

---

**EXHIBIT W**

**ENGINEER'S ASSESSMENT OF TANGIBLE PROPERTY**

---



# LIMERICK TOWNSHIP SEWERAGE FACILITIES ENGINEERING ASSESSMENT AND ORIGINAL COST

---

*Various Locations*  
*Limerick Township*  
*Montgomery County, PA*

---

***Prepared for:***

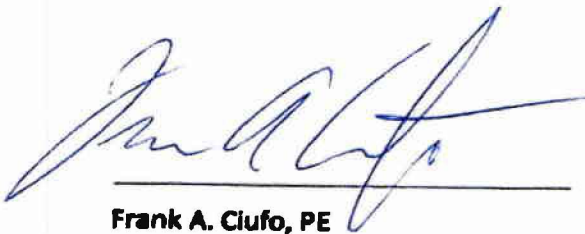
Limerick Township  
646 W. Ridge Pike  
Limerick, PA 19468

Aqua Pennsylvania  
762 W. Lancaster Avenue  
Bryn Mawr, PA 19010

---

***Submitted By:***

Pennoni Associates Inc.  
3100 Horizon Drive, Suite 200  
King of Prussia, PA 19406



**Frank A. Ciuffo, PE**  
**Senior Engineer**

**LMRK 1352**



**Khaled R. Hassan, PE**  
**Associate Vice President**

**February 17, 2017**  
**Revised: February 24, 2017**  
**Revised: April 3, 2017**

## CONTENTS

<b>1. EXECUTIVE SUMMARY.....</b>	<b>1</b>
<b>2. PURPOSE OF REPORT .....</b>	<b>2</b>
<b>3. SYSTEM DESCRIPTION.....</b>	<b>4</b>
<b>4. INVENTORY OF ASSETS</b>	
<b>4.1. KING ROAD TREATMENT PLANT</b>	
<b>4.2. POSSUM HOLLOW TREATMENT PLANT</b>	
<b>4.3. PUMP STATIONS</b>	
<b>4.4. GRAVITY SYSTEMS</b>	
<b>4.4.1. LAND DEVELOPMENT ASSETS</b>	
<b>4.4.2. INTERCEPTORS</b>	
<b>5. REAL PROPERTY EASEMENTS</b>	
<b>6. REGULATORY REQUIREMENTS</b>	
<b>6.1 KING ROAD WWTP PERMIT</b>	
<b>6.2 POSSOM HOLLOW WWTP PERMIT</b>	
<b>7. OPERATING EXPENSES</b>	
<b>8. FUTURE CAPITAL PROJECT</b>	
<b>9. LIST OF ASSETS AND COSTS</b>	
<b>ASSET COST SUMMARY SPREAD SHEET</b>	
<b>LAND DEVELOPMENT ASSET PIPING TOTALS</b>	
<b>INTERCEPTOR AND EXTENSION PIPING TOTALS</b>	
<b>PUMP STATION PIPING TOTALS</b>	

**APPENDICES**

**APPENDIX A – TOWNSHIP MAPS**

- ASSET FACILITIES MAP
- SANITARY SEWER EASEMENTS

**APPENDIX B – DEPRECIATED ASSETS LIST**

**APPENDIX C – RESOLUTION 2007 – TAPPING FEE**

**APPENDIX D – Uniform System of Accounts - Section 300  
ACT 12 (HB1329)**

**DIGITAL FILES**

**SYSTEM MAPS**

**ADDITIONAL PICTURES**

**ESCROWS**

**EASEMENTS AND ROW**

**WWTP & SEWER PLANS**

**UNIFORM SYSTEM OF ACCOUNTS**

## 1. EXECUTIVE SUMMARY

As required by PA Act 12 (HB1329) and following the guidelines of the "Uniform System of Accounts for Class A Wastewater Utilities", an assessment of the tangible assets of facilities and equipment of the Limerick Township wastewater utility was prepared. Each facility and class of equipment was coded based on Section 300 of the "Wastewater Utility Plant Accounts" of the Guidelines. The Asset Survey included the King Road Wastewater Treatment Plant (WWTP), the Possum Hollow WWTP, 17 active pump stations, 3 decommissioned pump stations and approximately 100 miles of gravity sewers and forcemains. Information was derived from various sources including Tapping Fee calculations, Land Development escrows for public improvements, Township accounting records and contractors' certificates of payment. Site visits were conducted to each of the facilities to inventory the equipment and assess their condition.

Site inventories and facility condition were documented on facility information sheets and facility description summaries. Each summary also documented the original cost of the facility and subsequent improvements.

The overall assessment of the King Road and Possum Hollow Wastewater Treatment Plants is very good, the headworks buildings for each WWTP will require replacement of some HVAC equipment in the near future.

Most of the Pump Stations are also in very good condition. The construction of the Pump Station #6 upgrade is expected to be completed in 2017 and the Pump Station #3 upgrade is designed, however construction has been delayed due to the current sale of the system.

Gravity sewers and forcemains are also in very good condition. There is only one lining project in the Orchard Terrace area projected to be rehabilitated in 2020.

A complete list of the assets and original costs is provided in Section 9 of this report.

## 2. PURPOSE OF REPORT

The purpose of this report is to “conduct an assessment of the tangible assets of the selling utility” per the requirements of PA Act 12 (HB1329) and as further identified in the Public Utility Commission (Commission) Final Implementation Order from the October 27, 2016 Limerick Township public meeting.

This engineering assessment will be used by the Utility Value Experts (UVEs) retained by both the seller (Limerick) and buyer (Aqua). The engineering assessment followed the practices and procedures of the Public Utility Commission and National Association of Regulatory Utility Commissioners (NARUC) Systems of Accounts. The engineering assessment report documents the conditions and original costs of Limerick’s assets that will be used as the common list for the UVEs to develop their appraisal of the system.

The report preparation process included meeting with key Township and Aqua representatives to identify and confirm specific information needed to support our assessment and to prepare the report, providing a mutually agreed upon scope of work with the Township, Aqua and their respective UVEs. The inventory was developed from institutional knowledge, available records, maps, work orders, debt issue closing documents funding construction projects, and other sources to provide an inventory and listing.

This report contains the following:

- An inventory of the used and useful assets to be transferred, compiled by year and account.
- Identifies separately any facility that is being held for future use (if any).
- A list of non-depreciable property such as land and rights-of-way.
- A review of system components, plans and reports of key facilities. This includes:
  - a. Permitted discharges, including regulatory requirements
  - b. Treatment Facilities (2 each)
  - c. Pumping Stations (20 each), including force mains
  - d. Gravity collection system
  - e. Low pressure collection system
- Review Township operating records and compare this data to regulatory requirements and generally accepted operating parameters for wastewater systems. Summarize the operation and maintenance expenses for the last five (5) years.
- Identify improvements made by the Township and current Township plans and projections for the future capital projects.
- Complete an assessment of the identified assets.
- Determine and/or establish an original cost of construction for each asset



Assets were identified through various sources. The Wastewater Treatment Plant (WWTP) assets were field inspected, and if available, information was obtained from as-built drawings. Forcemain size and quantities were taken from information sheets supplied by the Township. Pump Stations were also field inspected and if available, information was obtained from drawings. Since many of the pump stations were installed by developers, as-built drawings were not always available. Facilities involving developments that had sanitary sewers and manholes dedicated to the Township were determined using various methods. Township land development records were used to determine quantities. In cases where escrow quantities could not be found, length of piping measurements and manhole quantities were obtain from the Township sewerage maps using CAD.

A coding system as described in Section 300 of the Uniform System of Accounts for Class A Wastewater Utilities was used for classifying the various assets. Section 300 as well as the listing of the codes can be found in Appendix D. The entire Uniform System of Accounts can be found in the Digital Files.

### 3. SYSTEM DESCRIPTION

#### SYSTEM SUMMARY

Limerick Township, Montgomery County, PA borders Upper Frederick and New Hanover Townships to the north; Lower Frederick Township to the northeast; Lower Pottsgrove Township to the northwest; Perkiomen Township to the east; Upper Providence Township to the southeast; the Borough of Royersford to the south and Chester County boundaries to the west. The size of the Township is approximately 22 square miles. Approximately 75% of the township is zoned residential, 22% industrial and 3% commercial.

The wastewater system in the Township consists of multiple collectors and interceptors ranging in size from eight (8) to thirty-six (36) inches, seventeen (17) dedicated sewage pumping stations, a 1.7 MGD wastewater treatment plant (King Road) and a 0.7 MGD wastewater treatment plant (Possum Hollow). The wastewater systems are owned and operated by Limerick Township, which took ownership and operational responsibility from the Municipal Authority in September 2008.

A map of the pump station drainage basins is located in Appendix A. There are currently 6,662 connections that discharge to the King's Road Treatment Plant and 1,606 connections that flow to the Possum Hollow Treatment Plant. There are 8,268 total Township connections. The average annual flow for the King Road Treatment Plant in 2015 was 0.807 MGD and for the Possum Hollow Treatment Plant the average flow in 2015 was 0.203 MGD. Both plants were well within their hydraulic limits of 1.7 MGD and **0.70** MGD respectively.

#### System Service Areas

The Township is divided into two (2) service areas. The western portion of the Township, which includes the drainage basins for pump stations 1, 16, 17 and 18, flow to the Possum Hollow Treatment Plant. The eastern portion of the Township, which includes the drainage basins for pump stations 2, 3, 4, 5, 6, 7, ~~8~~ 10, 12, 13, 14, 15 19 and 20, flow to the King Road Treatment Plant. The Township collects sanitary sewage in each service area and conveys it to the respective WWTP. A majority of the Township's sanitary sewer system was originally constructed between 1986 and 1992 and has since been extended to accommodate additional developments as needed. The sanitary sewer system consists of interceptors ranging in size from eight (8) inch to thirty-six (36) inches and several pump stations. A bulk the gravity system is constructed of PVC pipe while a majority of the force mains are made of ductile iron pipe. The sanitary sewer collection system totals approximately 533,280 feet (101 miles) of pipe. Based on the Limerick Township Chapter 94 Report, the Possum Hollow Service area accounts for approximately 89,760 feet (17 miles) of this pipe; while the King Road Service area accounts for the remaining 443,530 feet (84 miles) of pipe. There are 2 former pump station buildings that are currently used for storage. There are 6 grinder pump systems maintained by the Township but are owned by the resident.





4 – INVENTORY OF ASSETS

## 4.1 - Kings Road WWTP

## **King Road WWTP**

### **Facility Description (See Facility Equipment Spread Sheet)**

The King Road Wastewater Treatment Plant was originally constructed in 1988. The original system consisted of 4 circular DAVCO treatment systems, blower building, emergency generator and outfall piping. In 2001, the outfall was relocated. The plant was expanded in 2007 – 2008.

The Plant expansion included the following:

- Influent box
- Influent screening
- Grit chamber
- Diversion box
- Aero-Mod System
- UV Disinfection System
- Generator
- Sludge pumping
- Sludge digestion
- Yard pump station
- Utility Water pumps

### **Influent Box (Forcemain Chamber)**

The Influent Box is an open aerated large concrete box with an overflow channels. The overflow discharge can flow to either grit removal or influent screening. The influent box accepts influent flow and plant recycle flows. The influent flow is the discharge from the Pump Station #6 force main. The plant recycle force main can be feed into either the influent box or overflow channel. Currently, the influent force main flows into the box and the plant recycle flows into the overflow channel.

### **Headworks Building (Screening Room)**

The Headworks Building is constructed of concrete block with a stone façade with an asphalt shingle roof and measures (53' x 29'). The building houses a Lakeside "Raptor" rotary bar screen, a Lakeside grit separator and a common dumpster. The Lakeside screen is located in an elevated concrete structure that is made up of the screen channel, overflow bypass screen channel, and influent diversion and effluent boxes. Aluminum slide gates are used to divert flow. The building has 4 steel double doors, one steel overhead door; five unit heaters and a metal duct work the runs the length of the building for ventilation. The effluent box concrete channel walls had experienced a large amount of heavy concrete

corrosion. In 2016, the interior walls and floors were coated with "Spray-Roq" epoxy coating. The exhaust louvers and duct work had a considerable amount of rust.

The building equipment is powered by a 600 amp MCC located in a separate room in the southwest corner of the building.

#### Aerated Grit Chamber

The grit chamber is a concrete box with a Lakeside "Raptor Aeroductor" center mount agitator and an air lift pump to remove grit from center of the grit chamber. The grit chamber is open to the atmosphere. The compressed air for the grit lift pump is taken as a side stream from the aeration blower header. The grit chamber and classifier work well.

#### Aeration Splitter Box

The splitter box is an open box with six (6) outlets. Aeration Tanks A, B, C, and D each have their own discharge. Each discharge has an isolation slide gate and a cut out stop gate.

#### SBR Treatment System

The Sequencing Batch Reactors (SBR) is an aeration system consists of two (2) separate treatment trains each consisting of a pair of treatment trains, designated A & B and C & D. The aeration system is a proprietary design, as provided by AeroMod Inc. The AeroMod system uses a sequencing activated sludge process for nitrogen removal. The AeroMod treatment train consists of an influent selector, First Stage Aeration, Second Stage Aeration, and Clarification. The process trains are contained within one large tank that is segmented into smaller tank compartments. The overall size of the SBR structure is 116' x 167' x 20' deep. The structure is constructed of post tensioned precast concrete manufactured by Dutchland, Inc. Most of the compartments are fitted with aeration drop pipes with diffusers and motorized valves for air control.

The Township is currently replacing some PVC aeration piping that was beginning to deteriorate due to heat and UV exposure, with stainless steel components.

#### Blowers Building

The Blower Building is a 24' x 118' prefabricated building. The Building is segregated into 3 sections. Two of the sections house blowers and the third section house the Utility Water equipment and system flow meters.

Section 1 is houses Three (3) Continental Industries Centrifugal Blowers the feed the AeroMod System. The blowers are 200 HP and can produce 5000 CFM of Air. The blower motors are started with reduced

voltage autotransformer (RVAT) starters. The blowers operate at full speed. The blowers have monitoring cabinets that indicate blower amps and flow rate based on amp draw. The Centrifugal Blowers are powered from an 800 amp Siemens MCC located in the same section of the building.

Section 2 houses five (5) Roots rotary lobe blowers that feed other portions of the system including the sludge digestion unit. Each unit is 100 HP and can produce 1550 CFM of air. The Roots blowers are powered by a 600 amp Eaton MCC which includes an integral starters and a TVSS. Section 3 houses the utility water receiving tanks (see Utility Water System), a 800 amp MCC with the blower disconnect switches, the Main Process Control Panel for the AeroMod Treatment system, the Blower building Control Panel, Verbatim alarm system and the plant effluent flow meter totalizer and chart recorder.

Section 3 houses the main MCC for the building auxiliary equipment (unit heaters, fans, etc.), yard flowmeters, three (3) 250 gallon yard water receiving tank.

#### Ultra Violet Disinfection System

The UV building is constructed of concrete block with a stone façade with an asphalt shingle roof and measures (51' x 21' x 12'). The building has a lower floor area that houses the UV units, controls and utility water pumps and water receiving tanks. The UV system is an inline system manufactured by Sunlight Systems. There are 3 separate 12" units installed in parallel. The UV system is powered by an Eaton 350 amp MCC with an integral TVSS. The flow from each unit is measured by an Endress and Hauser Mag Meter. Under normal flow conditions, only one unit is operational at a time. Adjacent to the UV building is the treatment plant discharge structure which contains the V-notch overflow weir and ultrasonic measuring unit. The outfall structure (10' x 16' x 12'D) is integral with the lower poured concrete UV treatment section of the building.

#### Sludge Digestion

Two (2) of the original steel wastewater treatment tanks were converted to sludge digesters. The treatment tanks consist of an outer segmented tank encircling the central clarifier. The total volume of one tank is 540,000 gallons. Currently, an outer section of the north tank is used for thickened sludge storage (67,000 gallons). The remainder of the tank including the center tank with a total capacity of 473,000 is being used for sludge digestion. The south tank has the same capabilities but is not currently being used. The tank has 15 PVC drop tubes with 6 - one meter long fine bubble diffusers on each drop.

#### Sludge Thickener

The Sludge Thickener building is constructed of prefabricated concrete panels and concrete roof and measures (16' x 22'). The sludge thickener is a rotary drum thickener manufactured by AeroMod. The unit is fed by 2 Seepex progressive cavity pumps. The unit is operated on a periodic basis as required. The system is powered by a 225 amp panel and an Cutler-Hammer 15KVA Transformer. The also has a



Neptune Polymaster polymer feed system. The building also contains a Berro electric unit heater, 1' diameter exhaust fan, intake louver and double steel doors.

#### Maintenance Building / Garage

The Maintenance Building / Garage building is constructed of concrete block with a stone façade with an asphalt shingle roof and measures (31' x 76'). The building has 5 electric operated overhead steel doors (10' x 12'H); four 3' x 7' man doors (2 interior and 2 exterior), 4 Electric Unit heaters, four infrared heaters, 50 gallon electric water heater and a bathroom with shower. The garage has a 1 ton Yale overhead crane on a rail, drill press, work table and various other tools. The building is powered by a 225 amp MCC with an integral TVSS. The building has an air exhaust fan with duct work running the length of the building, two intake louvers and metal halide lights.

#### Waste Activated Sludge (WAS)

The WAS building is constructed of concrete block with a stone façade with an asphalt shingle roof and measures (19' x 22'). The building houses two Seepex BN70 6L, 20 HP progressive cavity pumps. The system has a total of eleven 6" plug valves and four Flowserve 6" motor actuated plug valves. An Endress and Hauser 6" Mag Meter model 50WF1F measures the flow. The pumps are powered by an Eaton 350 AMP with integral TVSS and a 15 KVA transformer. The building has interior florescent lights and exterior wall pack lights.

#### Yard Pump Station

The Yard Pump Station is a precast concrete 9' x 9' x 23' deep wet well that houses 3 Flygt submersible pumps. All 3 pumps are Model NP-3127. Two pumps are 10HP, rated for 500 GPM each and the third "Jockey" Pump is 7.5 HP rated for 170 GPM. The Flygt pump station controls are located in the WAS building. The pump station has two aluminum hatchways for access. Power for the pump station is supplied by the MCC in the WAS building also. The pump valve chamber is 9' x 9' x 9'D precast concrete structure with 2 aluminum hatchways and a sump pump. There are two each 6 inch Clow plug valves and gate valves, and one each 4 inch Clow plug and gate valves in the valve chamber.

#### Utility Water System

The yard non-potable water distribution system is supplied by two (2) 20 HP centrifugal pumps located in the UV building. The pump discharge flows through filters and sodium hypochlorite is added via a LMI 2.5 GPH dosing pump. The treated water is pumped to three (3) 250 gallon receiving/bladder tanks located in the third segregated room at the north end of the blower building from where it is distributed throughout the property.

Generator

The generator is a Martin Machinery model MCD-750 rated for 750KW / 938 KVA, 1135 HP diesel powered unit. The generator is enclosed in a stainless steel enclosure and has an integral oil storage tank.

WWTP Office Building

The Wastewater Treatment plant is composed concrete masonry units with stone façade with a poured concrete foundation and an asphalt shingle roof. The building measures 63' x 45' and is two stories high. The building consists of 2 floors, the first floor contains the men's and women's locker rooms; a reception area; storage room; a laboratory and a 2 bay garage with side storage.

The second floor contains five offices; a lunch room; a training/conference room; men's and women's restrooms; the HVAC mechanical room and a storage room. The building is served by a central elevator.

The laboratory is equipped with lab tables with sinks; a fume hood; various lab glassware, oven testing equipment, scales, reagents and microscopes. The garage has an overhead crane on a rail. The overhead steel doors are 10' wide x 11' high. The building is heated with a forced air Electric Convection Unit, and an outdoor condenser unit provides cooling.

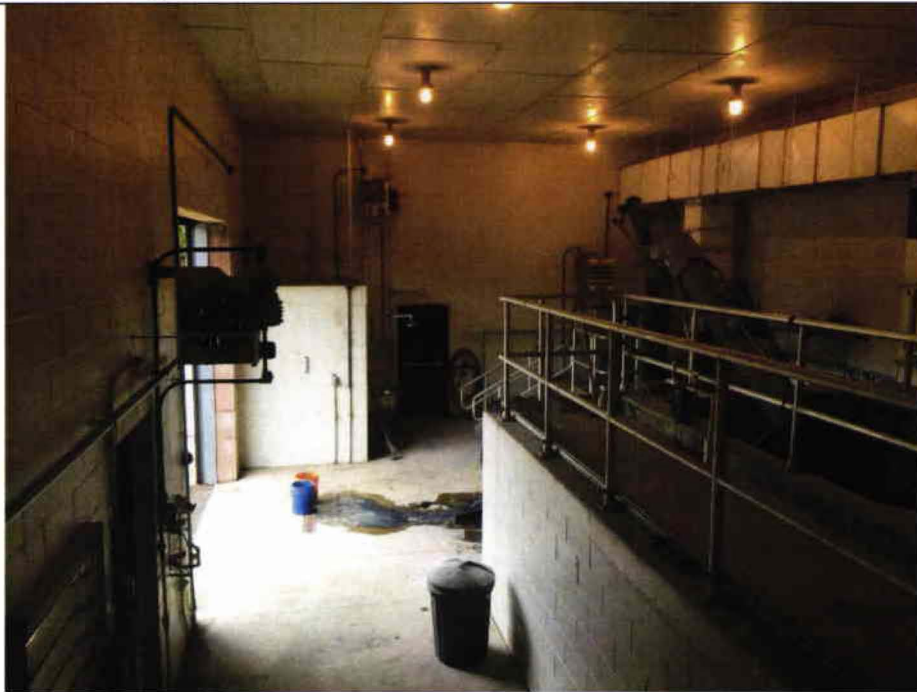
**Facility Construction Cost – King Road WWTP**

<u>Year</u>	<u>Cost</u>	<u>Description</u>	<u>Source</u>
1986	\$6,841,567	WWTP Facility including construction, bonding, engineering and inspection, legal and miscellaneous costs.	Tapping Fee Calculation
1991	\$873,890	Operations Building	Tapping Fee Calculation
2001	\$216,433	Outfall Relocation	Tapping Fee Calculation
2003	\$45,278	SCADA	Depreciate Asset List
2005	\$341,075	Sludge Thickener Facility	Tapping Fee Calculation
2007	\$8,654,278	WWTP Expansion including construction, engineering and inspection and legal. Includes credit for abandoned equipment and piping.	Tapping Fee Calculation
2007	\$135,774	Paving	Depreciate Asset List
2012	\$40,962	Roof Office Building	Depreciate Asset List
2016	\$37,624	Miscellaneous replacements incl. Aeration Tank piping, Air release valves, headworks doors and water heater	Depreciate Asset List
2016	\$15,100	Apply "Spray-Roq" coating to interior of headworks channels	Quote





1	Headworks Building
---	--------------------



2	Headworks Building Interior
---	-----------------------------



3	Aerated Grit Chamber at Headworks
---	-----------------------------------



4	Aerated Grit Chamber at Headworks
---	-----------------------------------



5 | Influent Box / Forcemain Chamber



6 | Out of Service Sludge Digester





7 Sludge Digester Aeration Chamber



8 Aeration Chamber Sludge Holding Chamber



9	Sludge Digester
---	-----------------



10	Sludge Thickener Building
----	---------------------------



11 | Sludge Thickener Unit



12 | Aeration Building





13	Centrifugal Blowers
----	---------------------



14	Roots Rotary Blowers
----	----------------------



15 Blower Building and Generator



16 Blower Control Panel





17 Blower MCC and Disconnect Switches



18 Yard Water Receiving Tanks



19 Building MCC, Blower Control Panel, Discharge Flow Meter and Chart Recorder

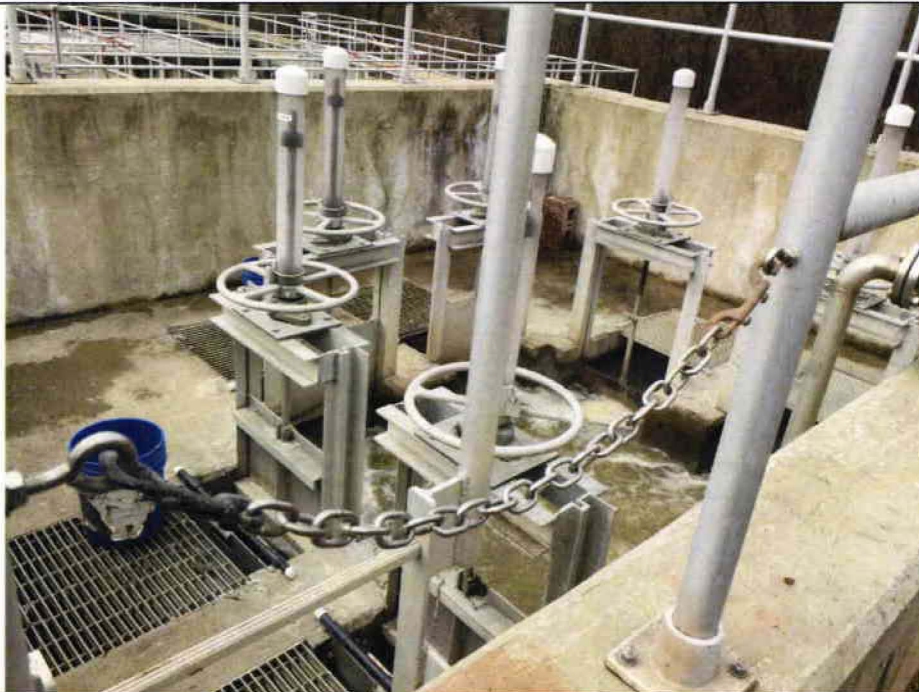


20 Maintenance Building Work Shop Area





21 Maintenance Building Exterior



22 Distribution Box for SBR Treatment System



23	SBR Treatment Chambers
----	------------------------



24	Blower Building
----	-----------------



25 | Yard Pumping Station



26 | Yard Pumping Wet Well





27 | WAS Sludge Pumping Building



28 | WAS Sludge Pump Building Interior



29 UV System Pump Building



30 UV Building Interior





31	UV Units
----	----------



32	Outfall Structure
----	-------------------

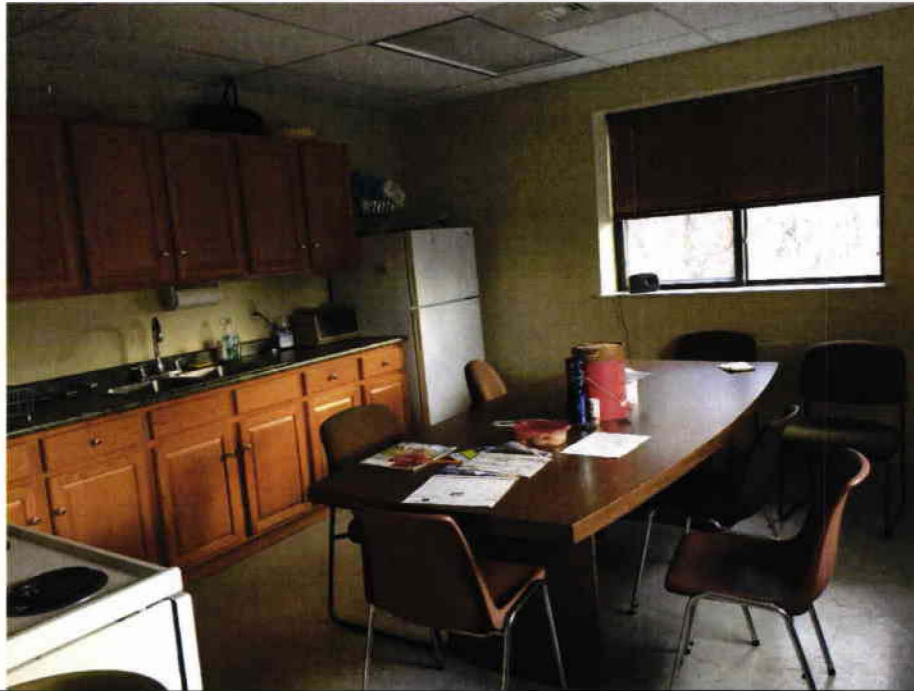




33 Office Building Exterior (Entrance Side)



34 Office Building Exterior



35 | Office Building Break Room



36 | Office Building Conference Room



37 Office Building Laboratory



38 WWTP Generator



39 | Office Building Air Handler



**KING ROAD WWTP**

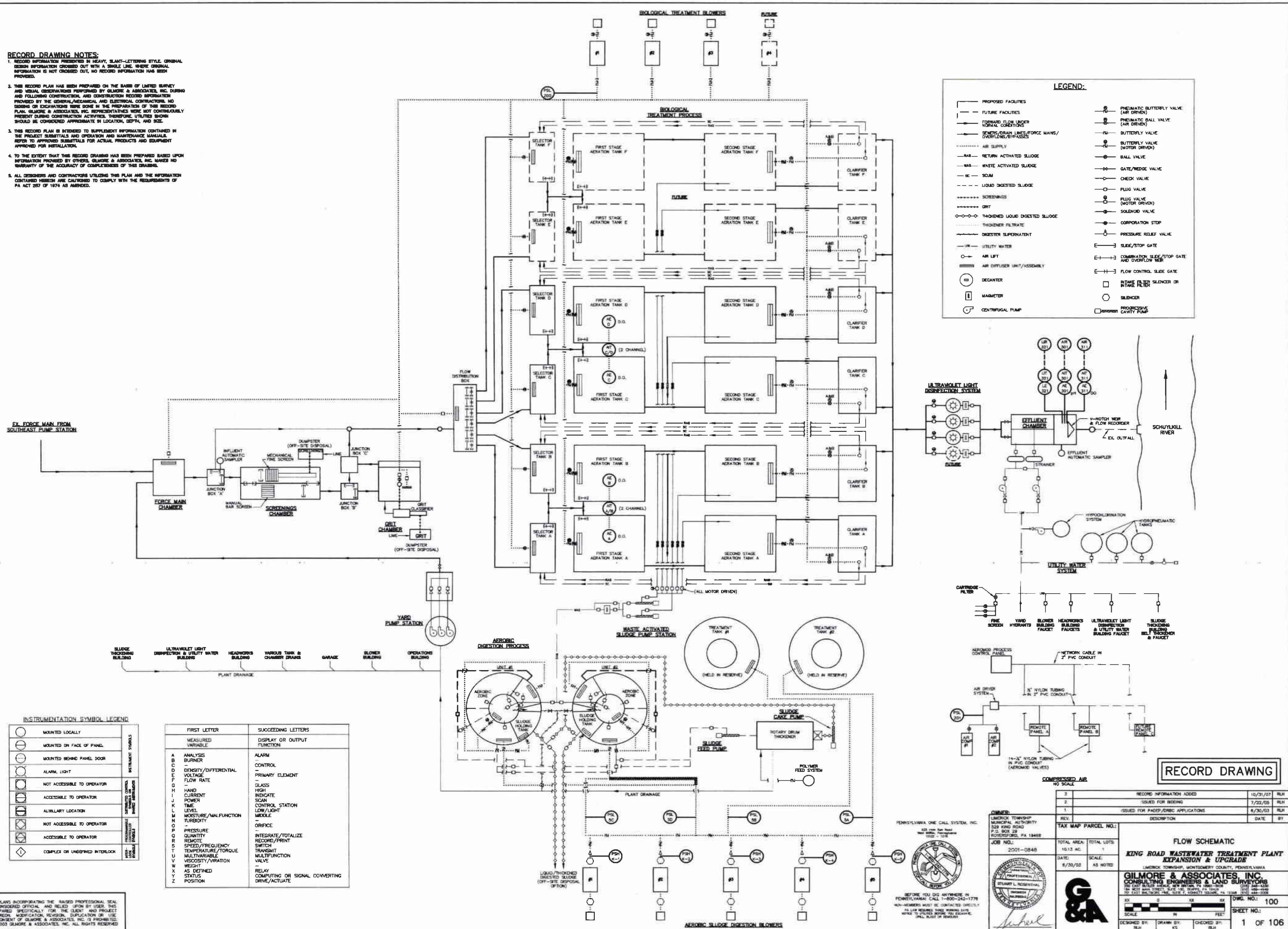
CODE	UNIT	DESCRIPTION	YEAR	COMMENTS
	<b>TREATMENT PROCESSES</b>			
	<b>Headworks</b>			
	facility description	Concrete Chamber w/ 2 sluice gates & bar screen		
354.4	Building	Concrete block/ stone façade (53' x 29')		
380.4	screen unit	Raptor- Fine Screen KR-HB-LSFS		
380.4	grit unit	Raptor s.s. Grit Classifier		
	lighting	Incandescent inside, Wall Packs outside		
	doors	4-Steel Mandoors, (6x7), 1-overhead (15'x12' H)		
	HVAC	5-Indeco unit heaters, 2 - 42" x 48" motorize Galv. Steel intake		intake louvers and ductwork had considerable amount of rust
	roof	Asphalt Shingle		
389.4	Electrical Control Room	MCC- 600 amp, 3 ph., 480V, 30KVA Transformer, LP1 - 100 Amp Circuit Panel, Unit Heater , 1' Diameter Exhaust Fan, 18" x 24" intake louver		
393	Other	Eye Wash and Shower		
	<b>SBR Units</b>			
354.4	Structure	Concrete post tension system (116' x 167' x 20' deep)		
	Manufacturer	Aeromod Sequox Biological Nutrient Removal System		
	<b>Sludge Digesters</b>			
		2-units		
354.4	Structure	77' diameter steel tank		converted from existing DAVCO units
380.4	Aeration	15 - PVC Drop pipes with 6 - one meter coarse bubble diffusers		
354.4	<b>BLOWER BUILDING</b>			Building houses 2 blower rooms and the utility water room
	<b>Blower Room #1</b>			
389.4	Blowers	3 - Continental Industries centrifugal model 0.77A1.08 Blowers 5000 CFM, 200 HP		
	HVAC	3' Diameter Exhaust Fan, 2.5'x5'- intake louves aluminum		
389.4	Electrical	Siemens 800 AMP MCC		
	Other	Interior Florescent Lighting 6'x7' double steel doors		
	<b>Blower Room #2</b>			
389.4	Blowers	5 Roots model 624 RCSH Rothex lobe blower, 1550 cfm each		
389.4		2 Ingersoll Rand- Compressors 60 Gal each, 14 cfm @ 40 psi		
	HVAC	3' diameter exhaust fan, 2.5'x5'- intake louves aluminum		
389.4	Electrical	Eaton 600 amp MCC/disconnects for roots, Eaton TVSS		
	Other	6' x 7' double steel door		
354.4	Aerated Grit chamber	Concrete 22' x 18' x 20' deep Raptor Aeroductor		
360	Forcemain Chamber	Concrete 16' x 19' x 13' deep with 6 aluminum slide gates aerated with single drop tube and fine bubble diffusers		
	<b>UV System</b>			
354.4	Building	CMU with Stone Exterior supported on concrete lower walls		
	Size	51' x 21' x 12'H, integral discharge chamber 10' x 16' x 12' D		
	UV unit	Sunlight systems - inline 25 bulb units , total 3		
389.4	electrical/controls	37.5 KVA transformer; MCC - Eaton Main-350 AMP with integral TVSS; LPQ-100 amp panel; A-B control panels (2)		
	lighting	wall packs and metal halide ceiling mounted		
	HVAC	3-unit heaters, 4'x4' motorized intake louver 50 gal electric water heater		
	roof	asphalt shingle		
389.4	flow metering	3 - Endress & Hauser Mag Meters		one unit on each discharge
371	valves	3 - 12" flowserve motor actuated valves		
	doors	6' x 7' steel double door		
371	utility water pumps	2 - 20hp 2.5 GPH LMI dosing pump		
393	other	eyewash/shower		
	<b>Yard Pump Station</b>			
371	Pump Manufacturer	Flygt		
	Pump Model Number	NP-3127		
	Motor HP	two 10 HP (500 GPM), one 7.5 HP (170 GPM)		
354.4	pump station	Concrete 9' x 9' x 23' deep precast concrete 4' x 8' and 2' x 3' aluminum hatchways		
	Control panel	Flygt		(located in WAS sludge building)
371	Valves	Concrete valve pit 10' x 10' x 8' deep 2 - 6 inch Clow plug valves, 1 - 4 inch Clow plug valve 2 - 6 inch Clow gate valves, 1 - 4 inch Clow gate valve		
395	controls	flygt multitrode		
	<b>ELECTRICAL</b>			
		MCC same as WAS sludge pumps		
	<b>WAS Sludge Pumps</b>			
371	Pump Manufacturer	Seepex		
	Pump Model Number	BN70 6L		
	Motor HP	20 HP		



371	Valves	(11) 6" Plug Valves	
		4 - Flowserve 6" motor actuated plug valves	
354.4	Building	19' x 22'	
	Main Structure Material	CMU/Stone Exterior	
	Roof type	Asphalt Shingle Roof	
	Doors (number /material)	Double Steel Doors	
	lighting	Interior - Fluorescent Lights, Exterior wall packs	
	ELECTRICAL		
389.4	MCC	Eaton 350 AMP with integral TVSS; LP4 60 Amp 15 KVA Transformer	
389.4	Other	Endress and Hauser 6" Mag meter - model 50WF1F	
	sludge thickener	Aero-mod rotary drum thickener	
354.4	Building	Concrete prefab -w/ concrete roof	
	Polymor unit	Neptune Polymastor	
	electrical/controls	C-H KVA transformer, Panel P-3 -225 Amp/ LP-4 1	100 Amp?
	lighting	fluorescent interior, outside wall packs	
	doors		
	HVAC	Berro Unit Heater/ 1' Diamter Exhaust Fan/ 18"x18" Alum. Intake Louver	
	roof	6' x 7' steel double door	
371	Sludge Pump	Seepex - Progressive cavity pumps	
	Utility Water system		
	Equipment	3 receiving tanks- 250 gallons each	
354.4	Building	same as blowers	
	electrical/controls	800 amp MCC 2006, Verbatum alarm	
	lighting	Interior Fluorescent	
	doors	double steel 6'x7'	
	HVAC	2' x 2.5' Aluminum motorized Intake, Unit heater, 3' diamter exhaust fan	
	roof	metal	
389.4	other	Util. water pumps 20hp (2)/ 215 GPH dosin pum lmi Effluent chart Recorder	
	Generator		
354.4	Maintenance Bldg. / Garage		Divided into 3 sections
	Dimensions	31' x 76'	
	Main Structure Material	CMU/Stone exterior	
	Roof type	Asphalt shingle roof	
	Doors (number /material)	5 overhead doors, steel (10' x12'H) electric operated; 4 - 3' x 7' man doors (2 interior and 2 exterior)	
	lighting	Interior Metal Halide	
	HVAC	4 Electric Unit heaters Intake Louver 3' x 6' Infared heaters (4) Intake Louver 4' x 4' 50 gal elec. Water heater	
354.4	Other	Elevate storage area Toilet/shower/sink	
389.4	Equipment	Overhead Crane - 1 ton cable unit manufactured by Yale Drill Press Work Table	
389.4	Electric	MCC 225 AMP with built in TVSS, 30 KVA transformer	
354.4	WWTP Office Building		
	Dimensions	63' x 45' - two story	
	Main structure material	Concrete Masonary Units with stone façade	
	Foundation	Poured Concrete	
	Roof type	Asphalt Shingle	
	Description of building	The building consists of 2 floors, the first floor contains the mens and womens loker rooms; as reception area; storage room; a laboratory and a 2 bay garage with side storage. The second floor contains five offices; a lunch room; a training/conference room; mens and womens bathrooms; the HVAC mechanical room and a storage room. The building is served by a central elevator. The laboratory is equipped with lab tables with sinks; a fume hood; various lab glassware, testing equipment, scales, reagents and microscopes.	

**RECORD DRAWING NOTES:**

1. RECORD INFORMATION PRESENTED IN HEAVY, SLANT-LETTERING STYLE. ORIGINAL DESIGN INFORMATION CROSSED OUT WITH A SINGLE LINE. WHERE ORIGINAL INFORMATION IS NOT CROSSED OUT, NO RECORD INFORMATION HAS BEEN PROVIDED.
2. THIS RECORD PLAN HAS BEEN PREPARED ON THE BASIS OF LIMITED SURVEY AND VISUAL OBSERVATIONS PERFORMED BY GILMORE & ASSOCIATES, INC. DURING AND FOLLOWING CONSTRUCTION. AND DISTRIBUTION RECORD INFORMATION PROVIDED BY THE GENERAL/MECHANICAL AND ELECTRICAL CONTRACTORS. NO SOILING OR EXCAVATIONS WERE DONE IN THE PREPARATION OF THIS RECORD PLAN. GILMORE & ASSOCIATES, INC. REPRESENTATIVES WERE NOT CONTINUOUSLY PRESENT DURING CONSTRUCTION ACTIVITIES. THEREFORE, UTILITIES SHOWN SHOULD BE CONSIDERED APPROXIMATE IN LOCATION, DEPTH, AND SIZE.
3. THIS RECORD PLAN IS INTENDED TO SUPPLEMENT INFORMATION CONTAINED IN THE PROJECT SUBMITTALS AND OPERATION AND MAINTENANCE MANUALS. REFER TO APPROVED SUBMITTALS FOR ACTUAL PRODUCTS AND EQUIPMENT APPROVED FOR INSTALLATION.
4. TO THE EXTENT THAT THIS RECORD DRAWING HAS BEEN PREPARED BASED UPON INFORMATION PROVIDED BY OTHERS, GILMORE & ASSOCIATES, INC. MAKES NO WARRANTY OF THE ACCURACY OR COMPLETENESS OF THIS DRAWING.
5. ALL DESIGNERS AND CONTRACTORS UTILIZING THIS PLAN AND THE INFORMATION CONTAINED HEREON ARE CAUTIONED TO COMPLY WITH THE REQUIREMENTS OF PA ACT 287 OF 1974 AS AMENDED.



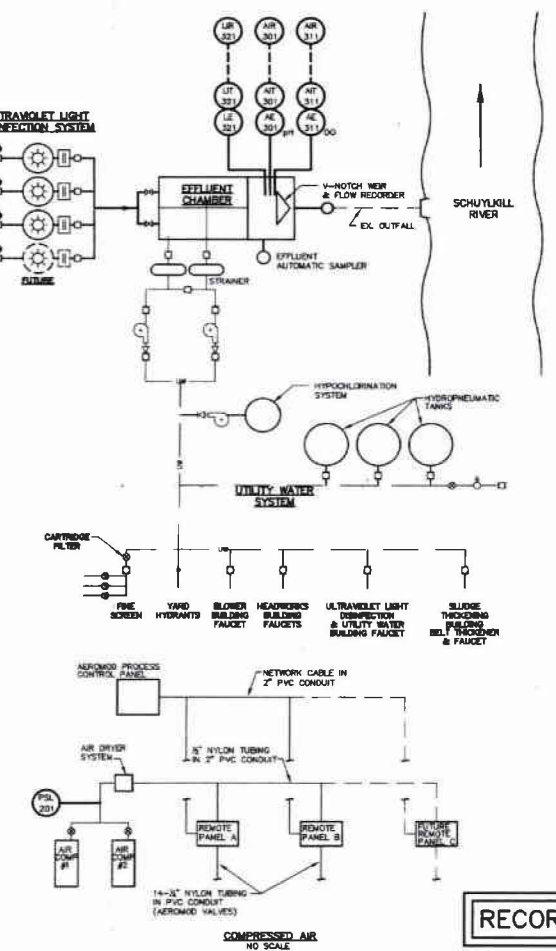
**LEGEND:**

— PROPOSED FACILITIES	— PNEUMATIC BUTTERFLY VALVE (AIR DRIVEN)
- - - FUTURE FACILITIES	— PNEUMATIC BALL VALVE (AIR DRIVEN)
— FORWARD FLOW UNDER NORMAL CONDITIONS	— BUTTERFLY VALVE
— SEMI/DRAIN LINES/FORCE MAINS/OVERFLWS/BYPASSES	— BUTTERFLY VALVE (MOTOR DRIVEN)
— AIR SUPPLY	— BALL VALVE
— RETURN ACTIVATED SLUDGE	— GATE/REGGIE VALVE
— WASTE ACTIVATED SLUDGE	— CHECK VALVE
— SCUM	— PLUG VALVE
— LIQUID DIGESTED SLUDGE	— PLUG VALVE (MOTOR DRIVEN)
— SCREENINGS	— SOLENOID VALVE
— GRIT	— CORPORATION STOP
— THICKENED LIQUID DIGESTED SLUDGE	— PRESSURE RELIEF VALVE
— THICKENER FILTRATE	— SLIDE/STOP GATE
— DIGESTER SUPERNATANT	— FLOW CONTROL SLIDE GATE
— UTILITY WATER	— INTAKE FILTER
— AIR LIFT	— SLUICER OR
— AIR DIFFUSER UNIT/ASSEMBLY	— SLUICER
— DECANTER	— PROGRESSIVE CAVITY PUMP
— MANMETER	
— CENTRIFUGAL PUMP	

**INSTRUMENTATION SYMBOL LEGEND**

SYMBOL	DESCRIPTION
○	MOUNTED LOCALLY
○	MOUNTED ON FACE OF PANEL
○	MOUNTED BEHIND PANEL DOOR
○	ALARM LIGHT
○	NOT ACCESSIBLE TO OPERATOR
○	ACCESSIBLE TO OPERATOR
○	AUXILIARY LOCATION
○	NOT ACCESSIBLE TO OPERATOR
○	ACCESSIBLE TO OPERATOR
○	COMPLEX OR UNDEFINED INTERLOCK

FIRST LETTER	SUCCESSING LETTERS
A	ANALYSIS
B	BURNER
D	DENSITY/DIFFERENTIAL
E	VOLTAGE
F	FLOW RATE
G	GLASS
H	HAND
I	CURRENT
J	POWER
K	TIME
L	LEVEL
M	MOISTURE/MALFUNCTION
N	TURBIDITY
O	PRESSURE
Q	QUANTITY
R	REMOTE
S	SPEED/FREQUENCY
T	TEMPERATURE/TORQUE
U	MULTIFUNCTION
V	VISCOSITY/VIBRATION
W	WEIGHT
X	AS DEFINED
Y	STATUS
Z	POSITION



**RECORD DRAWING**

**FLOW SCHEMATIC**  
**KING ROAD WASTEWATER TREATMENT PLANT EXPANSION & UPGRADE**

GILMORE & ASSOCIATES, INC.  
CONSULTING ENGINEERS & LAND SURVEYORS

DATE: 8/30/03  
SCALE: AS NOTED

DESIGNED BY: [Signature] DRAWN BY: [Signature] CHECKED BY: [Signature]

1 OF 106

ONLY THOSE PLANS INCORPORATING THE RAISED PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL AND RELIED UPON BY USER. THIS PLAN IS PREPARED SPECIFICALLY FOR THE CLIENT AND PROJECT DESCRIBED HEREON. MODIFICATION, REVISION, DUPLICATION OR USE WITHOUT THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED. © COPYRIGHT 2003 GILMORE & ASSOCIATES, INC. ALL RIGHTS RESERVED.

**4.2 – POSSUM HOLLOW WWTP**



## **Possum Hollow WWTP**

### **Facility Description (See Facility Equipment Spread Sheet)**

The Possum Hollow Wastewater Treatment Plant was built in 2002. The system consists of the following components:

- Influent box
- Influent screening
- Aerated Grit Chamber
- Grit Classifier Unit
- Diversion box
- Aero-Mod System including integral sludge and digestion units
- UV System
- Utility Water pumps
- HVAC exhaust tower

### **Influent Box (Forcemain Box)**

The Influent Box is an open aerated poured in place concrete structure (12' x 12' x 10'D) with an overflow channels. The overflow discharges over a fixed weir where it flows to a distribution box that can direct the flow to either the aerated grit chamber or directly to influent screen building. The influent flow is the discharge from the Pump Station #16 force main.

### **.Headworks Building (Screening Room)**

The Headworks Building is an "L" shaped prefabricated metal building (45' x 50') on the long sides, supported on concrete block. The building houses a Lakeside "Raptor" rotary bar screen and Lakeside grit separator. The Lakeside screen is located in an elevated concrete structure that is made up of the screen channel, overflow bypass screen channel, and influent diversion and effluent boxes. Aluminum slide gates are used to divert flow. The building has 4 steel double doors, one steel overhead door; five unit heaters and a metal duct work the runs the length of the building for ventilation. The exhaust louvers and duct work had a considerable amount of rust. The ventilation system is powered by an outdoor 2 HP fan that discharges through a 22 foot high metal stack.

The building equipment is powered by a 600 amp MCC and 30KVA transformer located in a separate room in the northeast corner of the building.

### Aerated Grit Chamber

The grit chamber is a concrete 14' x 18' x 16' deep structure with a Lakeside "Raptor Aeroductor" center mount agitator and an air lift pump to remove grit from center of the grit chamber. The grit chamber is open to the atmosphere. The compressed air for the grit lift pump is taken as a side stream from the aeration blower header. The grit chamber and classifier work well.

### SBR Treatment System

The Sequencing Batch Reactors (SBR) is an aeration system consists of Three (3) separate trains with integral aeration, sludge digestion and clarifier. There is single integral sludge thickening chamber. The aeration system is a proprietary design, as provided by AeroMod Inc. The AeroMod system uses a sequencing activated sludge process for nitrogen removal. The AeroMod treatment train consists of an influent selector, First Stage Aeration, Second Stage Aeration, and Clarification. The process trains are contained within one large tank that is segmented into smaller tank compartments. The overall size of the SBR structure is 110' x 163' x 16' deep. The structure is constructed of poured in place concrete. Most of the compartments are fitted with aeration drop pipes with diffusers and motorized valves for air control.

### Service Building

The Service Building is a 24' x 118' prefabricated steel building on a concrete block foundation. Building is divided into the office laboratory; the generator/ maintenance / Electrical room; the compressor room and a UV disinfection area on the lower level.

The building has four 3' x 7' steel man doors; one 6' x 7' steel double door; one electric operated overhead steel roll up door (10' x 10' H).

The office contains is combined with lab area. A men's shower / bathroom is adjacent to the office.

The laboratory is equipped with lab tables with sinks; refrigerator; various lab glassware, testing equipment, scales, oven, reagents and microscopes.

### Aeration System

The plant building houses 6 Roots rotary lobe blowers. 3 are model 624J, 100 HP units and 3 are 616J, 50 HP units.

### Ultraviolet Disinfection System

The UV system is located in a lower level integral with the Plant Service Building and is constructed of poured concrete. This area also houses the controls, utility water pumps and water receiving tanks. The UV system consists of two 14 inch Aquionics Inline 5000 unit in parallel configuration. The UV system is



powered by a Square D 600 amp MCC located in the Generator Room. Under normal flow conditions, only one unit is operational at a time. Adjacent to the building is the treatment plant discharge structure which contains the V-notch overflow weir and ultrasonic measuring unit.

#### Utility Water System

The yard non-potable water distribution system is supplied by two 15 HP, ITT 500 centrifugal pumps located in the UV section of the service building. The pump discharge flows through filters and sodium hypochlorite is added via a LMI dosing pump. The treated water is pumped to two 230 gallon receiving/bladder tanks located adjacent to the pumps, from where it is distributed throughout the property.

#### Potable Water Supply System

The potable water supplied by a 200 foot deep well located west of the Service Building. The well water is pumped to a receiving/bladder tank locate in the UV section of the service building from where it is distributed throughout the site.

#### Generator

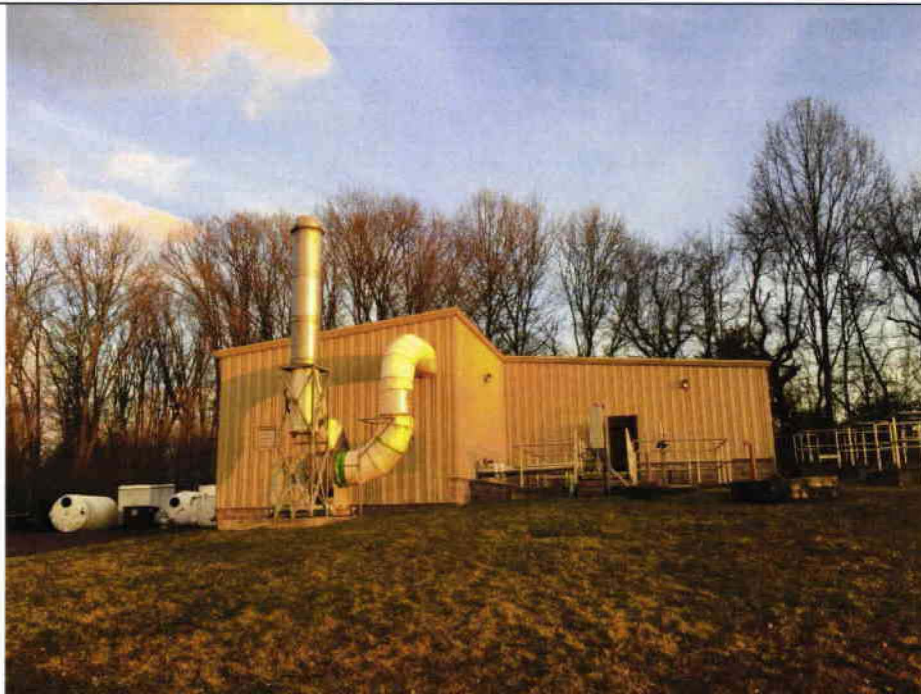
The generator is a Cummins 500 KW / 625 KVA, 755 HP unit. Diesel fuel is supplied locally with a 75 gallon Tramont Diesel Run System 2000 located adjacent to the generator. A 2000 gallon EcoVault duel wall, insulated steel tank is located outside on the east side of the building. The generator discharge louver is 10' x 7'.

**Facility Construction Cost – Possum Hollow WWTP**

<u>Year</u>	<u>Cost</u>	<u>Description</u>	<u>Source</u>
2002	\$7,904,782	WWTP Facility including construction including pump station 16 and pump station 17, bonding, engineering and inspection, legal and contribution from Excelon.	Tapping Fee Calculation
2005	\$44,654	SCADA	Depreciate Asset List



1	Possum Hollow WWTP- Building Entrance
---	---------------------------------------

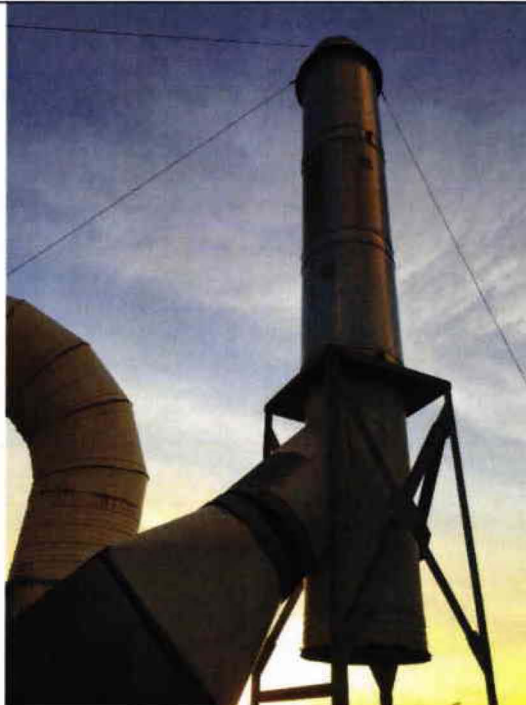


2	Possum Hollow WWTP- Head Works Building
---	---





3	Possum Hollow WWTP- Aerated Grit Chamber
---	--



4	Possum Hollow WWTP- Headworks Exhaust Tower
---	---



5 | Possum Hollow WWTP- Head Works Influent Screen Unit



6 | Possum Hollow WWTP- Grit Classifier



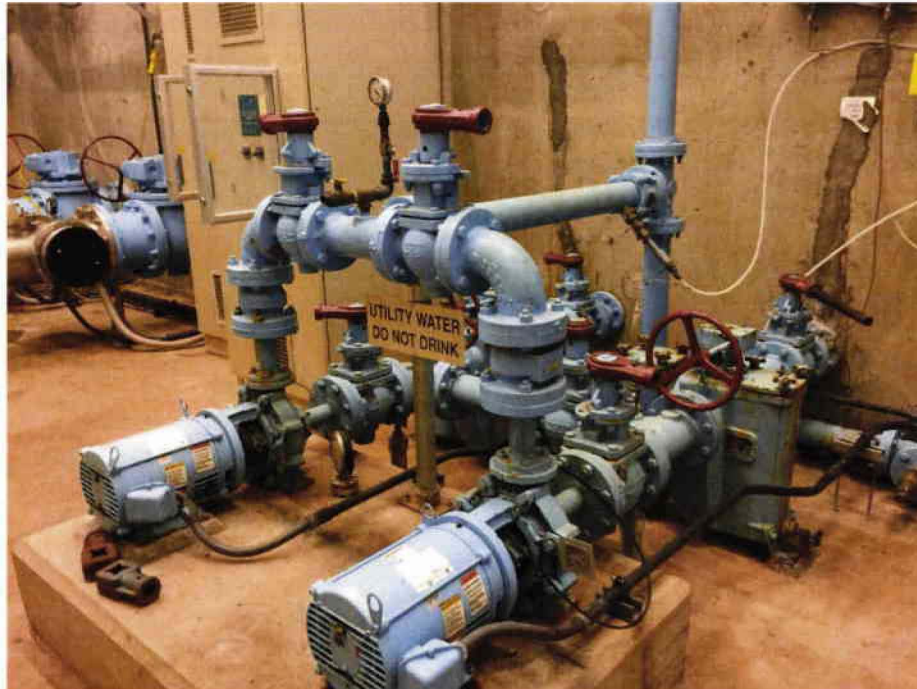


7 Possum Hollow WWTP- Inline UV Units



8 Possum Hollow WWTP- UV Units Control Panels





9	Possum Hollow WWTP- Yard Water Pumps
---	--------------------------------------



10	Possum Hollow WWTP- Yard Water Pump and Receiving Tanks (left) , Potable Water Tank (right)
----	---



11 | Possum Hollow WWTP- Office Area and Laboratory



12 | Possum Hollow WWTP- Flow Recorder and Chart Recorders

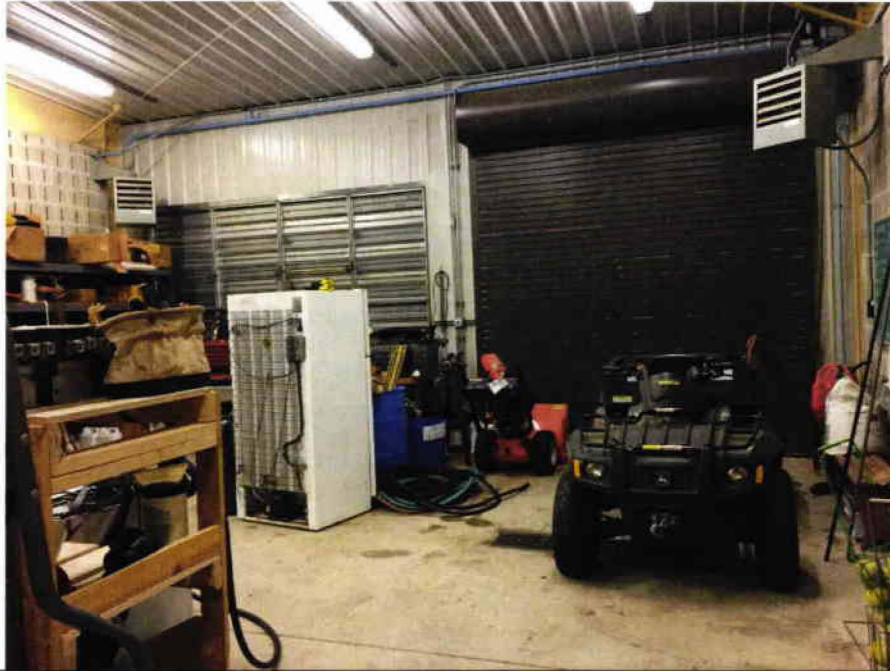




13 Possum Hollow WWTP- Service Building Exterior



14 Possum Hollow WWTP- Facility Generator Room



15	Possum Hollow WWTP- Maintenance Area
----	--------------------------------------



16	Possum Hollow WWTP- Building MCC
----	----------------------------------





17	Possum Hollow WWTP- Generator
----	-------------------------------



18	Possum Hollow WWTP- Blowers
----	-----------------------------



19 Possum Hollow WWTP- Blower MCC



20 Possum Hollow WWTP- SBR Unit Aeration Chamber





21	Possum Hollow WWTP- SBR Unit Aeration Chamber
----	---



22	Possum Hollow WWTP- Outside Oil Tank
----	--------------------------------------



23 | Possum Hollow WWTP- Heat Pump



24 | Possum Hollow WWTP- Discharge Chamber





25	Possum Hollow WWTP- Yard Well Pump and PECO Transformer
----	---

**Possum Hollow WWTP**

CODE	UNIT	DESCRIPTION	YEAR INSTALLED	COMMENTS
<b>Treatment processes</b>				
	<b>Headworks</b>			
	facility description	Concrete Chamber w/ 2 sluice gates & bar screen	2003	
354.4	<b>Building</b>	"L" shaped prefabricated metal building (45 x 50') on the long sides, supported on concrete block.		
380.4	screen unit	Lakeside Raptor- Fine Screen KR-HB-LSFS		
380.4	grit unit	Lakeside Grit Classifier		
	lighting	Metal Halide inside, Wall Packs outside		
	doors	4 Steel Manddoors, (3x7), 1-overhead roll up (14'x10' H)		
	HVAC	7 electric unit heaters, 2 - 42" x 48" motorize Galv. Steel Intake Louvers, Exhaust fan with steel duct work (length of building)		
	roof	Metal		
389.4	Electrical Control Room	MCC- 600 amp, 3 ph., 480V, 30KVA Transformer, LP1 - 100 Amp Circuit Panel, Unit Heater , 1' Diameter Exhaust Fan, 18" x 24" intake louver		
389.4	Other	Eye Wash and Shower		
354.4	<b>Forcemain Chamber</b>	Concrete 12' x 12' x 10' deep with 6 aluminum slide gates aerated with single drop tube and fine bubble diffusers		
	<b>SBR Units</b>			
354.4	Structure	Concrete poured in place units (110' x 163' x 16' deep)		
380.4	Manufacturer	Aeromod Sequox Biological Nutrient Removal System		
	Description	System has 3 separate trains with integral aeration, sludge digestion and clarifier. There is single Integral sludge thickening chamber.		
380.4	RAS Controls	Air Control system		located in Office
	<b>Blowers</b>			
380.4	Description	Ram615 roots/dresser 60HP (3) Ram 624 Roots/Dresser 100HP (3)		
	<b>Treatment Plant Service building</b>			
	Dimensions	95' x 35'		Building is divided into the office laboratory; the generator/ maintenance / Electrical room; the compressor room and a UV disinfection area on the lower level.
354.4	Main Structure Material	Prefabricated building on concrete block foundation		
	Roof type	metal		
	Doors	4 - 3' x 7' steel manddoors; 1 - 6' x 7' steel double door; 1 - overhead steel roll up door (10' x 10' H)		
	lighting	interior florescent lighting for all rooms, exterior wall packs		
	HVAC	Trane Heat pump		
394	Laboratory/Office	The laboratory is equipped with lab tables with sinks; refrigerator; various lab glassware, testing equipment, scales, oven, reagents and microscopes.  The office contains is combined with lab area. A mens shower / bathroom is adjacent to the office.		
354.4	<b>Aerated Grit Chamber</b>			
	Dimensions	Concrete 14' x 18' x 16' deep		
	Equipment	Raptor Aeroductor		

CODE	UNIT	DESCRIPTION	YEAR INSTALLED	COMMENTS
389.4	<b>Electric</b>			
	MCC			
	Main Disconnect	SQ. D-1200 Amp		
	MDP	SQ.D- 1200 Amp		
	MCC-C	600 Amp		
	LPA	150 Amp		
	LPA-1	150 Amp		
	Alarm	RACO Verbatim		
380.4	<b>UV System</b>			House in Lower level of treatment building
	Manufacturer / model	2 - Aquionics inline 5000		
	UV unit	14" Diam. Pipe		
	electrical/controls			
	lighting			
371	valves	14" plug		
	HVAC	Louver		
	roof	Air Ventilation System Greenneck (size)		
	<b>Utility Water pumps</b>			
371	pumps	ITT 500 - 15 HP		
371		Mueller Strainers		
		(7) 4" plug valves ballcentric		
		2 - receiving tanks 6.5' H x 30" W (230 gallons each)		
	<b>Potable water supply</b>			
389.4	Water supply well			
354.4	potable water tank	30" diameter x 5' high (180 gallons)		
355.4	<b>Generator</b>			
	Manufacture/ size	Cummins 500 KW - 625 KVA		
		755 HP		
389.4	local fuel tank	Tramont Diesel Run System 2000 Local Tank (75 gallons)		
389.4	Exterior Fuel Tank	2000 Gallon EcoVault Tank, dual wall insulated	2003	
		Exhaust Louver- 6'75"x10'		



THIS DRAWING IS THE PROPERTY OF GILMORE & ASSOCIATES, INC. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED THEREON. ANY REUSE OR MODIFICATION OF THIS DRAWING WITHOUT THE WRITTEN PERMISSION OF GILMORE & ASSOCIATES, INC. IS STRICTLY PROHIBITED. THE USER ASSUMES ALL LIABILITY FOR ANY ERRORS OR OMISSIONS IN THIS DRAWING.

INSTALLATION SYMBOL LEGEND

SYMBOL	DESCRIPTION
(Symbol)	WATER TREATMENT
(Symbol)	WATER DISTRIBUTION
(Symbol)	WATER COLLECTION
(Symbol)	WATER STORAGE
(Symbol)	WATER PUMP
(Symbol)	WATER VALVE
(Symbol)	WATER METER
(Symbol)	WATER FILTER
(Symbol)	WATER TANK
(Symbol)	WATER PIPING
(Symbol)	WATER CONNECTION
(Symbol)	WATER ISOLATION
(Symbol)	WATER METER
(Symbol)	WATER VALVE
(Symbol)	WATER TANK
(Symbol)	WATER PIPING
(Symbol)	WATER CONNECTION
(Symbol)	WATER ISOLATION

SYMBOL LEGEND

SYMBOL	DESCRIPTION
(Symbol)	WATER TREATMENT
(Symbol)	WATER DISTRIBUTION
(Symbol)	WATER COLLECTION
(Symbol)	WATER STORAGE
(Symbol)	WATER PUMP
(Symbol)	WATER VALVE
(Symbol)	WATER METER
(Symbol)	WATER FILTER
(Symbol)	WATER TANK
(Symbol)	WATER PIPING
(Symbol)	WATER CONNECTION
(Symbol)	WATER ISOLATION
(Symbol)	WATER METER
(Symbol)	WATER VALVE
(Symbol)	WATER TANK
(Symbol)	WATER PIPING
(Symbol)	WATER CONNECTION
(Symbol)	WATER ISOLATION

**RECORD DRAWING**

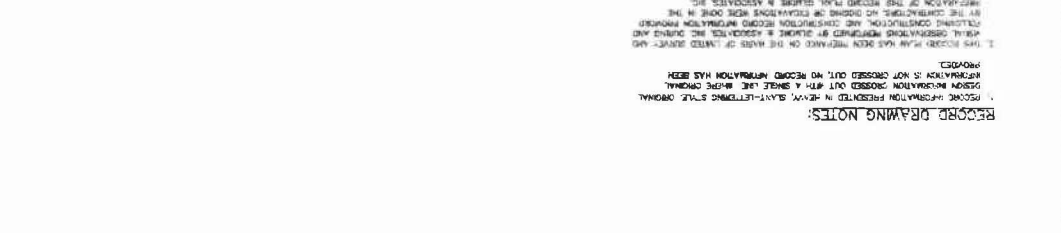
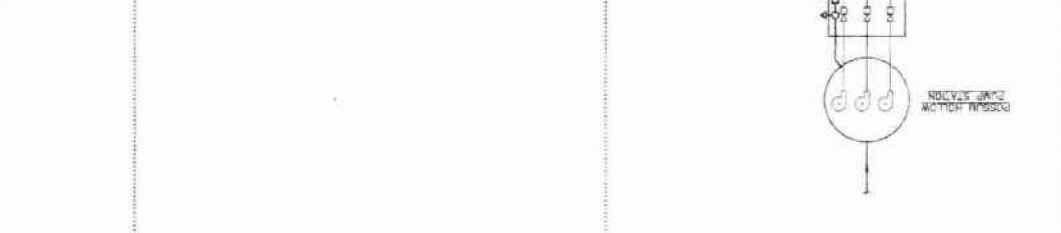
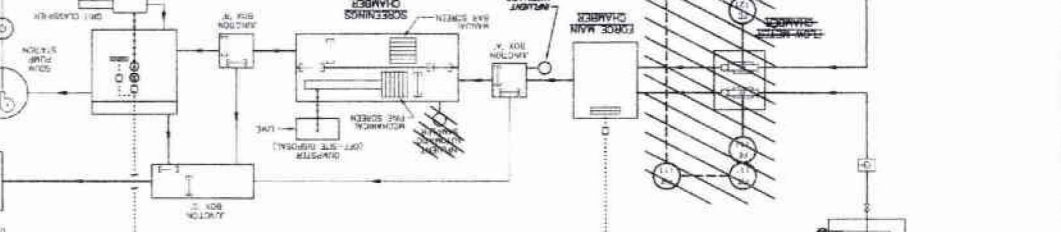
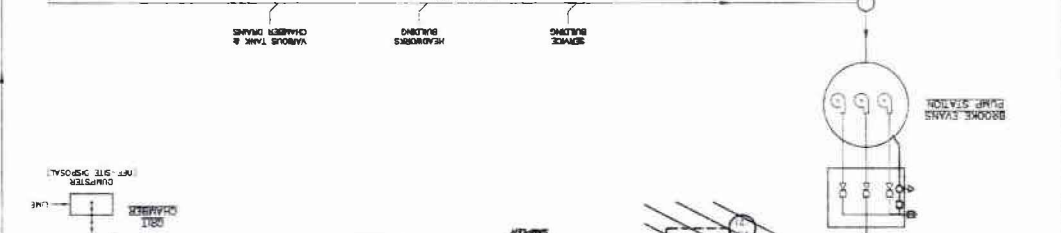
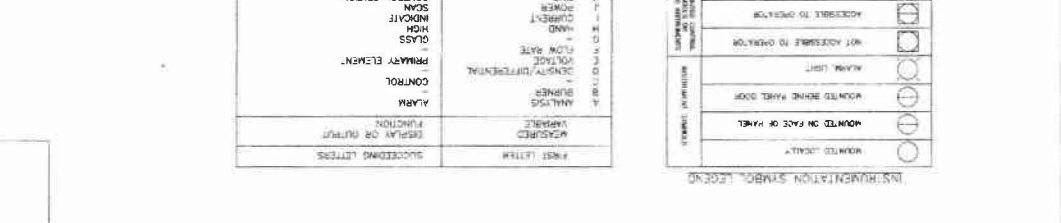
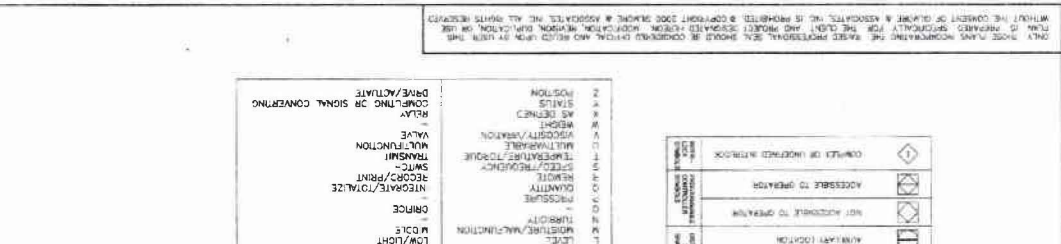
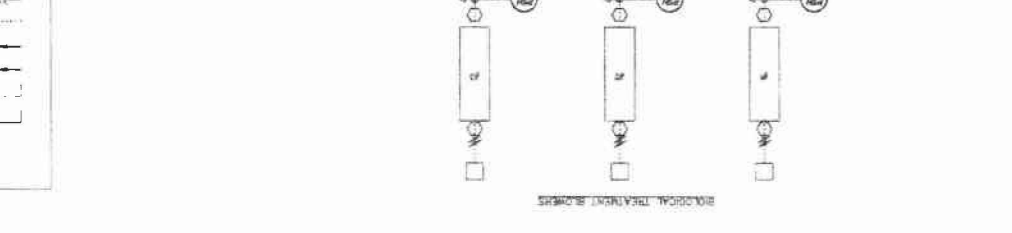
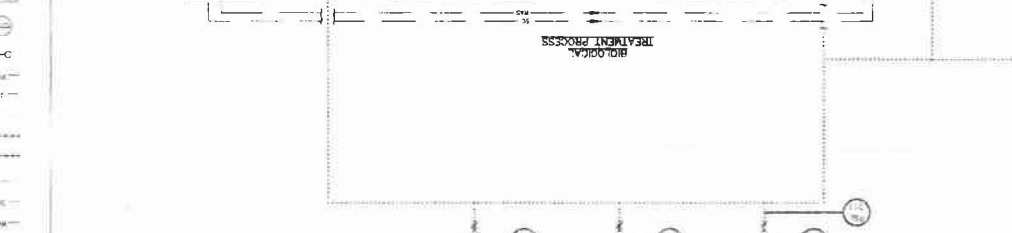
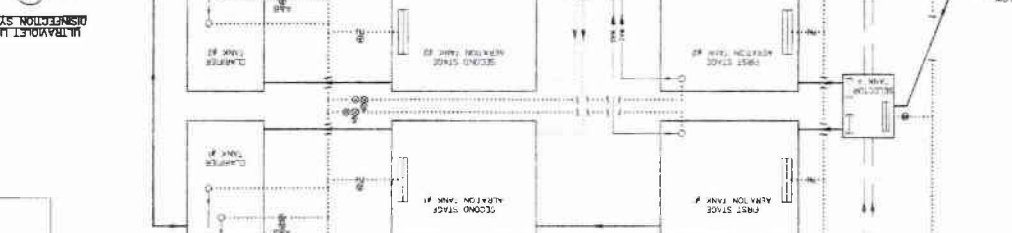
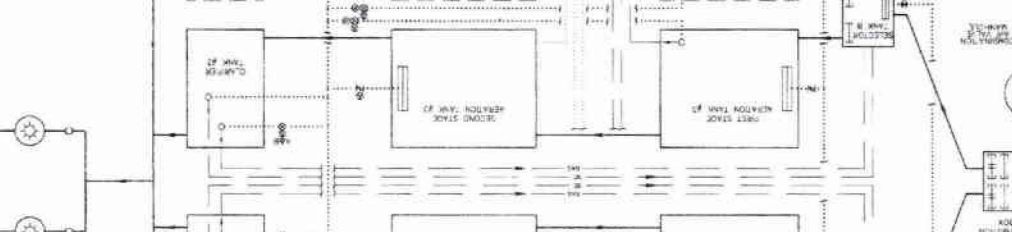
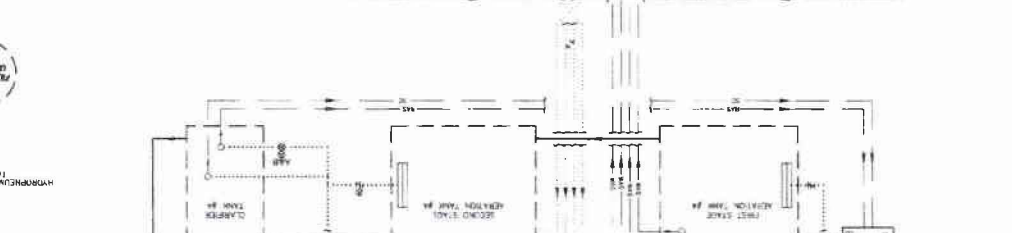
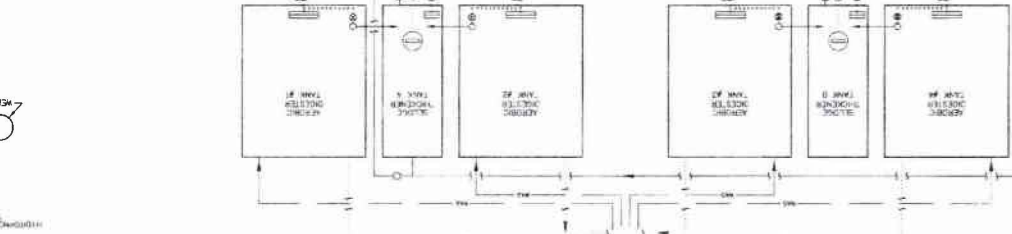
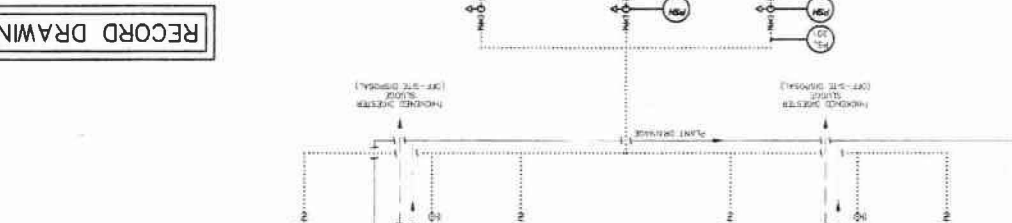
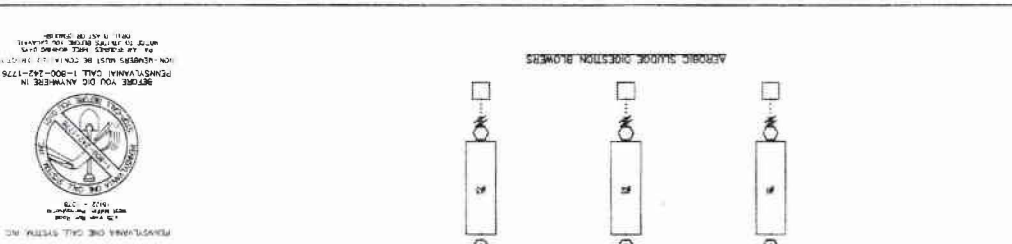
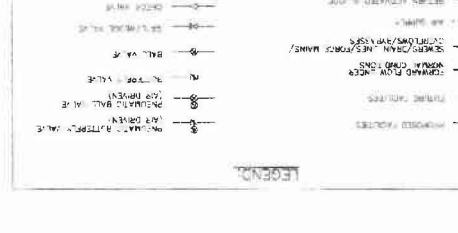
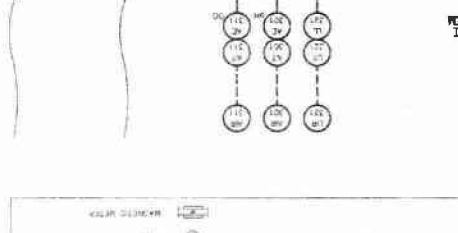
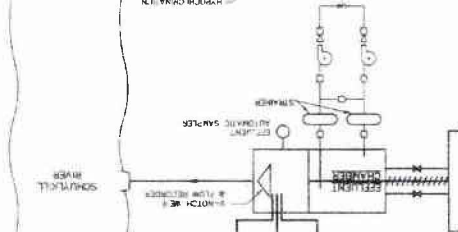
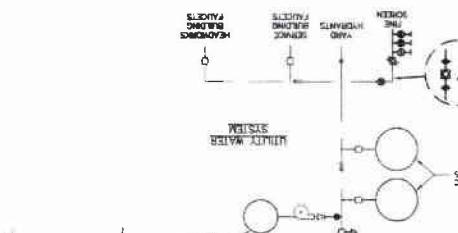
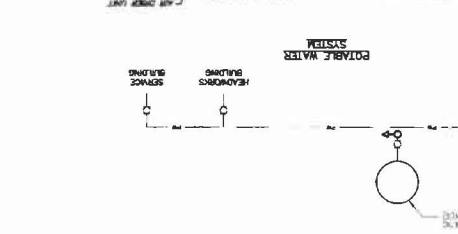
**GILMORE & ASSOCIATES, INC.**  
 CONSULTING ENGINEERS & LAND SURVEYORS  
 101 SHEET NO. 2 OF 80  
 WASTEWATER TREATMENT PLANT & PUMP STATIONS  
 FLOW SCHEMATIC

DATE: 2000-01-21  
 SCALE: AS SHOWN  
 TOTAL AREA: 101 SHEETS

PROJECT NO.: 2000-01-21  
 LOCATION: HUNTERDON TOWNSHIP, NEW JERSEY

REVISIONS

NO.	DATE	DESCRIPTION
1	11-11-00	ISSUED FOR PERMIT APPLICATION
2	12-20-00	GENERAL REVISIONS
3	1-11-01	RECORD INFORMATION ADDED



**RECORD DRAWING NOTES:**

1. RECORD DRAWING IS THE PROPERTY OF GILMORE & ASSOCIATES, INC. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED THEREON. ANY REUSE OR MODIFICATION OF THIS DRAWING WITHOUT THE WRITTEN PERMISSION OF GILMORE & ASSOCIATES, INC. IS STRICTLY PROHIBITED. THE USER ASSUMES ALL LIABILITY FOR ANY ERRORS OR OMISSIONS IN THIS DRAWING.
2. THE RECORD DRAWING IS THE PROPERTY OF GILMORE & ASSOCIATES, INC. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED THEREON. ANY REUSE OR MODIFICATION OF THIS DRAWING WITHOUT THE WRITTEN PERMISSION OF GILMORE & ASSOCIATES, INC. IS STRICTLY PROHIBITED. THE USER ASSUMES ALL LIABILITY FOR ANY ERRORS OR OMISSIONS IN THIS DRAWING.
3. THE RECORD DRAWING IS THE PROPERTY OF GILMORE & ASSOCIATES, INC. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED THEREON. ANY REUSE OR MODIFICATION OF THIS DRAWING WITHOUT THE WRITTEN PERMISSION OF GILMORE & ASSOCIATES, INC. IS STRICTLY PROHIBITED. THE USER ASSUMES ALL LIABILITY FOR ANY ERRORS OR OMISSIONS IN THIS DRAWING.

### **4.3 – PUMP STATIONS**

**Pump Station #1 - AKA Airport Road Pump Station**

**Facility Description (see attached Information Sheet)**

Pump Station #1 is located at 100 Jones Blvd and is equipped with Two (2) explosion proof 240-GPM Hydromatic submersible pumps. Wastewater is discharged through a 2420 foot, six (6) inch PVC force main that ties into the existing sewage collection system at Manhole BE46D located on Limerick Center Road. The line crosses Brooke Evans Creek and runs along Mulberry Drive to Limerick Center Road. The pump station was installed in 1992.

The pump wet well is a precast concrete unit (6 ft. round) with one 43" x 52" aluminum hatchway. The control panel is manufactured by Hydromatic. The pump system has a separate precast concrete valve box with a 3' x 3' aluminum hatchway. There are two CLOW 4" check valves and two 4" CLOW gate valves installed in 1992. The influent line to the wet well contains a Muffin Monster grinder which is hydraulically operated via a 5 HP unit located in the Generator Building.

The Generator Building (15' x 13') is constructed of concrete blocks with a brick façade and an asphalt shingle roof. The building contains florescent lighting and a steel double door.

The Generator is an ONAN/Cummins 50 KW diesel operated unit with an integral 200 gal diesel tank. The Automatic Transfer Switch (ATS) is manufactured by ONAN.

The entire property is surrounded by a 35' by 37' chain link fence with two double gates. The facility previously utilized a hydrogen peroxide dosing system, which is now abandoned. The system contained 500 gallon polyethylene tank, and dosing metering pump.

**Property Condition**

The Generator is serviced on a regular basis and operates satisfactorily. The building is in very good condition, the roof is in good condition and all HVAC systems work satisfactorily.

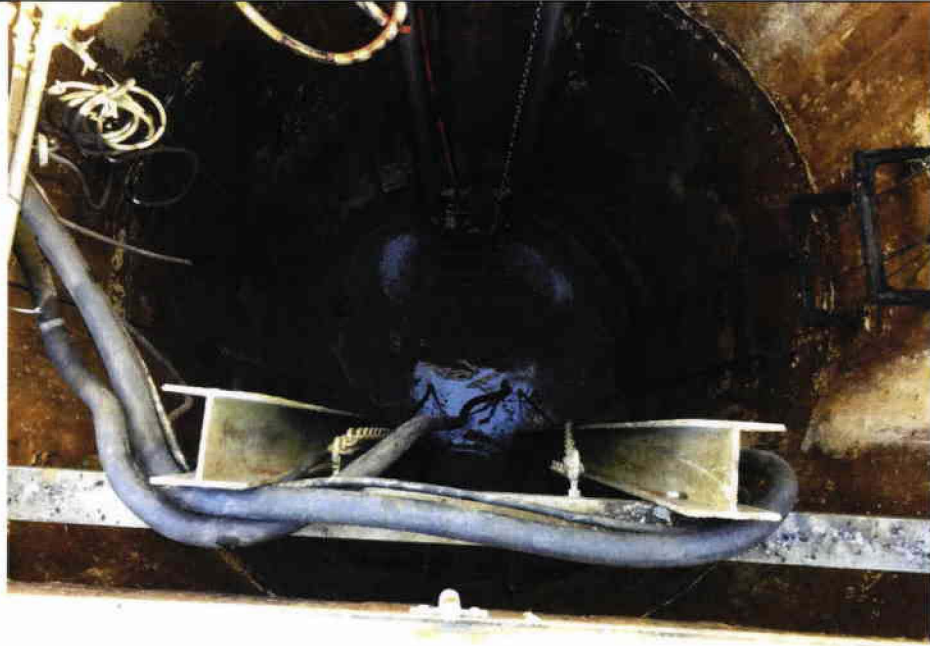


**Facility Construction Cost – Pump Station 1**

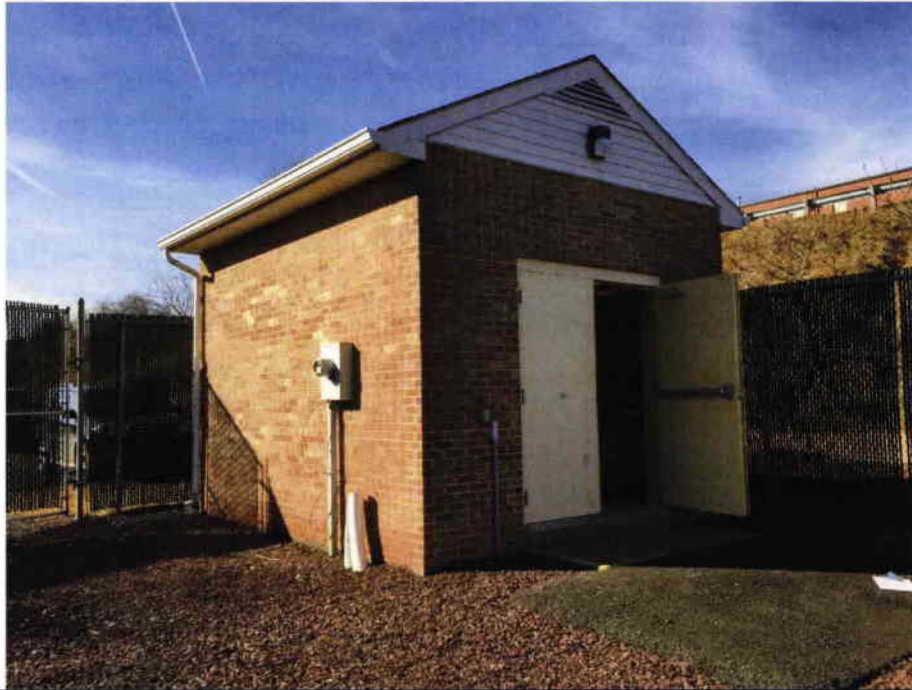
<u>Year</u>	<u>Cost</u>	<u>Description</u>	<u>Source</u>
1992	\$329,215.00	Initial facility cost including pump station, building, generator, forcemain, valve chamber, surge chamber, fencing, paving, etc.	Escrow Agreement
2016	\$3,250	Omni System Crystal Ball	Depreciated Asset List



1 Pump Station #1 – Wet Well and valve chamber



2 Pump Station #1 – Wet Well Interior.



3 Pump Station #1 – Building Exterior.



4 Pump Station #1 – Building Interior.



## Pump Station #1 Information Sheet

<b>PUMP STATION #1</b>					
		Station Name	Airport Road	Phone # 610-495-5647	
		Location	100 Jones Blvd., Limerick, PA 19468		
		Start Up Date	December 1, 1992		
CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS
371.3		Pump Manufacturer	Hydromatic	1992	
		Pump Model Number	S4LVX1500BC		
		Type	submersible		
		Pump GPM	240		
		Pump TDH Ft.	82		
		Pump Size	4 inch		
		Motor HP	15		
		Motor Voltage	230		
370.3		Wet Well Size	6 ft. round		
370.3		Hatchway	43"x52" Alum		
371.3		Pump Control	floats		OMNI - Crystal Ball
371.3		<b>CONTROL PANEL</b>			
		Manufacturer	Hydromatic		
		Model/serial number	620411-826		
371		<b>GRINDER</b>			
		manuf./model	Muffin Monster	1992	hydraulic
		HP	5 HP		
371		<b>CRAIN/HOIST</b>			
		Manuf./model	Portable Davit		
360		<b>VALVES</b>	precast concrete		3'x3' alum hatch
		Type/Manf./size/#	check/ 4" (2)		CLOW
			gate/ 4" (2)		CLOW
355		<b>GENERATOR</b>			
		Manufacturer	ONAN/Cummins	1992	
		Generator KW	50		
		Generator HP	86		
		Fuel Tank (Gals)	200		
355		ATS (manf/model #)	ONAN 150G		
360		<b>FORCE MAIN</b>			
		Force Main Size	6 inch	1992	
		Force Main Mat.	PVC		
		Length in Feet	2420		
354.2		<b>BUILDING</b>			
		SIZE	15'x13'	1992	
		Main Structure Material	concrete block, brick façade		
		Roof type	asphalt shingles		
		Doors (number /material)	6'x7' H double steel door		
		lighting	fluorescent		
		<b>ELECTRICAL</b>			
371.3		MCC	Service Panel 150 amp/150amp panel/ 150 amp pump main	1992	
396		Alarm System (manf/ model)	OMNI - Crystal Ball	2016	



**Pump Station #2 - AKA N. Limerick Pump Station**

**Facility Description (see attached Information Sheet)**

Pump Station #2 is located at 37 North Limerick Road and is equipped with two (2) explosion proof 179-GPM Hydromatic submersible pumps. The pump station was installed in 1990 and both pumps were replaced on 10/26/2000. Wastewater is discharged through an 800 foot, four (4) inch ductile iron force main that ties into the existing sewage collection system at Manhole 229 located at Ridge Pike and Limerick Road.

The pump wet well is a precast concrete unit (7 ft. x 5 ft. x approximately 20 ft. deep) with one 4.5' x 4.5' aluminum hatchway. The control panel is a generic unit manufactured locally. The pump system has a separate precast concrete valve box (6' x 8' x 12' deep). There are two CLOW 4" check valves and two 4" CLOW gate valves installed in 1990. The influent line to the wet well contains a Muffin Monster grinder which is hydraulically operated via a 5 HP unit located in the Generator Building.

The Generator Building (13' x 15') is constructed of concrete block with a brick façade and an asphalt shingle roof. The building contains florescent lighting with outside wall packs and the light on the outside light pole is broken. The building has a steel double doors. There is 100 Amp breaker and 100 Amp Main for the pumps outside.

The Generator is a Martin Machinery 30 KW diesel operated unit with an integral 50 gal diesel tank. An auxiliary tank (2'x2.5'x2.75'), approximately 100 gallons, is located adjacent to the unit. The Automatic Transfer Switch (ATS) is manufactured by Zenith Automatic Control Systems.

**Property Condition**

Both pumps were replaced in 2000. Generator is serviced on a regular basis and operates satisfactorily. The building is in very good condition, the roof is in good condition and all HVAC systems work satisfactorily.



**Facility Construction Cost – Pump Station 2**

<u>Year</u>	<u>Cost</u>	<u>Description</u>	<u>Source</u>
1990	\$191,713	Initial facility cost including pump station, building, generator, forcemain, valve chamber, surge chamber, fencing, paving, etc.	Tapping Fee calculations
2000	\$30,000	Both Pumps Replaced	Estimated 2016 dollars
2016	\$3,250	OMNI Crystal Ball	Depreciated assets



1 Pump Station #2 – Overall Site.



2 Pump Station #2 – Wet Well Interior.



3 Pump Station #2 – Building Exterior.



4 Pump Station #2 – Building Interior.





## Pump Station #2 Information Sheet

<b>PUMP STATION #2</b>					
		Station Name	N. Limerick		
		Location	37 North Limerick Road		
		Start Up Date	March, 1990		
CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS
371.3		Pump Manufacturer	Hydromatic	2000	Both Pumps Replaced 10/26/2000
		Pump Model Number	S4500M3t4	2000	New Battery 2/12/2013
		Type	Submersible		
		Pump GPM	179		
		Pump TDH Ft.	59		
		Pump Size	4"		
		Motor HP	5		
		Motor Voltage	230		
370.3		Wet Well Size	7ft. X 5ft.		
371.3		Pump Control	Transducer/ float backup		Crystal Ball
371.3		Hatch	4.5'x4.5' Alum		
371.3		<b>CONTROL PANEL</b>			
		Manufacturer	Generic		
		Model/serial number			
371		<b>GRINDER</b>			
		manuf./model	Muffin Monster Hydraulic	1990	
		HP	5		
371		<b>CRAIN/HOIST</b>			
		Manuf./model	N/A		
360		<b>VALVES</b>			
		Type/Manf./size/#	Concrete 6'x8'x12' D		
			Gate/CLOW/4" (2)		Sump pump
			Check/CLOW/4" (2)		
355		<b>GENERATOR</b>			
		Manufacturer	Martin Machinery		77 HP
		Generator KW	30	1990	
		Generator HP	66		Integral 6'x3'x10"
		Fuel Tank (Gals)	50		Aux Tank Steel 2'x2.5'x2.75'
355		ATS (manf/model #)	Zenith ZTS10EC-3AAELLPTUW		
360		<b>FORCE MAIN</b>			
		Force Main Size	4"		
		Force Main Mat.	Ductile Iron		
		Length in Feet	800 ft		
354.2		<b>BUILDING</b>			
		SIZE	13'x15'		
		Main Structure Material	Concrete block w/ brick		
		Roof type	Asphalt Shingles		
		Doors (number /material)	6'x7' steel		
		lighting	Fluorescent inside, outdoor wall packs, light on outside pole is broken		
371.3		<b>ELECTRICAL</b>			
		MCC	100 AMP Main Breaker		100 AMP Main for Pumps outside
396		Alarm System (manf/ model)	OMNI - Crystal Ball	2016	Transformer for light panel

**Pump Station #3 - AKA South Limerick Road Pump Station**

**Facility Description (see attached Information Sheet)**

Pump Station #3 is located at 302 South Limerick Road and is equipped with two (2) explosion proof 1,150-GPM Hydromatic submersible pumps. Wastewater is discharged through a 4000 foot, twelve (12) inch DIP force main that ties into the existing sewage collection system at Manhole A107 located on East Cherry Lane from where it flows by gravity to Pump Station #5 and inevitably on to the King Road WWTP. The pump station was installed in 1990.

The pump wet well is a precast concrete unit (10 ft. x 9.6 ft. x 18.33'ft deep) with two 4' x 3' aluminum hatchways. The control panel is manufactured by Hydromatic which was upgraded in 2016 with an OMNI Systems Crystal Ball Monitoring unit and new transducer to replace the ball float control system. The unit is also programmed to record flow volumes and for high and low level alarms. The pump system has a separate precast concrete valve box (9.3' x 9.3' x 13.67' deep) with a 4' x 4' aluminum hatchway. There are two APCO 8" check valves replaced in 2013 and 2014, and two 8" APCO gate valves installed in 1990. The influent line to the wet well contains a Muffin Monster grinder which is hydraulically operated via a 5 HP unit located in the Generator Building.

The station also has a precast concrete surge relief valve chamber (6' x 8' x 11.5' deep) with a 3.5' x 3.5' aluminum hatchway.

The Generator Building (22' x 14') is constructed of concrete blocks with a brick façade and an asphalt shingle roof. The building contains florescent lighting, a steel double door, a Dayton 5KW electric unit heater and a 70W Barber-Coleman motorized louver ( 5'x 5'). There is no MCC unit in the building; all power for the facility is distributed from the Electrical Panel.

The Generator is an O'Brian Machinery Co. 80 KW diesel operated unit with an integral 116 gal diesel tank. An approximately 205 gallon auxiliary tank is located adjacent to the unit. The Automatic Transfer Switch (ATS) is manufactured by Zenith Automatic Control Systems.

The entire property is surrounded by a 50' by 50' cyclone fence with barbed wire. The facility previously utilized a hydrogen peroxide dosing system, which is now abandoned. The system contained 250 gallon polyethylene tank, dosing metering pump and concrete block dike.

**Property Condition**

The pump station, pumps, control panel and associated piping and valves are scheduled for replacement. The Muffin Monster grinder unit was replace in 2013. The Generator is serviced on a regular basis and operates satisfactorily. The building is in very good condition, the roof is in good condition and all HVAC systems work satisfactorily. The interior walls have paint that is peeling in several locations and should be repainted.



**Facility Construction Cost – Pump Station 3**

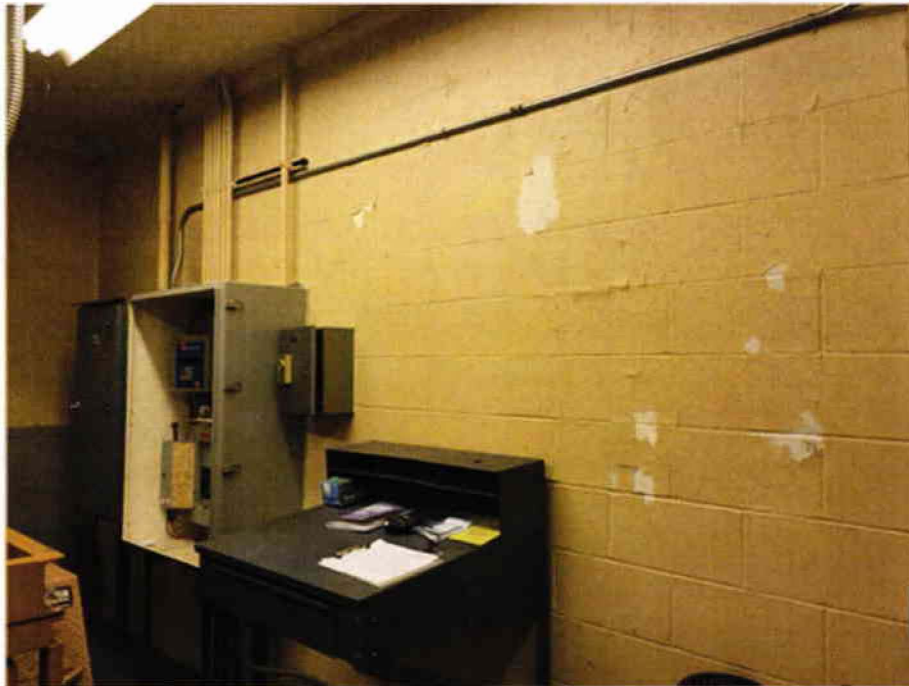
<u>Year</u>	<u>Cost</u>	<u>Description</u>	<u>Source</u>
1990	\$303,239	Initial facility cost including pump station, building, generator, forcemain, valve chamber, surge chamber, fencing, paving, etc.	Tapping Fee calculations
2011	\$18,666	Hydromatic Pump	Depreciated Asset list
2013	\$7,980	Muffin Monster Grinder Rebuild	Depreciated Asset list (2011 cost for pump station 11)
2016	\$2,492	Omni System Crystal Ball	Depreciated Asset List



1	Pump Station #3 – Overall Site.
---	---------------------------------



2	Pump Station #3 – Wet Well Interior.
---	--------------------------------------



3 Pump Station #3 – Control Panel.



4 Pump Station #3 – Building Interior.



### Pump Station #3 Information Sheet

<b>PUMP STATION #3</b>					
		Station Name	South Limerick	Phone # 610-948-0820	
		Location	302 South Limerick Rd., Royersford, PA 19468		
		Start Up Date	March 1, 1990		
CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS
371.3		Pump Manufacturer	Hydromatic	Pump 1 - 2011	Replaced
		Pump Model Number	S6LX4000EC	Pump 2 - 1990	
		Type	Submersible		
		Pump GPM	1150		
		Pump TDH Ft.	73		
		Pump Size	6"		
		Motor HP	40		
		Motor Voltage	230		
370.3		Wet Well Size	10 ft. x 9.6 ft. x 18'-4" ft D	1990	
370.3		Hatchway	4' x 3' aluminum		2 units
371.3		Pump Control	Transducer		Installed 2016, Omni Systems
371.3		<b><u>CONTROL PANEL</u></b>			
		Manufacturer	Hydromatic		
		Model/serial number	N/A		
371.3		<b><u>GRINDER</u></b>			
		manuf./model	Muffin Monster	2013	Grinder and Hydraulic unit rebuilt
		HP	5 HP		
371		<b><u>CRAIN/HOIST</u></b>			
		Manuf./model	N/A		
360		<b><u>VALVES</u></b>			
		Type/Manf./size/#	check/ APCO /8"/1	2013	REPLACED
			check/ APCO /8"/1	2014	REPLACED
			gate/ APCO /8"/2	1990	
355		<b><u>GENERATOR</u></b>			
		Manufacturer	The O'Brien Machinery Co.	1990	
		Generator KW	80		
		Generator HP			
		Fuel Tank (Gals)	116 (generator)		
			250 gallon aux. tank		
355		ATS (manf/model #)	Zenith Auto Controls		
360		<b><u>FORCE MAIN</u></b>			
		Force Main Size	12"		
		Force Main Mat.	DIP		
		Length in Feet	4000		
354.2		<b><u>BUILDING</u></b>			
		SIZE	22' x 14'		
		Main Structure Material	Concrete Block w/ brick facade		
		Roof type	Asphalt Shingle		
		Doors (number /material)	1 steel double door		
		lighting	fluorescent		
		<b><u>ELECTRICAL</u></b>			
371.3		MCC	Breaker Box		
396		Alarm System (manf/ model)	Omni Crystal Ball		



**Pump Station #4 - AKA Benner Road Pump Station**

**Facility Description (see attached Information Sheet)**

Pump Station #4 is located at 166 Benner Road and is equipped with two (2) explosion proof 120-GPM Flygt submersible pumps. Wastewater is discharged through a 940 foot, four (4) inch ductile iron force main that ties into the existing sewage collection system at the wye at Major and Benner Roads PS #5. The pump station was installed in 1990 and was upgraded with new pumps, controls, level stick, Muffin Monster (from PS#9) on 11/17/2001. Pump #2 oil seal failed and was repaired and installed on 11/14/2013.

The pump wet well is a precast concrete unit (6 ft. diameter, approximately 20' deep) with one 4.5' x 3' aluminum hatchway. The control panel is manufactured by FLYGT/Multirode. There is a 7.5'x7.5'x6.5' concrete valve pit with a sump pump. There are two APCO 4" check valves, a pressure release valve and 3 plug valves with 4" bypass. The influent line to the wet well contains a Muffin Monster grinder, which is hydraulically operated via a 5 HP unit located in the Generator Building.

The Generator Building (13' x 15') is constructed of concrete block with a brick façade and an asphalt shingle roof. The building contains florescent lighting inside and wall pack lighting on the outside with a steel double door. The building is powered by a 125 AMP main breaker, 180 AMP Breaker Pump Panel and 180 AMP Breaker Muffin Monster disconnects. The buildings HVAC system includes a 4'x5' aluminum motorized louver and electric unit heater.

The Generator is a Cummins/ ONAN 30 KW diesel operated unit with an integral 207 gal diesel tank and a 4'x3' louver. The Automatic Transfer Switch (ATS) is manufactured by Cummins TS-1310.

The entire property is surrounded by a 52'x 30'x 6' fence.

**Property Condition**

The Muffin Monster grinder unit was replaced in 2010. The Generator is serviced on a regular basis and operates satisfactorily. The building is in very good condition, the roof is in good condition and all HVAC systems work satisfactorily.



**Facility Construction Cost – Pump Station 4**

<u>Year</u>	<u>Cost</u>	<u>Description</u>	<u>Source</u>
1990	\$200,000	Initial facility cost including pump station, building, generator, forcemain, valve chamber, surge chamber, fencing, paving, etc.	Based on similar sized Pump Station #2. Installed 1990
2010	\$169,834	Pump Station Upgrades	Depreciated Asset list



1 Pump Station #4 – Overall Site.



2 Pump Station #4 – Wet Well Interior.



3 Pump Station #4 – Building Interior



4 Pump Station #4 – Building Interior



### Pump Station #4 Information Sheet

PUMP STATION #4					
		Station Name	Glen	Phone # 610-948-9454	
		Location	166 Benner Rd., Royersford, PA 19468		
		Start Up Date	September 1, 1990		
CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS
371.3		Pump Manufacturer	FLYGT	2010	Station upgraded
		Pump Model Number	Model 4" NP3127		Pump #2 Sn# 1060069 Failed Oil Seal repaired and installed on 11/14/2003
		Type			
		Pump GPM	120		
		Pump TDH Ft.	104		
		Pump Size	4"		
		Motor HP	11		
		Motor Voltage	230		
370.3		Wet Well Size	6 ft. round		
371.3		Pump Control	Multismart with probe		
371.3		Hatch	4.5'x3' Alum		
371.3		<b>CONTROL PANEL</b>			
		Manufacturer	FLYGT/ Multitrode		
		Model/serial number			
361		<b>MANHOLES (number)</b>	1		
		material	Precast		36" Diam. Bolted MH Cover
		size			
		depth			
371		<b>GRINDER</b>			
		manuf./model	Muffin Monster	2010	hydraulic power pack inside (parker)
		HP	5		
371		<b>CRAIN/HOIST</b>			
		Manuf./model	Portable davit crane manual		
360		<b>VALVES</b>			
		Type/Manf./size/#	APACO-2 check and pressure release valves 3 plug valves w/ 4" bypass all valves are 4"		includes 4 inch surge release valve.
		Hatch	3' x 3.5' alum		
		Valve pit	Concrete pit- 7.5'x7.5'x6.5' w/ sump pump		
355		<b>GENERATOR</b>			
		Manufacturer	Cummins/ ONAN	1990	573
		Generator KW	30		
		Generator HP	50		2'x2'x6'
		Fuel Tank (Gals)	207		Louwer for generator 4'x3'
355		ATS (manf/model #)	Cummins TS 1310		
360		<b>FORCE MAIN</b>			
		Force Main Size	4"		
		Force Main Mat.	Ductile Iron		
		Length in Feet	940		

### Pump Station #4 Information Sheet

CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS
354.2		<b>BUILDING</b>			
		SIZE	13'x15'		
		Main Structure Material	CMU with brick façade		
		Roof type	asphalt shingles		
		Doors (number /material)	double steel door 6'x7'		
		lighting	wall PAC mounted outside & fluorescent inside		
		<b>ELECTRICAL</b>			
371.3		MCC	125 AMP Breaker (main)		3x60 AMP Breaker Pump Panel disconnect 3x60 AMP Breaker muffin monster disconnect
396		Alarm System (manf/ model)	RACO Verbatim		
354.3		<b>HVAC</b>			
		Type/Manf./Model #	Motorized Louver 4'x5' (intake) Electric unit heater no brand name		Aluminum
364		flow meter	multi-trode multi smart		
364		chart recorder	no		
354.3		Hydrants	1 yard hydrant		
354.3		Fence (length and type)	6' h x 52' x 30' (aprox)chain link w/ vehicle gate		
354.3		paving and walkways	driveway		
371.3		<b>ODOR CONTROL</b>	N/A		
		Manufacturer			
		Type			
		<b>MISCELLANEOUS</b>			
		storage building	N/A		
		spare parts			
		<b>OVERALL BUILDING AND FACILITY ASSESSMENT</b>			
		Station upgraded 11/17/2010	overall facility in good condition. No improvements required		
		New pumps, controls, level stick, Muffin Monster from Impeller #249			
		Model 4" NP3127			
		New engine water pump 7/26/2012			
		Pump # 2, Sn# 1060069 seal Failure Oil Seal			
		Repaired and installed 11/14/2013			

### **Pump Station #5 - AKA Trinley Pump Station**

#### **Facility Description (see attached Information Sheet)**

Pump Station # 5 is located at 64 Trinley Road and is equipped with two (2) explosion proof 1,900-GPM Flygt submersible pumps. Wastewater is discharged through a 6000 foot, twelve (18) inch DIP force main that ties into the existing sewage collection system at Manhole A16 located on Lewis Road from where it flows by gravity to the King Road WWTP. The pump station was installed in 1990. In 2005 the pump station was upgraded with new pumps, control panels and check valves. In 2014, Variable Frequency Drives (VFDs), TVSS and new Pump Controls were installed in a new structure.

The pump station is a poured in place concrete structure that is two stories deep. The overall structure is 40 feet long and 23 feet wide. The total depth of the structure is 34 feet; the wet well is 14 feet deep. The control panels are manufactured by Flygt and were which was upgraded in 2016 with an OMNI Systems Crystal Ball Monitoring unit and new transducer. The unit is also programed to record flow volumes and for high and low level alarms. The pump system has integral concrete valve chambers that each house 14 inch Clow check valves and plug valves. One chamber is 16' x 6.5' x 10'D and the other is 22' x 6.5' x 10 feet deep; each chamber has a 6' x 4' aluminum double hatchway. The influent channel to the wet well contains a 5 HP Muffin Monster channel grinder with a bar screen in the other channel.

The Generator Building (24' x 15') is constructed of concrete blocks with a brick façade and a asphalt shingle roof. The building contains florescent lighting, a 6' x 7' steel double door, an electric unit heater and a motorized intake louver (6'x 6'). There is no MCC unit in the building, all power for the facility is distributed from the 600 AMP breaker box on the pump station deck. The TVSS and ATS are also located on the pump station deck.

The Generator is an O'Brian Machinery Co. 300 KW, 465 Cummins diesel operated unit with an integral 237 gal diesel tank. An approximately 120 gallon auxiliary tank is located adjacent to the unit. The Automatic Transfer Switch (ATS) is manufactured by Deep Sea Electronics.

The VFDs are manufactured by PowerFlex and pump control panels which integrated the Flygt pump controls were supplied by Optimum Controls Company. The units are housed in 20' x 7' concrete block building with brick façade and asphalt shingle roof.

A 4 ton P&H cable hoist and a 2 ton chain hoist are located on the deck. The entire property is surrounded by a chain link fence with barbed wire

#### **Property Condition**

The original pump station structure is in good condition with some corrosion and pitting of the aluminum structure components in the wet well area. The pumps, control panels and equipment replaced in 2005 and 2014 are in very good condition. There cable hoists are operational and show



some minor wear. The Generator is serviced on a regular basis and operates satisfactorily. All buildings are in very good condition and all HVAC systems work satisfactorily.

**Facility Construction Cost – Pump Station 5**

<u>Year</u>	<u>Cost</u>	<u>Description</u>	<u>Source</u>
1986	\$877,4810	Initial facility cost including pump station, building, generator, forcemain, valve chamber, surge chamber, fencing, paving, etc.	Tapping Fee calculations
2005	262,823	New pumps and controllers, includes deduct for old equipment	Tapping Fee calculations
2011	\$22,842	Hydromatic Pump	Depreciated Asset list
2011	\$3,635	Surge Protector	Depreciated Asset list
2014	\$317,044	Pump control upgrades, new building	Depreciated Asset list
2016	\$23,013	New Check Valves	Depreciated Asset list
2016	\$2,338	Transfer Controller	Depreciated Asset list
2016	\$8,414	Motor Control	Depreciated Asset list
2016	\$18,117	Muffin Monster Grinder Rebuild	Depreciated Asset list
2016	\$2,492	Omni System Crystal Ball	Depreciated Asset List



1	Pump Station #5 – Building Exterior.
---	--------------------------------------



2 Pump Station #5 – Building Interior.



3 Pump Station #5 – Wet Well Interior.





4	Pump Station #5 – Stairwell.
---	------------------------------

### Pump Station #5 Information Sheet

<b>PUMP STATION #5</b>					
		Station Name	Trinley	Phone # 610-495-5887	
		Location	64 Trinley Rd., Linfield, PA 19468		
		Start Up Date	March 1, 1990		
CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS
371.3		Pump Manufacturer		2014	VFD upgrade pump #1 & #2
		Pump Model Number	Model 6" CP-3300	2006	Station Upgraded
		Type		1990	
		Pump GPM	1900		
		Pump TDH Ft.	190		
		Pump Size	6"		
		Motor HP	160		
		Motor Voltage	480		
370.3		Wet Well Size	12.2 ft. x 14.3 ft.		
371.3		Pump Control	Multitrode with probe. Low & high level float backup.		OMNI - Crystal Ball
371.3		<b>CONTROL PANEL</b>			
		Manufacturer	FLYGT		
		Model/serial number			
371		<b>GRINDER</b>	Muffin Monster		
		manuf./model	5 HP		
		HP			
371		<b>CRAIN/HOIST</b>			
		Manuf./model			
360		<b>VALVES</b>			
		Type/Manf./size/#	14" CLON Plug (2)		
			14" CLON Checks (2)		
355		<b>GENERATOR</b>			
		Manufacturer	O'Brian Machinery	1990	
		Generator KW	300		
		Generator HP	465		
		Fuel Tank (Gals)	237		
355		ATS (manf/model #)	Deep Sea Electronics		
360		<b>FORCE MAIN</b>			
		Force Main Size	18"		
		Force Main Mat.	Ductile Iron		
		Length in Feet	6000		
354.2		<b>BUILDING</b>			
		SIZE	Generator - 24' x 15' Concrete Block w/ Brick Façade		
		Main Structure Material	VFD BLDG - 20' x 7' Concrete Block w/ Brick Façade		
		Roof type	Asphalt Shingles		
		Doors (number /material)	VFD BLDG 2 - 6'x 7' Double Steel GEN - 6' x 7' Double Steel		
		lighting	Florescent		
		<b>ELECTRICAL</b>			
371.3		MCC	600 Amp		
396		Alarm System (manf/ model)	OMNI - Crystal Ball		





**Pump Station #6A - AKA Royersford Road Pump Station**

**Facility Description (see attached Information Sheet)**

Pump Station # 6 is located at 70 Buckwalter Road, Royersford, PA with two (2) 2,225 GPM, 130 HP Flygt dry-prime submersible pumps. Wastewater is discharged through a 10,800 foot ductile iron forcemain that ties into the existing sewage collection system at the King Road Wastewater Treatment Plant headworks. The pump station was originally installed in 1996 to replace Pump Station 6 (Southeast Pump Station) which was built in 1988 as part of the original sewer system and WWTP installation. The pump station is currently being upgraded for additional capacity. The original structure was a poured in place concrete that was divided into two levels. The lower basement area that housed the pumps, wet well, grinder, grinder and bar screen was approximately 51' x 20', the upper floor and building, which houses the pump controls and emergency generator was approximately 38' x 25'. The total depth of the structure is 22 feet.

The building is concrete block with brick façade, the roof is asphalt shingles. The building has three intake fan and 2 exhaust fans. The building has 6' x 9' generator exhaust louver, 4 additional exhaust lovers ranging from 4' x 4' to 6' x 6'.

Electric is rated at 460V, 3 Phase and is fed overhead to the building. The MCC is a rated for 600 Amps which supply power to the pumps. Panel MDP is rated for 400 Amps which supply power to all the other facilities.

The Generator is a 230 KW, 375 HP unit manufactured by Martin Machinery with a Cummins engine. There is a approximately 200 gallon day tank adjacent to the generator and a 530 gallon intergral steel tank.

The influent channel to the wet well contains two (2) hydraulic operated grinders. A Coffing 2 ton crane on a rail is located above the pump access hatches.

A 2000 gallon stainless steel hydrogen peroxide tank with a LMI dosing tank is located outside the building, the system is no longer used.

**Property Condition**

The original pump station structure is in good condition; however there is considerable corrosion and pitting of the aluminum structure components in the wet well area. The building structure and ventilation components are in very good condition. With facility being upgraded, it is expected that at the completion of construction, the facility will be in excellent condition.

**Facility Construction Cost – Pump Station 6**

<u>Year</u>	<u>Cost</u>	<u>Description</u>	<u>Source</u>
1986	\$442,767	Original facility cost including pump station, building, generator, forcemain, valve chamber, surge chamber, fencing, paving, etc.. Pump Station was abandoned.	Tapping Fee calculations
1995	\$1,229,919	New Pump Station	Tapping Fee calculations
1999	\$31,848	Unknown improvement	Depreciated Assets
2010	\$114,208	Unknown Improvement (VFDs ?)	Depreciated Assets
2013	\$33,947	Peroxide System of odor control	Depreciated Assets
2016	\$12,680	Muffin Monster	Depreciated Assets
2016	\$4,084	Roof Replacement	Depreciated Assets



1 | Pump Station #6 –

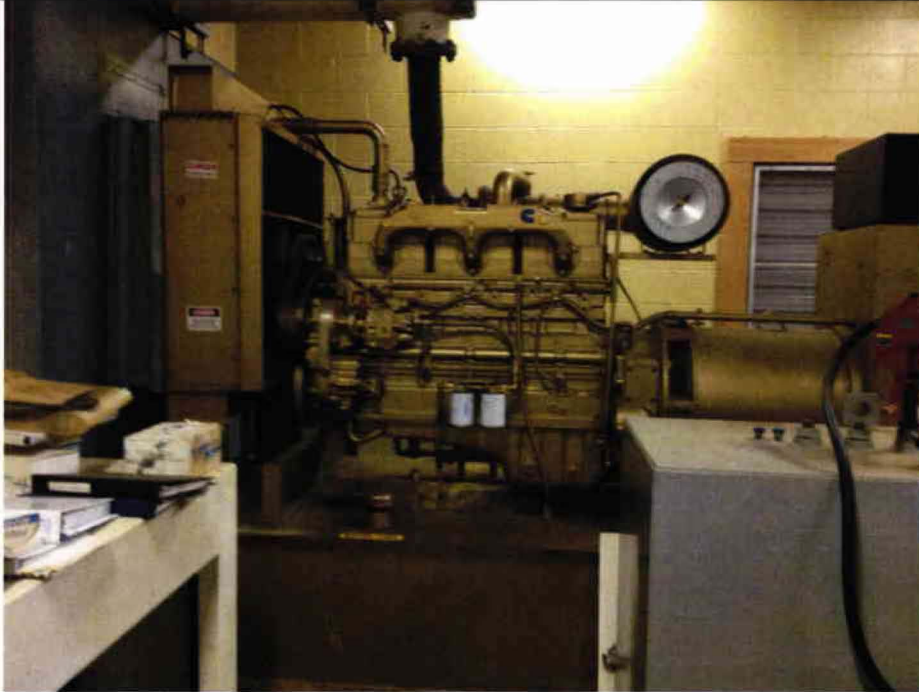




2 Pump Station #6 –



3 Pump Station #6 –



4 Pump Station #6 –



5 Pump Station #6 –



6 Pump Station #6 –



7	Pump Station #6 – Wet Well
---	----------------------------



## Pump Station #6A Information Sheet

<b>PUMP STATION #6A</b>					
		Station Name	Royersford Rd.	Phone # 610-948-4069	
		Location	70 Buckwalter Rd., Royersford, PA 19468		
		Start Up Date	January 1, 1996		
CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS
371.3		Pump Manufacturer	Flygt	1996	
		Pump Model Number			
		Type	Dry Prime Submersible		
		Pump GPM	2,225		
		Pump TDH Ft.	107		
		Pump Size	6"		
		Motor HP	130		
		Motor Voltage	460		
370.3		Wet Well Size	Varied		
371.3		Pump Control	Transducer		
371.3		<b>CONTROL PANEL</b>			
		Manufacturer	Multitrode	2016	
		Model/serial number	MP2PC with Monitor Pro		
371		<b>GRINDER</b>			
		manuf./model	Muffin Monster (2)	2016	
		HP	5 HP each		
371		<b>CRAIN/HOIST</b>			
		Manuf./model	Coffing 2 ton		
360		<b>VALVES</b>			
		Type/Manf./size/#	Milliken 6" Check (2)	1996	
			Milliken 6" Gate (2)		
355		<b>GENERATOR</b>			
		Manufacturer	Martin Machinery / Cummins		
		Generator KW	engine	1988	
		Generator HP	230		
		Fuel Tank (Gals)	375		
355		ATS (manf/model #)	530		
			Power Flex		
360		<b>FORCE MAIN</b>			
		Force Main Size	16"	1988	
		Force Main Mat.	Ductile Iron		
		Length in Feet	10,800		
354.2		<b>BUILDING</b>			
		SIZE	upper floor 38' x 25' lower pump and wet well area 51' x 20'	1996	
		Main Structure Material	concrete block with brick exterior		
		Roof type	asphalt shingle		
		Doors (number /material)	6' x 7' steel double door		
		lighting	flourecent interior / wall pack exterior		
371.3		<b>ELECTRICAL</b>			
		MCC	480 v, 400 AMP	1996	
			100 AMP Lighting Panel		
396		Alarm System (manf/ model)			



**Pump Station #7 - AKA Royersford Road Pump Station**

**Facility Description (see attached Information Sheet)**

Pump Station #7 is located at 571 King Road and is equipped with two (2) explosion proof 260-GPM Hydromatic submersible pumps. Wastewater is discharged through a 52 foot, four (4) inch ductile iron force main that connects to the PS 6A main in in King Road. The pump station was installed in 1990.

The pump wet well is a precast concrete unit (7 ft. x 5 ft.) with one 4.5' x 4.5' aluminum hatchway. The control panel is manufactured by Hydromatic. The pump system has a separate precast concrete valve box (6' x 8' x 11.5' deep) with a 3.5' x 3.5' aluminum hatchway and sump pump. There are two 4" check valves and two 4" gate valves. The influent line to the wet well contains a Muffin Monster grinder which is hydraulically operated via a 5 HP unit located in the Generator Building.

The Generator Building (20' x 14') is constructed of concrete block with a brick façade and an asphalt shingle roof. The building contains florescent lighting, a (6'x7'H) steel double door, a Berko electric unit heater, motorized intake louver (4'x4' galv. Steel), exhaust louver (3'x4' galv.) for the generator. The power for the unit is from 230 V outside main with transformer.

The Generator is an O'Brian Machinery Co. 30/37.5 KVA diesel operated unit with an integral 42 gal tank. An approximately 75 gallon auxiliary tank is located adjacent to the unit. The Automatic Transfer Switch (ATS) is manufactured by Zenith (model # ZTS10EC).

The facility is enclosed by a 26.5'x70' chain link barbed wire fence with a 14' and 16' wide double gates. The facility utilizes a hydrogen peroxide dosing system. The system contained 1600 gallon polyethylene tank and dosing metering pump.

The system contains a 3.5'x3.5'x10.5'D precast concrete surge valve pit with sump pump and 4" surge valve.

**Property Condition**

The Generator is serviced on a regular basis and operates satisfactorily. The building/facility is in very good condition, the roof is in good condition and all HVAC systems work satisfactorily.



**Facility Construction Cost – Pump Station 7**

<u>Year</u>	<u>Cost</u>	<u>Description</u>	<u>Source</u>
1990	\$213,451	Initial facility cost including pump station, building, generator, forcemain, valve chamber, surge chamber, fencing, paving, etc.	Tapping Fee calculations
2013	\$12,462	Peroxide Tank	Depreciated Asset list
2014	\$4,191	Unknown upgrade	Depreciated Asset list



1 Pump Station #7 – Overall Site.



2 Pump Station #7 – Wet Well Interior.



3 Pump Station #7 – Wet Well Exterior.



4 Pump Station #7 – Building Interior.



### Pump Station #7 Information Sheet

<b>PUMP STATION #7</b>					
		Station Name	Royersford Rd.	Phone # 610-948-4132	
		Location	571 King Rd., Royersford, PA 19468		
		Start Up Date	March 1, 1990		
CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS
371.3		Pump Manufacturer	Hydromatic	1990	
		Pump Model Number	S4M1000M3-4 (2)		
		Type	Submersible		
		Pump GPM	260		
		Pump TDH Ft.	67		
		Pump Size	4"		
		Motor HP	10		
		Motor Voltage	230		
370.3		Wet Well Size	7 ft. x 5 ft.		
371.3		Pump Control	Floats		
371.3		Hatch	4.5'x4.5' Alum		
371.3		<b>CONTROL PANEL</b>			
		Manufacturer	Hydromatic		
		Model/serial number	33177-002-1		
371		<b>GRINDER</b>			
		manuf./model	Muffin Monster		Hydraulic Unit
		HP	5		
371		<b>CRAIN/HOIST</b>			
		Manuf./model	N/A		
360		<b>VALVES</b>			
		Type/Manf./size/#	Valve Box 6'x8'x11.5' D Precast Check/4" (2) Gate/4" (2)		W/ Sump Pump, Hatch 3.5x3.5' Alum
355		<b>GENERATOR</b>			
		Manufacturer	The O'Brien Machinery Co.	1990	
		Generator KW	30/ 37.5 KVA		
		Generator HP	66		
		Fuel Tank (Gals)	42		Aux Tank 75 Gal Steel
355		ATS (manf/model #)	Zenith ZTS10EC		
360		<b>FORCE MAIN</b>			
		Force Main Size	4"		
		Force Main Mat.	Ductile Iron		
		Length in Feet	52		
354.2		<b>BUILDING</b>			
		SIZE	20'x14'	1990	
		Main Structure Material	Concrete block with brick façade		Chain link fence with barbed wire 26.5'x70'; 14' & 16' Double gates
		Roof type	Asphalt shingles		
		Doors (number /material)	1 double door 6'x7'H		
		lighting	Fluorescent		
371.3		<b>ELECTRICAL</b>			
		MCC	230 V Outside Main Disconnect & Transformer		
396		Alarm System (manf/ model)			
CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS



**Pump Station #8 - AKA West Cherry Lane Pump Station**

**Facility Description (see attached Information Sheet)**

Pump Station #8 is located on 68 West Cherry Lane and has a startup date of July 1, 1996 and has since been converted to a gravity line in November 2001.

The abandoned pump wet well is a precast concrete unit (8' x 8') with a 2.5'x2' aluminum hatch.

The Generator Building (20' x 24') is wood framed with stucco exterior with asphalt shingles and a 3'x6.5' steel man door. The building contains exterior wall pack lighting and fluorescent indoor lighting. The MCC for the building is 70 AMP main pump breaker, 100 AMP light panel and the alarm system has a 100 AMP main. The building has a 40"x45" intake louver and 2'x3' exhaust louver.

The Generator is a Cummins/ ONAN 25 KW, 2.7L HP diesel operated unit with a 40"x63" louver. The Automatic Transfer Switch (ATS) is manufactured by ONAN (model #OT125).

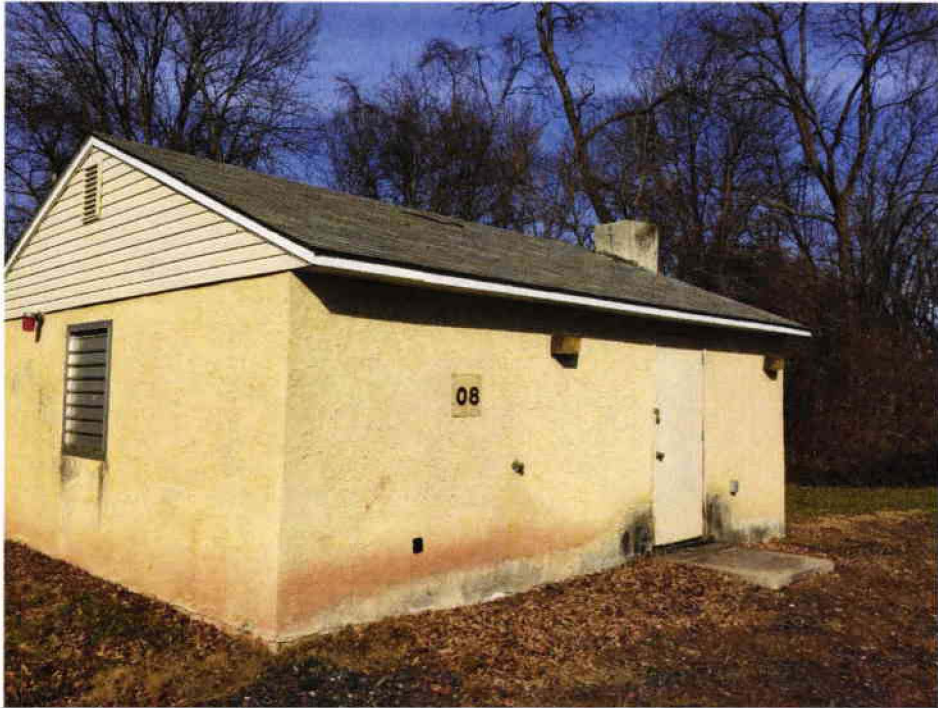
**Property Condition**

The building is in good condition.

**Facility Construction Cost – Pump Station 8**

<u>Year</u>	<u>Cost</u>	<u>Description</u>	<u>Source</u>
1996	\$375,200	Initial facility cost including pump station, building, generator, forcemain, valve chamber, surge chamber, fencing, paving, etc.	Escrow cost estimate.





1 Pump Station #8 – Building Exterior.



2 Pump Station #8 – Building Interior.



3 Pump Station #8 – Building Interior.



4 Pump Station #8 – Building Interior.

### Pump Station #8 Information Sheet

<b>PUMP STATION #8**</b>					
		Station Name	West Cherry Lane	Phone # 610-495-5834	
		Location	68 West Cherry Lane, Limerick, PA 19468		
		Start Up Date	July 1, 1996		
CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS
		<b>**Building Only</b>			
		Hatch	2.5'x2' Hatch Alum		
		Wete Well Size	8'x8' Concrete Wet Well		Connected to manhole flow through
371		<b>GRINDER</b>	N/A		
		manuf./model			
		HP			
371		<b>CRAIN/HOIST</b>	N/A		
		Manuf./model			
360		<b>VALVES</b>	N/A		
		Type/Manf./size/#			
355		<b>GENERATOR</b>			
		Manufacturer	Cummins/ONAN		25 DKAF
		Generator KW	25		
		Generator HP	2.7L Cummins		73 Hours
		Fuel Tank (Gals)			
355		ATS (manf/model #)	ONAN OT125	Integral TUSS	
360		<b>FORCE MAIN</b>			
		Force Main Size			
		Force Main Mat.	PVC		
		Length in Feet			
354.2		<b>BUILDING</b>			
		SIZE	20'x24'	1996	
		Main Structure Material	Wood frame stucco exterior		
		Roof type	Asphalt shingles		
		Doors (number /material)	3'x6.5' man door steel		
		lighting	Exterior wall pack/ fluorescent		
		<b>ELECTRICAL</b>			
371.3		MCC	70 AMP main pump breaker / 100 AMP light panel		
396		Alarm System (manf/ model)	100 AMP Main		
354.3		<b>HVAC</b>			
		Type/Manf./Model #	40"x45" Louver Intake 40"x63" Generator Louver 2'x3' Exhaust Louver		
364		flow meter	N/A		
364		chart recorder			
354.3		Hydrants			
354.3		Fence (length and type)			
354.3		paving and walkways			
371.3		<b>ODOR CONTROL</b>	N/A		
		Manufacturer			
		Type			







**Pump Station #9 - AKA Neiffer Road Pump Station**

**Facility Description (see attached Information Sheet)**

Pump Station #9 located on Neiffer Road is an abandoned pump station and the facility is used for storage.

The Generator Building (14' x 15') is constructed of concrete block with a brick façade and an asphalt shingle roof. The building contains interior florescent lighting with wall pack lighting on the outside and a 6'x7' steel double doors. A portable Thern davit crane is located within the building. The MCC has a 150 AMP main breaker and the alarm system has a 150 AMP Panel.

The Generator is a Cummins/ ONAN 40 KW/68 HP diesel operated unit with an integral 7'x3'x1.5' diesel tank. The Automatic Transfer Switch (ATS) is manufactured by ONAN (model #OT150).

The HVAC system includes a 12" diameter PENN exhaust fan, Dayton unit heater, 3.5'x4' intake aluminum louver and 3.5'x4' aluminum generator exhaust louver.

The facility is surrounded by a 60' by 45' chain link fence with barbed wire.

**Property Condition**

The building and roof are in good condition.

**Facility Construction Cost – Pump Station 9**

<u>Year</u>	<u>Cost</u>	<u>Description</u>	<u>Source</u>
1996	\$235,752	Initial facility cost including pump station, building, generator, forcemain, valve chamber, surge chamber, fencing, paving, etc.	Tapping Fee calculations



1 Pump Station #9 – Overall Site.



2 Pump Station #9 – Building Exterior.



3 Pump Station #9 –Building Interior.



4 Pump Station #9 –Building Interior.



### Pump Station #9 Information Sheet

<b>PUMP STATION #9</b>					
		Station Name:	Neiffer Road	Phone # 610-495-5834	
		Location	Neiffer Road		
		Start Up Date	1996		
CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS
		Pump Manufacturer	N/A		<b>Pump Station Abandoned</b>
		Pump Model Number			
		Type			
		Pump GPM			
		Pump TDH Ft.			
		Pump Size			
		Motor HP			
		Motor Voltage			
		Wet Well Size			
		Pump Control Hatch			
		<b>CONTROL PANEL</b>	N/A		
		Manufacturer			
361		Model/serial number			
361		<b>MANHOLES (number)</b>			
		material	3 precast		
		size			
		depth			
371		<b>GRINDER</b>			
		manuf./model			
		HP			
371		<b>CRAIN/HOIST</b>			
		Manuf./model	Portable Thern Danit Crain		
360		<b>VALVES</b>	N/A		
		Type/Manf./size/#			
355		<b>GENERATOR</b>			
		Manufacturer	Cummins/ONAN, 40DC, BC	1996	208 HRS
		Generator KW	40		
		Generator HP	68		
		Fuel Tank (Gals)	7'x3'x1.5'		
355		ATS (manf/model #)	ONAN OT150		
360		<b>FORCE MAIN</b>	N/A		
		Force Main Size			
		Force Main Mat.			
		Length in Feet			
354.2		<b>BUILDING</b>			
		SIZE	14'x15'	1996	
		Main Structure Material	Concrete block w/ brick façade		
		Roof type	Asphalt shingles		
		Doors (number /material)	6'x7'H Double steel door		
		lighting	fluorescent inside, wall packs outside		
		<b>ELECTRICAL</b>			
371.3		MCC	150 AMP Main Breaker		
396		Alarm System (manf/ model)	150 AMP Panel		





**Pump Station #10 – AKA Ridge Pike Pump Station**

**Facility Description (see attached Information Sheet)**

Pump Station #10 is located at 194 W Ridge Pike and is equipped with two (2) explosion proof 200-GPM FLYGT submersible pumps. Wastewater is discharged through 2476 feet of six (6) inch ductile iron force main that ties into the existing sewage collection system at MH A206 in Ridge Pike near 306 Ridge Pike. The pump station start date is September 1, 1998 and new impeller and suction eye wear rings were installed on 7/28/2012. Pump #2 has been replaced with a pump from Pump Station #11.

The pump wet well is a precast concrete unit (8 ft round) with one 5' x 6' aluminum hatchway. The control panel is manufactured by ITT-FLYGT. The pump system has a separate precast concrete valve box (9' x 7') with two aluminum hatchways, one of which is 3.5' x 3.5' and the other is 4.9' x 3.5'. There are two (2) CLOW 6" Check valves and three (3) CLOW 6" Gate valves. The influent line to the wet well contains a Muffin Monster grinder which is hydraulically operated via a 5 HP Parker Hypak unit located in the Generator Building.

The Generator Building (14' x 15') is constructed of concrete block with a brick façade and an asphalt shingle roof. The building contains florescent lighting, a (6'x7') steel double door, a Berko electric unit heater and a, 4'x4' galvanized steel motorized intake louver. A 70'x75' chain link fence surrounds the perimeter of the facility.

Power for the facility is distributed from Siemens breaker box with disconnect switch. A Crystal Ball/cellular tower alarm system is provided within the building.

The Generator is a Cummins Onan 69KW/75KVa diesel operated unit with an integral 140 gal diesel tank. The Automatic Transfer Switch (ATS) is manufactured by ASCO. The Onan ATS was removed. The flow meter is a OMNI Crystal Ball/Fisher Porter Mag Meter.

Odor control is provided by an outdoor 1500 gal. polytank containing Paroxide and there is a Guardian eye wash/shower.

**Property Condition**

The Generator is serviced on a regular basis and operates satisfactorily. The building is in very good condition, the roof is in good condition and all HVAC systems work satisfactorily

**Facility Construction Cost – Pump Station 10**

<u>Year</u>	<u>Cost</u>	<u>Description</u>	<u>Source</u>
1998	634,598	Initial facility cost including pump station, forcemain building, generator, forcemain, valve chamber, surge chamber, fencing, paving, etc.	Tapping Fee calculations
2016	\$3,209	Crystal Ball	Depreciated Asset List





1 Pump Station #10 – Wet Well Exterior.



2 Pump Station #10 – Wet Well Interior.



3 Pump Station #10 – Building Exterior.



4 Pump Station #10 – Building Interior.

### Pump Station #10 Information Sheet

<b>PUMP STATION #10</b>					
		Station Name	Ridge Pike	Phone # 610-831-0273	
		Location	194 West Ridge Pike, Limerick PA 19468		
		Start Up Date	September 1, 1998		
CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS
371.3		Pump Manufacturer	FLYGT	1998	Pump #2 replaced 7/28/2012 with pump from PS12
		Pump Model Number	3085		
		Type	Submersible		
		Pump GPM	200		#1 original@21 psi, #2 from ps 11 @28.
		Pump TDH Ft.	62, 16 1/4 psi static		
		Pump Size	4"		
		Motor HP	10		
		Motor Voltage	230		
370.3		Wet Well Size	8 ft. round x D		
371.3		Hatch	5'x 6' Alum		
371.3		Pump Control	Multitrode (MT 2PC) transducer		Scada control panel-Monitor Pro
371.3		<b>CONTROL PANEL</b>		1998	
		Manufacturer	ITT-FLYGT		
		Model/serial number			
361		<b>MANHOLES (number)</b>			
		material	Precast		
		size	4' diam.		
		depth			
371		<b>GRINDER</b>		1998	
		manuf./model	Muffin monster		Hydraulic unit
		HP			Parker Hypak
371		<b>CRAIN/HOIST</b>			
		Manuf./model	N/A		
360		<b>VALVES</b>	Valve Pit- Concrete		9'x 7' / 3.5x 3.5' Alum Hatch
		Type/Manf./size/#	Citack/ CLOW/ 6" (2)		4.5'x 3.5' Alum Hatch
			GATE/ CLOW/ 6" (3)		1 Bypass
355		<b>GENERATOR</b>		1998	
		Manufacturer	Cummins Onan		
		Generator KW	69		75 KVA
		Generator HP	93		
		Fuel Tank (Gals)	140		
355		ATS (manf/model #)	ASCO		Onan ATS-removed
360		<b>FORCE MAIN</b>			
		Force Main Size	6"		
		Force Main Mat.	Ductile Iron		
		Length in Feet	2476		
354.2		<b>BUILDING</b>		1998	
		SIZE	14'x15'		
		Main Structure Material	Concrete block w/ brick façade		
		Roof type	Asphalt shingles		
		Doors (number /material)	(1) 6'x7' Double Steel		
		lighting	fluorescent		







**Pump Station #11 - AKA Llewellyn Lane Pump Station**

Pump Station 11 was demolished as part of the Pump Station 20 construction project on Gratersford Road.

**Facility Description (see attached Information Sheet)**

Pump Station #11 was located on Llewellyn Lane and was installed in 1998. The pump station was demolished in 2015 and all flow diverted to new Pump Station #20.

**Facility Construction Cost – Pump Station 9**

<u>Year</u>	<u>Cost</u>	<u>Description</u>	<u>Source</u>
1998	\$226,600	Initial facility cost including pump station, building, generator, forcemain, valve chamber, surge chamber, fencing, paving, etc.	Tapping Fee calculations

### Pump Station #11 Information Sheet

<b>PUMP STATION #11*</b>					
		Station Name	Llewellyn Lane	Phone # 610-831-1348	
		Location	74 Llewellyn Lane, Limerick, PA 19468		
		Start Up Date	December 1, 1998		
CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS
371.3		Pump Manufacturer			<b>*Pump Station Demolished</b>
		Pump Model Number			
		Type			
		Pump GPM	90		
		Pump TDH Ft.	88		
		Pump Size	4"		
		Motor HP	10		
		Motor Voltage	230		
370.3		Wet Well Size	7.5 ft. round		
371.3		Pump Control	Multitrode		
371.3		<b>CONTROL PANEL</b>			
		Manufacturer			
		Model/serial number			
371		<b>GRINDER</b>			
		manuf./model			
		HP			
371		<b>CRAIN/HOIST</b>			
		Manuf./model			
360		<b>VALVES</b>			
		Type/Manf./size/#			
355		<b>GENERATOR</b>			
		Manufacturer		1998	
		Generator KW			
		Generator HP	102		
		Fuel Tank (Gals)	140		
355		ATS (manf/model #)			
360		<b>FORCE MAIN</b>			
		Force Main Size	4"		
		Force Main Mat.	PVC		
		Length in Feet	4400		
354.2		<b>BUILDING</b>			
		SIZE			
		Main Structure Material			
		Roof type			
		Doors (number /material)			
		lighting			
		<b>ELECTRICAL</b>			
371.3		MCC			
396		Alarm System (manf/ model)			
354.3		<b>HVAC</b>			
		Type/Manf./Model #			
364		flow meter			
364		chart recorder			
354.3		Hydrants			
354.3		Fence (length and type)			
354.3		paving and walkways			



**Pump Station #12 - AKA Bradford Woods Pump Station**

**Facility Description (see attached Information Sheet)**

Pump Station #12 is located at 97 Bartlett Drive and is equipped with two (2) explosion proof 94-GPM FLYGT submersible pumps. Wastewater is discharged through an 1840 foot, four (4) inch DIP force main that ties into the existing sewage collection system at Tanglewood. The pump station was installed in 2000.

The pump wet well is a precast concrete unit (6 ft diameter, approximately 20' deep) with two aluminum hatchways, one of which is 4.5'x4.5' and the other is 1.5'x2'. The control panel is a Multirode MT 2PC manufactured by ITT FLYGT. The pump system has a separate precast concrete valve box (9'x7') with two aluminum hatchways, one of which is 3.5'x3.5' and the other is 4.5'x4.5'. There are two Kennedy 4" check valves and three Kennedy 4" gate valves. The influent line to the wet well contains a Muffin Monster grinder which is hydraulically operated via a 5 HP unit located in the Generator Building. The flow meter is a Sparling Tiger Mag meter unit with a Sparling chart recorder.

The Generator Building (15' x 17') is constructed of concrete block with a brick façade and an asphalt shingle roof. The building contains florescent lighting, a (5'x7') steel double door, QMark Electric unit heater and a PENN Ventilator 36"x36" motorized louver. The facility is service by a 10KV transformer with 200 AMP main panel. The alarm system is a Verbatim/RACO-Series VSS unit.

The Generator is a Cummins/ ONAN 140 KW 188 HP diesel operated unit with an integral 336 gal diesel tank. The Automatic Transfer Switch (ATS) is manufactured by ONAN OTC-3385670.

The entire facility is surrounded by a 65' by 70' chain link fence and there is a Woodford Freeze Proof 1" yard hydrant on site.

**Property Condition**

The Generator is serviced on a regular basis and operates satisfactorily. The building is in very good condition, the roof is in good condition and all HVAC systems work satisfactorily.



**Facility Construction Cost – Pump Station 12**

<u>Year</u>	<u>Cost</u>	<u>Description</u>	<u>Source</u>
2000	\$183,500	Initial facility cost including pump station, building, generator, forcemain, valve chamber, fencing, paving, etc.	Escrow



1 Pump Station #12 – Overall Site.



2 Pump Station #12 – Wet Well Interior.



3 Pump Station #12 – Building Exterior



4 Pump Station #12 – Building Interior

## Pump Station #12 Information Sheet

<b>PUMP STATION #12</b>					
		Station Name	Bradford Woods	Phone # 610-287-0189	
		Location	97 Bartlett Drive, Schwenksville, Pa 19473		
		Start Up Date	January 1, 2000		
CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS
371.3		Pump Manufacturer	FLYGT	2000	
		Pump Model Number			
		Type	Submersible		
		Pump GPM	94		
		Pump TDH Ft.	211		
		Pump Size	4"		
		Motor HP	23		
		Motor Voltage	230		
370.3		Wet Well Size	6 ft. round		
370.3		Hatchway	4.5'x4.5' Alum/ 1.5'x2' Alum		
371.3		Pump Control	Multitrode MT 2PC		
371.3		<b>CONTROL PANEL</b>			
		Manufacturer	ITT FLYGT		
		Model/serial number			
361		<b>MANHOLES (number)</b>			
		material	Precast (4)		
		size	4' diam.		
		depth			
371		<b>GRINDER</b>			
		manuf./model	Muffin Monster		
		HP	5		
371		<b>CRAIN/HOIST</b>			
		Manuf./model	Portable Chain Hoist		
360		<b>VALVES</b>	9'x7' Valve Box Concrete		4.5x4.5 Hatch Alum
		Type/Manf./size/#	Kennedy/ Check/ 4" (2)		3.5x3.5' Hatch Alum
			Kennedy/ Gate/ 4" (3)		One Bypass
355		<b>GENERATOR</b>			
		Manufacturer	Cummins/ ONAN	2000	DGEA-3387389
		Generator KW	140		
		Generator HP	188		
		Fuel Tank (Gals)	336		
355		ATS (manf/model #)	ONAN OTC-3385670		
360		<b>FORCE MAIN</b>		2000	
		Force Main Size	4"		
		Force Main Mat.	Ductile Iron		
		Length in Feet	1840		
354.2		<b>BUILDING</b>		2000	
		SIZE	15x17		
		Main Structure Material	Concrete block/ brick façade		
		Roof type	Asphalt Shingles		
		Doors (number /material)	6'x7' Double Door steel		
		lighting	Fluorescent		
371.3		<b>ELECTRICAL</b>			
		MCC	10 KV Transformer/ 200 AMP Main Panel Box		
396		Alarm System (manf/ model)	Verbatim/RACO-Series VSS		





**Pump Station #13 - AKA Bradford Woods Pump Station**

**Facility Description (see attached Information Sheet)**

Pump Station #13 is located at 3 Bradford Drive and is equipped with two (2) explosion proof 37.5-GPM FLYGT submersible pumps and Pump #2 was added in 2006. Wastewater is discharged through a 1000 foot, long two (2) inch PVC force main that ties into the existing sewage collection system at Cambridge. The pump station was installed in 2000.

The pump wet well is a precast concrete unit (5 ft. round) with one aluminum hatchway 3.5'x3'. The control panel is Multirode MT 2PC manufactured by FLYGT ITT. The pump system has a separate precast concrete valve box (7'x7'x5.5') with two aluminum hatchways, one of which is 3.5'x3.5' and the other is 2'x2'. There are two 2" CLOW check valves and two 2" CLOW gate valves with a 2" bypass. The flow meter is a Sparling Tiger Mag meter unit with a Sparling chart recorder.

The Generator Building is constructed of concrete block with a brick façade and an asphalt shingle roof. The building contains florescent lighting, a (5'x7') steel double door, Dayton Electric unit heater and a PENN Ventilator 36"x36" louver. The facility is serviced by a 10KV transformer with 200 AMP main panel. The alarm system is a Verbatim/RACO-Series VSS unit.

The Generator is a Cummins/ ONAN 20 KW 27 HP diesel operated unit with an integral 70-gal diesel tank. The Automatic Transfer Switch (ATS) is manufactured by ONAN (serial #OTC-4478161).

The facility is surrounded by a 34' by 40' chain link fence and there is a Woodford Freeze Proof 1" fire hydrant on site. There is hydrogen peroxide LMI dosing pump system for odor control. The tanks are located within an ENPAC shelter.

**Property Condition**

The Generator is serviced on a regular basis and operates satisfactorily. The building is in very good condition, the roof is in good condition and all HVAC systems work satisfactorily.

**Facility Construction Cost – Pump Station 13**

<u>Year</u>	<u>Cost</u>	<u>Description</u>	<u>Source</u>
2000	\$303,239.50	Initial facility cost including pump station, building, generator, forcemain, valve chamber, fencing, paving, etc.	Escrow



1 Pump Station #13 – Wet Well Exterior.



2 Pump Station #13 – Wet Well Interior.





3 Pump Station #13 – Building Exterior.



4 Pump Station #13 – Building Interior.

### Pump Station #13 Information Sheet

<b>PUMP STATION #13</b>					
		Station Name	Bradford Woods	Phone # 610-287-6049	
		Location	3 Bradford Drive, Schenksville, PA 19473		
		Start Up Date	June 26, 2000		
CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS
371.3		Pump Manufacturer	FLYGT	2000	
		Pump Model Number	MP 3068HT	2006	PUMP 2- 2006
		Type	Submersible		
		Pump GPM	27.5		
		Pump TDH Ft.	54		
		Pump Size	2"		
		Motor HP	2.7		
		Motor Voltage	230		
370.3		Wet Well Size	5 ft. round		
370.3		Hatchway	3.5x3' Alum		
371.3		Pump Control	Multitrode-MT2PC		
371.3		<b>CONTROL PANEL</b>			
		Manufacturer	FLYGT ITT		
		Model/serial number			
361		<b>MANHOLES (number)</b>			
		material	Precast (1)		
		size	4'		
		depth			
371		<b>GRINDER</b>	N/A		
		manuf./model			
		HP			
371		<b>CRAIN/HOIST</b>			
		Manuf./model	Portable DLB 1200		
360		<b>VALVES</b>	7'x7' x5.5'D Concrete		
		Type/Manf./size/#	Check/CLOW/ 2"/ (2)		2'x2' Alum Hatch
			Gate/ CLOW/ 2"/ (2)		3.5x3.5' Alum Hatch
			2" PVC Bypass		
355		<b>GENERATOR</b>			
		Manufacturer	Cummins/ ONAN	2000	DKAE-4478162
		Generator KW	20		
		Generator HP	27		
		Fuel Tank (Gals)	70		
355		ATS (manf/model #)	ONAN		OTA-4478161
360		<b>FORCE MAIN</b>			
		Force Main Size	2"		
		Force Main Mat.	PVC		
		Length in Feet	1000		
354.2		<b>BUILDING</b>		2000	
		SIZE			
		Main Structure Material	Concrete Block/ Brick Façade		
		Roof type	Asphalt Shingles		
		Doors (number /material)	Steel Double Door 6'x7' H		
		lighting	Fluorescent		



**Pump Station #14 - AKA Bradford Woods Pump Station**

**Facility Description (see attached Information Sheet)**

Pump Station #14 is located at 89 Bradford Drive and is equipped with two (2) explosion proof 103-GPM FLYGT submersible pumps. Wastewater is discharged through 1865-foot long four (4) inch ductile iron force main that ties into the existing sewage collection system at Manhole C03 in Tanglewood Drive. The pump station was installed in February 2000.

The pump wet well is a precast concrete unit (6 ft. diameter, approximately 20 ft. deep) with one 4.5' x 4.5' aluminum hatchway. The control panel is manufactured by ITT FLYGT with an OMNI Site Crystal Ball Monitoring unit. The pump system has a separate precast concrete valve box (7' x 9') with a 4' x 4' aluminum hatchway and 3.5'x3.5' hatchway. There are two Kennedy 4" check valves and three 4" Kennedy gate valves with one bypass. The flow meter is a Sparling Tiger Mag meter unit (FM657) with a Sparling chart recorder.

The influent line to the wet well contains a Muffin Monster grinder which is hydraulically operated via a 5 HP unit located in the Generator Building.

The Generator Building (17' x 14.5') is constructed of concrete block with a brick façade and an asphalt shingle roof. The building contains florescent lighting, a (6'x7') steel double door, an electric heater unit and a 3'x3' galvanized steel louver. The facility is serviced by a 10KVa transformer with 150 AMP and 120 AMP panels.

The Generator is a Cummin/ ONAN 140 KW 188 HP diesel operated unit with an integral 336-gal diesel tank. The Automatic Transfer Switch (ATS) is manufactured by ONAN.

The facility is surrounded by a 40' by 40' chain link fence with a 16' double swing gate. There is a Woodford Freeze Proof 1" fire hydrant on site.

**Property Condition**

The Generator is serviced on a regular basis and operates satisfactorily. The building is in very good condition, the roof is in good condition and all HVAC systems work satisfactorily.



**Facility Construction Cost – Pump Station 14**

<u>Year</u>	<u>Cost</u>	<u>Description</u>	<u>Source</u>
2000	\$211,500	Initial facility cost including pump station, building, generator, forcemain, valve chamber, fencing, paving, etc.	Escrow



1 Pump Station #14 – Wet Well Exterior.



2 Pump Station #14 – Wet Well Interior.



3 Pump Station #14 – Building Exterior.



4 Pump Station #14 – Building Interior.



### Pump Station #14 Information Sheet

<b>PUMP STATION #14</b>					
		Station Name	Bradford Woods	Phone # 610-287-5091	
		Location	89 Bradford Drive, Schwenksville, PA 19473		
		Start Up Date	February 29, 2000		
CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS
371.3		Pump Manufacturer	FLYGT	2000	
		Pump Model Number			
		Type	Submersible		
		Pump GPM	103		
		Pump TDH Ft.	187		
		Pump Size	4"		
		Motor HP	23		
		Motor Voltage	230		
370.3		Wet Well Size	6 ft. round		Concrete Interior Coating peeling below water line
370.3		Hatchway	4.5'x4.5' Alum		
371.3		Pump Control	Multitrode		MT 2 PC/Monitor Pro
371.3		<b><u>CONTROL PANEL</u></b>			
		Manufacturer	ITT FLYGT		
		Model/serial number	OMNI Site Crystal Ball		
361		<b><u>MANHOLES (number)</u></b>			
		material	Precast (2)		
		size	4' diam.		
		depth			
371		<b><u>GRINDER</u></b>			
		manuf./model	Muffin Monster	2000	Hydraulic
		HP			
371		<b><u>CRAIN/HOIST</u></b>			
		Manuf./model	Portable cable		
360		<b><u>VALVES</u></b>	7'x9' Concrete Chamber		4'x4' Alum Hatch 3.5x3.5' Alum Hatch
		Type/Manf./size/#	Check/ Kennedy/ 4" (2) Gate/ Kennedy/ 4" (3)		One Bypass
355		<b><u>GENERATOR</u></b>			
		Manufacturer	Cummin/ ONAN	2000	
		Generator KW	140		
		Generator HP	188		
		Fuel Tank (Gals)	336		
355		ATS (manf/model #)	ONAN		OTC-3385645
360		<b><u>FORCE MAIN</u></b>			
		Force Main Size	4"		
		Force Main Mat.	Ductile Iron		
		Length in Feet	1865		
354.2		<b><u>BUILDING</u></b>			
		SIZE	17"x14.5"	2000	
		Main Structure Material	Concrete Block/ Brick façade		
		Roof type	Asphalt shingles		
		Doors (number /material)	Double Steel door 6'x7'		
		lighting	Fluorescent		





**Pump Station #15 - AKA Estates of Landis Brooke Pump Station**

**Facility Description (see attached Information Sheet)**

Pump Station #15 is located at 148 Sunny Brook Road and is equipped with two (2) explosion proof 33-GPM Hydromatic submersible grinder pumps. Wastewater is discharged through a 1000 foot, two (2) inch PVC force main that ties into the existing sewage collection system Sunny Brook Road. The pump station was installed in 2006.

The pump wet well is a precast concrete unit (5 ft.in diameter, approximately 20 ft. deep) with one 2.5' x 3.5' aluminum hatchway. The control panel is manufactured by ITT FLYGT

The Generator Building (15' x 15') is constructed of concrete block with a brick façade and an asphalt shingle roof. The building contains florescent lighting, a steel double door

The Generator is a Cummins 20 KW diesel operated unit with an integral diesel tank. The Automatic Transfer Switch (ATS) is manufactured by ASCO.

The entire property is surrounded by a 50' by 45' chain link fence.

**Property Condition**

The Generator is serviced on a regular basis and operates satisfactorily. The building is in very good condition, the roof is in good condition and all HVAC systems work satisfactorily.

**Facility Construction Cost – Pump Station 15**

<u>Year</u>	<u>Cost</u>	<u>Description</u>	<u>Source</u>
2006	\$170,000	Initial facility cost including pump station, building, generator, fencing, paving, etc.	Escrow



1 Pump Station #15 – Wet Well Exterior.



2 Pump Station #15 – Wet Well Interior.





3 Pump Station #15 – Building Exterior.



4 Pump Station #15 – Building Interior.

### Pump Station #15 Information Sheet

<b>PUMP STATION #15</b>					
Station Name		Estates of Landis Brooke		Phone # 610-287-6049	
Location		148 Sunny Brook Rd., Limerick PA 19468			
Start Up Date		August 21, 2006			
CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS
371.3		Pump Manufacturer	FLYGT	2006	
		Pump Model Number	3068		
		Type	Submersible		Grinder Pumps
		Pump GPM	33		
		Pump TDH Ft.	48		
		Pump Size	2" grinder		
		Motor HP	2.3 HP		
		Motor Voltage	240		
370.3		Wet Well Size	5 ft. round		
371.3		Pump Control	Multitrode		
371.3		Hatch	2.5'x3.5' Alum Hatch		
371.3		<b>CONTROL PANEL</b>			
		Manufacturer	ITT FLYGT		
		Model/serial number			
361		<b>MANHOLES (number)</b>			
		material	Precast (1)		
		size			
		depth			
371		<b>GRINDER</b>			
		manuf./model	N/A		
		HP			
371		<b>CRAIN/HOIST</b>			
		Manuf./model	Halliday Portable SS		
360		<b>VALVES</b>			
		Type/Manf./size/#	2" gate valve		no valve pit
355		<b>GENERATOR</b>			
		Manufacturer	Cummins	2006	
		Generator KW	20		
		Generator HP	32 HP		
		Fuel Tank (Gals)	79 integral tank		5.5'x 2.2'x 1.2' H-163 gal auxiliary tank
355		ATS (manf/model #)	ASCO		
360		<b>FORCE MAIN</b>			
		Force Main Size	2"		
		Force Main Mat.	Sch 21 PVC		
		Length in Feet	1000		
354.2		<b>BUILDING</b>			
		SIZE	15'x15'	2006	
		Main Structure Material	Concrete Block- Brick Façade		
		Roof type	Asphalt Shingle		
		Doors (number /material)	Double steel 7'x 6' W		
		lighting	Fluorescent		
		<b>ELECTRICAL</b>			
371.3		MCC	125 AMP Main-disconnect and 125 AMP Panel RACO Verbatim		
396		Alarm System (manf/ model)			



**Pump Station #16 - AKA Brook Evans Pump Station**

**Facility Description (see attached Information Sheet)**

Pump Station #16 is located at 182 Longview Road, Royersford, PA 19468, adjacent to the Possum Hollow Wastewater Treatment Plant, and is equipped with Three (3) explosion proof 319-GPM FLYGT submersible pumps. Wastewater is discharged through a 364 foot, ten (10) inch Ductile Iron force main that ties into the influent box/forcemain chamber at the Possum Hollow Treatment Plant. The pump station was installed in 2003.

The pump wet well is a precast concrete unit (8 ft diameter, XXXX ft. deep). The control panel is manufactured by FLYGT and the system has a multirode flow meter. The pump system has a separate precast concrete valve box (12.5' x 10.4') with a 4' x 4' aluminum hatchway and a 5' x 5' aluminum hatchway. The influent line to the wet well contains a Muffin Monster grinder. There are three (3) PRATT 10" plug valves, three (3) PRATT 10" Gate valves, with two (2) 4" surge and bypass valves.

All the equipment onsite is located outdoors. There is no generator building onsite. The pump station is connected to the generator located at the Possum Hollow Wastewater Treatment Plant, adjacent to the site (Refer to the Possum Hollow Wastewater Treatment Plant Section of this Report).

The entire property is surrounded by a 60' by 60' chain link fence with a 12' double gate a 4' wide main gate.

**Property Condition**

The pump station and all the existing control panels are in good condition.

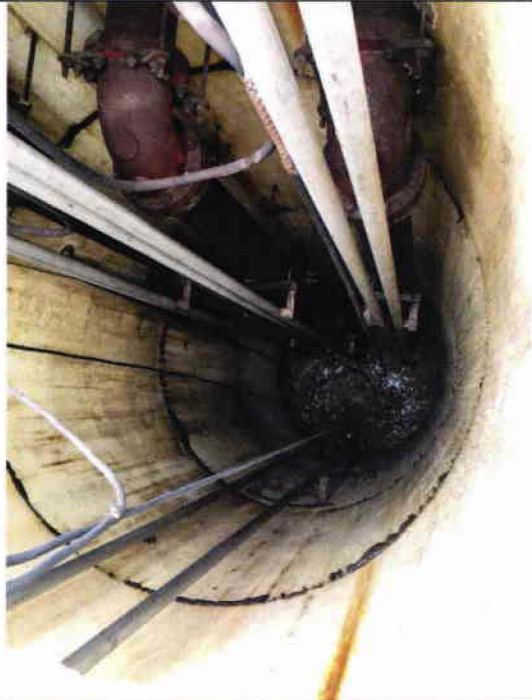


**Facility Construction Cost – Pump Station 16**

<u>Year</u>	<u>Cost</u>	<u>Description</u>	<u>Source</u>
2003		The Pump Station was installed as part of the Possum Hollow Treatment Plant. Information regarding individual cost breakdowns at the plant could not be found. Based on a sim	Tapping Fee calculations
2016	\$4,900	Grinder Rebuild	Depreciated Asset List



1 Pump Station #16 – Overall Site.



2 Pump Station #16 – Wet Well Interior.



3 Pump Station #16 – Wet Well Exterior.



4 Pump Station #16 – Control Panel.



### Pump Station #16 Information Sheet

<b>PUMP STATION #16</b>					
		Station Name	Brook Evans	Phone # 610-495-0167	
		Location	182 Longview Rd., Royersford, PA 19468		
		Start Up Date	June 5, 2003		
CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS
371.3		Pump Manufacturer	FLYGT	2003	
		Pump Model Number			
		Type	Submissible		
		Pump GPM	319		
		Pump TDH Ft.	90		
		Pump Size	4"		
		Motor HP	18		3 pumps
		Motor Voltage	480		
370.3		Wet Well Size	8 ft. round		
371.3		Pump Control	Multitrode		3 pc
371.3		Hatch			
371.3		<b>CONTROL PANEL</b>			
		Manufacturer	FLYGT		
		Model/serial number			
361		<b>MANHOLES (number)</b>			
		material	2 precast		
		size			
		depth			
371		<b>GRINDER</b>			
		manuf./model	Muffin Monster	2003	
		HP			
371		<b>CRAIN/HOIST</b>			
		Manuf./model			
360		<b>VALVES</b>	Hatch 4'x4' Alum; 5'x5' Alum Concrete 12.5'x10.4'		
		Type/Manf./size/#	Plug/10"/ PRATT (3) Gate/ 10"/ PRATT (3) Sump Pump		4"/(2)- Surge & Bypass
355		<b>GENERATOR</b>		2003	
		Manufacturer			
		Generator KW			
		Generator HP			
		Fuel Tank (Gals)			
355		ATS (manf/model #)			
360		<b>FORCE MAIN</b>			
		Force Main Size	10"		
		Force Main Mat.	Ductile Iron		
		Length in Feet	364		
354.2		<b>BUILDING</b>		2003	
		SIZE			
		Main Structure Material			
		Roof type			
		Doors (number /material)			
		lighting			
		<b>ELECTRICAL</b>			
371.3		MCC	FLYGT (Main power control)		
396		Alarm System (manf/ model)	Cell Tower/ Monitor Pro 60'+		





**Pump Station #17 - AKA Possum Hollow Run Pump Station**

**Facility Description (see attached Information Sheet)**

Pump Station #17 is located at 257 Longview Road and is equipped with three (3) explosion proof 500-GPM Hydromatic submersible pumps. Wastewater is discharged through a 364 foot, eight (8) inch ductile iron force main that ties into the existing sewage collection system at Pump Station 16 leading into the Possum Hollow Treatment Plant. The pump station was installed in 2003.

The pump wet well is a precast concrete unit (8 ft. diameter, xx dee[]) with two aluminum hatchways, one of which is 92"x45" and the other is 35"x28". The control panel is manufactured by FLYGT. The unit is also programmed to record flow volumes with an Endress &Hauser Chart Recorder and for high and low level alarms with a RACO Verbatim VSS. The pump system has a separate precast concrete valve box (10' x 12.5' x 7' deep) with two aluminum hatchways, one of which is 5'x5' and the other is 4'x4'. There are three PRATT 8" check valves, three 8" PRATT gate valves and two 4" plug valves for bypass & surge bypass, installed in 2003. The influent line to the wet well contains a Muffin Monster grinder which is hydraulically operated via a 5 HP unit located in the Generator Building.

The Generator Building (16' x 16') is constructed of concrete block with a stone façade and an asphalt shingle roof. The building contains florescent lighting, a steel double door, a Modine electric heater unit, an Intake Motorized Louver ( 2'x 3'), Greenneck Exhaust Fan and an Exhaust Generator louver (38"x38"). There is no MCC unit in the building, all power for the facility is distributed from the Electrical Panel. The panel includes a 225 AMP (PP), 60 AMP (LPC) and a 150 AMP Main Breaker.

The Generator is a Cummins 50 KW diesel operated unit with an integral 75 gal diesel tank. The Automatic Transfer Switch (ATS) is manufactured by Cummins/ Tuss.

**Property Condition**

The Generator is serviced on a regular basis and operates satisfactorily. The building is in very good condition, the roof is in good condition and all HVAC systems work satisfactorily.

**Facility Construction Cost – Pump Station 17**

<u>Year</u>	<u>Cost</u>	<u>Description</u>	<u>Source</u>
2003		The Pump Station was installed as part of the Possum Hollow Treatment Plant. Information regarding individual cost breakdowns at the plant could not be found. Based on a sim	Tapping Fee calculations



1 Pump Station #17 – Overall Site.



2 Pump Station #17 – Wet Well Interior.





3 Pump Station #17 – Wet Well Exterior.



4 Pump Station #17 – Building Interior.

### Pump Station #17 Information Sheet

PUMP STATION #17					
Station Name		Possum Hollow Run		Phone # 610-495-2174	
Location		257 Longview Rd., Royersford, PA 19468			
Start Up Date		June 5, 2003			
CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS
371.3		Pump Manufacturer	FLYGT	2003	3 pumps
		Pump Model Number			
		Type	Submersible		
		Pump GPM	500		
		Pump TDH Ft.	90		
		Pump Size	4"		
		Motor HP	18		
		Motor Voltage	480		
370.3		Wet Well Size	8 ft. round		
371.3		Pump Control	Multitrode		MT 3pc
371.3		Hatch	92"x45" Alum, 35"x28" Alum		
371.3		<b>CONTROL PANEL</b>			
		Manufacturer	FLYGT		
		Model/serial number			
371		<b>GRINDER</b>			
		manuf./model	Muffin Monster	2003	Hydraulic
		HP	5		
371		<b>CRAIN/HOIST</b>			
		Manuf./model	N/A		
360		<b>VALVES</b>	Valve Box Concrete 10'x12.5'x7' D		
		Type/Manf./size/#	Plug/8"/PRATT (3)		(2) Plug-4" Bypass & Surge Bypass
			CHECK/8"/ PRATT (3)		5'x5' Alum Hatch
			Sump/ Lights (ICOR)		4'x4' Alum Hatch
355		<b>GENERATOR</b>			
		Manufacturer	Cummin	2003	
		Generator KW	50		
		Generator HP	82		
		Fuel Tank (Gals)	75		
355		ATS (manf/model #)	Cummins/ Tuss		240 Hrs
360		<b>FORCE MAIN</b>			
		Force Main Size	8"		
		Force Main Mat.	Ductile Iron		
		Length in Feet	364		
354.2		<b>BUILDING</b>		2003	
		SIZE	16'x16'		
		Main Structure Material	Concrete block w/ stone façade		
		Roof type	asphalt shingles		
		Doors (number /material)	1 double steel (6'x7' H)		
		lighting			
		<b>ELECTRICAL</b>			
371.3		MCC	225 AMP Panel (PP)		150 Main Breaker
396		Alarm System (manf/ model)	LPC Panel 60 AMP Verbatim RACO VSS		Transformer 450 V?
CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS



**Pump Station #18 - AKA Raven's Claw Pump Station**

**Facility Description (see attached Information Sheet)**

Pump Station #18 is located at 78 Masters Drive and is equipped with two (2) explosion proof 510-GPM Hydromatic submersible pumps. Wastewater is discharged through a 6370 foot, six (6) inch ductile iron force main that ties into the existing sewage collection system on Airport Road and eventually to Possum Hollow Treatment Plant. The pump station was installed in 2004.

The pump wet well is a precast concrete unit (8 ft. diameter, approximately 20 ft. deep) with one 5.5' x 5.5' aluminum hatchway. The control panel is manufactured by FLYGT. The unit is also programmed to record flow volumes and for high and low level alarms with a Motion Pro system. The pump system has a separate precast concrete valve box (7' x 11') with two aluminum hatchways, one of which is 55"x54" and the other is 3.5'x3.5'. There are three Milcentric 6" check valves, and three 6" Milcentric plug valves (1 bypass) and a sump pump, installed in 2004. The influent line to the wet well contains a Muffin Monster grinder which is hydraulically operated via a 5 HP unit located in the Generator Building. The building is equipped with a portable hoist.

The Generator Building (16' x 18') is constructed of concrete blocks with a stone façade and an asphalt shingle roof. The building contains florescent lighting, a steel double door (6'x7'), a QMARK 5KW electric unit heater, a Greenneck Exhaust and a Milton Intake (53"x48"). There is no MCC unit in the building, a 200 AMP disconnect is in the FLYGT control panel inside the building. The PECO transformer is located outside of the fence.

The Generator is a Cummins ONAN 150 KW diesel operated unit with an integral 366 gal diesel tank.

The entire property is surrounded by a 40' by 100' fence with a 14' gate. Located outside is a single hydrant. The facility previously utilizes a hydrogen peroxide dosing system. The system contains a 250 gallon polyethylene tank.

**Property Condition**

The Generator is serviced on a regular basis and operates satisfactorily. The building is in very good condition, the roof is in good condition and all HVAC systems work satisfactorily.

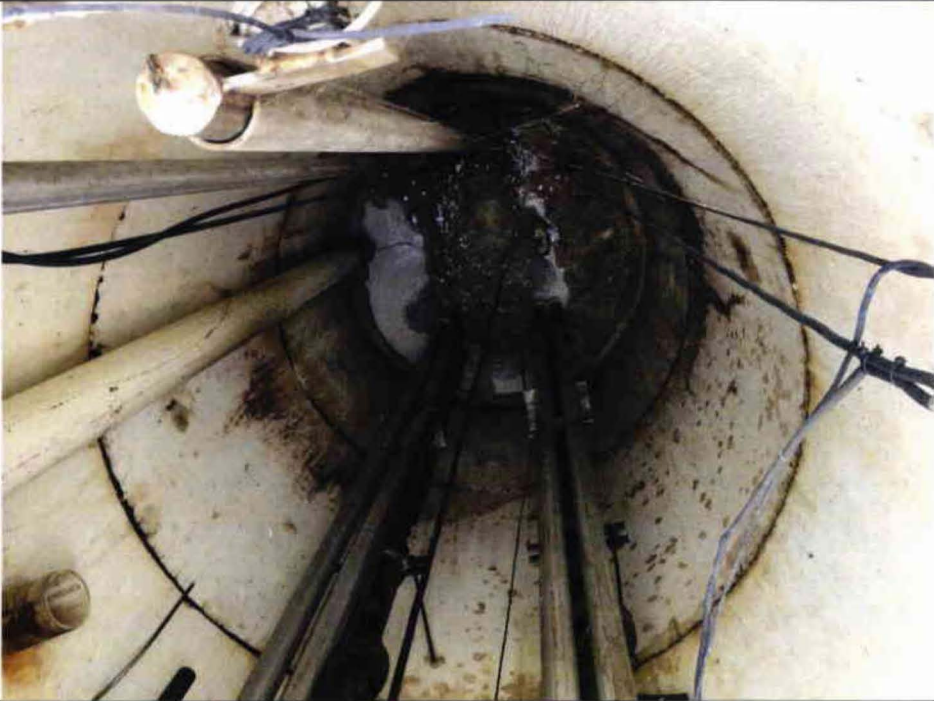


**Facility Construction Cost – Pump Station 18**

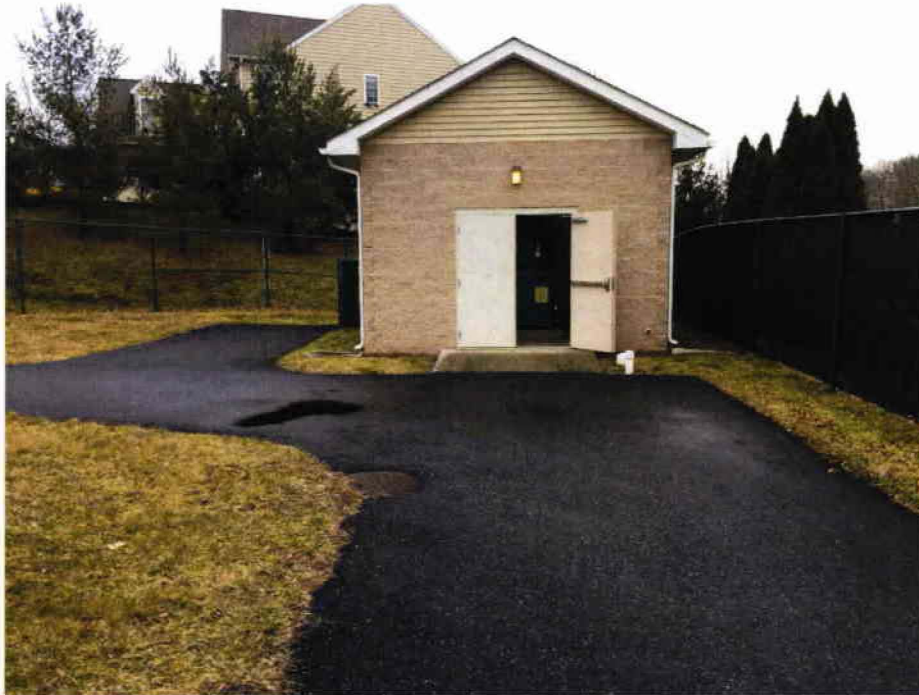
<u>Year</u>	<u>Cost</u>	<u>Description</u>	<u>Source</u>
2004	\$300,000	Information regarding the installation of this pump station could not be found, however, pump station 19 is of similar size was installed in 2007 for \$305,00.	Escrow for pump 19 installed in 2007.
2016	\$3,250.	Omni System Crystal Ball	Depreciated Asset List



1 Pump Station #18 – Wet Well Exterior.



2 Pump Station #18 – Wet Well Interior.



3 Pump Station #18 – Building Exterior.



4 Pump Station #18 – Building Interior.



### Pump Station #18 Information Sheet

<b>PUMP STATION #18</b>					
	Station Name	Raven's Claw	Phone # 610-495-3046		
	Location	78 Masters Drive, Pottstown, PA 19464			
	Start Up Date	October 14, 2004			
CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS
371.3		Pump Manufacturer	FLYGT	2004	
		Pump Model Number			
		Type	Submersible		
		Pump GPM	510		
		Pump TDH Ft.	166		
		Pump Size	4"		
		Motor HP	18		
		Motor Voltage	460		
370.3		Wet Well Size	8 ft. round, 9.5" OD		
371.3		Pump Control	Multitrode with high level floats		2pc
371.3		Hatch	5.5'x5.5' Alum		
371.3		<b>CONTROL PANEL</b>			
		Manufacturer	FLYGT		
		Model/serial number			
361		<b>MANHOLES (number)</b>			
		material	3 precast		
		size			
		depth			
371		<b>GRINDER</b>			
		manuf./model	Muffin Monster		
		HP	5		
371		<b>CRAIN/HOIST</b>			
		Manuf./model	Portable Davit		
360		<b>VALVES</b>			
		Type/Manf./size/#	Box Concrete 7'x11' Plug/ Milcanric/ 6" (3) 1 Bypass sump pump Chack/ Milcanric/ 6" (3)		Hatch 55"x54" alum; 3.5'x3.5' alum
355		<b>GENERATOR</b>			
		Manufacturer	Cummins ONAN	2004	
		Generator KW	150		
		Generator HP	160		6TCA8303
		Fuel Tank (Gals)	366		
355		ATS (manf/model #)			
360		<b>FORCE MAIN</b>			
		Force Main Size	6"		
		Force Main Mat.	Ductile Iron		
		Length in Feet	6370		
354.2		<b>BUILDING</b>			
		SIZE	16'x18'	2004	
		Main Structure Material	block/ stone façade		
		Roof type	asphalt shingles		
		Doors (number /material)	6'x7' steel double door		
		lighting	Fluorescent		
		<b>ELECTRICAL</b>			
371.3		MCC	Transformer inside		200 AMP Main FLYGT
396		Alarm System (manf/ model)	Monitor Pro		PACO outside





**Pump Station #19 - AKA Springford Country Club Pump Station**

**Facility Description (see attached Information Sheet)**

Pump Station #19 is located at 95 Country Club Road and is equipped with two (2) explosion proof 96-GPM Hydromatic submersible pumps. Wastewater is discharged through a 1300 foot, four (4) inch ductile iron force main that ties into an existing manhole located on Country Club Road and eventually to the King Road Treatment Plant. The pump station was installed in 2007.

The pump wet well is a precast concrete unit (6 ft. diameter, approx. 20 deep) with one 4' x 5.5' aluminum hatchway. The control panel is manufactured by ABB. The unit is also programmed to record flow volumes with a Monitor Pro – FLYGT meter and for high and low level alarms with a RACO Verbatim Cellular Signal Alarm System. The pump system has a separate precast concrete valve box (8' x 9' x 7' deep) with two aluminum hatchways, one of which is 4.5' x 4.5' and the other is 3.5'x3.5'. There are two 4" check valves, three 4" plug valves (1 bypass) and a sump pump located in the chamber, installed in 2007. The influent line to the wet well contains a Muffin Monster grinder which is hydraulically operated via a 5 HP unit located in the Generator Building.

The Generator Building (18' x 16') is constructed of concrete blocks with a stone façade and an asphalt shingle roof. The building contains florescent lighting, a steel double door (6'x7'), a QMARK electric unit heater, two galvanized motorized louver intakes (4'x 4') and a Greenneck Exhaust Fan. Power to the facility is supplied by a MCC 200 AMP Main Breaker, a 225 AMP Breaker Panel (PDP) and a 100 AMP Breaker Panel (LP). Also, installed is a toilet and hot water heater.

The Generator is a Cummins ONAN 40 KW diesel operated unit with an integral 75 gal diesel tank. The Automatic Transfer Switch (ATS) is manufactured by Cummins.

The entire property is surrounded by a 70' by 70' chain link fence. There is one hydrant located outside. The facility utilizes a hydrogen peroxide dosing system. The system contained 200 gallon polyethylene tank, and an LMI metering pump.

**Property Condition**

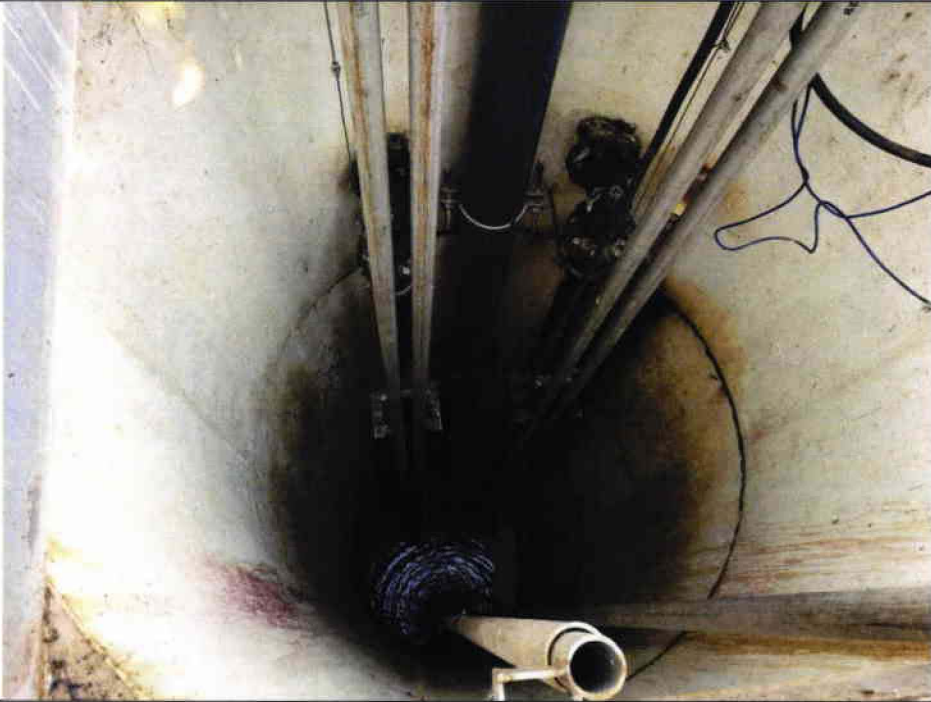
The Generator is serviced on a regular basis and operates satisfactorily. The building is in very good condition, the roof is in good condition and all HVAC systems work satisfactorily.

**Facility Construction Cost – Pump Station 19**

<u>Year</u>	<u>Cost</u>	<u>Description</u>	<u>Source</u>
2007	\$305,000	Initial facility cost including pump station, building, generator, valve chamber, fencing, paving, etc.	Escrow



1 Pump Station #3 – Overall Site.



2 Pump Station #19 – Wet Well Interior.





3 Pump Station #19 – Wet Well Exterior.



4 Pump Station #19 – Building Interior.

## Pump Station #19 Information Sheet

<b>PUMP STATION #19</b>					
		Station Name	Springford Country Club	Phone # 610-792-2638	
		Location	95 Country Club Rd., Limerick, PA 19468		
		Start Up Date	January 17, 2007		
CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS
371.3		Pump Manufacturer	FLYGT	2007	
		Pump Model Number			
		Type	Submersible		
		Pump GPM	96		
		Pump TDH Ft.	75		
		Pump Size	4"		
		Motor HP	10		
		Motor Voltage	230		
370.3		Wet Well Size	6' Round		Concrete
371.3		Pump Control	Multitrode with float backup		MT 2 PC
371.3		Hatch			4'x 5.5' Alum
371.3		<b>CONTROL PANEL</b>			
		Manufacturer	ABB-		
		Model/serial number	1658-P63170		
371		<b>GRINDER</b>			
		manuf./model	Muffin Monster	2007	Hydraulic 30005
		HP			
371		<b>CRAIN/HOIST</b>			
		Manuf./model	Portable 55		
360		<b>VALVES</b>	Valve Box Concrete Precast		8'x9'x7' D
		Type/Manf./size/#	Check/4"/ (2)		Hatch: 4.5x4.5' Alum, 3.5x3.5' Alum
			Plug/4"/ (3)	1 Bypass	Sump Pump
355		<b>GENERATOR</b>			
		Manufacturer	Cummins Onan	2007	DGHD-5762336
		Generator KW	40		
		Generator HP	82		
		Fuel Tank (Gals)	75		4.5x5' Exhaust Louver
355		ATS (manf/model #)	Cummins		
360		<b>FORCE MAIN</b>			
		Force Main Size	4"		
		Force Main Mat.	Ductile Iron		
		Length in Feet	1300		
354.2		<b>BUILDING</b>			
		SIZE	18'x16'	2007	
		Main Structure Material	Concrete Block w/ stone façade		
		Roof type	Asphalt shingles		
		Doors (number /material)	Double steel		6'W x 7' H
		lighting	Fluorescent/ outdoor pole light		
		<b>ELECTRICAL</b>			
371.3		MCC	200 AMP Main Breaker		
396		Alarm System (manf/ model)	225 AMP Breaker Panic (PDP) 100 AMP Breaker Panic (LP) RACO verbatim/cellular		Transformer size?



**Pump Station #20 - AKA Gratersford Road Pump Station**

**Facility Description (see attached Information Sheet)**

Pump Station #20 is located on Gratersford Road and is equipped with two (2) explosion proof 320-GPM FLYGT submersible pump. The pump control unit Muti-Smart FLYGT system. Wastewater is discharged through a four (4) inch force main. The pump station was installed in 2015.

The pump wet well is a precast concrete unit with aluminum hatchways. The control panel is manufactured by Schneider. The pump system has a separate precast concrete valve box with two aluminum hatchways, one of which is 42"x42" and the other is 54"x54". There are two GA Industries 6" check valves and three 6" GA Industries plug valves. The influent line to the wet well contains a Muffin Monster grinder which is hydraulically operated via a 5 HP unit located in the Generator Building.

The Generator Building is constructed of concrete block with a brown stone block façade and an asphalt shingle roof. The building contains florescent lighting, a steel double door, a QMark electric unit heater and 12" exhaust fan and 3'x5' motorized intake louver. The facility is serviced by a 225 Amp main panel and 110 Amp Control Panel. The alarm system is a VSS/Verbatim system. The building has a sink with tankless water heater and eye wash and shower station.

The Generator is a Cummins/ ONAN 80 KW/125 HP diesel operated unit. The Automatic Transfer Switch (ATS) is manufactured by TVSS/ ATS Cummins.

The facility previously utilized a hydrogen peroxide dosing system (900 gal. poly tank), which is now abandoned. There is a 1" freeze proof hydrant on site. A well was drilled (120' depth) on 6/25/15 has a 20GPM pump and 33 gal. receiving tank.

**Property Condition**

The building is in very good condition, the roof is in good condition and all HVAC systems work satisfactorily. All equipment is under 2 years old and in excellent working condition.



**Facility Construction Cost – Pump Station 20**

<u>Year</u>	<u>Cost</u>	<u>Description</u>	<u>Source</u>
2015	\$483,000	Initial facility cost including pump station, building, generator, valve chamber, fencing, paving, etc.	Escrow
2015	\$25,000	Forcemain	Escrow



1	Pump Station #20 – Wet Well Exterior.
---	---------------------------------------



2	Pump Station #20 – Wet Well Interior.
---	---------------------------------------



3 Pump Station #20 – Building Exterior.



4 Pump Station #20 – Building Interior.



**Pump Station #20 Information Sheet**

PUMP STATION #20					
Station Name		Gratersford Road		Phone # 610-489-2063	
Location					
Start Up Date					
CODE	SUBCODE	PUMP STATION	DESCRIPTION	YEAR INSTALLED	COMMENTS
371.3		Pump Manufacturer	FLYGT	2015	
		Pump Model Number	3153		
		Type	Submersible		
		Pump GPM	320		
		Pump TDH Ft.			
		Pump Size			
		Motor HP			
		Motor Voltage			
370.3		Wet Well Size			
371.3		Pump Control	Multi-Smart FLYGT		
371.3		<b>CONTROL PANEL</b>			
		Manufacturer	SCHNEIDER		
		Model/serial number			
371		<b>GRINDER</b>			
		manuf./model	Muffin Monster		
		HP	5		
371		<b>CRAIN/HOIST</b>			
		Manuf./model			
360		<b>VALVES</b>			
		Type/Manf./size/#	Valve box Plug/GA Ind. /6" (3) Check/ GA Ind./6" (2)		42"x42" & 54"x54" alum hatches One Bypass and sump pump
355		<b>GENERATOR</b>			
		Manufacturer	Cummin/ONAN	2015	DSFAE-1419778
		Generator KW	80		
		Generator HP	125HP		
		Fuel Tank (Gals)			
355		ATS (manf/model #)	TVSS/ATS Cummins		
360		<b>FORCE MAIN</b>			
		Force Main Size	4"		
		Force Main Mat.			
		Length in Feet			
354.2		<b>BUILDING</b>		2015	
		SIZE			
		Main Structure Material			
		Roof type			
		Doors (number /material)			
		lighting			
		<b>ELECTRICAL</b>			
371.3		MCC	225 AMP Main 110 Amp Control Panel Verbatim VSS		
396		Alarm System (manf/ model)			





**4.4.1 – LAND DEVELOPMENT ASSETS**

**4.4.2 - INTERCEPTORS**

#### 4.4.1 - LAND DEVELOPMENT ASSETS

Pennoni researched Township growth from 1988 to present for additions to the sewer system. Where available, escrow calculations, bid documents, tapping fee calculations and measurements from drawing were used.

A spread sheet with each development name has been prepared which provides the quantity of piping, number of manholes and original cost of installation. Where necessary an estimated cost was listed.

Escrows used for calculations are located in the Digital Files.

LIMERICK TOWNSHIP SEWAGE FACILITIES INVENTORY - LAND DEVELOPMENT ASSETS

Revised 3-31-2017

Development Name	No. of Manholes	Length of Pipe (LF)	Pipe Size	Material	Original Cost	Escrow Date	Estimated Completion Year	Pump Station
190 Airport Rd	1	447	6"	PVC	\$ 30,272	4/4/2013	2014	
292-296 W. Ridge Pike	5	680	6"	SDR-35	\$ 41,610	2/28/2006	2006	
57 Neiffer Rd	6	903	8"	PVC	\$ 25,836	6/24/2013	2015	
Abbey Downs (Ph. 2-3)	29	4,376	8"	SDR-35	\$ 185,848	5/25/93 (Ph. 3)	1994	6
		1,740	6"					
Aronimink	20	3,022	8"	SDR-35	\$ 118,001	11/17/1988	1989	5
		2,458	6"					
Ashbrook Estates (Ph. 1-4)	27	6,417	8"	PVC	\$ 286,855	-	2004	6
		1,842	6"					
Ashford SD	9	1,590	8"	SDR-35	\$ 73,568	4/9/98 (Release #1)	1999	16
		630	6"					
Bellemeade	7	948	8"	PVC	\$ 62,676	7/9/2003	2004	6
		211	8"	DIP				
		405	6"	PVC				
Bradford Woods	92	450	8"	DIP	\$ 835,625	1999	2000	12,13,14
		13,450	8"	SDR-35				
		2,234	8"	SDR-26				
		5,678	6"	SDR-35				
		234	6"	SDR-26				
		7,544	4"	DI				
1,085	2"	PVC	\$ 13,020	1999	2000	13		
Brookwood SD (Sara Ln)	3	493	8"		\$ 27,502	3/13/1991	1991	5
		164	6"					
Brownback Road Subdivison	1	200	8"	PVC	\$ 27,270	9/3/2010	2011	5
		145	6"					
Bruster's Ice Cream	0	20	6"	PVC	\$ <del>8,975</del>	3/8/2006	2006	
		50	4"					
Calamia Subdivision	2	570	8"	SDR-35	\$ 73,021	12/23/2003	2004	
		245	2"	SDR-21				
Chapel Heights/The Fields	15	3,124	8"	PVC	\$ 111,819	-	1990	2
Cherry Ridge	12	2,351	8"	SDR-26	\$ 195,551	7/25/2014	2016	
		137	8"	DIP				
		360	6"	SDR-26				
		560	4"	SDR-26				



LIMERICK TOWNSHIP SEWAGE FACILITIES INVENTORY - LAND DEVELOPMENT ASSETS

Revised 3-31-2017

Development Name	No. of Manholes	Length of Pipe (LF)	Pipe Size	Material	Original Cost	Escrow Date	Estimated Completion Year	Pump Station
Chestnut Pointe	19	14	12"	SDR-35	\$ 155,026	6/8/1999	2000	6
		3,675	8"					
		1,352	6"					
Church Hill Estates (Ph. 1-2)	14	1,736	8"	PVC	\$ 64,984	8/27/07 (Ph. 2)	2008	5
		620	6"					
Costco	10	2,025	8"	SDR-35	\$ 162,417	2/23/2010	2011	--
		164	6"	PVC				
Country Club Estates/Dinnocenti Tract	55	7,120	8"	PVC	\$ 717,941	10/5/2005	2007	19
		97		DIP				
		728	SDR-21					
		3,050	6"	PVC				
		1,400	4"	DIP				
Crosswinds	14.	2,708	8"	SDR-35	\$ 169,064	1/14/2000	2001	5
		1,120	6"	PVC				
D&L Associates	5	1,399	8"	--	\$ 35,320	12/10/1987	1989	
		260	6"					
Deer Run	21	2,800	8"	PVC	\$ 172,811		1999	18
Ely Property Subdivison	6	1,362	8"				2009	18
Estates At Landis Brooke	17	3,156	8"	SDR-35	\$ 134,128	-	2006	15
		1,096	6"	PVC				
		995	2"	SDR-21				
Evans brooke	18	2,949	8"	SDR-35	\$ 203,547	1/22/2004	2005	16
		1,400	6"	PVC				
Evans Creek Industrial Park	12	1,731	8"	SDR-35	\$ 148,280	10/4/2007	2008	16
		138	8"	DIP				
		270	6"	SDR-35				
Faircrest Farm (Ph 1-4)	37	8,313	8"	SDR-35	\$ 477,620	4/19/00 (Ph. 4)	2001	11
		351	8"	DIP				
		2,760	6"	SDR-35				
		182	6"	DIP				
Fernwood Retail	7	893	8"	SDR-35	\$ 72,278	6/26/2005	2006	6
		20	6"	PVC				
Four Maples Development	3	341	8"	SDR-35	\$ 23,040	6/21/2001	2002	3
		170	6"					
Fox Ridge	33	4,769	8"	SDR-35	\$ 207,327	4/12/1990	1991	3
		4,160	6"					
GB Sheds	1	166	8"	PVC	\$ 16,261	11/1/2010	2011	
		10	6"					

LIMERICK TOWNSHIP SEWAGE FACILITIES INVENTORY - LAND DEVELOPMENT ASSETS

Revised 3-31-2017

Development Name	No. of Manholes	Length of Pipe (LF)	Pipe Size	Material	Original Cost	Escrow Date	Estimated Completion Year	Pump Station																																																																																																																																																																																																			
Glenview Estates	12	1,739	8"	SDR-35	\$ 117,120	7/8/04 (Release #1)	2005	2																																																																																																																																																																																																			
		624	6"	SDR-35					Golf Ridge (Ph. 1-3)	44	5,301	8"	SDR-35	\$ 68,618	1/15/00 (Ph. 3)	2001	3	1,440	8"	DIP	4,804	6"	SDR-35	340	6"	DIP	2,094	8"	SDR-35	Greenfields (Ph. 2)	11	816	6"	SDR-35	\$ 71,630	2/4/88 (Ph. 2)	1989	7	7,867	8"	PVC	Heather Glen (Ph. 1a-b)	39	88	8"	DIP	\$ 246,679	-	1997	1	3,625	6"	PVC	1,005	8"		Heritage Crossing At Limerick	6	974	6"	SDR-35	\$ 109,632	6/5/2007	2008		300	4"		2,069	8"		Heritage Estates	11	585	6"	PVC	\$ 88,622	7/9/2002	2003	6	3,522	8"		Heritage Ridge (Ph. 1-3)	16	4,490	6"	SDR-35	\$ 150,820	7/22/93 (Ph. 3)	1994	3	266	8"		Lakeside Development	3	340	6"	SDR-35	\$ 24,850	7/10/02 (Release #1)	2003	3	1,351	8"	SDR-35	Lakeview Commercial Center	12	839	8"	DIP	\$ 143,280	-	2001	6	398	6"	SDR-35	290	4"	-	1,439	8"	SDR-35	Landis Farms Estates/Crosswinds II	12	450	8"	SDR-26	\$ 159,219	6/30/2004	2005	5	276	8"	PVC	Latitude Hotels	1	1,955	8"		\$ 18,660	6/2/09 (Release #1)	2010		Lewis Road Associates (Ph. 1-2)	14	1,136	6"		\$ 117,697	2/11/2002 (Ph. 2)	2003	6	274	8"		Lewis Road Office Complex (Ph. II)	2	298	6"		\$ 22,298	6/4/2001 (Ph. 2)	2001	5	4,710	8"	PVC	<b>Limerick Airport Business Center</b>	<b>17</b>				<b>\$ 104,082</b>		<b>1992</b>	<b>1</b>	Limerick Center	9	754	8"	SDR-35	\$ 176,112	11/08/07 (RELEASE #3)	2008	6	266		SDR-26	336		DIP	636	6"	SDR-35	Limerick Green	6	804	8"		\$ 34,749
Golf Ridge (Ph. 1-3)	44	5,301	8"	SDR-35	\$ 68,618	1/15/00 (Ph. 3)	2001	3																																																																																																																																																																																																			
		1,440	8"	DIP																																																																																																																																																																																																							
		4,804	6"	SDR-35																																																																																																																																																																																																							
		340	6"	DIP																																																																																																																																																																																																							
		2,094	8"	SDR-35																																																																																																																																																																																																							
Greenfields (Ph. 2)	11	816	6"	SDR-35	\$ 71,630	2/4/88 (Ph. 2)	1989	7																																																																																																																																																																																																			
		7,867	8"	PVC																																																																																																																																																																																																							
Heather Glen (Ph. 1a-b)	39	88	8"	DIP	\$ 246,679	-	1997	1																																																																																																																																																																																																			
		3,625	6"	PVC																																																																																																																																																																																																							
		1,005	8"																																																																																																																																																																																																								
Heritage Crossing At Limerick	6	974	6"	SDR-35	\$ 109,632	6/5/2007	2008																																																																																																																																																																																																				
		300	4"																																																																																																																																																																																																								
		2,069	8"																																																																																																																																																																																																								
Heritage Estates	11	585	6"	PVC	\$ 88,622	7/9/2002	2003	6																																																																																																																																																																																																			
		3,522	8"																																																																																																																																																																																																								
Heritage Ridge (Ph. 1-3)	16	4,490	6"	SDR-35	\$ 150,820	7/22/93 (Ph. 3)	1994	3																																																																																																																																																																																																			
		266	8"																																																																																																																																																																																																								
Lakeside Development	3	340	6"	SDR-35	\$ 24,850	7/10/02 (Release #1)	2003	3																																																																																																																																																																																																			
		1,351	8"	SDR-35																																																																																																																																																																																																							
Lakeview Commercial Center	12	839	8"	DIP	\$ 143,280	-	2001	6																																																																																																																																																																																																			
		398	6"	SDR-35																																																																																																																																																																																																							
		290	4"	-																																																																																																																																																																																																							
		1,439	8"	SDR-35																																																																																																																																																																																																							
Landis Farms Estates/Crosswinds II	12	450	8"	SDR-26	\$ 159,219	6/30/2004	2005	5																																																																																																																																																																																																			
		276	8"	PVC																																																																																																																																																																																																							
Latitude Hotels	1	1,955	8"		\$ 18,660	6/2/09 (Release #1)	2010																																																																																																																																																																																																				
Lewis Road Associates (Ph. 1-2)	14	1,136	6"		\$ 117,697	2/11/2002 (Ph. 2)	2003	6																																																																																																																																																																																																			
		274	8"																																																																																																																																																																																																								
Lewis Road Office Complex (Ph. II)	2	298	6"		\$ 22,298	6/4/2001 (Ph. 2)	2001	5																																																																																																																																																																																																			
		4,710	8"	PVC																																																																																																																																																																																																							
<b>Limerick Airport Business Center</b>	<b>17</b>				<b>\$ 104,082</b>		<b>1992</b>	<b>1</b>																																																																																																																																																																																																			
Limerick Center	9	754	8"	SDR-35	\$ 176,112	11/08/07 (RELEASE #3)	2008	6																																																																																																																																																																																																			
		266		SDR-26																																																																																																																																																																																																							
		336		DIP																																																																																																																																																																																																							
		636	6"	SDR-35																																																																																																																																																																																																							
Limerick Green	6	804	8"		\$ 34,749	-	2000	3																																																																																																																																																																																																			
		50	6"																																																																																																																																																																																																								

LIMERICK TOWNSHIP SEWAGE FACILITIES INVENTORY - LAND DEVELOPMENT ASSETS

Revised 3-31-2017

Development Name	No. Of Manholes	Length of Pipe (LF)	Pipe Size	Material	Original Cost	Escrow Date	Estimated Completion Year	Pump Station
Limerick Plaza	9	90	12"	PVC	\$ 352,744	08/19/04 (Release #1)	2005	
		1,160		DIP				
		589	8"	PVC				
		245	6"	PVC				
Linfield Corporate Center (Ph. 1)	42	5,559	8"	PVC	\$ 154,385	3/10/1994	1995	5
Linfield Farm (Ph. 1-3)	26	5,415	8"	SDR-35	\$ 246,044	4/22/98 (Ph. 3)	1999	5
		2,322	6"					
Linfield Knoll	17	2,660	8"	SDR-35	\$ 192,093	2/15/99 (Ph. 3)	2000	5
		3,711	6"					
Links at Springford	11	2,065	8"	SDR-35	\$ 130,272	-	1999	16
		380	8"	DIP				
		2,560	6"	SDR-35				
Merion	22	3,118	8"	SDR-35	\$ 480,080	1/9/1996	1997	16
		2,216	6"	SDR-35				
		525	4"	SDR-21				
Montgomery Brook	24	240	8"	SDR-35	\$ 8,345	2/9/1990	1990	6
		145	6"					
Moore tract	2	100	8"	SDR-35	\$ 18,775	9/19/2006	2007	3
Moscariello	16	3,889	8"	SDR-35	\$ 403,732	3/25/2014	2015	18
		623	8"	SDR-26				
		1,950	6"	SDR-35				
Mountain View Estates	4	1,054	8"	SDR-35	\$ 492,210	6/25/2014	2017	
		112	6"	SDR-35				
Muirfield (Ph. 1-2)	28	4,432	8"	PVC	\$ 199,735	4/27/1993	1994	6
		1,746	6"					
Oak Creek Estates/Neiffer Woods (Ph. 1-2)	51	2,128	10"	SDR-35	\$ 993,426	-	2011	18
		77		SDR-36				
		489		DIP				
		6,484	8"	SDR-35				
		393	SDR-36					
		59	DIP					
2,555	6"	SDR-35						
Penn Liberty Bank	4	623	8"	SDR-35	\$ 63,710	11/19/2007	2008	
		114	6"					
Philadelphia Premium Outlets (Ph. 1)	23	3,752	8"	SDR-35	\$ 426,224	10/18/2006	2008	--
		1,825		SDR-26				
		139		DIP				
Pine Tree SD	18	3,062	8"	SDR-35	\$ 137,982	-	2001	6



LIMERICK TOWNSHIP SEWAGE FACILITIES INVENTORY - LAND DEVELOPMENT ASSETS

Revised 3-31-2017

Development Name	No. of Manholes	Length of Pipe (LF)	Pipe Size	Material	Original Cost	Escrow Date	Estimated Completion Year	Pump Station
Pinecrest Estates	2	300	8"	SDR-35	\$ 34,040	1/18/2001	2001	4
		280	6"	PVC				
Possum Hollow Industrial Park	5	732	8"	SDR-35	\$ 68,372	-	2007	--
Puleo SD	5	604	8"	SDR-35	\$ 52,089	7/6/2004	2005	4
Rose Tree Estates	4	444	8"	PVC	\$ 48,036	8/12/2003	2004	16
		390	6"					
Royersford/Limerick Center LP	20	988	6"	PVC	\$ 176,508	12/8/1994	1995	
		2080	8"					
		2190	12"					
Springford Country Club	3	434	8"	PVC	\$ 109,289	-	1994	6
		LS	8"	DIP				
Summer Chase	15	3,501	8"	SDR-35	\$ 117,478	12/19/1997	1998	3
		1,495	6"	SDR-36				
Summerdale Estates	9	1,760	8"	PVC	\$ 105,655	2/11/2002	2002	5
		800	6"					
Summit Properties (Ridge Pike CVS)	2	289	8"	SDR-35	\$ 12,280	6/21/2000	2001	
Telvil-Landis/Carriage Crossing	17	3,118	8"	SDR-35	\$ 174,470	8/13/2014	2015	3
		965	6"					
The Fairways	27	<del>1,966</del>	<del>8"</del>	-	\$ <del>212,850</del>			REMOVED
		<del>5,075</del>	<del>6"</del>					
The Glen	17	3,891	8"	PVC	\$ 101,011	6/25/1989	1989	4
		1,230	6"					
The Meadows	22	3,639	8"	PVC	\$ 161,796	-	1997	5
		551	8"	DIP				
		1,600	6"	PVC				
Villas	30	6617	8"	SDR-35	\$ 308,557	10/4/2004	2005	
		110	8"	DIP				
		2450	6"	SDR-35				
		<del>2900</del>	<del>4"</del>	<del>SDR-35</del>				
Walnut Crossing	15	704	12"	DIP	\$ 191,338	11/5/1996	1997	6
		2,489	8"	SDR-35				
		575	8"	DIP				
		3,020	6"	SDR-35				
Walnut Grove	21	1,324	8"		\$ 203,800		1998	6
		2,176	12"					
Waterford Greene (Ph. 1-8c)	95	14,253	8"	SDR-35	\$ 685,490	11/21/96 (Ph. 8c)	1997	3
		13,376	6"					
Wawa	0	31	6"	PVC	\$ 4,524	3/7/2005	2006	



EMERICK TOWNSHIP SEWAGE FACILITIES INVENTORY - LAND DEVELOPMENT ASSETS

Revised 3-31-2017

Development Name	No. of Manholes	Length of Pipe (LF)	Pipe Size	Material	Original Cost	Escrow Date	Estimated Completion Year	Pump Station
Welsh Subaru (addition)	0	212	6"	PVC	\$ 10,480	7/2/2014	2015	
Western Center	10	639	8"	PVC	\$ 107,117	5/6/2009	2010	
		601	8"	DIP				
		150	6"	PVC				
Wickford Hunt	14	2,697	8"	SDR-35	\$ 121,911	-	2001	5
		1,195	6"					
William Penn Villas	23	4,537	8"	SDR-35	\$ 228,806	-	200	18
		2,035	6"					
Willow Run (Ph. 1-7)	67	8,217	8"	SDR-35	\$ 517,604	-	2001	3
		2,710	6"					
Winnie Tract (Wayside)	27	4,526	8"	SDR-35	\$ 528,766	7/6/1998	1999	
		744	8"	DIP				
		1,631	6"	SDR-35				
YMCA (Spring Valley)	4	<del>990</del>	6"	SDR-35	\$ <del>147,141</del>			<b>REMOVED</b>
		<del>1,386</del>	<del>1.25"</del>	SDR-21				
Zappone	3	434	8"	SDR-35	\$ 22,135	10/4/1995	1996	4
Chapel Road	4	1,090	8"	VTC			1968	6
Oak Steet	3	882	8"	VTC			1968	
Lewis Lane	5	1400	8"	VTC			1968	

#### 4.4.2 – Interceptors

Pennoni researched the major gravity sewer interceptors installed from 1986 to present. Attached is a list of each Interceptor that was installed as part of the original WWTP installation and subsequent extensions.

The spread sheet, with each Interceptor or Sewer Extension name, provides the quantity of piping, number of manholes and original cost of installation. Where necessary an estimated cost was listed and noted in the comments.

**INTERCEPTOR QUANTITIES AND ORIGINAL COST**

revised 3-27-17

	SEWER	PIPING			MANHOLES	ORIGINAL COST	YEAR	SOURCE / COMMENTS
		LENGTH	SIZE	MATERIAL				
1	Landis Creek Interceptor	1657	12"	ACP	9	\$5,596,725	1986	Replaced with HDPE pipe circa 2000
		447	8"					
	Lewis Rd Interceptor	1038	21"	PVC	5			
	King Rd Interceptor	1374	8"	PVC	6			
	Schuykill Interceptor	1184	12"	DIP	12			
		1204		PVC				
	Railroad Ave Interceptor	650	12"	PVC	5			
	Trinley Rd (Interceptor to Linfield Rd)	932	18"	PVC	10			
		74	16"	DIP				
		289	12"					
Linfield Interceptor	195	12"	DIP	14				
	1271	10"	PVC					
	196	8"						
2	Mingo Creek Interceptor (incl. Reifsnyder Road Sewer Extension)	4800	12"	PVC	50	\$1,310,789	1999	Tapping Fee and Escrow
		5760	15"					
		1588	8"	PVC				
		110	6"					
3	Possum Hollow Sewage System Interceptors (Possum Hollow and Brook Evans Interceptors)	4750	15"	PVC	51	\$3,001,430	2002	Tapping fee and Escrow - Installed as part of original WWTP construction
		2800	12"	PVC				
		4815	10"	PVC				
		214	10"	DIP				
4	Hartenstine Creek Interceptor	3139	8"	SDR-35	13	\$275,733	2004	Tapping Fee and Escrow
5	Landis Creek Interceptor	8450	10"	PVC	33	\$381,610	2005	Tapping Fee and Escrow
6	Springford High School Sewer Extension (Authority Portion)	3473	8"	pvc	15	\$59,155	1996	Tapping Fee and Measured from plans
7	Royersford Road Sewer Extension	1642	8"	PVC	8	\$176,544	1997	Tapping Fee and Measured from plans
8	Kugler Road Sewer Extension	1114	8"	SDR-35	5	\$175,132	1997	Tapping Fee and Measured from plans
9	Betty/Roberta Lanes Sewer Extension	2665	8"	PVC	8	\$332,740	1998	Tapping Fee and Measured from plans
10	West Cherry Lane Sewer Extension	1515	8"	SDR-35	8	\$133,900	1998	Tapping Fee and Escrow
		210	6"	PVC				
11	Ridge Pike Sewer Extension	3099	8"	SDR-35	31	\$634,598	1998	Tapping Fee and Escrow
		98	10"	SDR-35				
		1655	6"	SDR-35				
		1163	12"	SDR-35				
		298	12"	DIP				
		2769	8"	DIP				
12	North Limerick Road Sewer Extension	1750	8"	SDR-35	6	\$160,456	1999	Tapping Fee and Escrow
		240	6"	PVC				
13	Graterford Road Collection System	4600	10"	PVC	17	\$399,334	2001	Tapping Fee and Measured from plans
14	Limerick Center Road Sewer Extension	752	8"	SDR-35	4	\$176,656	2003	Tapping Fee and Escrow
		66	6"	PVC				
15	Linfield-Trappe Road Sewer Extension	1801	8"	SDR-35	12	\$433,577	2004	Tapping Fee and Escrow
		507		SDR-26				
		270	6"	PVC				
		85	4"	PVC				
16	Township Line Rd Sewer Extension	4134	12"	PVC	12	\$548,967	1999	tapping fee, measured from plans
17	Deer Run / Neiffer Road	2800	8"	PVC	21	\$158,529	1995	part of original pump station installation
18	Graterford Rd (associated with PS #20)	665	10"	SDR-26	22	\$323,732	2015	Contractor pay applications
		1153	10"	SDR-35				
		23	12"	PVC				
		18	12"	SDR-26				
		370	12"	SDR-35				
		1630	8"	SDR-35				
19	Pump Station 6A - Interceptors	382	36"	DIP	11	\$232,260	1996	Pay application
		1200	21"	PVC				
		65	12"	PVC				
20	McLaughlin Lane Extension	500	8"	PVC	1	\$24,212	1992	tapping fee, estimated quantities from map

NOTE: 6 INCH PVC PIPING ARE LATERALS CONNECTED TO THE EXTENSION AND ARE ASSETS OF THE TOWNSHIP





5 – REAL PROPERTY EASEMENTS

5.0 REAL PROPERTY EASEMENT AND RIGHT OF WAY DESCRIPTIONS

A list of all properties which were purchased and/or granted and easement was obtained from the Township. There were a total of 238 easement and Right of Way (ROW) documents. Financial Records did not list the specific amount paid for each parcel or easement right, however, property records did show the date that the easements were purchased. Utilizing that information and matching it with the "Easement and ROW" costs listed in the Depreciated Asset List provided by the Township, an overall cost by year was developed.

The attached spread sheet lists the amount paid for the assets by year. All property agreements can be found in the Digital Files.

Code	Asset Number	Description	Acquisition Date	Original Cost*	Total by Year
353.4	1.5057	King Rd Plant	7/1/1988	53,000	
353.3	1.5059	ROW- Pump Station Land Acq.	7/1/1988	28,522	
353.3	1.506	ROW- Pump Station Land Acq.	7/1/1988	25,402	106,924
353.4	1.5058	King Rd Plant	7/1/1989	150,267	
353.3	1.5061	ROW- Pump Station Land Acq.	7/1/1989	4,827	155,094
353.3	1.5062	ROW - Pump Station Land Acq.	7/1/1990	5,000	5,000
353.3	1.5063	ROW - Pump Station Land Acq.	7/1/1991	19,503	
353.3	1.5064	ROW - Pump Station Land Acq.	7/1/1991	3,056	
353.3	1.5065	ROW - Pump Station Land Acq.	7/1/1991	13,280	35,840
353.3	1.5066	ROW - Pump Station Land Acq.	7/1/1993	11,500	11,500
353.3	1.5067	ROW- Pump Station Land Acq.	7/1/1994	16,809	16,809
353.3	1.5068	ROW - Mingo Creek Interceptor	6/30/2000	189,540	189,540
353.3	1.5069	Easement & ROW	6/30/2001	83,639	83,639
353.3	1.507	Easement -King Rd Pump Station	6/30/2002	1,950	
353.3	1.5216	Easements King Rd	6/30/2002	12,455	
353.4		Possum Hollow	6/24/1905	83,180	
353.4	1.5036	Easement - Galie	8/14/2002	11,104	108,689
353.3	1.5037	Easement & ROW	6/1/2003	1,907	
353.3	1.5071	Easement & ROW	6/1/2003	15,716	
353.4	1.5217	Easements & ROW King Rd	6/11/2003	10,250	27,873
353.3	1.5072	Easement & ROW	6/9/2004	30,772	
353.3	1.5038	Easement & ROW	9/8/2004	357	
353.4	1.5042	Possum Hollow	9/8/2004	7,010	
353.4	1.5218	Easements & ROW King Rd	11/10/2004	2,907	41,045
353.3	1.5039	Easement & ROW	12/31/2005	22,646	22,646
353.3	1.504	Easement & ROW	9/13/2006	1,243	
353.4	1.5	Land- Galie Property	11/1/2006	325,722	326,965
		<b>Total</b>		<b>1,131,563</b>	

\* source - Depreciated Asset List from Township





6 – REGULATORY REQUIREMENTS

6.0 REGULATORY REQUIREMENTS

The King Road is permitted to discharge treated sewage under NPDES Permit PA0051934. Possum Hollow is permitted under Permit PA0058041. Both King Road and Possum Hollow Waste Water Treatment Plants consistently meet all effluent limits as required by their respective Permits. There was one exceedance at the King Road WWTP in the last 3 years for Fecal Coliform in September 2016. There were no other subsequent incidents, nor was there any action taken by the PADEP.

Attached are copies of the NPDES Permits for the King Road and Possum Hollow WWTPs.



February 9, 2015

**CERTIFIED MAIL NO. 7007 3020 0002 8265 3762**

Daniel Kerr  
Limerick Township Montgomery County  
646 West Ridge Pike  
Limerick, PA 19468

Re: Final NPDES Permit - Sewage  
Limerick Township King Rd Sewer System & STP  
NPDES Permit No. PA0051934  
Authorization ID No. 997020  
Limerick Township, Montgomery County

Dear Mr. Kerr:

Your NPDES permit is enclosed. Please read the permit carefully. The permit expires on the date identified on page 1 of the permit. A renewal application must be submitted to this office 180 days prior to the permit expiration date, if a discharge is expected to continue past the expiration date of the permit.

Enclosed are Discharge Monitoring Report (DMR) templates and DMR instructions. It is recommended that you retain the DMR templates in the event you are unable to submit DMRs electronically through DEP's eDMR system. Routine use of the eDMR system is a requirement of the permit unless the conditions in Part A III.B of the permit are met to withdraw from the eDMR system.

Also enclosed is a Supplemental Form Inventory, which identifies the forms that are attached to the permit and must be submitted as attachments to eDMR reports, as applicable (see individual form instructions). The submission of other supplemental forms may be required in accordance with the permit. We encourage you to use the spreadsheet versions of supplemental forms that contain appropriate validation and DEP-approved calculations.

Part C of the permit contains requirements relating to Whole Effluent Toxicity (WET) testing. These requirements have changed in comparison to previous permits. Please review the WET requirements carefully and contact this office if you have questions. Additional information may be found on DEP's website at [www.depweb.state.pa.us/wett](http://www.depweb.state.pa.us/wett).

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, P.O. Box 8457, Harrisburg, PA 17105-8457, 717.787.3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800.654.5984. Appeals

Mr. Daniel Kerr

- 2 -

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 contact Laurel Ateyeh at 484.250.5198.

Sincerely,



Jenifer L. Fields, P.E.  
Environmental Program Manager  
Clean Water Program

Enclosures

cc: U. S. Environmental Protection Agency  
MCHD (w/o enc.)  
Operations Section  
Mr. O'Neil  
Mr. Salkowski – Plant Superintendent  
Mr. Campbell – Pennoni Associates, Inc.  
DRBC  
Ms. Lashley (w/o enc.)  
Central Office, Division of Operations, Monitoring and Data Systems  
File  
Re





**pennsylvania**  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

**AUTHORIZATION TO DISCHARGE UNDER THE  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM  
DISCHARGE REQUIREMENTS FOR PUBLICLY OWNED  
TREATMENT WORKS (POTWs)**

**NPDES PERMIT NO: PA0051934**

In compliance with the provisions of the Clean Water Act, 33 U.S.C. Section 1251 *et seq.* ("the Act") and Pennsylvania's Clean Streams Law, as amended, 35 P.S. Section 691.1 *et seq.*,

**Limerick Township  
646 West Ridge Pike  
Limerick, PA 19468**

is authorized to discharge from a facility known as **King Rd STP**, located in **Limerick Township, Montgomery County**, to **Schuylkill River** in Watershed(s) **3-D** in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts A, B and C hereof.

**THIS PERMIT SHALL BECOME EFFECTIVE ON** MARCH 1, 2015

**THIS PERMIT SHALL EXPIRE AT MIDNIGHT ON** FEBRUARY 29, 2020

The authority granted by this permit is subject to the following further qualifications:

1. If there is a conflict between the application, its supporting documents and/or amendments and the terms and conditions of this permit, the terms and conditions shall apply.
2. Failure to comply with the terms, conditions or effluent limitations of this permit is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. (40 CFR 122.41(a))
3. A complete application for renewal of this permit, or notice of intent to cease discharging by the expiration date, must be submitted to DEP at least 180 days prior to the above expiration date (unless permission has been granted by DEP for submission at a later date), using the appropriate NPDES permit application form. (40 CFR 122.41(b), 122.21(d))

In the event that a timely and complete application for renewal has been submitted and DEP is unable, through no fault of the permittee, to reissue the permit before the above expiration date, the terms and conditions of this permit, including submission of the Discharge Monitoring Reports (DMRs), will be automatically continued and will remain fully effective and enforceable against the discharger until DEP takes final action on the pending permit application. (25 Pa. Code 92a.7(b), (c))

4. This NPDES permit does not constitute authorization to construct or make modifications to wastewater treatment facilities necessary to meet the terms and conditions of this permit.

**DATE PERMIT ISSUED** February 9, 2015

**ISSUED BY** \_\_\_\_\_

**Jenifer L. Fields, P.E.  
Clean Water Program Manager  
Southeast Regional Office**

**PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS**

I. A. For Outfall 002, Latitude 40° 11' 32", Longitude 75° 32' 59", River Mile Index 42.75, Stream Code 00833

Receiving Waters: Schuylkill River

Type of Effluent: Treated sewage from King Road STP

1. The permittee is authorized to discharge during the period from March 1, 2015 through February 29, 2020.
2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average Report Daily Max	Instant. Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Recorded
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
CBOD5	284	425	XXX	20	30	40	1/week	24-Hr Composite
CBOD5 Raw Sewage Influent	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Total Suspended Solids	425	638	XXX	30	45	60	1/week	24-Hr Composite
Total Suspended Solids Raw Sewage Influent	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Total Dissolved Solids	XXX	XXX	XXX	1,000	XXX	2,500	1/quarter	24-Hr Composite

Outfall 002, Continued (from March 1, 2015 through February 29, 2020)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instant. Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Fecal Coliform (No./100 ml) May 1 – Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000*	1/week	Grab
Fecal Coliform (No./100 ml) Oct 1 – Apr 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000*	1/week	Grab
UV Transmittance (%)	XXX	XXX	Report Min	XXX	XXX	XXX	1/day	Metered
Total Nitrogen	Report	XXX	XXX	Report	XXX	Report	1/week	24-Hr Composite
Ammonia-Nitrogen	114	XXX	XXX	8	XXX	16	1/week	24-Hr Composite
Total Phosphorus	Report	XXX	XXX	Report	XXX	Report	1/week	24-Hr Composite
Total Copper	XXX	Report Daily Max	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Total Zinc	XXX	Report Daily Max	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
PCBs (Dry Weather) (pg/L)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	24-Hr Composite
PCBs (Wet Weather) (pg/L)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	24-Hr Composite

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 002 \*Not to exceed 1,000/100 ml as an instantaneous maximum from May 1<sup>st</sup> through September 30<sup>th</sup>. Not to exceed 1,000/100 ml in greater than 10 percent of the samples tested from October 1<sup>st</sup> through April 30<sup>th</sup>. See Part C.I. Other Requirement E.



**PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS**

I. B. For Outfall 003 , Latitude 40° 11' 28" , Longitude 75° 32' 52" , River Mile Index 42.75 , Stream Code 00833  
 For Outfall 004 , Latitude 40° 11' 32" , Longitude 75° 32' 54" , River Mile Index 42.75 , Stream Code 00833  
 For Outfall 005 , Latitude 40° 11' 35" , Longitude 75° 32' 56" , River Mile Index 42.75 , Stream Code 00833

Receiving Waters: Schuylkill River

Type of Effluent: Site stormwater

1. The permittee is authorized to discharge during the period from March 1, 2015 through February 29, 2020.
2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> Measurement Frequency	Required Sample Type
	Average Monthly		Minimum	Average Monthly		Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
CBOD5	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Chemical Oxygen Demand	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Total Suspended Solids	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Oil and Grease	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Total Kjeldahl Nitrogen	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Dissolved Iron	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 003. Sampling is not required at Outfalls 004 and 005.



**PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS  
(Continued)**

Additional Requirements

1. The permittee may not discharge:
  - a. Floating solids, scum, sheen or substances that result in observed deposits in the receiving water. (25 Pa Code 92a.41(c))
  - b. Oil and grease in amounts that cause a film or sheen upon or discoloration of the waters of this Commonwealth or adjoining shoreline, or that exceed 15 mg/l as a daily average or 30 mg/l at any time (or lesser amounts if specified in this permit). (25 Pa. Code 92a.47(a)(7) and 95.2(2))
  - c. Substances in concentration or amounts sufficient to be inimical or harmful to the water uses to be protected or to human, animal, plant or aquatic life. (25 Pa Code 93.6(a))
  - d. Foam or substances that produce an observed change in the color, taste, odor or turbidity of the receiving water, unless those conditions are otherwise controlled through effluent limitations or other requirements in this permit. (25 Pa Code 92a.41(c))
2. The monthly average percent removal of BOD<sub>5</sub> or CBOD<sub>5</sub> and TSS must be at least 85% for POTW facilities on a concentration basis except where 25 Pa. Code 92a.47(g) and (h) are applicable to facilities with combined sewer overflows (CSOs) or as otherwise specified in this permit. (25 Pa. Code 92a.47(a)(3))
3. If the permit requires the reporting of average weekly statistical results, the maximum weekly average concentration and maximum weekly average mass loading shall be reported, regardless of whether the results are obtained for the same or different weeks.
4. The permittee shall monitor the sewage effluent discharge(s) for the effluent parameters identified in the Part A limitations table(s) during all bypass events at the facility, using the sample types that are specified in the limitations table(s). Where the required sample type is "composite", the permittee must commence sample collection within one hour of the start of the bypass, wherever possible. The results shall be reported on the Daily Effluent Monitoring supplemental form (3800-FM-BPNPSM0435) and be incorporated into the calculations used to report self-monitoring data on Discharge Monitoring Reports (DMRs).

Footnotes

- (1) When sampling to determine compliance with mass effluent limitations, the discharge flow at the time of sampling must be measured and recorded.
- (2) This is the minimum number of sampling events required. Permittees are encouraged, and it may be advantageous in demonstrating compliance, to perform more than the minimum number of sampling events.

Supplemental Information

- (1) The hydraulic design capacity of 1.7 million gallons per day for the treatment facility is used to prepare the annual Municipal Wasteload Management Report to help determine whether a "hydraulic overload" situation exists, as defined in Title 25 Pa. Code Chapter 94.
- (2) The effluent limitations for Outfall 002 were determined using an effluent discharge rate of 1.7 MGD.
- (3) The organic design capacity of 3900 lbs BOD<sub>5</sub> per day for the treatment facility is used to prepare the annual Municipal Wasteload Management Report to determine whether an "organic overload" condition exists, as defined in 25 Pa. Code Chapter 94.
- (4) Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO<sub>2</sub>+NO<sub>3</sub>-N), where TKN and NO<sub>2</sub>+NO<sub>3</sub>-N are measured in the same sample.

## II. DEFINITIONS

*At Outfall (XXX)* means a sampling location in outfall line XXX below the last point at which wastes are added to outfall line (XXX), or where otherwise specified.

*Average* refers to the use of an arithmetic mean, unless otherwise specified in this permit. (40 CFR 122.41(l)(4)(iii))

*Best Management Practices (BMPs)* means schedules of activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the pollutant loading to surface waters of the Commonwealth. The term also includes treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. The term includes activities, facilities, measures, planning or procedures used to minimize accelerated erosion and sedimentation and manage stormwater to protect, maintain, reclaim, and restore the quality of waters and the existing and designated uses of waters within this Commonwealth before, during and after earth disturbance activities. (25 Pa. Code 92a.2)

*Bypass* means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR 122.41(m)(1)(i))

*Calendar Week* is defined as the seven consecutive days from Sunday through Saturday, unless the permittee has been given permission by DEP to provide weekly data as Monday through Friday based on showing excellent performance of the facility and a history of compliance. In cases when the week falls in two separate months, the month with the most days in that week shall be the month for reporting.

*Clean Water Act* means the Federal Water Pollution Control Act, as amended (33 U.S.C.A. §§1251 to 1387).

*Composite Sample* (for all except GC/MS volatile organic analysis) means a combination of individual samples (at least eight for a 24-hour period or four for an 8-hour period) of at least 100 milliliters (mL) each obtained at spaced time intervals during the compositing period. The composite must be flow-proportional; either the volume of each individual sample is proportional to discharge flow rates, or the sampling interval is proportional to the flow rates over the time period used to produce the composite. (EPA Form 2C)

*Composite Sample* (for GC/MS volatile organic analysis) consists of at least four aliquots or grab samples collected during the sampling event (not necessarily flow proportioned). The samples must be combined in the laboratory immediately before analysis and then one analysis is performed. (EPA Form 2C)

*Daily Average Temperature* means the average of all temperature measurements made, or the mean value plot of the record of a continuous automated temperature recording instrument, either during a calendar day or during the operating day if flows are of a shorter duration.

*Daily Discharge* means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day. (25 Pa. Code 92a.2, 40 CFR 122.2)

*Daily Maximum Discharge Limitation* means the highest allowable "daily discharge."

*Discharge Monitoring Report (DMR)* means the DEP or EPA supplied form(s) for the reporting of self-monitoring results by the permittee. (25 Pa. Code 92a.2 and 40 CFR 122.2)

*Estimated Flow* means any method of liquid volume measurement based on a technical evaluation of the sources contributing to the discharge including, but not limited to, pump capabilities, water meters and batch discharge volumes.

*Geometric Mean* means the average of a set of n sample results given by the n<sup>th</sup> root of their product.



*Grab Sample* means an individual sample of at least 100 mL collected at a randomly selected time over a period not to exceed 15 minutes. (EPA Form 2C)

*Hauled-In Wastes* means any waste that is introduced into a treatment facility through any method other than a direct connection to the sewage collection system. The term includes wastes transported to and disposed of within the treatment facility or other entry points within the collection system.

*Hazardous Substance* means any substance designated under 40 CFR Part 116 pursuant to Section 311 of the Clean Water Act. (40 CFR 122.2)

*Immersion Stabilization* (i-s) means a calibrated device is immersed in the wastewater until the reading is stabilized.

*Indirect Discharger* means a non-domestic discharger introducing pollutants to a Publicly Owned Treatment Works (POTW) or other treatment works. (25 Pa. Code 92a.2 and 40 CFR 122.2)

*Industrial User* means a source of Indirect Discharge. (40 CFR 403.3)

*Instantaneous Maximum Effluent Limitation* means the highest allowable discharge of a concentration or mass of a substance at any one time as measured by a grab sample. (25 Pa. Code 92a.2)

*Measured Flow* means any method of liquid volume measurement, the accuracy of which has been previously demonstrated in engineering practice, or for which a relationship to absolute volume has been obtained.

*Monthly Average Discharge Limitation* means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month. (25 Pa. Code 92a.2)

*Municipality* means a city, town, borough, county, township, school district, institution, authority or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes. (25 Pa. Code 92a.2)

*Municipal Waste Garbage*, refuse, industrial lunchroom or office waste and other material, including solid, liquid, semisolid or contained gaseous material resulting from operation of residential, municipal, commercial or institutional establishments and from community activities; and sludge not meeting the definition of residual or hazardous waste under this section from a municipal, commercial or institutional water supply treatment plant, waste water treatment plant or air pollution control facility. (25 Pa. Code 271.1)

*Publicly Owned Treatment Works* (POTW) means a treatment works as defined by §212 of the Clean Water Act, owned by a state or municipality. The term includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. The term also includes sewers, pipes or other conveyances if they convey wastewater to a POTW providing treatment. The term also means the municipality as defined in section 502(4) of the Clean Water Act, which has jurisdiction over the indirect discharges to and the discharges from such a treatment works. (25 Pa Code 92a.2 and 40 CFR 122.2)

*Residual Waste Garbage*, refuse, other discarded material or other waste, including solid, liquid, semisolid or contained gaseous materials resulting from industrial, mining and agricultural operations and sludge from an industrial, mining or agricultural water supply treatment facility, wastewater treatment facility or air pollution control facility, if it is not hazardous. The term does not include coal refuse as defined in the Coal Refuse Disposal Control Act. The term does not include treatment sludges from coal mine drainage treatment plants, disposal of which is being carried on under and in compliance with a valid permit issued under the Clean Streams Law. (25 Pa Code 287.1)

*Severe Property Damage* means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR 122.41(m)(1)(ii))

*Stormwater* means the runoff from precipitation, snow melt runoff, and surface runoff and drainage. (25 Pa. Code 92a.2)

*Stormwater Associated With Industrial Activity* means the discharge from any conveyance that is used for collecting and conveying stormwater and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant, and as defined at 40 CFR §122.26(b)(14)(i) – (ix) and (xi) and 25 Pa. Code 92a.2.

*Toxic Pollutant* means those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains may, on the basis of information available to DEP cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction, or physical deformations in these organisms or their offspring. (25 Pa. Code 92a.2)

*Weekly Average Discharge Limitation* means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.



**III. SELF-MONITORING, REPORTING AND RECORDKEEPING****A. Representative Sampling**

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity (40 CFR 122.41(j)(1)). Representative sampling includes the collection of samples, where possible, during periods of adverse weather, changes in treatment plant performance and changes in treatment plant loading. If possible, effluent samples must be collected where the effluent is well mixed near the center of the discharge conveyance and at the approximate mid-depth point, where the turbulence is at a maximum and the settlement of solids is minimized. (40 CFR 122.48 and 25 Pa. Code § 92a.61)

2. Records Retention (40 CFR 122.41(j)(2))

Except for records of monitoring information required by this permit related to the permittee's sludge use and disposal activities which shall be retained for a period of at least 5 years, all records of monitoring activities and results (including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records), copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained by the permittee for 3 years from the date of the sample measurement, report or application, unless a longer retention period is required by the permit. The 3-year period shall be extended as requested by DEP or the EPA Regional Administrator.

3. Recording of Results (40 CFR 122.41(j)(3))

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date and time of sampling or measurements.
- b. The person(s) who performed the sampling or measurements.
- c. The date(s) the analyses were performed.
- d. The person(s) who performed the analyses.
- e. The analytical techniques or methods used; and the associated detection level.
- f. The results of such analyses.

4. Test Procedures (40 CFR 122.41(j)(4))

Facilities that test or analyze environmental samples used to demonstrate compliance with this permit shall be in compliance with laboratory accreditation requirements of Act 90 of 2002 (27 Pa. C.S. §§4101-4113) and 25 Pa. Code Chapter 252, relating to environmental laboratory accreditation. Unless otherwise specified in this permit, the test procedures for the analysis of pollutants shall be those approved under 40 CFR Part 136 (or in the case of sludge use or disposal, approved under 40 CFR Part 136, unless otherwise specified in 40 CFR Part 503 or Subpart J of 25 Pa. Code Chapter 271), or alternate test procedures approved pursuant to those parts, unless other test procedures have been specified in this permit.

5. Quality/Assurance/Control

In an effort to assure accurate self-monitoring analyses results:

- a. The permittee, or its designated laboratory, shall participate in the periodic scheduled quality assurance inspections conducted by DEP and EPA. (40 CFR 122.41(e), 122.41(i)(3))
- b. The permittee, or its designated laboratory, shall develop and implement a program to assure the quality and accurateness of the analyses performed to satisfy the requirements of this permit, in accordance with 40 CFR Part 136. (40 CFR 122.41(j)(4))

B. Reporting of Monitoring Results

1. The permittee shall effectively monitor the operation and efficiency of all wastewater treatment and control facilities, and the quantity and quality of the discharge(s) as specified in this permit. (40 CFR 122.41(e), 122.44(i)(1))
2. Discharge Monitoring Reports (DMRs) must be completed in accordance with DEP's published DMR Instructions (3800-FM-BPNPSM0463). DMRs are based on calendar reporting periods unless Part C of this permit requires otherwise. DMR(s) must be received by the agency(ies) specified in paragraph 3 below in accordance with the following schedule:
  - Monthly DMRs must be received within 28 days following the end of each calendar month.
  - Quarterly DMRs must be received within 28 days following the end of each calendar quarter, i.e., January 28, April 28, July 28, and October 28.
  - Semiannual DMRs must be received within 28 days following the end of each calendar semiannual period, i.e., January 28 and July 28.
  - Annual DMRs must be received by January 28, unless Part C of this permit requires otherwise.
3. The permittee shall complete all Supplemental Reporting forms (Supplemental DMRs) provided by DEP in this permit (or an approved equivalent), and submit the signed, completed forms as an attachment to the DMR(s). If the permittee elects to use DEP's electronic DMR (eDMR) system, one electronic submission may be made for DMRs and Supplemental DMRs. If paper forms are used, the completed forms shall be mailed to:

Department of Environmental Protection  
Clean Water Program  
2 East Main Street  
Norristown, PA 19401

NPDES Enforcement Branch (3WP42)  
Office of Permits & Enforcement  
Water Protection Division  
U.S. EPA - Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029

4. If the permittee elects to begin using DEP's eDMR system to submit DMRs required by the permit, the permittee shall, to assure continuity of business operations, continue using the eDMR system to submit all DMRs and Supplemental Reports required by the permit, unless the following steps are completed to discontinue use of eDMR:
  - a. The permittee shall submit written notification to the regional office that issued the permit that it intends to discontinue use of eDMR. The notification shall be signed by a principal executive officer or authorized agent of the permittee.
  - b. The permittee shall continue using eDMR until the permittee receives written notification from DEP's Central Office that the facility has been removed from the eDMR system, and electronic report submissions are no longer expected.
5. The completed DMR Form shall be signed and certified by either of the following applicable persons, as defined in 25 Pa. Code § 92a.22:
  - For a corporation - by a principal executive officer of at least the level of vice president, or an authorized representative, if the representative is responsible for the overall operation of the facility from which the discharge described in the NPDES form originates.

- For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.
- For a municipality, state, federal or other public agency - by a principal executive officer or ranking elected official.

If signed by a person other than the above, written notification of delegation of DMR signatory authority must be submitted to DEP in advance of or along with the relevant DMR form. (40 CFR 122.22(b))

6. If the permittee monitors any pollutant at monitoring points as designated by this permit, using analytical methods described in Part A III.A.4. herein, more frequently than the permit requires, the results of this monitoring shall be incorporated, as appropriate, into the calculations used to report self-monitoring data on the DMR. (40 CFR 122.41(l)(4)(ii))

### C. Reporting and Notification Requirements

1. **Planned Changes to Physical Facilities** – The permittee shall give notice to DEP as soon as possible but no later than 30 days prior to planned physical alterations or additions to the permitted facility. A permit under 25 Pa. Code Chapter 91 may be required for these situations prior to implementing the planned changes. A permit application, or other written submission to DEP, can be used to satisfy the notification requirements of this section.

Notice is required when:

- a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR §122.29(b). (40 CFR 122.41(l)(1)(i))
  - b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are not subject to effluent limitations in this permit. (40 CFR 122.41(l)(1)(ii))
  - c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 CFR 122.41(l)(1)(iii))
  - d. The planned change may result in noncompliance with permit requirements. (40 CFR 122.41(l)(2))
2. **Planned Changes to Waste Stream** – Under the authority of 25 Pa. Code 92a.24(a) and 40 CFR 122.42(b), the permittee shall provide notice to DEP and EPA as soon as possible but no later than 45 days prior to any planned changes in the volume or pollutant concentration of its influent waste stream as a result of indirect discharges or hauled-in wastes, as specified in paragraphs 2.a. and 2.b., below. Notice shall be provided on the "Planned Changes to Waste Stream" Supplemental Report (3800-FM-BPNPSM0482), available on DEP's website. The permittee shall provide information on the quality and quantity of waste introduced into the POTW, and any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW (40 CFR 122.42(b)(3)). The Report shall be sent via Certified Mail or other means to confirm DEP's receipt of the notification. DEP will determine if the submission of a new application and receipt of a new or amended permit is required.
    - a. **Introduction of New Pollutants** (25 Pa. Code 92a.24(a), 40 CFR 122.42(b)(1))

New pollutants are defined as parameters that meet one or more of the following criteria:

- (i) Any pollutants that were not detected in the facilities' influent waste stream as reported in the permit application; and have not been approved to be included in the permittee's influent waste stream by DEP in writing.



- (ii) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to Sections 301 or 306 of the Clean Water Act if it were directly discharging those pollutants (40 CFR 122.42(b)(1)).

The permittee shall provide notification of the introduction of new pollutants in accordance with paragraph 2 above. The permittee may not authorize the introduction of new pollutants until the permittee receives DEP's written approval.

b. Increased Loading of Approved Pollutants (25 Pa. Code 92a.24(a), 40 CFR 122.42(b)(2))

Approved pollutants are defined as parameters that meet one or more of the following criteria:

- (i) Were detected in the facilities' influent waste stream as reported in the permittee's permit application; or have been previously approved to be included in the permittee's influent waste stream by DEP in writing.
- (ii) Have an effluent limitation or monitoring requirement in this permit.

The permittee shall provide notification of the introduction of increased influent loading (lbs/day) of approved pollutants in accordance with paragraph 2 above when (1) the cumulative increase in influent loading (lbs/day) exceeds 20% of the maximum loading reported in the permit application, or a loading previously approved by DEP and/or EPA, or (2) may cause an exceedance in the effluent of Effluent Limitation Guidelines (ELGs) or limitations in Part A of this permit, or (3) may cause interference or pass through at the POTW, or (4) may cause exceedances of the applicable water quality standards in the receiving stream. Unless specified otherwise in this permit, if DEP does not respond to the notification within 30 days of its receipt, the permittee may proceed with the increase in loading. The acceptance of increased loading of approved pollutants may not result in an exceedance of ELGs or effluent limitations, may not result in a hydraulic or organic overload condition as defined in 25 Pa. Code 94.1, and may not cause exceedances of the applicable water quality standards in the receiving stream.

3. Reporting Requirements for Hauled-In Wastes

a. Receipt of Residual Waste

- (i) The permittee shall document the receipt of all hauled-in residual wastes (including but not limited to wastewater from oil and gas wells, food processing waste, and landfill leachate), as defined at 25 Pa. Code § 287.1, that are received for processing at the treatment facility. The permittee shall report hauled-in residual wastes on a monthly basis to DEP on the "Hauled In Residual Wastes" Supplemental Report (3800-FM-BPNPSM0450) as an attachment to the DMR. If no residual wastes were received during a month, submission of the Supplemental Report is not required.

The following information is required by the Supplemental Report. The information used to develop the Report shall be retained by the permittee for five years from the date of receipt and must be made available to DEP or EPA upon request.

- (1) The dates that residual wastes were received.
- (2) The volume (gallons) of wastes received.
- (3) The license plate number of the vehicle transporting the waste to the treatment facility.
- (4) The permit number(s) of the well(s) where residual wastes were generated, if applicable.
- (5) The name and address of the generator of the residual wastes.
- (6) The type of wastewater.



The transporter of residual waste must maintain these and other records as part of the daily operational record (25 Pa. Code § 299.219). If the transporter is unable to provide this information or the permittee has not otherwise received the information from the generator, the residual wastes shall not be accepted by the permittee until such time as the permittee receives such information from the transporter or generator.

- (ii) The following conditions apply to the characterization of residual wastes received by the permittee:
  - (1) If the generator is required to complete a chemical analysis of residual wastes in accordance with 25 Pa. Code § 287.51, the permittee must receive and maintain on file a chemical analysis of the residual wastes it receives. The chemical analysis must conform to the Bureau of Waste Management's Form 26R except as noted in paragraph (2), below. Each load of residual waste received must be covered by a chemical analysis if the generator is required to complete it.
  - (2) For wastewater generated from hydraulic fracturing operations ("frac wastewater") within the first 30 production days of a well site, the chemical analysis may be a general frac wastewater characterization approved by DEP. Thereafter, the chemical analysis must be waste-specific and be reported on the Form 26R.

b. Receipt of Municipal Waste

- (i) The permittee shall document the receipt of all hauled-in municipal wastes (including but not limited to septage and liquid sewage sludge), as defined at 25 Pa. Code § 271.1, that are received for processing at the treatment facility. The permittee shall report hauled-in municipal wastes on a monthly basis to DEP on the "Hauled In Municipal Wastes" Supplemental Report (3800-FM-BPNPSM0437) as an attachment to the DMR. If no municipal wastes were received during a month, submission of the Supplemental Report is not required.

The following information is required by the Supplemental Report:

- (1) The dates that municipal wastes were received.
  - (2) The volume (gallons) of wastes received.
  - (3) The BOD<sub>5</sub> concentration (mg/l) and load (lbs) for the wastes received.
  - (4) The location(s) where wastes were disposed of within the treatment facility.
- (ii) Sampling and analysis of hauled-in municipal wastes must be completed to characterize the organic strength of the wastes, unless composite sampling of influent wastewater is performed at a location downstream of the point of entry for the wastes. The influent BOD<sub>5</sub> characterization for the treatment facility, as reported in the annual Municipal Wasteload Management Report per 25 Pa. Code Chapter 94, must be representative of the hauled-in municipal wastes received.

#### 4. Unanticipated Noncompliance or Potential Pollution Reporting

- a. Immediate Reporting - The permittee shall immediately report any incident causing or threatening pollution in accordance with the requirements of 25 Pa. Code Sections 91.33 and 92a.41(b).
- (i) If, because of an accident, other activity or incident a toxic substance or another substance which would endanger users downstream from the discharge, or would otherwise result in pollution or create a danger of pollution or would damage property, the permittee shall immediately notify DEP by telephone of the location and nature of the danger. Oral notification to the Department is required as soon as possible, but no later than 4 hours after the permittee becomes aware of the incident causing or threatening pollution.
  - (ii) If reasonably possible to do so, the permittee shall immediately notify downstream users of the waters of the Commonwealth to which the substance was discharged. Such notice shall include the location and nature of the danger.
  - (iii) The permittee shall immediately take or cause to be taken steps necessary to prevent injury to property and downstream users of the waters from pollution or a danger of pollution and, in addition, within 15 days from the incident, shall remove the residual substances contained thereon or therein from the ground and from the affected waters of this Commonwealth to the extent required by applicable law.
- b. The permittee shall report any noncompliance which may endanger health or the environment in accordance with the requirements of 40 CFR 122.41(l)(6). These requirements include the following obligations:
- (i) 24 Hour Reporting - The permittee shall orally report any noncompliance with this permit which may endanger health or the environment within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which must be reported within 24 hours under this paragraph (40 CFR 122.41(l)(6)(ii)):
    - (1) Any unanticipated bypass which exceeds any effluent limitation in the permit;
    - (2) Any upset which exceeds any effluent limitation in the permit; and
    - (3) Violation of the maximum daily discharge limitation for any of the pollutants listed in the permit as being subject to the 24-hour reporting requirement.
  - (ii) Written Report - A written submission shall also be provided within 5 days of the time the permittee becomes aware of any noncompliance which may endanger health or the environment. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
  - (iii) Waiver of Written Report - DEP may waive the written report on a case-by-case basis if the associated oral report has been received within 24 hours from the time the permittee becomes aware of the circumstances which may endanger health or the environment. Unless such a waiver is expressly granted by DEP, the permittee shall submit a written report in accordance with this paragraph. (40 CFR 122.41(l)(6)(iii))

#### 5. Other Noncompliance

The permittee shall report all instances of noncompliance not reported under paragraph C.4 of this section or specific requirements of compliance schedules, at the time DMRs are submitted, on the Non-Compliance Reporting Form (3800-FM-BPNPSM0440). The reports shall contain the information listed in paragraph C.4.b.(ii) of this section. (40 CFR 122.41(l)(7))

**PART B**

**I. MANAGEMENT REQUIREMENTS**

**A. Compliance Schedules (25 Pa. Code 92a.51, 40 CFR 122.47(a))**

1. The permittee shall achieve compliance with the terms and conditions of this permit within the time frames specified in this permit.
2. The permittee shall submit reports of compliance or noncompliance, or progress reports as applicable, for any interim and final requirements contained in this permit. Such reports shall be submitted no later than 14 days following the applicable schedule date or compliance deadline. (40 CFR 122.47(a)(4))

**B. Permit Modification, Termination, or Revocation and Reissuance**

1. This permit may be modified, terminated, or revoked and reissued during its term in accordance with 25 Pa. Code 92a.72 and 40 CFR 122.41(f).
2. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition. (40 CFR 122.41(f))
3. In the absence of DEP action to modify or revoke and reissue this permit, the permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time specified in the regulations that establish those standards or prohibitions. (40 CFR 122.41(a)(1))

**C. Duty to Provide Information**

1. The permittee shall furnish to DEP, within a reasonable time, any information which DEP may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. (40 CFR 122.41(h))
2. The permittee shall furnish to DEP, upon request, copies of records required to be kept by this permit. (40 CFR 122.41(h))
3. Other Information - Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to DEP, it shall promptly submit the correct and complete facts or information. (40 CFR 122.41(l)(8))
4. The permittee shall provide the following information in the annual Municipal Wasteload Management Report, required under the provisions of Title 25 Pa. Code Chapter 94:
  - a. The requirements identified in 25 Pa. Code 94.12.
  - b. The identity of any indirect discharger(s) served by the POTW which are subject to pretreatment standards adopted under Section 307(b) of the Clean Water Act; the POTW shall also specify the total volume of discharge and estimated concentration of each pollutant discharged into the POTW by the indirect discharger.
  - c. A "Solids Management Inventory" if specified in Part C of this permit.
  - d. The total volume of hauled-in residual and municipal wastes received during the year, by source.
  - e. The Annual Report requirements for permittees required to implement an industrial pretreatment program listed in Part C, as applicable.

**D. General Pretreatment Requirements**

1. Any POTW (or combination of POTWs operated by the same authority) with a total design flow greater than 5 million gallons per day (MGD) and receiving from industrial users pollutants which pass through or interfere with the operation of the POTW or are otherwise subject to Pretreatment Standards will be required to establish a POTW Pretreatment Program unless specifically exempted by the Approval Authority. A POTW with a design flow of 5 MGD or less may be required to develop a POTW Pretreatment Program if the Approval Authority finds that the nature or volume of the industrial influent, treatment process upsets, violations of effluent limitations, contamination of sludge, or other circumstances warrant in order to prevent interference or pass through. (40 CFR 403.8)
2. Each POTW with an approved Pretreatment Program pursuant to 40 CFR 403.8 shall develop and enforce specific limits to implement the prohibitions listed in 40 CFR 403.5(a)(1) and (b), and shall continue to develop these limits as necessary and effectively enforce such limits. This condition applies, for example, when there are planned changes to the waste stream as identified in Part A III.C.2. If the permittee is required to develop or continue implementation of a Pretreatment Program, detailed requirements will be contained in Part C of this permit.
3. For all POTWs, where pollutants contributed by indirect dischargers result in interference or pass through, and a violation is likely to recur, the permittee shall develop and enforce specific limits for indirect dischargers and other users, as appropriate, that together with appropriate facility or operational changes, are necessary to ensure renewed or continued compliance with this permit or sludge use or disposal practices. Where POTWs do not have an approved Pretreatment Program, the permittee shall submit a copy of such limits to DEP when developed. (25 Pa. Code 92a.47(d))

E. Proper Operation and Maintenance

1. The permittee shall employ operators certified in compliance with the Water and Wastewater Systems Operators Certification Act (63 P.S. §§1001-1015.1).
2. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes, but is not limited to, adequate laboratory controls including appropriate quality assurance procedures. This provision also includes the operation of backup or auxiliary facilities or similar systems that are installed by the permittee, only when necessary to achieve compliance with the terms and conditions of this permit. (40 CFR 122.41(e))

F. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge, sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment. (40 CFR 122.41(d))

G. Bypassing

1. Bypassing Not Exceeding Permit Limitations - The permittee may allow a bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions in paragraphs two, three and four of this section. (40 CFR 122.41(m)(2))
2. Other Bypassing - In all other situations, bypassing is prohibited and DEP may take enforcement action against the permittee for bypass unless:
  - a. A bypass is unavoidable to prevent loss of life, personal injury or "severe property damage." (40 CFR 122.41(m)(4)(i)(A))
  - b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise



of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance. (40 CFR 122.41(m)(4)(i)(B))

- c. The permittee submitted the necessary notice required in paragraph G.4 below. (40 CFR 122.41(m)(4)(i)(C))
3. DEP may approve an anticipated bypass, after considering its adverse effects, if DEP determines that it will meet the conditions listed in paragraph G.2 above. (40 CFR 122.41(m)(4)(ii))
4. Notice
  - a. Anticipated Bypass – If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least 10 days before the bypass. (40 CFR 122.41(m)(3)(i))
  - b. Unanticipated Bypass – The permittee shall submit oral notice of any other unanticipated bypass within 24 hours, regardless of whether the bypass may endanger health or the environment or whether the bypass exceeds effluent limitations. The notice shall be in accordance with Part A III.C.4.b.

#### H. Sanitary Sewer Overflows (SSOs)

An SSO is an overflow of wastewater, or other untreated discharge from a separate sanitary sewer system (which is not a combined sewer system), which results from a flow in excess of the carrying capacity of the system or from some other cause prior to reaching the headworks of the sewage treatment facility. SSOs are not authorized under this permit. The permittee shall immediately report any SSO to DEP in accordance with Part A III.C.4 of this permit.

## II. PENALTIES AND LIABILITY

### A. Violations of Permit Conditions

Any person violating Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act or any permit condition or limitation implementing such sections in a permit issued under Section 402 of the Act is subject to civil, administrative and/or criminal penalties as set forth in 40 CFR §122.41(a)(2).

Any person or municipality, who violates any provision of this permit; any rule, regulation or order of DEP; or any condition or limitation of any permit issued pursuant to the Clean Streams Law, is subject to criminal and/or civil penalties as set forth in Sections 602, 603 and 605 of the Clean Streams Law.

### B. Falsifying Information

Any person who does any of the following:

- Falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, or
- Knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit (including monitoring reports or reports of compliance or noncompliance)

Shall, upon conviction, be punished by a fine and/or imprisonment as set forth in 18 Pa.C.S.A § 4904 and 40 CFR §122.41(j)(5) and (k)(2).

### C. Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance pursuant to Section 309 of the Clean Water Act or Sections 602, 603 or 605 of the Clean Streams Law.

Nothing in this permit shall be construed to preclude the institution of any legal action or to relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject to under the Clean Water Act and the Clean Streams Law.

D. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. 40 CFR 122.41(c)

III. OTHER RESPONSIBILITIES

A. Right of Entry

Pursuant to Sections 5(b) and 305 of Pennsylvania's Clean Streams Law, and Title 25 Pa. Code Chapter 92a and 40 CFR §122.41(i), the permittee shall allow authorized representatives of DEP and EPA, upon the presentation of credentials and other documents as may be required by law:

1. To enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit; (40 CFR 122.41(i)(1))
2. To have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit; (40 CFR 122.41(i)(2))
3. To inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and (40 CFR 122.41(i)(3))
4. To sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act or the Clean Streams Law, any substances or parameters at any location. (40 CFR 122.41(i)(4))

B. Transfer of Permits

1. Transfers by modification. Except as provided in paragraph 2 of this section, a permit may be transferred by the permittee to a new owner or operator only if this permit has been modified or revoked and reissued, or a minor modification made to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act. (40 CFR 122.61(a))
2. Automatic transfers. As an alternative to transfers under paragraph 1 of this section, any NPDES permit may be automatically transferred to a new permittee if:
  - a. The current permittee notifies DEP at least 30 days in advance of the proposed transfer date in paragraph 2.b. of this section; (40 CFR 122.61(b)(1))
  - b. The notice includes the appropriate DEP transfer form signed by the existing and new permittees containing a specific date for transfer of permit responsibility, coverage and liability between them; and (40 CFR 122.61(b)(2))
  - c. DEP does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue this permit, the transfer is effective on the date specified in the agreement mentioned in paragraph 2.b. of this section. (40 CFR 122.61(b)(3))
  - d. The new permittee is in compliance with existing DEP issued permits, regulations, orders and schedules of compliance, or has demonstrated that any noncompliance with the existing permits has been resolved by an appropriate compliance action or by the terms and conditions of the permit (including compliance schedules set forth in the permit), consistent with 25 Pa. Code 92a.51 (relating to schedules of compliance) and other appropriate Department regulations. (25 Pa. Code 92a.71)

3. In the event DEP does not approve transfer of this permit, the new owner or operator must submit a new permit application.

C. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege. (40 CFR 122.41(g))

D. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for a new permit. (40 CFR 122.41(b))

E. Other Laws

The issuance of this permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations.

IV. ANNUAL FEE

Permittees shall pay an annual fee in accordance with 25 Pa. Code § 92a.62. Annual fee amounts are specified in the following schedule and are due on each anniversary of the effective date of the most recent new or reissued permit. All flows identified in the schedule are annual average design flows. (25 Pa. Code 92a.62)

Small Flow Treatment Facility (SRSTP and SFTF)	\$0
Minor Sewage Facility < 0.05 MGD (million gallons per day)	\$250
Minor Sewage Facility ≥ 0.05 and < 1 MGD	\$500
Minor Sewage Facility with CSO (Combined Sewer Overflow)	\$750
Major Sewage Facility ≥ 1 and < 5 MGD	\$1,250
Major Sewage Facility ≥ 5 MGD	\$2,500
Major Sewage Facility with CSO	\$5,000

As of the effective date of this permit, the facility covered by the permit is classified in the following fee category: **Major Sewage Facility ≥1 and <5 MGD.**

Invoices for annual fees will be mailed to permittees approximately three months prior to the due date. In the event that an invoice is not received, the permittee is nonetheless responsible for payment. Throughout a five year permit term, permittees will pay four annual fees followed by a permit renewal application fee in the last year of permit coverage. Permittees may contact the DEP at 717-787-6744 with questions related to annual fees. The fees identified above are subject to change in accordance with 25 Pa. Code 92a.62(e).

Payment for annual fees shall be remitted to DEP at the address below by the anniversary date. Checks should be made payable to the Commonwealth of Pennsylvania.

PA Department of Environmental Protection  
Bureau of Point and Non-Point Source Management  
Re: Chapter 92a Annual Fee  
P.O. Box 8466  
Harrisburg, PA 17105-8466



**PART C**

**I. OTHER REQUIREMENTS**

- A. No storm water from pavements, area ways, roofs, foundation drains or other sources shall be directly admitted to the sanitary sewers associated with the herein approved discharge.
- B. The approval herein given is specifically made contingent upon the permittee acquiring all necessary property rights by easement or otherwise, providing for the satisfactory construction, operation, maintenance or replacement of all sewers or sewerage structures associated with the herein approved discharge in, along, or across private property, with full rights of ingress, egress and regress.
- C. Collected screenings, slurries, sludges, 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 landfilling, land application, incineration, and storage of sewage sludge), Federal Regulation 40 CFR 257, Pennsylvania Clean Streams Law, Pennsylvania Solid Waste Management Act of 1980, and the Federal Clean Water Act and its amendments. The permittee is responsible to obtain or assure that contracted agents have all necessary permits and approvals for the handling, storage, transport, and disposal of solid waste materials generated as a result of wastewater treatment.
- D. Notification of the designation of the responsible operator must be submitted to the permitting agency by the permittee within 60 days after the effective date of the permit and from time to time thereafter as the operator is replaced.
- E. The seasonal effluent limitations for fecal coliform are based on Chapter 92a (§ 92a.47(a)(4)) of DEP's regulations and Delaware River Basin Commission's (DRBC's) Water Quality Regulations at § 4.30.4.A. DEP's regulations govern the summer limits for fecal coliform while the winter limits are based on DRBC's regulations. The DRBC regulations state that during winter season from October through April, the instantaneous maximum concentration of fecal coliform organisms shall not be greater than 1,000 per 100 milliliters in more than 10 percent of the samples tested. For reporting purposes, a copy of the guidelines on the 10 percent rule is enclosed with the permit
- F. The permittee shall develop a treatment facility operations and maintenance (O&M) plan addressing key wastewater processes. The plan shall be reviewed annually and updated when appropriate. The plan shall be submitted to DEP for review upon request. For the purpose of this paragraph, a key wastewater process includes any equipment or process that, if it fails, may cause the discharge of raw wastewater or wastewater that fails to meet NPDES permit discharge requirements, or a failure that may threaten human or environmental health. The O&M plan shall include the following, at a minimum:
  - 1. A process control strategy that includes a schedule for process control sampling, monitoring, testing, and recordkeeping.
  - 2. A plan that identifies how key wastewater processes shall be monitored and adjusted while the facility is staffed.
  - 3. A plan that identifies how key wastewater processes will be monitored while the treatment facility is not staffed.
  - 4. For treatment plants that are impacted by wet weather flows, the permittee shall develop and implement a wet weather operations strategy that minimizes or eliminates the wash out of solids from the treatment system while maximizing the flow through the treatment plant.
  - 5. An emergency plan that identifies how the facility will be operated during times of emergency. For example, the plan shall detail how key wastewater processes will be repaired or replaced in the event of a failure while minimizing loss of life and property damage to the facility. This plan shall also include emergency contact numbers for local emergency response agencies, plant personnel, critical suppliers and vendors, and DEP contacts, at a minimum.



6. A preventative maintenance plan that includes a schedule for preventative maintenance for all equipment within the treatment system. A spare parts inventory shall be included as part of this plan.
7. A solids management plan that identifies how solids produced by the facility will be wasted, treated, and ultimately disposed of.

## II. WHOLE EFFLUENT TOXICITY (WET)

### A. General Requirements

1. The permittee shall conduct Chronic WET tests as specified in this section. The permittee shall collect discharge samples and perform WET tests to generate chronic survival and reproduction data for the cladoceran, *Ceriodaphnia dubia* and chronic survival and growth data for the fathead minnow, *Pimephales promelas*.
2. Samples shall be collected at Outfall 002 in accordance with paragraph E.
3. The permittee shall perform testing using the following dilution series: 1%, 2%, 30%, 60%, and 100% effluent, with a control, where 2% is the facility-specific Target In-Stream Waste Concentration (TIWC).
4. The determination of whether a test endpoint passes or fails shall be made using DEP's WET Analysis Spreadsheet (available at [www.depweb.state.pa.us/wett](http://www.depweb.state.pa.us/wett)) by comparing replicate data for the control with replicate data for the TIWC dilution or any dilution greater than the TIWC.
5. The permittee shall submit only valid WET test results to DEP.

### B. Test Frequency and Reporting

1. WET testing shall be conducted annually, at a minimum, during the period January 1 – December 31. Annual WET tests must be completed at least 6 months apart, and shall start in the year the permit becomes effective if the permit effective date is prior to October 1.
2. A complete WET test report shall be submitted to the DEP regional office that issued the permit within 45 days of test completion. A complete WET test report submission shall include the information contained in paragraph H, below. The permittee shall continue annual WET monitoring, at a minimum, during the permit renewal review period and during any period of administrative extension of this permit.
3. If a test failure is determined for any endpoint during annual monitoring, the permittee shall initiate a re-test for the species with the failure within 45 days of test completion. All endpoints for the species shall be evaluated in the re-test. The results of the re-test shall be submitted to the DEP regional office that issued the permit.
4. If a passing result is determined for all endpoints in a re-test, the permittee may resume annual monitoring.
5. If there is a failure for one or more endpoints in a re-test, the permittee shall initiate or continue quarterly WET testing for both species until there are four consecutive passing results for all endpoints. The results of all tests shall be submitted to the DEP regional office that issued the permit. In addition, the permittee shall initiate a Phase I Toxicity Reduction Evaluation (TRE) as specified in paragraph C, below.
6. The permittee shall attach the WET Analysis Spreadsheet for the latest four consecutive WET tests to the NPDES permit renewal application that is submitted to DEP at least 180 days prior to the permit expiration date.

### C. Phase I Toxicity Reduction Evaluation (TRE)

1. The Phase I TRE trigger is one WET endpoint failure followed by a re-test that confirms the failure for the same species. When the TRE process is triggered, quarterly WET testing shall be initiated for both

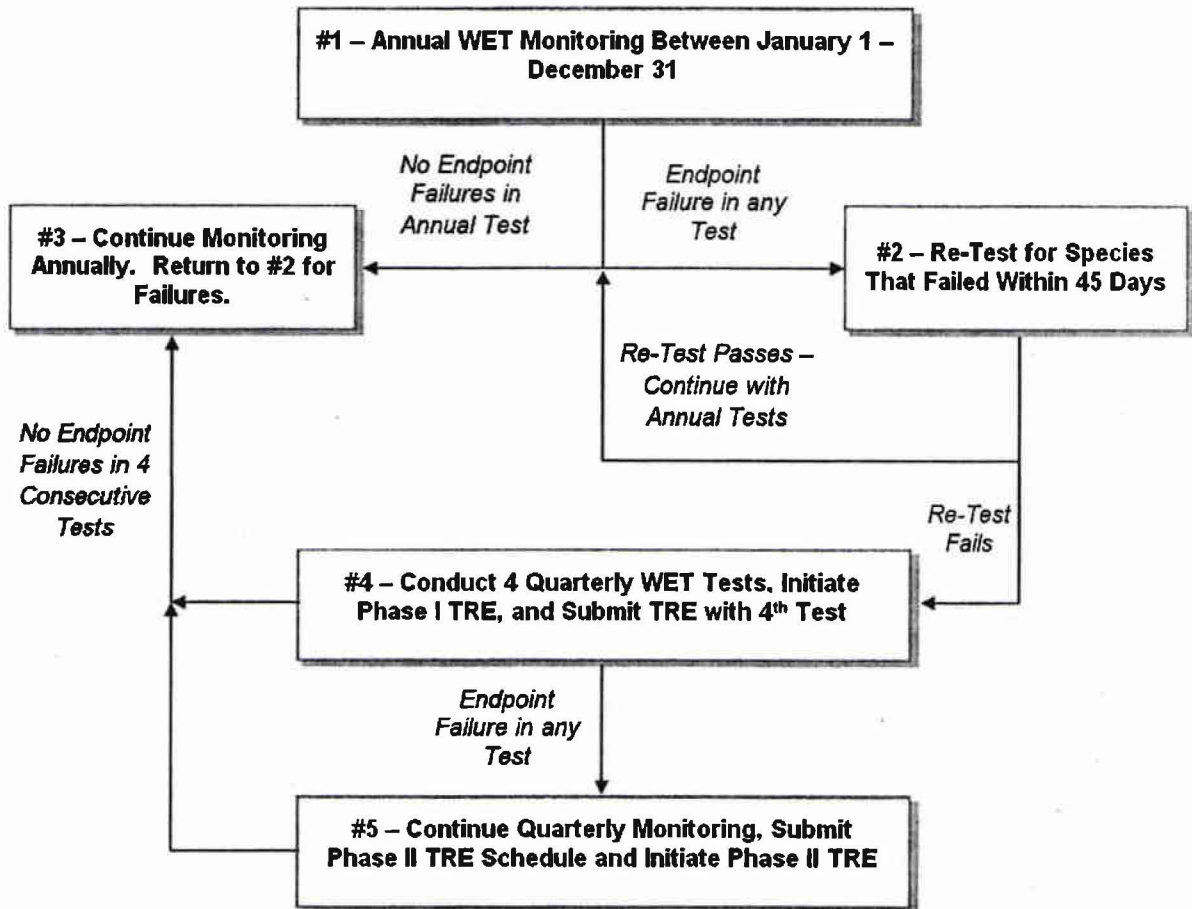
species until there are four consecutive passing results for all endpoints. The Phase I TRE may include a Toxicity Identification Evaluation (TIE) if the permittee cannot immediately identify the possible causes of the effluent toxicity and the possible sources of the causative agents.

2. The permittee shall, within one year following the Phase I TRE trigger, submit a Phase I TRE report to the DEP regional office that issued the permit. The Phase I TRE shall be conducted in accordance with EPA's guidance, "Toxicity Reduction Evaluation for Municipal Wastewater Treatment Plants" (EPA/833B-99/002), "Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations" (EPA/600/2-88/070), and other relevant EPA guidance, as applicable. If a TIE is conducted as part of the Phase I TRE, it shall conform to EPA's guidance, "Methods for Aquatic Toxicity Identification Evaluations Phase I" (EPA/600/6-91/003), "Phase II" (EPA/600/R-92/080), "Phase III" (EPA/600/R-92/081) and other relevant EPA guidance. The Phase I TRE report shall be submitted with the fourth quarterly WET test report that is completed following the Phase I TRE trigger. The TRE shall include all activities undertaken to identify the cause(s) and source(s) of toxicity and any control efforts.
3. If all four quarterly WET tests produce passing results for all endpoints during the Phase I TRE process, performance of a Phase II TRE is not required, and annual WET testing in accordance with paragraph B.1 may resume.
4. If the four WET tests produce at least one failing result during the Phase I TRE process, the permittee shall continue quarterly WETT monitoring for both species and initiate a Phase II TRE in accordance with paragraph D. In this case, the Phase I TRE must include a schedule for completion of the Phase II TRE. The schedule must include interim milestones and a final completion date not to exceed two years from the initiation of the Phase II TRE. The permittee shall implement the Phase II TRE in accordance with the schedule unless DEP issues written approval to modify the schedule or cease performance of the Phase II TRE.
5. Re-tests during the TRE process are required for invalid tests but are optional and at the discretion of the permittee for valid tests. The results of all re-tests must be submitted to the DEP regional office that issued the permit along with the required elements in paragraph H.

#### D. Phase II Toxicity Reduction Evaluation (TRE)

1. The Phase II TRE trigger is one WET endpoint failure during performance of the Phase I TRE. A Phase II TRE, if required, shall conform to EPA's guidance, "Toxicity Reduction Evaluation for Municipal Wastewater Treatment Plants" (EPA/833B-99/002), "Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations" (EPA/600/2-88/070), and other relevant EPA guidance, as applicable. A Phase II TRE evaluates the possible control options to reduce or eliminate the effluent toxicity and the implementation of controls.
2. Once initiated, the Phase II TRE must continue until the source(s) of toxicity are controlled as evidenced by four consecutive WET test passing results for all endpoints, and a final TRE report must be submitted on or before the date specified in the schedule, unless otherwise approved by DEP in writing.
3. If four consecutive quarterly WET tests produce passing results for all endpoints during the Phase II TRE process, annual WET testing in accordance with paragraph B.1 may be initiated or resume.

An overview of the process described in paragraphs B, C and D is presented below:



E. Sample Collection

For each acute testing event, a 24-hour flow-proportioned composite sample shall be collected. For each chronic testing event, three 24-hour flow-proportioned composite samples shall be collected over a seven day exposure period. The samples must be collected at a frequency of not greater than every two hours and must be flow-proportioned. The samples must be collected at the permit compliance sampling location. Samples must be analyzed within 36 hours from the end of the compositing period and must be placed on ice and held at  $\leq 6^{\circ}\text{C}$ . Refer to the sample handling and preservation regulations set forth in 40 CFR 136, 25 Pa. Code Chapter 252, The NELAC Institute (TNI) Standard, and the appropriate EPA methods.

F. Test Conditions and Methods

Laboratories must be accredited by the DEP Laboratory Accreditation Program in order to perform and report WET tests for NPDES permit compliance. Laboratories must be either State or NELAP accredited.

1. Acute tests shall be completed in accordance with EPA's "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" (EPA-821-R-02-012, latest edition). Forty eight (48) hour static non-renewal tests shall be used.
2. Chronic tests shall be completed in accordance with EPA's "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms" (EPA-821-R-02-013, latest edition). Seven (7) day tests shall be used with renewal every 24 hours.
3. The quality assurance and control (QA/QC) requirements and test acceptability standards specified in EPA's test methods and the requirements set forth in 25 Pa Code Chapter 252 or the TNI Standard must be followed.

4. If the permittee or its accredited laboratory determines that QA/QC requirements and/or test acceptability standards have not been met, a re-test shall be initiated within 45 days. Original test data must be maintained by the laboratory and be submitted to DEP upon request. The justification for a re-test must be clearly documented and kept on file with the sample results.

#### G. Chemical Analyses

Chemical analyses must follow the requirements of the EPA methods and applicable State and/or Federal regulations.

1. Chemical analysis on effluent samples shall include pH, Conductivity, Total Alkalinity, Total Hardness, Total Residual Chlorine, Total Ammonia (Unionized Ammonia), Dissolved Oxygen and temperature. Chemical analyses as described in the EPA Methods (above) shall be performed for each sampling event, including each new batch of dilution water and each testing event.
2. In addition to the chemical analyses required above, those parameters listed in Part A of the NPDES permit for the outfall(s) tested shall be analyzed concurrently with the WET test by using the method(s) specified in the permit.

#### H. WET Report Elements

WET test reports that are submitted to DEP must include the requirements identified in 25 Pa. Code § 252.401(j)(1) – (15) or in the TNI Standard, or equivalent, as well as the following information:

1. A general test description, including the origin and age of test organisms, dates and results of reference toxicant tests, light and temperature regimes, and other documentation that QA and test acceptability criteria as specified in EPA's methods and DEP's QA Summaries have been met.
2. A description of sample collection procedures and sampling location.
3. Name(s) of individual(s) collecting and transporting samples, including sample renewals, and the date(s) and time(s) of sample collection.
4. All chemical and physical data including laboratory quantitation limits and observations made on the species. The hardness shall be reported for each test condition.
5. Copies of raw data sheets and/or bench sheets with data entries and signatures.
6. When effluents are dechlorinated, dechlorination procedures must be described and if applicable a thiosulfate control used in addition to the normal dilution water control. If the thiosulfate control results are significantly different from the normal control, as determined using DEP's WET Analysis Spreadsheet, the thiosulfate control shall be used in the spreadsheet for comparison with the TIWC condition. The WET report must specify which control was used to determine whether the test result is pass or fail.
7. A description of all observations or test conditions that may have affected the test outcome.
8. Control charts for the species tested regarding age, temperature test range, mortality data and all reference toxicant tests.
9. A completed WET test summary report (3800-FM-BPNPSM0485).
10. A DEP WET Analysis Spreadsheet printout that provides control and TIWC replicate data and displays the outcome of the test (pass or fail) for each endpoint tested.

WETT reports shall be submitted to the DEP regional office that issued the permit and, for discharges to the Delaware River basin, the Delaware River Basin Commission (DRBC).



### III. REQUIREMENTS APPLICABLE TO STORMWATER OUTFALLS

- C. The permittee is authorized to discharge non-polluting stormwater from its site, alone or in combination with other wastewaters, through the following outfalls:

Outfall No.	Area Drained (acre)	Latitude	Longitude	Description
003	1.12	40°11'28"	75°32'52"	Sludge processing, driveway, parking
004	0.95	40°11'32"	75°32'54"	Grassed area
005	4.14	40°11'35"	75°32'56"	Driveway, parking, grassed area

Monitoring requirements and effluent limitations for these outfalls are specified in Part A of this permit, if applicable.

#### D. Preparedness, Prevention and Contingency (PPC) Plan

The permittee must develop and implement a PPC Plan in accordance with 25 Pa. Code § 91.34 following the guidance contained in DEP's "Guidelines for the Development and Implementation of Environmental Emergency Response Plans" (DEP ID 400-2200-001), its NPDES-specific addendum and the minimum requirements below. For existing facilities, the PPC Plan must be developed prior to permit issuance. For new facilities, the PPC Plan must be submitted to DEP no later than prior to startup of facility operation.

1. The PPC Plan must identify all potential sources of pollutants that may reasonably be expected to affect the quality of stormwater discharges from the facility.
2. The PPC Plan must describe preventative measures and best management practices (BMPs) that will be implemented to reduce or eliminate pollutants from coming into contact with stormwater resulting from routine site activities and spills.
3. The PPC Plan must address actions that will be taken in response to on-site spills or other pollution incidents.
4. The PPC Plan must identify areas which, due to topography or other factors, have a high potential for soil erosion, and identify measures to limit erosion. Where necessary, erosion and sediment control measures must be developed and implemented in accordance with 25 Pa. Code Chapter 102 and DEP's "Erosion and Sediment Pollution Control Manual" (DEP ID 363-2134-008).
5. The PPC Plan must address security measures to prevent accidental or intentional entry which could result in an unintentional discharge of pollutants.
6. The PPC Plan must include a plan for training employees and contractors on pollution prevention, BMPs, and emergency response measures.
7. If the facility is subject to SARA Title III, Section 313, the PPC Plan must identify releases of "Water Priority Chemicals" within the previous three years. Water Priority Chemicals are those identified in EPA's "Guidance for the Determination of Appropriate Methods for the Detection of Section 313 Water Priority Chemicals" (EPA 833-B-94-001, April 1994). The Plan must include an evaluation of all activities that may result in the stormwater discharge of Water Priority Chemicals.
8. Spill Prevention Control and Countermeasure (SPCC) plans may be used to meet the requirements of this section if the minimum requirements are addressed.
9. The PPC Plan shall be evaluated and if necessary updated on an annual basis, at a minimum, and when one or more of the following occur:
  - a. Applicable DEP or federal regulations are revised, or this permit is revised;
  - b. The Plan fails in an emergency;
  - c. There is a change in design, industrial process, operation, maintenance, or other circumstances, in

a manner that materially increases the potential for fires, explosions or releases of toxic or hazardous constituents; or which changes the response necessary in an emergency;

- d. The list of emergency coordinators or equipment changes; or
- e. When notified in writing by DEP.

All updates must be kept on-site and be made available to DEP upon request.

#### C. Minimum Required BMPs

In addition to BMPs identified in the PPC Plan, the permittee shall implement the following minimum BMPs relating to stormwater pollution prevention:

1. If applicable, post-construction stormwater BMPs that are required under 25 Pa. Code Chapter 102 must be maintained.
2. For industrial facilities, the BMPs in the applicable Appendix to the NPDES PAG-03 General Permit for Discharges of Stormwater Associated with Industrial Activities that is currently in effect.
3. For POTWs, all of the following:
  - a. Manage sludge in accordance with all applicable permit requirements.
  - b. Store chemicals in secure and covered areas on impervious surfaces away from storm drains.
  - c. For new facilities and upgrades, design wastewater treatment facilities to avoid, to the maximum extent practicable, stormwater commingling with sanitary wastewater, sewage sludge, and biosolids.
  - d. Efficiently use herbicides for weed control. Where practicable, use the least toxic herbicide that will achieve pest management objectives. Do not apply during windy conditions.
  - e. Do not wash parts or equipment over impervious surfaces that wash into storm drains.
  - f. Implement infiltration techniques, including infiltration basins, trenches, dry wells, porous pavement, etc., wherever practicable.

#### D. Annual Inspection and Compliance Evaluation

1. The permittee shall conduct an annual inspection of each outfall identified in paragraph A and record the results on the "Annual Inspection Form for NPDES Permits for Discharges of Stormwater Associated with Industrial Activities" (3800-PM-WFSR0083v). The permittee shall submit a copy of the completed and signed Annual Inspection Form to DEP at the address provided in Part A III.B.3 of this permit by January 28 of each year.
2. Areas contributing to a stormwater discharge associated with industrial activity shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. BMPs in the PPC Plan and required by this permit shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of this permit or whether additional control measures are needed.

#### E. Stormwater Sampling Requirements

If stormwater sampling is required in Part A of this permit, the following requirements apply:

1. The permittee shall record stormwater sampling event information on the "Additional Information for the Reporting of Stormwater Discharge Monitoring" form (3800-PM-WSFR0083t) and submit the form as an attachment to the DMR.
2. All samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The 72-hour storm interval is waived when the preceding storm did not yield a measurable discharge, or if the permittee is able to document that a less than 72-hour interval is representative for local storm events during the sample period.
3. Grab samples shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is not possible, a grab sample can be taken during the first hour of the discharge, in which case the discharger shall provide an explanation of why a grab sample during the first 30 minutes was not possible.

#### IV. PCB MONITORING

- A. On April 7, 2007, the U.S. Environmental Protection Agency (EPA), Region 3, adopted a Total Maximum Daily Load (TMDL) for Polychlorinated Biphenyls (PCBs) for the Schuylkill River. Implementation of the TMDL requires that permitted facilities that discharge directly to the Schuylkill River conduct sampling for PCBs and, based upon review of the results, develop and implement a PCB Pollutant Minimization Plan (PMP). Based on the sampling results submitted by the facility, this facility is required to develop and implement a PCB PMP.
- B. The permittee shall collect one 24-hour composite sample annually during a wet weather flow and one 24-hour composite sample annually during a dry weather flow. The samples shall be collected from Outfall 002.
- C. All sample analyses shall be performed using EPA Method 1668A, Revision A: Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by HRGC/HRMS. EPA-821-R-00-002, December 1999 as supplemented or amended, and results for all 209 PCB congeners shall be reported. Project-specific, sample collection protocols, analytical procedures, and reporting requirements at <http://www.state.nj.us/drbc/quality/toxics/pcbs/monitoring.html> shall be followed. Monitoring information, sample data, and reports associated with PCB monitoring shall be submitted to the DEP and the Delaware River Basin Commission (DRBC) in the form of two compact discs in the format referenced at <http://www.state.nj.us/drbc/library/documents/PCB-EDD011309.pdf>.
- D. In accordance with the U.S. EPA, Region 3, TMDL for PCBs for the Schuylkill River, the permittee shall submit a PMP for PCBs within 12 months from the effective date of the permit. The permittee shall comply with the requirements of Section 4.30.9 of DRBC's Water Quality Regulations. Additional information regarding PMP development may be found at <http://www.state.nj.us/drbc/programs/quality/pmp.html>. In addition, the permittee shall:
  1. Commence implementation of its PMP as submitted within 60 days of receipt of a PMP completeness determination issued by DEP.
  2. Submit an Annual Report beginning one year from the date of commencement of the PMP to the DRBC and DEP consistent with the guidance specified at <http://www.state.nj.us/drbc/programs/quality/pmp.html>.

The PMP, PMP Annual Report, and PCB data shall be submitted to DEP at the following addresses:

PA Department of Environmental Protection  
Southeast Regional Office  
Clean Water Program  
2 East Main Street  
Norristown, PA 19401





COMMONWEALTH OF PENNSYLVANIA  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT  
 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS

NAME King Road STP  
 CLIENT Limerick Township  
 ADDRESS 646 West Ridge Pike  
Limerick, PA 19468  
 LOCATION Limerick Township  
Montgomery County  
 WATERSHED 3-D

**PA0051934**  
 PERMIT NUMBER

**002**  
 OUTFALL NUMBER

Reporting Frequency: Monthly  
 DMR Effective From: March 1, 2015  
 DMR Effective To: February 29, 2020  
 Permit Expires: February 29, 2020  
 Permit Application Due: September 2, 2019

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY

Check Here if No Discharge

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS				
Flow	SAMPLE MEASUREMENT				*****	*****	*****					
	PERMIT REQUIREMENT	Report Avg Mo	Report Daily Max	MGD	*****	*****	*****	*****		Continuous	Recorded	
pH	SAMPLE MEASUREMENT	*****	*****			*****						
	PERMIT REQUIREMENT	*****	*****	*****	6.0 Inst Min	*****	9.0 IMAX	S.U.		1/day	Grab	
Dissolved Oxygen	SAMPLE MEASUREMENT	*****	*****			*****	*****					
	PERMIT REQUIREMENT	*****	*****	*****	5.0 Inst Min	*****	*****	mg/L		1/day	Grab	
CBOD5	SAMPLE MEASUREMENT				*****							
	PERMIT REQUIREMENT	284 Avg Mo	425 Wkly Avg	lbs/day	*****	20 Avg Mo	30 Wkly Avg	mg/L		1/week	24-Hr Composite	
CBOD5 Raw Sewage Influent	SAMPLE MEASUREMENT	*****	*****		*****		*****					
	PERMIT REQUIREMENT	*****	*****	*****	*****	Report Avg Mo	*****	mg/L		1/week	24-Hr Composite	
BOD5 Raw Sewage Influent	SAMPLE MEASUREMENT		*****		*****		*****					
	PERMIT REQUIREMENT	Report Avg Mo	*****	lbs/day	*****	Report Avg Mo	*****	mg/L		1/week	24-Hr Composite	
Total Suspended Solids	SAMPLE MEASUREMENT				*****							
	PERMIT REQUIREMENT	425 Avg Mo	638 Wkly Avg	lbs/day	*****	30 Avg Mo	45 Wkly Avg	mg/L		1/week	24-Hr Composite	
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate 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 knowing violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).							TELEPHONE		DATE		
TYPED OR PRINTED								SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO

COMMENTS (Report all violations on the "Non-Compliance Reporting Form")





**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)**

**PERMITTEE NAME/ADDRESS**

NAME King Road STP  
 CLIENT Limerick Townshp  
 ADDRESS 646 West Ridge Pike  
Limerick, PA 19468  
 LOCATION Limerick Township  
Montgomery County  
 WATERSHED 3-D

**PA0051934**  
 PERMIT NUMBER

**002**  
 OUTFALL NUMBER

Reporting Frequency: Monthly  
 DMR Effective From: March 1, 2015  
 DMR Effective To: February 29, 2020  
 Permit Expires: February 29, 2020  
 Permit Application Due: September 2, 2019

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY

Check Here if No Discharge  
 NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Total Suspended Solids Raw Sewage Influent	SAMPLE MEASUREMENT	*****	*****		*****		*****				
	PERMIT REQUIREMENT	*****	*****	*****	*****	Report Avg Mo	*****	mg/L		1/week	24-Hr Composite
Fecal Coliform	SAMPLE MEASUREMENT	*****	*****		*****						
	PERMIT REQUIREMENT	*****	*****	*****	*****	200 Geo Mean	1,000 IMAX	No./100 ml		1/week	Grab
UV Transmittance	SAMPLE MEASUREMENT	*****	*****								
	PERMIT REQUIREMENT	*****	*****	*****	Report Min	*****	*****	%		1/day	Metered
Total Nitrogen	SAMPLE MEASUREMENT		*****		*****		*****				
	PERMIT REQUIREMENT	Report Avg Mo	*****	lbs/day	*****	Report Avg Mo	*****	mg/L		1/week	24-Hr Composite
Ammonia-Nitrogen	SAMPLE MEASUREMENT		*****		*****		*****				
	PERMIT REQUIREMENT	114 Avg Mo	*****	lbs/day	*****	8 Avg Mo	*****	mg/L		1/week	24-Hr Composite
Total Phosphorus	SAMPLE MEASUREMENT		*****		*****		*****				
	PERMIT REQUIREMENT	Report Avg Mo	*****	lbs/day	*****	Report Avg Mo	*****	mg/L		1/week	24-Hr Composite
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	<small>I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate 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 knowing violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).</small>							TELEPHONE		DATE	
TYPED OR PRINTED								SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR

COMMENTS (Report all violations on the "Non-Compliance Reporting Form")



COMMONWEALTH OF PENNSYLVANIA  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT  
 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS

NAME King Road STP  
 CLIENT Limerick Township  
 ADDRESS 646 West Ridge Pike  
Limerick, PA 19468  
 LOCATION Limerick Township  
Montgomery County  
 WATERSHED 3-D

**PA0051934**  
 PERMIT NUMBER

**002**  
 OUTFALL NUMBER

Reporting Frequency: Quarterly  
 DMR Effective From: March 1, 2015  
 DMR Effective To: February 29, 2020  
 Permit Expires: February 29, 2020  
 Permit Application Due: September 2, 2019

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY

Check Here if No Discharge

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Total Dissolved Solids	SAMPLE MEASUREMENT	*****	*****		*****						
	PERMIT REQUIREMENT	*****	*****	*****	*****	1,000 Avg Mo	*****	mg/L		1/quarter	24-Hr Composite
Total Copper	SAMPLE MEASUREMENT	*****			*****	*****					
	PERMIT REQUIREMENT	*****	Report Daily Max	lbs/day	*****	*****	Report Daily Max	mg/L		1/quarter	24-Hr Composite
Total Zinc	SAMPLE MEASUREMENT	*****			*****	*****					
	PERMIT REQUIREMENT	*****	Report Daily Max	lbs/day	*****	*****	Report Daily Max	mg/L		1/quarter	24-Hr Composite
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate 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 knowing violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).				TELEPHONE		DATE				
TYPED OR PRINTED					SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS (Report all violations on the "Non-Compliance Reporting Form")



**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)**

**PERMITTEE NAME/ADDRESS**

**NAME** King Road STP  
**CLIENT** Limerick Township  
**ADDRESS** 646 West Ridge Pike  
Limerick, PA 19468  
**LOCATION** Limerick Township  
Montgomery County  
**WATERSHED** 3-D

**PA0051934**  
**PERMIT NUMBER**

**002**  
**OUTFALL NUMBER**

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY

Reporting Frequency: Annually  
DMR Effective From: March 1, 2015  
DMR Effective To: February 29, 2020  
Permit Expires: February 29, 2020  
Permit Application Due: September 2, 2019

Check Here If No Discharge

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
PCBs (Dry Weather)	SAMPLE MEASUREMENT	****	****		****	****					
	PERMIT REQUIREMENT	****	****	****	****	****	Report Daily Max	pp/L		1/year	24-Hr Composite
PCBs (Wet Weather)	SAMPLE MEASUREMENT	****	****		****	****					
	PERMIT REQUIREMENT	****	****	****	****	****	Report Daily Max	pp/L		1/year	24-Hr Composite
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		<small>I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate 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 knowing violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).</small>					TELEPHONE		DATE		
TYPED OR PRINTED							SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		AREA CODE	NUMBER	YEAR

COMMENTS (Report all violations on the "Non-Compliance Reporting Form")





**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)**

**PERMITTEE NAME/ADDRESS**

**NAME** King Road STP  
**CLIENT** Limerick Township  
**ADDRESS** 646 West Ridge Pike  
Limerick, PA 19468  
**LOCATION** Limerick Township  
Montgomery County  
**WATERSHED** 3-D

**PA0051934**  
**PERMIT NUMBER**

**003**  
**OUTFALL NUMBER**

Reporting Frequency: Annually  
 DMR Effective From: March 1, 2015  
 DMR Effective To: February 29, 2020  
 Permit Expires: February 29, 2020  
 Permit Application Due: September 2, 2019

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY

Check Here if No Discharge

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS				
pH	SAMPLE MEASUREMENT	****	****		****	****						
	PERMIT REQUIREMENT	****	****	****	****	****	Report IMAX	S.U.		1/year	Grab	
CBOD5	SAMPLE MEASUREMENT	****	****		****	****						
	PERMIT REQUIREMENT	****	****	****	****	****	Report IMAX	mg/L		1/year	Grab	
Chemical Oxygen Demand	SAMPLE MEASUREMENT	****	****		****	****						
	PERMIT REQUIREMENT	****	****	****	****	****	Report IMAX	mg/L		1/year	Grab	
Total Suspended Solids	SAMPLE MEASUREMENT	****	****		****	****						
	PERMIT REQUIREMENT	****	****	****	****	****	Report IMAX	mg/L		1/year	Grab	
Oil and Grease	SAMPLE MEASUREMENT	****	****		****	****						
	PERMIT REQUIREMENT	****	****	****	****	****	Report IMAX	mg/L		1/year	Grab	
Fecal Coliform	SAMPLE MEASUREMENT	****	****		****	****						
	PERMIT REQUIREMENT	****	****	****	****	****	Report IMAX	No./100 ml		1/year	Grab	
Total Kjeldahl Nitrogen	SAMPLE MEASUREMENT	****	****		****	****						
	PERMIT REQUIREMENT	****	****	****	****	****	Report IMAX	mg/L		1/year	Grab	
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate 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 knowing violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).							TELEPHONE		DATE		
TYPED OR PRINTED								SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO

COMMENTS (Report all violations on the "Non-Compliance Reporting Form")





**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGE MONITORING REPORT (DMR)**

**PRIMARY FACILITY NAME/ADDRESS**

NAME King Road STP  
 CLIENT Limerick Township  
 ADDRESS 646 West Ridge Pike  
Limerick, PA 19468  
 LOCATION Limerick Township  
Montgomery County  
 WATERSHED 3-D

**PA0051934**  
 PERMIT NUMBER

**003**  
 OUTFALL NUMBER

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY

Reporting Frequency: Annually  
 DMR Effective From: March 1, 2015  
 DMR Effective To: February 29, 2020  
 Permit Expires: February 29, 2020  
 Permit Application Due: September 2, 2019

Check Here if No Discharge  
 NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE			
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS						
Total Phosphorus	SAMPLE MEASUREMENT	*****	*****		*****	*****								
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	Report IMAX	mg/L		1/year	Grab			
Dissolved Iron	SAMPLE MEASUREMENT	*****	*****		*****	*****								
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	Report IMAX	mg/L		1/year	Grab			
	SAMPLE MEASUREMENT													
	PERMIT REQUIREMENT													
	SAMPLE MEASUREMENT													
	PERMIT REQUIREMENT													
	SAMPLE MEASUREMENT													
	PERMIT REQUIREMENT													
	SAMPLE MEASUREMENT													
	PERMIT REQUIREMENT													
	SAMPLE MEASUREMENT													
	PERMIT REQUIREMENT													
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate 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 knowing violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).						TELEPHONE		DATE				
TYPED OR PRINTED								SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		AREA CODE	NUMBER	YEAR	MO	DAY
COMMENTS (Report all violations on the "Non-Compliance Reporting Form")														



**AUTHORIZATION TO DISCHARGE UNDER THE  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM  
DISCHARGE REQUIREMENTS FOR PUBLICLY OWNED  
TREATMENT WORKS (POTWs)**

**NPDES PERMIT NO: PA0058041**

In compliance with the provisions of the Clean Water Act, 33 U.S.C. Section 1251 *et seq.* ("the Act") and Pennsylvania's Clean Streams Law, as amended, 35 P.S. Section 691.1 *et seq.*,

**Limerick Township  
646 West Ridge Pike  
Limerick, PA 19468**

is authorized to discharge from a facility known as **Possum Hollow STP**, located in **Limerick Township, Montgomery County**, to **Schuylkill River** in Watershed(s) **3-D** in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts A, B and C hereof.

**THIS PERMIT SHALL BECOME EFFECTIVE ON** OCTOBER 1, 2013

**THIS PERMIT SHALL EXPIRE AT MIDNIGHT ON** SEPTEMBER 30, 2018

The authority granted by this permit is subject to the following further qualifications:

1. If there is a conflict between the application, its supporting documents and/or amendments and the terms and conditions of this permit, the terms and conditions shall apply.
2. Failure to comply with the terms, conditions or effluent limitations of this permit is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. (40 CFR 122.41(a))
3. A complete application for renewal of this permit, or notice of intent to cease discharging by the expiration date, must be submitted to DEP at least 180 days prior to the above expiration date (unless permission has been granted by DEP for submission at a later date), using the appropriate NPDES permit application form. (40 CFR 122.41(b), 122.21(d))

In the event that a timely and complete application for renewal has been submitted and DEP is unable, through no fault of the permittee, to reissue the permit before the above expiration date, the terms and conditions of this permit, including submission of the Discharge Monitoring Reports (DMRs), will be automatically continued and will remain fully effective and enforceable against the discharger until DEP takes final action on the pending permit application. (25 Pa. Code 92a.7(b), (c))

4. This NPDES permit does not constitute authorization to construct or make modifications to wastewater treatment facilities necessary to meet the terms and conditions of this permit.

**DATE PERMIT ISSUED** September 3, 2013

**ISSUED BY** /S/  
**Jenifer L. Fields, P.E.**  
**Clean Water Program Manager**  
**Southeast Regional Office**

**PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS**

I. A. For Outfall 001, Latitude 40° 12' 51", Longitude 75° 35' 14", River Mile Index 47.55, Stream Code 00833

Receiving Waters: Schuylkill River

Type of Effluent: Treated sewage effluent from Possum Hollow STP

1. The permittee is authorized to discharge during the period from October 1, 2013 through September 30, 2018.
2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instant. Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
CBOD5	117	175	XXX	20	30	40	1/week	24-Hr Composite
CBOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Total Suspended Solids	175	263	XXX	30	45	60	1/week	24-Hr Composite
Total Dissolved Solids	XXX	XXX	XXX	1,000	XXX	2,500	1/quarter	24-Hr Composite

Outfall 001, Continued (from October 1, 2013 through September 30, 2018)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instant. Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000*	1/week	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000*	1/week	Grab
Ammonia-Nitrogen	47	XXX	XXX	8.0	XXX	16.0	1/week	24-Hr Composite
Total Phosphorus	Report	XXX	XXX	Report	XXX	Report	1/week	24-Hr Composite
UV Intensity ( $\mu\text{W}/\text{cm}^2$ )	XXX	XXX	Report Min	XXX	XXX	XXX	1/day	Metered
PCBs (Dry Weather) (pg/L)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	24-Hr Composite
PCBs (Wet Weather) (pg/L)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	24-Hr Composite

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 001 \*Not to exceed 1,000/100 ml as an instantaneous maximum from May 1<sup>st</sup> through September 30<sup>th</sup>. Not to exceed 1,000/100 ml in greater than 10 percent of the samples tested from October 1<sup>st</sup> through April 30<sup>th</sup>. See Part C.I. Other Requirement I.



**PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS  
(Continued)**

Additional Requirements

1. The permittee may not discharge:
  - a. Floating solids, scum, sheen or substances that result in observed deposits in the receiving water. (25 Pa Code 92a.41(c))
  - b. Oil and grease in amounts that cause a film or sheen upon or discoloration of the waters of this Commonwealth or adjoining shoreline, or that exceed 15 mg/l as a daily average or 30 mg/l at any time (or lesser amounts if specified in this permit). (25 Pa. Code 92a.47(a)(7) and 95.2(2))
  - c. Substances in concentration or amounts sufficient to be inimical or harmful to the water uses to be protected or to human, animal, plant or aquatic life. (25 Pa Code 93.6(a))
  - d. Foam or substances that produce an observed change in the color, taste, odor or turbidity of the receiving water, unless those conditions are otherwise controlled through effluent limitations or other requirements in this permit. (25 Pa Code 92a.41(c))
2. The monthly average percent removal of BOD<sub>5</sub> or CBOD<sub>5</sub> and TSS must be at least 85% for POTW facilities on a concentration basis except where 25 Pa. Code 92a.47(g) and (h) are applicable to facilities with combined sewer overflows (CSOs) or as otherwise specified in this permit. (25 Pa. Code 92a.47(a)(3))
3. If the permit requires the reporting of average weekly statistical results, the maximum weekly average concentration and maximum weekly average mass loading shall be reported, regardless of whether the results are obtained for the same or different weeks.
4. The permittee shall monitor the sewage effluent discharge(s) for the effluent parameters identified in the Part A limitations table(s) during all bypass events at the facility, using the sample types that are specified in the limitations table(s). Where the required sample type is "composite", the permittee must commence sample collection within one hour of the start of the bypass, wherever possible. The results shall be reported on the Daily Effluent Monitoring supplemental form (3800-FM-BPNPSM0435) and be incorporated into the calculations used to report self-monitoring data on Discharge Monitoring Reports (DMRs).

Footnotes

- (1) When sampling to determine compliance with mass effluent limitations, the discharge flow at the time of sampling must be measured and recorded.
- (2) This is the minimum number of sampling events required. Permittees are encouraged, and it may be advantageous in demonstrating compliance, to perform more than the minimum number of sampling events.

Supplemental Information

- (1) The hydraulic design capacity of 0.7 million gallons per day for the treatment facility is used to prepare the annual Municipal Wasteload Management Report to help determine whether a "hydraulic overload" situation exists, as defined in Title 25 Pa. Code Chapter 94.
- (2) The effluent limitations for Outfall 001 were determined using an effluent discharge rate of 0.7 MGD.
- (3) The organic design capacity of 1600 lbs BOD<sub>5</sub> per day for the treatment facility is used to prepare the annual Municipal Wasteload Management Report to determine whether an "organic overload" condition exists, as defined in 25 Pa. Code Chapter 94.

## II. DEFINITIONS

*At Outfall (XXX)* means a sampling location in outfall line XXX below the last point at which wastes are added to outfall line (XXX), or where otherwise specified.

*Average* refers to the use of an arithmetic mean, unless otherwise specified in this permit. (40 CFR 122.41(l)(4)(iii))

*Best Management Practices (BMPs)* means schedules of activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the pollution to surface waters of the Commonwealth. BMPs also include treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. (25 Pa. Code 92a.2)

*Bypass* means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR 122.41(m)(1)(i))

*Calendar Week* is defined as the seven consecutive days from Sunday through Saturday, unless the permittee has been given permission by DEP to provide weekly data as Monday through Friday based on showing excellent performance of the facility and a history of compliance. In cases when the week falls in two separate months, the month with the most days in that week shall be the month for reporting.

*Clean Water Act* means the Federal Water Pollution Control Act, as amended (33 U.S.C.A. §§1251 to 1387).

*Composite Sample* (for all except GC/MS volatile organic analysis) means a combination of individual samples (at least eight for a 24-hour period or four for an 8-hour period) of at least 100 milliliters (mL) each obtained at spaced time intervals during the compositing period. The composite must be flow-proportional; either the volume of each individual sample is proportional to discharge flow rates, or the sampling interval is proportional to the flow rates over the time period used to produce the composite. (EPA Form 2C)

*Composite Sample* (for GC/MS volatile organic analysis) consists of at least four aliquots or grab samples collected during the sampling event (not necessarily flow proportioned). The samples must be combined in the laboratory immediately before analysis and then one analysis is performed. (EPA Form 2C)

*Daily Average Temperature* means the average of all temperature measurements made, or the mean value plot of the record of a continuous automated temperature recording instrument, either during a calendar day or during the operating day if flows are of a shorter duration.

*Daily Discharge* means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day. (25 Pa. Code 92a.2, 40 CFR 122.2)

*Daily Maximum Discharge Limitation* means the highest allowable "daily discharge."

*Discharge Monitoring Report (DMR)* means the DEP or EPA supplied form(s) for the reporting of self-monitoring results by the permittee. (25 Pa. Code 92a.2 and 40 CFR 122.2)

*Estimated Flow* means any method of liquid volume measurement based on a technical evaluation of the sources contributing to the discharge including, but not limited to, pump capabilities, water meters and batch discharge volumes.

*Geometric Mean* means the average of a set of n sample results given by the n<sup>th</sup> root of their product.

*Grab Sample* means an individual sample of at least 100 mL collected at a randomly selected time over a period not to exceed 15 minutes. (EPA Form 2C)



**Hauled-In Wastes** means any waste that is introduced into a treatment facility through any method other than a direct connection to the sewage collection system. The term includes wastes transported to and disposed of within the treatment facility or other entry points within the collection system.

**Hazardous Substance** means any substance designated under 40 CFR Part 116 pursuant to Section 311 of the Clean Water Act. (40 CFR 122.2)

**Immersion Stabilization (i-s)** means a calibrated device is immersed in the wastewater until the reading is stabilized.

**Indirect Discharger** means a non-domestic discharger introducing pollutants to a Publicly Owned Treatment Works (POTW) or other treatment works. (25 Pa. Code 92a.2 and 40 CFR 122.2)

**Industrial User** means a source of Indirect Discharge. (40 CFR 403.3)

**Instantaneous Maximum Effluent Limitation** means the highest allowable discharge of a concentration or mass of a substance at any one time as measured by a grab sample. (25 Pa. Code 92a.2)

**Measured Flow** means any method of liquid volume measurement, the accuracy of which has been previously demonstrated in engineering practice, or for which a relationship to absolute volume has been obtained.

**Monthly Average Discharge Limitation** means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month. (25 Pa. Code 92a.2)

**Municipality** means a city, town, borough, county, township, school district, institution, authority or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes. (25 Pa. Code 92a.2)

**Publicly Owned Treatment Works (POTW)** means a treatment works as defined by §212 of the Clean Water Act, owned by a state or municipality. The term includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. The term also includes sewers, pipes or other conveyances if they convey wastewater to a POTW providing treatment. The term also means the municipality as defined in section 502(4) of the Clean Water Act, which has jurisdiction over the indirect discharges to and the discharges from such a treatment works. (25 Pa Code 92a.2 and 40 CFR 122.2)

**Severe Property Damage** means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR 122.41(m)(1)(ii))

**Stormwater** means the runoff from precipitation, snow melt runoff, and surface runoff and drainage. (25 Pa. Code 92a.2)

**Stormwater Associated With Industrial Activity** means the discharge from any conveyance that is used for collecting and conveying stormwater and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant, and as defined at 40 CFR §122.26(b)(14)(i) – (ix) and (xi) and 25 Pa. Code 92a.2.

**Toxic Pollutant** means those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains may, on the basis of information available to DEP cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction, or physical deformations in these organisms or their offspring. (25 Pa. Code 92a.2)

**Weekly Average Discharge Limitation** means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.

### III. SELF-MONITORING, REPORTING AND RECORDKEEPING

#### A. Representative Sampling

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity (40 CFR 122.41(j)(1)). Representative sampling includes the collection of samples, where possible, during periods of adverse weather, changes in treatment plant performance and changes in treatment plant loading. If possible, effluent samples must be collected where the effluent is well mixed near the center of the discharge conveyance and at the approximate mid-depth point, where the turbulence is at a maximum and the settlement of solids is minimized. (40 CFR 122.48 and 25 Pa. Code § 92a.61)

2. Records Retention (40 CFR 122.41(j)(2))

Except for records of monitoring information required by this permit related to the permittee's sludge use and disposal activities which shall be retained for a period of at least 5 years, all records of monitoring activities and results (including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records), copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained by the permittee for 3 years from the date of the sample measurement, report or application, unless a longer retention period is required by the permit. The 3-year period shall be extended as requested by DEP or the EPA Regional Administrator.

3. Recording of Results (40 CFR 122.41(j)(3))

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date and time of sampling or measurements.
- b. The person(s) who performed the sampling or measurements.
- c. The date(s) the analyses were performed.
- d. The person(s) who performed the analyses.
- e. The analytical techniques or methods used; and the associated detection level.
- f. The results of such analyses.

4. Test Procedures (40 CFR 122.41(j)(4))

Facilities that test or analyze environmental samples used to demonstrate compliance with this permit shall be in compliance with laboratory accreditation requirements of Act 90 of 2002 (27 Pa. C.S. §§4101-4113) and 25 Pa. Code Chapter 252, relating to environmental laboratory accreditation. Unless otherwise specified in this permit, the test procedures for the analysis of pollutants shall be those approved under 40 CFR Part 136 (or in the case of sludge use or disposal, approved under 40 CFR Part 136, unless otherwise specified in 40 CFR Part 503 or Subpart J of 25 Pa. Code Chapter 271), or alternate test procedures approved pursuant to those parts, unless other test procedures have been specified in this permit.

5. Quality/Assurance/Control

In an effort to assure accurate self-monitoring analyses results:

- a. The permittee, or its designated laboratory, shall participate in the periodic scheduled quality assurance inspections conducted by DEP and EPA. (40 CFR 122.41(e), 122.41(j)(3))
- b. The permittee, or its designated laboratory, shall develop and implement a program to assure the quality and accurateness of the analyses performed to satisfy the requirements of this permit, in accordance with 40 CFR Part 136. (40 CFR 122.41(j)(4))



B. Reporting of Monitoring Results

1. The permittee shall effectively monitor the operation and efficiency of all wastewater treatment and control facilities, and the quantity and quality of the discharge(s) as specified in this permit. (40 CFR 122.41(e), 122.44(i)(1))
2. Discharge Monitoring Reports (DMRs) must be completed in accordance with DEP's published DMR Instructions (3800-BPNPSM-0463). DMRs are based on calendar reporting periods. DMR(s) must be received by the agency(ies) specified in paragraph 3 below in accordance with the following schedule:
  - Monthly DMRs must be received within 28 days following the end of each calendar month.
  - Quarterly DMRs must be received within 28 days following the end of each calendar quarter, i.e., January 28, April 28, July 28, and October 28.
  - Semiannual DMRs must be received within 28 days following the end of each calendar semiannual period, i.e., January 28 and July 28.
  - Annual DMRs must be received by January 28, unless Part C of this permit requires otherwise.
3. The permittee shall complete all Supplemental Reporting forms (Supplemental DMRs) provided by DEP in this permit (or an approved equivalent), and submit the signed, completed forms as an attachment to the DMR(s). If the permittee elects to use DEP's electronic DMR (eDMR) system, one electronic submission may be made for DMRs and Supplemental DMRs. If paper forms are used, the completed forms shall be mailed to:

Department of Environmental Protection  
Clean Water Program  
2 East Main Street  
Norristown, PA 19401
4. If the permittee elects to begin using DEP's eDMR system to submit DMRs required by the permit, the permittee shall, to assure continuity of business operations, continue using the eDMR system to submit all DMRs and Supplemental Reports required by the permit, unless the following steps are completed to discontinue use of eDMR:
  - a. The permittee shall submit written notification to the regional office that issued the permit that it intends to discontinue use of eDMR. The notification shall be signed by a principal executive officer or authorized agent of the permittee.
  - b. The permittee shall continue using eDMR until the permittee receives written notification from DEP's Central Office that the facility has been removed from the eDMR system, and electronic report submissions are no longer expected.
5. The completed DMR Form shall be signed and certified by either of the following applicable persons, as defined in 25 Pa. Code 92a.22:
  - For a corporation - by a principal executive officer of at least the level of vice president, or an authorized representative, if the representative is responsible for the overall operation of the facility from which the discharge described in the NPDES form originates.
  - For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.
  - For a municipality, state, federal or other public agency - by a principal executive officer or ranking elected official.

If signed by a person other than the above, written notification of delegation of DMR signatory authority must be submitted to DEP in advance of or along with the relevant DMR form. (40 CFR 122.22(b))

6. If the permittee monitors any pollutant at monitoring points as designated by this permit, using analytical methods described in Part A III.A.4. herein, more frequently than the permit requires, the results of this monitoring shall be incorporated, as appropriate, into the calculations used to report self-monitoring data on the DMR. (40 CFR 122.41(l)(4)(ii))

C. Reporting and Notification Requirements

1. Planned Changes to Physical Facilities – The permittee shall give notice to DEP as soon as possible but no later than 30 days prior to planned physical alterations or additions to the permitted facility. A permit under 25 Pa. Code Chapter 91 may be required for these situations prior to implementing the planned changes. A permit application, or other written submission to DEP, can be used to satisfy the notification requirements of this section.

Notice is required when:

- a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR §122.29(b). (40 CFR 122.41(l)(1)(i))
  - b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are not subject to effluent limitations in this permit. (40 CFR 122.41(l)(1)(ii))
  - c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 CFR 122.41(l)(1)(iii))
  - d. The planned change may result in noncompliance with permit requirements. (40 CFR 122.41(l)(2))
  - e. The facility is proposing an expansion or modifications to its treatment processes.
2. Planned Changes to Waste Stream – Under the authority of 25 Pa. Code 92a.24(a) and 40 CFR 122.42(b), the permittee shall provide notice to DEP and EPA as soon as possible but no later than 45 days prior to any changes in the volume or pollutant concentration of its influent waste stream as a result of indirect discharges or hauled-in wastes, as specified in paragraphs 2.a. and 2.b., below. Notice shall be provided on the "Planned Changes to Waste Stream" Supplemental Report (3800-FM-BPNPSM0482), available on DEP's website. The permittee shall provide information on the quality and quantity of waste introduced into the POTW, and any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW (40 CFR 122.42(b)(3)). The Report shall be sent via Certified Mail or other means to confirm DEP's receipt of the notification. DEP will determine if the submission of an application and receipt of an amended permit is required.
    - a. Introduction of New Pollutants (25 Pa. Code 92a.24(a), 40 CFR 122.42(b)(1))

New pollutants are defined as parameters that meet one or more of the following criteria:

- (i) Were not detected in the facilities' influent waste stream as reported in the permit application, or were otherwise not analyzed in the influent and reported to DEP prior to permit issuance;
- (ii) Have not been previously approved to be included in the permittee's influent waste stream by DEP and/or EPA in writing;
- (iii) Are previously unapproved pollutants introduced into the POTW from an indirect discharger which would be subject to Sections 301 and 306 of the Clean Water Act if it were directly discharging those pollutants (40 CFR 122.42(b)(1)).

The permittee shall provide notification of the introduction of new pollutants in accordance with paragraph 2 above. The permittee may not authorize the introduction of new pollutants until the permittee receives DEP's and/or EPA's written approval.

b. Increased Loading of Approved Pollutants (25 Pa. Code 92a.24(a), 40 CFR 122.42(b)(2))

Approved pollutants are defined as parameters that meet one or more of the following criteria:

- (i) Were detected in the facilities' influent waste stream as reported in the permittee's permit application or were otherwise analyzed and reported to DEP prior to permit issuance;
- (ii) Have an effluent limitation or monitoring requirement in this permit;
- (iii) Have been previously approved for the permittee's influent waste stream by DEP in writing.

The permittee shall provide notification of the introduction of increased influent loading (lbs/day) of approved pollutants in accordance with paragraph 2 above when (1) the cumulative increase in influent loading (lbs/day) exceeds 10% of the maximum loading reported in the permit application, or a loading previously approved by DEP, or (2) may cause an exceedance in the effluent of Effluent Limitation Guidelines (ELGs) or limitations in Part A of this permit, or (3) may cause interference or pass through at the POTW, or (4) may cause exceedances of the applicable water quality standards in the receiving stream. Unless specified otherwise in this permit, if DEP and/or EPA does not respond to the notification within 30 days of its receipt, the permittee may proceed with the increase in loading. The acceptance of increased loading of approved pollutants may not result in an exceedance of ELGs or effluent limitations, may not result in a hydraulic or organic overload condition as defined in 25 Pa. Code 94.1, and may not cause exceedances of the applicable water quality standards in the receiving stream.

c. New Information on Existing Discharges

The permittee shall notify DEP and EPA where it discovers new information, not reported previously, on the quality and quantity of the effluent introduced into the POTW by an industrial user or an indirect discharger and the anticipated impact of the change in the quality and quantity of effluent to be discharged from the POTW. (40 CFR 122.41(h) and 122.62)

3. Reporting Requirements for Hauled-In Wastes

a. Receipt of Residual Waste

- (i) The permittee shall document the receipt of all hauled-in residual wastes (including but not limited to wastewater from oil and gas wells, food processing waste, and landfill leachate) received for processing at the treatment facility. The permittee shall report hauled-in residual wastes on a monthly basis to DEP on the "Hauled In Residual Wastes" Supplemental Report (3800-FM-BPNPSM0450) as an attachment to the DMR. If no residual wastes were received during a month, submission of the Supplemental Report is not required.

The following information is required by the Supplemental Report. The information used to develop the Report shall be retained by the permittee for five years from the date of receipt and must be made available to DEP or EPA upon request.

- (1) The dates that residual wastes were received.
- (2) The volume (gallons) of wastes received.
- (3) The license plate number of the vehicle transporting the waste to the treatment facility.
- (4) The permit number(s) of the well(s) where residual wastes were generated, if applicable.

- (5) The name and address of the generator of the residual wastes.
- (6) The type of wastewater.
- (7) Documentation of whether or not a chemical analysis of the residual wastes were reported on a Residual Waste Form 26R, or a separate waste characterization using the parameters from Form 26R.

The transporter of residual waste must maintain these and other records as part of the daily operational record (25 Pa. Code 299.219). If the transporter is unable to provide this information, the residual wastes shall not be accepted by the permittee until such time as the transporter is able to provide the required information.

- (ii) The following conditions apply to the characterization of residual wastes received by the permitted treatment facility:
  - (1) The permitted facility must receive and maintain on file a characterization of the residual wastes it receives from the generator, as required by 25 Pa. Code 287.54. The characterization shall conform to the Bureau of Waste Management's Form 26R except as noted in paragraph (2), below. Each load of residual waste received must be characterized accordingly.
  - (2) For wastewater generated from hydraulic fracturing operations ("frac wastewater") within the first 30 production days of a well site, the characterization may be a general frac wastewater characterization approved by DEP. Thereafter, the characterization must be waste-specific and reported on the Form 26R.

b. Receipt of Municipal Waste

- (i) The permittee shall document the receipt of all hauled-in municipal wastes (including but not limited to septage and liquid sewage sludge) received for processing at the treatment facility. The permittee shall report hauled-in municipal wastes on a monthly basis to DEP on the "Hauled In Municipal Wastes" Supplemental Report (3800-FM-BPNPSM0437) as an attachment to the DMR. If no municipal wastes were received during a month, submission of the Supplemental Report is not required.

The following information is required by the Supplemental Report:

- (1) The dates that municipal wastes were received.
  - (2) The volume (gallons) of wastes received.
  - (3) The BOD<sub>5</sub> concentration (mg/l) and load (lbs) for the wastes received.
  - (4) The location(s) where wastes were disposed of within the treatment facility.
- (ii) Sampling and analysis of hauled-in municipal wastes must be completed to characterize the organic strength of the wastes, unless composite sampling of influent wastewater is performed at a location downstream of the point of entry for the wastes. The influent BOD<sub>5</sub> characterization for the treatment facility, as reported in the annual Municipal Wasteload Management Report per 25 Pa. Code Chapter 94, must be representative of the hauled-in municipal wastes received.



4. Unanticipated Noncompliance or Potential Pollution Reporting

- a. Immediate Reporting - The permittee shall immediately report any incident causing or threatening pollution in accordance with the requirements of 25 Pa. Code Sections 91.33 and 92a.41(b).
- (i) If, because of an accident, other activity or incident a toxic substance or another substance which would endanger users downstream from the discharge, or would otherwise result in pollution or create a danger of pollution or would damage property, the permittee shall immediately notify DEP by telephone of the location and nature of the danger. Oral notification to the Department is required as soon as possible, but no later than 4 hours after the permittee becomes aware of the incident causing or threatening pollution.
  - (ii) If reasonably possible to do so, the permittee shall immediately notify downstream users of the waters of the Commonwealth to which the substance was discharged. Such notice shall include the location and nature of the danger.
  - (iii) The permittee shall immediately take or cause to be taken steps necessary to prevent injury to property and downstream users of the waters from pollution or a danger of pollution and, in addition, within 15 days from the incident, shall remove the residual substances contained thereon or therein from the ground and from the affected waters of this Commonwealth to the extent required by applicable law.
- b. The permittee shall report any noncompliance which may endanger health or the environment in accordance with the requirements of 40 CFR 122.41(l)(6). These requirements include the following obligations:
- (i) 24 Hour Reporting - The permittee shall orally report any noncompliance with this permit which may endanger health or the environment within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which must be reported within 24 hours under this paragraph (40 CFR 122.41(l)(6)(ii)):
    - (1) Any unanticipated bypass which exceeds any effluent limitation in the permit;
    - (2) Any upset which exceeds any effluent limitation in the permit; and
    - (3) Violation of the maximum daily discharge limitation for any of the pollutants listed in the permit as being subject to the 24-hour reporting requirement.
  - (ii) Written Report - A written submission shall also be provided within 5 days of the time the permittee becomes aware of any noncompliance which may endanger health or the environment. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
  - (iii) Waiver of Written Report - DEP may waive the written report on a case-by-case basis if the associated oral report has been received within 24 hours from the time the permittee becomes aware of the circumstances which may endanger health or the environment. Unless such a waiver is expressly granted by DEP, the permittee shall submit a written report in accordance with this paragraph. (40 CFR 122.41(l)(6)(iii))

5. Other Noncompliance

The permittee shall report all instances of noncompliance not reported under paragraph C.4 of this section or specific requirements of compliance schedules, at the time DMRs are submitted, on the Non-Compliance Reporting Form (3800-FM-BPNPSM0440). The reports shall contain the information listed in paragraph C.4.b.(ii) of this section. (40 CFR 122.41(l)(7))

**PART B**

**I. MANAGEMENT REQUIREMENTS**

**A. Compliance Schedules (25 Pa. Code 92a.51, 40 CFR 122.47(a))**

1. The permittee shall achieve compliance with the terms and conditions of this permit within the time frames specified in this permit.
2. The permittee shall submit reports of compliance or noncompliance, or progress reports as applicable, for any interim and final requirements contained in this permit. Such reports shall be submitted no later than 14 days following the applicable schedule date or compliance deadline. (40 CFR 122.47(a)(4))

**B. Permit Modification, Termination, or Revocation and Reissuance**

1. This permit may be modified, terminated, or revoked and reissued during its term in accordance with 25 Pa. Code 92a.72 and 40 CFR 122.41(f).
2. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition. (40 CFR 122.41(f))
3. In the absence of DEP action to modify or revoke and reissue this permit, the permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time specified in the regulations that establish those standards or prohibitions. (40 CFR 122.41(a)(1))

**C. Duty to Provide Information**

1. The permittee shall furnish to DEP, within a reasonable time, any information which DEP may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. (40 CFR 122.41(h))
2. The permittee shall furnish to DEP, upon request, copies of records required to be kept by this permit. (40 CFR 122.41(h))
3. Other Information - Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to DEP, it shall promptly submit the correct and complete facts or information. (40 CFR 122.41(l)(8))
4. The permittee shall provide the following information in the annual Municipal Wasteload Management Report, required under the provisions of Title 25 Pa. Code Chapter 94:
  - a. The requirements identified in 25 Pa. Code 94.12.
  - b. The identity of any indirect discharger(s) served by the POTW which are subject to pretreatment standards adopted under Section 307(b) of the Clean Water Act; the POTW shall also specify the total volume of discharge and estimate concentration of each pollutant discharged into the POTW by the indirect discharger.
  - c. A "Solids Management Inventory" including the following information for the preceding year, at a minimum: average annual flow (MGD), average influent BOD<sub>5</sub> (mg/l), average effluent CBOD<sub>5</sub> (mg/l), total volume of sludge wasted (gallons), average solids concentration of return or waste sludge flow (mg/l), and total sludge or biosolids generated (wet or dry tons).
  - d. The total volume of hauled-in residual and municipal wastes received during the year, by source.

- e. The Annual Report requirements for permittees required to implement an industrial pretreatment program listed in Part C, as applicable.

D. General Pretreatment Requirements

1. POTWs shall require indirect dischargers to the treatment works subject to pretreatment standards adopted under Section 307(b) of the Clean Water Act to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Clean Water Act and regulations thereunder.
2. Any POTW (or combination of POTWs operated by the same authority) with a total design flow greater than 5 million gallons per day (MGD) and receiving from industrial users pollutants which pass through or interfere with the operation of the POTW or are otherwise subject to Pretreatment Standards will be required to establish a POTW Pretreatment Program unless specifically exempted by the Approval Authority. A POTW with a design flow of 5 MGD or less may be required to develop a POTW Pretreatment Program if the Approval Authority finds that the nature or volume of the industrial influent, treatment process upsets, violations of effluent limitations, contamination of sludge, or other circumstances warrant in order to prevent interference or pass through. (40 CFR 403.8)
3. Each POTW with an approved Pretreatment Program pursuant to 40 CFR 403.8 shall develop and enforce specific limits to implement the prohibitions listed in 40 CFR 403.5(a)(1) and (b), and shall continue to develop these limits as necessary and effectively enforce such limits. This condition applies, for example, when there are planned changes to the waste stream as identified in Part A III.C.2. If the permittee is required to develop or continue implementation of a Pretreatment Program, detailed requirements will be contained in Part C of this permit.
4. For all POTWs, where pollutants contributed by indirect dischargers result in interference or pass through, and a violation is likely to recur, the permittee shall develop and enforce specific limits for indirect dischargers and other users, as appropriate, that together with appropriate facility or operational changes, are necessary to ensure renewed or continued compliance with this permit or sludge use or disposal practices. Where POTWs do not have an approved Pretreatment Program, the permittee shall submit a copy of such limits to DEP when developed. (25 Pa. Code 92a.47(d))

E. Proper Operation and Maintenance

1. The permittee shall employ operators certified in compliance with the Water and Wastewater Systems Operators Certification Act (63 P.S. §§1001-1015.1).
2. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes, but is not limited to, adequate laboratory controls including appropriate quality assurance procedures. This provision also includes the operation of backup or auxiliary facilities or similar systems that are installed by the permittee, only when necessary to achieve compliance with the terms and conditions of this permit. (40 CFR 122.41(e))

F. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge, sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment. (40 CFR 122.41(d))

G. Bypassing

1. Bypassing Not Exceeding Permit Limitations - The permittee may allow a bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions in paragraphs two, three and four of this section. (40 CFR 122.41(m)(2))

2. Other Bypassing - In all other situations, bypassing is prohibited and DEP may take enforcement action against the permittee for bypass unless:
  - a. A bypass is unavoidable to prevent loss of life, personal injury or "severe property damage." (40 CFR 122.41(m)(4)(i)(A))
  - b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance. (40 CFR 122.41(m)(4)(i)(B))
  - c. The permittee submitted the necessary notice required in paragraph G.4 below. (40 CFR 122.41(m)(4)(i)(C))
3. DEP may approve an anticipated bypass, after considering its adverse effects, if DEP determines that it will meet the conditions listed in paragraph G.2 above. (40 CFR 122.41(m)(4)(ii))
4. Notice
  - a. Anticipated Bypass – If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least 10 days before the bypass. (40 CFR 122.41(m)(3)(i))
  - b. Unanticipated Bypass
    - (i) The permittee shall submit immediate notice of an unanticipated bypass causing or threatening pollution. The notice shall be in accordance with Part A III.C.4.a.
    - (ii) The permittee shall submit oral notice of any other unanticipated bypass within 24 hours, regardless of whether the bypass may endanger health or the environment or whether the bypass exceeds effluent limitations. The notice shall be in accordance with Part A III.C.4.b.

H. Sanitary Sewer Overflows (SSOs)

An SSO is an overflow of wastewater, or other untreated discharge from a separate sanitary sewer system (which is not a combined sewer system), which results from a flow in excess of the carrying capacity of the system or from some other cause prior to reaching the headworks of the sewage treatment facility. SSOs are not authorized under this permit. The permittee shall immediately report any SSO to DEP in accordance with Part A III.C.4 of this permit.

II. PENALTIES AND LIABILITY

A. Violations of Permit Conditions

Any person violating Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act or any permit condition or limitation implementing such sections in a permit issued under Section 402 of the Act is subject to civil, administrative and/or criminal penalties as set forth in 40 CFR §122.41(a)(2).

Any person or municipality, who violates any provision of this permit; any rule, regulation or order of DEP; or any condition or limitation of any permit issued pursuant to the Clean Streams Law, is subject to criminal and/or civil penalties as set forth in Sections 602, 603 and 605 of the Clean Streams Law.

B. Falsifying Information

Any person who does any of the following:

- Falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, or



- Knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit (including monitoring reports or reports of compliance or noncompliance)

Shall, upon conviction, be punished by a fine and/or imprisonment as set forth in *18 Pa.C.S.A § 4904* and 40 CFR §122.41(j)(5) and (k)(2).

#### C. Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance pursuant to Section 309 of the Clean Water Act or Sections 602, 603 or 605 of the Clean Streams Law.

Nothing in this permit shall be construed to preclude the institution of any legal action or to relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject to under the Clean Water Act and the Clean Streams Law.

#### D. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. 40 CFR 122.41(c)

### III. OTHER RESPONSIBILITIES

#### A. Right of Entry

Pursuant to Sections 5(b) and 305 of Pennsylvania's Clean Streams Law, and Title 25 Pa. Code Chapter 92a and 40 CFR §122.41(i), the permittee shall allow authorized representatives of DEP and EPA, upon the presentation of credentials and other documents as may be required by law:

1. To enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit; (40 CFR 122.41(i)(1))
2. To have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit; (40 CFR 122.41(i)(2))
3. To inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and (40 CFR 122.41(i)(3))
4. To sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act or the Clean Streams Law, any substances or parameters at any location. (40 CFR 122.41(i)(4))

#### B. Transfer of Permits

1. Transfers by modification. Except as provided in paragraph 2 of this section, a permit may be transferred by the permittee to a new owner or operator only if this permit has been modified or revoked and reissued, or a minor modification made to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act. (40 CFR 122.61(a))
2. Automatic transfers. As an alternative to transfers under paragraph 1 of this section, any NPDES permit may be automatically transferred to a new permittee if:
  - a. The current permittee notifies DEP at least 30 days in advance of the proposed transfer date in paragraph 2.b. of this section; (40 CFR 122.61(b)(1))

- b. The notice includes the appropriate DEP transfer form signed by the existing and new permittees containing a specific date for transfer of permit responsibility, coverage and liability between them; and (40 CFR 122.61(b)(2))
- c. DEP does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue this permit, the transfer is effective on the date specified in the agreement mentioned in paragraph 2.b. of this section. (40 CFR 122.61(b)(3))
- d. The new permittee is in compliance with existing DEP issued permits, regulations, orders and schedules of compliance, or has demonstrated that any noncompliance with the existing permits has been resolved by an appropriate compliance action or by the terms and conditions of the permit (including compliance schedules set forth in the permit), consistent with 25 Pa. Code 92a.51 (relating to schedules of compliance) and other appropriate Department regulations. (25 Pa. Code 92a.71)

3. In the event DEP does not approve transfer of this permit, the new owner or controller must submit a new permit application.

C. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege. (40 CFR 122.41(q))

D. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for a new permit. (40 CFR 122.41(b))

E. Other Laws

The issuance of this permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations.

IV. ANNUAL FEE

Permittees shall pay an annual fee in accordance with 25 Pa. Code § 92a.62. Annual fee amounts are specified in the following schedule and are due on each anniversary of the effective date of the most recent new or reissued permit. All flows identified in the schedule are annual average design flows. (25 Pa. Code 92a.62)

Small Flow Treatment Facility (SRSTP and SFTF)	\$0
Minor Sewage Facility < 0.05 MGD (million gallons per day)	\$250
Minor Sewage Facility ≥ 0.05 and < 1 MGD	\$500
Minor Sewage Facility with CSO (Combined Sewer Overflow)	\$750
Major Sewage Facility ≥ 1 and < 5 MGD	\$1,250
Major Sewage Facility ≥ 5 MGD	\$2,500
Major Sewage Facility with CSO	\$5,000

As of the effective date of this permit, the facility covered by the permit is classified in the following fee category: **Minor Sewage Facility ≥0.05 and <1 MGD.**

Invoices for annual fees will be mailed to permittees approximately three months prior to the due date. In the event that an invoice is not received, the permittee is nonetheless responsible for payment. Throughout a five year permit term, permittees will pay four annual fees followed by a permit renewal application fee in the last year of permit coverage. Permittees may contact the DEP at 717-787-6744 with questions related to annual fees. The fees identified above are subject to change in accordance with 25 Pa. Code 92a.62(e).

Payment for annual fees shall be remitted to DEP at the address below by the anniversary date. Checks should be made payable to the Commonwealth of Pennsylvania.

PA Department of Environmental Protection  
Bureau of Point and Non-Point Source Management  
Re: Chapter 92a Annual Fee  
P.O. Box 8466  
Harrisburg, PA 17105-8466

**PART C**

**I. OTHER REQUIREMENTS**

- A. No storm water from pavements, area ways, roofs, foundation drains or other sources shall be directly admitted to the sanitary sewers associated with the herein approved discharge.
- B. The approval herein given is specifically made contingent upon the permittee acquiring all necessary property rights by easement or otherwise, providing for the satisfactory construction, operation, maintenance or replacement of all sewers or sewerage structures associated with the herein approved discharge in, along, or across private property, with full rights of ingress, egress and regress.
- C. Collected screenings, slurries, sludges, 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 landfilling, land application, incineration, and storage of sewage sludge), Federal Regulation 40 CFR 257, Pennsylvania Clean Streams Law, Pennsylvania Solid Waste Management Act of 1980, and the Federal Clean Water Act and its amendments. The permittee is responsible to obtain or assure that contracted agents have all necessary permits and approvals for the handling, storage, transport, and disposal of solid waste materials generated as a result of wastewater treatment.
- D. Notification of the designation of the responsible operator must be submitted to the permitting agency by the permittee within 60 days after the effective date of the permit and from time to time thereafter as the operator is replaced.
- E. If, at any time, the DEP determines that the discharge permitted herein creates a public nuisance or causes environmental harm to the receiving water of the Commonwealth, the DEP may require the permittee to adopt such remedial measures as will produce a satisfactory effluent. If the permittee fails to adopt such remedial measures within the time specified by the DEP, the right to discharge herein granted shall, upon notice by the DEP, cease and become null and void.
- F. If there is a change in ownership of this facility or in the name of the permittee, an application for transfer of the permit must be submitted to the DEP.
- G. The facility shall be operated under the charge of a responsible operator(s) certified under the Pennsylvania Water and Wastewater Systems Operations Certification Act (Act 11). The operator(s) shall comply with the continuing education requirements required under the regulations and guidelines related to Act 11.
- H. Instantaneous maximum limitations are imposed to allow for a grab sample to be collected by the appropriate regulatory agency to determine compliance. The permittee does not have to monitor for the instantaneous maximum limitation except for the parameters pH and fecal coliform. However, if grab samples are collected for parameters normally monitored through composite sampling, the results must be reported.
- I. The seasonal effluent limitations for fecal coliform are based on Chapter 92a (§ 92a.47(a)(4)) of DEP's regulations and Delaware River Basin Commission's (DRBC's) Water Quality Regulations at § 4.30.4.A. DEP's regulations govern the summer limits for fecal coliform while the winter limits are based on DRBC's regulations. The DRBC regulations state that during winter season from October through April, the instantaneous maximum concentration of fecal coliform organisms shall not be greater than 1,000 per 100 milliliters in more than 10 percent of the samples tested. For reporting purposes, a copy of the guidelines on the 10 percent rule is enclosed with the permit.
- J. The permittee shall develop a treatment facility operations and maintenance (O&M) plan addressing key wastewater processes. The plan shall be reviewed annually and updated when appropriate. The plan shall be submitted to DEP for review upon request. For the purpose of this paragraph, a key wastewater process includes any equipment or process that, if it fails, may cause the discharge of raw wastewater or wastewater that fails to meet NPDES permit discharge requirements, or a failure that may threaten human or environmental health. The O&M plan shall include the following, at a minimum:



1. A process control strategy that includes a schedule for process control sampling, monitoring, testing, and recordkeeping.
2. A plan that identifies how key wastewater processes shall be monitored and adjusted while the facility is staffed.
3. A plan that identifies how key wastewater processes will be monitored while the treatment facility is not staffed.
4. For treatment plants that are impacted by wet weather flows, the permittee shall develop and implement a wet weather operations strategy that minimizes or eliminates the wash out of solids from the treatment system while maximizing the flow through the treatment plant.
5. An emergency plan that identifies how the facility will be operated during times of emergency. For example, the plan shall detail how key wastewater processes will be repaired or replaced in the event of a failure while minimizing loss of life and property damage to the facility. This plan shall also include emergency contact numbers for local emergency response agencies, plant personnel, critical suppliers and vendors, and DEP contacts, at a minimum.
6. A preventative maintenance plan that includes a schedule for preventative maintenance for all equipment within the treatment system. A spare parts inventory shall be included as part of this plan.
7. A solids management plan that identifies how solids produced by the facility will be wasted, treated, and ultimately disposed of.

## II. PCB MINIMIZATION PLAN AND MONITORING

- A. On April 7, 2007, the U.S. Environmental Protection Agency (EPA), Region 3, adopted a Total Maximum Daily Load (TMDL) for Polychlorinated Biphenyls (PCBs) for the Schuylkill River. Implementation of the TMDL requires that permitted facilities that discharge directly to the Schuylkill River conduct sampling for PCBs and, based upon review of the results, develop and implement a PCB Pollutant Minimization Plan (PMP). Based on the sampling results submitted by the facility, this facility is required to develop and implement a PCB PMP.
- B. The permittee shall collect one 24-hour composite sample annually during a wet weather flow and one 24-hour composite sample annually during a dry weather flow. The samples shall be collected from Outfall 001.
- C. All sample analyses shall be performed using EPA Method 1668A, Revision A: Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by HRGC/HRMS. EPA-821-R-00-002, December 1999 as supplemented or amended, and results for all 209 PCB congeners shall be reported. Project-specific, sample collection protocols, analytical procedures, and reporting requirements at <http://www.state.nj.us/drbc/quality/toxics/pcbs/monitoring.html> shall be followed. Monitoring information, sample data, and reports associated with PCB monitoring shall be submitted to the DEP and the Delaware River Basin Commission (DRBC) in the form of two compact discs in the format referenced at <http://www.state.nj.us/drbc/library/documents/PCB-EDD011309.pdf>.
- D. In accordance with the U.S. EPA, Region 3, TMDL for PCBs for the Schuylkill River, the permittee shall submit a PMP for PCBs within 12 months from the effective date of the permit. The permittee shall comply with the requirements of Section 4.30.9 of DRBC's Water Quality Regulations. Additional information regarding PMP development may be found at <http://www.state.nj.us/drbc/programs/quality/pmp.html>. In addition, the permittee shall:
  1. Commence implementation of its PMP as submitted within 60 days of receipt of a PMP completeness determination issued by DEP.

2. Submit an Annual Report beginning one year from the date of commencement of the PMP to the DRBC and DEP consistent with the guidance specified at <http://www.state.nj.us/drbc/programs/quality/pmp.html>.

The PMP, PMP Annual Report, and PCB data shall be submitted to DEP and DRBC at the following addresses:

PA Department of Environmental Protection  
Southeast Regional Office  
Clean Water Program  
2 East Main Street  
Norristown, PA 19401

Delaware River Basin Commission  
Modeling, Monitoring & Assessment Branch  
P.O. Box 7360  
West Trenton, NJ 08628



**7 – OPERATING EXPENSES**



<b>Account # Account Title</b>	<b>2012 Actual</b>	<b>2013 Actual</b>	<b>2014 Actual</b>	<b>2015 Actual</b>	<b>2016 Actual</b>
<b>General Operating:</b>					
8427120 Wages - Superintendent	74,132	76,727	79,796	82,190	-
8427130 Wages - Operators	315,604	326,841	345,027	396,996	488,015
8427154 Life/Disability Insurance	2,163	2,579	2,670	3,533	3,545
8427156 Health Insurance	146,623	157,818	149,325	170,215	167,035
8427161 Employer's Liab (FICA/SUTA)	34,477	37,438	38,417	41,115	42,171
8427183 Overtime	23,742	27,706	30,655	26,691	26,521
8427184 On Call Pay	9,850	10,627	10,681	10,521	10,177
8427191 Uniform Rental	2,844	2,855	2,795	2,829	3,207
8427192 Personal Safety Equipment	-	-	-	-	3,313
8427231 Gas & Oil	3,641	-	56	-	2,646
8427244 Water Reads	3,325	3,169	4,113	3,345	3,537
8427331 Mileage Costs	-	-	-	-	-
8427351 Vehicle Insurance	8,384	7,227	6,732	6,707	8,916
8427354 Workers' Comp. Insurance	17,077	19,152	22,492	23,338	25,846
8427374 Vehicle Maintenance	3,511	4,159	6,575	7,604	5,091
8427420 Dues/Subscriptions/Membership	393	178	300	501	453
8427460 Training	352	955	990	794	1,416
<b>Total - General Operating</b>	<b>646,118</b>	<b>677,430</b>	<b>700,623</b>	<b>776,379</b>	<b>791,889</b>

**King Road:**

8428221 Water	8,323	9,636	10,378	9,508	8,715
8428222 Sludge Removal	60,014	73,194	69,375	63,181	59,725
8428223 Refuse/Trash	1,084	1,158	1,456	1,027	1,102
8428224 Grit Removal	3,828	6,320	5,199	9,487	8,070
8428225 Lab Supplies	2,200	1,048	2,540	1,505	3,108
8428226 Outside Lab Analysis	6,790	14,060	11,713	13,125	26,637
8428227 I & I	12,381	648	5,786	2,229	8,969
8428228 Odor Control	27,877	38,973	23,881	34,598	18,468
8428229 Other Chemicals	7,083	10,585	6,448	8,282	10,476
8428321 Telephone Services - Monthly	13,005	13,884	14,694	16,253	15,651

<b>Account # Account Title</b>	<b>2012 Actual</b>	<b>2013 Actual</b>	<b>2014 Actual</b>	<b>2015 Actual</b>	<b>2016 Actual</b>
8428351 Bldg & Plant Insurance	6,709	8,077	8,352	12,455	13,478
8428361 Electric - Plant	224,217	257,088	243,877	246,877	217,970
8428362 Electric - PS #2, N. Limerick	2,378	2,627	2,756	2,498	2,271
8428363 Electric - PS #3, S. Limerick	7,344	7,541	6,649	6,883	6,493
8428364 Electric - PS #4, Benner Rd	2,029	2,230	2,468	2,387	2,370
8428365 Electric - PS #5, Trinley Rd	18,375	18,096	20,275	21,242	18,433
8428366 Electric - PS # 8, Merion	897	1,017	1,058	938	633
8428367 ELECTRIC - PS #7, King Rd	2,125	2,179	2,602	2,316	2,080
8428368 Electric - PS #6, SE	20,090	18,849	21,030	20,006	21,795
8428369 Electric - PS #10, Ridge Pike	2,827	2,587	2,742	2,699	2,455
8428370 Electric - PS #11, Wayside	3,584	3,198	3,528	2,459	-
8428371 Electric - PS #9, Neiffer Rd	506	552	555	574	642
8428372 Electric - PS #12, Bradford Wo	5,312	5,083	5,896	4,811	4,527
8428373 Electric -PS # 13, Bradford Wo	1,345	1,445	1,569	1,599	1,415
8428374 Electric - PS # 14, Bradford W	3,596	3,183	3,711	3,722	3,568
8428375 Electric PS#15, Landis Brooke	1,151	1,142	1,187	1,114	1,036
8428376 Electric - Country Club Estate	2,954	3,380	3,315	3,565	3,003
8428377 Electric - PS #20, Graterford	-	-	-	1,299	2,973
8428451 Lawn Maintenance	-	-	-	-	-
8428452 Permits	3,369	2,975	1,071	2,305	2,361
8428480 Plant/Bldg Maintenance	16,274	15,613	37,624	16,381	29,362
8428481 Collection System Maintenance	39,375	40,346	36,416	62,732	77,589
8428482 Equipment Maintenance	863	1,077	-	1,027	1,358
8428483 Materials & Small Tools	4,739	3,337	1,813	3,136	3,884
8428484 Equipment Rental	907	1,043	617	436	117
8428485 Major Maintenance	20,390	17,118	10,273	20,379	14,687
8428486 Other Contractor Services	7,989	4,164	7,122	9,046	7,692
8428487 Well Meters, Install & Repair	4,199	1,370	3,253	3,589	7,868
8428488 Private Meter Supplies	749	-	1,022	1,297	-
8428489 Deduct Meters	824	(1,555)	171	1,138	(2,558)
<b>Total - King Road</b>	<b>547,704</b>	<b>593,268</b>	<b>582,422</b>	<b>618,108</b>	<b>608,423</b>

<b>Account # Account Title</b>	<b>2012 Actual</b>	<b>2013 Actual</b>	<b>2014 Actual</b>	<b>2015 Actual</b>	<b>2016 Actual</b>
<b>Possum Hollow:</b>					
8429221 Water	507	646	463	436	446
8429222 Sludge Removal	16,586	15,913	18,425	15,075	14,872
8429223 Refuse/Trash	-	-	-	-	-
8429224 Grit Removal	1,469	3,271	3,582	4,089	4,519
8429225 Lab Supplies	896	440	930	2,314	772
8429226 Outside Lab Analysis	6,916	6,599	11,571	17,368	11,346
8429227 I & I	-	-	-	-	-
8429228 Odor Control	-	-	-	-	4,506
8429229 Other Chemicals	-	-	105	52	310
8429321 Telephone Services - Monthly	2,808	2,973	3,203	3,326	4,605
8429351 Bldg & Plant Insurance	4,272	5,385	5,803	-	-
8429361 Electric - Plant	63,137	72,875	70,177	74,434	74,320
8429363 Electric - PS #17, Poss Holl	3,749	4,073	4,496	4,265	4,340
8429364 ELECTRIC - PS #1, Airport Rd	3,216	3,121	3,319	3,665	4,057
8429365 Electric - PS # Heritage Hills	4,915	5,188	5,832	6,001	6,339
8429451 Lawn Maintenance	-	-	-	-	-
8429480 Plant/Bldg Maintenance	2,842	2,446	2,154	1,554	6,221
8429481 Collection System Maintenance	2,635	428	149	3,163	4,188
8429482 Equipment Maintenance	-	1,254	1,344	2,019	2,242
8429483 Materials & Small Tools	370	1,472	1,044	200	1,682
8429484 Equipment Rental	-	-	-	-	-
8429485 Major Maintenance	9,196	7,335	7,683	7,194	7,491
8429486 Other Contractor Services	-	806	3,675	-	5,833
8429487 Well Meters, Install & Repair	-	-	-	-	-
8429488 Private Meter Supplies	-	-	-	-	-
8429489 Deduct Meters	1,000	-	1,523	-	-
	<u>124,513</u>	<u>134,223</u>	<u>145,479</u>	<u>145,155</u>	<u>158,091</u>





**8 – FUTURE CAPITAL PROJECTS**

**Sewer Capital Projects - 5 Year Projections**

**King Road Plant:**

	<b>Budget</b>				
	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
<b>30-428-620 Sewer System Construction</b>					
Lewis Rd. sewer main rehab.	-	-	20,000	-	-
Manhole Rehab.	20,000	-	-	20,000	-
Ridge Pike Manhole riser replacement	-	15,000	-	-	-
Manhole Paving Riser for Public Works Paving Projects	10,000	-	10,000	-	10,000
Slip lining of 1400 ft. clay sewer main in Orchard Terrance Area	-	-	-	-	200,000
	<u>30,000</u>	<u>15,000</u>	<u>30,000</u>	<u>20,000</u>	<u>210,000</u>
 <b>31-428-630 Pumps Station Upgrade</b>					
Upgrade to Pump Station # 3 (1984)	950,000	-	-	-	-
Upgrade to Pump Station # 7 (1984)	45,000	-	-	-	-
Upgrade to Pump Station # 6 (1984)	1,500,000	-	-	-	-
Pump Station # 10 lighting & surge protection	-	-	25,000	-	-
Muffin Monster Rebuilding	10,000	-	10,000	-	10,000
Pump Station Remote Montioring systems	-	10,000	10,000	10,000	10,000
	<u>2,505,000</u>	<u>10,000</u>	<u>45,000</u>	<u>10,000</u>	<u>20,000</u>
 <b>31-428-640 I/I Program Equipment</b>					
Flo-Dar Portable Meters	-	16,000	-	16,000	-
MP2 & Montior Pro Meters	-	13,000	13,000	13,000	13,000
Portable Samplers	-	12,000	-	12,000	-
Sewer Main Repairs for I/I	-	-	25,000	-	25,000
	<u>-</u>	<u>41,000</u>	<u>38,000</u>	<u>41,000</u>	<u>38,000</u>

**31-428-680 Miscellaneous**

<u>25,000</u>	<u>25,000</u>	<u>25,000</u>	<u>25,000</u>	<u>25,000</u>
25,000	25,000	25,000	25,000	25,000

**31-428-740 Vehicles**

Replace F-250 (1999) Truck	50,000	-	-	-	-
Replace F-350 (2006) Truck	-	-	60,000	-	-
Sewer Line Flush Truck	-	-	-	-	300,000
Sewer Line Telvising Truck	-	-	-	-	200,000
	<u>50,000</u>	<u>-</u>	<u>60,000</u>	<u>-</u>	<u>500,000</u>

**31-428-750 Equipment**

Headworks Man Doors (3) Replacement	5,000	-	-	-	-
Ultra-Violet Bulbs, Sleeves, Gaskets & Misc. Parts	10,000	10,000	10,000	10,000	10,000
Repair Aeration Tank Air Headers	20,000	22,000	-	-	-
Thickner Sludge Discharge Pump Replacement (Netsch)	-	20,000	-	-	-
Thickner Sludge Inlet Pump Replacement (Seepex)	-	-	20,000	-	-
Dissolved Oxygen Sensor & Controller	-	10,000	-	10,000	-
Repair Concrete Walls in Headworks	20,000	-	20,000	-	20,000
Replace ATS Power Transfer Switch On MCC"A"	12,000	-	-	-	-
Upgrade King Road Plant Scada System	-	-	25,000	-	-
Rebuild Headwork Exhaust System	-	60,000	-	-	-
Electronic Meter Reading System	-	-	-	-	-
Sewer and Firewall	-	-	-	-	-
	<u>67,000</u>	<u>122,000</u>	<u>75,000</u>	<u>20,000</u>	<u>30,000</u>

**Total King Road Plant**

<u>2,677,000</u>	<u>213,000</u>	<u>273,000</u>	<u>116,000</u>	<u>823,000</u>
------------------	----------------	----------------	----------------	----------------

**Possum Hollow Plant:**

	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
<b>31-429-630 Pump Stations Upgrades</b>					
Upgrade Pump Station #1 ( 1990)	45,000	-	-	-	-
MP2 & MP3,control panels & Montior Pro Units	-	13,000	-	-	13,000
Muffin Monster Rebuilds	<u>10,000</u>	<u>-</u>	<u>10,000</u>	<u>-</u>	<u>10,000</u>
	55,000	13,000	10,000	-	23,000
<b>31-429-680 Miscellaneous</b>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>
	20,000	20,000	20,000	20,000	20,000
<b>31-429-750 Equipment</b>					
Headworks Exhaust System Rebuild	-	75,000	-	-	-
Upgrade Ultra-Violet System	-	-	-	80,000	-
Upgrade Waste Pumps & Flow Metering	-	50,000	-	-	-
Install SCADA Plant Montoring System	<u>-</u>	<u>-</u>	<u>25,000</u>	<u>-</u>	<u>-</u>
	-	125,000	25,000	80,000	-
<b>Total Possum Hollow Plant</b>	<b>75,000</b>	<b>158,000</b>	<b>55,000</b>	<b>100,000</b>	<b>43,000</b>





**9 – LIST OF ASSETS AND COSTS**

**CONSOLIDATED ASSETS:**

Utilizing the "Uniform System of Accounts for Class A Wastewater Utilities", each asset class was coded based on Section 300 of the Guidelines. The Codes utilized are as follows:

**WASTEWATER UTILITY PLANT ACCOUNTS**

	<u>.2</u>	<u>.3</u>
	Collection Plant	System Pumping Plant
Organization		
352. Franchise		
353. Land and Land Rights	353.2	
354. Structures and Improvements	354.2	
355. Power Generation Equipment	355.2	
360. Collection Sewers - Force	360.2	
361. Collection Sewers - Gravity	361.2	
362. Special Collecting Structures	362.2	
363. Services to Customers	363.2	
364. Flow Measuring Devices	364.2	
365. Flow Measuring Installations	365.2	
366. Reuse Services		
367. Reuse Meters and Meter Installations		
370. Receiving Wells		370.3
371. Pumping Equipment		371.3
374. Reuse Distribution Reservoirs Distribution System		
375. Reuse Transmission and Distribution System		
380. Treatment and Disposal Equipment		
381. Plant Sewers		
382. Outfall Sewer Lines		
389. Other Plant and Misc. Equipment	389.2	389.3
390. Office Furniture and Equipment		
391. Transportation Equipment		
392. Stores Equipment		
393. Tools, Shop and Garage Equipment		
394. Laboratory Equipment		
395. Power Operated Equipment		
396. Communication Equipment		
397. Miscellaneous Equipment		
398. Other Tangible Plant		

This section is a consolidation of all assets previously documented in the Asset Report.

## ASSET COST SUMMARY SPREAD SHEET

Revised 4/03/2017

YEAR	CODE	ASSET	ORINGINAL COST	COMMENTS
1986	371.3	PS#5 - Pump Station constructed	\$ 877,481	
1986	371.3	PS#6 - Pumping Stations (Abandoned)	\$ 442,767	
1986	371.3	PS#7 - Pumping Stations	\$ 213,451	
1986	361	Landis Creek Interceptor	\$ 5,596,725	
1986	361	Lewis Rd Interceptor		
1986	361	King Rd Interceptor		
1986	361	Schuykill Interceptor		
1986	361	Railroad Ave Interceptor		
1986	361	Trinley Rd (Interceptor to Linfield Rd)		
1986	361	Linfield Interceptor		
				deleted KR Interceptor
1986	380	King Road Sewage Treatment Plant	\$ 6,742,671	
1988	353.4	King Rd Plant- Property	\$ 53,000	
1988	353.3	ROW- Pump Station Land Acq.	\$ 28,522	
1988	353.3	ROW- Pump Station Land Acq.	\$ 25,402	
1988	361	Fox Hollow SD (Pump Station #1)	\$ 104,439	
1988	361	The Fairways	\$ 212,850	
1989	361	Aronimink	\$ 118,001	
1989	361	D&L Associates	\$ 35,320	
1989	361	Greenfields (Ph. 2)	\$ 71,630	
1989	361	The Glen**	\$ 101,011	
1989	353.4	King Rd Plant- Property	\$ 150,267	
1989	353.3	ROW- Pump Station Land Acq.	\$ 4,827	
1990	371.3	PS#3 - Pump Station constructed	\$ 303,240	
1990	371.3	PS#2 - Pump+ Station constructed	\$ 191,713	
1990	371.3	PS#4 - Pump Station constructed	\$ 200,000	Estimate 1990 dollars
1990	371.3	PS#7 - Pump Station constructed	\$ 213,451	
1990	361	Montgomery Brook**	\$ 8,345	
1990	353.3	ROW - Pump Station Land Acq.	\$ 5,000	
1991	354	KR - Operation Building	\$ 873,890	
1991	361	Brookwood SD (Sara Ln)	\$ 27,502	
1991	361	Fox Ridge**	\$ 207,327	
1991	353.3	ROW - Pump Station Land Acq.	\$ 19,503	
1991	353.3	ROW - Pump Station Land Acq.	\$ 3,056	
1991	353.3	ROW - Pump Station Land Acq.	\$ 13,280	
1992	317.3	PS#1 - Pumping Station	\$ 329,215	
<b>1992</b>	<b>361</b>	<b>Limerick Airport Business Center</b>	<b>\$ 107,972</b>	<b>Added 3-31-17</b>
1993	353.3	ROW - Pump Station Land Acq.	\$ 11,500	
1994	361	Abbey Downs (Ph. 2-3)	\$ 185,848	
1994	361	Springford Country Club	\$ 109,289	
1994	361	Herritage Ridge (Ph. 1-3)	\$ 150,820	
1994	361	Muirfield (Ph. 1-2)	\$ 199,735	
1994	353.3	ROW- Pump Station Land Acq.	\$ 16,809	
1995	371.3	PS#6 - New Pump Station	\$ 1,229,919	
1995	361	Deer Run / Neiffer Road	\$ 158,529	
1995	361	Linfield Corporate Center (Ph. 1)	\$ 154,385	
1995	361	Royersford/Limerick Center LP	\$ 176,508	
1996	371.3	PS#8 - Pump Station constructed	\$ 375,200	
1996	371.3	PS#9 - Pumping Stations	\$ 235,752	
1996	361	Pump Station 6A Interceptors	\$ 232,260	
1996	361	Chapel Heights/The Fields	\$ 111,819	
1996	361	Zappone	\$ 22,135	
1996	361	Springford High School Sewer Extension (Authority Portion)	\$ 59,155	
1997	361	Merion	\$ 480,080	
1997	361	The Meadows	\$ 161,796	



YEAR	CODE	ASSET	ORINGINAL COST	COMMENTS
1997	361	Walnut Crossing	\$ 191,338	
1997	361	Heather Glen (Ph. 1a-b)	\$ 246,679	
1997	361	Waterford Greene (Ph. 1-8c)	\$ 685,490	
1997	361	Royersford Road Sewer Extension	\$ 176,544	
1997	361	Kugler Road Sewer Extension	\$ 175,132	
1998	371.3	PS#10 - Pump Station constructed	\$ 634,598	
1998	371.3	PS#11 - Pumping Stations	\$ 226,600	
1998	361	Summer Chase	\$ 117,478	
1998	361	Walnut Grove	\$ 230,800	
1998	361	Betty/Roberta Lanes Sewer Extension	\$ 332,740	
1998	361	West Cherry Lane Sewer Extension	\$ 133,900	
1998	361	Ridge Pike Sewer Extension	\$ 634,598	
1999	371.3	PS#6 - Unknown Improvement	\$ 31,848	
1999	361	Ashford SD	\$ 73,568	
1999	361	Links at Springford	\$ 130,272	
1999	361	Linfield Farm (Ph. 1-3)	\$ 246,044	
1999	361	Winnie Tract (Wayside)	\$ 528,766	
1999	361	Township Line Road Interceptor	\$ 548,967	
1999	361	Mingo Creek Interceptor (incl. Reifsnyder Road Sewer Extension)	\$ 1,310,789	
1999	361	North Limerick Road Sewer Extension	\$ 160,456	
2000	371.3	PS#2 - Pump Replacement	\$ 30,000	Estimate 2016 dollars
2000	371.3	PS#12 - Pump Station constructed	\$ 183,500	
2000	371.3	PS#13 - Pump Station constructed	\$ 303,239	
2000	371.3	PS#14 - Pump Station constructed	\$ 211,500	
2000	361	Bradford Woods gravity	\$ 835,625	
2000	360	Bradford Woods 4" force main	\$ 194,378	
2000	360	Bradford Woods 2" force main	\$ 13,020	
2000	361	Chestnut Pointe	\$ 155,026	
2000	361	Limerick Green	\$ 34,749	
2000	361	Linfield Knoll	\$ 192,093	
2000	353.3	ROW - Mingo Creek Interceptor	\$ 189,540	
2000	361	William Penn Villas	\$ 228,806	
2001	361	Crosswinds	\$ 169,064	
2001	382	KR - Outfall Relocation	\$ 216,433	
2001	361	Faircrest Farm (Ph 1-4)	\$ 477,620	
2001	361	Golf Ridge (Ph. 1-3)	\$ 68,618	
2001	361	Lakeview Commercial Center	\$ 143,280	
2001	361	Lewis Road Office Complex (Ph. II)	\$ 22,298	
2001	361	Pine Tree SD	\$ 137,982	
2001	361	Pinecrest Estates	\$ 34,040	
2001	361	Wickford Hunt	\$ 121,911	
2001	361	Willow Run (Ph. 1-7)	\$ 517,604	
2001	361	Summit Properties (Ridge Pike CVS)	\$ 12,280	
2001	353.3	Easement & ROW	\$ 83,639	
2001	361	Graterford Road Collection System	\$ 399,334	
2002	380	Possum Hollow Sewerage System- Wastewater Treatment Plant and Pump Stations	\$ 7,904,782	
2002	361	Possum Hollow Sewerage System- Interceptor Lines	\$ 3,001,430	
2002	361	Four Maples Development	\$ 23,040	
2002	361	Summerdale Estates	\$ 105,655	
2002	353.3	Easement -King Rd Pump Station	\$ 1,950	
2002	353.3	Easements King Rd	\$ 12,455	
2002	353.4	Easement - Galie	\$ 11,104	
2003	371.3	PS#16 - Pumping Station	\$ -	(Priced as part of Possum Hollow Treatment Plant)

YEAR	CODE	ASSET	ORINGINAL COST	COMMENTS
2003	371.3	PS#17 - Pumping Station	\$ -	(Priced as part of Possum Hollow Treatment Plant)
2003	396	KR - SCADA	\$ 45,278	
2003	361	Heritage Estates	\$ 88,622	
2003	361	Lakeside Development	\$ 24,850	
2003	361	Lewis Road Associates (Ph. 1-2)	\$ 117,697	
2003	361	YMCA (Spring Valley)	\$ 147,141	
2003	353.3	Easement & ROW	\$ 1,907	
2003	353.3	Easement & ROW	\$ 15,716	
2003	353.4	Easements & ROW King Rd	\$ 10,250	
2003	361	Limerick Center Road Sewer Extension	\$ 176,656	
2004	371.3	PS#18 - Pumping Stations	\$ 300,000	Estimated from similar PS19 built in 2007
2004	361	Ashbrook Estates (Ph. 1-4)	\$ 286,855	
2004	361	Bellemeade	\$ 62,676	
2004	361	Calamia Subdivision	\$ 75,221	
2004	361	Rose Tree Estates	\$ 48,036	
2004	353.3	Easement & ROW	\$ 30,772	
2004	353.3	Easement & ROW	\$ 357	
2004	353.4	Possum Hollow- Property	\$ 7,010	
2004	353.4	Easements & ROW King Rd	\$ 2,907	
2004	361	Hartenstine Creek Interceptor	\$ 275,733	
2004	361	Linfield-Trappe Road Sewer Extension	\$ 433,577	
2005	380	KR - Sludge Thickener Facility	\$ 341,075	
2005	396	PH - SCADA	\$ 44,654	
2005	371.3	PS#5 - New Pumps and Controllers	\$ 262,823	
2005	361	Evans brooke	\$ 203,547	
2005	361	Glenview Estates	\$ 117,120	
2005	361	Landis Farms Estates/Crosswinds II	\$ 159,219	
2005	361	Limerick Plaza	\$ 352,744	
2005	361	Puleo SD	\$ 52,089	
2005	361	Villas	\$ 425,383	
2005	353.3	Easement & ROW	\$ 22,646	
2005	361	Landis Creek Interceptor	\$ 381,610	
2006	371.3	PS#15 - Pump Station constructed	\$ 170,000	
2006	360	PS#15 - forcemain	\$ 11,194	
2006	361	Estates at Landis Brooke	\$ 134,128	
2006	361	292-296 W. Ridge Pike	\$ 41,610	
2006	361	Bruster's Ice Cream	\$ 8,975	
2006	361	Fernwood Retail	\$ 72,278	
2006	361	Philadelphia Premium Outlets (Ph. 1)	\$ 426,224	
2006	353.3	Easement & ROW	\$ 1,243	
2006	353.4	Land- Galie Property	\$ 325,722	
2007	371.3	PS#19 - Pump Station constructed	\$ 305,000	
2007	380	King Road Treatment Plant Expansion	\$ 8,933,119	
2007	354	KR - Paving	\$ 135,744	
2007	361	Possum Hollow Industrial Park	\$ 68,372	
2007	361	McLaughlin Land Sewer Extension	\$ 24,212	
2007	361	Country Club Estates/Dinnocenti Tract	\$ 717,941	
2007	361	Moore tract	\$ 18,775	
2008	361	Church Hill Estates (Ph. 1-2)	\$ 64,984	
2008	361	Evans Creek Industrial Park	\$ 148,280	
2008	361	Heritage Crossing At Limerick	\$ 109,632	
2008	361	Limerick Center	\$ 176,112	
2008	361	Penn Liberty Bank	\$ 63,710	
2010	371.3	PS#4 - Pumping Station Upgrades	\$ 169,834	
2010	361	Western Center	\$ 107,117	
2010	361	PS #6 - unknown improvement	\$ 114,208	



YEAR	CODE	ASSET	ORINGINAL COST	COMMENTS
2011	371.3	PS#3 - HYDROMATIC PUMP	\$ 18,666	
2011	371.3	PS#5 - Surge Protector	\$ 3,635	
2011	371.3	PS#5 - Hydromatic Pump	\$ 22,842	
2011	361	Brownback Road Subdivision	\$ 27,270	
2011	361	Costco	\$ 162,417	
2011	361	GB Sheds	\$ 16,261	
2011	361	Oak Creek Estates/Neiffer Woods (Ph. 1-2)	\$ 993,426	
2012	354	KR - Operation Building Roof	\$ 40,962	
2013	371.3	PS#3 - Muffin Monster Grinder Rebuild	\$ 7,980	
2013	371.3	PS#6 - Peroxide system of odor control	\$ 33,947	
2013	371.3	PS#7 - Peroxide Tank	\$ 12,462	
2014	371.3	PS#5 - Pump Control Upgrades, New Building	\$ 317,044	
2014	371.3	PS#7 - Unknown Upgrade	\$ 4,191	
2014	361	190 Airport Rd**	\$ 30,272	
2015	361	57 Neiffer Road	\$ 25,836	
2015	371.3	PS#20 - Forcemain	\$ 25,000	
2015	371.3	PS#20 - Pump Station constructed	\$ 483,000	
2015	361	Graterford Road	\$ 323,732	
2015	361	Moscariello	\$ 403,732	
2015	361	Telvil-Landis/Carriage Crossing	\$ 174,470	
2016	371.3	PS#5 - New Check Valves	\$ 23,362	
2016	380	KR - Misc. improvements	\$ 37,624	
2016	354	KR -Headworks coating	\$ 15,100	
2016	371.3	PS#2 - Omni System Crystal Ball	\$ 3,250	
2016	371.3	PS#3 - Omni System Crystal Ball	\$ 2,492	
2016	371.3	PS#1- Omni System Crystal Ball	\$ 3,250	
2016	371.3	PS#5 - Omni System Crystal Ball	\$ 2,492	
2016	371.3	PS#5 - Muffin Monster Grinder Rebuild	\$ 18,117	
2016	371.3	PS#5 - Motor Control	\$ 8,414	
2016	371.3	PS#5 - Transfer Controller	\$ 2,338	
2016	371.3	PS#6 - Roof Replacement	\$ 4,084	
2016	371.3	PS#6 - Muffin Monster	\$ 12,680	
2016	371.3	PS#10 - Crystal Ball	\$ 3,209	
2016	371.3	PS#16 - Grinder Rebuild	\$ 4,900	
2016	371.3	PS#18 - Omni System Crystal Ball	\$ 3,250	
2016	361	Cherry Ridge	\$ 195,551	
2017	361	Mountain View Estates	\$ 492,210	
		Total	\$ 65,028,045	

LAND DEVELOPMENT ASSET PIPING

revised 3-30-17

Development Name	Length of Pipe (LF)	Pipe Size	Material	Sewer Use	Comments	Category Totals	Total Length (Feet)
Brookwood SD (Sara Ln)	164	6	PVC	Gravity			
D&L Associates	260	6	PVC	Gravity			
Faircrest Farm (Ph 1-4)	182	6	DIP	Gravity			
Golf Ridge (Ph. 1-3)	340	6	DIP	Gravity			
190 Airport Rd	447	6	PVC	Gravity			
Ashbrook Estates (Ph. 1-4)	1,842	6	PVC	Gravity			
Bellemeade	405	6	PVC	Gravity			
Brownback Road Subdivision	145	6	PVC	Gravity			
Church Hill Estates (Ph. 1-2)	620	6	PVC	Gravity			
Costco	164	6	PVC	Gravity			
Country Club Estates/Dinnocenti Tract	3,050	6	PVC	Gravity			
Crosswinds	1,120	6	PVC	Gravity			
Estates At Landis Brooke	1,096	6	PVC	Gravity			
Evans brooke	1,400	6	PVC	Gravity			
Fernwood Retail	20	6	PVC	Gravity			
GB Sheds	10	6	PVC	Gravity			
Heather Glen (Ph. 1a-b)	3,625	6	PVC	Gravity			
Heritage Estates	585	6	PVC	Gravity			
Limerick Plaza	245	6	PVC	Gravity			
Muirfield (Ph. 1-2)	1,746	6	PVC	Gravity			
Pinecrest Estates	280	6	PVC	Gravity			
Rose Tree Estates	390	6	PVC	Gravity			
Royersford/Limerick Center LP	988	6	PVC	Gravity			
Summerdale Estates	800	6	PVC	Gravity			
The Glen	1,230	6	PVC	Gravity			
The Meadows	1,600	6	PVC	Gravity			
Wawa	31	6	PVC	Gravity			
Welsh Subaru (addition)	212	6	PVC	Gravity			
Western Center	150	6	PVC	Gravity			
Bradford Woods	234	6	SDR-26	Gravity			
Cherry Ridge	360	6	SDR-26	Gravity			
292-296 W. Ridge Pike	680	6	SDR-35	Gravity			
Abbey Downs (Ph. 2-3)	1,740	6	SDR-35	Gravity			
Aronimink	2,458	6	SDR-35	Gravity			
Ashford SD	630	6	SDR-35	Gravity			
Bradford Woods	5,678	6	SDR-35	Gravity			
Chestnut Pointe	1,352	6	SDR-35	Gravity			
Evans Creek Industrial Park	270	6	SDR-35	Gravity			
Faircrest Farm (Ph 1-4)	2,760	6	SDR-35	Gravity			
Four Maples Development	170	6	SDR-35	Gravity			
Fox Ridge	4,160	6	SDR-35	Gravity			
Glenview Estates	624	6	SDR-35	Gravity			
Golf Ridge (Ph. 1-3)	4,804	6	SDR-35	Gravity			
Greenfields (Ph. 2)	816	6	SDR-35	Gravity			
Heritage Crossing At Limerick	974	6	SDR-35	Gravity			
Herritage Ridge (Ph. 1-3)	4,490	6	SDR-35	Gravity			
Lakeside Development	340	6	SDR-35	Gravity			
Lakeview Commercial Center	398	6	SDR-35	Gravity			
Lewis Road Associates (Ph. 1-2)	1,136	6	SDR-35	Gravity			
Lewis Road Office Complex (Ph. II)	298	6	SDR-35	Gravity			
Limerick Center	636	6	SDR-35	Gravity			
Limerick Green	50	6	SDR-35	Gravity			
Linfield Farm (Ph. 1-3)	2,322	6	SDR-35	Gravity			
Linfield Knoll	3,711	6	SDR-35	Gravity			
Links at Springford	2,560	6	SDR-35	Gravity			
Merion	2,216	6	SDR-35	Gravity			
Montgomery Brook	145	6	SDR-35	Gravity			
Moscariello	1,950	6	SDR-35	Gravity			
Mountain View Estates	112	6	SDR-35	Gravity			
Oak Creek Estates/Neiffer Woods (Ph. 1-2)	2,555	6	SDR-35	Gravity			
Penn Liberty Bank	114	6	SDR-35	Gravity			
Telvil-Landis/Carriage Crossing	965	6	SDR-35	Gravity			
Villas	2450	6	SDR-35	Gravity			
Walnut Crossing	3,020	6	SDR-35	Gravity			



LAND DEVELOPMENT ASSET PIPING

revised 3-30-17

Waterford Greene (Ph. 1-8c)	13,376	6	SDR-35	Gravity		
Wickford Hunt	1,195	6	SDR-35	Gravity		
William Penn Villas	2,035	6	SDR-35	Gravity		
Willow Run (Ph. 1-7)	2,710	6	SDR-35	Gravity		
Winnie Tract (Wayside)	1,631	6	SDR-35	Gravity		
Summer Chase	1,495	6	SDR-35	Gravity	6 inch PVC Gravity	102,767
Bellemeade	211	8	DIP	Gravity		
Bradford Woods	450	8	DIP	Gravity		
Cherry Ridge	137	8	DIP	Gravity		
Country Club Estates/Dinnocenti Tract	97	8	DIP	Gravity		
Evans Creek Industrial Park	138	8	DIP	Gravity		
Faircrest Farm (Ph 1-4)	351	8	DIP	Gravity		
Golf Ridge (Ph. 1-3)	1,440	8	DIP	Gravity		
Heather Glen (Ph. 1a-b)	88	8	DIP	Gravity		
Lakeview Commercial Center	839	8	DIP	Gravity		
Limerick Center	336	8	DIP	Gravity		
Links at Springford	380	8	DIP	Gravity		
Oak Creek Estates/Neiffer Woods (Ph. 1-2)	59	8	DIP	Gravity		
Philadelphia Premium Outlets (Ph. 1)	139	8	DIP	Gravity		
Springford Country Club	LS	8	DIP	Gravity		
The Meadows	551	8	DIP	Gravity		
Villas	110	8	DIP	Gravity		
Walnut Crossing	575	8	DIP	Gravity		
Western Center	601	8	DIP	Gravity		
Winnie Tract (Wayside)	744	8	DIP	Gravity	8 inch DIP Gravity	7,246
Brookwood SD (Sara Ln)	493	8	PVC	Gravity		
D&L Associates	1,399	8	PVC	Gravity		
Ely Property Subdivision	1,362	8	PVC	Gravity		
Walnut Grove	1,324	8	PVC	Gravity		
57 Neiffer Rd	903	8	PVC	Gravity		
Ashbrook Estates (Ph. 1-4)	6,417	8	PVC	Gravity		
Bellemeade	948	8	PVC	Gravity		
Brownback Road Subdivision	200	8	PVC	Gravity		
Chapel Heights/The Fields	3,124	8	PVC	Gravity		
Church Hill Estates (Ph. 1-2)	1,736	8	PVC	Gravity		
Country Club Estates/Dinnocenti Tract	7,120	8	PVC	Gravity		
Deer Run	2,800	8	PVC	Gravity		
GB Sheds	166	8	PVC	Gravity		
Heather Glen (Ph. 1a-b)	7,867	8	PVC	Gravity		
Heritage Estates	2,069	8	PVC	Gravity		
Latitude Hotels	276	8	PVC	Gravity		
<b>Limerick Airport Business Center</b>	<b>4,710</b>	<b>8</b>	<b>PVC</b>	<b>Gravity</b>		
Limerick Plaza	589	8	PVC	Gravity		
Linfield Corporate Center (Ph. 1)	5,559	8	PVC	Gravity		
Muirfield (Ph. 1-2)	4,432	8	PVC	Gravity		
Rose Tree Estates	444	8	PVC	Gravity		
Royersford/Limerick Center LP	2080	8	PVC	Gravity		
Springford Country Club	434	8	PVC	Gravity		
Summerdale Estates	1,760	8	PVC	Gravity		
The Glen	3,891	8	PVC	Gravity		
The Meadows	3,639	8	PVC	Gravity		
Western Center	639	8	PVC	Gravity		
Country Club Estates/Dinnocenti Tract	728	8	SDR-21	Gravity		
Bradford Woods	2,234	8	SDR-26	Gravity		
Cherry Ridge	2,351	8	SDR-26	Gravity		
Landis Farms Estates/Crosswinds II	450	8	SDR-26	Gravity		
Limerick Center	266	8	SDR-26	Gravity		
Moscariello	623	8	SDR-26	Gravity		
Philadelphia Premium Outlets (Ph. 1)	1,825	8	SDR-26	Gravity		
Abbey Downs (Ph. 2-3)	4,376	8	SDR-35	Gravity		
Aronimink	3,022	8	SDR-35	Gravity		
Ashford SD	1,590	8	SDR-35	Gravity		
Bradford Woods	13,450	8	SDR-35	Gravity		
Calamia Subdivision	570	8	SDR-35	Gravity		
Chestnut Pointe	3,675	8	SDR-35	Gravity		
Costco	2,025	8	SDR-35	Gravity		

LAND DEVELOPMENT ASSET PIPING

revised 3-30-17

Crosswinds	2,708	8	SDR-35	Gravity		
Estates At Landis Brooke	3,156	8	SDR-35	Gravity		
Evans brooke	2,949	8	SDR-35	Gravity		
Evans Creek Industrial Park	1,731	8	SDR-35	Gravity		
Faircrest Farm (Ph 1-4)	8,313	8	SDR-35	Gravity		
Fernwood Retail	893	8	SDR-35	Gravity		
Four Maples Development	341	8	SDR-35	Gravity		
Fox Ridge	4,769	8	SDR-35	Gravity		
Glenview Estates	1,739	8	SDR-35	Gravity		
Golf Ridge (Ph. 1-3)	5,301	8	SDR-35	Gravity		
Greenfields (Ph. 2)	2,094	8	SDR-35	Gravity		
Heritage Crossing At Limerick	1,005	8	SDR-35	Gravity		
Herritage Ridge (Ph. 1-3)	3,522	8	SDR-35	Gravity		
Lakeside Development	266	8	SDR-35	Gravity		
Lakeview Commercial Center	1,351	8	SDR-35	Gravity		
Landis Farms Estates/Crosswinds II	1,439	8	SDR-35	Gravity		
Lewis Road Associates (Ph. 1-2)	1,955	8	SDR-35	Gravity		
Lewis Road Office Complex (Ph. II)	274	8	SDR-35	Gravity		
Limerick Center	754	8	SDR-35	Gravity		
Limerick Green	804	8	SDR-35	Gravity		
Linfield Farm (Ph. 1-3)	5,415	8	SDR-35	Gravity		
Linfield Knoll	2,660	8	SDR-35	Gravity		
Links at Springfield	2,065	8	SDR-35	Gravity		
Merion	3,118	8	SDR-35	Gravity		
Montgomery Brook	240	8	SDR-35	Gravity		
Moore tract	100	8	SDR-35	Gravity		
Moscarllo	3,889	8	SDR-35	Gravity		
Mountain View Estates	1,054	8	SDR-35	Gravity		
Oak Creek Estates/Neiffer Woods (Ph. 1-2)	6,484	8	SDR-35	Gravity		
Penn Liberty Bank	623	8	SDR-35	Gravity		
Philadelphia Premium Outlets (Ph. 1)	3,752	8	SDR-35	Gravity		
Pine Tree SD	3,062	8	SDR-35	Gravity		
Pinecrest Estates	300	8	SDR-35	Gravity		
Possum Hollow Industrial Park	732	8	SDR-35	Gravity		
Puleo SD	604	8	SDR-35	Gravity		
Summer Chase	3,501	8	SDR-35	Gravity		
Summit Properties (Ridge Pike CVS)	289	8	SDR-35	Gravity		
Telvil-Landis/Carriage Crossing	3,118	8	SDR-35	Gravity		
Villas	6617	8	SDR-35	Gravity		
Walnut Crossing	2,489	8	SDR-35	Gravity		
Waterford Greene (Ph. 1-8c)	14,253	8	SDR-35	Gravity		
Wickford Hunt	2,697	8	SDR-35	Gravity		
William Penn Villas	4,537	8	SDR-35	Gravity		
Willow Run (Ph. 1-7)	8,217	8	SDR-35	Gravity		
Winnie Tract (Wayside)	4,526	8	SDR-35	Gravity		
Zappone	434	8	SDR-35	Gravity		
Oak Creek Estates/Neiffer Woods (Ph. 1-2)	393	8	SDR-35	Gravity	8 inch PVC Gravity	234,099
Oak Creek Estates/Neiffer Woods (Ph. 1-2)	489	10	DIP	Gravity		
Oak Creek Estates/Neiffer Woods (Ph. 1-2)	2,128	10	SDR-35	Gravity		
Oak Creek Estates/Neiffer Woods (Ph. 1-2)	77	10	SDR-35	Gravity	10 inch PVC Gravity	2,694
Walnut Grove	2,176	12	PVC	Gravity		
Limerick Plaza	1,160	12	DIP	Gravity		
Walnut Crossing	704	12	DIP	Gravity		
Limerick Plaza	90	12	PVC	Gravity		
Chestnut Pointe	14	12	SDR-35	Gravity		
Royersford/Limerick Center LP	2190	12	PVC	Gravity	12 inch PVC Gravity	6,334
Chapel/Oak/Lewis Road	3,372	8	VTC	Gravity	8 inch VTC Gravity	3,372
<b>TOTALS</b>	<b>LF</b>					
<b>6 inch PVC Gravity</b>	<b>102,767</b>					
<b>8 inch PVC Gravity</b>	<b>234,099</b>					
<b>8 inch DIP Gravity</b>	<b>7,246</b>					
<b>8 inch VTC Gravity</b>	<b>3,372</b>					
<b>10 inch PVC Gravity</b>	<b>2,694</b>					
<b>12 inch PVC Gravity</b>	<b>6,334</b>					



INTERCEPTOR AND EXTENSION PIPING

	Interceptor and Extension Piping	Length of Pipe (LF)	Pipe Size	Material	Sewer Use	Category	Total Length (feet)
2	Mingo Creek Interceptor (incl. Reifsnnyder Road Sewer Extension)	110	6	PVC	Gravity		
10	West Cherry Lane Sewer Extension	210	6	PVC	Gravity		
12	North Limerick Road Sewer Extension	240	6	PVC	Gravity		
14	Limerick Center Road Sewer Extension	66	6	PVC	Gravity		
15	Linfield-Trappe Road Sewer Extension	270	6	PVC	Gravity		
11	Ridge Pike Sewer Extension	1655	6	SDR-35	Gravity	6 inch PVC	2,551
1	Landis Creek Interceptor	447	8	HDPE	Gravity	8 inch HDPE	447
1	King Rd Interceptor	1374	8	PVC	Gravity		
1	Linfield Interceptor	196	8	PVC	Gravity		
2	Mingo Creek Interceptor (incl. Reifsnnyder Road Sewer Extension)	1588	8	PVC	Gravity		
6	Springford High School Sewer Extension (Authority Portion)	3473	8	pvc	Gravity		
7	Royersford Road Sewer Extension	1642	8	PVC	Gravity		
9	Betty/Roberta Lanes Sewer Extension	2665	8	PVC	Gravity		
17	Deer Run / Neiffer Road	2800	8	PVC	Gravity		
20	McLaughlin Lane Extension	500	8	PVC	Gravity		
4	Hartenstine Creek Interceptor	3139	8	SDR-35	Gravity		
8	Deer Run / Neiffer Road	1114	8	SDR-35	Gravity		
10	West Cherry Lane Sewer Extension	1515	8	SDR-35	Gravity		
11	Ridge Pike Sewer Extension	3099	8	SDR-35	Gravity		
12	North Limerick Road Sewer Extension	1750	8	SDR-35	Gravity		
14	Limerick Center Road Sewer Extension	752	8	SDR-35	Gravity		
15	Linfield-Trappe Road Sewer Extension	1801	8	SDR-35	Gravity		
15	Linfield-Trappe Road Sewer Extension	507	8	SDR-26	Gravity		
18	Graterford Rd (associated with PS #20)	1630	8	SDR-35	Gravity	8 inch PVC	29,545
11	Ridge Pike Sewer Extension	2769	8	DIP	Gravity	8 inch DIP	2,769
1	Linfield Interceptor	1271	10	PVC	Gravity		
3	Possum Hollow Sewage System Interceptors (Possum Hollow and Brook Evans Interceptors)	4815	10	PVC	Gravity		
5	Landis Creek Interceptor	8450	10	PVC	Gravity		
13	Graterford Road Collection System	4600	10	PVC	Gravity		
18	Graterford Rd (associated with PS #20)	665	10	SDR-26	Gravity		
11	Ridge Pike Sewer Extension	98	10	SDR-35	Gravity		
18	Graterford Rd (associated with PS #20)	1153	10	SDR-35	Gravity	10 inch PVC	21,052
3	Possum Hollow Sewage System Interceptors (Possum Hollow and Brook Evans Interceptors)	214	10	DIP	Gravity	10 inch DIP	214
1	Landis Creek Interceptor	1657	12	HDPE	Gravity	12 inch HDPE	1,657
1	Railroad Ave Interceptor	650	12	PVC	Gravity		
2	Mingo Creek Interceptor (incl. Reifsnnyder Road Sewer Extension)	4800	12	PVC	Gravity		
1	Schuykill Interceptor	1204	12	PVC	Gravity		
3	Possum Hollow Sewage System Interceptors (Possum Hollow and Brook Evans Interceptors)	2800	12	PVC	Gravity		
16	Township Line Rd Sewer Extension	4134	12	PVC	Gravity		
18	Graterford Rd (associated with PS #20)	23	12	PVC	Gravity		
19	Pump Station 6A - Interceptors	65	12	PVC	Gravity		
18	Graterford Rd (associated with PS #20)	18	12	SDR-26	Gravity		
11	Ridge Pike Sewer Extension	1163	12	SDR-35	Gravity		
18	Graterford Rd (associated with PS #20)	370	12	SDR-35	Gravity	12 inch PVC	15,227
1	Schuykill Interceptor	1184	12	DIP	Gravity		
1	Trinley Rd (Interceptor to Linfield Rd)	289	12	DIP	Gravity		
1	Linfield Interceptor	195	12	DIP	Gravity		
11	Ridge Pike Sewer Extension	298	12	DIP	Gravity	12 inch DIP	1,966
2	Mingo Creek Interceptor (incl. Reifsnnyder Road Sewer Extension)	5760	15	PVC	Gravity		
3	Possum Hollow Sewage System Interceptors (Possum Hollow and Brook Evans Interceptors)	4750	15	PVC	Gravity	15 inch PVC	10,510
1	Trinley Rd (Interceptor to Linfield Rd)	74	16	DIP	Gravity	16 inch DIP	74
1	Trinley Rd (Interceptor to Linfield Rd)	932	18	PVC	Gravity	18 inch PVC	932
1	Lewis Rd Interceptor	1038	21	PVC	Gravity		
19	Pump Station 6A - Interceptors	1200	21	PVC	Gravity	21 inch PVC	2,238
19	Pump Station 6A - Interceptors	382	36	DIP	Gravity	36 inch DIP	382
	<b>TOTALS</b>	<b>LF</b>					
	6 inch PVC	2,551					
	8 inch HDPE	447					
	8 inch PVC	29,545					
	8 inch DIP	2,769					
	10 inch PVC	21,052					
	10 inch DIP	214					
	12 inch HDPE	1,657					
	12 inch PVC	15,227					
	12 inch DIP	1,966					
	15 inch PVC	10,510					
	16 inch DIP	74					
	18 inch PVC	932					
	21 inch PVC	2,238					
	36 inch DIP	382					

# PUMP STATION ASSET PIPING

3-27-17

Pump Station Number	Length of Pipe (LF)	Pipe Size	Material	Sewer Use	Comments
1	2420	6	PVC	Force	
2	800	4	DIP	Force	
3	4000	12	DIP	Force	
4	940	4	DIP	Force	
5	6000	18	DIP	Force	
6A	10800	16	DIP	Force	
7	52	4	DIP	Force	
8	525	4	SDR-21	Force	abandoned
10	2476	6	DIP	Force	
11	4400	4	PVC	Force	Abandoned
12	1840	4	DIP	Force	
13	1000	2	PVC	Force	
14	1865	4	DIP	Force	
15	1000	2	SDR 21	Force	
16	364	10	DIP	Force	
17	364	8	DIP	Force	
18	6370	6	DIP	Force	
19	1300	4	DIP	Force	
20	1998	6	DIP	Force	
<b>TOTALS</b>					
<b>TYPE</b>	<b>LENGTH (LF)</b>	<b>COMMENTS</b>			
2 inch PVC	2,000				
4 inch PVC	4,925	Abandoned			
6 inch PVC	2,420				
4 inch DIP	6,797				
6 inch DIP	10,844				
10 inch DIP	364				
12 inch DIP	4,000				
16 inch DIP	10,800				
18 inch DIP	6,000				





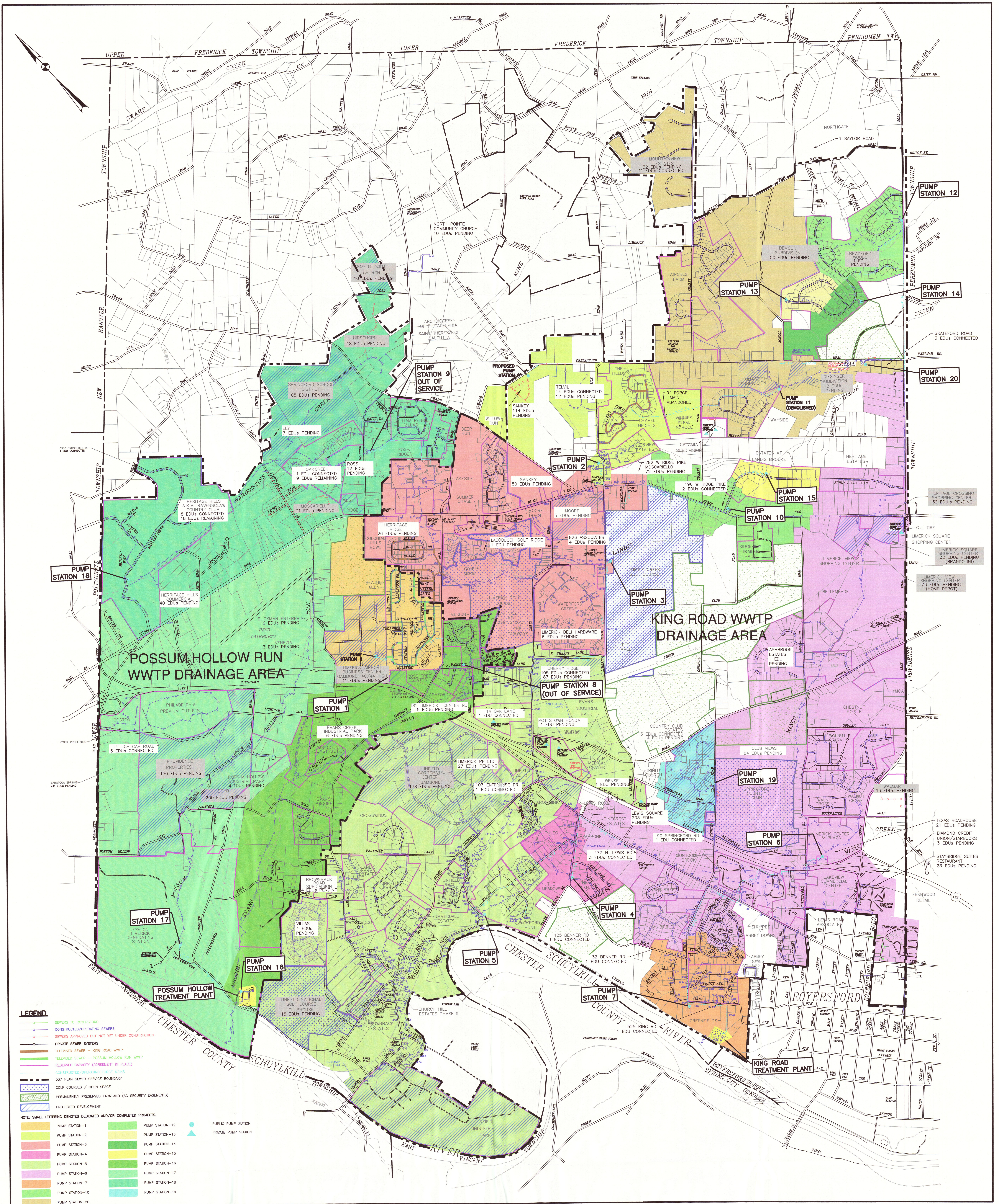
**APPENDICES**

Appendix A









Pennoni Associates Inc.

3602 Horizon Drive  
 King of Prussia, PA 19406 (610) 277-2402

Consulting Engineers

ASSET STUDY - FACILITIES MAP

LIMERICK TOWNSHIP  
 MONTGOMERY COUNTY, PA

LIMERICK TOWNSHIP  
 646 WEST RIDGE PIKE  
 LIMERICK, PA 19448

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER & MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK

DATE	NO.	REVISIONS	BY
4/4/17	1	REVISED PS 20 BASIN AREA AND 537 SEWER SERVICE BOUNDARY	CRK



FIG. 1

DATE: 2/9/17

SCALE: 1" = 1'

PROJECT: LMK1552

DATE: 4/17/17

SCALE: 1" = 1'

PROJECT: LMK1552



Appendix B

Asset Number	Description	Acquisition Date	Useful Life (Years)	Depreciation Method	Cost	Accumulated Depreciation	Book Value
<b>Construction in Progress:</b>							
1.4103	CIP- PS# 3 Upgrade	12/31/2014	0	Straight line	3,386	-	3,386
1.4105	CIP - PS# 6 Upgrades	12/31/2014	0	Straight line	1,440	-	1,440
1.4106	CIP - PS#7 Upgrades	12/31/2014	0	Straight line	4,191	-	4,191
1.5226	Pump Station # 3	12/31/2009	0	None	11,981	-	11,981
1.5229	Pump Station 3	12/31/2010	0	None	23,433	-	23,433
15.0101	PS#3 Upgrade - Engineering	12/31/2015	0	Straight line	31,481	-	31,481
15.0102	PS# 6 Upgrade - Engineering	12/31/2015	0	Straight line	93,500	-	93,500
15.0103	PS #7 Upgrade - Engineering	12/31/2015	0	Straight line	1,316	-	1,316
16.0004	PS #3, Engineering	8/30/2016	0	Straight line	768	-	768
16.0005	PS #6, Engineering	9/30/2016	0	Straight line	30,610	-	30,610
16.0006	PS #6, Upgrade, Pmt #1	8/30/2016	0	Straight line	31,068	-	31,068
					<u>233,173</u>	<u>-</u>	<u>233,173</u>
<b>Land:</b>							
1.5	Land- Galie Property	11/1/2006	0	Straight line	325,722	-	325,722
1.5036	Easement - Galie	8/14/2002	0	Straight line	11,104	-	11,104
1.5037	Easement & ROW	6/1/2003	0	Straight line	1,907	-	1,907
1.5038	Easement & ROW	9/8/2004	0	Straight line	357	-	357
1.5039	Easement & ROW	12/31/2005	0	Straight line	22,646	-	22,646
1.504	Easement & ROW	9/13/2006	0	Straight line	1,243	-	1,243
1.5042	Possum Hollow	9/8/2004	0	Straight line	7,010	-	7,010
1.5057	King Rd Plant	7/1/1988	0	Straight line	53,000	-	53,000
1.5058	King Rd Plant	7/1/1989	0	Straight line	150,267	-	150,267
1.5059	ROW- Pump Station Land Acq.	7/1/1988	0	Straight line	28,522	-	28,522
1.506	ROW- Pump Station Land Acq.	7/1/1988	0	Straight line	25,402	-	25,402
1.5061	ROW- Pump Station Land Acq.	7/1/1989	0	Straight line	4,827	-	4,827
1.5062	ROW - Pump Station Land Acq.	7/1/1990	0	Straight line	5,000	-	5,000
1.5063	ROW - Pump Station Land Acq.	7/1/1991	0	Straight line	19,503	-	19,503
1.5064	ROW - Pump Station Land Acq.	7/1/1991	0	Straight line	3,056	-	3,056
1.5065	ROW - Pump Station Land Acq.	7/1/1991	0	Straight line	13,280	-	13,280
1.5066	ROW - Pump Station Land Acq.	7/1/1993	0	Straight line	11,500	-	11,500
1.5067	ROW- Pump Station Land Acq.	7/1/1994	0	Straight line	16,809	-	16,809

1.5068 ROW - Mingo Creek Interceptor	6/30/2000	0	Straight line	189,540	-	189,540
1.5069 Easement & ROW	6/30/2001	0	Straight line	83,639	-	83,639
1.507 Easement -King Rd Pump Station	6/30/2002	0	Straight line	1,950	-	1,950
1.5071 Easement & ROW	6/1/2003	0	Straight line	15,716	-	15,716
1.5072 Easement & ROW	6/9/2004	0	Straight line	30,772	-	30,772
1.5216 Easements King Rd	6/30/2002	0	None	12,455	-	12,455
1.5217 Easements & ROW King Rd	6/11/2003	0	None	10,250	-	10,250
1.5218 Easements & ROW King Rd	11/10/2004	0	None	2,907	-	2,907
				<u>1,048,383</u>	<u>-</u>	<u>1,048,383</u>

**Office Furn & Fixtures:**

1.5001 Office Furniture	2/13/2002	7	Straight line	13,504	10,287	3,217
1.5043 Operation Building	1/1/2003	40	Straight line	2,729	887	1,842
				<u>16,233</u>	<u>11,174</u>	<u>5,058</u>

**Plant Equipment:**

1.41 Pump Controllers - King Road	11/14/2014	0	Straight line	12,097	-	12,097
1.4101 Pump Controllers, Possum Hollow	12/3/2014	5	Straight line	12,097	2,612	9,485
1.5202 Generator	12/31/2009	10	Straight line	156,772	94,063	62,709
1.5203 Mower	12/31/2009	5	Straight line	3,225	3,225	-
1.5204 Gas Monitors	12/31/2009	5	Straight line	3,827	3,827	-
1.5205 Auto Dialers	12/31/2009	10	Straight line	9,525	5,996	3,529
15.0111 Controllers	10/30/2015	15	Straight line	9,077	104	8,973
15.0112 Rebuild Lakeside grit removal	5/29/2015	15	Straight line	18,426	730	17,696
15.0113 portable sampler for i&l	10/23/2015	15	Straight line	9,401	120	9,281
15.0114 KR - replace Effluent sampler	10/23/2015	15	Straight line	7,152	91	7,061
15.0115 PH - replace effluent sampler	10/22/2015	15	Straight line	7,152	93	7,059
15.0116 Ultra Violet Bulbs	10/23/2015	15	Straight line	14,665	188	14,478
				<u>263,416</u>	<u>111,049</u>	<u>152,366</u>

**Sewer System & Util:**

1.1552 Pump Station Upgrades	12/31/2009	40	Straight line	42,247	6,337	35,910
1.3102 Peroxide Tank - PS #6	8/19/2013	15	Straight line	33,947	5,363	28,584
1.4104 PS#5 Upgrades	12/31/2014	35	Straight line	317,044	9,058	307,985
1.5003 Sewer Treatment Misc Equip.	6/30/2002	15	Straight line	28,123	25,311	2,812



1.5004	Sewer Treatment Small Items	6/30/2002	15	Straight line	6,484	5,835	648
1.5005	Sewer Treatment & Collection	6/1/2003	15	Straight line	70,251	58,933	11,318
1.5006	Sewer Treatment & Collection	6/30/2004	15	Straight line	105,551	80,923	24,629
1.5007	Sewer Treatment & Collection	6/30/2005	15	Straight line	33,774	23,642	10,132
1.5008	Sewer Treatment and Collection	12/13/2006	15	Straight line	7,393	4,477	2,916
1.5009	Sewer Treatment & Collection	3/14/2007	15	Straight line	143	84	59
1.501	Computer Equipment	2/14/2007	5	Straight line	14,163	14,163	-
1.5011	Operation Building	6/1/2003	15	Straight line	5,546	4,652	894
1.5012	Scada Project - King Rd	6/1/2003	7	Straight line	45,278	32,675	12,603
1.5013	Scada Project - Possum Hollow	4/13/2005	7	Straight line	44,654	43,432	1,222
1.5014	Sludge Thickener Facility	12/31/2005	15	Straight line	70,136	46,737	23,399
1.5015	Springford Rd - Legal	12/12/2007	7	Straight line	68	68	-
1.5016	King Rd - Paving	9/30/2007	35	Straight line	135,774	32,066	103,707
1.5017	Graterford Rd - Engineering	5/9/2007	35	Straight line	1,140	282	858
1.5018	Graterford Rd - Legal	6/13/2007	7	Straight line	1,189	1,189	-
1.5019	Linfield Trappe Rd -Engineer.	10/10/2007	35	Straight line	4,136	975	3,161
1.502	Linfield Trappe Rd - Legal	8/8/2007	7	Straight line	2,506	2,506	-
1.5021	Linfield Trappe Rd - Other	9/12/2007	7	Straight line	650	650	-
1.5022	Linfield Trappe - Construction	6/30/2004	35	Straight line	325,778	107,041	218,737
1.5023	Linfield Trappe Rd Engineer.	6/1/2003	35	Straight line	87,093	29,432	57,661
1.5024	Linfield Trappe Rd - Legal	6/1/2003	7	Straight line	14,934	14,795	139
1.5025	Metro / UTC LTD	2/13/2002	35	Straight line	7,296	2,693	4,603
1.5026	Graterford Rd - Engineering	6/30/2002	35	Straight line	10,636	5,905	4,731
1.5027	Graterford Rd - Legal	12/11/2002	7	Straight line	1,525	1,164	361
1.5028	Graterford Rd Sewer - CIP	6/30/2007	7	Straight line	5,963	5,963	-
1.5029	Orchard terrace Sanitary Sewer	12/31/2006	15	Straight line	14,119	13,114	1,005
1.503	Neiffer Rd Sewer	12/31/2006	15	Straight line	9,566	6,314	3,252
1.5031	Lodal Creek Sewer -Engineer.	6/30/2007	35	Straight line	85,423	20,746	64,677
1.5032	Lodal Creek Sewer- Legal	6/30/2007	7	Straight line	19,102	19,102	-
1.5033	Lodal Creek - Other	6/30/2007	7	Straight line	1,141	1,141	-
1.5034	Landis Creek - Engineering	6/30/2002	7	Straight line	32,014	20,881	11,133
1.5035	Landis Creek	6/30/2007	40	Straight line	339,012	72,040	266,972
1.5041	Misc Capital Projects	6/30/2002	15	Straight line	112,218	100,108	12,110
1.5044	Sewer Treatment & Collection	6/1/2003	15	Straight line	4,630	3,884	746
1.5045	Operations Building	6/1/2003	40	Straight line	10,793	3,508	7,285
1.5046	Construction - Possum Hollow	6/1/2003	40	Straight line	9,102,951	2,956,206	6,146,745

1.5047	Possum Hollow - Engineering	6/1/2003	35	Straight line	955,101	348,911	606,190
1.5048	Possum Hollow - Legal	6/1/2003	35	Straight line	78,807	28,686	50,120
1.5049	Possum Hollow - Other	6/1/2003	35	Straight line	36,271	13,356	22,916
1.505	Plant Expansion - Engineer	6/1/2003	35	Straight line	318,205	115,637	202,568
1.5051	Plant Expansion - Legal	6/1/2003	7	Straight line	10,973	10,973	-
1.5052	Plant Expansion - Other	6/1/2003	7	Straight line	5,890	5,890	-
1.5053	King Rd Expansion	6/30/2007	40	Straight line	255,955	54,390	201,565
1.5054	Brooke Evans - Construction	6/1/2003	35	Straight line	214,391	64,238	150,153
1.5055	Limerick Ctr Rd - Construction	6/1/2003	40	Straight line	143,793	45,235	98,558
1.5056	Limerick Ctr -Engineer & Legal	6/1/2003	35	Straight line	34,273	13,827	20,447
1.5073	Capitalizes Interest 2002	6/1/2003	35	Straight line	142,125	65,033	77,092
1.5074	Possum Hollow - Engineer	12/31/2006	35	Straight line	7,834	2,006	5,829
1.5075	Possum Hollow - Legal	12/31/2006	35	Straight line	90	23	67
1.5078	Sewer Lines	7/1/1992	50	Straight line	734,451	345,192	389,259
1.5079	Treatment Units	7/1/1992	25	Straight line	660,071	620,466	39,605
1.508	Blowers	7/1/1992	15	Straight line	76,162	76,162	0
1.5081	Blower Building	7/1/1992	40	Straight line	63,468	37,287	26,181
1.5082	Generator	7/1/1992	25	Straight line	120,844	113,594	7,250
1.5083	Fans	7/1/1992	15	Straight line	17,771	17,771	-
1.5084	Louvers	7/1/1992	25	Straight line	15,232	14,318	914
1.5085	Balance of REM	7/1/1992	30	Straight line	1,729,004	1,357,566	371,438
1.5086	Royersford Rd	8/26/1997	35	Straight line	166,887	88,212	78,675
1.5087	Kugler Rd	6/13/1997	35	Straight line	162,218	85,744	76,474
1.5088	Rerate Sewer	1/1/1998	35	Straight line	26,311	13,531	12,779
1.5089	Ridge Pike Sewer	10/27/1998	35	Straight line	1,848,001	906,987	941,014
1.509	High School Sewer	1/1/1998	35	Straight line	146,418	75,301	71,117
1.5091	W. Cherry Lane	8/25/1998	35	Straight line	131,801	65,335	66,465
1.5092	N. Limerick Ext	11/15/1999	35	Straight line	158,546	73,233	85,313
1.5093	Ridge Pike	2/15/1999	35	Straight line	16,781	8,111	8,670
1.5094	Betty - Roberta Lane	3/15/1999	35	Straight line	344,648	165,759	178,889
1.5095	Cherry Lane	1/1/1999	35	Straight line	2,287	1,111	1,176
1.5096	SE Pump Station	9/15/1999	35	Straight line	373,515	174,307	199,208
1.5097	PS # 6	7/15/1999	35	Straight line	31,848	15,014	16,834
1.5098	Conti / Trim	3/15/1999	35	Straight line	9,319	4,482	4,837
1.5099	Fairways	3/15/1999	35	Straight line	22,471	10,807	11,663
1.51	Sewer Lines	7/1/1988	35	Straight line	6,230,118	3,746,969	2,483,149

1.5101 Pumping Station	7/1/1988	35	Straight line	217,933	171,230	46,703
1.5102 Pumping Station	7/1/1988	35	Straight line	364,721	286,563	78,158
1.5103 Pumping Station	7/1/1988	35	Straight line	1,010,662	794,091	216,571
1.5104 Pumping Station	7/1/1988	35	Straight line	524,736	412,290	112,446
1.5105 Pumping Station	7/1/1988	35	Straight line	264,694	207,970	56,724
1.5109 Blower Building	7/1/1988	40	Straight line	66,787	45,918	20,869
1.511 Transformer	7/1/1988	20	Straight line	16,697	16,697	-
1.5111 Service Switch	7/1/1988	20	Straight line	27,828	27,828	-
1.5112 Motor Control	7/1/1988	20	Straight line	33,393	33,393	-
1.5113 Generator	7/1/1988	25	Straight line	11,132	11,132	-
1.5114 Balance of REM	7/1/1988	30	Straight line	1,690,685	1,549,794	140,891
1.5115 SE Pump Station	2/1/1996	35	Straight line	1,323,530	737,395	586,135
1.5116 Upgrade Manhole	10/30/1998	15	Straight line	3,940	3,940	-
1.5117 Upgrade Manhole	12/19/1998	15	Straight line	4,200	4,200	-
1.5118 Upgrade Manhole	12/19/1998	15	Straight line	4,013	4,013	-
1.5119 Upgrade Manhole	6/12/1998	15	Straight line	7,880	7,880	-
1.512 Upgrade Manhole	6/27/1998	15	Straight line	4,531	4,531	-
1.5121 Upgrade Manhole	3/23/1999	15	Straight line	1,750	1,750	-
1.5122 Upgrade Manhole	5/12/1999	15	Straight line	7,880	7,880	-
1.5123 Upgrade Manhole	5/12/1999	15	Straight line	1,232	1,232	-
1.5124 2 Flange Couplings	8/11/1999	15	Straight line	3,488	3,488	-
1.5125 Air Diffusion	12/8/1999	15	Straight line	357	357	-
1.5126 Original Collection	7/1/1974	15	Straight line	59,969	59,969	-
1.5127 Flow Meter	5/15/1997	7	Straight line	5,593	5,593	-
1.5128 Sewer Equip.	4/14/1999	15	Straight line	659	659	-
1.5129 Flow Meter	12/8/1999	7	Straight line	304	-	304
1.513 Sewer Map	7/1/1994	50	Straight line	10,070	4,330	5,740
1.5131 Comprehensive Plan	7/1/1993	30	Straight line	32,070	24,053	8,017
1.5132 Mclaughlin Lane	7/1/1993	50	Straight line	24,211	10,895	13,316
1.5133 Pump Station Upgrade	5/30/2000	35	Straight line	4,234	1,885	2,349
1.5134 Manhole Upgrades	8/10/2000	15	Straight line	11,032	11,032	-
1.5135 Odor COntrOl Equip.	11/15/2000	7	Straight line	801	801	-
1.5136 Hartenstine Crest	1/1/2001	7	Straight line	5,056	5,056	-
1.5137 Possum Hollow Plant Expansion	1/1/2001	35	Straight line	429,922	384,476	45,447
1.5138 Mingo Creek Interceptor	12/13/2000	35	Straight line	1,313,925	566,241	747,685
1.5139 Reifsneider Rd	1/1/2000	35	Straight line	12,339	5,641	6,698



1.514 Misc. Township	1/1/2000	35	Straight line	3,940	1,801	2,139
1.5141 Eng. Township	1/1/2000	35	Straight line	40,850	18,674	22,176
1.5142 Limerick Center Rd	1/1/2000	35	Straight line	21,881	10,003	11,878
1.5143 Meter Equipment	1/1/2000	7	Straight line	165,984	165,984	-
1.5144 Equipment	6/1/2001	5	Straight line	29,107	29,107	-
1.5145 Possum Hollow Engineering	6/1/2001	7	Straight line	11,986	11,986	-
1.5146 Possum Hollow	6/1/2001	7	Straight line	943	943	-
1.5147 Construction Plant Expansion	6/30/2001	35	Straight line	230,849	95,638	135,212
1.5148 Plant Expansion - Engineering	6/30/2001	35	Straight line	36,604	15,165	21,440
1.5149 Plant Expansion - Legal	6/30/2001	7	Straight line	2,635	2,635	-
1.515 Plant Expansion - Other	6/30/2001	35	Straight line	2,175	901	1,274
1.5151 Pump Station #2 Escrow	6/30/2001	5	Straight line	1,126	1,126	-
1.5152 Plan Engineering	6/30/2001	7	Straight line	2,461	2,461	-
1.5153 SEPS Engineering	6/30/2001	7	Straight line	4,995	4,995	-
1.5154 SEPS Other	6/30/2001	7	Straight line	3,194	3,194	-
1.5155 Minko Creek Engineering	6/30/2001	7	Straight line	1,058	1,058	-
1.5156 Mingo Creek Legal	6/30/2001	7	Straight line	3,735	3,735	-
1.5157 Mingo Creek Other	6/30/2001	7	Straight line	700	700	-
1.5158 Township Line Engineering	6/30/2001	7	Straight line	3,122	3,122	-
1.5159 Landis Creek Engineering	6/30/2001	7	Straight line	10,583	10,583	-
1.516 Pumping Station	1/15/2001	40	Straight line	226,600	84,975	141,625
1.5161 Faircrest Estates	7/1/2002	40	Straight line	375,174	126,621	248,553
1.5162 Lewis Rd Associates	7/1/2002	40	Straight line	59,297	20,013	39,284
1.5163 Wickford Hunt	7/1/2002	40	Straight line	184,811	62,374	122,437
1.5164 Crosswinds	7/1/2002	40	Straight line	171,777	57,975	113,802
1.5165 Sewer Treatment & Collection	6/1/2003	40	Straight line	1,514,545	476,451	1,038,094
1.5166 Zappone	1/1/2004	40	Straight line	19,635	5,891	13,744
1.5167 Willow Run Phase 4	8/1/2004	40	Straight line	89,628	25,581	64,047
1.5168 Willow Run Phase 5	8/1/2004	40	Straight line	105,681	30,163	75,518
1.5169 Willow Run Phase 6	8/1/2004	40	Straight line	25,712	7,339	18,373
1.517 Willow Run Phase 7	8/1/2004	40	Straight line	58,515	16,701	41,814
1.5171 William Penn Villas	12/1/2004	40	Straight line	210,306	58,272	152,034
1.5172 Limerick Plaza	12/1/2004	40	Straight line	317,343	87,931	229,412
1.5173 Meadows	12/31/2005	29	Straight line	105,678	36,441	69,237
1.5174 Lewis Rd Assoc. Apartments	12/31/2005	40	Straight line	53,096	13,274	39,822
1.5175 Ashbrook	12/31/2005	40	Straight line	259,855	64,964	194,891

1.5176 Pine Crest Estates	12/31/2005	40	Straight line	30,540	7,635	22,905
1.5177 Rose Tree Estates	12/31/2005	40	Straight line	42,036	10,509	31,527
1.5178 Glenview Estates	12/31/2005	40	Straight line	102,120	25,530	76,590
1.5179 Bellemeade	12/31/2005	40	Straight line	53,676	13,419	40,257
1.518 Lakeside Apartments	12/31/2005	38	Straight line	19,770	5,203	14,567
1.5181 Fox ridge Commercial	12/31/2005	29	Straight line	58,000	20,000	38,000
1.5182 Four Maples Apartments	12/31/2005	29	Straight line	14,161	4,883	9,278
1.5183 Landis Farms Estates	12/31/2005	40	Straight line	138,219	34,555	103,664
1.5184 Evansbrooke	12/31/2005	40	Straight line	177,047	44,262	132,785
1.5185 Golf Ridge	12/31/2005	31	Straight line	250,460	80,794	169,666
1.5186 Heritage Hills Country Club	12/31/2005	40	Straight line	706,201	176,550	529,651
1.5187 Hartnestine Interceptor	12/31/2005	40	Straight line	242,764	60,691	182,073
1.5188 Calamia Subdivision	12/31/2006	40	Straight line	42,300	9,518	32,783
1.5189 SF Country Club Sewer Ext.	12/31/2006	28	Straight line	66,821	21,478	45,343
1.519 07-Church Hill Estates	12/31/2007	40	Straight line	56,484	11,297	45,187
1.5191 Country Club Estates	12/31/2007	40	Straight line	288,000	57,600	230,400
1.5192 Estates @ Landis Brook	12/31/2007	40	Straight line	287,322	57,464	229,858
1.5193 Puleo Subdivision	12/31/2008	40	Straight line	45,289	8,558	36,731
1.5195 Church Hill Estates	12/31/2008	40	Straight line	77,490	15,499	61,992
1.5196 Oak Creek	12/31/2009	40	Straight line	842,426	147,425	695,001
1.5197 Kennedy Mazda	12/31/2009	40	Straight line	191,000	33,425	157,575
1.5198 Lewis Ridge Retail	12/31/2009	40	Straight line	93,254	16,319	76,935
1.5199 Penn Liberty Bank	12/31/2009	40	Straight line	56,710	9,924	46,786
1.52 Sewer Sleeve	7/1/1975	15	Straight line	37,395	12,465	24,930
1.5201 King Rd Building	7/1/1992	40	Straight line	873,390	491,294	382,095
1.5206 Graterford Rd Construction	6/1/2003	40	Straight line	326,471	97,941	228,529
1.5207 Graterford Rd Sewer	6/1/2003	7	Straight line	1,051	1,051	-
1.5208 Graterford Rd Engineering	6/1/2003	7	Straight line	55,174	55,174	-
1.5209 Graterford Rd Legal	6/1/2003	7	Straight line	1,928	1,928	-
1.521 Possum Hollow STP ( Eng)	1/1/2000	7	Straight line	65,440	65,440	-
1.5211 Possum Hollow Engineering	6/1/2003	35	Straight line	599,670	222,734	376,935
1.5212 Possum Hollow Legal	6/1/2003	7	Straight line	103,298	79,889	23,409
1.5213 Possum Hollow STP (other)	6/1/2003	7	Straight line	2,689	2,689	-
1.5214 Plant Expansion Other	6/1/2003	7	Straight line	500	500	-
1.5215 Plant Expansion Other	6/30/2005	7	Straight line	226	226	-
1.5219 King Rd Plant Upgrade	12/31/2008	40	Straight line	11,260,739	2,252,060	9,008,679

1.522	Disolved Oxygen Sensor Probes	12/31/2010	10	Straight line	9,614	4,810	4,804
1.5222	Hartenstine Interceptor	12/31/2010	40	Straight line	202,210	25,290	176,920
1.5223	Blessed Teresa of Calcutta	12/31/2010	40	Straight line	15,000	1,876	13,124
1.5231	Pump Station # 4	12/31/2010	15	Straight line	169,834	56,642	113,191
1.5232	Pump Station # 6	12/31/2010	15	Straight line	114,208	38,090	76,118
5.1551	Limerick Sq. Shopping Center	12/31/2010	40	Straight line	228,226	28,544	199,682
11.0005	Chelsea/PPO	9/6/2011	40	Straight line	386,224	41,717	344,507
11.0006	Possum Hollow/Zara Dr	9/6/2011	40	Straight line	59,454	6,422	53,032
11.002	PS #3, hydromatic pump	10/7/2011	40	Straight line	18,666	1,977	16,689
11.0021	PS #5, repairs ot Pump #2	2/18/2011	40	Straight line	22,842	2,780	20,062
11.0022	PS #5, Electrical Surge Protec	8/26/2011	10	Straight line	3,635	1,581	2,054
11.0023	UV Lamps	9/28/2011	5	Straight line	5,237	4,463	775
11.0024	quartz sleeves	10/25/2011	5	Straight line	2,200	1,842	358
11.0025	mahole risers	10/31/2011	15	Straight line	3,984	1,107	2,876
11.0026	head gasket & ballast	12/1/2011	15	Straight line	6,328	1,723	4,605
12.0001	Roof - King Road Plant	7/30/2012	40	Straight line	40,962	3,507	37,455
12.0002	Fox Ridge Sewer Lines	12/1/2012	40	Straight line	165,876	12,793	153,083
12.0003	I&I Flow Meters	8/24/2012	15	Straight line	12,225	2,735	9,490
13.01	Neptune Polymaster Pump	8/13/2013	15	Straight line	8,334	1,326	7,008
13.0101	Peroxide Tank, PS #7	7/15/2013	15	Straight line	12,462	2,049	10,414
13.0105	Demo Old Tanks	8/15/2013	40	Straight line	5,851	348	5,503
13.0106	Demo Old Tanks (2009 CIP)	8/15/2013	40	Straight line	12,600	750	11,850
15.0104	Evans Creek sanitary sewer lines	4/21/2015	45	Straight line	129,280	2,007	127,273
15.0105	Graterford Road Pump Station	11/10/2015	45	Straight line	1,251,877	3,963	1,247,914
15.0106	Graterford Road- Engineering (froi	11/10/2015	45	Straight line	174,212	552	173,660
15.0107	PS#5 - final construct & eng	12/31/2015	45	Straight line	23,013	-	23,013
15.0108	Aeration Tank Pipe Repairs	10/9/2015	15	Straight line	14,225	218	14,007
15.0109	Replace Rolling Door -Headworks	9/9/2015	15	Straight line	7,399	154	7,245
15.011	PS #11 - rebuild grinder core	9/30/2015	15	Straight line	7,980	136	7,844
16.0001	KR- (2) Air Release Valves	8/30/2016	10	Straight line	11,504	-	11,504
16.0002	PS #14 - ABS Pump	3/1/2016	20	Straight line	12,625	-	12,625
16.0003	PS #5, Check Valve, (#1)	2/11/2016	25	Straight line	11,605	-	11,605
16.0007	PS #6, Roof Replacement	5/27/2016	20	Straight line	4,084	-	4,084
16.0008	PS #5, Transfer Control/NEMA co'	5/4/2016	10	Straight line	2,338	-	2,338
16.0009	PS #16, Muffin Monster rebuild	4/30/2016	10	Straight line	4,900	-	4,900
16.001	PS #5, Check Valve #2	9/6/2016	25	Straight line	11,757	-	11,757



16.0011 PS #6, Motor Control	2/10/2016	10	Straight line	8,414	-	8,414
16.0012 PS #6, Muffin Monster	5/30/2016	10	Straight line	12,680	-	12,680
16.0013 PS #5, Muffin Monster	7/30/2016	10	Straight line	18,117	-	18,117
16.0016 KR - Aeration tank piping repairs	6/17/2016	10	Straight line	14,225	-	14,225
16.0017 KR- replace steel doors (3 -headw	7/12/2016	20	Straight line	9,000	-	9,000
16.0018 KR- Water heater, 3 phase	3/30/2016	10	Straight line	2,895	-	2,895
16.0019 PS #10, Crystal Ball	1/21/2016	10	Straight line	3,209	-	3,209
16.002 PS #1, crystal ball	1/21/2016	10	Straight line	3,250	-	3,250
16.0021 PS #18, Crystal Ball	3/10/2016	10	Straight line	3,250	-	3,250
16.0022 PS #2, Crystal Ball	4/9/2016	10	Straight line	3,250	-	3,250
16.0023 PS #14, Crystal Ball	4/6/2016	10	Straight line	2,478	-	2,478
16.0024 Crystal Ball	7/12/2016	10	Straight line	2,612	-	2,612
16.0025 PS #3,Crystal Ball	5/31/2016	10	Straight line	2,492	-	2,492
				<u>58,772,807</u>	<u>23,947,169</u>	<u>34,825,638</u>

**Transportation Equip:**

1.5002 2006 Ford F-250	3/15/2006	5	Straight line	29,115	29,115	-
1.5077 2009 Crane Truck Attachment	7/29/2009	10	Straight line	85,272	59,690	25,582
11.0019 2011 Ford F350	10/14/2011	10	Straight line	47,110	19,864	27,246
15.0117 Utility Vehicle	9/2/2015	10	Straight line	3,499	116	3,383
16.0014 Ford E-350, Panel truck	1/31/2016	10	Straight line	42,320	-	42,320
16.0015 2016 Ford F-150	8/26/2016	10	Straight line	32,315	-	32,315
				<u>239,631</u>	<u>108,785</u>	<u>130,846</u>

**TOTAL**

	<u>60,573,642</u>	<u>24,178,178</u>	<u>36,395,464</u>
--	-------------------	-------------------	-------------------

Appendix C

**THE LIMERICK TOWNSHIP MUNICIPAL AUTHORITY**

---

**A RESOLUTION  
(2007-1)**

---

**OF THE LIMERICK TOWNSHIP MUNICIPAL AUTHORITY FURTHER AMENDING THE TAPPING FEE RESOLUTION (ORIGINALLY BEING RESOLUTION 91-2, AS AMENDED AND SUPPLEMENTED) TO REFLECT THE CURRENT TAPPING FEE CHARGED TO THE OWNER OF PROPERTY CONNECTING SUCH PROPERTY WITH THE WASTE WATER SYSTEM OWNED AND OPERATED BY THE AUTHORITY AND DELINEATING THE COMPONENTS OF SAID TAPPING FEE AND THE MANNER BY WHICH SUCH FEES ARE CALCULATED IN ACCORDANCE WITH ACT 57 OF 2003.**

**WHEREAS,** This Authority is a municipality authority existing under and governed by the Pennsylvania Municipality Authorities Act of 1945, approved May 2, 1945, P.L. 382, as amended and supplemented (the "Authorities Act"); and

**WHEREAS,** This Authority, pursuant to the authority vested in it by law and pursuant to and in accordance with the request and consent of the Township, has constructed and now owns and maintains certain sewage collection lines and treatment facilities (collectively/interchangeably the "sewer system" or "system") all of which being located entirely within the corporate limits of the Township; and

**WHEREAS,** This Authority, pursuant to its continuing authority as vested in it by law and in furtherance of the continuing request and consent of the Township, plans to construct such additional collection lines and treatment facilities as shall be necessary and essential to expand said system to other properties/areas within the Township as have been, and



as from time to time will be, delineated on the Township's official 537 Plan or as have been specifically identified by the Township; and

**WHEREAS**, The Authority was required by law, to wit Act 203 of 1990, as amended (53 P.S. §301, et seq.) (the "Act 203"), to adopt a fee schedule for all such charges to be made or imposed for connecting into the sewer system of the Authority; and

**WHEREAS**, The Authority, in furtherance of its legal obligations under Act 203, adopted its initial fee schedule with respect to said connections, said fee schedule being set forth in a formal Resolution, being Resolution 91-2; and

**WHEREAS**, The Authority, in furtherance of its obligation under Act 203 to periodically monitor and amend said Resolution, with particular emphasis being placed on the analysis of the components of said tapping fee, has amended the initial Resolution as evidenced by Resolution 92-1, adopted May 20, 1992; Resolution 92-3, adopted November 18, 1992; Resolution 93-1, adopted May 12, 1993; Resolution 97-1, adopted May 14, 1997; and Resolution 2003-4, adopted December 10, 2003; and

**WHEREAS**, the Authority, pursuant to the then duly-adopted Act 57 of 2003 (53 Pa. C.S. §5607, et seq.) (the "Act"), adopted a new fee schedule for all such charges to be made or imposed for connecting into the sewer system of the Authority, with said Resolution being known as Resolution 2005-1, adopted June 8, 2005; and

**WHEREAS**, the Authority, in continued furtherance of its responsibilities under the Act, authorized its consulting engineers to undertake a current detailed analysis of the calculations/components utilized in establishing the tapping fee; and

**WHEREAS**, the Authority, following its receipt and thorough evaluation of its consulting engineer's analysis, has determined that a modification of said fee is in order and

is desirous of setting forth in this Resolution its findings with regard to an amended tapping fee as shall be charged to/imposed upon all property owners connecting their properties with the sewer system owned by the Authority.

**NOW, THEREFORE, BE IT RESOLVED**, by the Board of this Authority as follows:

**ARTICLE I**

**DEFINITIONS**

**SECTION 1.01.** Unless the context specifically and clearly indicates otherwise, the meaning of the terms and phrases used in this Resolution shall be as follows:

A. "Authority" shall mean the Limerick Township Municipal Authority, a municipality authority incorporated pursuant to the provisions of the Municipality Authorities Act of 1945, approved May 2, 1945, P.L. 382, as amended and supplemented, of the Commonwealth of Pennsylvania.

B. "Consulting Engineer" shall mean the professional engineering firm as appointed, from time to time, to advise and serve the Authority.

C. "Equivalent Dwelling Unit" shall mean the unit of measure by which the sewer rates and connection charges shall be imposed upon each Improved Property, as determined in this Resolution or in any subsequent resolution of the Authority which shall be deemed to constitute the estimated, equivalent amount of domestic sanitary sewage discharge by a single family dwelling unit.

D. "Equivalent Dwelling Unit Capacity" shall mean a measure calculated at the rate of 230 gpd per EDU.

E. "Improved Property" shall mean any property 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 domestic sanitary sewage and/or industrial waste shall be or may be discharged, which is located within the area to be serviced by the sewer system and subject to being connected to the sewer system.

F. "Inspection Fee" shall mean the fee which the Authority may charge to the property owner if the Authority inspects and tests the sewer line from the property line to the structure to be served.

G. "Owner" shall mean any person vested with title, legal or equitable, sole or partial, of any Improved Property.

H. "Person" shall mean any individual, partnership, company, association, society, trust, corporation or other group or entity, including municipalities, municipality authorities, school districts and other units of government.

I. "Sewer System" shall mean all facilities, as of any particular time, for collecting, pumping, transmitting, treating and disposing of sanitary sewage situate in or adjacent to this Township, and owned by the Authority.

J. "Tapping Fee" shall mean that fee which the Authority may charge, pursuant to and in accordance with the provisions of Act 57 of 2003, as amended, (53 Pa.C.S. §5607, et seq.) and which fee is based upon the various components identified in the Consulting Engineer's report as is attached hereto, made a part hereof and marked as Exhibit "1".

K. "Township" shall mean the Township of Limerick, Montgomery County, Pennsylvania, a township of the second class of the Commonwealth of Pennsylvania,



acting by and through its Board of Supervisors or, in appropriate cases, acting by and through its authorized representatives.

## **ARTICLE II**

### **TAPPING FEE**

**SECTION 2.01.** The Authority shall impose at the time of application for connection a Tapping Fee for each Equivalent Dwelling Unit.

**SECTION 2.01.1.** In the event the number of Equivalent Dwelling Units increases for any Improved Property after the date of original application for connection, the Owner of said Improved Property will be charged a Tapping Fee for each Equivalent Dwelling Unit in excess of the former total number of Equivalent Dwelling Units for said Improved Property based on the appropriate Tapping Fee in effect for the Improved Property in question. Said Tapping Fee will be payable contemporaneously with the Connection Fee or at such time as an Owner makes a formal application/request to the Authority for the acquisition and/or reservation of EDUs in the Authority's Sewer System.

**SECTION 2.02.** The Tapping Fee is Four Thousand Eight Hundred Twenty-six Dollars (\$4,826.00). The Consulting Engineer's report/tapping fee, including a tapping fee calculation and its backup cost documentation upon which the Authority relied in establishing this Tapping Fee, is attached hereto, made a part hereof and is collectively referred to as Exhibit "1".

**SECTION 2.03.** The Tapping Fee reimbursement allowance is One Thousand Two Hundred Ninety-seven Dollars (\$1,297.00). The Consulting Engineer's report/tapping fee, including the reimbursement component upon which the Authority relied in establishing

this allowance, is attached hereto, made a part hereof and is collectively referred to as Exhibit "1".

### **ARTICLE III**

#### **MISCELLANEOUS**

**SECTION 3.01.** The Authority shall have the right of access, at all reasonable times, to any part of any Improved Property as may be necessary for purposes of inspection, observation, measurement, sampling and testing and for performance of other functions relating to service rendered by the Authority.

**SECTION 3.02.** The Owner of any Improved Property shall be held liable for all acts of tenants or other occupants of such Improved Property, as may be permitted by law, insofar as such acts shall be governed by the provisions of this Resolution.

**SECTION 3.03.** The recitals/background as hereinbefore set forth (preceding Article I) are incorporated herein by reference, in their entirety, as though the same were set forth again in the body of this Resolution.

**SECTION 3.04.** The Tapping Fee as herein established together with this enabling Resolution are intended to become a part of this Authority's comprehensive Sewer Use Regulations and, as such, are to be incorporated into and made a part of said Sewer Use Regulations modifying only any section in said Use Regulations that would be in direct contradiction to the Tapping Fee herein established in conformity with Act 57 of 2003, as amended.

**SECTION 3.05.** The Authority, in adopting a Tapping Fee, is desirous of establishing a record, evidenced by this formal written Resolution, that it fulfilled its duties and legal responsibilities as intended and required in Act 57 of 2003, as amended, (replacing Act

203 of 1990) and will closely monitor the continuing validity of the various components utilized in establishing the Tapping Fee.

**SECTION 3.06.** The Authority shall adopt, from time to time, such additional rules and regulations, and shall modify/amend its Tapping Fee, as it shall deem necessary and proper in connection with the use and operation of the Sewer System, which rules and regulations shall be, and shall become and shall be construed as part of this Resolution.

**SECTION 3.07.** In the event any provision, section, sentence, clause or part of this Resolution shall be held by any court or administrative tribunal of competent jurisdiction to be invalid, such invalidity shall not affect or impair any remaining provision, section, sentence, clause or part of this Resolution, it being the intent of the Authority that such remainder shall be and shall remain in full force and effect.

**SECTION 3.08.** All resolutions or parts of resolutions of this Authority which are expressly inconsistent herewith shall be and are repealed.

**SECTION 3.09.** This Resolution shall become effective on the date of its adoption by the Authority.

Duly adopted this *9<sup>th</sup>* day of May, 2007, by the Limerick Township Municipal Authority in lawful session duly assembled.

LIMERICK TOWNSHIP MUNICIPAL  
AUTHORITY

BY: *Michael Stone*  
Chairman

ATTEST: *Barbara P. Frankel*  
*Assistant* Secretary

(SEAL)



**LIMERICK TOWNSHIP MUNICIPAL AUTHORITY  
2007 TAPPING FEE CALCULATION**

ITEM	EXPENSE YEAR	ORIGINAL COST	MULT	PROJECTED CURRENT COST	
<b><u>A. Existing System (Capacity Component)</u></b>					
1.	King Road Sewerage System (treatment plant, pump stations, interceptors)	1986 (4679 ENR)	\$7,229,351	2.05	\$14,831,062
2.	Operations Building	1991 (5617 ENR)	\$873,890	1.71	\$1,493,408
3.	Pump Station Comminutors	1991 (5617 ENR)	\$120,482	1.71	\$205,894
4.	Act 537 Plan	1992 (5682 ENR)	\$12,500	1.69	\$21,117
5.	Act 537 Plan Addendum	1993 (6022 ENR)	\$5,357	1.59	\$8,539
6.	Upper Brooke Evans Creek Study	1993 (6022 ENR)	\$7,604	1.59	\$12,120
7.	Act 537 Sizing Cost Review	1994 (6225 ENR)	\$15,944	1.54	\$24,586
8.	King Road Treatment Plant Rerate	1994 (6225 ENR)	\$34,034	1.54	\$52,481
9.	Southeast Pump Station (No. 6A)	1996 (6599 ENR)	\$1,229,919	1.45	\$1,789,058
10.	Sewage Feasibility Concept Plan (Act 537 related)	1996 (6599 ENR)	\$5,670	1.45	\$8,248
11.	King Road Treatment Plant Land Acquisition	1997 (7057 ENR)	\$60,000	1.36	\$81,613
12.	Act 537 Plan Revision	1997 (7057 ENR)	\$30,661	1.36	\$41,705
13.	Ridge Pike Sewer Extension (pump station, interceptor, force main)	1998 (7298 ENR)	\$634,598	1.32	\$834,681
14.	Southeast Pump Station Expansion	1999 (7487 ENR)	\$344,248	1.28	\$441,356
15.	Township Line Road Interceptor	1999 (7487 ENR)	\$548,967	1.28	\$703,825
16.	Mingo Creek Interceptor (incl. Reifsnyder Road Sewer Extension)	1999 (7487 ENR)	\$1,310,789	1.28	\$1,680,548
17.	Act 537 Plan Updates (Possum Hollow & King Road Study Areas)	2000 (7600 ENR)	\$48,946	1.26	\$61,820
18.	King Road Treatment Plant Outfall Replacement	2001 (7961 ENR)	\$216,433	1.21	\$260,965
19.	Tractor/Front End Loader	2002 (8226 ENR)	\$39,416	1.17	\$45,995
20.	Possum Hollow Sewerage System (treatment plant, pump stations, interceptors)	2002 (8226 ENR)	\$11,090,256	1.17	\$12,941,328
21.	Backhoe, Trailer & Truck	2003 (8403 ENR)	\$42,333	1.14	\$48,358
22.	Truck Bed/Bumper Crane	2004 (8728 ENR)	\$5,728	1.10	\$6,300
23.	Hartenstine Creek Pump Station and Force Main (Authority Portion)	2004 (8728 ENR)	\$36,075	1.10	\$39,675
24.	Hartenstine Creek Interceptor	2004 (8728 ENR)	\$275,733	1.10	\$303,250
25.	King Road Treatment Plant Land Acquisition	2004 (8728 ENR)	\$72,280	1.10	\$79,493
26.	Landis Creek Interceptor	2005 (9207 ENR)	\$381,610	1.04	\$397,857
27.	King Road Sludge Thickener	2005 (9207 ENR)	\$341,075	1.04	\$355,597
28.	Truck Winch	2005 (9207 ENR)	\$7,399	1.04	\$7,714
29.	Truck	2006 (9603 ENR)	\$29,115	1.00	\$29,115
30.	Pump Station No. 5 Upgrade	2006 (9603 ENR)	\$262,823	1.00	\$262,823
31.	King Road Treatment Plant Land Acquisition	2006 (9603 ENR)	\$304,958	1.00	\$304,958
32.	SCADA System	2007	\$81,937	1.00	\$81,937
33.	King Road Treatment Plant Upgrade and Expansion	2007	\$8,654,278	1.00	\$8,654,278
<b>Subtotal</b>			<b>\$34,354,407</b>		<b>\$46,111,702</b>
<b>Prorated Outstanding Bonds (as of March 15, 2007)</b>					<b>(\$10,009,136)</b>
<b>TOTAL</b>					<b>\$36,102,566</b>
<b>Existing System Capacity Component (10,434 EDUs)</b>					<b>\$3,460</b>

**LIMERICK TOWNSHIP MUNICIPAL AUTHORITY  
2007 TAPPING FEE CALCULATION**

ITEM	EXPENSE YEAR	ORIGINAL COST	MULT	PROJECTED CURRENT COST	
<b><u>B. Existing System (Collection Component)</u></b>					
1.	King Road Sewage Collection System	1986 (4679 ENR)	\$6,742,671	2.05	\$13,832,635
2.	McLaughlin Lane Sewer Extension	1992 (5682 ENR)	\$24,212	1.69	\$40,903
3.	Springford High School Sewer Extension (Authority Portion)	1996 (6599 ENR)	\$59,155	1.45	\$86,048
4.	Royersford Road Sewer Extension	1997 (7057 ENR)	\$176,544	1.36	\$240,136
5.	Kugler Road Sewer Extension	1997 (7057 ENR)	\$175,132	1.36	\$238,217
6.	Betty/Roberta Lanes Sewer Extension	1998 (7298 ENR)	\$332,740	1.32	\$437,650
7.	West Cherry Lane Sewer Extension	1998 (7298 ENR)	\$133,900	1.32	\$176,117
8.	Ridge Pike Sewer Extension (8" collection lines)	1998 (7298 ENR)	\$1,295,775	1.32	\$1,704,322
9.	Pienta Easement	1999 (7298 ENR)	\$20,016	1.28	\$25,662
10.	North Limerick Road Sewer Extension	1999 (7487 ENR)	\$160,456	1.28	\$205,719
11.	King Road Sewer Extension	1999 (7487 ENR)	\$40,509	1.28	\$51,936
12.	Graterford Road Collection System	2001 (7961 ENR)	\$399,334	1.21	\$481,498
13.	Limerick Center Road Sewer Extension	2003 (8403 ENR)	\$176,656	1.14	\$201,799
14.	Linfield-Trappe Road Sewer Extension	2004 (8728 ENR)	\$433,577	1.10	\$476,846
	<b>Subtotal</b>		<b>\$10,170,676</b>		<b>\$18,199,488</b>
	<b>Prorated Outstanding Bonds (as of March 15, 2007)</b>				<b>(\$3,950,432)</b>
	<b>TOTAL</b>				<b>\$14,249,056</b>
	<b>Existing System Collection Component (10,434 EDUs)</b>				<b>\$1,366</b>
<b><u>C. Proposed Facilities (Capacity Component)</u></b>					
	None				\$0
	<b>TOTAL</b>				<b>\$0</b>
	<b>Proposed Facilities Capacity Component (10,434 EDUs)</b>				<b>\$0</b>

**LIMERICK TOWNSHIP MUNICIPAL AUTHORITY  
2007 TAPPING FEE CALCULATION**

ITEM	EXPENSE YEAR	ORIGINAL COST	MULT	PROJECTED CURRENT COST
<b>Tapping Fee Components</b>				
Existing System Components				
Capacity				\$3,460
Collection				\$1,366
Proposed Facilities Component				
Capacity				\$0
<b>Total Maximum Allowable Tapping Fee per EDU</b>				<u>\$4,826</u>
<b>Reimbursement Components</b>				
Existing Collection System				
Administration (5%)				\$1,366
				(\$68)
<b>Total Reimbursement per EDU</b>				<u>\$1,297</u>

**Notes:**

1. Existing system escalation based on ENR Construction Cost Index, 9599, March 2007, for Philadelphia.
2. Proposed facilities costs taken from current estimates and bids.
3. King Road STP Expansion and Pump Station No. 5 costs based on cost of new facilities minus estimated current value of facilities abandoned.
4. 537 planning costs (Group A Items 4, 5, 7, 10, 12, and 17) have been reduced by 50% to reflect PADEP reimbursements.
5. Outstanding bonds based on amortization schedules for the Guaranteed Sewer Revenue Notes, Series A, B and C of 2001. Outstanding amounts as of March 15, 2007, totalling \$13,959,568, prorated between Capacity and Collection Components.
6. EDU figures are 7,391 at expanded King Road Treatment Plant and 3,043 at Possum Hollow Treatment Plant (10,434 EDUs total), based upon design capacities and 230 gallons per day per EDU.



**LIMERICK TOWNSHIP MUNICIPAL AUTHORITY  
2007 TAPPING FEE CALCULATION**

**EXHIBIT A  
Background Data**

<b>Part I <u>Original King Road Sewerage System Construction (1986)</u></b>			
A. Sewer Lines	Contract No. 1	\$	2,584,041.14
	Contract No. 2	\$	3,012,684.20
	<b>Total</b>	\$	<b>5,596,725.34</b>
B. Pumping Stations P.S. #2	Contract No. 3	\$	148,136.50
	Contract No. 4	\$	43,576.91
	<b>Total</b>	\$	<b>191,713.41</b>
P.S. #3	Contract No. 3	\$	244,721.50
	Contract No. 4	\$	58,518.00
	<b>Total</b>	\$	<b>303,239.50</b>
P.S. #5	Contract No. 3	\$	762,846.30
	Contract No. 4	\$	114,635.00
	<b>Total</b>	\$	<b>877,481.30</b>
P.S. #6 (abandoned)	Contract No. 3	\$	352,044.00
	Contract No. 4	\$	90,723.00
	<b>Total</b>	\$	<b>442,767.00</b>
P.S. #7	Contract No. 3	\$	179,180.00
	Contract No. 4	\$	34,271.00
	<b>Total</b>	\$	<b>213,451.00</b>
C. Wastewater Treatment Plant	Contract No. 3	\$	3,591,603.89
	Contract No. 4	\$	740,038.88
	Contract No. 5	\$	57,000.00
	<b>Total</b>	\$	<b>4,388,642.77</b>
	<b>Construction Subtotal</b>	\$	<b>11,571,253.32</b>
D. Rights-of-Way/Properties		\$	276,488.18
E. Bond Issuance		\$	99,826.00
F. Engineering/Inspection		\$	1,958,249.27
G. Legal		\$	103,530.52
H. Miscellaneous		\$	291,319.69
	<b>PART I TOTAL</b>	\$	<b>14,300,666.98</b>

**Part II Possum Hollow Sewerage System Construction (2002)**

A. Wastewater Treatment Plant & Pump Stations	Contract No. 1	\$ 5,726,485.81
	Contract No. 2	\$ 152,022.28
	Contract No. 3	\$ 589,776.00
	Contract No. 4	\$ 168,663.21
	<b>Total</b>	<b>\$ 6,636,947.30</b>
B. Interceptor Lines	Contract No. 5	\$ 1,120,879.54
	Contract No. 6	\$ 1,026,989.88
	Contract No. 7	\$ 650,130.44
	Providence Properties	\$ 203,429.76
	<b>Total</b>	<b>\$ 3,001,429.62</b>
C. Sewer Lines	Providence Properties	\$ 100,863.00
	<b>Construction Subtotal</b>	<b>\$ 9,739,239.92</b>
D. Rights-of-Way/Properties		\$ 83,180.00
E. Bond Issuance		\$ 92,692.00
F. Engineering/Inspection		\$ 1,685,729.75
G. Legal		\$ 154,989.00
H. <i>Exelon Meter Plt Reimbursement</i>		\$ (49,104.68)
I. <i>Exelon Extras Settlement Payment</i>		\$ (103,136.96)
J. <i>Net Capital Contribution (Exelon)</i>		\$ (513,332.99)
	<b>PART II TOTAL</b>	<b>\$ 11,090,256.04</b>

**Part III King Road Upgrade and Expansion (2007)** (subject to change)

A. Wastewater Treatment Plant	Contract No. 3	\$ 7,929,009.20
	Contract No. 4	\$ 83,362.50
	Contract No. 5	\$ 817,558.64
	Contract No. 6	\$ 103,189.00
	<b>Total</b>	<b>\$ 8,933,119.34</b>
B. Engineering/Inspection		\$ 1,220,053.61
C. Legal		\$ 10,105.50
D. <i>Abandoned Equipment and Piping (deduct current value)*</i>		\$ (1,509,000.00)
	<b>PART III TOTAL</b>	<b>\$ 8,654,278.45</b>

\*Abandoned facilities include two (2) circular treatment units, one (1) comminutor, two (2) blowers, chlorination equipment, and various piping and associated items. Original 1986 costs escalated to current equivalent value.

**Part IV Other Construction and Related Costs**  
 (Based on invoice totals and authority manager input)

A.	Operations Building	\$	873,890.00
B.	Pump Station Comminutors	\$	120,482.00
C.	McLaughlin Lane Sewer Extension	\$	24,212.00
D.	1992 Act 537 Plan	\$	25,000.00
E.	1993 Act 537 Plan Addendum	\$	10,714.37
F.	Upper Brooke Evans Creek Study	\$	7,603.65
G.	1994 Act 537 Sizing/Cost Review	\$	31,887.00
H.	Wastewater Treatment Plant Rerate	\$	34,034.32
I.	Southeast Pump Station		
	Contract No. 95-2	\$	920,085.00
	Contract No: 95-3	\$	67,703.00
	Contract No. 95-4	\$	85,777.00
	Pump Station 6 Generator (original cost)	\$	50,393.00
	Engineering/Inspection	\$	101,995.83
	Legal	\$	3,965.00
	<b>Total</b>	\$	<b>1,229,918.83</b>
J.	Springford High School Sewer Extension (Authority share)		
	Construction	\$	46,943.00
	Engineering/Inspection	\$	11,653.00
	Legal	\$	559.00
	<b>Total</b>	\$	<b>59,155.00</b>
K.	1996 Sewage Feasibility Concept Plan	\$	11,339.00
L.	Royersford Road Sewer Extension		
	Construction	\$	136,528.50
	Engineering/Inspection	\$	39,456.01
	Legal	\$	559.00
	<b>Total</b>	\$	<b>176,543.51</b>
M.	Kugler Road Sewer Extension		
	Construction	\$	143,967.10
	Engineering/Inspection	\$	30,728.18
	Legal	\$	437.00
	<b>Total</b>	\$	<b>175,132.28</b>
N.	Land Acquisition Wastewater Treatment Plant (1997)	\$	60,000.00
O.	1997 Act 537 Plan Revision	\$	61,322.00



<b>P. Neiffer Road Pump Station and Force Main (abandoned)</b>		
Construction		\$ 169,672.21
Engineering/Inspection		\$ 24,000.00
Legal		\$ 5,588.80
Rights-of-way/Properties		\$ 36,491.00
<b>Total</b>		<b>\$ 235,752.01</b>
<b>Q. Merion Pump Station Expansion (abandoned)</b>		\$ 19,055.00
<b>R. Ridge Pike Sewerage System (p.s., interceptor, force main)</b>		
Contract 96-4 (partial)		\$ 508,982.25
Contract 96-5		\$ 46,700.00
Engineering/Inspection (prorated)		\$ 61,230.35
Legal (prorated)		\$ 7,210.00
Rights-of-way/Properties		\$ 10,475.00
<b>Total</b>		<b>\$ 634,597.60</b>
<b>S. Southeast Pump Station Expansion</b>		
Contract No. 98-2		\$ 239,385.60
Contract No. 98-3		\$ 24,092.35
Engineering/Inspection		\$ 80,769.61
Legal		\$ -
<b>Total</b>		<b>\$ 344,247.56</b>
<b>T. Township Line Road Interceptor</b>		
Construction/Inspection		\$ 485,900.00
Engineering		\$ 63,067.05
Legal		\$ -
<b>Total</b>		<b>\$ 548,967.05</b>
<b>U. Mingo Creek Interceptor (incl. Reifsnyder Road)</b>		
Construction		\$ 981,600.16
Engineering/Inspection		\$ 230,903.64
Legal		\$ 37,033.00
Rights-of-way/Properties		\$ 61,252.00
<b>Total</b>		<b>\$ 1,310,788.80</b>
<b>V. Betty/Roberta Lane Sewer Extension</b>		
Construction		\$ 274,672.14
Engineering/Inspection		\$ 55,240.41
Legal		\$ 2,827.00
<b>Total</b>		<b>\$ 332,739.55</b>
<b>W. West Cherry Lane Sewer Extension</b>		
Construction		\$ 98,579.86
Engineering/Inspection		\$ 34,787.84
Legal		\$ 532.00
<b>Total</b>		<b>\$ 133,899.70</b>
<b>X. Ridge Pike Sewerage System (collection lines)</b>		
Contract 96-4 (partial)		\$ 1,165,542.49
Engineering/Inspection (prorated)		\$ 128,430.54
Legal (prorated)		\$ 1,802.00
<b>Total</b>		<b>\$ 1,295,775.03</b>

<b>Y. Pienta Easement Acquisition</b>		
Engineering	\$	2,074.15
Legal	\$	9,459.00
Rights-of-way/Properties	\$	8,483.00
	\$	<u>20,016.15</u>
<b>Z. North Limerick Road Sewer Extension</b>		
Construction	\$	131,867.15
Engineering/Inspection	\$	28,381.94
Legal	\$	207.00
<b>Total</b>	\$	<u>160,456.09</u>
<b>AA. King Road Sewer Extension</b>		
Construction	\$	31,870.50
Engineering/Inspection	\$	8,638.19
Legal	\$	-
<b>Total</b>	\$	<u>40,508.69</u>
<b>BB. 2000 Possum Hollow &amp; King Road 537 Revisions</b>		
Engineering	\$	93,628.00
Legal	\$	4,263.00
	\$	<u>97,891.00</u>
<b>CC. King Road Outfall Sewer</b>		
Construction	\$	160,056.00
Engineering/Inspection	\$	55,905.00
Legal	\$	472.00
<b>Total</b>	\$	<u>216,433.00</u>
<b>DD. Graterford Road Sewer Extension</b>		
Construction	\$	333,766.71
Engineering/Inspection	\$	63,503.43
Legal	\$	2,064.00
<b>Total</b>	\$	<u>399,334.14</u>
<b>EE. Limerick Center Road Sewer Extension</b>		
Construction	\$	143,792.60
Engineering/Inspection	\$	32,323.19
Legal	\$	540.00
<b>Total</b>	\$	<u>176,655.79</u>
<b>FF. Linfield-Trappe Road Sewer Extension</b>		
Construction	\$	332,152.92
Engineering/Inspection	\$	84,664.35
Legal	\$	16,760.00
<b>Total</b>	\$	<u>433,577.27</u>
<b>GG. Hartenstine Creek PS &amp; FM (Authority portion)</b>		
Construction	\$	36,074.69
Engineering/Inspection	\$	-
Legal	\$	-
<b>Total</b>	\$	<u>36,074.69</u>

<b>HH. Hartenstine Creek Interceptor</b>		
Construction	\$	264,925.31
Engineering/Inspection	\$	5,500.05
Legal	\$	-
Rights-of-way/Properties	\$	5,308.00
<b>Total</b>	<b>\$</b>	<b>275,733.36</b>
<b>II. Land Acquisition Wastewater Treatment Plant (2004)</b>		
Legal	\$	12,280.00
Rights-of-way/Properties	\$	60,000.00
	<b>\$</b>	<b>72,280.00</b>
<b>JJ. Landis Creek Interceptor</b>		
Construction	\$	322,768.90
Engineering/Inspection	\$	58,840.81
Legal (projected)	\$	-
<b>Total</b>	<b>\$</b>	<b>381,609.71</b>
<b>KK. King Road Sludge Thickener</b>		
Contract No. 05-1	\$	195,679.20
Contract No. 05-2	\$	58,000.00
Engineering/Inspection	\$	87,395.93
Legal	\$	-
<b>Total</b>	<b>\$</b>	<b>341,075.13</b>
<b>LL. Vehicular Equipment</b>		
Tractor/Front End Loader (2002)	\$	39,416.00
Backhoe and Trailer (2003)	\$	9,207.00
Truck (2003)	\$	33,126.00
Truck Bed/Bumper Crane (2004)	\$	5,728.00
Truck Winch (2005)	\$	7,399.00
Truck (2006)	\$	29,115.00
	<b>\$</b>	<b>123,991.00</b>
<b>MM. Pump Station No. 5 Upgrade</b>	<b>(subject to change)</b>	
Contract No. 05-7	\$	310,663.30
Contract No. 05-8	\$	55,670.00
Abandoned Pumps & Controls ( <i>deduct current value</i> )	\$	(184,500.00)
Engineering/Inspection	\$	80,173.36
Legal	\$	816.00
	<b>\$</b>	<b>262,822.66</b>
<b>NN. Land Acquisition Wastewater Treatment Plant (2006)</b>		
Engineering	\$	2,317.72
Legal	\$	7,639.86
Rights-of-way/Properties	\$	295,000.00
	<b>\$</b>	<b>304,957.58</b>
<b>PART IV TOTAL</b>	<b>\$</b>	<b>11,081,417.52</b>

**Notes:**

1. All costs are original costs that are not escalated for inflation.
2. Italsized figures not included in, or deducted from, tapping fee calculation.
3. Not itemized are Authority expenses associated with installing and programming the SCADA system, which through February, 2007 totalled \$81,937.45.



Appendix D

**PUBLIC UTILITY CODE (66 PA.C.S.) - VALUATION OF ACQUIRED WATER  
AND WASTEWATER SYSTEMS FOR RATEMAKING PURPOSES**

**Act of Apr. 14, 2016, P.L. 76, No. 12**

**Cl. 66**

Session of 2016

No. 2016-12

HB1326

AN ACT

Amending Title 66 (Public Utilities) of the Pennsylvania Consolidated Statutes, in rates and distribution systems, providing for valuation of acquired water and wastewater systems for ratemaking purposes.

The General Assembly of the Commonwealth of Pennsylvania hereby enacts as follows:

Section 1. Title 66 of the Pennsylvania Consolidated Statutes is amended by adding a section to read:

**§ 1329. Valuation of acquired water and wastewater systems.**

(a) **Process to establish fair market value of selling utility.--Upon agreement by both the acquiring public utility or entity and the selling utility, the following procedure shall be used to determine the fair market value of the selling utility:**

(1) **The commission will maintain a list of utility valuation experts from which the acquiring public utility or entity and selling utility will choose.**

(2) **Two utility valuation experts shall perform two separate appraisals of the selling utility for the purpose of establishing its fair market value.**

(3) **Each utility valuation expert shall determine fair market value in compliance with the Uniform Standards of Professional Appraisal Practice, employing the cost, market and income approaches.**

(4) **The acquiring public utility or entity and selling utility shall engage the services of the same licensed engineer to conduct an assessment of the tangible assets of the selling utility. The assessment shall be incorporated into the appraisal under the cost approach required under paragraph (3).**

(5) **Each utility valuation expert shall provide the completed appraisal to the acquiring public utility or entity and selling utility within 90 days of execution of the service contract.**

(b) **Utility valuation experts.--**

(1) **The utility valuation experts required under subsection (a) shall be selected as follows:**

(i) **one shall be selected by the acquiring public utility or entity; and**

(ii) **one shall be selected by the selling utility.**

(2) **The utility valuation experts shall not:**

(i) **derive any material financial benefit from the sale of the selling utility other than fees for services rendered; or**

(ii) **be an immediate family member of a director, officer or employee of either the acquiring public utility, entity or selling utility within a 12-month period of the date of hire to perform an appraisal.**

(3) **Fees paid to utility valuation experts may be included in the transaction and closing costs associated with acquisition by the acquiring utility or entity. Fees eligible for inclusion may be of an amount not exceeding 5% of the fair**

market value of the selling utility or a fee approved by the commission.

(c) **Rate-making rate base.**--The following apply:

(1) The rate-making rate base of the selling utility shall be incorporated into the rate base of:

(i) the acquiring public utility during the acquiring public utility's next base rate case; or

(ii) the entity in its initial tariff filing.

(2) The rate-making rate base of the selling utility shall be the lesser of the purchase price negotiated by the acquiring public utility or entity and selling utility or the fair market value of the selling utility.

(d) **Acquisitions by public utility.**--The following apply:

(1) If the acquiring public utility and selling utility agree to use the process outlined in subsection (a), the acquiring public utility shall include the following as an attachment to its application for commission approval of the acquisition filed pursuant to section 1102 (relating to enumeration of acts requiring certificate):

(i) Copies of the two appraisals performed by the utility valuation experts under subsection (a).

(ii) The purchase price of the selling utility as agreed to by the acquiring public utility and selling utility.

(iii) The rate-making rate base determined pursuant to subsection (c) (2).

(iv) The transaction and closing costs incurred by the acquiring public utility that will be included in its rate base.

(v) A tariff containing a rate equal to the existing rates of the selling utility at the time of the acquisition and a rate stabilization plan, if applicable to the acquisition.

(2) The commission shall issue a final order on an application submitted under this section within six months of the filing date of an application meeting the requirements of subsection (d) (1).

(3) If the commission issues an order approving the application for acquisition, the order shall include:

(i) The rate-making rate base of the selling utility, as determined under subsection (c) (2).

(ii) Additional conditions of approval as may be required by the commission.

(4) The tariff submitted pursuant to subsection (d) (1) (v) shall remain in effect until such time as new rates are approved for the acquiring public utility as the result of a base rate case proceeding before the commission. The acquiring public utility may collect a distribution system improvement charge during this time, as approved by the commission under this chapter.

(5) The selling utility's cost of service shall be incorporated into the revenue requirement of the acquiring public utility as part of the acquiring utility's next base rate case proceeding. The original source of funding for any part of the water or sewer assets of the selling utility shall not be relevant to determine the value of said assets.

(e) **Acquisitions by entity.**--An entity shall provide all the information required by subsection (d) (1) to the commission as an attachment to its application for a certificate of public convenience filed pursuant to section 1102.

(f) **Postacquisition projects.**--The following apply:

(1) An acquiring public utility's postacquisition improvements that are not included in a distribution improvement charge shall accrue allowance for funds used during construction after the date the cost was incurred until the asset has been in service for a period of four years or until



the asset is included in the acquiring public utility's next base rate case, whichever is earlier.

(2) Depreciation on an acquiring public utility's postacquisition improvements that have not been included in the calculation of a distribution system improvement charge shall be deferred for book and ratemaking purposes.

(g) Definitions.--The following words and phrases when used in this section shall have the meanings given to them in this section unless the context clearly indicates otherwise:

"Acquiring public utility." A water or wastewater public utility subject to regulation under this title that is acquiring a selling utility as the result of a voluntary arm's-length transaction between the buyer and seller.

"Allowance of funds used during construction." An accounting practice that recognizes the capital costs, including debt and equity funds that are used to finance the construction costs of an improvement to a selling utility's assets by an acquiring public utility.

"Entity." A person, partnership or corporation that is acquiring a selling utility and has filed or whose affiliate has filed an application with the commission seeking public utility status pursuant to section 1102.

"Fair market value." The average of the two utility valuation expert appraisals conducted under subsection (a)(2).

"Ratemaking rate base." The dollar value of a selling utility which, for postacquisition ratemaking purposes, is incorporated into the rate base of the acquiring public utility or entity.

"Rate stabilization plan." A plan that will hold rates constant or phase rates in over a period of time after the next base rate case.

"Selling utility." A water or wastewater company located in this Commonwealth, owned by a municipal corporation or authority that is being purchased by an acquiring public utility or entity as the result of a voluntary arm's-length transaction between the buyer and seller.

"Utility valuation expert." A person hired by an acquiring public utility and selling utility for the purpose of conducting an economic valuation of the selling utility to determine its fair market value.

Section 2. This act shall take effect in 60 days.

APPROVED--The 14th day of April, A.D. 2016.

TOM WOLF

**WASTEWATER UTILITY PLANT ACCOUNTS**

	<u>.1</u>	<u>.2</u>
	Intangible Plant	Collection Plant
351. Organization	351.1	XXXXXXXXXXXX
352. Franchises	352.1	XXXXXXXXXXXX
353. Land and Land Rights	XXXXXXXXXXXX	353.2
354. Structures and Improvements	XXXXXXXXXXXX	354.2
355. Power Generation Equipment	XXXXXXXXXXXX	355.2
360. Collection Sewers - Force	XXXXXXXXXXXX	360.2
361. Collection Sewers - Gravity	XXXXXXXXXXXX	361.2
362. Special Collecting Structures	XXXXXXXXXXXX	362.2
363. Services to Customers	XXXXXXXXXXXX	363.2
364. Flow Measuring Devices	XXXXXXXXXXXX	364.2
365. Flow Measuring Installations	XXXXXXXXXXXX	365.2
366. Reuse Services	XXXXXXXXXXXX	XXXXXXXXXXXX
367. Reuse Meters and Meter Installations	XXXXXXXXXXXX	XXXXXXXXXXXX
370. Receiving Wells	XXXXXXXXXXXX	XXXXXXXXXXXX
371. Pumping Equipment	XXXXXXXXXXXX	XXXXXXXXXXXX
374. Reuse Distribution Reservoirs	XXXXXXXXXXXX	XXXXXXXXXXXX
375. Reuse Transmission and Distribution System	XXXXXXXXXXXX	XXXXXXXXXXXX
380. Treatment and Disposal Equipment	XXXXXXXXXXXX	XXXXXXXXXXXX
381. Plant Sewers	XXXXXXXXXXXX	XXXXXXXXXXXX
382. Outfall Sewer Lines	XXXXXXXXXXXX	XXXXXXXXXXXX
389. Other Plant and Misc. Equipment	389.1	389.2
390. Office Furniture and Equipment	XXXXXXXXXXXX	XXXXXXXXXXXX
391. Transportation Equipment	XXXXXXXXXXXX	XXXXXXXXXXXX
392. Stores Equipment	XXXXXXXXXXXX	XXXXXXXXXXXX
393. Tools, Shop and Garage Equipment	XXXXXXXXXXXX	XXXXXXXXXXXX
394. Laboratory Equipment	XXXXXXXXXXXX	XXXXXXXXXXXX
395. Power Operated Equipment	XXXXXXXXXXXX	XXXXXXXXXXXX
396. Communication Equipment	XXXXXXXXXXXX	XXXXXXXXXXXX
397. Miscellaneous Equipment	XXXXXXXXXXXX	XXXXXXXXXXXX
398. Other Tangible Plant	XXXXXXXXXXXX	XXXXXXXXXXXX

**WASTEWATER UTILITY PLANT ACCOUNTS**

<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
System Pumping Plant	Treatment and Disposal Plant	Reclaimed Water Treatment Plant	Reclaimed Water Distribution Plant	General Plant
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	352.6	XXXXXXXXXX
353.3	353.4	353.5	353.6	353.7
354.3	354.4	354.5	354.6	354.7
355.3	355.4	355.5	355.6	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	366.6	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	367.6	XXXXXXXXXX
370.3	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
371.3	XXXXXXXXXX	371.5	371.6	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	374.5	XXXXXXXXXX	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	375.6	XXXXXXXXXX
XXXXXXXXXX	380.4	380.5	XXXXXXXXXX	XXXXXXXXXX
XXXXXXXXXX	381.4	381.5	XXXXXXXXXX	XXXXXXXXXX
XXXXXXXXXX	382.4	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
389.3	389.4	389.5	389.6	XXXXXXXXXX
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	390.7
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	391.7
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	392.7
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	393.7
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	394.7
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	395.7
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	396.7
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	397.7
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	398.7



## WASTEWATER UTILITY PLANT ACCOUNTS

The wastewater utility plant accounts have been designed utilizing an account matrix. The matrix employs a list of object accounts which in effect act as control accounts. The object accounts are further segregated by the matrix into classifications by functions or subaccount. The instructions for segregating the object accounts to the function subaccount are contained in Accounting Instruction 32. Listed below are the object account descriptions.

### 351. Organization

This account shall include all fees paid to federal or state governments for the privilege of incorporation and expenditures incident to organizing the corporation, partnership or other enterprise and putting it into readiness to do business. A sample of items to be included in this account are listed below.

1. Actual cost of obtaining certificates authorizing an enterprise to engage in the public utility business.
2. Fees and expenses for incorporation.
3. Fees and expenses for mergers or consolidations.
4. Office expenses incident to organizing the utility.
5. Stock and minute books and corporate seal.

Note A--This account shall not include any discounts upon securities issued or assumed; nor shall it include any costs incident to negotiating loans, selling bonds or other evidences of debt, or expenses in connection with the authorization, issuance and sale of capital stock.

Note B--Exclude from this account and include in the appropriate expense account the cost of preparing and filing papers in connection with the extension of the term of incorporation unless the first organization costs have been written off. Where charges are made to this account for expenses incurred in mergers, consolidations or reorganizations, amounts previously included herein or in similar accounts in the books of the companies concerned shall be excluded from this account.

### 352. Franchises

A. This account shall include amounts paid to the federal government, to a state or to a political subdivision thereof in consideration for franchises, consents or certificates, running in perpetuity or for a specified term of more than one year, together with necessary and reasonable expenses incident to procuring such franchises, consents or certificates of permission and approval, including expenses of organizing and merging separate corporations, where statutes require solely for the purpose of acquiring franchise.

## WASTEWATER UTILITY PLANT ACCOUNTS

B. If a franchise or certificate is acquired by assignment, the charge to this account in respect thereof shall not exceed the amount paid therefor by the utility to the assignor, nor shall it exceed the amount paid by the original grantee, plus the expense of acquisition to such grantee. Any excess of the amount actually paid by the utility over the amount specified shall be charged to account 426 - Miscellaneous Nonutility Expenses.

C. When any franchise has expired, the book cost thereof shall be credited hereto and charged to account 426 - Miscellaneous Nonutility Expenses, or to account 110.1 - Accumulated Amortization of Utility Plant in Service, as appropriate.

D. Records supporting this account shall be kept so as to show separately the book cost of each franchise.

Note:--Annual or other periodic payments under franchises shall not be included herein but in the appropriate expense account.

### 353. Land and Land Rights

This account shall include the cost of land and land rights used in connection with wastewater collection, pumping, treatment and disposal, reclaimed water treatment and distribution and general plant operations (See Accounting Instruction 24). A sample of items to be included in this account are listed below:

1. Bulkheads buried, not requiring maintenance or replacement.
2. Cost, first, of acquisition including mortgages and other liens assumed (but not subsequent interest thereon).
3. Condemnation proceedings, including court and counsel costs.
4. Consents and abutting damages, payment for.
5. Conveyancers' and notaries' fees.
6. Fees, commissions, and salaries to brokers, agents, and others in connection with the acquisition of the land or land rights.
7. Leases, cost of voiding upon purchase to secure possession of land.
8. Removing, relocating, or reconstructing property of others, such as buildings, highways, railroads, bridges, cemeteries, churches, telephone and power lines, etc., in order to acquire quiet possession.
9. Retaining walls unless identified with structures.
10. Special assessments levied by public authorities for public improvements on the basis of benefits for new

## WASTEWATER UTILITY PLANT ACCOUNTS

- roads, new bridges, new sewers, new curbing, new pavements, and other public improvements, but not taxes levied to provide for the maintenance of such improvements.
11. Surveys in connection with the acquisition, but not amounts paid for topographical surveys and maps where such costs are attributable to structures or plant equipment erected or to be erected or installed on such land.
  12. Taxes assumed, accrued to date of transfer of title.
  13. Title, examining, clearing, insuring and registering in connection with the acquisition and defending against claims relating to the period prior to the acquisition.
  14. Appraisals prior to closing title.
  15. Cost of dealing with distributees or legatees residing outside of the state or county, such as recording power of attorney, recording will or exemplification of will, recording satisfaction of state tax.
  16. Filing satisfaction of mortgage.
  17. Documentary stamps.
  18. Photographs of property at acquisition.
  19. Fees and expenses incurred in the acquisition of sewer rights, and grants.
  20. Cost of fill to extend bulkhead line over land under water, where riparian rights are held, which is not occasioned by the erection of a structure.
  21. Sidewalks and curbs constructed by the utility on public property.
  22. Labor and expenses in connection with securing rights of way, where performed by company employees and company agents.

### 354. Structures and Improvements

This account shall include the cost in place of structures and improvements used in connection with wastewater collection, pumping, treatment and disposal, reclaimed water treatment and distribution and general plant operations (See Accounting Instruction 25). A sample of items to be included in this account are listed below:

1. Architects' plans and specifications including supervision.
2. Boilers, furnaces, piping, wiring, fixtures, and machinery for heating, lighting, signaling, ventilating and air conditioning systems, plumbing, vacuum cleaning systems, incinerator and smoke pipe, flues, etc.



### WASTEWATER UTILITY PLANT ACCOUNTS

3. Bulkheads, including dredging, riprap fill, piling, decking, concrete fenders, etc., when exposed and subject to maintenance and replacement.
4. Commissions and fees to brokers, agents, architects and others.
5. Conduit (not to be removed) with its contents.
6. Damages to abutting property during construction.
7. Drainage systems.
8. Elevators, cranes, hoists, etc., and the machinery for operating them.
9. Excavation, including shoring, bracing, bridging, refill and disposal of excess excavated material, cofferdams around foundations, pumping water from cofferdam during construction, test borings.
10. Fences and fence curbs (not including protective fences isolating items of equipment, which should be charged to the appropriate equipment account).
11. Fire protection systems when forming a part of a structure.
12. Flagpole.
13. Floor covering (permanently attached).
14. Foundations and piers for machinery, constructed as a permanent part of a building or other item listed herein.
15. Grading and clearing when directly occasioned by the building of a structure.
16. Intrasite communication system, poles, pole fixtures, wires and cables.
17. Landscaping, lawns, shrubbery, etc.
18. Leases, voiding upon purchase, to secure possession of structures.
19. Leased property, expenditures on.
20. Lighting fixtures and outside lighting systems.
21. Marquee, permanently attached to building.
22. Painting, first cost.
23. Permanent paving, concrete, brick, flagstone, asphalt, etc., within the property lines.
24. Partitions, including movable.
25. Permits and privileges.
26. Power boards for services to a building.
27. Refrigerating systems for general use.
28. Retaining walls except when identified with land.
29. Roadways.
30. Roofs.
31. Scales, connected to and forming a part of a structure.
32. Water and wastewater systems, for general use.
33. Sidewalks, culverts, curbs and streets constructed by the utility on its property.

## WASTEWATER UTILITY PLANT ACCOUNTS

34. Sprinkling systems.
35. Stacks -- brick, steel, or concrete, when set on foundation forming part of general foundation and steelwork of a building.
36. Steel inspection during construction.
37. Storage facilities constituting a part of a building.
38. Storm doors and windows.
39. Temporary heating during construction (net cost).
40. Temporary water connection during construction (net cost).
41. Temporary shanties and other facilities used during construction (net cost).
42. Topographical maps.
43. Vaults constructed as part of a building.
44. Watchmen's sheds and clock systems (net cost when used during construction only).
45. Water meters and supply system for a building or for general company purposes.
46. Water supply piping, hydrants and wells.
47. Yard surfacing, gravel, concrete, or oil (First cost only).
48. Tunnels, intake and discharge when constructed as part of a structure including sluice gates and those constructed to house.

### 355. Power Generation Equipment

A. This account shall include the cost installed of any equipment used for the production of power principally used in pumping operations.

B. Subaccounts shall be maintained hereunder for the cost of equipment used for each type of power generating equipment.

### 360. Collecting Sewers - Force

This account shall include all sewers which are used to lift sewage from a low elevation to a higher elevation. The force sewer will include that pipe between the discharge outlet of the lift station and the receiving manhole.

### 361. Collecting Sewers - Gravity

This account shall include the installed cost of all gravity collecting sewers, interceptor, branch, trunk, lateral including service wye, and manholes and lampholes. Manholes shall be included as a separate unit of property.

### 362. Special Collecting Structures

Inverted siphon shall be included in this account but so

## WASTEWATER UTILITY PLANT ACCOUNTS

distinctly noted; also any other special designed structures unusual to the wastewater system should be included herein but specifically noted as to what they do.

### 363. Services to Customers

This account shall include the installed cost of service sewers, from collection sewer to the customer's property or curb line. A sample of items to be included in this account are listed below:

1. Jointing and jointing material.
2. Manhole or clean-out.
3. Municipal inspection and permits
4. Pavement disturbed.
5. Protection of street openings.
6. Tapping saddle.
7. Service connection wye shall be included in account 363 instead of account 361 when company owns service sewers to customers property line.

### 364. Flow Measuring Devices

A. This account shall include the cost of flow measuring and recording equipment and initial testing used for measuring the quantity of wastewater or wastewater effluent delivered by customers, whether actually in service or held in reserve.

B. When flow measuring equipment is permanently retired from service, the amount at which it is included herein shall be credited to this account.

C. The records covering flow measuring equipment shall be so kept that the utility can furnish information as to the number of devices of each type and size in service and in reserve, as well as the location of each device included in this account.

### 365. Flow Measuring Installations

A. This account shall include the cost of labor employed, materials used and expenses incurred in connection with the original installation of customers' flow measuring equipment. A sample of items to be included in this account are listed below:

1. Floats, connections, flumes, or wires.
2. Special manhole, boxes, or other separate housing.

B. When a flow measuring installation is permanently retired from service, the cost thereof shall be credited to this account.



## WASTEWATER UTILITY PLANT ACCOUNTS

### 366. Reuse Services

A. This account shall include the cost installed of reclaimed water service pipes and accessories leading to the customers' premises.

B. A complete reclaimed water service begins with the connection on the main and extends to but does not include the connection with the customer's meter. A stub service extends from the main to the property line, or the curb stop (curb stop cock).

C. Services which have been used but have become inactive shall be retired from utility plant in service immediately if there is no prospect for future use.

#### Items

1. Corporation stops or tees.
2. Gate valves and boxes.
3. Goose necks.
4. Jointing and jointing material.
5. Municipal inspection or permits.
6. Pavements disturbed.
7. Pipes.
8. Placing pipes and accessories.
9. Protection of street openings.
10. Service or curb boxes.
11. Service or curb stops (curb stop cocks).
12. Tapping main.
13. Tapping saddle.

### 367. Reuse Meters and Meter Installations

A. This account shall include the cost of meters, devices and appurtenances attached thereto, used for measuring the quantity of reclaimed water delivered to users, whether actually in service or held in reserve. It shall also include the cost of labor employed, materials used and expenses incurred in connection with the original installation of a customer's meters and devices and appurtenances attached thereto.

B. When a meter and/or meter installation is permanently retired from service, the amount at which it is included herein shall be credited to this account.

C. The records covering meters shall be so kept that the utility can furnish information as to the number of meters of each type and size in service and in reserve as well as the location of each meter included in this account.

D. A sample of items to be included in this account are listed

## WASTEWATER UTILITY PLANT ACCOUNTS

below:

1. Meters, including badging and initial testing.
2. Remote meter registers.
3. Installation labor (first installation only).
4. Meter coupling.
5. Meter bars.
6. Meter yokes.
7. Meter fittings, connections and shelves.
8. Meter vaults or boxes.
9. Stops.

Note A:--This account shall not include meters for recording the output of a supply or treatment plant, or those located on mains. It includes only those meters to record reclaimed water delivered to customers, including company use and for those used elsewhere in the system if a type available for general use.

Note B:--The utility shall maintain a statistical record to show separately the number of each type and size of meter or group of types and sizes as carried in the continuing property record. Underlying records shall be kept so that the utility can determine readily for each such classification the number of company-owned meters in service (subdivided between active and inactive) and the number of meters carried herein but not in service, the latter to include meters undergoing repairs; and the number of meters in service owned by customers.

### 370. Receiving Wells

This account shall include the cost of constructing wells at pumping stations or at other junction points along the collecting system, used for intercepting wastewater for clearing and screening, transfer to a pumping well or otherwise further convey it along the collecting system to the treatment plant or point of final discharge. This account shall include any chemical feed apparatus and holding basins associated with the receiving well.

### 371. Pumping Equipment

This account shall include the cost installed of pumping equipment driven by electric power or diesel engines. A sample of items to be included in this account are listed below:

1. Motors or engines for driving pumps.
2. Pumps, including settings, gearing, shafting and belting.
3. Sewage piping within station, including valves.
4. Auxiliary equipment for motors and pumps such as oiling systems, cooling systems, condensers, etc.

## WASTEWATER UTILITY PLANT ACCOUNTS

5. Electrical power lines and switching.
6. Foundations, frames, and bed plates.
7. Hoist units.

### 374. Reuse Distribution Reservoirs

This account shall include the cost in place of reservoirs, tanks and appurtenances used in storing reclaimed water for distribution. A sample of items to be included in this account are listed below:

1. Bridges and culverts.
2. Clearing land.
3. Dams.
4. Embankments.
5. Fences.
6. Foundations.
7. Gates and gate houses.
8. Landscaping.
9. Lighting systems.
10. Piping system within reservoirs.
11. Retaining walls.
12. Roads and paths.
13. Rust-proofing apparatus.
14. Sewer drain or storm sewer.
15. Spillways and channels.
16. Standpipes.
17. Tanks.
18. Towers.
19. Valves.

### 375. Reuse Transmission and Distribution System

A. This account shall include the cost installed of reclaimed water transmission and distribution mains and appurtenances. A sample of items to be included in this account are listed below:

1. Air chambers.
2. Blow-offs and overflows.
3. Bridges and culverts.
4. Electrolysis control equipment.
5. Gauges and recorders.
6. Jointing and jointing material.
7. Manholes.
8. Meters and appurtenances.
9. Municipal inspection or permits.
10. Pavement disturbed, including cutting and replacing pavement, pavement base and sidewalks.
11. Pipes.
12. Fire mains.
13. Fire Hydrants.



## WASTEWATER UTILITY PLANT ACCOUNTS

B. Records supporting this account shall be so kept as to show separately the cost of mains of different sizes and types and of each tunnel, bridge, or river crossing.

### 380. Treatment and Disposal Equipment

This account shall include the cost installed of apparatus equipment and other facilities used for the treatment of wastewater, disposal of sewage wastes and the treatment of effluent for reuse. A sample of items to be included in this account are listed below:

1. Aeration chambers.
2. Chemical equipment.
3. Disinfection facilities.
4. Filters.
5. Imhoff tank.
6. Land fill equipment and appurtenances.
7. Monitoring equipment.
8. Oxidation pond or lagoon.
9. Sedimentation equipment.
10. Septic tank.
11. Screen unit.
12. Sludge system.
13. Trucks, tractors, or other equipment used primarily for sludge or other waste disposal.
14. Package mechanical treatment plant.
15. Sedimentation basin.
16. Sludge digestion equipment.
17. Sludge filtration or dewatering equipment.

### 381. Plant Sewers

This account shall include the cost installed of plant yard piping and appurtenances, and facilities required to dispose of treatment plant liquid effluent into the outfall sewer line. A sample of items to be included in this account are listed below:

1. Unit to unit sections of yard piping.
2. Valves and vaults.
3. Pipe tunnels and galleries.
4. Filter and filter backwash piping.

### 382. Outfall Sewer Lines

This account shall include the installed cost of sewer line carrying effluent from treatment facility to point of discharge. Includible in this account would be headwall or outlet.

## WASTEWATER UTILITY PLANT ACCOUNTS

### 389. Other Plant and Miscellaneous Equipment

This account shall include the cost installed of all other intangible, collection system pumping, treatment and disposal, reclaimed water treatment and reclaimed water distribution plant not provided for in the foregoing accounts.

### 390. Office Furniture and Equipment

A. This account shall include the cost of office furniture and equipment owned by the utility and devoted to utility service, and not permanently attached to buildings, except the cost of such furniture and equipment which the utility elects to assign to other plant accounts on a functional basis. A sample of items to be included in this account are listed below:

1. Book cases and shelves.
2. Desk, chairs, and desk equipment.
3. Drafting room equipment.
4. Electronic data processing equipment.
5. Filing, storage and other cabinets.
6. Floor covering.
7. Library and library equipment.
8. Mechanical office equipment such as accounting machines, typewriters, etc.
9. Safes.
10. Tables.

B. If the utility has equipment includible in this account at more than one location, separate records shall be maintained for each location.

### 391. Transportation Equipment

This account shall include the cost of transportation vehicles used for utility purposes. A sample of items to be included in this account are listed below:

1. Airplanes.
2. Automobiles.
3. Bicycles.
4. Electrical vehicles.
5. Motor trucks.
6. Motorcycles.
7. Repair cars or trucks.
8. Tractors and trailers.
9. Other transportation vehicles.

## WASTEWATER UTILITY PLANT ACCOUNTS

### 392. Stores Equipment

A. This account shall include the cost of equipment used for the receiving, shipping, handling and storage of materials and supplies.

B. If the utility has equipment includible in this account at more than one location, separate records shall be maintained for each location. A sample of items to be included in this account are listed below:

1. Chain falls.
2. Counters.
3. Cranes (portable).
4. Elevating and stacking equipment (portable).
5. Hoists.
6. Lockers.
7. Scales.
8. Shelving.
9. Storage bins.
10. Trucks, hand and power driven.
11. Wheelbarrows.

### 393. Tools, Shop and Garage Equipment

This account shall include the cost of tools, implements, and equipment used in construction, repair work, general shops and garages and not specifically provided for or includible in other accounts. A sample of items to be included in this account are listed below:

1. Air compressors.
2. Anvils.
3. Automobile repair shop equipment.
4. Battery charging equipment.
5. Belts, shafts and countershafts.
6. Boilers.
7. Cable pulling equipment.
8. Concrete mixers.
9. Drill presses.
10. Derricks.
11. Electric equipment.
12. Engines.
13. Forges.
14. Furnaces.
15. Foundations and settings specially constructed for and not expected to outlast the equipment for which provided.
16. Gas producers.
17. Gasoline pumps, oil pumps and storage tanks.
18. Greasing tools and equipment.



## WASTEWATER UTILITY PLANT ACCOUNTS

19. Hoists.
20. Ladders.
21. Lathes.
22. Machine tools.
23. Motor driven tools.
24. Motors.
25. Pipe threading and cutting tools.
26. Pneumatic tools.
27. Pumps.
28. Riveters.
29. Smithing equipment.
30. Tool racks.
31. Vises.
32. Welding apparatus.
33. Work benches.

### 394. Laboratory Equipment

A. This account shall include the cost installed of laboratory equipment used for general laboratory purposes and not specifically provided for or includible in other departmental or functional plant accounts. A sample of items to be included in this account are listed below:

1. Autoclaves.
2. Barometers.
3. Cameras.
4. Centrifuge.
5. Distilling apparatus.
6. Furnaces.
7. Microscopes.
8. Ovens.
9. Pitometers.
10. Rain gauges.
11. Refrigerators.
12. Scales.
13. Sterilizers.
14. Stop watches.
15. Testing machines.
16. Therometers.
17. Voltmeters.
18. Other bacteriological, electric, chemical hydraulic or research equipment.

B. If the utility has equipment includible in this account at more than one location, separate records shall be maintained for each location.

## WASTEWATER UTILITY PLANT ACCOUNTS

### 395. Power Operated Equipment

This account shall include the cost of power operated equipment used in construction of repair work exclusive of equipment includible in other accounts. Include, also, the tools and accessories acquired for use with such equipment and the vehicle on which such equipment is mounted. A sample of items to be included in this account are listed below:

1. Air compressors, including driving unit and vehicle.
2. Back filling machines.
3. Boring machines.
4. Bulldozers.
5. Cranes and joists.
6. Diggers.
7. Engines.
8. File drivers.
9. Pipe cleaning machines.
10. Pipe coating or wrapping machines.
11. Tractors - Crawler type.
12. Trenchers.
13. Other power operated equipment.

Note:--It is intended that this account include only such large units as are generally self-propelled or mounted on moveable equipment.

### 396. Communication Equipment

This account shall include the cost installed of telephone, telegraph and wireless equipment for general use in connection with utility operations. A sample of items to be included in this account are listed below:

1. Antennae.
2. Booths.
3. Cables.
4. Distribution boards.
5. Extension cords.
6. Gongs.
7. Handsets, manual and dial.
8. Insulators.
9. Intercommunicating sets.
10. Loading coils.
11. Operators desks.
12. Poles and fixtures used wholly for telephone and telegraph wires.
13. Radio transmitting and receiving sets.
14. Remote control equipment and lines.
15. Sending keys.
16. Storage batteries.

## WASTEWATER UTILITY PLANT ACCOUNTS

17. Switchboards.
18. Teleautograph circuit connections.
19. Telegraph receiving sets.
20. Telephone and telegraph circuits.
21. Testing instruments.
22. Towers.
23. Underground conduit used wholly for telephone or telegraph wires and cable wires.

### 397. Miscellaneous Equipment

This account shall include the cost of equipment, apparatus, etc., used in utility operations, and which is not includible in any other account. A sample of items to be included in this account are listed below:

1. Hospital and infirmary equipment.
2. Kitchen equipment.
3. Recreation equipment.
4. Radios.
5. Restaurant equipment.
6. Soda fountains.
7. Operator's cottage furnishings.
8. Electric signs advertising the corporate name or symbol, plant or facility name, or otherwise serving only the general purpose of acquainting the public with the facilities and services of the utility.
9. Other miscellaneous equipment.

Note:--Miscellaneous equipment of the nature indicated above wherever practicable shall be included in the utility plant accounts on a functional basis.

### 398. Other Tangible Plant

This account shall include the cost of tangible utility plant not provided for elsewhere.