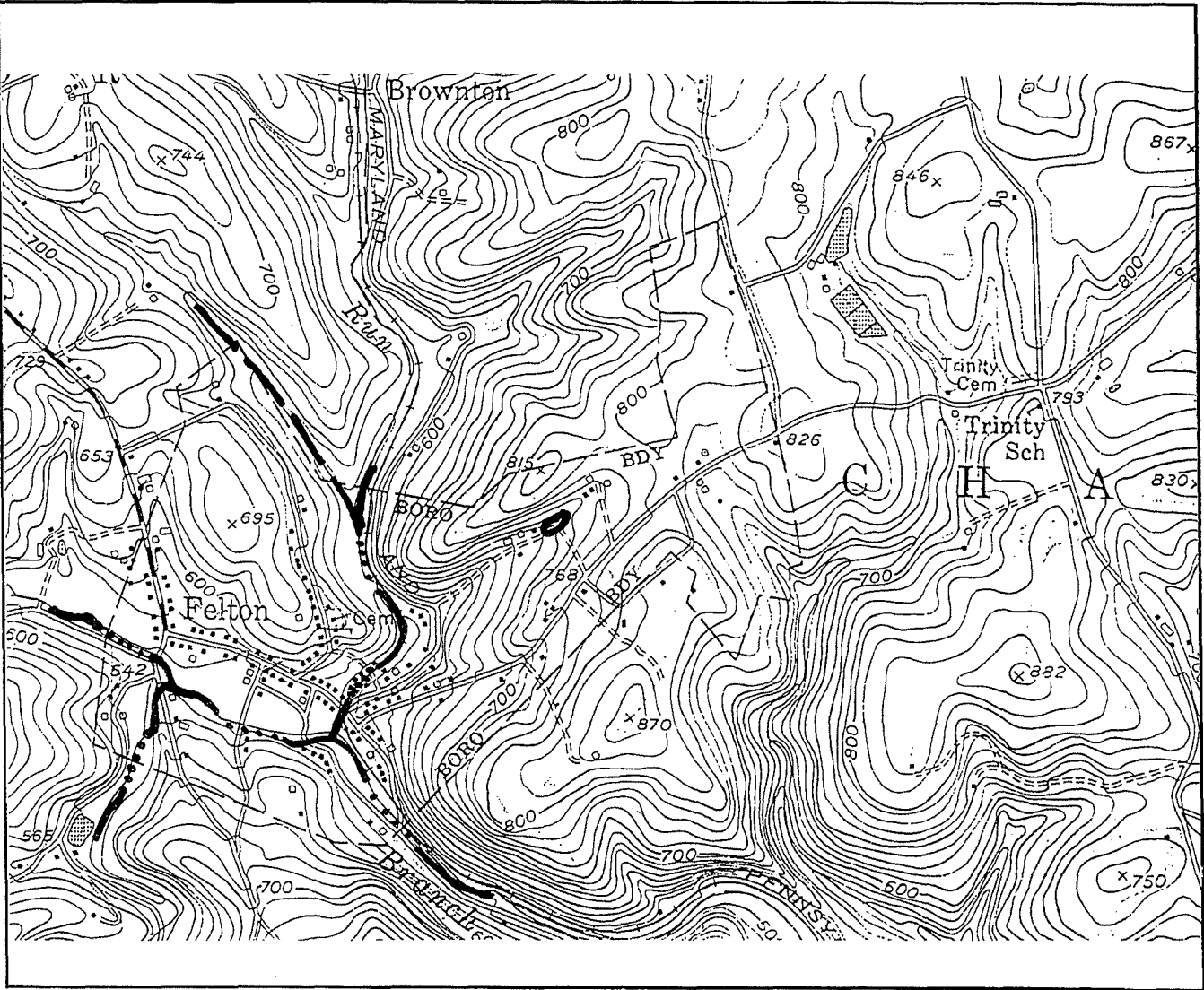
### Legend

 Wetlands as mapped by the  
National Wetlands Inventory



500 0 500 1000 1500 Feet  







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# Map 3 Floodplains

Borough of Felton  
York County, PA

### Legend

-  Municipal Boundary
-  Parcels
-  Streams
-  Lakes and Ponds
-  100 - Year Floodplain



500 0 500 1000 1500 Feet

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### 2.3 Soil Suitability for On-lot Sewage Disposal

The characteristics of soils in the planning area were reviewed and analyzed to determine probable soil limitations for on-lot sewage disposal systems (OLDS) based on the *Soil Survey of York County, Pennsylvania*, prepared by the United States Department of Agriculture, Soils Conservation Service (USDA-SCS). The following classification system was used for this analysis to rate soils according to their general suitability for OLDS:

Suitable for Subsurface Systems - Soils which are considered generally suitable for subsurface systems possess a typical depth to limiting zone of 60 inches or more and a slope of 0 to 25 percent.

Elevated Sand Mound Systems - Elevated sand mound systems are typically required in soils with a depth to limiting zone between 20 and 60 inches and a slope of less than 12 percent.





Unsuitable - Soils which are considered generally unsuitable for any on-lot sewage disposal system possess slopes in excess of 25 percent, soils with a shallow limiting zone (less than 20 inches) soils with a depth to limiting zone of 20 and 60 inches combined with slopes in excess of 12 percent, hydric soils, and soils classified as "quarry", "pits", "urban", and "water".




Map 4 identifies the limitations for OLDS and will be further evaluated in Section 4.11 of this Plan to assess the suitability of the types of systems currently in use.

# Map 4 Limitations for On-Lot Sewage Disposal

Borough of Felton  
York County, PA

**Legend**

-  Municipal Boundary
-  Parcels
-  Streams
-  Lakes and Ponds

- Soil Suitability
-  Generally suitable
  -  Elevated sand mound systems typically required
  -  Generally unsuitable



500 0 500 1000 1500 Feet



## 2.4 Geology and Hydrogeology

The geology of an area generally dictates important groundwater characteristics such as median yields and susceptibility to potential contaminants. The Borough of Felton is underlain by only one geologic formation, the Wissahickon Formation. This formation consists of various schists and is not a carbonate formation. The Wissahickon Formation has a median yield is 20 gallons per minute and has a low porosity and permeability. Since the Borough has only one formation, geology is not mapped within this Plan.

In areas which rely heavily upon OLDS and individual wells, Act 537 planning requires well testing to identify areas where the groundwater may be contaminated by OLDS. In March 1997 and November 1997, domestic well testing of the planning area was conducted as part of the Sewage Needs Survey. The survey included an analysis of nitrate-nitrogen, total coliform, and fecal coliform in drinking water supplies within the planning area.

According to the US Environmental Protection Agency (EPA), the maximum limit of nitrate-nitrogen in drinking water is 10 milligrams per liter (mg/L). Sources of nitrate-nitrogen include natural decay of organic matter, precipitation, mineral weathering, manure application, chemical fertilizers, and malfunctioning sewage disposal systems. In areas where nitrate-nitrogen is greater than 5 mg/L, the DEP requires preliminary hydrogeologic evaluations for proposed developments as part of the Planning Module for Land Development process.

Total coliform is an "indicator" bacteria which also exists naturally in the soil, vegetation, and the intestines of warm-blooded animals. Fecal coliform testing measures mostly *Escherichia coli* (*E. coli*) bacteria which is found in the stool of humans and other warm-blooded animals. EPA standards for drinking water require that the water be free of total coliform or fecal coliform bacteria. Therefore, a water sample with 1 colony of bacteria per 100 milliliters (1 col./100 ml) is considered to exceed the EPA drinking water standards.

A total of 41 domestic water supplies were tested for nitrate-nitrogen, total coliform, and fecal coliform. This number represents 25.6% of the households in the Borough. The results are summarized as follows:

Sample #	Nitrate-Nitrogen	Fecal Coliform	Total Coliform	Well Type
1	9.3	0	0	drilled
5	9.6	0	1	drilled
7	10.7	0	0	drilled
10	5.7	0	0	drilled
13	6.5	0	3	drilled
16	4.6	0	1	drilled
24	5.4	0	6	drilled
27	6.2	0	0	drilled
30	6.3	0	14	drilled
31	10.7	0	11	drilled
33	4.3	0	0	drilled
37	5.4	0	confluent	dug
40	8.2	0	20	dug
41	14.5	0	0	drilled
47	10.6	0	13	spring
51	3.9	0	0	drilled
55	3	0	23	drilled
56	2.8	0	0	drilled
57	7.8	0	0	drilled
62	5.4	0	8	drilled
68	4.15	0	234	spring
70	4.4	0	0	drilled
70A	4.7	0	6	drilled
72	1.6	0	4	drilled
79	4.3	0	1	drilled
80	4.5	0	1	drilled
84	2.01	0	42	drilled
87	3.3	0	0	drilled
89	12.6	0	0	drilled
90	10.60	0	2	drilled
92	15.1	0	68	dug
93	8.7	0	1	drilled
94	8.7	0	0	drilled
95	5.81	0	0	drilled
97	1.14	0	0	drilled
98	1.19	0	6	drilled
100	4.73	1	18	spring
101	5.34	0	0	drilled
102	19.2	607	confluent	drilled
103	2.15	0	1	drilled
104	6.7	0	0	drilled

Summary of Well Tests Based on Number of Samples			
Total= 41			
Nitrate-Nitrogen		Fecal Coliform	Total Coliform
<u>5 to 10 PPM</u>	<u>&gt;10 PPM</u>	<u>&gt;0./100 ml</u>	<u>&gt;0./100 ml</u>
17	8	2	24
# of samples which do not meet DEP & EPA safe drinking water standards: 27 or 66%			

The sample locations and results for nitrate-nitrogen and coliform bacteria are mapped on Maps 5 and 6, respectively.

Responses from the Borough's Sewage Needs Survey (see Chapter 3) indicate that 19 homeowners use water treatment devices, other than water softeners. Of these 19 treatment systems, two treat for pH and three use ultraviolet filters to remove bacteria. The type of treatment for the remaining 14 systems were not specified. The survey also indicated that eight homes are served by hand-dug wells and six homes are served by individual or community springs.

After analyzing these maps and the geology of the Borough, the following conclusions appear appropriate:





- Potential causes of the high levels of bacteria include inadequate sewage disposal systems, surface runoff due to steep slopes, the use of springs and hand-dug wells which are prone to surface water infiltration, and significant areas within the Borough with a seasonally high water table.
- The water tests which possessed the highest levels of bacteria are hand-dug wells and springs. Of the eight water supplies with the highest levels of bacteria, only two are drilled wells. A sewage holding tank is utilized on the same lot as one of the two drilled wells (sample #102) which suggests that either the holding tank is overflowing or the well is receiving fecal and other coliforms from adjacent homes.
- The strongest indicator of sewage contamination, fecal coliform, was detected in two of the 41 well samples.
- The Borough's geology is not considered to be a "hazardous geologic formation" as referenced in Pennsylvania Title 25, Chapter 71. However, because of the prevalence of marginal nitrate-nitrogen results (between 5 and 10 PPM), a preliminary

hydrogeologic analysis will be required for any proposed land development with on-lot sewage disposal within a quarter mile of a well sample location which exceeds 5 mg/L nitrate-nitrogen.

# Map 5 Nitrate Nitrogen

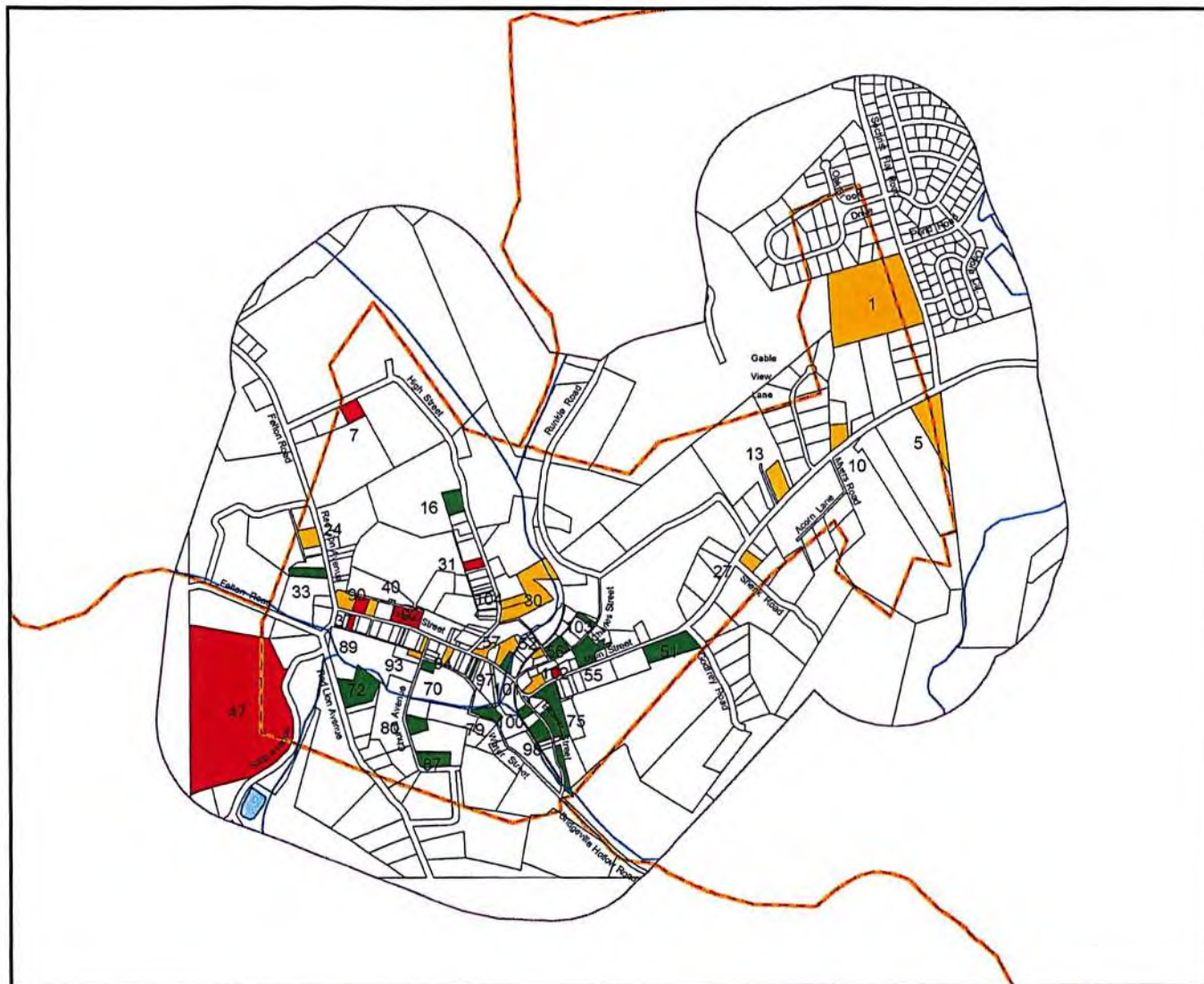
Borough of Felton  
York County, PA

### Legend

-  Municipal Boundary
-  Parcels
-  Streams
-  Lakes and Ponds

Nitrate Level (mg/l)

-  0 - 5
-  5 - 10
-  > 10







500 0 500 1000 1500 Feet

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# Map 6 Coliform Bacteria

Borough of Felton  
York County, PA

### Legend

-  Municipal Boundary
-  Parcels
-  Streams
-  Lakes and Ponds

### Total Coliform Bacteria

-  0
-  1 - 5
-  5 - 10
-  > 10

### Fecal Coliform Bacteria > 0



500 0 500 1000 1500 Feet

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## **2.5 Prime Agricultural Soils**






Prime farmland, as defined by the USDA-SCS, is land that is best suited for producing food, feed, forage, fiber, and oilseed crops. It has the soil quality, growing season, and water supply needed to economically produce a sustained high yield of crops when it is treated and managed using acceptable farming methods. According to the USDA, qualities which characterize prime agricultural soils include high permeability to water and air, few or no rocks, optimum levels of acidity and alkalinity, zero to eight percent slopes, and the absence of flooding during the growing season. These soils may now be utilized for crops, pasture, woodland, or land covers other than urban land or water areas.

As presented on Map 7, prime agricultural soils are found along the floodplains and on the gently sloping tops of ridges.

# Map 7 Prime Agricultural Soils

Borough of Felton  
York County, PA

### Legend

-  Municipal Boundary
-  Parcels
-  Streams
-  Lakes and Ponds
-  Prime Agricultural Soils



500 0 500 1000 1500 Feet

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## **2.6 Wetlands**

As defined by DEP, EPA, and the US Army Corps of Engineers, wetlands are those areas which are inundated or saturated by surface or groundwater at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas which possess three essential characteristics: (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology.

The National Wetlands Inventory (NWI) Map was compiled by the U.S. Fish and Wildlife Service using color infrared aerial photos for the identification of wetlands using soil moisture content. The quality of the maps vary greatly depending on the quality of the photos, the time the photos were taken, and the type of wetlands being identified. The NWI map is a helpful background source for wetland investigations. However, field research by a trained expert is necessary to determine the prevalence or absence of wetlands.

The NWI maps indicate that the planning area contains a number of small wetlands along Pine Run and the North Branch of the Muddy Creek. Map 2 presents probable wetlands as identified by the NWI maps.

## **2.7 Public Water and Sewer Service Areas**

The planning area is not served by public water or sewers.

## CHAPTER 3 EVALUATION OF EXISTING WASTEWATER FACILITIES

### 3.1 Existing Public Wastewater Treatment Systems

The planning area does not have any public wastewater treatment systems.

### 3.2 Existing Collection and Conveyance Systems

The planning area is served by individual on-lot sewage disposal systems. Therefore, there are no public wastewater collection and conveyance systems.

### 3.3 Areas Dependent Upon On-lot Sewage Disposal

In January 1997 a Sewage Needs Survey was conducted to aid in the assessment of the status of on-lot sewage disposal methods. The survey was initiated with a mail survey which was sent to all 168 improved property owners in the Borough. A copy of this survey is included in Appendix B. A total of 86 surveys were completed by the property owners which equates to a high response rate of 51 percent. Confirmation of 38 of the 86 responses was obtained through site visits at the same time well samples were collected.

The Borough sewage enforcement officer (SEO) also provided a map and a listing of repairs and enforcement actions (see Appendix A - Documentation of SEO Involvement). SEO records and the Sewage Needs Survey results were analyzed and categorized using the following method of classification:

- **Confirmed Malfunction** - Confirmed through observation by SEO or other qualified professional, dye testing, best technical guidance repairs, seasonally wet absorption areas, system back-ups, piped discharges with evidence of sewage.
- **Suspected Malfunction** - Abnormally green grass, piped discharges without evidence of sewage, absorption areas with known unsuitable soils, cesspools in high density development (i.e. lots which are less than one-half acre), pit privies, and dwellings with on-lot systems which are pumped more frequently than one time per year.
- **Potential Malfunction** - Appear to operate satisfactorily but are one of the following:

- ◆ Pre-regulatory system or are unlikely to receive a permit under current regulations;
- ◆ Repair due to poor site conditions;
- ◆ Repair due to aging system; or
- ◆ Properties which are less than one-half acre in size and are served by an on-lot sewage disposal system.

- Wildcat Sewer System
- Borehole Disposal
- Repaired with a Holding Tank
- Adequate or New System - Survey response indicates adequate site conditions and system or SEO has issued a new permit.

The SEO records added an additional 21 systems to the survey data. The following table provides a summary of the categories of on-lot systems using SEO records, survey results and York County Tax Assessment data on lot sizes. Map 8 shows the geographic distribution of the categories of on-lot systems.

CATEGORY	NUMBER	% OF TOTAL
Confirmed Malfunctions	6	3.6%
Suspected Malfunctions	21	12.6%
Potential Malfunctions	113	68%
Holding Tank	7	4.2%
Adequate	20	12%
Parcels Classified	167	100.0%

Five of the home owners who responded to the survey indicated that they have an elevated sand mound system. Other types of on-lot systems in use include standard subsurface systems and pre-regulatory cesspools. As depicted by the soils mapping on Map 4, much of the Borough has site conditions which are generally unsuitable for on-lot systems according to today's regulations. The most substantial on-lot problem in the Borough is the use of pre-regulatory systems located on small lots in marginal or unsuitable soils. When malfunctions occur in these situations, holding tanks are typically required. One

repair on High Street utilized a small flow treatment facility. The Borough adopted a holding tank ordinance in August of 1994. A copy of the Ordinance is provided in Appendix B.

The Sewage Needs Analysis Survey also revealed a high frequency of septic tank pumping. The Borough has emphasized the importance of on-lot management and septic tank pumping through periodic reminders in bills and newsletters. It is also recognized that septic tank pumping at intervals more frequent than one time per year suggests that such systems may be malfunctioning. The Survey yielded the following responses to the frequency of septic tank pumping:

Frequency of Pumping	#	%
Never	14	16.3%
More often than once a year (includes one holding tank)	4	4.7%
Every 1 to 2 years	40	46.5%
Every 3 to 5 years	18	20.9%
Every 5 to 10 years	7	8.1%
Unknown	3	3.5%
Total	86	

### 3.4 Unpermitted Disposal Areas

The Sewage Needs Survey and SEO records did not reveal any unpermitted disposal areas such as "wildcat" sewers or borehole disposal.

### 3.5 Sludge Generation and Disposal

The planning area is comprised of approximately 168 equivalent dwelling units (EDU's) which are estimated to produce approximately 26,880 gallons of septage per year (based on the standard of 160 gallons of septage per year per EDU). The primary source of septage is residential. Septage hauling is contracted privately by individual property owners and is transported by truck to DEP-permitted septage disposal facilities, the closest of which is the Springettsbury Township wastewater treatment facility.

### **3.6 Federal Programs**

The Borough has not received money for any previous wastewater studies or projects under the Federal Construction Grants Program.

### **3.7 Local Programs**

Consistent with the requirements of the DEP, the Borough's sewage enforcement officer (SEO) oversees the on-lot permitting program. The SEO also enforces applicable DEP regulations and reviews on-lot sewage permit applications. Planning Modules for Land Development are required when applicable and are reviewed by the appropriate Borough officials, the SEO, and the York County Planning Commission. There are no foreseen problems with the local program which may lead to improperly sited and installed systems.

### **3.8 Summary of Existing Wastewater Facility Needs**

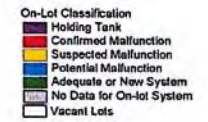
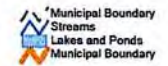
The above tables and Map 8 summarize the Sewage Needs Survey. Based on these findings, the following conclusions appear appropriate:

- The use of holding tanks for the six homes which experienced malfunctions is not a preferable repair considering the expense and inconvenience to the affected home owners.
- The Borough's historic pattern of development prior to the implementation of modern sewage disposal regulations resulted in the use of cesspools on small lots with soils which are not typically well suited for on-lot sewage disposal. This is particularly true of the areas of Main Street (west of Godfrey Road), the southern half of Hill Street, Charles Street, and Beaver Street. Malfunctions in such areas typically necessitate the use of holding tanks which are not a preferable long-term solution.
- The water testing program did not reveal a high percentage of fecal coliform bacteria which is most closely linked to improper sewage disposal. The presence of total could be attributed to inadequately treated wastewater or it could be a function of surface infiltration resulting from the use of springs, hand-dug wells, and even drilled wells with a high static water level. Nevertheless, it is clear that the Borough must consider a long-term wastewater treatment solution.

# Map 8 Existing Needs Analysis

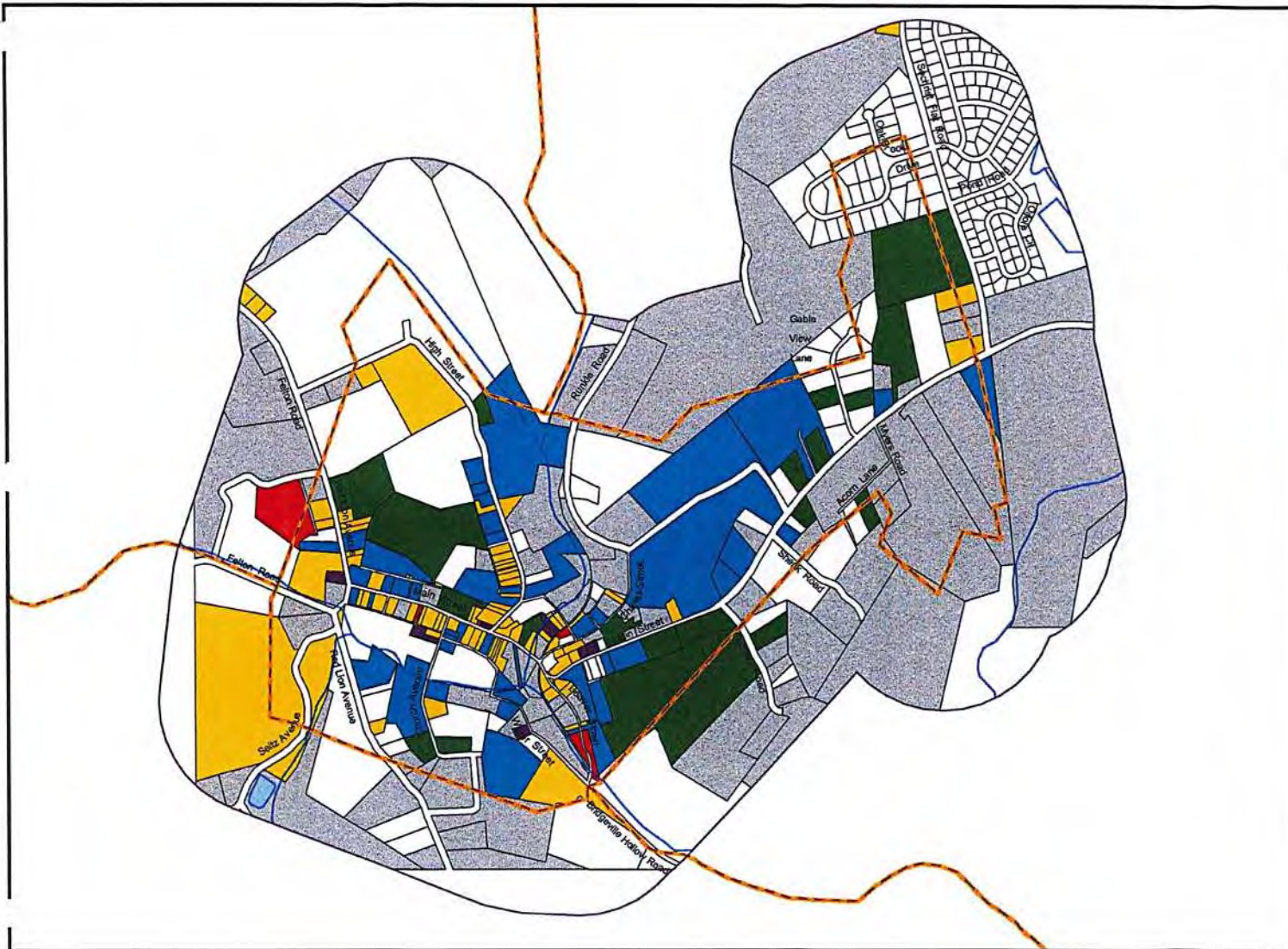
Borough of Felton  
York County, PA

## Legend



400 0 400 800 1200 Feet

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## CHAPTER 4 FUTURE GROWTH AND DEVELOPMENT

### 4.1 Subdivision Activity

With respect to sewage facilities planning, it is important to closely monitor growth to ensure that each proposed lot has an adequate means of sewage disposal. If on-lot sewage disposal methods are proposed for new subdivisions, each lot should be of sufficient size and have proper site conditions to accommodate an initial and a replacement absorption field. Likewise, proposed growth in areas which are served by public sewers requires an evaluation of all pertinent wastewater collection, conveyance, and treatment facilities. To address this issue, the DEP requires municipalities and developers to demonstrate that adequate sewage facilities are available prior to the approval of subdivisions or land developments. With few exceptions, a Planning Module for Land Development must be submitted to, and approved by, the municipality and the Department before subdivision or land development approval can be obtained.

Subdivisions within the planning area were researched to ensure that Planning Modules are being required. This research demonstrated that the Borough has an effective Planning Module program and has been consistently requiring Modules for subdivisions when appropriate. The following table provides a list of the subdivisions and land developments for which Planning Modules were required.





PLANNING MODULE APPLICATIONS  
Act 537 Plan for the Borough of Felton

Map #	Name	Location	DEP #	# of Homes or Lots	Sewage Disposal	Total Flow (GPD)	Water Supply	DEP Action	Status
1	Garvie Baldwin	Main St. 2500' east of Beaver St.	83-67922-005-2 83-67908-069-2	7	Individual On-lot	2,000	On-lot	4/21/93 Approved	Under Construction
2	Gable's View	Main St. .6 miles east of Beaver St.	A3-67922-007-2 A3-67908-072-2	13	Individual On-lot	4,400	On-lot	3/10/94 Approved	Under Construction
3	Ben Hake	29 High Street	A3-67922-008-3s	2	Small Flow Treatment Facility for 2 Existing Homes	800	On-lot	11/9/94 Approved	Pending DEP Permit
4	Jackie Trout	east side of Church St. 0.2 miles south of Main St.	3-67922-009-1	2	Individual On-lot	800	--	10/8/93 Approved	Approved and Constructed
5	Lawrence Wirtz	west side of Charles Street	W3-67922-010-5	2	Form B Waiver- No Systems Proposed	--	On-lot	8/16/94 Denied	Not Approved
6	Terry Senz	west side of High Street, .1 mile north of Main St.	3-67922-011-1	2 (1 res., 1 ag.)	Individual On-lot	800	On-lot	11/23/94 Approved	No New Lots or Construction
7	Robert C. Jones	west side of Charles Street	--	2 ag. lots	Form B Waiver- No Systems Proposed	--	--	5/6/96 Approved	Subdivided/ Nothing Built








# Map 9 Subdivision Activity

Borough of Felton  
York County, PA

### Legend

-  Municipal Boundary
-  Parcels
-  Streams
-  Lakes and Ponds

### Planning Module Applications

-  Garvie Baldwin
-  Gable's View Estates
-  Ben Hake
-  Jackie Trout
-  Lawrence Wirtz
-  Terry Sentez
-  Robert Jones



500 0 500 1000 1500 Feet

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## 4.2 Population Projections

When evaluating future wastewater facility needs, it is important to forecast anticipated future populations. Population growth is affected by a multitude of variables including local and regional economy, infrastructure, and the availability of suitable land for development. Therefore, it is most beneficial to consider population projections in conjunction with anticipated future development.

As stated previously, Felton is outside of the path of regional growth and is not anticipated to grow significantly over the next ten years. In its document entitled *York County Growth Trends*, the York County Planning Commission projected that the Borough would grow from a 1990 population of 438 residents to a year 2000 population of 447. Applying this same minimal rate of growth over the next five and ten years, the following projections appear reasonable:

1997 Estimated Population of the Borough:	444
2002 (Five-year) Population Projection:	449
2007 (Ten-year) Population Projection:	453

## 4.3 Future Growth Areas







Since the Borough does not have a zoning ordinance, growth is not directed to distinct portions of the planning area. Over the next five years, foreseeable growth is somewhat limited to several new homes within the Gable's View Estates development in the northeast portion of the Borough. The most likely scenario for the remainder of the Borough over the next ten years is sporadic growth in the areas which are best suited for on-lot sewage disposal. Map 10 shows the potential five and ten-year growth areas.

The ten-year projection would result in a net increase of nine persons within the planning area. Dividing this population by the Borough's 1990 average persons per household a projected increase of four housing units in the planning area. Using 350 gallons per day per dwelling, the increase in sewage generated in the planning area over the next ten years is projected to be 1,400 gallons per day.

# Map 10 Growth Areas

Borough of Felton  
York County, PA

### Legend

-  Municipal Boundary
-  Parcels
-  Streams
-  Lakes and Ponds
- Growth Areas**
-  0 - 5 Year Growth Area
-  5-10 Year Growth Area



500 0 500 1000 1500 Feet

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#### **4.4 Summary of Wastewater Planning Needs**

The Borough's most significant wastewater planning need is addressing the continued use of the older on-lot systems which pre-date current regulations. Such systems are located on small lots which also would not be permitted under current land use regulations. The small size and minimal growth potential of the Borough reduce the likelihood of creating an affordable public wastewater solution.

The Borough's projected growth is not dependent upon a public wastewater solution since the five-year growth area will be served by on-lot sewage disposal using either elevated sand mound systems or conventional systems. Likewise, the ten year growth area remains speculative and is also dependent upon on-lot sewage disposal.

Borough residents are generally aware of the need to properly maintain their on-lot systems. The Borough's sewage enforcement and educational efforts must continue if on-lot sewage disposal is to be considered a viable long term option.

## **CHAPTER 5**

### **IDENTIFICATION OF ALTERNATIVES**

#### **5.1 Overview of Alternatives**

The alternatives which are considered in this chapter include the following:

1. No action alternative;
2. Repairs and continued use of existing facilities;
3. Public wastewater collection, conveyance and treatment alternatives; and
4. Local agency programs and regulations.

Each alternative is discussed in detail below.

#### **5.2 No Action Alternative**

The no action alternative is acceptable only where threats to public health or pollution of groundwater and surface water sources will not occur or continue to occur. The no action alternative may be applied to all or portions of the planning area where sufficient documentation exists to support an assertion that safe sewage disposal is occurring. The no action alternative is not appropriate for the portions of the Borough which utilize holding tanks or on-lot systems on small lots with soils which are typically unsuitable for on-lot sewage disposal.

#### **5.3 Continued Use of Existing Facilities**

Considering the number of holding tanks in use as well as the number of confirmed malfunctions and suspected malfunctions, it is clear that the continued use of existing facilities is not a preferable long-term solution for the older portions of the Borough.

On-lot education may help extend the functional life of existing septic systems by informing residents of the basics of managing on-lot systems, including periodic pumping, proper operation and maintenance of the system, and the use of water conservation devices.

Continued use of on-lot sewage disposal systems (OLDS) remains a viable option for the newer and larger lots in the less densely populated portions of the planning area. In such

areas, OLDS are generally constructed according to modern standards and adequate area is available for replacement absorption areas or alternating absorption areas in the event of a malfunction.

## **5.4 Public Wastewater Collection, Conveyance, and Treatment Alternatives**

### **Collection and Conveyance Alternatives**

#### **1. Conventional Gravity Sewers**

Conventional gravity sewers convey wastewater by using gravity or the differential elevations between the upstream and downstream points in the system. The sewers must be set deep enough to receive flows from individual buildings. The building sewer or lateral is typically comprised of 6-inch diameter pipe laid at a minimum slope of two percent. Building sewers connect directly to the collecting sewers. Where financially feasible, the collecting sewer is set at a depth which is capable of receiving basement flows. Generally, they are constructed of 8-inch diameter or larger pipe with access manholes spaced a maximum of 400 feet apart and at each change of direction. The feasibility of conventional gravity sewers is dependent on factors such as topography, presence of rock, high groundwater tables and density of homes. The costs of a conventional gravity system can rise dramatically depending on these factors, especially when significant pumping is required or in areas with a relatively low density of potential connections.

#### **2. Low Pressure Sewers with Grinder Pumps**

As the cost of conventional gravity sewers continues to increase, alternative sewer systems are becoming more frequently considered. Whenever conventional gravity sewers are considered for use, an appropriate alternative sewer system should be evaluated to compare economic and non-economic issues. The most common type of alternative system in use today is the grinder pump system.

When discussing grinder pump systems, it is necessary to consider both the on-lot element as well as the collection system elements. The on-lot elements of a grinder pump system consist of 4-inch or 6-inch building sewer which conveys household

sewage to an on-lot pump station. On existing homes, either a new connection is made to the existing plumbing system or the existing building sewer is intercepted by the new building sewer and directed to the pump station. The on-lot pump station is typically a fiberglass basin with a minimum capacity of 50 gallons. The pumps are either centrifugal or semi-positive replacement units with 1 to 2 horse power motors. The basin includes appropriate valving for the isolation of the pumps. Each basin package is provided with a pump control panel which can either be located remotely at the house or locally at the pump station.

The second component of any grinder pump system is the collection system. A typical low pressure sewer system consists of small diameter, plastic, pressure piping. All piping downstream of the grinder pump is under low pressure, usually 60 pounds per square inch or less. The low pressure collection system is arranged as a branch network without any loops in the system. Appurtenances of a low pressure system consist of in-line and terminal clean-outs located at 400 to 600-foot intervals, at changes in direction or a changes in pipe size. Air release valves are located within the system at all high points. Isolation valves are installed strategically throughout the system to facilitate maintenance. Discharge from the low pressure system can be directly routed to a treatment plant provided the difference in elevation is not significant, or to a conventional collection or conveyance system. Grinder pump systems have been most applicable in areas where the topography is either very flat or frequently and gently rolling which would require numerous pump stations if served by conventional gravity sewers. Other conditions in which grinder pump systems may be favorable include shallow bedrock which cannot be removed cost effectively, high groundwater table, or where the system outfall is at a higher elevation than the service area.

### 3. Small Diameter Gravity Sewers

A third alternative is the use of small diameter gravity sewers which collect the effluent from individual septic tanks. Since the septic tanks remove most of the solids, a smaller gravity collection sewer, with cleanouts in lieu of manholes, can be used. Advantages of this method are shallow depth of sewers; no power requirements; design can be more flexible to avoid obstacles; and low infiltration of

groundwater and stormwater. Disadvantages of small diameter gravity sewers are that each connection requires a septic tank; areas with existing cesspools will require the purchase of a new septic tank; each tank needs to be pumped to remove septage, and pump stations may be necessary based on the topography.

### Treatment Alternatives

Seven treatment alternatives were selected for evaluation:

1. Construction of an extended aeration activated sludge “packaged” wastewater treatment plant facility;
2. Conveyance to the Springettsbury Township treatment facility; and
3. Conveyance to the existing, privately owned and operated lagoon treatment facility which serves the Chanceford Crossings development, immediately northeast of the Borough. In addition to conveying flows to this facility, the Borough would need to participate in the expansion of the treatment facility to accommodate its flows.
4. Construction of a community on-lot subsurface disposal system.
5. Construction of aerated lagoons along with a spray irrigation land application system.
6. Construction of a sequencing batch reactor (SBR) treatment plant. After evaluating this alternative, it was determined that the higher cost of an SBR as compared to a packaged treatment plant could not be justified given the small size of the treatment plant and the limited customer base. Therefore the SBR alternative is not further evaluated in this Plan.
7. Small flow treatment facilities (SFTF’s) to serve individual homes or clusters of 2 or 3 homes. Similar to the previous alternative, SFTF’s were evaluated and were excluded from further consideration as a primary treatment option for the potential sewer service area. The cost of SFTF’s is approximately 30 percent higher than a packaged treatment plant. Additionally, each SFTF would typically require conveyance to a stream discharge because existing lot sizes and poor soil conditions found on most of the properties throughout the planning area would preclude a subsurface discharge. However, small flow treatment facilities remain a viable option for individual malfunctions or clusters of malfunctions in situations where no other alternatives, including public sewer, are available.

## **Summary of Wastewater Collection, Treatment, and Conveyance Alternatives**

Chapter 6 presents the evaluation of the technical and financial implications for all collection alternatives. The following conveyance and treatment alternatives are presented on Maps 11 through 13 and are further evaluated in Chapter 6:

### **Alternative 1**

Construction of an extended aeration activated sludge “packaged” wastewater treatment plant facility. (See Map 11)

### **Alternative 1A**

In an attempt to identify a smaller, more affordable project, this alternative uses the same design as Alternative 1, only it serves a smaller geographic area and proposes a smaller treatment plant. (See Map 11)

### **Alternative 2**

Conveyance to the Springettsbury Township treatment facility. (See Map 12)

### **Alternative 3**

Conveyance to the existing, privately owned and operated lagoon treatment facility which serves the Chanceford Crossings development, immediately northeast of the Borough. In addition to conveying flows to this facility, the Borough would need to participate in the expansion of the treatment facility to accommodate its flows. (See Map 12)

### **Alternative 4**

Construction of a community on-lot subsurface disposal system. This alternative utilizes the same collection and conveyance design as Alternative 1 with a different treatment method (See Map 13).

### **Alternative 5**

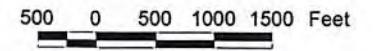
Construction of aerated lagoons along with a spray irrigation land application system. Similar to the previous alternative, this alternative utilizes the same collection and conveyance design as Alternative 1 with a different treatment method (See Map 13).

# Map 11 Public Wastewater Alternatives 1 & 1A

Borough of Felton  
York County, PA



- Legend**
- Wastewater Treatment Plant
  - ▲ Pump Station
  - Proposed Sewers
  - Gravity Sewer
  - Forcemain
  - - - Municipal Boundary
  - ▭ Parcels
  - Streams
  - ▭ Lakes and Ponds
  - ▭ Sewers Deleted for Alt. 1A
  - - - Municipal Boundary
  - ▭ Alternative 1 Service Area



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# Map 12 Public Wastewater Alternatives 2 & 3

Borough of Felton  
York County, PA

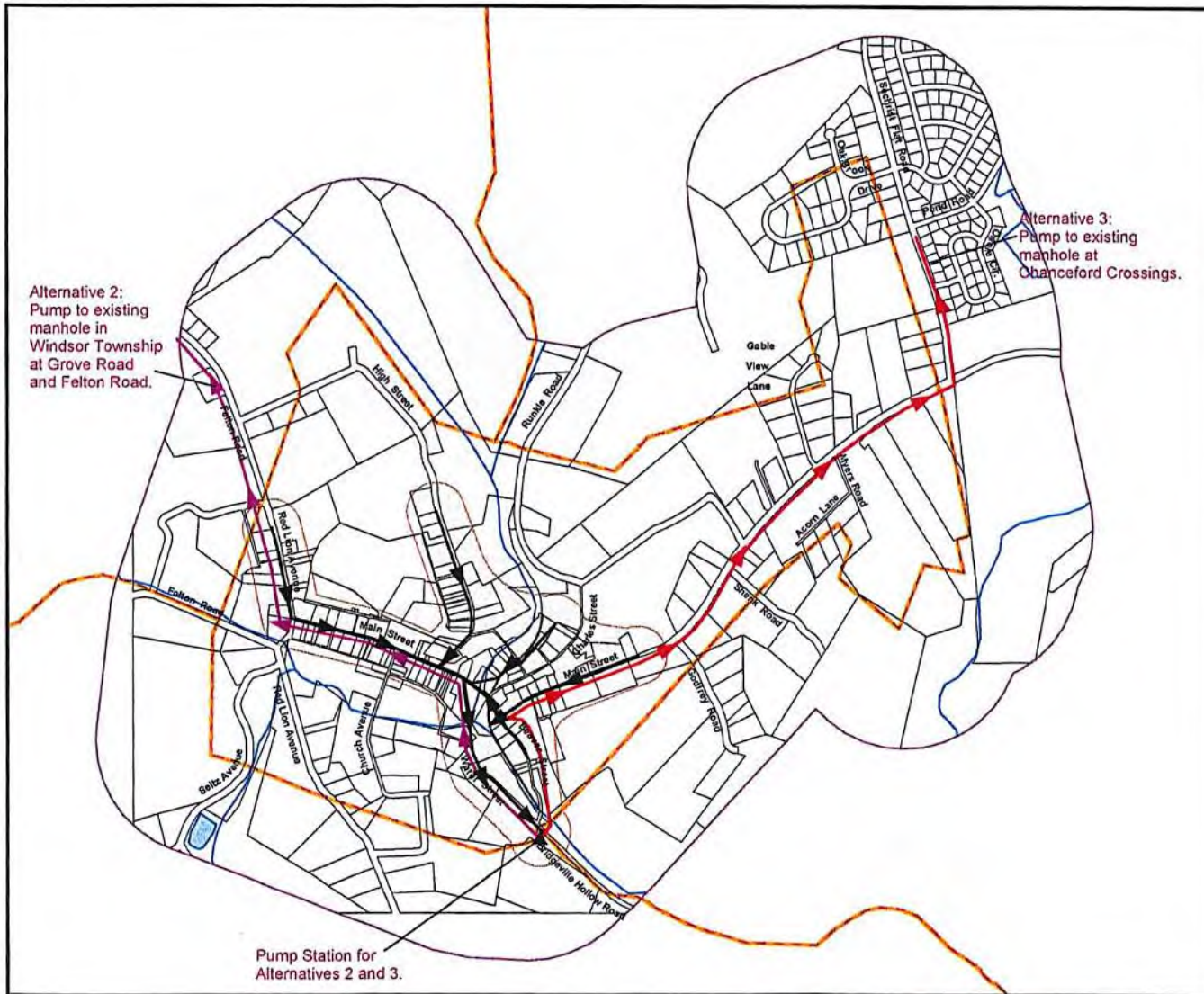
### Legend

- ▲ Pump Station
- Sewers
  - ▲ Alt. 2 Force Main
  - ▲ Alt. 3 Force Main
  - ▲ Gravity Sewer
- ▭ Municipal Boundary
- ▭ Parcels
- ▭ Streams
- ▭ Municipal Boundary
- ▭ Service Area



500 0 500 1000 1500 Feet

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# Map 13 Public Wastewater Alternatives 4 & 5

Borough of Felton  
York County, PA

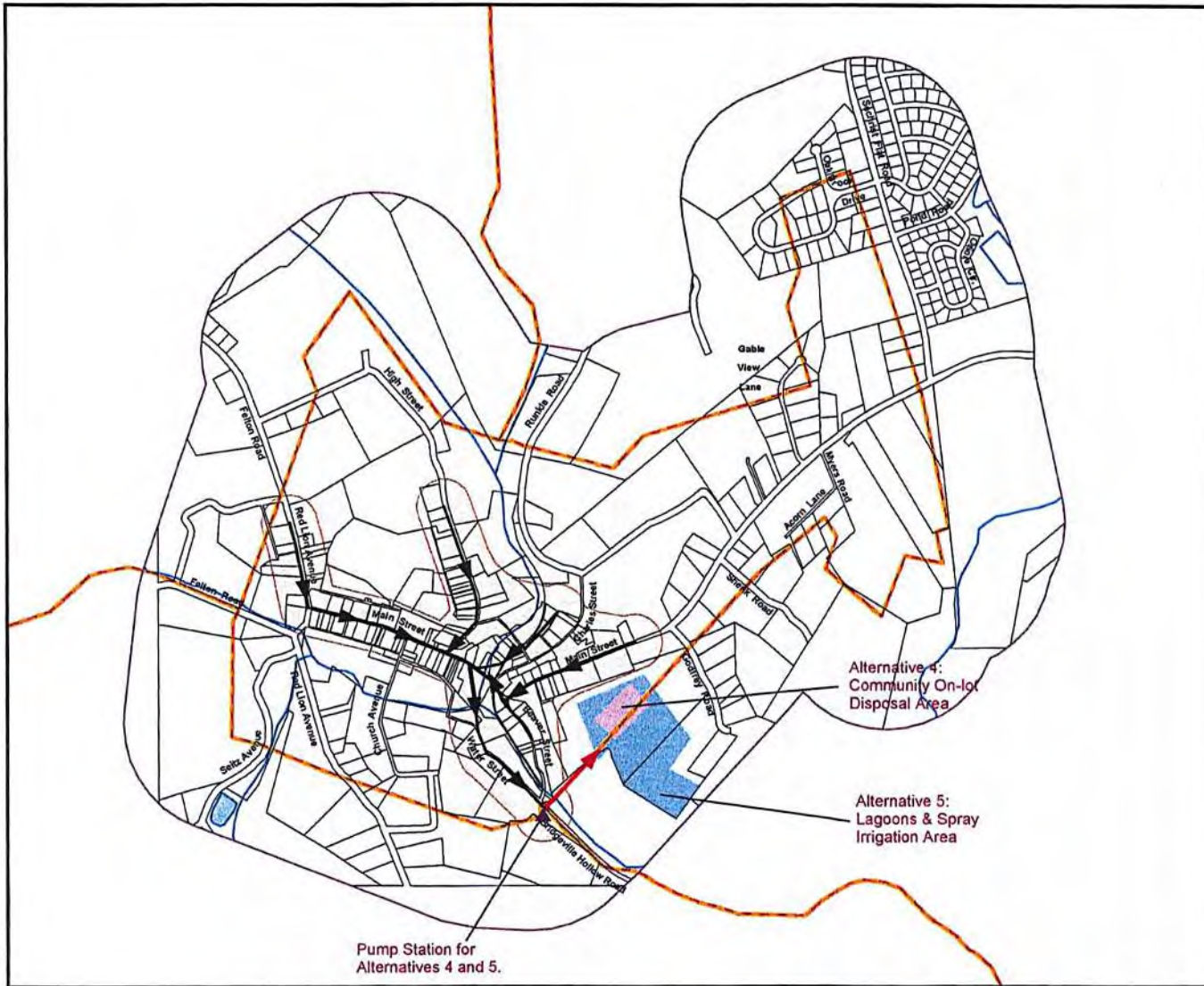
### Legend

- ▲ Pump Station
- Sewers
  - ▬ Gravity Sewer
  - ▬ Forcemain
- ▬ Municipal Boundary
- ▭ Parcels
- ▬ Streams
- ▭ Lakes and Ponds
- ▬ Municipal Boundary
- ▭ Service Area
- ▭ On-lot Disposal Area
- ▭ Lagoon & Spray Irrigation Area



500 0 500 1000 1500 Feet

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### **Sludge Treatment and Disposal**

Waste sludge would be aerobically digested and stored at the plant prior to disposal. Approximately 30 days of storage would be provided at the plant. Based on the small amount of sludge that would be generated, dewatering is not considered necessary or cost effective. In addition, permitting of land application sites and purchasing of the required application equipment would not be economically feasible considering the small size of this facility. Disposal of liquid sludge at a local wastewater treatment plant would be preferable.

### **Wastewater Flow Projections**

The total projected wastewater flow for a potential sewer project in the planning area is 42,000 gallons per day (GPD). Since little to no growth is anticipated in this area, the Borough's five- and ten-year growth is included in this projected flow for the purpose of evaluating potential alternatives for sewer service.

The above estimate of existing wastewater flow is based on a conservatively defined equivalent dwelling unit (EDU) of 350 GPD. In areas similar to the planning area, studies have demonstrated that a more realistic wastewater flow per EDU will range between 200 and 300 GPD. The above design capacity should be considered adequate to accommodate existing growth for the next ten years, considering both the conservative standard of 350 GPD/EDU and the limited growth which is anticipated in the planning area.

## **5.5 Local Agency Programs and Regulations**

A municipality's sewage facilities program typically consists of the enforcement of systems permitted by the sewage enforcement officer, the review and adoption of Planning Modules for Land Development, administration and enforcement of authority regulations, and the enforcement of special purpose ordinances related to sewage facilities. A local sewage facilities program can be enhanced through the implementation of additional requirements which relate to DEP regulations or specific concerns of the municipality. Within the context of an Act 537 Plan, such requirements may be in the form of selected nonstructural alternatives. The following subsections represent alternatives which could be selected and implemented within the Plan.

### **5.51 Small Flow Treatment Facilities**

Small flow treatment facilities (SFTFs) are permitted by DEP to abate an existing nuisance or health hazard or as a system to serve residential dwellings subject to Chapter 71, Section 71.64 and Planning Module criteria which include discharge requirements, soil suitability, and preliminary hydrogeologic evaluations. SFTFs could be utilized for future failing systems or existing vacant residential lots. On a case-by-case basis, the governing body may require specific operation and maintenance requirements based on one or more of the methods established in Chapter 71, Section 71.72 or in another form acceptable to the Borough Council and DEP. Such conditions would be established during the Planning Module process, prior to municipal adoption.

### **5.52 Retaining Tanks**

Specific criteria for the use of retaining tanks is provided by Chapter 71, Section 71.63 which primarily permit such facilities as a temporary solution to abate an immediate health hazard in areas where sewers are planned. Due to the high maintenance costs resulting from frequent pumping, retaining tanks are not considered to be a viable long term alternative. However, retaining tanks may be necessary as an interim measure, subject to the requirements of Chapter 71. As mentioned previously, the Borough has a holding tank ordinance in place.

### **5.53 Supplemental Planning Module Requirements**

There are several additional Planning Module requirements which municipalities may consider based on the findings of the Act 537 Plan:

- Additional requirements for preliminary hydrogeologic analyses could be warranted if the planning area is underlain by limestone geology or if nitrate-nitrogen levels in the groundwater are documented to be greater than 5 milligrams per liter.
- Municipalities can require the testing and reservation of a replacement absorption area in addition to the primary absorption area for new land developments.

- Wastewater disposal systems which are permitted by the Department and are not owned or operated by a municipality or an authority could be required to comply with conditions which ensure the long term proper operation and maintenance of such facilities. Such requirements would ensure consistency with Chapter 71, Section 71.72 relating to the establishment of the legal entity responsible for the system and financial assurances for the completion, maintenance, and operation of such facilities. These requirements would apply to community systems when such facilities are proposed for construction or expansion.

#### **5.54 Sewage Management Program**

Municipalities may develop a sewage management program to address all on-lot systems which are within the enforcement powers of the SEO. This program is typically developed when a significant health threat has been documented as a result of improper operation and maintenance of such systems. A sewage management program would address the following maintenance responsibilities:

- The removal of septage to avoid the overflow of sludge or solids into the absorption field.
- Maintenance of surface contouring.
- Requirements for water conservation devices if such systems are found to be malfunctioning as a result of hydraulic overload.
- Maintenance of electrical, mechanical, and chemical components.
- Documentation of septage pumping and hauling which indicates disposal at a DEP-permitted site.

#### **5.55 OLDS Education**

The Borough has implemented various forms of public on-lot educational programs through information distributed at public meetings and mailings to residents.

### **5.56 Comprehensive Planning**

Preparing or updating a municipal comprehensive plan is often an important component of a long-term wastewater planning process. Comprehensive planning is useful in identifying areas which are appropriate for growth considering a wide range of factors including wastewater disposal. Due to the small size of the Borough and limited area which is available for future growth, the Borough has not pursued the preparation of a comprehensive plan.

### **5.57 Zoning and Subdivision and Land Development Regulations**

Through the administration of the County's Subdivision and Land Development Ordinance a minimum lot size of 40,000 square feet is established for all future development with on-lot sewage disposal. If additional land use controls are desired through the adoption of a zoning ordinance, the Borough would require administrative and technical assistance through the appointment of a zoning officer.

## CHAPTER 6 EVALUATION OF ALTERNATIVES

### 6.1 Consistency Evaluation

In addition to obtaining consistency with municipal objectives, it is important to evaluate the consistency between alternatives and the objectives of county, state, and federal policies and plans. As required by the Pennsylvania Sewage Facilities Act, the alternatives analyzed in this Plan must be evaluated for consistency with each of the following policies and plans:

#### Plans Approved Under the Clean Streams Law or the Clean Water Act

The *Comprehensive Water Quality Management Plan* (COWAMP) was developed by DEP under the Clean Streams Law and the Clean Water Act. With the exception of the no action alternative, the alternatives evaluated by this Plan are not considered to be inconsistent with the COWAMP.

#### Municipal Wasteload Management Plans Under Chapter 94

The alternatives evaluated in this Plan are consistent with Chapter 94 since they do not propose the overloading of existing public wastewater facilities.

#### The State Water Plan

The State Water Plan identifies specific goals and objectives for water supply, flood damage reduction, outdoor recreation, water quality management, and environmental management. With the exception of the no action alternative, all alternatives presented in this Sewage Facilities Plan are consistent with the goals and objectives of the State Water Plan.

#### Comprehensive Plans

The Borough does not have a comprehensive plan. Given the fact that the County's Comprehensive Plan identifies Felton as being outside of the path of regional growth, sewage facilities are not deemed to be necessary to accommodate the Borough's projected growth. The sewer service options which are under consideration by the Borough are designed to primarily address existing needs and to accommodate a relatively minimal

7/10/98

amount of growth. Therefore, the alternatives evaluated in this Plan are considered to be consistent with the York County Comprehensive Plan.

#### Antidegradation Requirements Contained in Chapters 93, 95, and 102

The implementation of the wastewater treatment alternatives or continued use of properly functioning on-lot sewage disposal systems would not result in a conflict with the regulations of Chapter 93 (water quality criteria), Chapter 95 (wastewater treatment requirements), or Chapter 102 (erosion and sedimentation control).

#### Pennsylvania's Prime Agricultural Land Policy

The potential treatment facility site for alternatives 1 and 1A does not contain prime agricultural soils. Alternatives 4 and 5 would result in the loss prime agricultural soils in the amount of 7 acres and 28 acres, respectively.

#### County Stormwater Management Plans Approved by the Department

York County does not have a stormwater management plan which is approved by the DEP.

#### Wetland Protection Under Chapter 105

Based on the National Wetlands Inventory Map (Map 2), the implementation of any of the structural alternatives considered by this Plan would impact wetlands minimally through sewer line crossings along the stream corridors sewer.

#### Protection of Rare and Endangered Plant and Animal Species

The Pennsylvania Department of Conservation and Natural Resources (DCNR) Bureau of Forestry consulted the Pennsylvania Natural Diversity Index and has indicated that the proposed project is not anticipated to have an impact on any endangered, threatened, or rare species at this location. A copy of the DCNR's May 29, 1998 letter is provided in Appendix A.

#### Pennsylvania Historic Preservation Act

The Pennsylvania Historic and Museum Commission (PHMC) was consulted to identify the potential impact of this Plan's selected alternative. The PHMC responded with a letter dated July 7, 1998 indicating that no National Register eligible or listed historic or

amount of growth. Therefore, the alternatives evaluated in this Plan are considered to be consistent with the York County Comprehensive Plan.

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#### Protection of Rare and Endangered Plant and Animal Species

The Pennsylvania Natural Diversity Inventory (PNDI) must be evaluated for adverse effects resulting from the implementation of this Plan's selected alternative. Prior to the implementation of a sewer project, a request to the Pennsylvania Department of Conservation and Natural Resources, Bureau of Forestry would be required and the impact of the proposed project would be addressed prior to the finalization of the design.

#### Pennsylvania Historic Preservation Act

The Pennsylvania Historic and Museum Commission (PHMC) must be consulted to identify the potential impact of this Plan's selected alternative. If a structural alternative is to be implemented, the Borough would be required to notify the PHMC and the

7/10/98

archaeological properties are in the area of the proposed project. A copy of this letter is provided in Appendix A.

Plans Developed Under Title II of the Clean Water Act or Titles II & VI of the Water Quality Act of 1987

No previous wastewater planning has been conducted for the planning area under Title II. Therefore, there are no inconsistencies resulting from this Plan.

## 6.2 Water Quality Standards

The treatment alternatives identified and evaluated in Chapter 5 were selected based on their ability to provide adequate treatment of wastewater. Based on the preliminary site selection, it appears that Alternatives 1, 1A, and 3 would result in a discharge of treated effluent to the North Branch of the Muddy Creek which is not classified by the DEP as a "high quality" or "exceptional value" body of water. Preliminary effluent limits were obtained from the DEP and are provided in Appendix A. All treatment alternatives would comply with the DEP preliminary effluent limits.

## 6.3 Capital Costs

Several alternatives were investigated for both the sewer collection system and the means of wastewater conveyance and treatment. Below is a discussion of each:

### *Collection System Alternatives*

The first alternative for conveyance of municipal wastewater is a gravity collection system. Given the area's topography, the entire Study Area in the Borough could be served by a gravity collection system consisting of 6-inch diameter PVC service laterals, 8-inch PVC sewers, and pre-cast concrete manholes. The total construction cost for a gravity collection system is estimated at \$1,018,662 and is summarized in Table 6-1.

A second collection system alternative is the use of low pressure sewers and grinder pumps. For the purposes of this study, it was assumed that a single grinder pump could service two homes through out the service area. Although it is technically feasible in many

Commission's response would be considered by the Borough.

Plans Developed Under Title II of the Clean Water Act or Titles II & VI of the Water Quality Act of 1987

No previous wastewater planning has been conducted for the planning area under Title II. Therefore, there are no inconsistencies resulting from this Plan.

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A second collection system alternative is the use of low pressure sewers and grinder pumps. For the purposes of this study, it was assumed that a single grinder pump could service two homes through out the service area. Although it is technically feasible in many

instances, this is a rather optimistic assumption because grinder pumps typically serve one dwelling. The grinder pumps would discharge to 2-inch or 3-inch PVC low pressure sewer. Cleanout manholes and air release valve manholes would be installed along the sewers for proper operation and maintenance. As summarized in Table 6-2, the estimated construction cost for a low pressure collection system is \$1,318,248. Operation and maintenance costs would be higher for a low pressure sewer system than for a gravity collection system due to the electric required for pumping and the cost to maintain and replace grinder pumps.

A third alternative is the use of small diameter gravity sewers which collect the effluent from individual septic tanks. Since the septic tanks remove most of the solids, a smaller gravity collection sewer, with cleanouts in lieu of manholes, can be used. Septic tanks would require regular pumping at the same intervals required for individual on-lot sewage disposal systems. For the purposes of this analysis, it was assumed that one-half of the septic tanks within the Borough are in poor condition and would need replaced. This is a somewhat optimistic assumption because of the age of the systems in use and the predominant use of cesspools which would be abandoned and replaced with new septic tanks. The total estimated construction cost, as shown in Table 6-3, is \$1,265,116.

#### Conclusion of Wastewater Collection Alternatives

Based on the above evaluation, the gravity sewer system alternative was deemed to be the most appropriate collection alternative.

**TABLE 6-1  
GRAVITY COLLECTION SYSTEM**

PROJECT NO. 962478-01

May 1998

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1.1	8" PVC Pipe	LF	11040	\$35.00	\$386,400.00
1.2	6" PVC Lateral	LF	2400	\$32.00	\$76,800.00
1.3	6" Wyes & Plugs	EA	120	\$82.00	\$9,840.00
1.4	Standard Manhole	EA	51	\$1,200.00	\$61,200.00
1.5	MH Frame & Cover	EA	51	\$280.00	\$14,280.00
1.6	Temp. Road Restoration	LF	6030	\$4.00	\$24,120.00
1.7	Final Road Restoration	LF	6030	\$12.00	\$72,360.00
1.8	Lawn & Field Restoration	LF	7160	\$1.50	\$10,740.00
1.9	R.R. Boring	LF	150	\$300.00	\$45,000.00
1.10	Stream Crossing	LF	100	\$150.00	\$15,000.00
1.11	E&S Control	LS	1	\$14,000.00	\$14,000.00
1.12	Work Zone Traffic Control	LS	1	\$17,000.00	\$17,000.00
1.13	Temporary Facilities	LS	1	\$10,000.00	\$10,000.00
1.14	Mobilization & Demobilization	LS	1	\$10,000.00	\$10,000.00
	Bonds & Insurances			2%	\$15,000.00
	<b>Collection System Construction Cost</b>				<b>\$781,740.00</b>
	Easement Acquisition	LF	1200	\$2.00	\$2,400.00
	Admin., Legal, & Engr.			20%	\$156,348.00
	Contingencies			10%	\$78,174.00
	<b>TOTAL ESTIMATED COST</b>				<b>\$1,018,662.00</b>

**TABLE 6-2**  
**LOW PRESSURE COLLECTION SYSTEM**  
(ASSUMES 2 HOMES PER GRINDER PUMP)

PROJECT NO. 962478-01

May 1998

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1.1	2" PVC Low Pressure Sewer	LF	9440	\$14.50	\$136,880.00
1.2	3" PVC Low Pressure Sewer	LF	1600	\$18.50	\$29,600.00
1.3	1 1/2" PVC L.P. Service Connection	LF	1800	\$9.00	\$16,200.00
1.4	2" x 1 1/2" Service Wye	EA	60	\$28.50	\$1,710.00
1.5	Air Release Valve & MH	EA	2	\$2,200.00	\$4,400.00
1.6	Terminal Cleanout Manhole	EA	8	\$1,600.00	\$12,800.00
1.7	Type 1 Cleanout Manhole	EA	13	\$1,700.00	\$22,100.00
1.8	Type 2 Cleanout Manhole	EA	7	\$2,000.00	\$14,000.00
1.9	Duplex Grinder Pump Station	EA	60	\$8,000.00	\$480,000.00
1.10	Temp. Road Restoration	LF	10000	\$4.00	\$40,000.00
1.11	Final Road Restoration	LF	10000	\$12.00	\$120,000.00
1.12	Lawn & Field Restoration	LF	2590	\$1.50	\$3,885.00
1.13	R.R. Boring	LF	150	\$280.00	\$42,000.00
1.14	Stream Crossing	LF	100	\$130.00	\$13,000.00
1.15	E&S Control	LS	1	\$14,000.00	\$14,000.00
1.16	Work Zone Traffic Control	LS	1	\$17,000.00	\$17,000.00
1.17	Temporary Facilities	LS	1	\$10,000.00	\$10,000.00
1.18	Mobilization & Demobilization	LS	1	\$10,000.00	\$10,000.00
	Bonds & Insurances			2%	\$20,000.00
	<b>Collection System Construction Cost</b>				<b>\$1,007,575.00</b>
	Easement Acquisition	LF	1200	\$2.00	\$2,400.00
	G.P. Easements	EA	60	\$100.00	\$6,000.00
	Admin., Legal, & Engr.			20%	\$201,515.00
	Contingencies			10%	\$100,757.50
	<b>TOTAL ESTIMATED COST</b>				<b>\$1,318,247.50</b>

**TABLE 6-3**  
**SMALL DIAMETER GRAVITY COLLECTION SYSTEM W/ SEPTIC TANKS**  
 (ASSUMES NEW TANKS REQUIRED FOR 50% OF HOMES)

PROJECT NO. 962478-01

May 1998

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1.1	6" PVC Pipe	LF	11040	\$32.00	\$353,280.00
1.2	4" PVC Lateral	LF	8400	\$28.00	\$235,200.00
1.3	4" Wyes & Plugs	EA	120	\$76.00	\$9,120.00
1.4	Cleanouts	EA	75	\$500.00	\$37,500.00
1.5	Septic Tank	EA	60	\$1,500.00	\$90,000.00
1.6	Temp. Road Restoration	LF	6030	\$4.00	\$24,120.00
1.7	Final Road Restoration	LF	6030	\$12.00	\$72,360.00
1.8	Lawn & Field Restoration	LF	13160	\$1.50	\$19,740.00
1.9	R.R. Boring	LF	150	\$300.00	\$45,000.00
1.10	Stream Crossing	LF	100	\$150.00	\$15,000.00
1.11	E&S Control	LS	1	\$14,000.00	\$14,000.00
1.12	Work Zone Traffic Control	LS	1	\$17,000.00	\$17,000.00
1.13	Temporary Facilities	LS	1	\$10,000.00	\$10,000.00
1.14	Mobilization & Demobilization	LS	1	\$10,000.00	\$10,000.00
	Bonds & Insurances			2%	\$19,000.00
	<b>Collection System Construction Cost</b>				<b>\$971,320.00</b>
	Easement Acquisition	LF	1200	\$2.00	\$2,400.00
	Admin., Legal, & Engr.			20%	\$194,264.00
	Contingencies			10%	\$97,132.00
	<b>TOTAL COST</b>				<b>\$1,265,116.00</b>

### *Wastewater Treatment Alternatives*

A cost analysis was conducted for six alternatives for wastewater treatment. With the exception of Alternative 1A, all alternatives were based on the gravity sewer collection alternative serving 120 equivalent dwelling units (EDUs) and a total projected wastewater flow of 42,000 gallons per day (GPD).

#### Alternative 1

The first alternative is an extended aeration activated sludge “packaged” wastewater treatment plant. These types of systems normally include an influent pump station, comminution, equalization, extended biological aeration, aerobic sludge digestion, clarification, and disinfection. Because of the 0.5 mg/L maximum chlorine residual effluent limit that would be imposed by DEP, ultraviolet disinfection could be used. Total construction costs for an extended aeration system as described above are estimated to be \$613,000, as shown in Table 6-4. When the gravity collection system is added to the treatment cost, the total estimated project cost of this alternative is \$1,631,662.

#### Alternative 1A

In an interest to the economic feasibility of a sewer project, the Borough Council evaluated an alternative which served a smaller geographic area using the same design as Alternative 1. This alternative would serve a 78 EDUs which would result in a projected wastewater flow of 27,300 GPD. The estimated total project cost, including a reduced gravity sewer collection system, is \$1,068,192 as shown in Table 6-5.

#### Alternative 2 - Conveyance to the Windsor Township Sewer System

Sewer service would be provided to the same EDU's as Alternative 1 under this scenario. However, a pump station would replace the Alternative 1 treatment plant and wastewater would be pumped to the existing sewer at the intersection of Felton Road and Grove Road in Windsor Township. This alternative would also require two additional new pump stations along the proposed forcemain route in Windsor Township, which are not shown on Map 12. Wastewater would then flow through Red Lion Borough, York Township, Spring Garden Township, and Springettsbury Township and would be treated at the Springettsbury Treatment facility. The total construction cost of this alternative is \$2,126,912.

Additional charges which are not estimated in Table 6-2 include the following:

- Treatment capacity purchased from Springettsbury Township;
- Conveyance capacity purchased from each of the six municipalities involved;
- Costs associated with the expansion of conveyance and treatment facilities, if necessary;
- Annual conveyance charges from each municipality to recover operation and maintenance costs; and
- Operation and maintenance costs for the Borough's collection and conveyance system.

Due to the significantly higher construction cost of this alternative when compared to the other alternatives, and the likelihood of substantial other charges as identified above, this alternative is considered to be financially unfeasible and will not be given further consideration in this Plan. Additionally, this alternative is not technically feasible because the Springettsbury treatment facility does not currently have treatment capacity which would be available for the Borough's use and is not anticipated to have additional capacity until the year 2005.

#### Alternative 3 - Conveyance to the Chanceford Crossings Treatment Facility

This alternative includes the conveyance of wastewater from the service area by gravity to a pump station in the same location as Alternative 2. However, sewage would be pumped approximately 1.4 miles to the existing sewer system in the Chanceford Crossings development in Chanceford Township. This point of connection is approximately 200 feet higher in elevation than the proposed pump station. From the point of connection, wastewater would flow by gravity into the existing privately owned treatment facility. This facility is currently operating at capacity and would require a significant expansion and a point discharge rather than the spray irrigation method currently in use.

The total construction cost of Alternative 3 is \$3,174,608. This cost would be shared between the Borough (120 EDU's), the existing Chanceford Crossings residents (240 EDU's), and future Chanceford Crossings residents. Based on input received from the developer of Chanceford Crossings, it is anticipated that the abandonment of the spray irrigation area, which would be made possible through changing to a treatment facility with a point discharge, would allow sufficient area for 250 additional dwellings. The

distribution of costs will be further discussed later in this Chapter.

#### Alternative 4

Alternative 4 proposes the construction of a community on-lot subsurface disposal system. The subsurface system would include a pump station, screening facilities, aeration tanks, dosing pumps, and elevated sand mound absorption beds. Approximately 7 acres of land would need to be purchased for this alternative. As presented in Table 6-8, the estimated construction costs of the community on-lot treatment system is \$826,000. Adding the gravity collection system to this treatment cost, the total estimated project cost of this alternative is \$1,844,562.

#### Alternative 5

Alternative 5 includes a wastewater treatment system using aerated lagoons and a spray irrigation land application system. The system proposed would include a pump station to the lagoon site, a control building, a 2-stage aerated lagoon system, a detention pond providing 90 days of storage, and a spray irrigation system. This alternative would require the purchase of approximately 28 acres of land for the lagoons, pond, and irrigation fields. As shown in Table 6-9, the total estimated construction cost for this treatment alternative is \$1,053,000. When the gravity collection system is added to the treatment cost, the total estimated project cost of this alternative becomes \$2,071,422.

**TABLE 6-4**  
**WASTEWATER TREATMENT ALTERNATIVE 1**  
**EXTENDED AERATION ACTIVATED SLUDGE WITH STREAM DISCHARGE**

PROJECT NO. 962478-01

May 1998

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1.1	Treatment System incl. Comminution, Equalization, Extended Aeration, Aerobic Digestion and Clarification	LS	1	\$150,600.00	\$150,600.00
1.2	Plant Pump Station/Distribution Box	LS	1	\$31,800.00	\$31,800.00
1.3	Ultraviolet Disinfection System	LS	1	\$13,800.00	\$13,800.00
1.4	Control Building	LS	1	\$58,600.00	\$58,600.00
1.5	Misc. Piping, Valves, Gates, etc.	LS	1	\$37,000.00	\$37,000.00
1.6	Air Blower System	LS	1	\$21,200.00	\$21,200.00
1.7	Chemical Feed System	LS	1	\$2,900.00	\$2,900.00
1.8	Electrical Work	LS	1	\$50,000.00	\$50,000.00
1.9	Site Work	LS	1	\$69,600.00	\$69,600.00
1.10	E&S Control	LS	1	\$3,300.00	\$3,300.00
1.11	Mobilization & Demobilization	LS	1	\$5,000.00	\$5,000.00
	Bonds & Insurances				\$16,200.00
	<b>Treatment Plant Construction Cost</b>				<b>\$460,000.00</b>
	Land Acquisition				\$15,000.00
	Admin., Legal, & Engr.			20%	\$92,000.00
	Contingencies			10%	\$46,000.00
	<b>TOTAL ESTIMATED COST</b>				<b>\$613,000.00</b>

**TABLE 6-5 - ALTERNATIVE 1A - REDUCED SERVICE AREA  
GRAVITY COLLECTION SYSTEM AND BOROUGH TREATMENT PLANT**

PROJECT NO. 962478-01

May 1998

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1.1	8" PVC Pipe	LF	5440	\$35.00	\$190,400.00
1.2	6" PVC Lateral	LF	1600	\$32.00	\$51,200.00
1.3	6" Wyes & Plugs	EA	76	\$82.00	\$6,232.00
1.4	Standard Manhole	EA	32	\$1,200.00	\$38,400.00
1.5	MH Frame & Cover	EA	23	\$280.00	\$6,440.00
1.6	Temp. Road Restoration	LF	4950	\$4.00	\$19,800.00
1.7	Final Road Restoration	LF	4950	\$12.00	\$59,400.00
1.8	Lawn & Field Restoration	LF	2090	\$1.50	\$3,135.00
1.9	Stream Crossing	LF	80	\$170.00	\$13,600.00
1.10	E&S Control	LS	1	\$2,000.00	\$2,000.00
1.11	Work Zone Traffic Control	LS	1	\$7,000.00	\$7,000.00
1.12	Mobilization & Demobilization	LS	1	\$4,000.00	\$4,000.00
1.13	Bonds & Insurances			2%	\$8,000.00
<b>Collection System Construction Cost</b>					<b>\$409,607.00</b>
2.1	0.03 MGD Treatment Plant	LS	1	\$310,000.00	\$310,000.00
2.2	50 GPM Influent Pump Station	LS	1	\$45,000.00	\$45,000.00
2.3	3" PVC Forcemain	LF	1000	\$18.00	\$18,000.00
2.4	Temp. Road Restoration	LF	90	\$4.00	\$360.00
2.5	Final Road Restoration	LF	90	\$12.00	\$1,080.00
2.6	Lawn & Field Restoration	LF	910	\$1.50	\$1,365.00
2.7	E&S Control	LS	1	\$3,500.00	\$3,500.00
2.8	Work Zone Traffic Control	LS	1	\$2,000.00	\$2,000.00
2.9	Temporary Facilities	LS	1	\$6,000.00	\$6,000.00
2.10	Mobilization & Demobilization	LS	1	\$4,000.00	\$4,000.00
2.11	Bonds & Insurances			2%	\$7,800.00
<b>Treatment Plant Construction Cost</b>					<b>\$399,105.00</b>
	Easement Acquisition	LF	940	\$2.00	\$1,880.00
	Land Acquisition (Plant)	LS	1	\$15,000.00	\$15,000.00
	Admin., Legal, & Engr.			20%	\$161,700.00
	Contingencies			10%	\$80,900.00
<b>TOTAL PROJECT COST</b>					<b>\$1,068,192.00</b>

**TABLE 6-6  
ALTERNATIVE 2  
COLLECTION SYSTEM WITH PUMP STATION TO WINDSOR TOWNSHIP SYSTEM**

PROJECT NO. 962478-01

June 1997

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1.1	8" PVC Pipe	LF	11040	\$35.00	\$386,400.00
1.2	4" PVC Force Main	LF	14000	\$24.00	\$336,000.00
1.3	6" PVC Lateral	LF	2400	\$32.00	\$76,800.00
1.4	6" Wyes & Plugs	EA	120	\$82.00	\$9,840.00
1.5	Standard Manhole	EA	51	\$1,200.00	\$61,200.00
1.6	MH Frame & Cover	EA	51	\$280.00	\$14,280.00
1.7	Temp. Road Restoration	LF	13030	\$4.00	\$52,120.00
1.8	Final Road Restoration	LF	13030	\$12.00	\$156,360.00
1.9	Lawn & Field Restoration	LF	14160	\$1.50	\$21,240.00
1.10	R.R. Boring	LF	150	\$300.00	\$45,000.00
1.11	Stream Crossing	LF	100	\$150.00	\$15,000.00
1.12	Pumping Station	EA	3	\$120,000.00	\$360,000.00
1.13	Air Release Valve & MH	EA	3	\$2,000.00	\$6,000.00
1.14	E&S Control	LS	1	\$18,000.00	\$18,000.00
1.15	Work Zone Traffic Control	LS	1	\$22,000.00	\$22,000.00
1.16	Temporary Facilities	LS	1	\$10,000.00	\$10,000.00
1.17	Mobilization & Demobilization	LS	1	\$12,000.00	\$12,000.00
	Bonds & Insurances	LS	1	2%	\$32,000.00
	<b>Construction Cost</b>				<b>\$1,634,240.00</b>
	Easement Acquisition	LF	1200	\$2.00	\$2,400.00
	Admin., Legal, & Engr.			20%	\$326,848.00
	Contingencies			10%	\$163,424.00
	Purchase of Treatment & Conveyance Capacity				Unknown
	<b>TOTAL ESTIMATED PROJECT COST</b>				<b>\$2,126,912.00</b>

**TABLE 6-7**  
**ALTERNATIVE 3 - COLLECTION SYSTEM WITH PUMP STATION TO**  
**CHANCEFORD CROSSINGS TREATMENT PLANT AND EXPANSION OF THE**  
**CHANCEFORD CROSSINGS TREATMENT PLANT**

PROJECT NO. 962478-01

June 1997

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1.1	8" PVC Pipe	LF	11040	\$35.00	\$386,400.00
1.2	4" PVC Force Main	LF	7600	\$24.00	\$182,400.00
1.3	6" PVC Lateral	LF	2400	\$32.00	\$76,800.00
1.4	6" Wyes & Plugs	EA	120	\$82.00	\$9,840.00
1.5	Standard Manhole	EA	51	\$1,200.00	\$61,200.00
1.6	MH Frame & Cover	EA	51	\$280.00	\$14,280.00
1.7	Temp. Road Restoration	LF	9500	\$4.00	\$38,000.00
1.8	Final Road Restoration	LF	9500	\$12.00	\$114,000.00
1.9	Lawn & Field Restoration	LF	12160	\$1.50	\$18,240.00
1.10	R.R. Boring	LF	150	\$300.00	\$45,000.00
1.11	Stream Crossing	LF	140	\$150.00	\$21,000.00
1.12	Pumping Station	EA	1	\$185,000.00	\$185,000.00
1.13	Air Release Valve & MH	EA	2	\$2,000.00	\$4,000.00
1.14	E&S Control	LS	1	\$18,000.00	\$18,000.00
1.15	Work Zone Traffic Control	LS	1	\$22,000.00	\$22,000.00
1.16	Temporary Facilities	LS	1	\$10,000.00	\$10,000.00
1.17	Mobilization & Demobilization	LS	1	\$10,000.00	\$10,000.00
	Bonds & Insurances			2%	\$24,000.00
	<b>Collection &amp; Conveyance Construction Cost</b>				<b>\$1,240,160.00</b>
	Easement Acquisition	LF	1200	\$2.00	\$2,400.00
	Admin., Legal, & Engr.			20%	\$248,032.00
	Contingencies			10%	\$124,016.00
	<b>Total Collection &amp; Conveyance Cost</b>				<b>\$1,614,608.00</b>
	<b>Treatment Plant Upgrade</b>				
	Construction				\$1,200,000.00
	Admin., Legal, & Engr.			20%	\$240,000.00
	Contingencies			10%	\$120,000.00
	<b>Total Treatment Plant Upgrade</b>				<b>\$1,560,000.00</b>
	<b>TOTAL ESTIMATED COST</b>				<b>\$3,174,608.00</b>

**TABLE 6-8  
ALTERNATIVE 4  
COMMUNITY ON-LOT SUBSURFACE DISPOSAL SYSTEM**

PROJECT NO. 962478-01

May 1998

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1.1	Screening Facilities	LS	1	\$10,000.00	\$10,000.00
1.2	Aeration Tanks	LS	1	\$150,000.00	\$150,000.00
1.3	Control Building	LS	1	\$50,000.00	\$50,000.00
1.4	Pump Station to Site	LS	1	\$99,000.00	\$99,000.00
1.5	Pump Station to Absorption Beds	LS	1	\$80,000.00	\$80,000.00
1.6	Absorption Beds	EA	4	\$25,000.00	\$100,000.00
1.7	Sitework	LS	1	\$47,000.00	\$47,000.00
1.8	Force Main	LS	1	\$50,000.00	\$50,000.00
1.9	Mobilization & Demobilization	LS	1	\$5,000.00	\$5,000.00
	Bonds & Insurances			2%	\$12,000.00
	<b>Treatment System Construction Cost</b>				<b>\$603,000.00</b>
	Land\Easement Acquisition	AC	7	\$6,000.00	\$42,000.00
	Admin., Legal, & Engr.			20%	\$120,600.00
	Contingencies			10%	\$60,300.00
	<b>TOTAL ESTIMATED COST</b>				<b>\$825,900.00</b>

**TABLE 6-9**  
**ALTERNATIVE 5**  
**AERATED LAGOONS \ LAND APPLICATION SYSTEM**

PROJECT NO. 962478-01

May 1998

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1.1	Screening Facilities	LS	1	\$10,000.00	\$10,000.00
1.2	Aerated Lagoons	LS	1	\$90,000.00	\$90,000.00
1.3	Storage Pond	LS	1	\$140,000.00	\$140,000.00
1.4	Field Preparation	LS	1	\$20,000.00	\$20,000.00
1.5	Distribution System	LS	1	\$50,000.00	\$50,000.00
1.6	Control Building	LS	1	\$50,000.00	\$50,000.00
1.7	Pump Station to Site	LS	1	\$99,000.00	\$99,000.00
1.8	Pump Station to Field	LS	1	\$83,200.00	\$83,200.00
1.9	Electrical Work	LS	1	\$40,000.00	\$40,000.00
1.10	Monitoring Wells	LS	1	\$4,000.00	\$4,000.00
1.11	Service Roads & Fencing	LS	1	\$25,000.00	\$25,000.00
1.12	Force Main	LS	1	\$50,000.00	\$50,000.00
1.13	Mobilization & Demobilization	LS	1	\$5,000.00	\$5,000.00
	Bonds & Insurances			2%	\$13,000.00
	<b>Treatment System Construction Cost</b>				<b>\$679,200.00</b>
	Land\Easement Acquisition	AC	28.3	\$6,000.00	\$169,800.00
	Admin., Legal, & Engr.			20%	\$135,840.00
	Contingencies			10%	\$67,920.00
	<b>TOTAL ESTIMATED COST</b>				<b>\$1,052,760.00</b>

### *Summary of Capital Cost of Alternatives*

The capital costs for the six wastewater collection, conveyance, and treatment alternatives are summarized as follows:

Alternative #	EDUs Served in Felton Borough	Treatment Capacity (Gallons Per Day)	Total Estimated Capital Cost
1	120	42,000	\$ 1,631,662
1A	78	27,300	\$ 1,068,192
2	120	42,000	\$ 2,126,912
3	120	42,000	\$ 3,174,608
4	120	42,000	\$ 1,844,562
5	120	42,000	\$ 2,071,422

#### **6.4 Funding Alternatives and User Rate Analysis**

Given the size of Felton, the most significant challenge for viable sewer project is the identification of a financing plan which Borough residents could afford. User fees for sewer projects usually include a tapping fee (sometimes referred to as a capital recovery fee) and an annual user fee (also known as a sewer rental). The tapping fee is paid only once prior to connection and serves to reduce the annual cost by reducing the amount of interest. The annual user fee is usually paid in quarterly installments and covers annual operation and maintenance (O&M) and debt service which consists of principal and interest payments on money borrowed for the project. An additional cost incurred by each customer is the construction of the customer facilities which connect each structure to the sewer. Customer facilities are typically the responsibility of each property owner and are therefore not included in this rate analysis.

The consensus of the Borough Council is that an affordable rate structure could not exceed a tapping fee of \$2,000 and an annual sewer rental (user fee) of \$600 per year. Recognizing such financial limitations, it is evident that the implementation of any of the structural alternatives would require a financing plan which includes a significant grant

portion of funding. Consequently, the following financing alternatives were evaluated as potential funding sources for Felton Borough:

#### Community Development Block Grant Program

This program is administered by the Pennsylvania DCED for the U.S. Department of Housing and Urban Development. Both financial and technical assistance is provided through the Federal Community Development Block Grant Program to aid in community economic development efforts. Among others, eligible project activities include the construction of water and wastewater facilities.

Approximately 50% of the money allocated to Pennsylvania is in turn reallocated to various entitlement communities. The remaining funds are allocated through a statewide competitive program (non-entitlement municipalities). Requests for funding for county entitlement funds are made through each county planning commission which acts as a screening agency for the county commissioners. Similarly, applications for funding through the statewide competitive grant process are submitted to the Pennsylvania DCED. The basic eligibility criteria established by the DCED requires that 51% of the project benefit low and moderate income households in the project area.

The following key points summarize the applicability of the CDBG financing alternative to Felton Borough. Supporting correspondence with the York County Planning Commission is provided in Appendix E.

- Felton would not be eligible for the statewide competitive grant (non-entitlement) because York County is classified as an “urban county”. Only the county entitlement funds would apply to the Borough.
- Based on correspondence from the York County Planning Commission, tapping fees collected for a CDBG-funded project would be considered “program income” and would be required to be paid to the CDBG program. Therefore, tapping fees are typically not advantageous for CDBG projects.
- The York County Planning Commission CDBG office has a sewer hookup loan program for low/ moderate income households.. Through this program, low/moderate households may qualify for grants for the payment of special assessments (such as tapping fees) and the installation of customer facilities (connection the lateral from the

property line to the home).

- If the Borough would pursue a sufficient grant (i.e. \$400,000) to adequately reduce the amount of money borrowed, the County would have two challenges. First, such funding would need to be divided into three or four projects. A second challenge would be that the County could deny funding because Felton is not within a planned growth area according the County's Comprehensive Plan. (See May 5, 1998 letter from YCPC in Appendix E).

#### Pennsylvania Infrastructure Investment Authority (PENNVEST)

The Pennsylvania Infrastructure Investment Authority program is administered by PENNVEST staff in conjunction with the Pennsylvania Department of Environmental Protection. This program provides low interest loans and limited grant assistance to communities for wastewater, drinking water, and stormwater facilities. Low interest loans are as low as one percent with a typical term of 20 years. On relatively rare occasions, PENNVEST can provide extended term loans which can be as long as 25 years. The maximum grant assistance is \$250,000. PENNVEST recommends that municipalities avoid basing sewage facilities planning on the assumption that an extended term or maximum grant will be awarded.

Communities which are designated "severely economically disadvantaged" may qualify for a PENNVEST grant through the Hardship Grants Program for Rural Communities. PENNVEST also administers a low interest loan funding program for the repair of individual on-lot sewage disposal systems for qualifying households. The maximum loan amount is \$15,000 and can be used for subsurface disposal systems and small flow treatment facilities. Such loans have an annual interest rate of one percent and a maximum term of 15 years.

As summarized below, Felton may benefit from PENNVEST funding. Supporting correspondence is provided in Appendix F.

- Felton is not a hardship community and therefore would not qualify for a hardship grant from PENNVEST.
- Based on a preliminary analysis by PENNVEST, Felton would be eligible for a one percent loan for 20 years.

### Rural Development - U.S. Department of Agriculture

Formerly known as the Farmer's Home Administration or FmHA, this program provides the longest term (40 year) fixed rate financing for qualified municipal utility projects. Such loans are typically at a lower interest rate than can be found on the market. Project eligibility is based on the median household income of residents within the municipality. Grant funding for up to 75 percent of project costs is also available if such grants are necessary to make a project affordable. Funding is based on the annual appropriation of federal funds to the program. A significant backlog of applications for grant funds would likely result in a delay of three to five years from the time of application.

The following key points summarize the applicability of the Rural Development financing alternative to Felton Borough:

- Considering the Borough's median household income, the maximum grant would be 45 percent of the total project cost.
- The current loan rate which would apply to Felton is 4.875 percent for a term of 40 years.
- Rural Development would consider the Borough's tapping fee to be between \$1,000 and \$1,500.
- Rural Development's standard range of acceptable user rates for Felton is \$35 to \$50 per month (\$420 to \$600 per year).

### Summary of Funding Sources

After evaluating the above financing options, it was determined that the following funding options have the greatest potential for Felton:

1. PENNVEST project financing at one percent for 20 years with the possibility of grant funding from PENNVEST.
2. Rural Development grant and loan for 40 years at 4.875 percent.
3. CDBG grant funding from the York County Planning Commission. This may only apply to the County's sewer hookup loan assistance program because the County will not likely fund projects outside of designated growth areas.

### Analysis of Estimated User Rates of Alternatives

Within Section 6.3, Alternative 2 (conveyance to Springettsbury Township WWTF) was precluded from further consideration because the project costs far exceeded the other alternatives with the same number of users. Alternative 3 (conveyance to Chanceford Crossings WWTF) also has relatively high project costs, however the existing and future customers in Chanceford Township may increase the project's economy of scale. Alternative 3 warrants further consideration within the context of user rates to determine its viability.

### Alternative 3 Estimated User Costs

User costs for both Borough and Township customers for Alternative 3 (conveyance to Chanceford Crossings) are presented in Table 6-10. In summary, Alternative 3 is not advantageous for the Borough because the higher cost of the larger pump station and the length of the force main are not offset by the economy of scale of sharing in a Chanceford Crossings treatment plant expansion.

The following assumptions also apply to this table:

- Public financing was considered to be the most likely financing scenario using a 6.5 percent interest rate for 25 years.
- The existing treatment facility would need to be expanded to a capacity of 183,000 GPD to accommodate the Borough and existing and future Chanceford Township residents.
- The cost of expanding the treatment facility is estimated to be \$1,560,000. Of this cost, the developer for the future Chanceford Crossings project (which would include approximately 250 new homes) would provide a capital contribution of \$639,344 to cover the cost of building treatment capacity.
- The existing sewer customers in Chanceford Crossings would pay their share of annual O&M and debt service on the newly expanded treatment facility. The annual user rate for these customers as shown in Table 6-10 does not include the annual O&M for the existing conveyance system nor does it include any debt service for the existing conveyance and treatment facilities. It is unlikely that the resulting significant rate increase to existing customers would be acceptable to the developer and existing Chanceford Crossings residents.

TABLE 6-10  
ALTERNATIVE 3 USER RATES

	TOTAL	Existing Borough Customers	Chanceford Township	
			Existing Customers	Future Customers
Tapping Fee per EDU	\$2,000	\$2,000	\$0	\$0
Interest Rate	6.5%	6.5%	6.5%	-
Term of Loan (years)	25	25	25	-
<u>Number of EDU's:</u>				
Existing Borough EDU's	120	120		
Existing Township EDU's	240		240	
Future Township EDU's	250			250
Total and % of Total	610	20%	39%	41%
<u>Estimated Total Project Cost</u>				
Collection & Conveyance	\$1,614,608	\$1,614,608	\$0	\$0
Treatment	\$1,560,000	\$306,885	\$613,770	\$639,344
Total Project Cost	\$3,174,608	\$1,921,493	\$613,770	\$639,344
Capital Recovery from Tapping Fees		\$240,000	\$0	
Developer Capital Contribution				\$639,344
Amount to be Financed		\$1,681,493	\$613,770	\$0
Total Annual Debt Service		\$151,636	\$55,350	\$0
Total Operation & Maintenance Cost	\$90,000			
% of flow		33%	67%	
Share of O&M		\$30,000	\$60,000	
Debt Service per EDU		\$1,264	\$231	
Operation & Maintenance per EDU		\$250	\$250	
Annual Cost per EDU		\$1,514	\$481	

### Estimated User Costs for Alternatives 1, 1A, 4, & 5

The following approach to alternative funding scenarios was used to evaluate potential user rates for Alternatives 1, 1A, 4, & 5:

- PENNVEST without a grant;
- PENNVEST with a maximum grant;
- PENNVEST with a maximum grant and an extended term (23 years); and
- Rural Development grant and loan.

Tables 6-11 through 6-14 show the above financing scenarios for each alternative. The maximum affordable user rate of \$600 per year with a tapping fee of \$2,000 was used as a basis for the financial analysis. The far right column of the three PENNVEST options shows the amount of additional grants which would be needed to achieve the Borough's maximum affordable rate structure. This column was not included in the Rural Development option because the target rate was obtained for Alternative 1.

In summary, the lowest cost alternative is Alternative 1 under all of the funding scenarios. Table 6-12 shows that Alternative 1A would result in the desired rate only if a grant was secured in the amount of \$404,141 from a source other than PENNVEST. The Rural Development funding for Alternative 1 is the only funding scenario which results in an affordable user rate as defined by the Borough. All other financing options would require additional grants from a sources which are unlikely or unidentified at this time. For example, the most optimistic PENNVEST scenario of an extended term loan for 23 years at a one percent interest rate with a maximum grant of \$250,000 would require approximately \$400,000 in additional grants from sources other than PENNVEST.

TABLE 6-11					
<u>PENNVEST without Grant</u>					
Term (yrs.):		20			
Interest:		1%			
Grant:		\$0			
Tapping Fee:		\$2,000			
Alternative #	# of EDUs	Capital Cost	Annual Operation & Maintenance	Annual User Fee per EDU (O&M and debt service)	Additional Grants Needed for a \$600 per Year Annual User Fee
1	120	\$1,631,662	\$32,500	\$913	\$678,863
4	120	\$1,844,562	\$28,800	\$981	\$824,994
5	120	\$2,071,422	\$29,500	\$1,092	\$1,064,486
1A	78	\$1,068,192	\$32,500	\$1,065	\$654,141

TABLE 6-12					
<u>PENNVEST Maximum Grant</u>					
Term (yrs.):		20			
Interest:		1%			
Grant:		\$250,000			
Tapping Fee:		\$2,000			
Alternative #	# of EDUs	Capital Cost	Annual Operation & Maintenance	Annual User Fee per EDU (O&M and debt service)	Additional Grants Needed for a \$600 per Year Annual User Fee
1	120	\$1,631,662	\$32,500	\$798	\$428,863
4	120	\$1,844,562	\$28,800	\$866	\$574,994
5	120	\$2,071,422	\$29,500	\$976	\$814,486
1A	78	\$1,068,192	\$32,500	\$887	\$404,141

TABLE 6-13

PENNVEST with Maximum Grant and Extended Term

Term (yrs.): 23  
 Interest: 1%  
 Grant: \$250,000  
 Tapping Fee: \$2,000

Alternative #	# of EDUs	Capital Cost	Annual Operation & Maintenance	Annual User Fee per EDU (O&M and debt service)	Additional Grants Needed for a \$600 per Year Annual User Fee
1	120	\$1,631,662	\$32,500	\$736	\$333,657
4	120	\$1,844,562	\$28,800	\$792	\$470,871
5	120	\$2,071,422	\$29,500	\$890	\$712,050
1A	78	\$1,068,192	\$32,500	\$832	\$369,674

TABLE 6-14

Rural Development Funding

Term (yrs.): 40  
 Interest: 4.875%

Grant 45% of Capital Cost  
 Alternative 1 \$734,248  
 Alternative 4 \$830,053  
 Alternative 5 \$932,140  
 Alternative 1A \$480,686

Tapping Fee: \$2,000

Alternative #	# of EDUs	Capital Cost	Annual Operation & Maintenance	Annual User Fee per EDU (O&M and debt service)
1	120	\$1,631,662	\$32,500	\$585
4	120	\$1,844,562	\$28,800	\$610
5	120	\$2,071,422	\$29,500	\$675
1A	78	\$1,068,192	\$32,500	\$734

## **6.5 Ability to Implement**

The implementation of the various structural alternatives evaluated in this Plan would typically require the development of a sewer authority or authorities which would be responsible for the financing, construction, administration, operation, and maintenance of the newly constructed wastewater facilities. The non-structural alternatives could be implemented by the Borough without significant changes in structure or administration.

Based on the previous discussion on user costs, the Borough would be able to implement Alternative 1 if adequate funding would result in an affordable user rate as discussed in the previous section.

## **CHAPTER 7 SELECTED ALTERNATIVES**

### **7.1 Selected Structural Alternatives**

After careful consideration of the findings of the background studies, which address existing sewage needs and the condition of the groundwater, as well as the cost analysis of the six structural alternatives, the Borough Council determined that a public sewer project is appropriate only if adequate funding is available to result in an affordable user rate as identified in Chapter 6. If such funding is available, the Borough will implement Alternative 1.

### **7.2 Selected Nonstructural Alternatives**

The Borough will promote proper wastewater disposal through the following nonstructural initiatives or policies:

#### Small Flow Treatment Facilities

Small flow treatment facilities (SFTFs) are permitted by DEP to abate an existing nuisance or health hazard or as a system to serve residential dwellings subject to Chapter 71, Section 71.64 and Planning Module criteria which include discharge requirements, soil suitability, and preliminary hydrogeologic evaluations. Provided that such criteria is satisfied, SFTF shall be permitted in the Borough. On a case-by-case basis, the Borough may require specific operation and maintenance requirements based on one or more of the methods established in Chapter 71, Section 71.72 or in another form acceptable to the Borough Council and DEP. Such conditions will be established during the Planning Module process or through a repair permit issued by the SEO. The DEP does not typically allow SFTFs in an area which is planned for public sewers within five years. However, if a SFTF is proposed in an area which is planned for public sewer service within five years and adequate funding is not yet available for the public sewer project, the Borough may, on a case-by-case basis, allow the construction of the SFTF, pending approval by the DEP.

### Holding Tanks

The Borough will continue to permit the use of holding tanks in compliance with its Holding Tank Ordinance and applicable DEP regulations.

### Planning Module Requirements

The following Planning Module requirements will apply throughout the Borough:

- A preliminary hydrogeologic analysis will be required for all Planning Modules which propose on-lot sewage disposal within one quarter mile of any well which has a documented nitrate-nitrogen level in excess of 5 milligrams per liter as shown on Map 5.
- For all future subdivisions which propose on-lot sewage disposal, the Borough will require the testing and reservation of a replacement absorption area for each lot.
- Any proposed wastewater disposal system which requires a permit issued by the DEP and not owned or operated by the Borough shall be required to comply with specific conditions which ensure the long term proper operation and maintenance of such facilities. Such requirements shall ensure consistency with Chapter 71, Section 71.72 relating to the establishment of the legal entity responsible for the system and financial assurances for the completion, maintenance, and operation of such facilities.

### OLDS Education

The Borough will continue its on-lot educational programs through information distributed at public meetings and mailings to residents.

## **7.3 Coordination of Future Facilities and Growth Areas**

As discussed in Chapter 4, growth is not anticipated to be of a magnitude which would require future public wastewater facilities in the Borough.

## **7.4 Financing Plan**

The financing plan for the selected structural alternative (Alternative 1) is Rural

Development funding for 40 years at an interest rate of 4.875 percent. The estimated user rate structure is a \$2,000 tapping fee and a \$600 annual user fee.

The selected nonstructural alternatives will be financed using the Borough's general fund.

#### **7.5 Evaluation of Necessary Institutional, Administrative, and Legal Activities**

The implementation of this Plan may require the formation of a sewer authority depending upon the Borough's existing debt and its ability to borrow money. A sewer authority would be responsible for the financing, construction, administration, operation, and maintenance of the newly constructed wastewater facilities. The Borough will make this determination when the Borough receives a commitment that adequate funding is available.

The implementation of the nonstructural alternatives will not require any changes in the Borough's institutional, administrative, or legal activities.

#### **7.6 Environmental Soundness of Selected Alternatives**

The alternatives selected within this Plan are considered to be environmentally sound and in compliance with existing natural resource planning and preservation programs. Section 6.1 of this Plan demonstrated that the alternatives considered by this Plan do not represent a conflict with such plans and programs.

#### Recreation and Open Space Considerations

The structural alternative recommended in this Plan will not create any new recreational or open space opportunities because the vast majority of the proposed sewer lines are within existing road rights-of-way. Additionally, the amount of land to be acquired for the wastewater treatment facility would not be of sufficient size to provide additional park land for residents.

#### Air Quality

With the exception of the minimal impact of dust and exhaust during construction, the project will not create any significant negative impacts on air quality.

#### Fish and Wildlife

The elimination of malfunctioning on-lot sewage disposal systems will have a positive impact on fish. The project is not anticipated to impact wildlife.

#### Wild and Scenic Rivers

The planning area does not contain any rivers classified as scenic.

#### Coastal Zone Management

There are no coastal areas within the planning area.

#### Socio-Economic Impacts

The availability of public sewer service will enhance the viability of the community, protect public health, and enhance property values.

#### Water Supplies

The provision of public sewer service to areas with inadequate on-lot sewage disposal systems will improve and protect water supplies.

#### Other Environmentally Sensitive Areas

The proposed sewage facilities are not anticipated to adversely impact any other environmentally sensitive areas.

7/10/98

## CHAPTER 8 PLAN IMPLEMENTATION

### 8.1 Implementation Schedule

The selected nonstructural alternatives will be implemented with the adoption of this Plan by the Borough. The selected structural alternative, Alternative 1, will be pursued according to the following schedule which assumes that adequate funding from Rural Development will be obtained within three years of the DEP's approval of the Plan:

PROJECTED DATE(S)	TASK
July 1998	Borough adopts Act 537 and submits to DEP
November 1998	DEP approval of Act 537 Plan
January 1999	Borough submits funding application to Rural Development
March 1999	Rural Development responds to Borough's funding application
March 2002	Anticipated availability of sufficient grant funds from Rural Development
April 2002 - December 2002	Design of wastewater facilities
January 2003 - March 2003	Bid project
April 2003	Award project
April 2003 - September 2004	Construction
October 2004	Substantial Completion / Operational
December 2004	Final Completion

If adequate funding is not available by the final date of completion outlined above (December 2004) the Borough shall revise its Act 537 Plan to identify an alternative plan of action and shall submit its revised Act 537 Plan to the DEP within one year (December 2006).

## CHAPTER 8 PLAN IMPLEMENTATION

### 8.1 Implementation Schedule

The selected nonstructural alternatives will be implemented with the adoption of this Plan by the Borough. The selected structural alternative, Alternative 1, will be pursued according to the following schedule which assumes that adequate funding from Rural Development will be obtained within three years of the DEP's approval of the Plan:

PROJECTED DATE(S)	TASK
July 1998	Borough adopts Act 537 and submits to DEP
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March 2002	Anticipated availability of sufficient grant funds from Rural Development
April 2002 - December 2002	Design of wastewater facilities
January 2003 - March 2003	Bid project
April 2003	Award project
April 2003 - September 2004	Construction
October 2004	Substantial Completion / Operational
December 2004	Final Completion

**APPENDIX A  
CORRESPONDENCE**

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- **DEP Letter Approving Plan of Study**
- **Documentation of SEO Involvement**
- **DEP Preliminary Effluent Limits**
- **Letter to Windsor Township**
- **Letter to Chanceford Township**
- **York County Planning Commission Comments**



Pennsylvania Department of Environmental Protection

One Ararat Boulevard  
Harrisburg, PA 17110-9333

February 13, 1997

Southcentral Regional Office

717-657-4590  
FAX - 717-657-4446

Felton Borough  
c/o Kathryn S. Shultz, Secretary  
49 Main Street  
Felton, PA 17322

RECEIVED

FEB 17 1997

RETTEW ASSO., INC.

Re: Act 537 Planning (67922)  
Plan of Study and Task/Activity Report  
Felton Borough, York County

Ladies and Gentlemen:

We received a Plan of Study and Task/Activity Report for preparation of an Act 537 Plan, submitted by Rettew Associates, Inc., under a cover letter dated January 28, 1997.

Your Plan of Study has been approved by the Department, with the following concerns, for a total cost of \$25,288. If the expressed concerns will significantly change this figure, you are referred to procedures in the fourth paragraph of this letter.

1. Depending upon the results of your 15 percent well sampling program, it may be necessary to sample additional wells to achieve a 25 percent sample size. Please refer to the Act 537 Sewage Disposal Needs ID Guidance (March 1996) for additional details.
2. Contact with neighboring municipalities and developers is highly encouraged. The result could be a lower cost multi-municipality solution alternative for examination.

Your resulting Act 537 Official Plan must be consistent with Act 537, Chapter 71, Sections 71.21 and 71.31 of the Department's regulations, and with information contained in both A Guide for Preparing Act 537 Update Revisions (November 1992), and Sewage Disposal Needs Identification Guidance (March 1996). The guide contains a comprehensive Plan Content and Environmental Assessment Checklist detailing information required for a successful Act 537 Plan submission in Appendix I. This checklist is extremely important. Strict adherence to its contents minimizes the possibility of submitting an incomplete plan to the Department and incurring untimely project delay. Copies of either document can be obtained from the Department.

The Department administers post plan approval grants for up to 50 percent of planning costs to municipalities with approved Task/Activity Reports. Costs for completion of any planning activities outside the scope of the originally proposed plan, or costs in excess of those previously approved, are

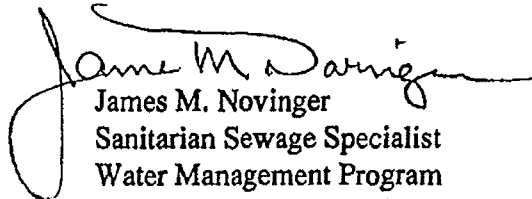


not automatically eligible for a 50 percent reimbursement. These additional activities must be within the scope of Act 537. Costs must be submitted as revised Task/Activity Reports and receive Departmental approval.

Following your adoption and the Department's approval of your completed Act 537 Plan, you may apply for the reimbursement grant. At that time, as part of your reimbursement application, you will find that you must submit cost invoices clearly identifying the task in the approved Task/Activity Report to which they apply. Good record keeping is important during the planning process.

If you have any questions, please contact me at the above address.

Sincerely,

  
James M. Novinger  
Sanitarian Sewage Specialist  
Water Management Program

cc: Rettew Associates  
York County Planning Commission  
Northeast Rural Community Assistance Program

# RETTEW

Associates, Inc.

3020 Columbia Avenue, Lancaster, PA 17603 • (717) 394-3721 • FAX (717) 394-1063

March 7, 1997

Mr. Bradley D. Hengst  
40 Water Street  
Jacobus, PA 17407

RE: Felton Borough, York County

Dear Mr. Hengst:

RETTEW Associates, Inc. is in the process of updating Felton Borough's Act 537 Plan. At this time, we need your input regarding the status of on-lot sewage disposal systems (OLDS) in the Borough. I have enclosed a map, a table of OLDS categories, and a blank table for your use in providing us with this information. We are primarily asking you for the history of malfunctions, repairs, the cause of each malfunction, complaints, and the location of holding tanks.

Here's an example of what we are looking for. For your first entry, you would write the number "1" on the map at the location and complete the table as follows:

OLDS

<u>Map #</u>	<u>Resident</u>	<u>Street Address</u>	<u>Category</u>	<u>Comments</u>
1	John Doe	4 Main St., Felton	PS	bad soils

The category of "Confirmed Malfunction (M)" refers to a system which you know is currently malfunctioning. For such systems, please also indicate any actions which you have taken with the resident to remedy the situation.

You are probably aware of the fact that the Borough is under a DEP Consent Order to update its Act 537 Plan by August 1997. Therefore, we need your input as soon as possible; preferably by the end of March so that we can present our background findings to the Borough Council at its next meeting on April 7. Please call me if this is a problem or if you have any questions

Sincerely,



Dale B. Witmer, AICP  
Community Planner  
Enclosures

copy: Mr. Stephen Campbell, Felton Borough Council President (w/o map)  
h:\96\96247801\seoletr.doc

SURVEY OF ON-LOT SEWAGE DISPOSAL SYSTEMS  
OLDS Mapping Requirements for Act 537 Plans\*

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CATEGORY

- M Confirmed Malfunction - Confirmed through observation by SEO or other qualified professional, dye testing, best technical guidance repairs, seasonally wet absorption areas, system back-ups, piped discharges with evidence of sewage.
- S Suspected Malfunction - Abnormally green grass, piped discharges without evidence of sewage, absorption areas in known unsuitable soils, cesspools in high density development, and pit privies.

Potential Malfunction - Appear to operate satisfactorily but are one of the following:

- PR pre-regulatory systems or are unlikely to receive a permit under current regulations.
- PS repair due to poor site conditions.
- PA repair due to aging system.
- W Wildcat sewer system
- B Borehole disposal
- H Holding tank repair
- C Complaint by public
- I Illness caused by, or suspected to be caused by improper sewage disposal.

\* Requirements according to the *Act 537 Sewage Disposal Needs Identification Guidance*, March 1996, prepared by the DEP.

Map #	Resident	Street Address	OLDS Category	Comments/ Actions
1.	CHARLES KEECH	72 RED LION AVE	H	I54440
2.	ERIC WITMER	9 MAIN ST	PR	L47645
3.		52 WATER ST	S-PRIVY	K63581 - HOUSE VACANT
4.	RICHARD MACKLIN	104 MAIN ST	PS	K63630
5.	JAMES KAIKATAK	155 MAIN ST		K42957 - REPAIR 1992
6.	DALE BROWN	134 MAIN ST	H	G31989
7.	CRAIG M WARNER	132 MAIN ST	H	J65519
8.	RONALD RHEILIG JR	49 CHARLES ST	H	N77081 - HOUSE VACANT - <sup>HT NOT</sup> INSTALLED
9.	JEFFREY K PULLEN	6 CHARLES ST	H	I55170
10.	JOHN W KING	79 HIGHL ST		J65524 - NEW 1991
11.	ROBERT C VAN ORSEN	70 MAIN ST	H	L47639
12.	JEFFREY GROVE	60 MAIN ST	M	N77090
13.	BRIAN RAJOTTE	4 CHARLES ST	I	ALSO STREAM DISCHARGE - CURRENT ENFORCEMENT
14.	FRANCIS C FLAHERTY	22 MAIN ST	PA	K43140 - NEW TANK 1993 - BTG
15.	PEARL F SEITZ	18 SEITZ AVE	S	O35983 - VACANT HOUSE BEING SOLD
16.	JOHN G TROUT	67 CHURCH AVE		IG1117 - NEW 1993
17.	JACKIE L TROUT	65 CHURCH AVE		IG1118 - NEW 1996
18.		54 CHURCH AVE		K42946 - REPAIR 1992
19.	JOHN S KOVACS	66 CHURCH AVE		I61051 - NEW 1995
20.	MICHAEL MOORHEAD	34 SECHRIST FLAT RD	M	N77097 - HAS REPAIR PERMIT
21.		LOT 4 MAIN ST		K43162 - NEW 1994
22.		506 GARBLE'S VIEW LN		L41677 - NEW 1995
23.	CRAIG A STELTS	284 MAIN ST		K43122 - REPAIR 1993
24.		LOT 7 GARBLE'S VIEW LN		L41670 - NEW 1997
25.		LOT 3 MAIN ST		K43160 - NEW 1993
26.	JERRY W WEIKLE	27 WEIKLE DR		L47632 - NEW 1996
27.	TODD SHENK	LOT 3 MAIN ST		I48843 - NEW 1993
28.				
29.				

RECEIVED

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES  
 SEWAGE ENFORCEMENT OFFICER  
 CERTIFICATE NO. 00215

APR 30 1997

RETTEW ASSO., INC.

BRADLEY D. HENGST  
 40 WATER ST.  
 JACOBUS, PA 17407  
 PH. 717-428-1188



Pennsylvania Department of Environmental Protection

One Ararat Boulevard  
Harrisburg, PA 17110-9333  
February 2, 1998

Southcentral Regional Office

717-657-4590

RECEIVED

FAX - 717-657-4446

Mr. Mark S. Snyder, Environmental Engineer  
Rettew Associates, Inc.  
3020 Columbia Avenue  
Lancaster, PA 17603

FEB 5 1998

RETT EW ASSOC INC

Re: Sewage  
Preliminary Effluent Limits  
Felton Borough STP  
Felton Borough, York County

Dear Mr. Snyder:

In response to your November 14, 1997 request, we have developed preliminary effluent limits for a discharge of 0.042 MGD of treated domestic wastewater to the North Branch of Muddy Creek. Any changes in the size or location of the discharge will require a reevaluation. The preliminary limits in mg/l are:

Parameter	Concentration		
	Monthly Average	Weekly Average	Instantaneous Maximum
5-Day CBOD	25		50
Suspended Solids	30		60
Total Residual Chlorine	0.5		1.6
Dissolved Oxygen	Minimum of 5.0 at all times		
pH (S.U.)	Within range of 6 to 9 at all times		
Fecal Coliform	Not greater than 200/100 ml as a geometric average value, not greater than 1,000/100 ml in more than 10% of the samples tested from May 1 to September 30; not greater than 95,000/100 ml as a geometric average value during the remainder of the year.		

Issuance of these limits does not represent approval for a discharge to the waters of the Commonwealth. This information is provided as an aid in evaluating alternative wastewater disposal methods.

To meet the requirements of the Sewage Facilities Act, the proposed facility must be included in the municipality's Official Plan for Wastewater Management approved by the Department. If you have not already done so, please initiate the planning process by contacting the Department's York District Office.

Mr. Mark S. Snyder

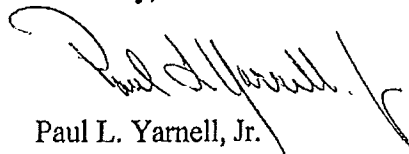
- 2 -

February 2, 1998

When the municipality has a Department approved Official Plan that addresses this project, permit applications may be submitted. Please remember that an NPDES permit application must be filed with the Department at least 180 days before you propose to commence discharge of treated wastewater. A Water Management Part II permit must be obtained from the Department prior to starting construction of the collection system or treatment plant. Permit applications can be obtained by contacting this office.

If you have any questions, please call me at 717-541-7992.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul L. Yarnell, Jr.", written over the typed name.

Paul L. Yarnell, Jr.  
Permit Engineer  
Water Management Program

# RETTEW

Associates, Inc.

3020 Columbia Avenue, Lancaster, PA 17603 • (717) 394-3721 • FAX (717) 394-1063

July 17, 1997

Windsor Township Board of Supervisors  
255 Bahn's Mill Road  
P.O. Box 458  
Red Lion, PA 17356

RE: Felton Borough Act 537 Plan

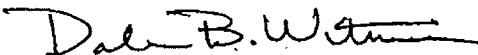
Dear Board of Supervisors:

The Borough of Felton is in the process of updating its Act 537 Sewage Facilities Plan. RETTEW Associates, Inc. is assisting the Borough with this project and we have recently completed the first draft of the Plan. This letter is intended to update the Township on the Borough's wastewater planning efforts. A summary of the Plan is enclosed for your information.

As part of this study, we evaluated one sewer alternative which involved connecting to the Windsor Township sewer system. This alternative was not selected because it proved to be cost prohibitive for Borough residents and would not be technically feasible until additional sewer capacity is available at the Springettsbury Township treatment facility. As discussed in the enclosed summary, the Plan does not currently propose the construction of public sewers.

If you have any comments regarding this Plan please feel free to contact the Borough or me.

Respectfully,



Dale B. Witmer, AICP  
Project Manager

Enclosure

copy: Borough of Felton

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# RETTEW

Associates, Inc.

3020 Columbia Avenue, Lancaster, PA 17603 • (717) 394-3721 • FAX (717) 394-1063

July 17, 1997

Chanceford Township Board of Supervisors  
Muddy Creek Road  
P.O. Box 115  
Brogue, PA 17309

RE: Felton Borough Act 537 Plan

Dear Board of Supervisors:

The Borough of Felton is in the process of updating its Act 537 Sewage Facilities Plan. RETTEW Associates, Inc. is assisting the Borough with this project and we have recently completed the first draft of the Plan. This letter is intended to update the Township on the Borough's wastewater planning efforts. A summary of the Plan is enclosed for your information.

As part of this study, we evaluated one sewer alternative which involved connecting to the Chanceford Crossings sewer system in Chanceford Township and expanding the treatment facility. This alternative was determined to be cost prohibitive and was therefore not selected. As discussed in the enclosed summary, the Plan does not currently propose the construction of public sewers.

If you have any comments regarding this Plan please feel free to contact the Borough or me.

Respectfully,



Dale B. Witmer, AICP  
Project Manager

Enclosure

copy: Borough of Felton

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7/10/98



# YORK COUNTY PLANNING COMMISSION

100 WEST MARKET STREET, YORK, PENNSYLVANIA 17401  
TELEPHONE: (717) 771-9870 FAX: (717) 771-9511

July 9, 1998

Mr. Dale B. Witmer, AICP  
Project Manager  
Retnew Associates, Inc.  
3020 Columbia Avenue  
Lancaster, PA 17603

Re: Act 537 Plan  
Felton Borough  
YCPC Project #98-53

Dear Mr. Witmer:

The above referenced matter was reviewed by the York County Planning Commission at its regular meeting held on July 7, 1998.

By formal action the Commission adopted the attached report as constituting its comments on this matter in accordance with Section 304 of the Pennsylvania Municipalities Planning Code.

You are reminded that the Pennsylvania Municipalities Planning Code requires the submission of a copy of any adopted municipal Zoning Ordinance, Subdivision and Land Development Ordinance, Comprehensive Plan or any amendments to such documents to the York County Planning Commission within thirty (30) days following the date of adoption.

Very truly yours,

Reed J. Dunn, Jr.  
Director of Planning

RJD/jb  
Encl.  
cc: Pres. Boro. Council

7/10/98

**ACT 537 SEWAGE FACILITIES PLAN REVISION  
FELTON BOROUGH  
YCPC PROJECT #98-53**

**PROJECT DESCRIPTION**

A Act 537 Sewage Facilities Plan Revision for Felton Borough has been submitted to the York County Planning Commission for review and comment, as required by Section 304 of the Pennsylvania Municipalities Planning Code, and Section 71.16(b)(2) of the Pennsylvania Sewage Facilities Act, Act 537.

**PROJECT DISCUSSION**

**Background:** The project submitted is a revision of the Felton Borough Act 537 Plan recommended for adoption by the York County Planning Commission on August 13, 1997. The original plan chose the alternative of committing to an update of the Plan within five years of the DEP's approval, and upon the Borough's adoption of the Plan to institute the nonstructural alternative.

**Problems to be Addressed:** The major problem within the Borough is owner occupied structures that utilize older on-lot systems which pre-date current regulations. These on-lot systems are located on parcels that are small and do not offer a replacement on-lot system location. Many of the parcels contain soils that are marginal to unsuitable due to steep slopes and depth of soil and they are located on or near flood plains and wetlands that have high water tables. These problems are amplified by the fact that some of the parcels rely on wells that are older, hand dug, or spring fed. The age and location of the Borough's on-lot systems has lead to twenty one of the one hundred sixty seven parcels classified either malfunctioning or being suspected of malfunctioning. Twenty seven of the forty one wells sampled were found not to be within the safe drinking water standards established by the DEP and EPA for either coliform, fecal coliform, or nitrate-nitrogen.

**Alternatives:** The following are a list of alternatives as defined by the Borough:

- \*Alternative 1- No action alternative;
- \*Alternative 2- Repairs and continued use of existing facilities;
- \*Alternative 3- Structural alternatives;
  1. Construction of an extended aeration activated "packaged" wastewater treatment plant facility with a gravity collection system (selected alternative);
    - 1a. Same as above, but smaller geographic area and treatment plant;
  2. Conveyance to the Springettsbury Township treatment facility;
  3. Conveyance to the existing Chanceford Crossing development, northeast of the Borough. This option includes expansion of the current treatment plant to meet the needs of the Borough;
  4. Construction of a community on-lot subsurface disposal system. This

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alternative is the same as number one, but uses a different treatment system;

5. Construction of aerated lagoons with spray irrigation land application system. This alternative is the same as number one, but uses a different treatment system;

\*Alternative 4-Local agency programs and regulations;

1. Small flow treatment facilities;
2. Retaining Tanks;
3. Supplemental planning module requirements(i.e.-additional requirements for hydro geologic analysis, testing and reservation of replacement absorption area, and additional conditions on systems not operated by the municipality);
4. Sewage management program to address maintenance responsibilities;
5. On-Lot Disposal System Education(OLDS Education);
6. Comprehensive Planning; and
7. Zoning and Subdivision and Land Development Regulations.

**Selected Alternatives:** The Borough after considering existing sewage needs, the condition of groundwater, and the cost analysis of the six structural alternatives decided that a public sewer project is appropriate only if funding is available that would result in an affordable user rate. An affordable user rate is defined by the Borough as one not exceeding a tapping fee of \$2,000 and a annual sewer rental of \$600 per year. If funding is available the Borough would Implement structural alternative 1. The estimated cost of this project is \$1,631,662 and is proposed to be financed using Rural Development funding, including a grant equaling forty five percent of the project costs combined with a forty year loan at 4.875 percent. It is estimated that it would take three to five years to receive such funding, with completion of the project scheduled for December of the year 2004.

Alternative 1 would serve 120 dwelling units within the Borough. The total treatment capacity of the plant would be 42,000 gallons per day. The proposed service area of the wastewater treatment plant is as shown on the attached map.

In addition to the above structural alternative the Borough upon adoption of this plan also proposes to implement the following nonstructural alternatives. The Borough will:

- \*Continue to educate its residents on proper on-lot sewage disposal methods through periodic mailings to Borough residents;
- \*Permit the use of private small flow treatment facilities subject to specific conditions addressed in the Plan;
- \*Continue to allow holding tanks subject to the Borough's Holding Tank Ordinance and applicable State regulations;
- \*Minimize the impact of future development on the groundwater by requiring preliminary hydro geologic studies for Planning Modules for Land Development which

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are proposed within one quarter mile of a well which has been documented to contain greater than five milligrams per liter nitrate-nitrogen;

\*Require the testing and reservation of a replacement absorption area for each lot within all future subdivisions which propose the use of on-lot sewage disposal;  
and

\*Require certain conditions for proposed wastewater disposal systems which require a permit from the DEP relating to the operation and maintenance of such facilities.

### COMMENTS

1. The intent or meaning of paragraph two in section 1.3 on page 1-2 is unclear. This paragraph seems to imply that if growth areas are present there is a conflict with environmentally sensitive areas. This is untrue since growth boundaries are established to direct growth to areas providing public facilities and protecting areas unsuited for growth. By directing growth to areas providing public facilities, the impact on water supplies and environmentally sensitive areas should be negated. Other documents such as the York County Natural Areas Inventory (NAI) and the York County Water Supply Plan and the York County Wellhead Protection Plan, the later two not finalized, address these concerns both within and out of growth boundaries.
2. The York County Sludge and Septage Management Plan, dated December 1993, notes that DEP requires as part of the Act 537 update that septic tanks be pumped at least every three years. The chart in section 3.3 on page 3-3 showing frequency of pumping would be more beneficial to current and future sewage facilities planning if it showed which septic systems are currently in compliance with this regulation.
3. The Plan does not make a determination as to whether or not septic system failure is the cause of all the current problems facing the Borough. The plan recommends a sewage treatment plant, but if surface water infiltration into older, hand dug, or spring fed wells is the problem in some cases, then something may also need to be done to correct this problem which can lead to high nitrate-nitrogen counts in wells.
4. Section 7.6 on page 7-3 states that the alternatives selected are considered to be environmentally sound and in compliance with existing natural resource planning and preservation programs. It also states that Section 6.1 of the Plan demonstrated that the alternatives considered by the Plan do not represent a conflict with such plans and programs. However, Section 6.1 merely states that consultation should occur with the Pennsylvania Natural Diversity Inventory (PNDI) and the Pennsylvania Historic and Museum Commission (PHMC) prior to implementation. These consultations should instead take place prior to selection of an alternative. For example, a review of the York County Natural Areas Inventory indicates that a special plant, code number SP305, has been identified in the area of the proposed treatment plant. Consultation with PNDI will verify the specific location and potential impact on the identified plant, and could possibly necessitate consideration of another treatment plant location, thus changing the project's estimated costs. Since these

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consultations could potentially alter the selected alternative, it is important for them to be completed prior to adoption of the Act 537 Plan.

5. The Plan states that if funding is available, then the Borough will implement Alternative 1. If a need for a public sewerage system has been documented based on a threat to public health and pollution of ground and surface waters, then the goal of the Act 537 Plan should be to determine the most cost effective alternative for provision of the needed system, rather than stating that public sewers would be pursued only if such project can be financed in a manner which results in a user rate which is affordable to residents.

The Plan clearly documents the need for a solution to existing on-lot disposal problems within Felton Borough. The decision to implement the construction of a wastewater treatment plant appears to be the proper and necessary response.

The recommended alternative is consistent with the goals and objectives of the York County Comprehensive Plan. Although Felton Borough is not located within a designated Growth Area, the County Plan does stress the need to direct development to areas in and around existing villages and boroughs. Provision of public services, facilities, and utilities is also encouraged as needed within existing developed areas. However, although the selected alternative as described is consistent with the York County Comprehensive Plan, it is recommended that the Act 537 Sewage Facilities Plan for the Borough of Felton not be adopted until all environmental consultations are completed. As stated previously, such consultations are necessary in order to fully evaluate and compare solution alternatives. If these consultations do not indicate the need for another location for the proposed sewage treatment facility, then it would be recommended that the proposed Act 537 Plan be adopted.

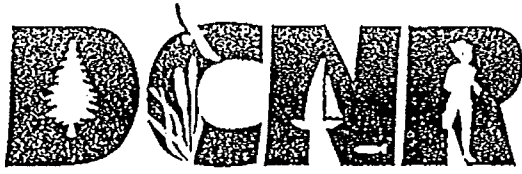
7/10/98

BOROUGH'S RESPONSE TO  
YORK COUNTY PLANNING COMMISSION COMMENTS

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The following responses are numbered to correspond to the review letter issued by the York County Planning Commission. The Borough considered the County's July 2, 1998 draft review letter prior to adopting the Act 537 Plan. The County's comments in its final review letter of July 7, 1998 were identical to the draft comments of July 2, 1998.

1. The second paragraph of Section 1.3 on page 1-2 will be revised to address the County's comment regarding the County's growth boundaries which serve to protect environmentally sensitive areas.
2. The frequency of septic tank pumping was a criterion for the existing needs analysis. Septic tanks which are pumped more frequently than one time per year one are classified as "suspected malfunctions" in Section 3.3 and mapped on Map 8. The Borough's property-specific database developed for this project could be used for future sewage facility planning. This data base includes all survey responses including the frequency of pumping. The Borough is not under a Sewage Management Program which would require septic tank pumping at certain intervals, such as every three years.
3. The table on page 2-7 demonstrates that the Borough's water quality problems are not limited to springs and hand-dug wells. Wells which were drilled also demonstrated unacceptable levels of total coliform, fecal coliform, and nitrate nitrogen. The Borough recognizes that septic system failure is not the cause of all water quality problems and that the Borough's drinking water quality could be enhanced through improved well construction.
4. Due to a DEP Consent Order and project deadlines, the requests for environmental reviews were submitted at the same time the County was asked to review the Plan. On May 22, 1998 the Borough supplied the Pennsylvania Historic and Museum Commission (PHMC) and the DEP Pennsylvania Natural Diversity Index (PNDI) with all proposed project information including maps and a narrative discussion. The PNDI responded with a letter dated May 29, 1998 stating "PNDI records indicate no occurrences of species of special concern within the project area, therefore we do not anticipate any impact on endangered, threatened, or rare species at this location." The PHMC also responded favorably in a letter dated July 7, 1998 stating that no National Register eligible or listed historic or archaeological properties are in the area of the proposed project. Copies of both letters are now included in Appendix A of the Plan.
5. As a prerequisite to any public sewer project, the Borough determined that it will not pursue a sewer project which Borough residents can not afford. If adequate funding is not available, the Borough will be forced to reevaluate its Act 537 Plan and pursue on-lot sewage disposal management and maintenance options.



RECEIVED 7/10/98

Pennsylvania Department of Conservation and Natural Resources

Rachel Carson State Office Building  
P.O. Box 8552  
Harrisburg, PA 17105-8552  
May 29, 1998

Bureau of Forestry

717-787-3444  
Fax 717-783-5109

David O. Hunt  
Rettew Associates, Inc.  
302 Columbia Avenue  
Lancaster, PA 17603

Re: Pennsylvania Natural Diversity Inventory Review of Felton Borough Act 537 Plan, York County, PA  
P&R number: 006511

Dear Mr. Hunt:

In response to your request on May 22, 1998 to review the above mentioned project, we have reviewed the area using the Pennsylvania Natural Diversity Inventory (PNDI) information system. PNDI records indicate no occurrences of species of special concern within the project area, therefore we do not anticipate any impact on endangered, threatened, or rare species at this location.

PNDI is a site specific information system which describes significant natural resources of Pennsylvania. This system includes data descriptive of plant and animal species of special concern, exemplary natural communities and unique geological features. PNDI is a cooperative project of the Department of Conservation and Natural Resources, The Nature Conservancy and the Western Pennsylvania Conservancy. This response represents the most up-to-date summary of the PNDI data files and is good for one year. An absence of recorded information does not necessarily imply actual conditions on-site. A field survey of any site may reveal previously unreported populations.

Feel free to phone our office if you have questions concerning this response or the PNDI system, and please refer to the P.E.R. Reference Number at the top of the letter in future correspondence concerning this project.

Sincerely,

*Julia M. Letourneau*

for  
Jeanne Brennan  
Environmental Review Specialist  
Pennsylvania Natural Diversity Inventory

Stewardship

Partnership

Service



Commonwealth of Pennsylvania  
Pennsylvania Historical and Museum Commission  
Bureau for Historic Preservation  
Post Office Box 1026  
Harrisburg, Pennsylvania 17108-1026

7/10/98

July 7, 1998

David O. Hunt  
Rettew Associates, Inc.  
3020 Columbia Avenue  
Lancaster, PA 17603

NO EXPEDITED REVIEW IS  
BHP REFERENCE NUMBER

Re: File No. ER 98-1867-133-A  
PV, Act 537 Plan, Felton  
Borough, York County

Dear Mr. Hunt:

The Bureau for Historic Preservation (the State Historic Preservation Office) has reviewed the above named project in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended in 1980 and 1992, and the regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation. These requirements include consideration of the project's potential effect upon 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. Therefore, your responsibility for consultation for this project is complete. Should you become aware, from any source, that historic or archaeological properties are located at or near the project site, please notify the Bureau for Historic Preservation at (717) 783-8946.

Sincerely,

Kurt W. Carr, Chief  
Division of Archaeology &  
Protection

KC/tmw



## YORK COUNTY PLANNING COMMISSION

100 WEST MARKET STREET YORK, PENNSYLVANIA 17401  
TELEPHONE: (717) 771-9870 FAX: (717) 771-9511

August 14, 1997

Dale B. Witmer  
Rettew Associates  
3020 Columbia Avenue  
Lancaster PA 17603

Re: Act 537 Plan  
Felton Borough  
YCPC Project #97-63

Dear Mr. Witmer:

The above referenced matter was reviewed by the York County Planning Commission at its regular meeting held on August 13, 1997

By formal action the Commission adopted the attached report as constituting its comments on this matter in accordance with Section 304 of the Pennsylvania Municipalities Planning Code.

You are reminded that the Pennsylvania Municipalities Planning Code requires the submission of a copy of any adopted municipal Zoning Ordinance, Subdivision and Land Development Ordinance, Comprehensive Plan or any amendments to such documents to the York County Planning Commission within thirty (30) days following the date of adoption.

Very truly yours,

Reed J. Dunn, Jr.  
Director of Planning

RJD/ss

Enc.

cc: Pres. Borough Council

JOSEPH J. EDWARDS, CHAIRMAN • TERRY L. DUNLAP, VICE-CHAIRMAN • RICHARD D. AWALT, SECRETARY • H. BURNELL SPRENKLE, TREASURER  
WALTER A. KUHL • DANIEL M. LEESE • ANITA H. PFLUM • RALPH MCGREGOR • RONALD G. RUMAN  
REED J. DUNN, JR., DIRECTOR • CHRISTINA M. VELTRI, SOLICITOR

EQUAL OPPORTUNITY EMPLOYER

**ACT 537 SEWAGE FACILITIES PLAN  
FELTON BOROUGH  
YCPC PROJECT #97-63**

**PROJECT DESCRIPTION**

A proposed Act 537 Sewage Facilities Plan for Felton Borough has been submitted to the York County Planning Commission for review and comment, as required by Section 304 of the Pennsylvania Municipalities Planning Code, and Section 71.16(b)(2) of the Pennsylvania Sewage Facilities Act, Act 537.

**PROJECT DISCUSSION**

**Problems to be Addressed:** Many occupied structures within the Borough utilize older on-lot systems which pre-date current regulations. These systems are located on small lots, that contain inadequate soils. Several of these on-lot systems are known to have failed and several more are suspected to have failed. However, well test results did not link groundwater degradation with these inadequate on-lot systems, but rather indicated that positive total coliform results were likely the result of surface water infiltration and naturally occurring nutrients, both of which are common in areas adjacent to flood plains, particularly when older wells are utilized.

Given the small size and minimal growth potential of the Borough, the likelihood of creating an affordable public wastewater solution is limited, and therefore the most significant planning need appears to be addressing the continued use of the older on-lot systems.

**Selected Alternative:** Based on an evaluation of groundwater samples showing that existing wastewater disposal methods are not resulting in decreased ground water quality, a Borough-wide survey of sewage needs showing community awareness of the need to maintain on-lot systems and an evaluation of potential treatment alternatives showing costs that are unfeasible at the present, the Borough Council determined that a public sewer project was not appropriate at this time. The Borough Council chose to commit to an update of this Plan within five years of the DEP's approval, and upon the Borough's adoption of the plan to institute the following nonstructural alternatives:

- \*Continue to educate its residents on proper on-lot sewage disposal methods through periodic mailings to Borough residents;
- \*Permit the use of private small flow treatment facilities subject to specific conditions addressed in the Plan;
- \*Continue to allow holding tanks subject to the Borough's Holding Tank Ordinance and applicable State regulations;
- \*Minimize the impact of future development on the groundwater by requiring

preliminary hydrogeologic studies for Planning Modules for Land Development which are proposed within one quarter mile of a well which has been documented to contain greater than five milligrams per liter nitrate-nitrogen;

\*Require the testing and reservation of a replacement absorption area for each lot within all future subdivisions which propose the use of on-lot sewage disposal;  
and

\*Require certain conditions for proposed wastewater disposal systems which require a permit from the DEP relating to the operation and maintenance of such facilities.

### COMMENTS

The past, present and future of wastewater disposal in Felton Borough has been sufficiently documented, and the decision to institute nonstructural alternatives appears to be the correct approach for Felton Borough.

The recommended alternative is consistent with the goals and objectives of the York County Comprehensive Plan. Although the County Comprehensive Plan does recommend that growth be directed in and around boroughs, Felton is predicted to have minimal growth in the future and does not lie within a designated Urban Growth Area.

Since Felton Borough has shown that there is no proof of ground water contamination from existing on-lot systems, the public is aware of the importance of maintaining current on-lot systems and the cost of public treatment facilities are unfeasible at this time, it is recommended that the proposed Felton Borough Act 537 Plan be adopted.



## YORK COUNTY PLANNING COMMISSION

100 WEST MARKET STREET YORK, PENNSYLVANIA 17401  
TELEPHONE: (717) 771-9870 FAX: (717) 771-9511

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Given the small size and minimal growth potential of the Borough, the likelihood of creating an affordable public wastewater solution is limited, and therefore the most significant planning need appears to be addressing the continued use of the older on-lot systems.

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**APPENDIX B**  
**SUPPORTING DOCUMENTATION**

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- Sewage Needs Survey
- Holding Tank Ordinance

FELTON BOROUGH MAIL SURVEY

DATE: \_\_\_ / \_\_\_ / \_\_\_

PLEASE CIRCLE OR FILL IN AS APPROPRIATE EACH QUESTION. ADD COMMENTS AS NEEDED

NAME: \_\_\_\_\_

PHONE: ( ) \_\_\_ - \_\_\_\_\_

ADDRESS: \_\_\_\_\_

1. How many people live in your house? \_\_\_\_\_ SEASONAL / YEAR ROUND? (Please circle one)
2. Approximately how large is the size of your lot? \_\_\_\_\_
3. Do you have more than one sewage system on your lot? YES or NO  
If yes, explain: \_\_\_\_\_
4. What kind of water system do you have? WELL? SPRING? PUBLIC? OTHER? \_\_\_\_\_  
Do you treat your water? YES or NO If yes, how? \_\_\_\_\_  
If you have a well: Is it DUG or DRILLED? (Please circle one) How Deep? \_\_\_\_\_ ft.  
Does the well have a outer casing? YES or NO (Please circle one)
5. How far is the well or spring from the septic system drainfield? \_\_\_\_\_ ft. Is the well UP or DOWN Slope from the drainfield?  
Have you ever had your water tested? YES or NO (Circle) When? \_\_\_\_\_  
What were the results? \_\_\_\_\_
6. What kind of sewage system do you have? (CIRCLE ALL THAT APPLY)
 

SEPTIC TANK	INGROUND BED	COMMUNITY SEWER
CESSPOOL	INGROUND TRENCH	STORM SEWER
OLD WELL	ELEVATED SAND MOUND	PIPE TO DITCH
HOLDING TANK	SEEPAGE PIT	PIPE TO STEAM
PRIVY	BORE HOLE	PIPE TO SURFACE
PUBLIC SEWER	OTHER _____	
7. Where does your laundry and/or sink water go? (CIRCLE ALL THAT APPLY)
 

SEPTIC TANK	INGROUND BED	COMMUNITY SEWER
CESSPOOL	INGROUND TRENCH	STORM SEWER
OLD WELL	ELEVATED SAND MOUND	PIPE TO DITCH
HOLDING TANK	SEEPAGE PIT	PIPE TO STEAM
PRIVY	BORE HOLE	PIPE TO SURFACE
PUBLIC SEWER	OTHER _____	
8. How old is your system? \_\_\_\_\_ How old is your home? \_\_\_\_\_  
Was a permit issued for the septic system to be constructed? YES or NO (Circle) When? \_\_\_\_\_
9. Have you ever noticed any of the following near your septic system?
 

GREEN LUSH GRASS	WETNESS OR SPONGY AREAS
ODORS	WATER PONDING OR SURFACE
SLUGGISH DRAINS	WASTEWATER BACKING INTO THE HOME
SYSTEM OVERFLOW	OTHER _____
10. Was your system ever pumped out? YES or NO How often? \_\_\_\_\_ Last Time \_\_\_\_\_  
If it was pumped, was it inspected for cracks or broken baffles? \_\_\_\_\_
11. Was your system ever repaired? YES or NO When? \_\_\_\_\_ By permit? YES / NO  
What part was repaired or replaced?  
TANK: REPAIRED/REPLACED    LINE: REPAIRED/REPLACED    DRAIN FIELD: REPAIR/REPLACED
12. Are there any other sewage problems you are aware off?
13. COMMENTS (Continue on back): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

FELTON BOROUGH  
YORK COUNTY, PENNSYLVANIA

---

ORDINANCE NO. 1994-1

---

AN ORDINANCE OF THE BOROUGH COUNCIL OF FELTON BOROUGH, YORK COUNTY, PENNSYLVANIA, ESTABLISHING A PROCEDURE FOR THE USE AND MAINTENANCE OF SEWAGE HOLDING TANKS IN FELTON BOROUGH; PROVIDING FOR THE TRANSPORTATION OF SEWAGE THEREFROM; PROVIDING FOR THE ADOPTION OF REGULATIONS RELATING THERETO; AND PROVIDING FOR ENFORCEMENT, INCLUDING THE FILING OF LIENS AND PENALTIES

---

BE IT ENACTED by the Borough Council of Felton Borough of York County, Pennsylvania, and it is hereby enacted and ordained as follows:

Section 1. Purpose. The purpose of this Ordinance is to establish procedures for the use and maintenance of existing and new holding tanks designed to receive and retain sewage whether from residential or commercial uses, and it is hereby declared that the enactment of this Ordinance is necessary for the protection, benefit and preservation of the health, safety and welfare of the inhabitants of this municipality.

Section 2. Definitions. Unless the context specifically and clearly indicates otherwise, the meaning of terms used in this Ordinance shall be as follows:

A. "Authority" shall mean the Borough Council of Felton Borough, York County, Pennsylvania, acting through its duly elected officials and through such agents and employees as may be delegated the authority and responsibility for the enforcement and administration of this Ordinance from time to time, including, but not limited to, the duly appointed Sewer Enforcement Officer for the Borough.

B. "Holding Tank" shall mean a watertight receptacle, whether permanent or temporary which receives and retains sewage conveyed by a water carrying system and is designed and constructed to facilitate the ultimate disposal of the sewage at another site.

C. "Improved Property" shall mean any property within the Borough upon which there is erected a structure intended for continuous or periodic habitation, occupancy or use by human beings or animals and from which structure sewage shall or may be discharged.

D. "Municipality" shall mean Felton Borough, York County, Pennsylvania.

E. "Owner" shall mean any person vested with ownership, legal or equitable, sole or partial, of any property located in the Borough.

F. "Person" shall mean any individual, partnership, company, association, corporation or other group or entity.

G. "Sewage" shall mean any substance that contains any of the waste products or excrement or other discharge from the bodies of human beings or animals and any noxious or deleterious substance being harmful or inimical to the public health, or to animal or aquatic life or to the use of water for domestic water supply or for recreation.

Section 3. Rights and Privileges Granted. That the Authority is hereby authorized and empowered to undertake within the Borough the control and methods of holding tank use, sewage disposal and sewage collection and transportation thereof.

Section 4. Rules and Regulations. That the Authority is hereby authorized and empowered to adopt such rules and regulations concerning sewage which it may deem necessary from time to time to effect the purposes herein.

Section 5. Rules and Regulations to be in Conformity with Applicable Law. All such rules and regulations adopted by the Authority shall be in conformity with the provisions herein, all other ordinances of the Borough, and all applicable laws, and applicable rules and regulations of administrative agencies of the Commonwealth of Pennsylvania.

Section 6. Rates and Charges. The Authority shall have the right and power to fix, alter, charge and collect rates, assessments, and other charges in the area served by its facilities at reasonable and uniform rates as authorized by applicable law.

Section 7. Exclusiveness of Rights and Privileges.

- A. The collection and transportation of all sewage from any improved property utilizing a holding tank shall be done solely by or under the direction and control of the Authority or its designated representative, and the disposal thereof shall be made only at such site or sites as may be approved by the Department of Environmental Resources of the Commonwealth of Pennsylvania.
- B. The Authority will receive, review and retain pumping receipts from permitted holding tanks.

- C. The Authority will complete and retain annual inspection reports for each permitted holding tank.

Section 8. Duties of Improved Property Owner. The owner of an improved property that utilizes a holding tank shall:

- A. Maintain the holding tank in conformance with this or any ordinance of the Borough, the provisions of any applicable law, and the rules and regulations of the Authority and any administrative agency of the Commonwealth of Pennsylvania.
- B. Permit only the Authority or its agent to inspect holding tanks on an annual basis.
- C. Permit only an approved hauler to collect, transport and dispose of the contents therein.

Section 9. Violations. Any person who violates any provisions of Section 8 shall, upon conviction thereof by summary proceedings, be sentenced to pay a fine of not less than One Hundred Dollars (\$100.00) and not more than Three Hundred Dollars (\$300.00), and in default of said fine and cost to undergo imprisonment in the County Prison for a period not in excess of thirty (30) days.

Section 10. Abatement of Nuisances. In addition to any other remedies provided in this Ordinance, any violation of Section 8 above shall constitute a nuisance and shall be abated by the Authority by either seeking mitigation of the nuisance or appropriate equitable or legal relief from a court of competent jurisdiction.

Section 11. Repeal. All ordinances or resolutions or parts of ordinances or resolutions, insofar as they are inconsistent herewith, be and the same are hereby repealed.

Section 12. Severability. If any sentence, clause, section or part of this Ordinance is for any reason found to be unconstitutional, illegal, or invalid, such unconstitutionality, illegality, or invalidity shall not affect or impair any of the remaining provisions, sentences, clauses, sections or parts of this Ordinance. It is hereby declared as the intent of the Authority, that this Ordinance would have been adopted had such unconstitutional, illegal or invalid sentence, clause, section or part thereof not been included therein.

Section 13. Effective Date. This Ordinance shall become effective five (5) days after its adoption.

ENACTED AND ORDAINED into an Ordinance this 1<sup>ST</sup> day of AUGUST 1994, by the Borough Council of Felton Borough, York County, Pennsylvania in lawful session duly assembled.

Attest:

BOROUGH COUNCIL OF  
FELTON BOROUGH

Kathryn S. Shultz  
Secretary

By: Stephen R. Spill  
President

APPROVED this 1 day of Aug. 1994.

Charles Lentz  
Mayor

7/10/98

**APPENDIX C  
PUBLIC ADVERTISEMENT**

---

# Proof of Publication

7/10/98

in the \_\_\_\_\_ Court \_\_\_\_\_ of York County

Copy of Advertisement Attached Here

Of \_\_\_\_\_ Term, 19  
No. \_\_\_\_\_

THE YORK DISPATCH/YORK SUNDAY NEWS and YORK DAILY RECORD are the names of the daily newspapers of general circulation published continuously for more than the last six months by York Newspaper Company, at its principal place of business, which is at 1891 Loucks Road, York, PA 17404.

The printed copy of the advertisement hereto attached is a true copy, exactly as printed and published, of an advertisement printed in the regular issues of the said The York Dispatch/York Sunday News and York Daily Record published on the following dates, viz:

June 2, 1998

COMMONWEALTH OF PENNSYLVANIA  
COUNTY OF YORK

SS

Before me, a Notary Public, personally came Kristel Fairchild who being duly sworn deposes and says that he/she is the legal clerk of York Newspaper Company, and has personal knowledge of the publication of the advertisement mentioned in the foregoing statement; that the facts set forth in said statement and all the allegations of said statement as to the time, place and character of publication are true, and that the affiant is not interested in the subject matter of the above mentioned advertisement.

Sworn and subscribed to before me this

2nd day of June 1998

*Jean Marie Porter*

Notary Public

*Kristel Fairchild*  
*her Mark*

Notarial Seal  
Jean Marie Porter, Notary Public  
York Twp., York County  
My Commission Expires March 20, 2001  
Member, Pennsylvania Association of Notaries

Received of \_\_\_\_\_

Dollars

100

in payment of the charge for the publication of above mentioned advertisement and the expense of above affidavit.

Advertisement \$ \_\_\_\_\_

Affidavit \$ \_\_\_\_\_

Flat Rate Fee \$ \_\_\_\_\_

\$ \_\_\_\_\_

APPENDIX C

## NOTICE

Notice is hereby given that the Borough Council of the Borough of Felton, York County, Pennsylvania proposes to adopt a Sewage Facilities Plan pursuant to Act 537 of 1986, as amended (Act 537 Plan) following a 30-day public comment period, hereby established. The Plan includes an evaluation of groundwater samples, a Borough-wide survey of sewage needs and an evaluation of potential public wastewater treatment alternatives.

The Borough Council has selected the following recommendations set forth in the Plan as the alternatives of choice which shall be implemented by the Borough in accordance with the implementation schedule set forth in Chapter 8 of the Plan. The Borough will continue public education efforts regarding the proper operation and maintenance of on-lot sewage disposal systems; permit the use of small flow treatment facilities; continue to allow the use of holding tanks subject to the Borough's Holding Tank Ordinance; require preliminary hydrogeologic studies for new land developments which propose on-lot sewage disposal in areas where groundwater has been found to exceed five milligrams per liter nitrate-nitrogen; require the testing and reservation of a replacement absorption area for each lot within all future subdivisions which propose the use of on-lot sewage disposal; require certain conditions for proposed wastewater disposal systems which require a permit from the DEP relating to the operation and maintenance of such facilities and the Borough will implement the construction of a sewage treatment plant and collection and conveyance facilities in accordance with Alternative 1 provided that adequate funding is available to result in a lapping fee not to exceed \$2,000 per equivalent dwelling unit (EDU) and an annual user rate not to exceed \$600 per EDU. The implementation of the public sewer alternative shall occur when adequate grants are made available to the Borough which is currently projected for the year 2002. The final completion of construction is projected to occur during the year 2004.

Individuals interested in making an appointment to review a copy of the Plan may do so Monday through Friday between 8:00 AM and 8:00 PM by calling Mayor Charles Sentz at 244-1717 or Borough Council President Steve Campbell at 244-3423. Mr. Campbell can also be reached Monday through Friday between 8:00 AM and 5:00 PM at 840-0022. The public may provide written comments on the proposed Act 537 Plan to the Felton Borough Council, 52 Red Lion Avenue, Felton, PA 17322 during the 30-day public comment period which shall commence on June 3, 1998 and terminate on July 2, 1998.

7/10/98

APPENDIX D  
PUBLIC COMMENTS

---

The advertisement of this Act 537 Plan included a 30-day public comment period during which the public was invited to review the Plan and provide written comments to the Borough by July 2, 1998.

The Borough Council did not receive any written comments during the advertised public comment period. Subsequently, the Borough Council adopted the Plan at its regularly scheduled meeting on July 6, 1998.

**APPENDIX C**  
**PUBLIC ADVERTISEMENT**

---

# Proof of Publication

in the NOTICE Court \_\_\_\_\_ of York County

Copy of \_\_\_\_\_ attached Here

Of \_\_\_\_\_ Term, 19  
No. \_\_\_\_\_

**THE YORK DISPATCH/YORK SUNDAY NEWS and YORK DAILY RECORD** are the names of the daily newspapers of general circulation published continuously for more than the last six months by York Newspaper Company, at its principal place of business, which is at 1891 Loucks Road, York, PA 17404.

The printed copy of the advertisement hereto attached is a true copy, exactly as printed and published, of an advertisement printed in the regular issues of the said **The York Dispatch/York Sunday News and York Daily Record** published on the following dates, viz:

July 19, 1997

COMMONWEALTH OF PENNSYLVANIA  
COUNTY OF YORK SS

Before me, a Notary Public, personally came Nancy L. Nelson who being duly sworn deposes and says that he/she is the legal clerk of York Newspaper Company, and has personal knowledge of the publication of the advertisement mentioned in the foregoing statement; that the facts set forth in said statement and all the allegations of said statement as to the time, place and character of publication are true, and that the affiant is not interested in the subject matter of the above mentioned advertisement.

Sworn and subscribed to before me this

19th day of July 1997

*Jean Marie Porter*

Notary Public

*Nancy L. Nelson*

Notarial Seal  
Jean Marie Porter, Notary Public  
York Twp., York County  
My Commission Expires March 20, 2001  
Member, Pennsylvania Association of Notaries

Received of \_\_\_\_\_ Dollars  
100

in payment of the charge for the publication of above mentioned advertisement and the expense of above affidavit.

Advertisement \$ \_\_\_\_\_  
Affidavit \$ \_\_\_\_\_  
Flat Rate Fee \$ \_\_\_\_\_  
\$ \_\_\_\_\_

Notice is hereby given that the Borough Council of the Borough of Felton, York County, Pennsylvania proposes to adopt a Sewage Facilities Plan pursuant to Act 537 of 1966, as amended (Act 537 Plan) following a 30-day public comment period, hereby established. The plan includes an evaluation of groundwater samples, a Borough-wide survey of sewage needs and an evaluation of potential public wastewater treatment alternatives. Groundwater testing did not demonstrate that existing wastewater disposal methods are resulting in decreased groundwater quality. Likewise, the sewage needs survey did not reveal a clear need for a public sewer system. Considering the possibility that public sewer could become necessary in the long-term future, three public wastewater disposal alternatives were evaluated. After careful consideration of such studies and potential user costs, the Borough Council determined that a public sewer project is not appropriate at this time. Upon the Borough's adoption of its Act 537 Plan, the following policies and nonstructural alternatives will be implemented. The Borough will continue public education efforts regarding the proper operation and maintenance of on-lot sewage disposal systems; permit the use of small flow treatment facilities; continue to allow the use of holding tanks subject to the Borough's Holding Tank Ordinance; require preliminary hydrogeologic studies for new land developments which propose on-lot sewage disposal in areas where groundwater has been found to exceed five milligrams per liter nitrate-nitrogen; require the testing and reservation of a replacement absorption area for each lot within all future subdivisions which propose the use of on-lot sewage disposal; and require certain conditions for proposed wastewater disposal systems which require a permit from the DEP relating to the operation and maintenance of such facilities. The Plan also states that the Borough is committed to re-evaluate the status of on-lot sewage disposal methods and the need for public sewers within five years. Individuals interested in making an appointment to review a copy of the Plan may do so Monday through Friday between 6:00 p.m. and 8:00 p.m. by calling Mayor Charles Sertiz at 244-1717 or Borough Council President Steve Campbell at 246-3425. Mr. Campbell can also be reached Monday through Friday between 8:00 a.m. and 5:00 p.m. at 840-0022. The public may provide written comments on the proposed Act 537 Plan to the Felton Borough Council, 52 Red Lion Avenue, Felton, PA 17322 during the 30-day public comment period which shall commence on July 19, 1997 and terminate on August 17, 1997.

**APPENDIX D**  
**PUBLIC COMMENTS**

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APPENDIX E  
YORK COUNTY PLANNING COMMISSION  
CDBG CORRESPONDENCE

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## YORK COUNTY PLANNING COMMISSION

100 WEST MARKET STREET, YORK, PENNSYLVANIA 17401  
TELEPHONE: (717) 771-9870 FAX: (717) 771-9511

RECEIVED

March 4, 1998

MAR 5 1998

Dale Witmer  
RETTEW Associates, Inc.  
3020 Columbia Avenue  
Lancaster, PA 17603

RETTEW ASSO., INC.

RE: Felton Borough Sanitary Sewer Options

Dear Mr. Witmer:

Regarding our telephone conversation on Monday, March 2, 1998, the following is an attempt to clarify the requirements of the CDBG program regarding special assessments and installation of customer facilities.

**Special Assessments** - Payment of special assessments with CDBG funds varies according to how the project itself qualified for CDBG dollars. Special assessments may be paid for all property owners (if the project area qualified as low/mod income) or for low/moderate income owner-occupied properties only. When CDBG dollars are being used for construction of the public sewer or water facilities, special assessments for connection fees or tapping fees collected by the Authority or the Township may be considered fund recovery and treated as Program Income. Enclosed is a copy of HUD regulations regarding special assessments.

York County has a sewer hookup loan assistance program which pays tapping fees for low/moderate income owner-occupants. In order to request assistance, property owners apply directly to the York County Planning Commission CDBG office. Karen Hynd, Rehabilitation Program Coordinator, is the contact person (771-9870). I recommend contacting her as soon as possible about the possibility of requests for assistance, so that she can reserve sufficient funding.

**Customer Facilities** - The use of CDBG funds for installation of customer facilities (connecting the lateral from the property line to the home) follows the same guidelines as the special assessments. The York County Planning Commission sewer hookup loan program can pay for the installation of customer facilities for low/moderate income owner-occupied properties only. Karen Hynd is the contact person for this program, also.

JOSEPH J. EDWARDS, CHAIRMAN • TERRY L. DUNLAP, VICE-CHAIRMAN • RICHARD D. AWALT, SECRETARY • H. BURNELL SPRENKLE, TREASURER  
WALTER A. KUHL • DANIEL M. LEESE • ANITA H. PFLUM • RALPH MCGREGOR • RONALD G. RUMAN  
REED J. DUNN, JR., DIRECTOR • CHRISTINA M. VELTRI, SOLICITOR

EQUAL OPPORTUNITY EMPLOYER

Dale Witmer, Rettew Associates, Inc.

March 4, 1998

page 2

I hope that this information will be helpful to you and the Borough. Please contact me at the York County Planning Commission, (717) 771-9870, if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Joann Galiano".

Joann Galiano  
Project Coordinator

Enc.

facilities assisted with CDBG funds, but charges such as excessive membership fees, which will have the effect of precluding low- and moderate-income persons from using the facilities, are not permitted.

→ (c) *Special assessments under the CDBG program.* The following policies relate to special assessments under the CDBG program:

- (1) *Definition of special assessment.* The term "special assessment" means the recovery of the capital costs of a public improvement, such as streets, water or sewer lines, curbs, and gutters, through a fee or charge levied or filed as a lien against a parcel of real estate as a direct result of benefit derived from the installation of a public improvement, or a one-time charge made as a condition of access to a public improvement. This term does not relate to taxes, or the establishment of the value of real estate for the purpose of levying real estate, property, or ad valorem taxes, and does not include periodic charges based on the use of a public improvement, such as water or sewer user charges, even if such charges include the recovery of all or some portion of the capital costs of the public improvement.
- (2) *Special assessments to recover capital costs.* Where CDBG funds are used to pay all or part of the cost of a public improvement, special assessments may be imposed as follows:
  - (i) Special assessments to recover the CDBG funds may be made only against properties owned and occupied by persons not of low and moderate income. Such assessments constitute program income.
  - (ii) Special assessments to recover the non-CDBG portion may be made provided that CDBG funds are used to pay the special assessment in behalf of all properties owned and occupied by low- and moderate-income persons; except that CDBG funds need not be used to pay the special assessments in behalf of properties owned and occupied by moderate-income persons if the grant recipient certifies that it does not have sufficient CDBG funds to pay the assessments in behalf of all of the low- and moderate-income owner-occupant persons. Funds collected through such special assessments are not program income.
- (3) *Public improvements not initially assisted with CDBG funds.* The payment of special assessments with CDBG funds constitutes CDBG assistance to the public improvement. Therefore, CDBG funds may be used to pay special assessments provided:
  - (i) The installation of the public improvements was carried out in

compliance with requirements applicable to activities assisted under this part including environmental, citizen participation and Davis-Bacon requirements;

- (ii) The installation of the public improvement meets a criterion for national objectives in § 570.208(a)(1), (b), or (c); and
  - (iii) The requirements of § 570.200(c)(2)(ii) are met.
- (d) *Consultant activities.* Consulting services are eligible for assistance under this part for professional assistance in program planning, development of community development objectives, and other general professional guidance relating to program execution. The use of consultants is governed by the following:
- (1) *Employer-employee type of relationship.* No person providing consultant services in an employer-employee type of relationship shall receive more than a reasonable rate of compensation for personal services paid with CDBG funds. In no event, however, shall such compensation exceed the equivalent of the daily rate paid for Level IV of the Executive Schedule. Such services shall be evidenced by written agreements between the parties which detail the responsibilities, standards, and compensation.
  - (2) *Independent contractor relationship.* Consultant services provided under an independent contractor relationship are governed by the procurement requirements in 24 CFR 85.36 and are not subject to the Level IV\* limitation.

\*Nov. 9, 1995, published regulation inadvertently failed to change the reference from GS-18 to Level IV.

- (e) *Recipient determinations required as a condition of eligibility.* In several instances under this subpart, the eligibility of an activity depends on a special local determination. Recipients shall maintain documentation of all such determinations. A written determination is required for any activity carried out under the authority of §§ 570.201(f), 570.201(i)(2), 570.201(p), 570.201(q), 570.202(b)(3), 570.206(f), 570.209, and 570.309.\*

\*Nov. 9, 1995, published regulation inadvertently included a reference to §570.202(f)(2).

- (f) *Means of carrying out eligible activities.*
- (1) Activities eligible under this subpart, other than those authorized under § 570.204(a), may be undertaken, subject to local law:
    - (i) By the recipient through:



## YORK COUNTY PLANNING COMMISSION

100 WEST MARKET STREET, YORK, PENNSYLVANIA 17401  
TELEPHONE: (717) 771-9870 FAX: (717) 771-9511

May 5, 1998

Dale Witmer  
RETTEW Associates, Inc.  
3020 Columbia Avenue  
Lancaster, PA 17603

RE: CDBG Project #7030.8394  
Act 537 Plan  
Felton Borough

Dear Mr. Witmer:

Recently, you requested information regarding the York County Community Development Block Grant program policy on funding new sanitary sewer systems.

Although sanitary sewer systems are eligible for funding through the CDBG program, it is the policy of the York County CDBG program to fund only those systems in designated growth areas. These growth areas are defined in the York County Comprehensive Plan. Enclosed is a copy of the map depicting the areas. The policy carries out one objective of the CDBG program: "To continue public improvements and redevelopment programs in neighborhoods and communities by upgrading housing, sanitary sewer, storm drainage, water supply, transportation, and public utility facilities, consistent with local, state, and federal plans and requirements."

You will note that the Comprehensive Plan does not include Felton Borough as a growth area. Accordingly, funding a new sanitary sewer system in the Borough would not be consistent with the York County CDBG program policy.



Please contact me at (717) 771-9870 if you have further questions regarding CDBG policy.

Sincerely,

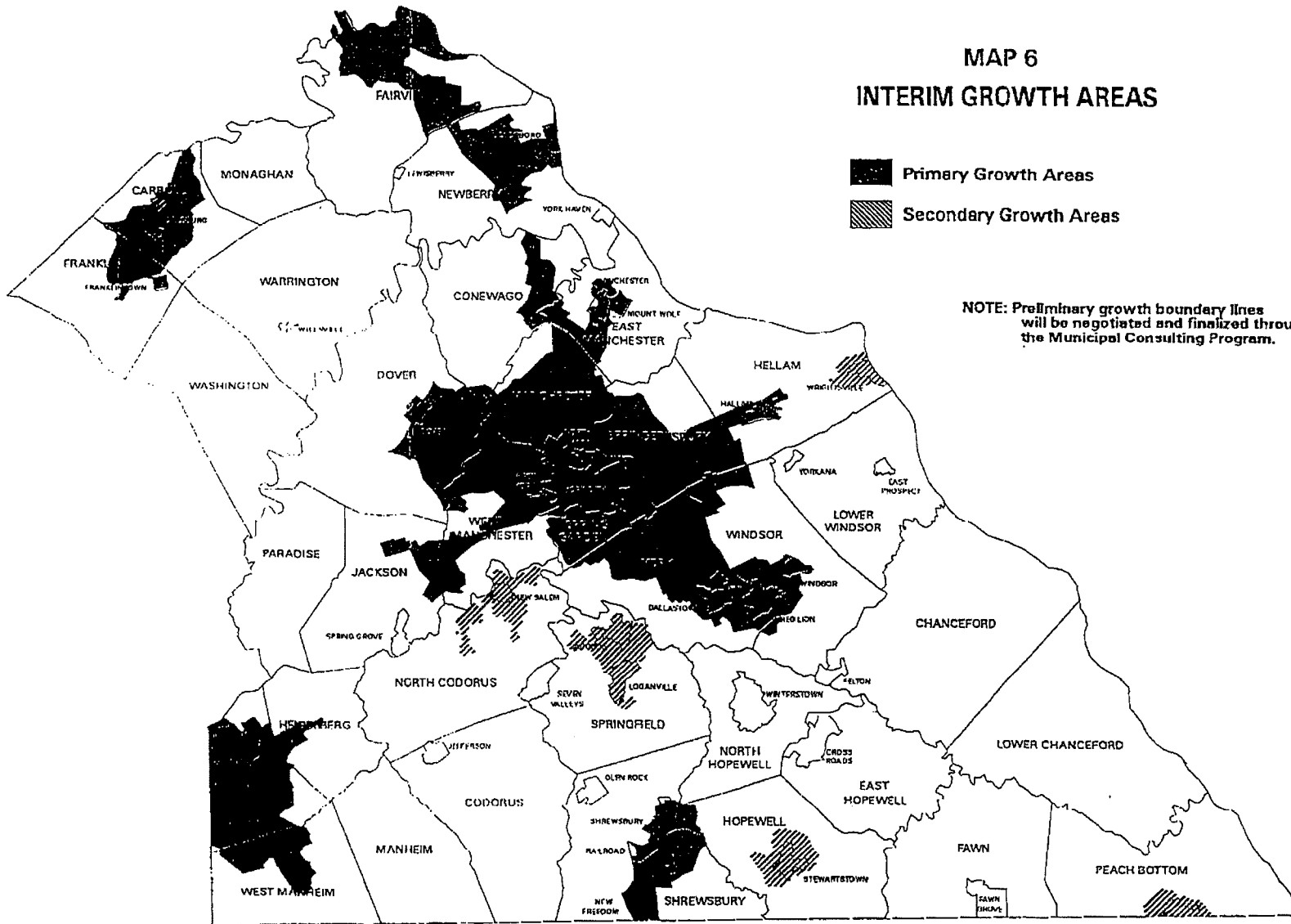
Joann Galiano  
Project Coordinator

Enc.

## MAP 6 INTERIM GROWTH AREAS

-  Primary Growth Areas
-  Secondary Growth Areas

NOTE: Preliminary growth boundary lines will be negotiated and finalized through the Municipal Consulting Program.



**APPENDIX F**  
**PENNVEST CORRESPONDENCE**

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Commonwealth of Pennsylvania  
**PENNVEST**

Pennsylvania Infrastructure Investment Authority  
Keystone Building, 22 South Third St., Harrisburg, PA 17101  
(717) 787-8137

RECEIVED

MAY 5 1998

RETT...

Governor Tom Ridge,  
Chairman

Paul K. Marchetti,  
Executive Director

May 1, 1998

Mr. Dale Witmer  
Rettew Associates, Inc.  
3020 Columbia Avenue  
Lancaster, Pennsylvania 17603

RE: Felton Borough  
Potential PENNVEST funding - Wastewater

Dear Mr. Witmer,

I am responding to your request of March 23, 1998 regarding potential PENNVEST funding for Felton Borough, York County. You have sent me a scenario of project cost estimates for a sewer system so that a preliminary financial analysis could be done as to what PENNVEST might be able to offer them if they submitted a new application at this time and if all the financial data and assumptions remained the same. This is to give them some idea of what kind of user and interest rates they might be able to expect from PENNVEST.

Based on the assumptions of Total Project Costs of \$1,068,192; 78 Households; 100% Residential; O&M of \$28,000; No Existing Debt; CDBG of \$400,000 and No Tap Fees; PENNVEST might be able to offer full funding of the project for 20 years in the 1.0 percentage interest range with the potential of grant monies. This might result in annual user rates in the \$650 to \$700 range.

Assuming that the other numbers remained the same, choosing not to charge taps would result in full funding

of the project at the same interest rates and term, resulting in potential annual rates in the same range. You may want to reconsider charging tap fees, since they are optional as far as PENNVEST is concerned.

Please remember that all of the above represents a preliminary analysis based on early estimates and current market and socio-economic information and in no way constitutes an offer to provide a loan or any commitment whatsoever. It is unfortunate that it is necessary to be so imprecise and indefinite, but in the absence of an actual application and solid information, only general direction and "educated guesses" can be provided.

I hope that this information has been helpful to you in assessing alternatives for implementing this project. If you have any further questions or comments, please feel free to call me at (717) 783-8618.

Sincerely,

A handwritten signature in cursive script that reads "Vickie A. Johnson".

Vickie A. Johnson  
Project Specialist

cc: Felton Borough  
PENNVEST



Commonwealth of Pennsylvania

# PENNVEST

Pennsylvania Infrastructure Investment Authority

Keystone Building, 22 South Third St., Harrisburg, PA 17101  
(717) 787-8137

RECEIVED

MAY 18 1998

RETTAW ASSOCIATES, INC.

Governor Tom Ridge,  
Chairman

Paul K. Marchetti,  
Executive Director

May 14, 1998

Mr. Dale Witmer  
Rettew Associates, Inc.  
3020 Columbia Avenue  
Lancaster, Pennsylvania 17603

RE: Felton Borough  
Potential PENNVEST funding - Wastewater

Dear Mr. Witmer,

I am responding to your second request of May 1, 1998 regarding potential PENNVEST funding for Felton Borough, York County. You have sent me a scenario of project cost estimates for a sewer system so that a preliminary financial analysis could be done as to what PENNVEST might be able to offer them if they submitted a new application at this time and if all the financial data and assumptions remained the same. This is to give them some idea of what kind of user and interest rates they might be able to expect from PENNVEST.

Based on the assumptions of Total Project Costs of \$1,068,192; 78 Households; 100% Residential; O&M of \$28,000; No Existing Debt; No Other Contributions; and Tap Fees of \$156,000; PENNVEST might be able to offer full funding of the project for 20 years in the 1.0 percentage interest range with the potential of grant monies. This might result in annual user rates in the \$800 to \$850 range.

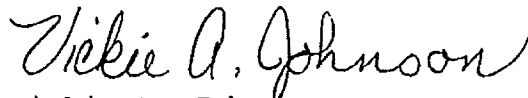
~~Assuming that the other numbers remained the same,~~

~~choosing not to charge taps would result in full funding  
of the project at the same interest rates and term,  
resulting in potential annual rates in the same range.  
You may want to reconsider charging tap fees, since they  
are optional as far as PENNVEST is concerned.~~

Please remember that all of the above represents a preliminary analysis based on early estimates and current market and socio-economic information and in no way constitutes an offer to provide a loan or any commitment whatsoever. It is unfortunate that it is necessary to be so imprecise and indefinite, but in the absence of an actual application and solid information, only general direction and "educated guesses" can be provided.

I hope that this information has been helpful to you in assessing alternatives for implementing this project. If you have any further questions or comments, please feel free to call me at (717) 783-8618.

Sincerely,



Vickie A. Johnson  
Project Specialist

cc: Felton Borough  
PENNVEST

RECEIVED

MAY 20 1998



Commonwealth of Pennsylvania

# PENNVEST

Pennsylvania Infrastructure Investment Authority  
Keystone Building, 22 South Third St., Harrisburg, PA 17101  
(717) 787-8137

Governor Tom Ridge,  
Chairman

Paul K. Marchetti,  
Executive Director

May 18, 1998

Mr. Dale Witmer  
Rettew Associates, Inc.  
3020 Columbia Avenue  
Lancaster, Pennsylvania 17603

RE: REVISION  
Felton Borough  
Potential PENNVEST funding - Wastewater

Dear Mr. Witmer,

This is a revision to my response of May 1 and May 14, 1998. I inadvertently included some language pertaining to another project, so paragraph 3 beginning with "Assuming that the other numbers..." should be deleted. I hope this does not cause any confusion or inconvenience.

If you have any further questions or comments, please feel free to call me at (717) 783-8618.

Sincerely,

A handwritten signature in cursive script that reads "Vickie A. Johnson".

Vickie A. Johnson  
Project Specialist

cc: Felton Borough  
PENNVEST

**The York Water Company**  
**Responses to Bureau of Technical Utility Services, Water/Wastewater Division**  
**Data Request 1**

Application of The York Water Company - Wastewater for approval of the acquisition of the  
wastewater system assets of the Felton Borough at Docket No. A-2019-3013113

**DISCOVERY A-5**

Provide a statement verifying that York Water-WW's provision of public wastewater service within the entirety of the Application's requested service territory is consistent with Felton's DEP-approved Act 537 Plan.

**RESPONDENT:**

Joseph T. Hand  
Chief Operating Officer

**RESPONSE:**

York Water-WW's provision of public wastewater service within the entirety of the Application's requested service territory is consistent with Felton's DEP-approved Act 537 Plan, consistent with Felton's approved Ordinance No. 2002-2 (Application, Exhibit "F") and consistent with York County's comprehensive plan (Application, Exhibit "J"). See Discovery A-1.

**The York Water Company**  
**Responses to Bureau of Technical Utility Services, Water/Wastewater Division**  
**Data Request 1**

Application of The York Water Company - Wastewater for approval of the acquisition of the  
wastewater system assets of the Felton Borough at Docket No. A-2019-3013113

**DISCOVERY A-6**

The Application's Section 5 references Felton's 2018 Chapter 94 Municipal Wasteload Management Annual Report as being provided in Exhibit H-3. However, the Application did not include an Exhibit H-3. Please provide a copy of Felton's 2018 Chapter 94 Municipal Wasteload Management Annual Report.

**RESPONDENT:**

Joseph T. Hand  
Chief Operating Officer

**RESPONSE:**

A copy of Felton's 2018 Chapter 94 Annual Municipal Wasteload Management Report is attached.

**FELTON BOROUGH**

**YORK COUNTY**

**2018 ANNUAL MUNICIPAL WASTELOAD  
MANAGEMENT REPORT**

**FOR**

**THE PENNSYLVANIA DEPARTMENT OF  
ENVIRONMENTAL PROTECTION**



Gordon L. Brown & Assocs., Inc.  
Consulting Engineers & Surveyors  
2238 S. Queen St. York, Pa. 17402  
(717)741-4621



## CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT

For Calendar Year: **January 1, 2018 to December 31, 2018**

- Permittee is owner and/or operator of a POTW or other sewage treatment facility  
 Permittee is owner and/or operator of a collection system tributary to a POTW not owned/operated by permittee

GENERAL INFORMATION			
Permittee Name:	Felton Borough	Permit No.:	PA0088579
Mailing Address:	88 Main Street	Effective Date:	October 1, 2018
City, State, Zip:	Felton, PA 17322	Expiration Date:	September 30, 2018
Contact Person:	Joy Flinchbaugh	Renewal Due Date:	April 3, 2023
Title:	Secretary/Treasurer	Municipality:	Felton Borough
Phone:	(717) 246-6493	County:	York
Email:	Feltonborough@aol.com	Consultant Name:	Gordon L. Brown & Assoc., Inc.

### CHAPTER 94 REPORT COMPONENTS

1. Attach to this report a line graph depicting the monthly average flows (expressed in MGD) for each month for the past 5 years and projecting the flows for the next 5 years. The graph must also include a line depicting the hydraulic design capacity per the WQM permit. (25 Pa. Code § 94.12(a)(1))  
  
**Check the appropriate boxes:**
  - Line graph for flows attached (**Attachment 1**)
  - DEP Chapter 94 Spreadsheet used (**Attachment 3**)
  - Section 1 is not applicable (report is for a collection system).
  
2. Attach to this report a line graph depicting the monthly average organic loads (express as lbs BOD5/day) for each month for the past 5 years and projecting the organic loads for the next 5 years. The graph must also include a line depicting the organic design capacity of the treatment plant per the WQM permit. (25 Pa. Code § 94.12(a)(2))  
  
**Check the appropriate boxes:**
  - Line graph for organic loads attached (**Attachment 2**)
  - DEP Chapter 94 Spreadsheet used (**Attachment 3**)
  - Section 2 is not applicable (report is for a collection system).

3. If the DEP Chapter 94 Spreadsheet was not used to determine projections, discuss the basis for the hydraulic and organic projections. In all cases, include a description of the time needed to expand the plant to meet the load projections, if necessary, and data used to support the projections should be included in an appendix to this report. (25 Pa. Code § 94.12(a)(3))

**Spreadsheet used**

4. Attach a map showing all sewer extensions constructed within the past calendar year, sewer extensions approved or exempted in the past year in accordance with Act 537 and Chapter 71, but not yet constructed, and all known proposed projects which require public sewers but are in the preliminary planning stages. The map must be accompanied by a list summarizing each extension or project and the population to be served by the extension or project. If a sewer extension approval or proposed project includes schedules describing how the project will be completed over time, the listing should include that information and the effect this build-out-rate will have on populations served. (25 Pa. Code § 94.12(a)(4))

**Check the appropriate boxes:**

- Map showing sewer extensions constructed, approved/exempted but not yet constructed, and proposed projects attached (**Attachment** )
- List summarizing each extension or project attached (**Attachment** )
- Schedules describing how each project will be completed over time and effects attached (**Attachment** )

**Comments:**

N/A

5. Discuss the permittee's program for sewer system monitoring, maintenance, repair and rehabilitation, including routine and special activities, personnel and equipment used, sampling frequency, quality assurance, data analyses, infiltration/inflow monitoring, and, where applicable, maintenance and control of combined sewer regulators during the past year. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(5))

**There were no mechanical upgrades of any major component during 2018. The daily operations at the facility consist of performing the required effluent testing, process control testing and adjustment, sludge management, and various labor tasks such as hosing, skimming, scraping of clarifier hoppers, checking all mechanical systems and their related components for proper operation. General repairs and service was completed on the generator in 2017.**

6. Discuss the condition of the sewer system including portions of the system where conveyance capacity is being exceeded or will be exceeded in the next 5 years and portions where rehabilitation or cleaning is needed or is underway to maintain the integrity of the system and prevent or eliminate bypassing, CSOs, SSOs, excessive infiltration and other system problems. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(6))

**Check the appropriate boxes:**

- System experienced capacity-related bypassing, SSOs or surcharging during the report year. On a separate sheet, list the date, location, and reason for each bypass, SSO or surcharge event.
- System did not experience capacity-related bypassing, SSOs or surcharging during the report year.

**Comments:**

**In 2016 the Borough completed visual inspections of existing manholes, during rainfall events to try and locate current I&I problems. While the visual inspections were inconclusive the Borough began the three-year maintenance schedule televising and cleaning approximately 4554 lineal feet of gravity main. Additional searches for sources of I&I, making the corrective measures as needed, and clean/televis the next phase shall continue in 2019.**

7. Attach a discussion on the condition of sewage pumping (pump) stations. Include a comparison of the maximum pumping rate with present maximum flows and the projected 2-year maximum flows for each station. (25 Pa. Code § 94.12(a)(7))

**Check the appropriate boxes:**

- The collection system does not contain pump stations
- The collection system does contain pump stations (Number – 1)
- Discussion of condition of each pump station attached (**Attachment** )

8. If the sewage collection system receives industrial wastes (i.e., non-sanitary wastes), attach a report with the information listed below. (25 Pa. Code § 94.12(a)(8))

- a. A copy of any ordinance or regulation governing industrial waste discharges to the sewer system or a copy of amendments adopted since the initial submission of the ordinance or regulation under Chapter 94, if it has not previously been submitted.
- b. A discussion of the permittee's or municipality's program for surveillance and monitoring of industrial waste discharges into the sewer system during the past year.
- c. A discussion of specific problems in the sewer system or at the plant, known or suspected to be caused by industrial waste discharges and a summary of the steps being taken to alleviate or eliminate the problems. The discussion shall include a list of industries known to be discharging wastes which create problems in the plant or in the sewer system and action taken to eliminate the problem or prevent its recurrence. The report may describe pollution prevention techniques in the summary of steps taken to alleviate current problems caused by industrial waste dischargers and in actions taken to eliminate or prevent potential or recurring problems caused by industrial waste dischargers.

**Check the appropriate boxes:**

- Industrial waste report as described in 8 a., b. and c. attached (**Attachment** )
- Industrial pretreatment report as required in an NPDES permit attached (**Attachment** )

9. Existing or Projected Overload.

**Check the appropriate boxes:**

- This report demonstrates an existing hydraulic overload condition.
- This report demonstrates a projected hydraulic overload condition.
- This report demonstrates an existing organic overload condition.
- This report demonstrates a projected organic overload condition.

If one or more boxes above have been checked, attach a Corrective Action Plan (CAP) to reduce or eliminate present or projected overloaded conditions under §§ 94.21 and/or 94.22 (relating to existing overload and projected overload). (25 Pa. Code § 94.12(a)(9))

- Corrective Action Plan attached (**Attachment** )

10. Where required by the NPDES permit, attach a Sewage Sludge Management inventory that demonstrates a mass balance of solids coming in and leaving the facility over the previous calendar year.

- Sewage Sludge Management Inventory attached (**Attachment B**)

11. For facilities with CSOs and where required by the NPDES permit, attach an Annual CSO Report (including satellite combined sewer systems).

- Annual CSO Report attached (**Attachment** )

12. For POTWs, attach a calibration report documenting that flow measuring, indicating and recording equipment has been calibrated annually. (25 Pa. Code § 94.13(b))

- Flow calibration report attached (**Attachment A**)

**RESPONSIBLE OFFICIAL CERTIFICATION**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

**Gary Martin, President**

Name of Responsible Official

Signature

**717-246-6493**

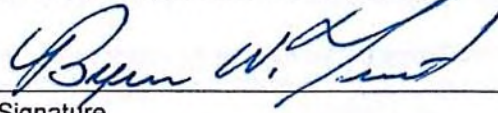
Telephone No.

Date

**PREPARER CERTIFICATION**

I certify under penalty of law that this document and all attachments were prepared by me or otherwise under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

**Byron W. Trout, P.E.**



Name of Preparer

Signature

**717-741-4621**

**3-5-18**

Telephone No.

Date



## CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT INSTRUCTIONS

This form has been developed to promote consistency in the development of annual municipal wasteload management reports ("Chapter 94 reports") required by 25 Pa. Code § 94.12. At least two copies of the complete report must be submitted to the appropriate regional office of the Department of Environmental Protection (DEP) by March 31.

Enter the calendar year that the report covers at the top of the form. Check the appropriate box to indicate whether the permittee is the owner/operator of a publicly owned treatment works (POTW) or other sewage treatment facility, or is the owner/operator of a sewage collection system that is tributary to a POTW owned/operated by a different entity.

### General Information

Record the name of the permittee, the permittee's full mailing address, the permittee's contact person and this person's title, phone number and email address. Also record the permit number (NPDES or WQM), the effective date of permit coverage, the expiration date of permit coverage (if applicable), the date by which an application or NOI is due for reissuance (renewal) (if applicable), the municipality and county where the sewage treatment facility or collection system is located, and the name of the consultant (company name), if any, who assisted in the preparation of the form.

### Chapter 94 Report Components

This section requests responses to 12 questions that, if applicable, must be addressed for a complete Chapter 94 report. Questions 1 – 9 and 12 come directly from the Chapter 94 regulations, i.e., 25 Pa. Code §§ 94.12(a)(1) – 94.12(a)(9) and 94.13(b). Some questions request that you check an appropriate box, attach the information requested, and specify the attachment number, while responses to other questions may be entered directly on the form.

For Questions 1 and 2, permittees may use DEP's Chapter 94 Spreadsheet to satisfy 25 Pa. Code §§ 94.12(a)(1) and 94.12(a)(2), respectively. DEP encourages use of the Chapter 94 Spreadsheet to provide consistency in the format and calculations associated with hydraulic and organic load evaluations (see [www.depweb.state.pa.us/chapter94](http://www.depweb.state.pa.us/chapter94)). If the Chapter 94 Spreadsheet was used, check the appropriate box(es) and attach printouts of the data and graphs to the Chapter 94 report. If this report is being used for a collection system only, these graphs are not needed.

For Question 6, if the permittee checks the box that there were capacity-related bypasses or SSOs during the report year, in general the box for existing hydraulic overload in Question 9 should be checked. If the permittee checks the box in Question 6 because surcharging occurred during the report year, in general the box for projected hydraulic overload in Question 9 should be checked.

For Question 8, if the permittee has an EPA-approved pretreatment program, attachment of an annual pretreatment report as required in an NPDES permit will satisfy the requirement for an industrial waste report.

For Question 10, if a permit requires a "Sewage Sludge Management" inventory, check the appropriate box if the inventory is attached to the Chapter 94 report.

For Question 11, if an NPDES permit (individual permit or, for satellite collection systems, PAG-06 General NPDES permit coverage) requires an Annual CSO (Status) report, attach the CSO report to the Chapter 94 report and check the appropriate box.

### Certification

In accordance with 25 Pa. Code § 94.12(a), both the individual who prepared the report and (a responsible official of) the permittee must sign the report. The term "responsible official" for a municipality is a principal executive officer or ranking elected official.

Questions on the completion of Chapter 94 reports may be directed to DEP's Bureau of Point and Non-Point Source Management at (717) 787-8184 or to the appropriate DEP regional office (contact information available by visiting DEP's website, [www.depweb.state.pa.us](http://www.depweb.state.pa.us), and selecting Regional Resources).

**FELTON BOROUGH  
WASTEWATER TREATMENT PLANT  
2018 ANNUAL REPORT**

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- Appendix A – Flow Meter Calibration Report
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## INTRODUCTION

The Pennsylvania Department of Environmental Protection (PADEP) has adopted regulations under Chapter 94 of the PADEP Rules and Regulations entitled: “Municipal Wasteload Management,” which requires annual reports on all wastewater facilities. These regulations became effective on November 25, 1977 and were amended on June 16, 1998.

The intent of the annual report is to help Felton Borough ensure that needed sewage conveyance and treatment capacity will be provided to meet anticipated growth demands. If the sewage conveyance system or wastewater treatment plant (WWTP) is found to be overloaded or is projected to become overloaded within five (5) years, specific steps to alleviate or prevent this situation will be required.

The required annual Chapter 94 report for Felton Borough’s wastewater collection system and WWTP must include information on the following:

- Hydraulic and organic loadings for the past five (5) years;
- Hydraulic and organic loading projections for the next five (5) years;
- Hydraulic loading projection for the next two (2) years;
- Industrial waste;
- Sewer extensions for the last year;
- Sewer system and WWTP monitoring, maintenance, repair and rehabilitation; and
- Flowmeter calibration information

The current Felton Borough WWTP began operation in June 2005. The information for the Felton Borough Wastewater collection system presented in this Chapter 94 report covers the five (5) year period from 2014 through December 2018.

Felton Borough presently operates the WWTP under the National Pollutant Discharge Elimination System (NPDES) permit no. PA0088579. A new permit was issued on October 1, 2018 and will expire on September 30, 2023.

## HYDRAULIC AND ORGANIC LOADINGS AND PROJECTIONS

The hydraulic and organic loadings presented in this report have been developed using available WWTP data. The hydraulic data from January 2018 through December 2018 are presented in Table 1. The WWTP operator submitted approval Discharge Monitoring Reports (DMRs) to the PADEP for January 2018 through December 2018. The average influent Biochemical Oxygen Demand (BOD) per day was utilized for the loading projections. Organic loading data for January 2018 through December 2018 is as indicated in Table 2.

Currently, the WWTP is permitted for an annual average daily flow capacity of 40,000 gallons per day (GPD) or 0.04 million gallons per day (MGD). The average daily flow for 2018 was calculated to be 0.348 MGD based on available WWTP data. The maximum three-month average daily flow for 2018 was 0.0572 MGD. The average daily flow is below the permitted the permitted limit of 0.04 MGD but the maximum three-month average daily flow exceeded the permitted limit of 0.04 MGD. The five (5) year annual average was 0.0183 MGD, which is 0.0165 MGD less than the 2018 annual average of 0.0348 MGD. The five (5) year annual average loading was used as a basis to calculate the projected flow for the upcoming five (5) years.

**I. Hydraulic Loading**

The loadings and projections for the years 2014 through 2023 presented in Table 1, below, and ‘Figure 1’, attached.

**Table 1**  
**Hydraulic Flows (2014 - 2018) and Projections (2019 - 2023)**  
**Flows in mgd**

MONTH	2014	2015	2016	2017	2018
January	0.0218	0.0106	0.0124	0.0112	0.0124
February	0.0220	0.0117	0.0412	0.0106	0.0243
March	0.0245	0.0256	0.0136	0.0123	0.0191
April	0.0236	0.0127	0.0114	0.0225	0.0263
May	0.0286	0.0090	0.0122	0.0125	0.0258
June	0.0131	0.0115	0.0098	0.0094	0.0222
July	0.0104	0.0131	0.0097	0.0112	0.0237
August	0.0094	0.0094	0.0107	0.0117	0.0296
September	0.0083	0.0097	0.0098	0.0104	0.0656
October	0.0088	0.0113	0.0089	0.0083	0.0373
November	0.0084	0.0103	0.0090	0.0089	0.0687
December	0.0115	0.0094	0.1030	0.0089	0.0630

	2014	2015	2016	2017	2018	5 YEAR AVERAGES
ANNUAL AVERAGE	0.0159	0.012	0.0133	0.0115	0.0348	0.0183
MAX 3 MO. AVG.	0.0256	0.0167	0.0224	0.0158	0.0572	0.0275
RATIO	1.61	1.39	1.68	1.37	1.64	1.50
EDUs	126	126	126	127	127	126.4
FLOW/EDU (GPD)	126.2	95.2	105.6	90.6	274.0	138.32

FLOW PROJECTIONS (mgd)											
YEAR	PREV. FLOW	ADD'L EDUs	+	INCR. FLOW	=	PROJ. FLOW	x	PROJ. FACTOR	=	PROJ. 3 MO. MAX	DESIGN FLOW
2019	0.0183	6		0.0006		0.0189		1.50		0.0282	0.0400
2020	0.0189	4		0.0004		0.0193		1.50		0.0291	0.0400
2021	0.0193	0		0.0000		0.0193		1.50		0.0291	0.0400
2022	0.0193	0		0.0000		0.0193		1.50		0.0291	0.0400
2023	0.0193	0		0.0000		0.0193		1.50		0.0291	0.0400

- Notes: 1. EDU = "Equivalent Dwelling Unit", which is the typical residential connection estimated at 275 GPD.  
 2. The 5-year average flow has been used as the basis for projections. The "PREV. FLOW" for 2019 is equal to the "5 YEAR ANNUAL AVERAGE".  
 3. "INCR. FLOW" is equal to "ADD'L EDUs" multiplied by "5 YEAR AVERAGE FLOW/EDU"

**II. Organic Loading**

The loadings and projections for the years 2014 through 2023 are presented in Table 2, below, and 'Figure 2', attached.

**Table 2**  
**Organic Loadings (2014 - 2018) and Projections (2019 - 2023)**  
**Loadings in BOD<sub>5</sub> (lbs)**

MONTH	2014	2015	2016	2017	2018
January	33	17	18	26	25
February	34	15	26	22	34
March	26	31	18	28	24
April	23	29	13	19	78
May	32	19	13	28	27
June	16	25	23	32	92
July	59	33	21	46	25
August	22	21	14	15	29
September	12	36	10	39	29
October	17	25	9	20	57
November	16	18	26	19	49
December	25	17	41	48	88

						5 YEAR AVERAGES
ANNUAL AVERAGE	26	24	19	29	46	28.8
MAX 1 MONTH	59	36	41	48	92	55.2
RATIO	2.25	1.51	2.12	1.68	2.00	1.92
EDUs	126	126	126	127	127	126.4
BOD <sub>5</sub> (LBS) / EDU	0.207	0.188	0.153	0.225	0.366	0.228

BOD <sub>5</sub> PROJECTIONS											
YEAR	PREV. LOAD	ADD'L EDUs	+	INCR. LOAD	=	PROJ. LOAD	x	PROJ. FACTOR	=	PROJ. 1 MO. MAX	DESIGN LOAD
2019	28.8	6		1.37		30.17		1.92		58	80
2020	30.17	4		0.91		31.08		1.92		59	80
2021	31.08	0		0.0		31.08		1.92		59	80
2022	27.4	0		0.0		31.08		1.92		59	80
2023	27.4	0		0.0		31.08		1.92		59	80

- Notes:
1. EDU = "Equivalent Dwelling Unit", which is the typical residential connection estimated at 275 GPD.
  2. The 5-year average load has been used as the basis for projections. The "PREV. LOAD" for 2019 is equal to the "5 YEAR ANNUAL AVERAGE".
  3. "INCR. LOAD" is equal to "ADD'L EDUs" multiplied by "5 YEAR AVERAGE BOD<sub>5</sub>/EDU"

**DISCUSSION OF PROJECTS**

The five (5) year projected flow increases were calculated using the Felton Borough’s WWTP design information, available connection information and flow information. The current sanitary sewer system and WWTP were designed for approximately 140 connections at 275 GPD/Equivalent Dwelling Units (EDUs).

There were no new connections within Felton Borough in 2018. Therefore, the current total connections of the WWTP are 127, which produced an average daily flow of 0.0348 MGD.

To estimate the appropriate flow (GPD/EDU) to be utilized for future flow predictions, the average daily flow was divided by the number of connections resulting in a flow of 274.0 GPD/EDU. The five-year average flow has been used as the basis for the future projections. The previous flow used in 2019 is equal to the five-year annual average. The increased flow is equal to the assumed additional EDU’s multiplied by the five-year average flow/EDU.

The projected number of connections were developed using the number of connections planned for the current system design and newly proposed developments. Based on the available data from Felton Borough, a total of 10 EDU applications have been submitted or are projected to be connected within the next five (5) years. Table 3 below is a list of proposed connections. Load projections do not exceed permitted capacity; thus, there is no planned treatment plant expansion at this time.

**Table 3  
2019-2023 Proposed Connections**

<b>Development</b>	<b>Pumping Station</b>	<b>Total</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Alan Herman	Beaver Street	1	1				
Frank Shaffer	Beaver Street	5	3	2			
Dirk Posey	Beaver Street	2	2				
70 Main Street	Beaver Street	1		1			
Anderson Property, Main Street	Beaver Street	1		1			
<b>Total New Projected EDUs</b>		<b>10</b>	<b>6</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>

**PROPOSED PLAN TO REDUCE PROJECTED OVERLOAD CONDITIONS**

The Felton Borough WWTP is projected to have adequate hydraulic and organic capacity for the next five (5) years.

**INDUSTRIAL WASTE**

There are currently no industries within the area served by the Felton Borough WWTP, thus there are no problems associated with industrial wastes.

**EXTENSION TO THE COLLECTION SYSTEM**

There were no sewer extensions begun or completed during 2018. The current WWTP began operation in June 2005. The collection system along High Street, Main Street, Red Lion Avenue, Charles Street, Church Street, Water Street and Beaver Street was completed in 2005. Currently there are 127 connections to the sanitary sewer system.

**PROGRAM FOR SANITARY SEWER MONITORING, MAINTENANCE AND REPAIR**

There were no mechanical upgrades of any major component during 2018. The daily operations at the facility consist of performing the required effluent testing, process control testing and adjustment, sludge management, and various labor tasks such as hosing, skimming, scraping of clarifier hoppers, checking all mechanical systems and their

related components for proper operation. The Beaver Street pump station and the WWTP equalization tanks were drained and cleaned in 2018. It is scheduled for service again in 2020. The generator service was serviced in 2018. The two aeration blowers underwent service by R&M in 2014. A new 24 URAI EQ blower was installed. Per the DEP request, a high-water alarm connection was installed in 2017.

The Borough is currently working on a three-year maintenance schedule which begun in 2017, which shall include visual inspections of manholes during low flow and peak flow conditions, conduct searches for sources of I&I, making the corrective measures as needed. Cleaning and televising approximately one third of the gravity sewer within the collection system is proposed in 2019.

## **2-YEAR SEWAGE PUMPING STATIONS FLOW PROJECTION**

Felton Borough owns and operates two (2) pump stations. The pump stations are located at Beaver Street (the BSPS) and the Wastewater Treatment Plant (WWTP) at Water Street (the WSPS). 100% of the sewage is pumped from the BSPS to the equalization tank at the WWTP. Inside the equalization tank, sewage is then pumped downstream for further treatment. The following are summaries of the pump stations.

### **A. Beaver Street Pump Station (BSPS)**

The BSPS currently includes two (2) pumps. The pumps are designed to run alternately twenty-four (24) hours per day and are controlled by a float switch. The pumps are rated at 180 gpm at 44 feet of Total Dynamic Head (TDH). Since the pumps are rated in gallons per minute, data and calculations have also been converted in gallons per minute for comparison purposes. Based on the pump station data, the 2018 annual average flow for the pump station is calculated to be 24.19 gpm. The 2018 annual average run time is 55.45 hours/month. As mentioned above there is ten new connections projected to connect to the Borough's system by the end of 2020. Therefore, the two (2) year projected flows are 13.40 gpm or a maximum projected flow of 20.10 gpm with peaking factor of 1.50. The projection indicates that the BSPS will not be overloaded in the coming two (2) years. Flow data and the two (2) year projected flow can be found in Table 4 and Table 5 below.

### **B. Water Street Pump Station (WSPS)**

The WSPS contains two (2) pumps which are located in the equalization tank. The pumps are designed to run twenty-four (24) hours per day. The amount of flow is adjusted by a splitter box. Since the purpose of the equalization pumps is only for sending sewage into different chambers when the flow reaches a certain level, this pump station will not be overloaded in the coming two (2) years.

**Table 4  
Beaver Street Pump Station 2017 Flow Data**

Month	Total Run Time (Hrs/Month)	Effluent Flow (MGD)	Effluent Flow (GPD)	Effluent Flow (GPM)
January	31.11	0.0124	12400	8.61
February	57.82	0.0243	24300	16.88
March	40.78	0.0191	19100	13.26
April	44.91	0.0263	26300	18.26
May	62.52	0.0258	25800	17.92
June	40.91	0.0222	22200	15.42
July	39.65	0.0237	23700	16.46
August	41.32	0.0296	29600	20.56
September	84.23	0.0656	65600	45.56
October	66.18	0.0373	37300	25.90
November	87.36	0.0687	68700	47.71
December	68.63	0.0630	63000	43.75
			Annual Average Flow (GPM)	24.19

**Table 5  
Beaver Street Pump Station 2-Year Flow Projection**

Pump Station Name	Number of Pumps	Pump Station Capacity (gpm)	Present Flows From DMP Data Annual Average Flow (gpm)	Projected EDUs		Projected Annual Average Flow (gpm)	Peak Factor	Projected Flows 2-YR Projected Max Flow (gpm)
				2019	2020			
Beaver Street	2	180	24.19	6	4	13.40	1.50	20.10

Determination of the 2-YR projected maximum flows: 1. Determine the projected 2-YR annual average flow to the pump station based on proposed connections. The ratio (1.50) is determined by the 5-yr average of the maximum 3-month average to the annual average. 2. Calculate the 2-year projected peak flow by multiplying the projected annual average flow by the peak annual average ratio.

## **CORRECTIVE ACTION PLAN**

The monthly BOD loads for June and December 2018 exceeded the existing organic design capacity. These readings are not consistent with past readings and are an unrepresentative of the true sample readings. Most likely the sample is unrepresentative of the true condition from the sample being taken to close to the bottom of the tank.

Corrective actions include cleaning the tank which is scheduled for 2019 or changing the location of where the sample is taken to the Beaver Street pump station. The sample reading for January 2019 was determined to be 25 lbs/day well within our normal readings. If elevated readings continue, further tests will be conducted to determine cause of the potential problem and the Borough will follow the requirements of §94.21 and §94.22 and immediately prohibit additional connections to the system.

## **CALIBRATION REPORTS**

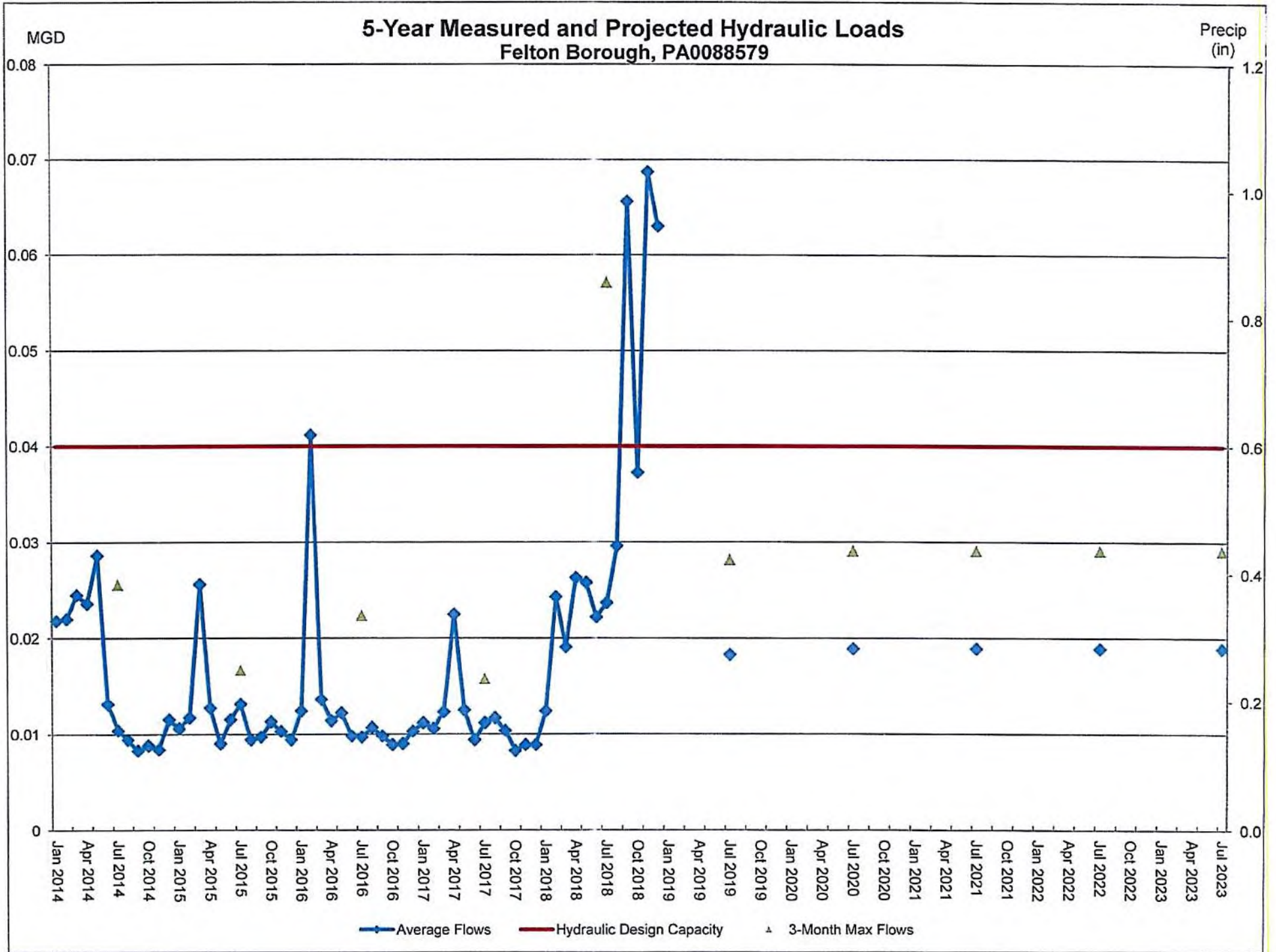
A copy of the flow meter calibration report, completed March 28, 2018 and is shown in Appendix A.

## **2018 PEAK FLOWS**

Increased rainfall for the year 2018 has been well documented. The monthly average flows to the plant have significantly increased each month as a result of the constant high-water table and an apparent infiltration problem. Most significant increases are the months of September, November and December where the flows were nearly 6 times that of the normal monthly flows. Annual average for 2018 increased by 3 times of the 2017 annual average.

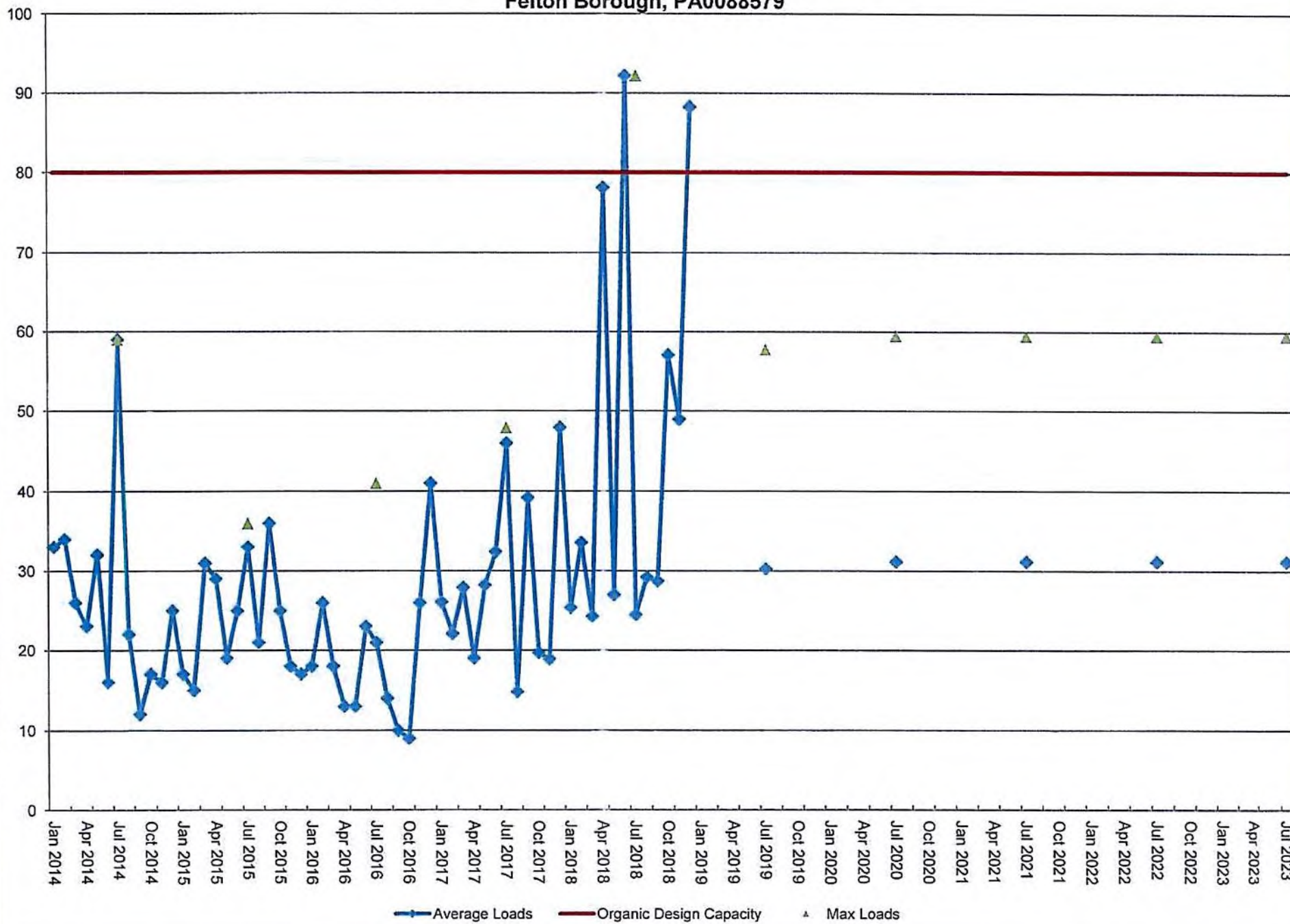
**FIGURE 1  
HYDRAULIC LOADING GRAPH**

### 5-Year Measured and Projected Hydraulic Loads Felton Borough, PA0088579



**FIGURE 2  
ORGANIC LOADING GRAPH**

### 5-Year Measured and Projected Organic Loads Felton Borough, PA0088579



**FIGURE 3**  
**DEP CHAPTER 94 SPREADSHEET**



**PADEP Chapter 94 Spread:  
Sewage Treatment PI**

Reporting Year:

Facility Name:

Permit No.:

Persons/EDU:

Existing Hydraulic Design Capacity:  MGD  
 Upgrade Planned in Next 5 Years?  Year:   
 Future Hydraulic Design Capacity:  MGD

Existing Organic Design Capacity:  lbs BOD5/day  
 Upgrade Planned in Next 5 Years?  Year:   
 Future Organic Design Capacity:  lbs BOD5/day

**Monthly Average Flows for Past Five Years (MGD)**

Month	2014	2015	2016	2017	2018
January	0.0218	0.0106	0.0124	0.0112	0.0124
February	0.022	0.0117	0.0412	0.0106	0.0243
March	0.0245	0.0256	0.0136	0.0123	0.0191
April	0.0238	0.0127	0.0114	0.0225	0.0263
May	0.0286	0.009	0.0122	0.0125	0.0258
June	0.0131	0.0115	0.0098	0.0094	0.0222
July	0.0104	0.0131	0.0097	0.0112	0.0237
August	0.0094	0.0094	0.0107	0.0117	0.0296
September	0.0083	0.0097	0.0098	0.0104	0.0656
October	0.0088	0.0113	0.0089	0.0083	0.0373
November	0.0084	0.0103	0.009	0.0089	0.0687
December	0.0115	0.0094	0.0103	0.0089	0.063

**Monthly Average BOD5 Loads for Past Five Years (lbs/day)**

Month	2014	2015	2016	2017	2018
January	33	17	18	26	25
February	34	15	26	22	34
March	26	31	18	28	24
April	23	29	13	19	78
May	32	19	13	28	27
June	16	25	23	32	92
July	59	33	21	46	25
August	22	21	14	15	29
September	12	36	10	39	29
October	17	25	9	20	57
November	16	18	26	19	49
December	25	17	41	48	88

Annual Avg	0.0159	0.012	0.0133	0.0115	0.0348
Max 3-Mo Avg	0.0256	0.0167	0.0224	0.0158	0.0572
Max : Avg Ratio	1.61	1.39	1.68	1.37	1.64
Existing EDUs	126.0	126.0	126.0	127.0	127.0
Flow/EDU (GPD)	126.2	95.2	105.6	90.6	274.0
Flow/Capita (GPD)	36.1	27.2	30.2	25.9	78.3
Exist. Overload?	NO	NO	NO	NO	NO

Annual Avg	26	24	19	29	46
Max Mo Avg	59	36	41	48	92
Max : Avg Ratio	2.25	1.51	2.12	1.68	1.98
Existing EDUs	126	126	126	127	127
Load/EDU	0.208	0.189	0.153	0.225	0.366
Load/Capita	0.060	0.054	0.044	0.064	0.104
Exist. Overload?	NO	NO	NO	NO	YES

**Projected Flows for Next Five Years (MGD)**

	2019	2020	2021	2022	2023
New EDUs	6.0	4.0	0.0	0.0	0.0
New EDU Flow	0.0008	0.0006	0	0	0
Proj. Annual Avg	0.0183	0.0189	0.0189	0.0189	0.0189
Proj. Max 3-Mo Avg	0.0282	0.0291	0.0291	0.0291	0.0291
Proj. Overload?	NO	NO	NO	NO	NO

**Projected BOD5 Loads for Next Five Years (lbs/day)**

	2019	2020	2021	2022	2023
New EDUs	6	4	0	0	0
New EDU Load	1.370	0.913	0.000	0.000	0.000
Proj. Annual Avg	30	31	31	31	31
Proj. Max Avg	58	59	59	59	59
Proj. Overload?	NO	NO	NO	NO	NO

Show Precipitation Data on Hydraulic Graph?

**Total Monthly Precipitation for Past Five Years (Inches)**

Month	2014	2015	2016	2017	2018
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					

**APPENDIX A**  
**FLOW METER CALIBRATION REPORT**

WG Malden  
P.O. BOX 196, EAST EARL, PA 17519  
PHONE: (717) 768-0800 FAX: (717) 768-0802

**\*\*\* SERVICE REPORT \*\*\***

FELTON BOROUGH  
88 MAIN STREET  
FELTON, PA 17322

SERVICE DATE: MARCH 28, 2018  
METER#: C8255 AA  
LOCATION: FELTON WWTP- EFFLUENT  
SERIAL #: 10481/1143526-0002  
MANUFACTURER: EASTECH/PARTLOW  
RECORDER: MRC 5000  
TRANSMITTER: 2210  
PRIMARY: WEIR V-NOTCH 45°  
MAXIMUM CAPACITY: 100,000 GPD  
SERVICE CONTRACT: ANNUAL

---

**\*\*\* WORK PERFORMED \*\*\***

TRANSMITTER CALIBRATION  
LEVEL MEASUREMENTS AND FLOW CHECKS  
ERROR: 0.25" TOLERANCE: ±1%

RECORDER CALIBRATION  
CHECKED AT: 0, 50, 100% ERROR: 0,0,0% TOLERANCE: ±1%

TOTALIZER CALIBRATION  
CHECKED AT: 0, 50, 100% ERROR: 0,0,0% TOLERANCE: ±1/2%

---

**\*\*\* TECHNICIAN COMMENTS \*\*\***

PERFORMED ANNUAL CALIBRATION  
CLEANED PRIMARY  
ADJUSTED EQUIPMENT  
VERIFIED TOTALIZER (PASSED)  
TESTED 4-20MA LOOP  
LEFT EQUIPMENT OPERATING PROPERLY

SERVICE REPRESENTATIVE(S): JACOB BROWN

# **APPENDIX B**

## **SLUDGE GENERATION CALCULATION**

### SLUDGE GENERATION CALCULATION

Facility Name:

Permit Number:

Date of Calculation:

#### Required Information For Calculation

Average Daily Flow (mgd):       Digester Capacity (gal):

Influent BOD (mg/l):       %Solids of Outgoing Sludge:

Effluent BOD (mg/l):       Monitoring Period (days):

#### Wastewater Treatment Processes

Place an "X" in the box beside the corresponding treatment process. Select a maximum of Primary Clarification and one other treatment process.

Primary Clarification <input type="checkbox"/>	Contact Stabilization <input type="checkbox"/>	RBC <input type="checkbox"/>
Conventional Activated Sludge <input type="checkbox"/>	SBR <input type="checkbox"/>	ABF <input type="checkbox"/>
Extended Aeration <input checked="" type="checkbox"/>	Trickling Filter <input type="checkbox"/>	Small Plant with low SOR <input type="checkbox"/> <small>(&lt;500 gpd/sq ft)</small>

#### Operational Information

BOD Removed (lbs/day):

TSS Removed (lbs/day):

#### Digester Information

##### Type of Digester

Place an "X" in the box beside the corresponding treatment process.

Aerobic Digestion       Anaerobic Digestion       None

Sludge Feed Rate to Digesters (gpd):

Digester Hydraulic Detention Time (days):

Estimated Total Solids Reduction (%):

#### Sludge Generation

dry lbs/day <input type="text" value="29"/>	wet lbs/day <input type="text" value="3200"/>
dry tons/monitoring period <input type="text" value="5"/>	wet tons/monitoring period <input type="text" value="584"/>
gal/day <input type="text" value="384"/>	gal/monitoring period <input type="text" value="140053"/>

#### Amount of Sludge Reported as Being Generated by the Facility

wet tons/monitoring period

OR

dry tons/monitoring period

Enter only one of the above values. The remaining value should be "0".

Is the amount reported by the generator within 15% of the calculated value?

NO explanation:

What type of information was used to calculate the above information:

Dates used:  TO

Name of person performing the calculation:

**The York Water Company**  
**Responses to Bureau of Technical Utility Services, Water/Wastewater Division**  
**Data Request 1**

Application of The York Water Company - Wastewater for approval of the acquisition of the  
wastewater system assets of the Felton Borough at Docket No. A-2019-3013113

**DISCOVERY A-7**

Provide a copy of Felton's Water Quality Management Part II permit for the Felton WWTP.

**RESPONDENT:**

Joseph T. Hand  
Chief Operating Officer

**RESPONSE:**

A copy of the Felton's 2005 Water Quality Management Part II Permit is attached.



909 Elmerton Avenue  
Harrisburg, PA 17110-8200

JAN 20 2005

Southcentral Regional Office

717-705-4707  
FAX - 717-705-4760

CERTIFIED MAIL NO. 7002 2030 0007 9412 9958

Gary McBrien  
Felton Borough  
88 Main Street  
Felton, PA 17322

Re: Sewage  
Felton Borough WWTP and Collection System  
WQM Permit No. 6700417 05-1  
APS ID No. 332160  
Authorization ID No. 578704  
Felton Borough, York County

Dear Mr. McBrien:

Your permit amendment is enclosed, reflecting modifications to the treatment plant and Beaver Street Pump Station.

You must comply with all Standard and Special Conditions attached to this Permit. Construction must be done in accordance with the permit application and all supporting documentation. Please review the permit conditions and the supporting documentation submitted with your application before starting construction.

Enclosed is the "Sewage and Industrial Wastewater Facilities Construction Certification" form. A Pennsylvania-registered Professional Engineer must sign and complete this form prior to startup of the facilities (see Special Conditions). You or your authorized representative must also sign the form. This certification and other post-construction documentation must be submitted to the Department within 30 days following startup of the facilities.

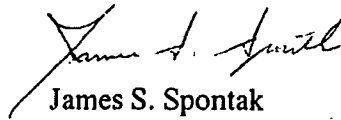
Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa. C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, PO Box 8457, Harrisburg, PA 17105-8457, 717-787-3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800-654-5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in braille or on audiotape from the Secretary to the Board at 717-787-3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST REACH THE BOARD WITHIN 30 DAYS. YOU DO NOT NEED A LAWYER TO FILE AN APPEAL WITH THE BOARD.

IMPORTANT LEGAL RIGHTS ARE AT STAKE, HOWEVER, SO YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD (717-787-3483) FOR MORE INFORMATION.

If you have any questions, please call Mr. Sean Furjanic at 717-705-4826.

Sincerely,



James S. Spontak  
Acting Program Manager  
Water Management Program

Enclosures

cc: Terry Meyers, C.S. Davidson, Inc.  
Ben Kauffman, Dutchland, Inc.



COMMONWEALTH OF PENNSYLVANIA  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF WATER SUPPLY AND WASTEWATER MANAGEMENT

PERMIT NO. 6700417 05-1

APS ID. 332160

AUTH. ID. 578704

**WATER QUALITY MANAGEMENT  
 PERMIT**

<b>A. PERMITTEE (Name and Address):</b> Felton Borough 88 Main Street Felton, PA 17322		<b>CLIENT ID #:</b> 117845	<b>B. PROJECT/FACILITY (Name):</b> Felton Borough WWTP and Collection System	
<b>C. LOCATION (Municipality, County):</b> Felton Borough, York County			<b>SITE ID #:</b> 459500	
<b>D. This permit amendment approves the modification and construction of sewerage facilities consisting of:</b> <ul style="list-style-type: none"> <li>o One sewage treatment facility to serve Felton Borough, with the following components:           <ul style="list-style-type: none"> <li>• One comminutor ("Monoflo Muncher") at the influent to the equalization tanks, with a bypass bar screen;</li> <li>• Two equalization tanks in series (each tank 15' x 6.17' x 11.67'), with two 110 GPM submersible transfer pumps, a flow regulation box and adjustable return spill gate;</li> <li>• Six interconnected aeration tanks (each tank 15' x 6.17' x 11.67'), providing over 24 hours of detention time at the design flow;</li> <li>• Two clarifiers (each tank 15' x 6.17' x 11.67'), with two hoppers, two air lift sludge return pumps, and one air lift skimmer pump per tank;</li> <li>• One 15' x 6.17' x 11.67' tank following clarifiers utilized for ultraviolet disinfection (Trojan 3075K-PTP system), post-aeration, and flow recording;</li> <li>• Three aerated sludge holding tanks (each tank 15' x 6.17' x 11.67'), providing over 100 days of storage time at anticipated sludge wasting rates, with supernatant returned to head of plant;</li> <li>• Four blower systems (3, 5, 10, and 10 hp) to provide air for equalization tanks, aeration tanks, clarifier air lift pumps, sludge holding tank and air lift pump, and post-aeration tank;</li> <li>• Approximately 475 feet of 8-foot outfall sewer with discharge to North Branch Muddy Creek.</li> </ul> </li> <li>o Collection system consisting of approximately 8,500 LF of 8-inch PVC sewers, stream crossings, and the Beaver Street Pump Station, which receives nearly all flows from collection system.</li> </ul>				
<b>Pump Station(s):</b> Beaver Street Pump Station <b>Design Capacity:</b> 130 GPM @ 24' TDH		<b>Sewage Treatment Facility:</b> Annual Average Flow: <u>0.04</u> MGD Design Hydraulic Capacity: <u>0.04</u> MGD Design Organic Capacity: <u>80</u> lbs BOD <sub>5</sub> /day		
<b>E. APPROVAL GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING:</b> <ol style="list-style-type: none"> <li>1. All construction, operations, and procedures shall be in accordance with the Water Quality Management Permit amendment application dated <u>December 21, 2004</u>, and its supporting documentation, which are hereby made a part of this permit.</li> <li>2. Permit Conditions Relating to Sewerage and Erosion and Sediment Control are attached and made part of this permit.</li> </ol>				
<b>F. THE AUTHORITY GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING FURTHER QUALIFICATIONS:</b> <ol style="list-style-type: none"> <li>1. If there is a conflict between the application or its supporting documents and amendments and the attached conditions, the attached conditions shall apply.</li> <li>2. Failure to comply with the rules and regulations of DEP or with the terms or conditions of this permit shall void the authority given to the permittee by the issuance of this permit.</li> <li>3. This permit is issued pursuant to the Clean Streams Law Act of June 22, 1937, P.L. 1987, as amended 35 P.S. § 691.1 <i>et seq.</i>, and/or the Dam Safety and Encroachments Act of November 26, 1978, P.L. 1375, as amended, 32 P.S. § 693.1 <i>et seq.</i> Issuance of this permit shall not relieve the permittee of any responsibility under any other law.</li> </ol>				
<b>PERMIT ISSUED:</b> _____ JAN 20 2005		<b>BY:</b> <u>James S. Spontak</u> _____ James S. Spontak Program Manager <b>TITLE:</b> Water Management Program		



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WATER SUPPLY AND WASTEWATER MANAGEMENT

**PERMIT CONDITIONS RELATING TO SEWERAGE**  
Water Quality Management Permit No. 6700417 05-1

Felton Borough

Felton Borough WWTP and Collection System

**General**

1. DEP considers Terry A. Meyers, the registered Professional Engineer whose seal is affixed to the design documents, to be fully responsible for the adequacy of all aspects of the facility design.
2. The approval is specifically made contingent on the permittee acquiring all necessary property rights, by easement or otherwise, providing for the satisfactory construction, operation, maintenance and replacement of all sewers or sewerage structures in, along, or across private property with full rights of ingress, egress and regress.
3. When construction of the approved sewerage facilities is completed and before they are placed in operation, the permittee shall notify DEP in writing so that a DEP representative may inspect the facilities.
4. If, at any time, the sewerage facilities covered by this permit create a public nuisance, including but not limited to, causing malodors or causing environmental harm to waters of the Commonwealth, DEP may require the permittee to adopt appropriate remedial measures to abate the nuisance or harm.
5. This permit does not relieve the permittee of its obligations to comply with all federal, interstate, state or local laws, ordinances and regulations applicable to the sewerage facilities.
6. This permit does not give any real or personal property rights or grant any exclusive privileges, nor shall it be construed to grant or confirm any right, easement or interest in, on, to, or over any lands that belong to the Commonwealth.
7. This permit authorizes the construction and operation of the proposed sewerage facilities until such time as facilities for conveyance and treatment at a more suitable location are installed and capable of receiving and treating the permittee's sewage. Such facilities must be in accordance with the applicable municipal official plan adopted pursuant to Section 5 of the Pennsylvania Sewage Facilities Act, the Act of January 24, 1966, P.L. 1535 as amended. When such municipal sewerage facilities become available, the permittee shall provide for the conveyance of the sewage to these sewerage facilities, abandon the use of these approved facilities and notify DEP accordingly. This permit shall then, upon notice from DEP, terminate and become null and void, and shall be relinquished to DEP.
8. The authority granted by this permit is subject to all effluent requirements, monitoring requirements, and other conditions as set forth in NPDES Permit No. PA 0088579 and all subsequent amendments and renewals. No discharge is authorized from these facilities unless approved by an NPDES Permit.

**Construction**

9. The facilities shall be constructed under the supervision of a Pennsylvania-registered Professional Engineer in accordance with the approved reports, plans and specifications. Any deviations from approved plans or specifications so revised should, therefore, be submitted well in advance of any construction work that will be affected by such changes, to permit sufficient time for review and approval. Structural revisions or other minor changes not affecting capacities, flows or operations are permitted during construction without approval. "As-built drawings" shall be filed with DEP at the completion of the work.
10. A Pennsylvania-registered Professional Engineer shall certify that construction of the permitted facilities was completed in accordance with the Part II application and design plans submitted to DEP, using the enclosed "Sewage and Industrial Wastewater Facilities Construction Certification." It is the permittee's responsibility to ensure that a Professional Engineer is on-site to provide the necessary oversight and/or inspections to certify the facilities. The facilities may not be placed into operation until the Professional Engineer completes the certification. The certification must be submitted to DEP within 30 days following startup of the facilities, along with as-built drawings, photographs, and a description of any DEP-approved deviations from the application and design plans.
11. Manhole inverts shall be formed to facilitate the flow of the sewage and to prevent the stranding of sewage solids. The whole manhole structure shall be built to prevent undue infiltration, entrance of street wash or grit and provide safe access to facilitate manhole maintenance activities.

## Operation and Maintenance

12. An operator certified in accordance with the Water and Wastewater Systems Operator Certification Act of February 21, 2002, 63 P.S. § 1001, et seq. shall operate the sewage treatment plant.
13. The local Waterways Conservation Officer of the Pennsylvania Fish and Boat Commission (FBC) shall be notified when the construction of any stream crossing and/or outfall is started and completed. A written permit must be secured from the FBC if the use of explosives in any waterways is required and the permittee shall notify the local Waterways Conservation Officer when explosives are to be used.
14. The permittee shall maintain facility operation and maintenance (O&M) manuals at the facility and ensure proper O&M of the permitted facility. The permittee shall file the O&M manuals with DEP upon request.
15. The sewers shall have adequate foundation support, as soil conditions require. Trenches shall be back-filled to ensure that sewers will have proper structural stability, with minimum settling and adequate protection against breakage. Concrete used in connection with these sewers shall be protected from damage by water, freezing, drying or other harmful conditions until cured.
16. Stormwater from roofs, foundation drains, basement drains or other sources shall not be admitted directly to the sanitary sewers.
17. The approved sewers shall be maintained in good condition, kept free of deposits by flushing or other cleaning methods and repaired when necessary.
18. The sewerage facilities shall be properly maintained so that the facility will perform as designed.
19. The attention of the permittee is called to the highly explosive nature of certain gases generated by the digestion of sewage solids when these gases are mixed in proper proportions with air and to the highly toxic character of certain gases arising from such digestion or from sewage in poorly ventilated compartments or sewers. Therefore, at all places throughout the sewerage facilities where hazard of fire, explosion or danger from toxic gases may occur, the permittee shall post conspicuous permanent and legible warnings. The permittee shall instruct all employees concerning the aforesaid hazards, first aid and emergency methods of meeting such hazards and shall make all necessary equipment and material accessible.
20. The permittee shall properly control any industrial waste discharged into its sewerage system by regulating the rate and quality of such discharge, requiring necessary pretreatment and excluding industrial waste, if necessary, to protect the integrity or operation of the permittee's sewerage system.
21. There shall be no physical connection between a public water supply system and a sewer or appurtenance to it that would permit the passage of any sewage or polluted water into the potable water supply. No water pipe shall pass through or come in contact with any part of a sewer manhole.
22. Collected screenings, slurries, sludge and other solids shall be handled and disposed of in compliance with 25 Pa. Code Chapters 271, 273, 275, 283 and 285 (related to permits and requirements for land filling, land application, incineration and storage of sewage sludge), Federal Regulations 40 CFR 257 and the Federal Clean Water Act and its amendments.



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WATER SUPPLY AND WASTEWATER MANAGEMENT

**PERMIT CONDITIONS RELATING TO EROSION AND SEDIMENT CONTROL**  
Water Quality Management Permit No. 6700417 05-1

Felton Borough

Felton Borough WWTP and Collection System

**General**

1. By approval of the plans for which this permit is issued, neither the Department of Environmental Protection (DEP) nor the Commonwealth of Pennsylvania assumes any responsibility for the feasibility of the plans or the measures and facilities to be constructed thereunder.
2. If at any time the erosion and sediment control activities undertaken pursuant to this permit or other activities carried out at the location is causing or contributing to pollution of the waters of the Commonwealth, the permittee shall forthwith adopt such remedial measures as are acceptable to DEP.
3. This permit does not authorize any earth disturbance controlled or regulated by an ordinance enacted by a local municipality. Additional permits must be secured from local municipalities where earthmoving activities are covered by such local ordinances.
4. When the erosion and sediment control measures and facilities approved in this permit are completed, the permittee shall notify the County Conservation District or the DEP regional office so that a final inspection of the measures and facilities may be made.
5. The permittee shall be responsible for assuring that permit conditions are implemented in accordance with 25 Pa. Code Chapter 102.
6. The permittee shall comply with the Individual or General NPDES Permit for Stormwater Discharges Associated with Construction Activities issued by DEP or the County Conservation District.

**Construction**

7. The erosion control measures and facilities shall be constructed under the supervision and competent inspection of an individual trained and experienced in erosion control, in accordance with the plans, design and other data as herein approved or amended and with the conditions of this permit. Control facilities shall be inspected and maintained to ensure effective control.
8. At least seven days before earthmoving will begin, the permittee, by telephone or certified mail, shall notify DEP or its designee of the date for beginning of construction and invite the County Conservation District representative to attend a pre-construction conference. The permittee shall have his erosion control plan available at the activity site at all times.
9. All earthmoving activities shall be undertaken in the manner set forth in the erosion and sediment control plan identified with this permit. Revisions to the plan shall be pre-approved by DEP or the County Conservation District.
10. All slopes, channels, ditches or any disturbed area shall be stabilized as soon as possible after the final grade or final earthmoving has been completed. Where it is not possible to permanently stabilize a disturbed area immediately after the final earthmoving has been completed or where the activity ceases for more than 20 days, interim stabilization measures shall be implemented promptly.

**Operation and Maintenance**

11. No stormwater, sewage or other wastes not specifically approved in this permit, shall be admitted to the erosion and sediment control facilities for which this permit is issued.
12. Sediment shall at no time be permitted to accumulate in sedimentation basins to a depth that may limit storage capacity or interfere with the facility's settling efficiency. The sediment removed shall be handled and disposed of in a manner that will not create pollution problems so that every reasonable and practical precaution is taken to prevent the said material from reaching the waters of the Commonwealth.
13. Upon completion of the project, all disturbed areas shall be stabilized to prevent accelerated erosion. Any erosion and sediment control facility required or necessary to protect areas from erosion during the stabilization period shall be maintained until stabilization is completed. Upon completion of stabilization, all unnecessary or unusable control measures and facilities shall be removed, the areas shall be graded and the soils shall be stabilized.



COMMONWEALTH OF PENNSYLVANIA  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 SOUTH CENTRAL REGIONAL OFFICE  
 WATER MANAGEMENT PROGRAM  
 909 ELMERTON AVENUE  
 HARRISBURG, PA 17110-8200

**SEWAGE AND INDUSTRIAL WASTEWATER FACILITIES  
 CONSTRUCTION CERTIFICATION**

Permittee: Felton Borough

Address: 88 Main Street, Felton, PA 17322

Municipality: Felton Borough

County: York

I (We) hereby certify that the Felton Borough WWTP and collection system  
 approved under WQM Permit No. 6700417 05-1, Auth. ID 578704, has been inspected and constructed in accordance  
 with the plans and specifications approved by the Department.

***THE FOLLOWING INFORMATION MUST BE COMPLETED AND RETURNED TO THE PERMITS SECTION  
 AT THE ABOVE ADDRESS WITHIN 30 DAYS OF COMPLETION OF THE PROJECT, ALONG WITH AS-BUILT  
 DRAWINGS, PHOTOGRAPHS (IF AVAILABLE), AND A DISCUSSION OF ANY DEVIATIONS FROM THE  
 DESIGN PLANS DURING CONSTRUCTION.***

Construction Completion Date (MM/DD/YYYY): \_\_\_\_\_

**Supervising Professional Engineer:**

Name: \_\_\_\_\_  
 (Please Print or Type)

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Title: \_\_\_\_\_

Firm or Agency: \_\_\_\_\_

Telephone: \_\_\_\_\_

**Permittee's Authorized Representative:**

Name: \_\_\_\_\_  
 (Please Print or Type)

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Telephone: \_\_\_\_\_

**Principal Operator Information (For Sewage Facilities):**

Name: \_\_\_\_\_  
 (Please Print or Type)

Certification Number (if applicable): \_\_\_\_\_

Class: \_\_\_\_\_

Type: \_\_\_\_\_

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER MANAGEMENT PROGRAM

INTERNAL REVIEW AND RECOMMENDATIONS

Name of Applicant Felton Borough Project Felton Borough,  
Location York County Permit No. 6700417 05-1

**BRIEF DESCRIPTION OF PROJECT AND DISCUSSION**

The Department issued WQM Permit No. 6700417 to Felton Borough on January 18, 2002. The permit was issued for the construction of a new 40,000 GPD package treatment plant and sewage collection system to serve Felton borough, as approved in the Borough's 1998 Act 537 Plan (DEP Code No. A1-67922-ACT). The package plant that was permitted consisted of a comminutor, flow equalization chamber, one aeration chamber, two clarification chambers, one UV disinfection and post-air chamber, and one sludge holding chamber.

This project is being funded through the USDA Rural Utility Service. To save costs on the treatment plant, the contractor has proposed the installation of precast concrete tanks and standardized package plant design, which involved certain changes to the configuration of plant units and unit sizing.

The collection system, which has been mostly completed to date, consists of approximately 8,500 LF of 8-inch PVC sewers and the Beaver Street Pump Station. The original permit was for two pump stations: 1) the Water Street Pump Station (grinder pump conveying sewage from four homes) and 2) Beaver Street Pump Station. The Water Street Pump Station was eliminated during reevaluation of the design, and the four homes will now connect to the facility directly through a 6-inch PVC gravity line. The majority of the flow from the Borough enters the Beaver Street Pump Station, which was originally permitted as a 200 GPM suction lift station. The design now calls for this station to have a capacity of 130 GPM @ 24' TDH, using submersible pumps. The reduction in capacity was due to a reduction in the static head needed for the pumps, since the plant will now be constructed in-ground and the invert elevation is lower than the prior design.

The revisions to the treatment plant include the following:

Continued...

**Recommendation and Action**

Approve -- Issue by Region	Approve -- Issue by Central Office	Refuse	Signature	Date
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sean M. Furjanic PERMITS SECTION <i>Sean M. Furjanic</i>	1/18/05
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crystal Newcomer, P.E. REGIONAL PERMITS SECTION CHIEF <i>Crystal Newcomer</i>	1/19/05
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	James S. Spontak PROGRAM MANAGER <i>James S. Spontak</i>	1/19/2005

**Permit Conditions**

1. Standard Sewerage and Erosion and Sediment Control conditions.

## Internal Review and Recommendations

Felton Borough

WQM Permit No. 6700417 05-1

Felton Borough, York County

Page 2

- **Comminutor** – a comminutor was originally proposed (a Muffin Monster 30000-08 grinder) and will be installed prior to flow equalization, but a different model was chosen (Monoflo grinder). An aluminum bypass screen will be used to screen influent when the comminutor is off-line.
- **Flow Equalization** – one concrete flow equalization chamber was originally proposed, with dimensions of 24.83' x 9.5' x 15.5' and an effective capacity of 25,143 gallons. The revised plans call for the use of two equalization tanks with dimensions of 15' x 6.17' x 10' SWD, with an effective capacity of 13,845 gallons, which will provide just over 8 hours of retention time at average daily flow. Two 0.5 hp, 110 GPM submersible pumps in one of the two connected tanks will feed sewage through an aluminum flow regulation box and then to the aeration tanks. The regulation box will allow only for a forward flow of 53,000 GPD (37 GPM) or 26,500 GPD per unit, and the remainder (73 GPM) will recirculate back into the equalization tank through an adjustable return spill gate. The reason for the use of higher capacity pumps is for operational reliability (i.e., pumps at lower capacities burn out more frequently). A high-level alarm and overflow port to aeration will be provided. Air will be introduced via coarse bubble diffusers at a rate of 56 CFM from a dedicated 3 hp blower.
- **Aeration** – one aeration chamber was originally proposed, with dimensions of 24.83' x 16' x 15.5' and an effective capacity of 42,346 gallons, providing a detention time of 25.4 hours at design flow (extended aeration). The modified design includes two parallel trains of three tanks (6 tanks total), each tank having dimensions of 15' x 6.17' x 11.67', with a total capacity of 41,536 gallons and a detention time of 24.9 hours. Air will be introduced via 10 Sanitaire D-24 coarse bubble diffusers at a rate of 158 CFM using two 10 hp blowers capable of providing a total of 233 cfm (one backup).
- **Final Clarifiers** – two clarification chambers were originally proposed with dimensions 12' x 12' x 15.5', and an effective capacity for each tank of 17,531 gallons, for a detention time of 10.5 hours. The modified design calls for two 15' x 6.17' x 11.67' clarifiers with an effective capacity of 7,054 gallons per clarifier (without hopper volume). Each clarifier will have two hoppers, two air lift sludge return pumps, and one air lift skimmer pump, and two 6" surface skimmers will be provided, requiring 60 CFM of air from the 10 hp aeration blowers. The weir trough (20.7 feet total length) will be an adjustable aluminum v-notch type. Surface overflow and solids loading rates are within the acceptable ranges of the *Domestic Wastewater Facilities Manual*.
- **UV Disinfection/Post Aeration** – the method of disinfection for this plant has not been modified; one tank will house a Trojan 3075K-PTP UV disinfection system (capable of treating peak flows up to 0.075 MGD) with dimensions of 15' x 6.17' x 11.67' and an effective capacity of 5,421 gallons. This tank will also provide post-aeration and flow recording, in a chamber downstream from the UV system, with 14 cfm provided for aeration through a coarse bubble diffuser.
- **Sludge Holding** – one sludge holding tank (aerobic digester) was originally proposed with dimensions of 8' x 24.83' x 15.5'. The new proposal calls for three aerated sludge holding tanks, each with dimensions of 15' x 6.17' x 11.67' and an effective capacity of 20,768 gallons providing over 100 days of storage time for expected sludge wasting rates. One airlift pump will be utilized to return supernatant to the equalization tanks. 83 cfm of air will be provided through a dedicated 5 hp blower and coarse bubble diffusers. Thickened sludge will be hauled to the Springettsbury Township WWTP, Dover Township WWTP or Harrisburg City WWTP.

Internal Review and Recommendations

Felton Borough

WQM Permit No. 6700417 05-1

Felton Borough, York County

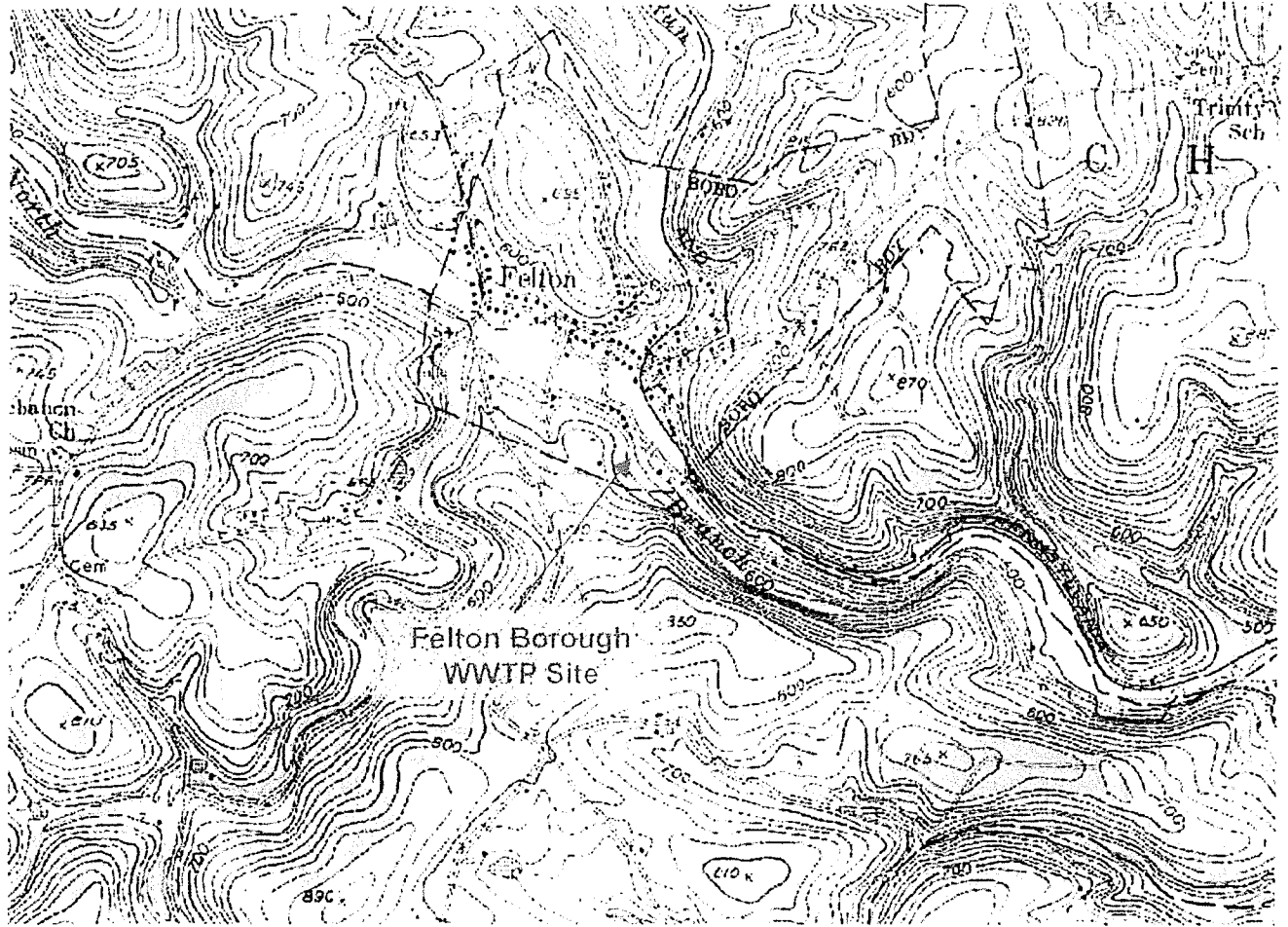
Page 3

An on-site emergency generator will be provided for backup power. The generator will service the WWTP and the Beaver Street Pump Station. High water level and power failure alarms will be provided through a telephone dialer system. A control building will house the four blowers. The outfall line will consist of approximately 475 feet of 8-inch PVC pipe, with discharge to North Branch Muddy Creek.

A Chapter 106 Floodplain Management permit was issued by the Soils & Waterways Section in 2002 (No. E67-699). The applicant has indicated that no changes to the E&S Plan have been made, and there is no need for York Co. Conservation District review.

Coverage under three general permits were acknowledged by the Department on January 19, 2001: 1) GP-4 permit coverage for the 8-inch outfall structure to North Branch Muddy Creek (GP-04-67-01-101), 2) GP-5 permit coverage for a 4-inch force main crossing under North Branch Muddy Creek (GP-05-67-01-104), and 3) GP-5 permit coverage for an 8-inch sanitary sewer crossing under Pine Run.

It is recommended that this permit amendment be issued.



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER MANAGEMENT PROGRAM

INTERNAL REVIEW AND RECOMMENDATIONS

Name of Applicant Felton Borough Project Location Felton Borough, York County Permit No. 6700417 05-1

**BRIEF DESCRIPTION OF PROJECT AND DISCUSSION**

The Department issued WQM Permit No. 6700417 to Felton Borough on January 18, 2002. The permit was issued for the construction of a new 40,000 GPD package treatment plant and sewage collection system to serve Felton borough, as approved in the Borough's 1998 Act 537 Plan (DEP Code No. A1-67922-ACT). The package plant that was permitted consisted of a comminutor, flow equalization chamber, one aeration chamber, two clarification chambers, one UV disinfection and post-air chamber, and one sludge holding chamber.

This project is being funded through the USDA Rural Utility Service. To save costs on the treatment plant, the contractor has proposed the installation of precast concrete tanks and standardized package plant design, which involved certain changes to the configuration of plant units and unit sizing.

The collection system, which has been mostly completed to date, consists of approximately 8,500 LF of 8-inch PVC sewers and the Beaver Street Pump Station. The original permit was for two pump stations: 1) the Water Street Pump Station (grinder pump conveying sewage from four homes) and 2) Beaver Street Pump Station. The Water Street Pump Station was eliminated during reevaluation of the design, and the four homes will now connect to the facility directly through a 6-inch PVC gravity line. The majority of the flow from the Borough enters the Beaver Street Pump Station, which was originally permitted as a 200 GPM suction lift station. The design now calls for this station to have a capacity of 130 GPM @ 24' TDH, using submersible pumps. The reduction in capacity was due to a reduction in the static head needed for the pumps, since the plant will now be constructed in-ground and the invert elevation is lower than the prior design.

The revisions to the treatment plant include the following:

Continued...

**Recommendation and Action**

Approve -- Issue by Region	Approve -- Issue by Central Office	Refuse	Signature	Date
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sean M. Furjanic PERMITS SECTION	1/18/05
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Crystal Newcomer REGIONAL PERMITS SECTION CHIEF	1/19/05
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	James S. Spontak PROGRAM MANAGER	1/19/2005

**Permit Conditions**

1. Standard Sewerage and Erosion and Sediment Control conditions.

Internal Review and Recommendations

Felton Borough

WQM Permit No. 6700417 05-1

Felton Borough, York County

Page 2

- **Comminutor** – a comminutor was originally proposed (a Muffin Monster 30000-08 grinder) and will be installed prior to flow equalization, but a different model was chosen (Monoflo grinder). An aluminum bypass screen will be used to screen influent when the comminutor is off-line.
- **Flow Equalization** – one concrete flow equalization chamber was originally proposed, with dimensions of 24.83' x 9.5' x 15.5' and an effective capacity of 25,143 gallons. The revised plans call for the use of two equalization tanks with dimensions of 15' x 6.17' x 10' SWD, with an effective capacity of 13,845 gallons, which will provide just over 8 hours of retention time at average daily flow. Two 0.5 hp, 110 GPM submersible pumps in one of the two connected tanks will feed sewage through an aluminum flow regulation box and then to the aeration tanks. The regulation box will allow only for a forward flow of 53,000 GPD (37 GPM) or 26,500 GPD per unit, and the remainder (73 GPM) will recirculate back into the equalization tank through an adjustable return spill gate. The reason for the use of higher capacity pumps is for operational reliability (i.e., pumps at lower capacities burn out more frequently). A high-level alarm and overflow port to aeration will be provided. Air will be introduced via coarse bubble diffusers at a rate of 56 CFM from a dedicated 3 hp blower.
- **Aeration** – one aeration chamber was originally proposed, with dimensions of 24.83' x 16' x 15.5' and an effective capacity of 42,346 gallons, providing a detention time of 25.4 hours at design flow (extended aeration). The modified design includes two parallel trains of three tanks (6 tanks total), each tank having dimensions of 15' x 6.17' x 11.67', with a total capacity of 41,536 gallons and a detention time of 24.9 hours. Air will be introduced via 10 Sanitaire D-24 coarse bubble diffusers at a rate of 158 CFM using two 10 hp blowers capable of providing a total of 233 cfm (one backup).
- **Final Clarifiers** – two clarification chambers were originally proposed with dimensions 12' x 12' x 15.5', and an effective capacity for each tank of 17,531 gallons, for a detention time of 10.5 hours. The modified design calls for two 15' x 6.17' x 11.67' clarifiers with an effective capacity of 7,054 gallons per clarifier (without hopper volume). Each clarifier will have two hoppers, two air lift sludge return pumps, and one air lift skimmer pump, and two 6" surface skimmers will be provided, requiring 60 CFM of air from the 10 hp aeration blowers. The weir trough (20.7 feet total length) will be an adjustable aluminum v-notch type. Surface overflow and solids loading rates are within the acceptable ranges of the *Domestic Wastewater Facilities Manual*.
- **UV Disinfection/Post Aeration** – the method of disinfection for this plant has not been modified; one tank will house a Trojan 3075K-PTP UV disinfection system (capable of treating peak flows up to 0.075 MGD) with dimensions of 15' x 6.17' x 11.67' and an effective capacity of 5,421 gallons. This tank will also provide post-aeration and flow recording, in a chamber downstream from the UV system, with 14 cfm provided for aeration through a coarse bubble diffuser.
- **Sludge Holding** – one sludge holding tank (aerobic digester) was originally proposed with dimensions of 8' x 24.83' x 15.5'. The new proposal calls for three aerated sludge holding tanks, each with dimensions of 15' x 6.17' x 11.67' and an effective capacity of 20,768 gallons providing over 100 days of storage time for expected sludge wasting rates. One airlift pump will be utilized to return supernatant to the equalization tanks. 83 cfm of air will be provided through a dedicated 5 hp blower and coarse bubble diffusers. Thickened sludge will be hauled to the Springettsbury Township WWTP, Dover Township WWTP or Harrisburg City WWTP.

Internal Review and Recommendations

Felton Borough

WQM Permit No. 6700417 05-1

Felton Borough, York County

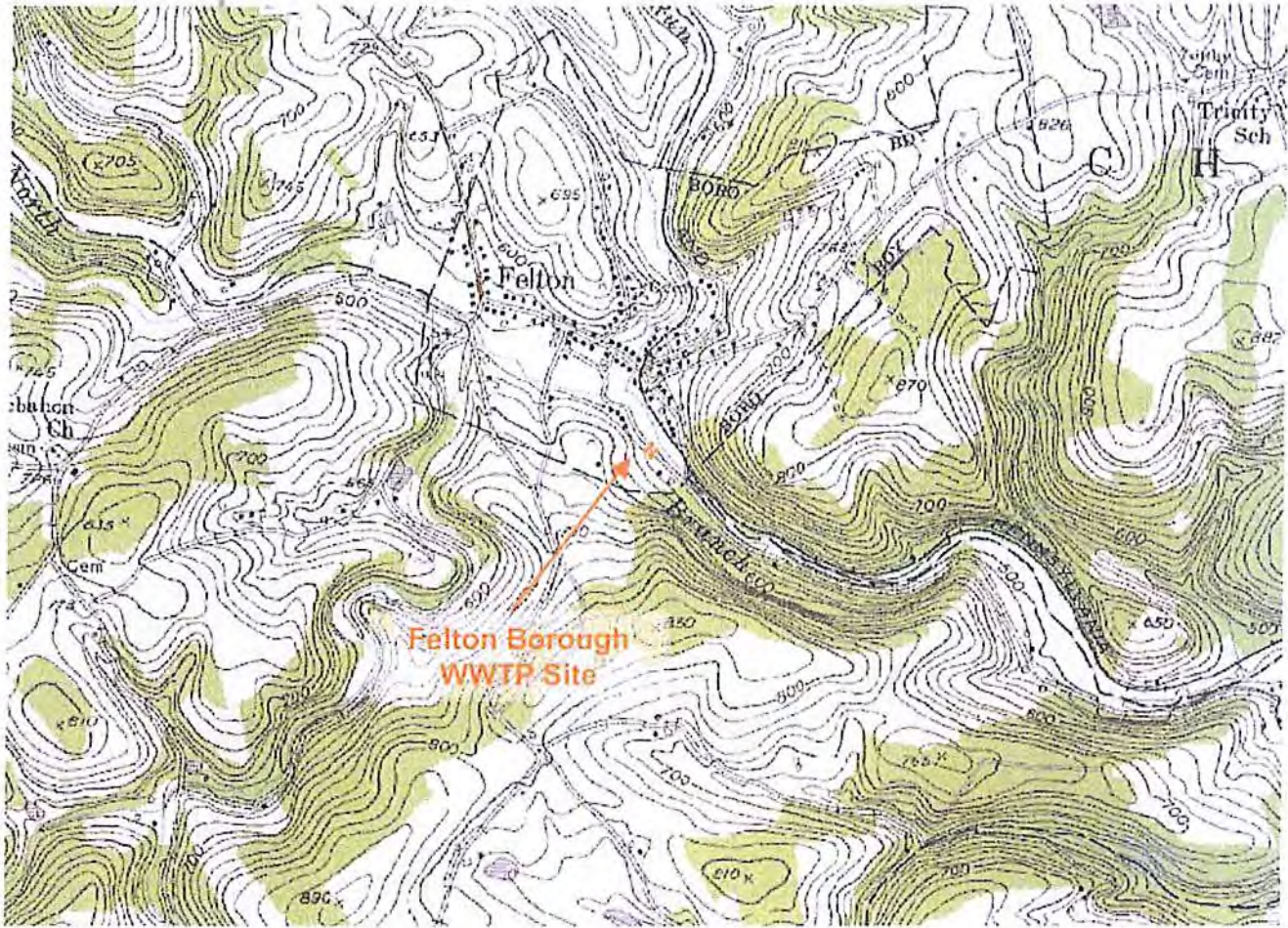
Page 3

An on-site emergency generator will be provided for backup power. The generator will service the WWTP and the Beaver Street Pump Station. High water level and power failure alarms will be provided through a telephone dialer system. A control building will house the four blowers. The outfall line will consist of approximately 475 feet of 8-inch PVC pipe, with discharge to North Branch Muddy Creek.

A Chapter 106 Floodplain Management permit was issued by the Soils & Waterways Section in 2002 (No. E67-699). The applicant has indicated that no changes to the E&S Plan have been made, and there is no need for York Co. Conservation District review.

Coverage under three general permits were acknowledged by the Department on January 19, 2001: 1) GP-4 permit coverage for the 8-inch outfall structure to North Branch Muddy Creek (GP-04-67-01-101), 2) GP-5 permit coverage for a 4-inch force main crossing under North Branch Muddy Creek (GP-05-67-01-104), and 3) GP-5 permit coverage for an 8-inch sanitary sewer crossing under Pine Run.

It is recommended that this permit amendment be issued.



**The York Water Company**  
**Responses to Bureau of Technical Utility Services, Water/Wastewater Division**  
**Data Request 1**

Application of The York Water Company - Wastewater for approval of the acquisition of the  
wastewater system assets of the Felton Borough at Docket No. A-2019-3013113

**DISCOVERY A-8**

Please provide a description of the wastewater treatment process and plant equipment used at the Felton WWTP.

**RESPONDENT:**

Joseph T. Hand  
Chief Operating Officer

**RESPONSE:**

A description of the wastewater treatment process and plant equipment is attached.

## **Description of Treatment Process Units at the Felton Borough WWTP**

**Comminutor** - a Monoflo Grinder comminutor installed prior to flow equalization, with an aluminum bypass screen for use when the comminutor is off-line.

**Flow Equalization** - Two concrete flow equalization tanks with dimensions of 15' x 6.17' x 10' SWD, with an effective capacity of 13,845 gallons. These provide just over 8 hours of retention time at average daily flow. Two 0.5 hp, 110 GPM submersible pumps in one of the two connected tanks feed sewage through an aluminum flow regulation box and then to the aeration tanks. The regulation box allows for a forward flow of 53,000 GPD (37 GPM) or 26,500 GPD per unit, and the remainder (73 GPM) is recirculated back into the equalization tank through an adjustable return spill gate. A high-level alarm and overflow port to aeration are provided. Air is introduced via coarse bubble diffusers at a rate of 56 CFM from a dedicated 3 hp blower.

**Aeration** – Consists of two parallel trains of three tanks (6 tanks total), each tank having dimensions of 15' x 6.17' x 11.67', with a total capacity of 41,536 gallons and a detention time of 24.9 hours. Air is introduced via 10 Sanitaire D-24 coarse bubble diffusers at a rate of 158 CFM using two 10 hp blowers capable of providing a total of 233 cfm (one backup).

**Final Clarifiers** – Consists of two (2) 15' x 6.17' x 11.67' clarifiers with an effective capacity of 7,054 gallons per clarifier (without hopper volume). Each clarifier has two hoppers, two air lift sludge return pumps, and one air lift skimmer pump, and two 6" surface skimmers, requiring 60 CFM of air from the 10 hp aeration blowers. The weir trough (20.7 feet total length) is an adjustable aluminum v-notch type. Surface overflow and solids loading rates are within the acceptable ranges of the *Domestic Wastewater Facilities Manual*.

**UV Disinfection/Post Aeration** – A single tank with a Trojan 3075K-PTP UV disinfection system (capable of treating peak flows up to 0.075 MGD) with dimensions of 15' x 6.17' x 11.67' and an effective capacity of 5,421 gallons. This tank provides post-aeration and flow recording, in a chamber downstream from the UV system, with 14 cfm provided for aeration through a coarse bubble diffuser.

**Sludge Holding-** Consists of three (3) aerated sludge holding tanks, each with dimensions of 15' x 6.17' x 11.67' and an effective capacity of 20,768 gallons provides over 100 days of storage time for expected sludge wasting rates. One airlift pump is utilized to return supernatant to the equalization tanks. 83 cfm of air is provided through a dedicated 5 hp blower and coarse bubble diffusers. Thickened sludge will be hauled to the an approved sludge processing facility.

**Other Systems** - An on-site emergency generator provides backup power. The generator services both the WWTP and the Beaver Street Pump Station. High water level and power failure alarms are installed and communicated via a telephone dialer system. The outfall line consists of approximately 475 feet of 8- inch PVC pipe, with discharge to North Branch Muddy Creek.

**The York Water Company**  
**Responses to Bureau of Technical Utility Services, Water/Wastewater Division**  
**Data Request 1**

Application of The York Water Company - Wastewater for approval of the acquisition of the  
wastewater system assets of the Felton Borough at Docket No. A-2019-3013113

**DISCOVERY A-10**

Please identify the original cost and vintage of the assets included in the major plant categories listed in the table of the Application's page.

**RESPONDENT:**

Matthew E. Poff  
Chief Financial Officer

**RESPONSE:**

Through an examination of borough records, York Water has determined that Felton Borough has some basic information with regards to the original cost and vintage of the assets within its system but does not maintain detailed fixed asset cost records. As such, the Company will perform an original cost study for the purchase of the Felton Borough wastewater system and provide a detailed listing and description of assets when the original cost study is completed and submitted.

**The York Water Company**  
**Responses to Bureau of Technical Utility Services, Water/Wastewater Division**  
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wastewater system assets of the Felton Borough at Docket No. A-2019-3013113

**DISCOVERY A-11**

Please state the distance, in miles, between York Water-WW's closest existing wastewater facilities and Felton's Wastewater System.

**RESPONDENT:**

Joseph T. Hand  
Chief Operating Officer

**RESPONSE:**

The distance between York Water-WW 's Lower Windsor Wastewater Treatment Plant and Felton's wastewater system is approximately 8 miles.

**The York Water Company**  
**Responses to Bureau of Technical Utility Services, Water/Wastewater Division**  
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Application of The York Water Company - Wastewater for approval of the acquisition of the  
wastewater system assets of the Felton Borough at Docket No. A-2019-3013113

**DISCOVERY A-12**

In the Application's Section 10, York Water-WW indicated its long-range plans [for Felton's Wastewater System] consider various collection, sanitary waste transportation, and system maintenance alternatives to ensure the collection system can meet future requirements. Please provide a description, estimated timeline and projected costs of the improvements being considered.

**RESPONDENT:**

Joseph T. Hand  
Chief Operating Officer

**RESPONSE:**

Upon approval of the Application and successful closing, York Water will conduct an assessment of the collection system and treatment works once under York Water's ownership. York Water will televise the collection system to identify any potential points of collection system concern. Areas of concern related to potential inflow and infiltration will be identified and considered for remediation. York Water will prepare a cost analysis and schedule repairs once the Company has a better appreciation of the condition of both the collection system and treatment works.

**The York Water Company**  
**Responses to Bureau of Technical Utility Services, Water/Wastewater Division**  
**Data Request 1**

Application of The York Water Company - Wastewater for approval of the acquisition of the wastewater system assets of the Felton Borough at Docket No. A-2019-3013113

**DISCOVERY A-13**

The Application's Exhibit G included a copy of a DEP Sewage Compliance Inspection Report dated 6-21-2018 that identified Felton's 3-year plan to identify sources of Inflow and Infiltration (I&I) that began in 2016 and was to be completed in 2018. Please provide:

- a. A description of the results or a copy of any reports from Felton's I&I identification plan;
- b. An explanation as to why York Water-WW intends to conduct its own I&I study of the Wastewater System in addition to the Felton plan, as indicated on page 8 of the Application; and
- c. The estimated cost of York Water-WW's planned I&I study.

**RESPONDENT:**

Joseph T. Hand  
Chief Operating Officer

**RESPONSE:**

- a. Felton Borough has not prepared, or provided, any status reports related to its I&I reduction efforts. The only indications of these efforts are the references in the Chapter 94 Annual Wasteload Management Reports.
- b. See Discovery A-13(a). Felton has not provided any reports or results from any I&I reduction efforts. Therefore, York Water intends to conduct its own investigation and evaluate I&I concerns within the Felton Borough collection and conveyance system. The data collected during the investigation will determine the extent of system I&I and assist in identifying remediation opportunities.
- c. York Water plans to clean and CCTV (closed circuit television) inspect all of Felton's 9,900 lf of 8" sanitary sewer mains as the initial component of the I&I evaluation with an estimated cost of \$13,000. Upon completion of the visual inspection, York Water will identify and prioritize locations within the system to begin short-term flow metering data collection. Short-term metering costs will be determined based on the number of meters and duration of the study.

**The York Water Company**  
**Responses to Bureau of Technical Utility Services, Water/Wastewater Division**  
**Data Request 1**

Application of The York Water Company - Wastewater for approval of the acquisition of the  
wastewater system assets of the Felton Borough at Docket No. A-2019-3013113

**DISCOVERY A-14**

Please clarify if the reserved capacity holders identified in Appendix A.1 of the Application's Exhibit I will continue to hold reserved capacity after closing.

**RESPONDENT:**

Joseph T. Hand  
Chief Operating Officer

**RESPONSE:**

The reserved capacity holders identified in Appendix A.1 (Exhibit I) will continue to hold reserve capacity after closing.

**The York Water Company**  
**Responses to Bureau of Technical Utility Services, Water/Wastewater Division**  
**Data Request 1**

Application of The York Water Company - Wastewater for approval of the acquisition of the  
wastewater system assets of the Felton Borough at Docket No. A-2019-3013113

**DISCOVERY A-15**

It is indicated in the Application that Felton plans to use the proceeds of the sale to help satisfy General Obligation Bonds in the amount of \$949,000. Please identify if the terms of these bonds include the collateralization of any portion of Felton's Wastewater System assets.

**RESPONDENT:**

Joseph T. Hand  
Chief Operating Officer

**RESPONSE:**

According to Felton Borough, the terms of the bonds do not include the collateralization of any portion of Felton's Wastewater System assets. The bonds are backed by sewer fees and the taxing authority of Felton Borough. The sewer system itself was not collateralized.

**The York Water Company**  
**Responses to Bureau of Technical Utility Services, Water/Wastewater Division**  
**Data Request 1**

Application of The York Water Company - Wastewater for approval of the acquisition of the  
wastewater system assets of the Felton Borough at Docket No. A-2019-3013113

**DISCOVERY A-16**

Please explain why the tentative journal entries, shown in the Application, for booking the purchase of Felton's wastewater system utilize Account No. 105 - Construction Work in Progress instead of Account No. 104 - Utility Plant Purchases or Sold in conformance with the National Association of Regulatory Utility Commissioners, Uniform System of Accounts.

**RESPONDENT:**

Matthew Poff  
Chief Financial Officer

**RESPONSE:**

The Company has historically recorded acquisition costs in Account No. 105 – Construction Work in Progress until after the Closing.

**The York Water Company**  
**Responses to Bureau of Technical Utility Services, Water/Wastewater Division**  
**Data Request 1**

Application of The York Water Company - Wastewater for approval of the acquisition of the  
wastewater system assets of the Felton Borough at Docket No. A-2019-3013113

**DISCOVERY A-17**

Please provide a detailed breakdown, by major plant category, of the \$660,000 accumulated depreciation shown in the tentative journal entries as quantified on the Application's page 11.

**RESPONDENT:**

Matthew E. Poff  
Chief Financial Officer

**RESPONSE:**

York Water estimated the accumulated depreciation for the entire system based on the basic information the Company was able to obtain from Felton Borough. The detailed calculation and breakdown of accumulated depreciation by plant category will be included in the original cost study when completed.

**The York Water Company**  
**Responses to Bureau of Technical Utility Services, Water/Wastewater Division**  
**Data Request 1**

Application of The York Water Company - Wastewater for approval of the acquisition of the  
wastewater system assets of the Felton Borough at Docket No. A-2019-3013113

**DISCOVERY A-18**

In the Application's Section 6, York Water-WW indicated that Felton received a \$1,024,300 U.S. Department of Agriculture (USDA) grant to help construct the Wastewater System. please provide a breakdown of the specific components of the Wastewater System, including the treatment plant, that were paid for by the grant and may be considered contributions-in-aid of construction.

**RESPONDENT:**

Matthew E. Poff  
Chief Financial Officer

**RESPONSE:**

Felton Borough is unable to provide a breakdown of the specific components of the Wastewater System funded through the U.S. Department of Agriculture (USDA) grant. Further, the Company is not seeking, as a part of this Application, any approval as to the ratemaking treatment of the proposed acquisition, including the USDA grant. Such ratemaking issues will be addressed in a future base rate proceeding.

**The York Water Company**  
**Responses to Bureau of Technical Utility Services, Water/Wastewater Division**  
**Data Request 1**

Application of The York Water Company - Wastewater for approval of the acquisition of the  
wastewater system assets of the Felton Borough at Docket No. A-2019-3013113

**DISCOVERY A-19**

The tentative journal entries provided on the Application's page 11 do not include a tentative journal entry for Account No. 271 – Contributions in Aid of Construction. Please indicate how those portions of Felton's Wastewater System paid for by the USDA grant will be booked into York Water-WW's accounts.

**RESPONDENT:**

Matthew E. Poff  
Chief Financial Officer

**RESPONSE:**

The ratemaking treatment of the proposed transaction, including whether the USDA grant should be considered a contribution in aid of construction, will be addressed in a future base rate case.

**The York Water Company**  
**Responses to Bureau of Technical Utility Services, Water/Wastewater Division**  
**Data Request 1**

Application of The York Water Company - Wastewater for approval of the acquisition of the  
wastewater system assets of the Felton Borough at Docket No. A-2019-3013113

**DISCOVERY A-20**

Please provide a copy of Felton's two most recent annual financial statements filed with the Department of Community and Economic Development.

**RESPONDENT:**

Joseph T. Hand  
Chief Operating Officer

**RESPONSE:**

Felton Borough's 2017 Audit and 2018 Audit are attached.

**2017 MUNICIPAL ANNUAL AUDIT  
AND  
FINANCIAL REPORT**

**670513 FELTON BORO, YORK COUNTY**



FELTON BORO, YORK County

**BALANCE SHEET**

December 31, 2017

		Governmental Funds				Proprietary Funds		Fid. Fund	Account Groups		Total
		General Fund	Special Revenue (Including State Liquid Fuels)	Capital Projects	Debt Service	Enterprise	Internal Service	Trust and Agency	General Fixed Assets	General Long Term Debt	Memorandum Only
<b>Liabilities and Other Credits</b>											
260-269	Long-Term-Liabilities										
240-259	Current Portion of Long-Term Debt and Other Credits										
<b>Total Liabilities and Other Credits</b>											
<b>Fund and Account Group Equity</b>											
281-284	Contributed Capital										
290.00	Investment in General Fixed Assets										
270-289	Fund Balance / Retained Earnings on 12/31	181,220	14,566			95,675					291,461
291-299	Other Equity										
<b>Total Fund and Account Group Equity</b>		181,220	14,566			95,675					291,461
<b>TOTAL LIABILITIES AND FUND AND ACCOUNT GROUP EQUITY</b>											291,461

FELTON BORO, YORK County  
**STATEMENT OF REVENUES AND EXPENDITURES**  
 December 31, 2017

Governmental Funds				Proprietary Funds		Fiduciary Fund	Total
General Fund	Special Revenue (Including State Liquid Fuels)	Capital Projects	Debt Service	Enterprise	Internal Service	Trust and Agency	Memorandum Only

**REVENUES**

Taxes								
301.00	Real Estate Taxes	74,151						74,151
305.00	Occupation Taxes (levied under municipal code)							
308.00	Residence Taxes (levied by cities of the 3rd Class)							
309.00	Regional Asset District Sales Tax (Allegheny County municipalities only)							
310.00	Per Capita Taxes							
310.10	Real Estate Transfer Taxes	5,152						5,152
310.20	Earned Income Taxes / Wage Taxes	58,936						58,936
310.30	Business Gross Receipts Taxes							
310.40	Occupation Taxes (levied under Act 511)							
310.50	Local Services Tax **							
310.60	Amusement / Admission Taxes							
310.70	Mechanical Device Taxes							
310.90	Other: _____							
	Other: _____							
<b>Total Taxes</b>		138,239						138,239

Licenses and Permits								
320-322	All Other Licenses and Permits	1,965						1,965
321.80	Cable Television Franchise Fees	5,149						5,149
<b>Total Licenses and Permits</b>		7,114						7,114

Fines and Forfeits								
330-332	Fines and Forfeits	1,071						1,071
<b>Total Fines and Forfeits</b>		1,071						1,071

FELTON BORO, YORK County  
**STATEMENT OF REVENUES AND EXPENDITURES**  
 December 31, 2017

Governmental Funds				Proprietary Funds		Fiduciary Fund	Total
General Fund	Special Revenue (Including State Liquid Fuels)	Capital Projects	Debt Service	Enterprise	Internal Service	Trust and Agency	Memorandum Only

**REVENUES**

Interest, Rents and Royalties								
341.00	Interest Earnings	626	40			175		841
342.00	Rents and Royalties							
<b>Total Interest, Rents and Royalties</b>		626	40			175		841

Federal								
351.03	Highways and Streets							
351.09	Community Development							
351.00	All Other Federal Capital and Operating Grants							
352.01	National Forest							
352.00	All Other Federal Shared Revenue and Entitlements							
353.00	Federal Payments in Lieu of Taxes							
<b>Total Federal</b>								

State								
354.03	Highways and Streets							
354.09	Community Development							
354.15	Recycling / Act 101	238						238
354.00	All Other State Capital and Operating Grants	178,515						178,515
355.01	Public Utility Realty Tax (PURTA)	145						145
355.02- 355.03	Motor Vehicle Fuel Tax (Liquid Fuels Tax) and State Road Turnback		17,924					17,924
355.04	Alcoholic Beverage Licenses							
355.05	General Municipal Pension System State Aid							
355.07	Foreign Fire Insurance Tax Distribution	2,570						2,570
355.08	Local Share Assessment/Gaming Proceeds							
355.09	Marcellus Shale Impact Fee Distribution							

FELTON BORO, YORK County  
**STATEMENT OF REVENUES AND EXPENDITURES**  
 December 31, 2017

Governmental Funds				Proprietary Funds		Fiduciary Fund	Total
General Fund	Special Revenue (Including State Liquid Fuels)	Capital Projects	Debt Service	Enterprise	Internal Service	Trust and Agency	Memorandum Only

**REVENUES**

State								
355.00	All Other State Shared Revenues and Entitlements							
356.00	State Payments in Lieu of Taxes							
<b>Total State</b>		181,468	17,924					199,392

Local Government Units								
357.03	Highways and Streets							
357.00	All Other Local Governmental Units Capital and Operating Grants							
358.00	Local Government Unit Shared Payments for Contracted Intergovernmental Services							
359.00	Local Governmental Units and Authorities Payments in Lieu of Taxes							
<b>Total Local Government Units</b>								

Charges for Service								
361.00	General Government	1			70			71
362.00	Public Safety	10,923						10,923
363.20	Parking							
363.00	All Other Charges for Highway & Street Services							
364.10	Wastewater / Sewage (including connection / tapping fees, sewer usage charges, reserve capacity fee, etc.)				131,032			131,032
364.30	Solid Waste Collection and Disposal Charge (trash)	54,601						54,601
364.60	Host Municipality Benefit Fee for Solid Waste Facility							
364.00	All Other Charges for Sanitation Services	54						54
365.00	Health							
366.00	Human Services							
367.00	Culture and Recreation							
368.00	Airports							

FELTON BORO, YORK County  
**STATEMENT OF REVENUES AND EXPENDITURES**

December 31, 2017

Governmental Funds				Proprietary Funds		Fiduciary Fund	Total
General Fund	Special Revenue (Including State Liquid Fuels)	Capital Projects	Debt Service	Enterprise	Internal Service	Trust and Agency	Memorandum Only

**REVENUES**

Charges for Service								
369.00	Bars							
370.00	Cemeteries							
372.00	Electric System							
373.00	Gas System							
374.00	Housing System							
375.00	Markets							
377.00	Transit Systems							
378.00	Water System							
379.00	All Other Charges for Service				100			100
<b>Total Charges for Service</b>		65,579			131,202			196,781

Unclassified Operating Revenues								
383.00	Special Assessments							
386.00	Escheats (sale of personal property)							
387.00	Contributions and Donations from Private Sectors	2,924						2,924
388.00	Fiduciary Fund Pension Contributions							
389.00	All Other Unclassified Operating Revenues	900						900
<b>Total Unclassified Operating Revenues</b>		3,824						3,824

Other Financing Sources								
391.00	Proceeds of General Fixed Asset Disposition							
392.00	Interfund Operating Transfers							
393.00	Proceeds of General Long-Term Debt							
394.00	Proceeds of Short Term-Debt							

FELTON BORO, YORK County  
STATEMENT OF REVENUES AND EXPENDITURES

December 31, 2017

Governmental Funds				Proprietary Funds		Fiduciary Fund	Total
General Fund	Special Revenue (Including State Liquid Fuels)	Capital Projects	Debt Service	Enterprise	Internal Service	Trust and Agency	Memorandum Only

**REVENUES**

Other Financing Sources							
395.00	Refunds of Prior Year Expenditures	7,324	47			9,392	16,763
<b>Total Other Financing Sources</b>		<b>7,324</b>	<b>47</b>			<b>9,392</b>	<b>16,763</b>

**TOTAL REVENUES**

405,245	18,011			140,769			564,025
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**EXPENDITURES**

General Government							
400.00	Legislative (Governing) Body	1,565					1,565
401.00	Executive (Manager or Mayor)	330					330
402.00	Auditing Services / Financial Administration	200					200
403.00	Tax Collection	2,756					2,756
404.00	Solicitor / Legal Services	14,527			2,932		17,459
405.00	Secretary / Clerk	18,794			2,707		21,501
406.00	Other General Government Administration	7,245	27		11,291		18,563
407.00	IT-Networking Services-Data Processing						
408.00	Engineering Services	15,953			995		16,948
409.00	General Government Buildings and Plant	1,157					1,157
<b>Total General Government</b>		<b>62,527</b>	<b>27</b>		<b>17,925</b>		<b>80,479</b>

**Public Safety**

410.00	Police	41,155					41,155
411.00	Fire	8,570					8,570
412.00	Ambulance / Rescue	3,060					3,060
413.00	UCC and Code Enforcement	1,443					1,443

FELTON BORO, YORK County  
STATEMENT OF REVENUES AND EXPENDITURES

December 31, 2017

Governmental Funds				Proprietary Funds		Fiduciary Fund	Total
General Fund	Special Revenue (Including State Liquid Fuels)	Capital Projects	Debt Service	Enterprise	Internal Service	Trust and Agency	Memorandum Only

**EXPENDITURES**

Public Safety							
414.00	Planning and Zoning	30					30
415.00	Emergency Management and Communications	250					250
416.00	Militia and Armories						
417.00	Examination of Licensed Occupations						
418.00	Public Scales (weights and measures)						
419.00	Other Public Safety						
<b>Total Public Safety</b>		54,508					54,508

Health and Human Services							
420.00- 425.00	Health and Human Services	322					322
<b>Total Health and Human Services</b>		322					322

Public Works - Sanitation							
426.00	Recycling Collection and Disposal						
427.00	Solid Waste Collection and Disposal (garbage)	53,515			5,755		59,270
428.00	Weed Control	3,200					3,200
429.00	Wastewater / Sewage Treatment and Collection				30,951		30,951
<b>Total Public Works - Sanitation</b>		56,715			36,706		93,421

Public Works - Highways and Streets							
430.00	General Services - Administration						
431.00	Cleaning of Streets and Gutters						
432.00	Winter Maintenance – Snow Removal		4,514				4,514
433.00	Traffic Control Devices		365				365
434.00	Street Lighting		7,989				7,989

FELTON BORO, YORK County  
**STATEMENT OF REVENUES AND EXPENDITURES**  
 December 31, 2017

Governmental Funds				Proprietary Funds		Fiduciary Fund	Total
General Fund	Special Revenue (Including State Liquid Fuels)	Capital Projects	Debt Service	Enterprise	Internal Service	Trust and Agency	Memorandum Only

**EXPENDITURES**

<b>Public Works - Highways and Streets</b>								
435.00	Sidewalks and Crosswalks							
436.00	Storm Sewers and Drains	704						704
437.00	Repairs of Tools and Machinery							
438.00	Maintenance and Repairs of Roads and Bridges	2,343						2,343
439.00	Highway Construction and Rebuilding Projects	172,967						172,967
<b>Total Public Works - Highways and Streets</b>		176,014	12,868					188,882

<b>Other Public Works Enterprises</b>								
440.00	Airports							
441.00	Cemeteries							
442.00	Electric System							
443.00	Gas System							
444.00	Markets							
445.00	Parking							
446.00	Storm Water and Flood Control							
447.00	Transit System							
448.00	Water System							
449.00	Water Transport and Terminals							
<b>Total Other Public Works Enterprises</b>								

<b>Culture and Recreation</b>								
451.00	Culture-Recreation Administration	6,238						6,238
452.00	Participant Recreation							
453.00	Spectator Recreation							
454.00	Parks							

FELTON BORO, YORK County  
**STATEMENT OF REVENUES AND EXPENDITURES**  
 December 31, 2017

Governmental Funds				Proprietary Funds		Fiduciary Fund	Total
General Fund	Special Revenue (Including State Liquid Fuels)	Capital Projects	Debt Service	Enterprise	Internal Service	Trust and Agency	Memorandum Only

**EXPENDITURES**

Culture and Recreation								
455.00	Shade Trees							
456.00	Libraries	500						500
457.00	Civil and Military Celebrations							
458.00	Senior Citizens' Centers							
459.00	All Other Culture and Recreation	250						250
<b>Total Culture and Recreation</b>		6,988						6,988

Community Development								
461.00	Conservation of Natural Resources							
462.00	Community Development and Housing							
463.00	Economic Development							
464.00	Economic Opportunity							
465-469	All Other Community Development							
<b>Total Community Development</b>								

Debt Service								
471.00	Debt Principal (short-term and long-term)				15,671			15,671
472.00	Debt Interest (short-term and long-term)				35,409			35,409
475.00	Fiscal Agent Fees							
<b>Total Debt Service</b>					51,080			51,080

Employer Paid Benefits and Withholding Items								
481.00	Employer Paid Withholding Taxes and Unemployment Compensation	1,661			55			1,716
482.00	Judgments and Losses							
483.00	Pension / Retirement Fund Contributions							

FELTON BORO, YORK County  
**STATEMENT OF REVENUES AND EXPENDITURES**  
 December 31, 2017

Governmental Funds				Proprietary Funds		Fiduciary Fund	Total
General Fund	Special Revenue (Including State Liquid Fuels)	Capital Projects	Debt Service	Enterprise	Internal Service	Trust and Agency	Memorandum Only

**EXPENDITURES**

<b>Employer Paid Benefits and Withholding Items</b>							
484.00	Worker Compensation Insurance						
487.00	Other Group Insurance Benefits						
<b>Total Employer Paid Benefits and Withholding Items</b>		1,661			55		1,716

<b>Insurance</b>							
486.00	Insurance, Casualty, and Surety	21,390			1,647		23,037
<b>Total Insurance</b>		21,390			1,647		23,037

<b>Unclassified Operating Expenditures</b>							
488.00	Fiduciary Fund Benefits and Refunds Paid						
489.00	All Other Unclassified Expenditures	46					46
<b>Total Unclassified Operating Expenditures</b>		46					46

<b>Other Financing Uses</b>							
491.00	Refund of Prior Year Revenues						
492.00	Interfund Operating Transfers						
493.00	All Other Financing Uses						
<b>Total Other Financing Uses</b>							

<b>TOTAL EXPENDITURES</b>	380,171	12,895			107,413		500,479
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<b>EXCESS/DEFICIT OF REVENUES OVER EXPENDITURES</b>	25,074	5,116			33,356		63,546
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**FELTON BORO**  
December 31, 2017

**DEBT STATEMENT**

**OUTSTANDING BONDS AND NOTES**

Listed below are all currently outstanding bond and note issues according to our files, excluding bond issues redeemed or refunded and defeased. Please show the principal payments and make any other necessary corrections and additions.

Purpose	Bond (B) Capital Lease (C) Lease Rental (L) Note (N)	Issue Year (yyyy)	Maturity Year (yyyy)	Original Amount of Issue	Outstanding Beginning of Year (1)	Principal Incurred This Year	Principal Paid This Year	Current Year Accretion on Compound Interest Bonds	Outstanding at Year End (1)	Plus (less) Unamortized Premium (Discount)	Total Balance
<b>General Obligation Bonds and Notes</b>											
Sewer FDA-01	Note	2004	2044	540,600	462,774		8,816		453,958		453,958
Sewer FDA-03	Note	2004	2044	408,400	347,269		6,855		340,414		340,414
<b>Revenue Bonds and Notes</b>											
<b>Lease Rental Debt</b>											
<b>Other</b>											

(1) - excludes unamortized premium/discount

<b>Total bonds and notes outstanding</b>	794,372
<b>Capitalized lease obligations</b>	0
<b>Net debt</b>	794,372

**FELTON BORO, YORK County**  
**STATEMENT OF CAPITAL EXPENDITURES**

December 31, 2017

Category	Capital Purchases	Capital Construction	Total
Community Development			
Electric			
Fire			
Gas System			
General Government			
Health			
Housing			
Libraries			
Mass Transit			
Parks			
Police			
Recreation			
Sewer			
Solid Waste			
Streets / Highways			
Water			
Other: _____			
<b>TOTAL CAPITAL EXPENDITURES</b>			

**EMPLOYEE COMPENSATION**

Total salaries, wages, commissions, etc. paid this year (including all employees and elected officials)

26,366



December 31, 2017

**NOTES / COMMENTS**

**2018 MUNICIPAL ANNUAL AUDIT  
AND  
FINANCIAL REPORT**

**670513 FELTON BORO, YORK COUNTY**



FELTON BORO, YORK County

**BALANCE SHEET**

December 31, 2018

		Governmental Funds				Proprietary Funds		Fid. Fund	Account Groups		Total
		General Fund	Special Revenue (Including State Liquid Fuels)	Capital Projects	Debt Service	Enterprise	Internal Service	Trust and Agency	General Fixed Assets	General Long Term Debt	Memorandum Only
<b>Liabilities and Other Credits</b>											
260-269	Long-Term-Liabilities										
240-259	Current Portion of Long-Term Debt and Other Credits										
<b>Total Liabilities and Other Credits</b>											
<b>Fund and Account Group Equity</b>											
281-284	Contributed Capital										
290.00	Investment in General Fixed Assets										
270-289	Fund Balance / Retained Earnings on 12/31	237,720	16,053			112,975					366,748
291-299	Other Equity										
<b>Total Fund and Account Group Equity</b>		237,720	16,053			112,975					366,748
<b>TOTAL LIABILITIES AND FUND AND ACCOUNT GROUP EQUITY</b>											366,748

FELTON BORO, YORK County  
**STATEMENT OF REVENUES AND EXPENDITURES**  
 December 31, 2018

Governmental Funds				Proprietary Funds		Fiduciary Fund	Total
General Fund	Special Revenue (Including State Liquid Fuels)	Capital Projects	Debt Service	Enterprise	Internal Service	Trust and Agency	Memorandum Only

**REVENUES**

Taxes							
301.00	Real Estate Taxes	75,287					75,287
305.00	Occupation Taxes (levied under municipal code)						
308.00	Residence Taxes (levied by cities of the 3rd Class)						
309.00	Regional Asset District Sales Tax (Allegheny County municipalities only)						
310.00	Per Capita Taxes						
310.10	Real Estate Transfer Taxes	4,297					4,297
310.20	Earned Income Taxes / Wage Taxes	61,816					61,816
310.30	Business Gross Receipts Taxes						
310.40	Occupation Taxes (levied under Act 511)						
310.50	Local Services Tax **						
310.60	Amusement / Admission Taxes						
310.70	Mechanical Device Taxes						
310.90	Other: _____						
	Other: _____						
<b>Total Taxes</b>		141,400					141,400

Licenses and Permits							
320-322	All Other Licenses and Permits	1,904					1,904
321.80	Cable Television Franchise Fees	5,072					5,072
<b>Total Licenses and Permits</b>		6,976					6,976

Fines and Forfeits							
330-332	Fines and Forfeits	1,481					1,481
<b>Total Fines and Forfeits</b>		1,481					1,481

FELTON BORO, YORK County  
**STATEMENT OF REVENUES AND EXPENDITURES**  
 December 31, 2018

Governmental Funds				Proprietary Funds		Fiduciary Fund	Total
General Fund	Special Revenue (Including State Liquid Fuels)	Capital Projects	Debt Service	Enterprise	Internal Service	Trust and Agency	Memorandum Only

**REVENUES**

Interest, Rents and Royalties							
341.00	Interest Earnings	2,110	88			888	3,086
342.00	Rents and Royalties						
<b>Total Interest, Rents and Royalties</b>		2,110	88			888	3,086

Federal							
351.03	Highways and Streets						
351.09	Community Development						
351.00	All Other Federal Capital and Operating Grants						
352.01	National Forest						
352.00	All Other Federal Shared Revenue and Entitlements						
353.00	Federal Payments in Lieu of Taxes						
<b>Total Federal</b>							

State							
354.03	Highways and Streets	531					531
354.09	Community Development						
354.15	Recycling / Act 101						
354.00	All Other State Capital and Operating Grants						
355.01	Public Utility Realty Tax (PURTA)	137					137
355.02-355.03	Motor Vehicle Fuel Tax (Liquid Fuels Tax) and State Road Turnback		18,792				18,792
355.04	Alcoholic Beverage Licenses						
355.05	General Municipal Pension System State Aid						
355.07	Foreign Fire Insurance Tax Distribution	2,338					2,338
355.08	Local Share Assessment/Gaming Proceeds						
355.09	Marcellus Shale Impact Fee Distribution						

**FELTON BORO, YORK County**  
**STATEMENT OF REVENUES AND EXPENDITURES**  
 December 31, 2018

Governmental Funds				Proprietary Funds		Fiduciary Fund	Total
General Fund	Special Revenue (Including State Liquid Fuels)	Capital Projects	Debt Service	Enterprise	Internal Service	Trust and Agency	Memorandum Only

**REVENUES**

State								
355.00	All Other State Shared Revenues and Entitlements							
356.00	State Payments in Lieu of Taxes							
<b>Total State</b>		3,006	18,792					21,798

Local Government Units								
357.03	Highways and Streets							
357.00	All Other Local Governmental Units Capital and Operating Grants							
358.00	Local Government Unit Shared Payments for Contracted Intergovernmental Services							
359.00	Local Governmental Units and Authorities Payments in Lieu of Taxes							
<b>Total Local Government Units</b>								

Charges for Service								
361.00	General Government	35			50			85
362.00	Public Safety	15,298						15,298
363.20	Parking							
363.00	All Other Charges for Highway & Street Services							
364.10	Wastewater / Sewage (including connection / tapping fees, sewer usage charges, reserve capacity fee, etc.)				119,111			119,111
364.30	Solid Waste Collection and Disposal Charge (trash)	54,883						54,883
364.60	Host Municipality Benefit Fee for Solid Waste Facility							
364.00	All Other Charges for Sanitation Services	36						36
365.00	Health							
366.00	Human Services							
367.00	Culture and Recreation							
368.00	Airports							

FELTON BORO, YORK County  
STATEMENT OF REVENUES AND EXPENDITURES

December 31, 2018

Governmental Funds				Proprietary Funds		Fiduciary Fund	Total
General Fund	Special Revenue (Including State Liquid Fuels)	Capital Projects	Debt Service	Enterprise	Internal Service	Trust and Agency	Memorandum Only

**REVENUES**

Charges for Service							
369.00	Bars						
370.00	Cemeteries						
372.00	Electric System						
373.00	Gas System						
374.00	Housing System						
375.00	Markets						
377.00	Transit Systems						
378.00	Water System						
379.00	All Other Charges for Service				70		70
<b>Total Charges for Service</b>		70,252			119,231		189,483

Unclassified Operating Revenues							
383.00	Special Assessments						
386.00	Escheats (sale of personal property)						
387.00	Contributions and Donations from Private Sectors	130			10,000		10,130
388.00	Fiduciary Fund Pension Contributions						
389.00	All Other Unclassified Operating Revenues						
<b>Total Unclassified Operating Revenues</b>		130			10,000		10,130

Other Financing Sources							
391.00	Proceeds of General Fixed Asset Disposition						
392.00	Interfund Operating Transfers						
393.00	Proceeds of General Long-Term Debt						
394.00	Proceeds of Short Term-Debt						

FELTON BORO, YORK County  
STATEMENT OF REVENUES AND EXPENDITURES

December 31, 2018

Governmental Funds				Proprietary Funds		Fiduciary Fund	Total
General Fund	Special Revenue (Including State Liquid Fuels)	Capital Projects	Debt Service	Enterprise	Internal Service	Trust and Agency	Memorandum Only

**REVENUES**

Other Financing Sources							
395.00	Refunds of Prior Year Expenditures	3,335			1,165		4,500
<b>Total Other Financing Sources</b>		3,335			1,165		4,500
<b>TOTAL REVENUES</b>		228,690	18,880		131,284		378,854

**EXPENDITURES**

General Government							
400.00	Legislative (Governing) Body	1,800					1,800
401.00	Executive (Manager or Mayor)	330					330
402.00	Auditing Services / Financial Administration	145					145
403.00	Tax Collection	2,880					2,880
404.00	Solicitor / Legal Services	11,022			10,051		21,073
405.00	Secretary / Clerk	18,238			2,316		20,554
406.00	Other General Government Administration	7,365	38		12,070		19,473
407.00	IT-Networking Services-Data Processing						
408.00	Engineering Services	4,142			1,223		5,365
409.00	General Government Buildings and Plant	281					281
<b>Total General Government</b>		46,203	38		25,660		71,901

Public Safety							
410.00	Police	25,280					25,280
411.00	Fire	8,338					8,338
412.00	Ambulance / Rescue	3,152					3,152
413.00	UCC and Code Enforcement	1,370					1,370

FELTON BORO, YORK County  
**STATEMENT OF REVENUES AND EXPENDITURES**  
 December 31, 2018

Governmental Funds				Proprietary Funds		Fiduciary Fund	Total
General Fund	Special Revenue (Including State Liquid Fuels)	Capital Projects	Debt Service	Enterprise	Internal Service	Trust and Agency	Memorandum Only

**EXPENDITURES**

<b>Public Safety</b>								
414.00	Planning and Zoning	30						30
415.00	Emergency Management and Communications	250						250
416.00	Militia and Armories							
417.00	Examination of Licensed Occupations							
418.00	Public Scales (weights and measures)							
419.00	Other Public Safety							
<b>Total Public Safety</b>		38,420						38,420

<b>Health and Human Services</b>								
420.00-425.00	Health and Human Services	936						936
<b>Total Health and Human Services</b>		936						936

<b>Public Works - Sanitation</b>								
426.00	Recycling Collection and Disposal							
427.00	Solid Waste Collection and Disposal (garbage)	53,952			5,412			59,364
428.00	Weed Control	2,982						2,982
429.00	Wastewater / Sewage Treatment and Collection				29,743			29,743
<b>Total Public Works - Sanitation</b>		56,934			35,155			92,089

<b>Public Works - Highways and Streets</b>								
430.00	General Services - Administration							
431.00	Cleaning of Streets and Gutters							
432.00	Winter Maintenance – Snow Removal		9,689					9,689
433.00	Traffic Control Devices		280					280
434.00	Street Lighting		7,384					7,384

FELTON BORO, YORK County  
STATEMENT OF REVENUES AND EXPENDITURES

December 31, 2018

Governmental Funds				Proprietary Funds		Fiduciary Fund	Total
General Fund	Special Revenue (Including State Liquid Fuels)	Capital Projects	Debt Service	Enterprise	Internal Service	Trust and Agency	Memorandum Only

**EXPENDITURES**

Public Works - Highways and Streets							
435.00	Sidewalks and Crosswalks						
436.00	Storm Sewers and Drains	2,941					2,941
437.00	Repairs of Tools and Machinery						
438.00	Maintenance and Repairs of Roads and Bridges	1,041					1,041
439.00	Highway Construction and Rebuilding Projects	13					13
<b>Total Public Works - Highways and Streets</b>		3,995	17,353				21,348

Other Public Works Enterprises							
440.00	Airports						
441.00	Cemeteries						
442.00	Electric System						
443.00	Gas System						
444.00	Markets						
445.00	Parking						
446.00	Storm Water and Flood Control						
447.00	Transit System						
448.00	Water System						
449.00	Water Transport and Terminals						
<b>Total Other Public Works Enterprises</b>							

Culture and Recreation							
451.00	Culture-Recreation Administration	1,446					1,446
452.00	Participant Recreation						
453.00	Spectator Recreation						
454.00	Parks						

FELTON BORO, YORK County  
STATEMENT OF REVENUES AND EXPENDITURES

December 31, 2018

Governmental Funds				Proprietary Funds		Fiduciary Fund	Total
General Fund	Special Revenue (Including State Liquid Fuels)	Capital Projects	Debt Service	Enterprise	Internal Service	Trust and Agency	Memorandum Only

**EXPENDITURES**

Culture and Recreation								
455.00	Shade Trees							
456.00	Libraries	500						500
457.00	Civil and Military Celebrations							
458.00	Senior Citizens' Centers							
459.00	All Other Culture and Recreation	5,244						5,244
<b>Total Culture and Recreation</b>		<b>7,190</b>						<b>7,190</b>

Community Development								
461.00	Conservation of Natural Resources							
462.00	Community Development and Housing							
463.00	Economic Development							
464.00	Economic Opportunity							
465-469	All Other Community Development							
<b>Total Community Development</b>								

Debt Service								
471.00	Debt Principal (short-term and long-term)				16,366			16,366
472.00	Debt Interest (short-term and long-term)				34,713			34,713
475.00	Fiscal Agent Fees							
<b>Total Debt Service</b>					<b>51,079</b>			<b>51,079</b>

Employer Paid Benefits and Withholding Items								
481.00	Employer Paid Withholding Taxes and Unemployment Compensation	2,249			140			2,389
482.00	Judgments and Losses							
483.00	Pension / Retirement Fund Contributions							

FELTON BORO, YORK County  
STATEMENT OF REVENUES AND EXPENDITURES

December 31, 2018

Governmental Funds				Proprietary Funds		Fiduciary Fund	Total
General Fund	Special Revenue (Including State Liquid Fuels)	Capital Projects	Debt Service	Enterprise	Internal Service	Trust and Agency	Memorandum Only

**EXPENDITURES**

<b>Employer Paid Benefits and Withholding Items</b>							
484.00	Worker Compensation Insurance						
487.00	Other Group Insurance Benefits						
<b>Total Employer Paid Benefits and Withholding Items</b>		2,249			140		2,389

<b>Insurance</b>							
486.00	Insurance, Casualty, and Surety	15,902			1,744		17,646
<b>Total Insurance</b>		15,902			1,744		17,646

<b>Unclassified Operating Expenditures</b>							
488.00	Fiduciary Fund Benefits and Refunds Paid						
489.00	All Other Unclassified Expenditures	143					143
<b>Total Unclassified Operating Expenditures</b>		143					143

<b>Other Financing Uses</b>							
491.00	Refund of Prior Year Revenues						
492.00	Interfund Operating Transfers						
493.00	All Other Financing Uses						
<b>Total Other Financing Uses</b>							

<b>TOTAL EXPENDITURES</b>	171,972	17,391			113,778		303,141
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<b>EXCESS/DEFICIT OF REVENUES OVER EXPENDITURES</b>	56,718	1,489			17,506		75,713
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FELTON BORO  
December 31, 2018

DEBT STATEMENT

OUTSTANDING BONDS AND NOTES

Listed below are all currently outstanding bond and note issues according to our files, excluding bond issues redeemed or refunded and defeased. Please show the principal payments and make any other necessary corrections and additions.

Purpose	Bond (B) Capital Lease (C) Lease Rental (L) Note (N)	Issue Year (yyyy)	Maturity Year (yyyy)	Original Amount of Issue	Outstanding Beginning of Year (1)	Principal Incurred This Year	Principal Paid This Year	Current Year Accretion on Compound Interest Bonds	Outstanding at Year End (1)	Plus (less) Unamortized Premium (Discount)	Total Balance
<b>General Obligation Bonds and Notes</b>											
Sewer FDA-01	Note	2004	2044	540,600	453,958		9,217		444,741		444,741
Sewer FDA-03	Note	2004	2044	408,400	340,414		7,149		333,265		333,265
<b>Revenue Bonds and Notes</b>											
<b>Lease Rental Debt</b>											
<b>Other</b>											

(1) - excludes unamortized premium/discount

<b>Total bonds and notes outstanding</b>	778,006
<b>Capitalized lease obligations</b>	0
<b>Net debt</b>	778,006

**FELTON BORO, YORK County**  
**STATEMENT OF CAPITAL EXPENDITURES**

December 31, 2018

Category	Capital Purchases	Capital Construction	Total
Community Development			
Electric			
Fire			
Gas System			
General Government			
Health			
Housing			
Libraries			
Mass Transit			
Parks			
Police			
Recreation			
Sewer			
Solid Waste			
Streets / Highways			
Water			
Other: _____			
<b>TOTAL CAPITAL EXPENDITURES</b>			

**EMPLOYEE COMPENSATION**

Total salaries, wages, commissions, etc. paid this year (including all employees and elected officials)

22,650



December 31, 2018

**NOTES / COMMENTS**

**The York Water Company**  
**Responses to Bureau of Technical Utility Services, Water/Wastewater Division**  
**Data Request 1**

Application of The York Water Company - Wastewater for approval of the acquisition of the  
wastewater system assets of the Felton Borough at Docket No. A-2019-3013113

**DISCOVERY A-21**

Please identify any operation and/or managerial changes York Water-WW intends to make after acquiring Felton's wastewater system.

**RESPONDENT:**

Joseph T. Hand  
Chief Operating Officer

**RESPONSE:**

York Water does not intend on making any operational or managerial changes after acquiring Felton Borough's wastewater system.

**The York Water Company**  
**Responses to Bureau of Technical Utility Services, Water/Wastewater Division**  
**Data Request 1**

Application of The York Water Company - Wastewater for approval of the acquisition of the  
wastewater system assets of the Felton Borough at Docket No. A-2019-3013113

**DISCOVERY A-22**

Please explain how approval of the Application would benefit York Water-WW's existing customers.

**RESPONDENT:**

Joseph T. Hand  
Chief Operating Officer

**RESPONSE:**

Approval of the proposed Application will benefit the Company's existing wastewater customers because by expanding the Company's customer base, York Water's fixed wastewater costs will be spread over a greater number of customers. Furthermore, the revenues received from these new customers can help pay for system improvements elsewhere on the Company's wastewater system. York Water also maintains that the Commission should take other considerations into account when determining whether the Application is necessary and proper for the service, accommodation, convenience, and safety of the public, including how:

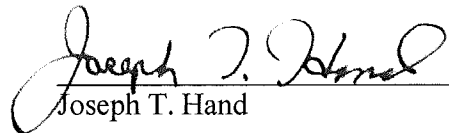
- (a) Felton is no longer willing to provide wastewater service to its customers due to the regulatory requirements necessary to continue to provide service and the difficulties in maintaining a viable wastewater system as indicated in the recent NOV and Felton's Chapter 94 Report;
- (b) York Water will bring significant resources to the Felton wastewater system and keep it in compliance with existing and proposed regulatory requirements; and
- (c) The Commission encourages utilities, such as York Water, to acquire small wastewater systems such as the system owned and operated by Felton. *See* 52 Pa. Code § 69.711.

**VERIFICATION**

I, Joseph T. Hand, being the Chief Operating Officer at The York Water Company, hereby state that the facts set forth above are true and correct to the best of my knowledge, information and belief, and that if asked orally at a hearing in this matter, my answers would be as set forth therein.

I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 relating to unsworn falsification to authorities.

Date: October 30, 2019

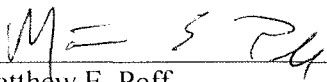
  
\_\_\_\_\_  
Joseph T. Hand

**VERIFICATION**

I, Matthew E. Poff, being the Chief Financial Officer at The York Water Company, hereby state that the facts set forth above are true and correct to the best of my knowledge, information and belief, and that if asked orally at a hearing in this matter, my answers would be as set forth therein.

I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 relating to unsworn falsification to authorities.

Date: October 30, 2019

  
Matthew E. Poff