PLEASANT HILLS AUTHORITY

RESOLUTION NO. 316

A RESOLUTION ADOPTING THE BUDGET FOR THE PLEASANT HILLS AUTHORITY FOR CALENDAR YEAR 2018 AS CONTAINED IN THE 59th ANNUAL ENGINEERING REPORT

WHEREAS, in accordance with its established procedures, the Pleasant Hills Authority (the "Authority") has requested its Consulting Engineer to develop an annual report highlighting the accomplishments of the Authority for the calendar year and proposing the operating and capital improvement budgets (the "Budget") for the next calendar year; and

WHEREAS, the Consulting Engineer has submitted the Fifty-eighth (59th) Annual Engineering Report (the "Report") which contains the proposed Budget for the Authority for the calendar year 2018; and

WHEREAS, the Board of the Authority has met with and discussed the proposed Budget with its Consulting Engineer and the Authority staff; and

WHEREAS, the Authority provided the Contracting Municipalities with copies of the Report, has received comments regarding the Report from South Park Township and has amended the Report to incorporate the comments,

NOW THEREFORE, BE IT RESOLVED AND ENACTED by the Board of the Pleasant Hills Authority, Allegheny County, Pennsylvania, and it is hereby resolved and enacted by and with the authority of the same:

SECTION 1. The Budget of the Pleasant Hills Authority for the year 2018 as contained in the amended 59th Annual Report of the Consulting Engineer is hereby adopted.

SECTION 2. All resolutions or parts of resolutions conflicting with this Resolution are hereby repealed.

ADOPTED this 13th day of December, 2017.

ATTEST:

Secretary/Manager

PLEASANT HILLS AUTHORITY

By: Richard G. Neiman
Chairman

APPROVED:

DICKIE, MCCAMEY & CHILCOTE, P.C.

Authority Solicitors

APPROVED:

GANNETT FLEMING, INC.

Consulting Engineer

Gannett Fleming

Excellence Delivered As Promised

October 10, 2017

Pleasant Hills Authority
610 Old Clairton Road, Room 100
Pittsburgh, PA 15236

Attention: Mr. Richard G. Nieman, Chairman

Gentlemen:

In accordance with Section 2.09 of the Agreement between the Authority and the Contracting Municipalities dated July 1, 2014, we submit herewith our Annual Report on the Authority Sewer System for the Authority's fiscal year beginning January 1, 2018 and ending December 31, 2018.

Very truly yours,

GANNETT FLEMING, INC.

ROBERT W. DENGLER, II, P.E.
Senior Project Manager

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PLEASANT HILLS AUTHORITY

Allegheny County, Pennsylvania

FIFTY-NINTH ANNUAL REPORT

SEWER SYSTEM

OCTOBER 2017

PLEASANT HILLS AUTHORITY

Allegheny County, Pennsylvania

FIFTY-NINTH ANNUAL REPORT

SEWER SYSTEM

October 2017

FOREWORD

In accordance with the requirements of Section 2.09 of the Agreement between the Authority and the Contracting Municipalities, dated July 1, 2014, this report sets forth the following concerning the Sewer System:

1. Report as to compliance by the Authority with its obligations under Section 2.08 concerning insurance of the Authority Sewer System and its operations;

2. Findings as to whether the Authority Sewer System has been maintained in good repair and sound operating condition and a statement showing separately the Repairs Operations and Maintenance, and Replacements, if any, which should be made during the next Fiscal Year;

3. Report as to Authority Sewer System overflows that have occurred since the previous Consulting Engineers Report and anticipated Authority Sewer System capacity issues;

4. Advice and recommendation as to any Capital Additions which should be constructed or otherwise acquired by the Authority during the next fiscal year; and

5. An Operating Expense Budget setting forth the Operating Expense for the next Fiscal Year.

GENERAL

The Sewer System consists of approximately 11.5 miles of trunk sewers, two sewage pumping stations, and a 5.0 MGD sewage treatment plant (STP). The trunk sewers, the Lewis Run Pumping Station and a 3.0 MGD secondary sewage treatment plant were constructed in 1958-59. In 1982 the Authority constructed the Sunrise Drive Pumping Station and 1,200 feet of 6-inch diameter force main to replace a portion of the original trunk sewer which was crushed and inoperable.

In January 1988, the Authority awarded contracts to increase the capacity of the Lewis Run Pumping Station; expand the sewage treatment plant capacity from 3.0 MGD to 5.0 MGD; and upgrade the facilities from secondary treatment to tertiary treatment. The expanded and upgraded facilities were placed into operation in June 1990.

On June 19, 2017, Notice To Proceeds were issued for three contracts for the SSO Elimination Project. The project involves the expansion of the existing STP to maintain the annual average daily flow of 5.0 MGD with an increased peak instantaneous flow of 25.0 MGD. The estimated substantial completion date for the project is October 2019.

The Sewer System serves all of Pleasant Hills Borough; parts of the Boroughs of Baldwin, Whitehall, Bethel Park and Jefferson Hills; and part of South Park Township.

The sewage collection facilities in the served municipalities are owned, operated and maintained by the respective municipalities.

The Authority will provide operation and maintenance of the equalization tanks for the Boroughs of Baldwin and Pleasant Hills starting in 2018.

The Borough of Pleasant Hills provides for the operation and ordinary repair and maintenance of the Authority's Sewer System in accordance with a Management Agreement dated July 1, 2014 between the Borough and the Authority.

1988 to 2017 OPERATION, MAINTENANCE, REPAIRS AND IMPROVEMENTS

In early 1988 contracts were awarded to increase the capacity of the Lewis Run Pumping Station and expand and upgrade the sewage treatment plant. These facilities were placed into operation in June 1990.

The Return Sludge Wetwell in the First Stage was expanded in 1992 to improve the plant process. The construction cost of this addition was $42,660.

The Torwood-Temona Trunk Sewer and service connections were replaced in 1994. This project was completed in August 1994 at a cost of $252,469. The new tighter trunk sewer and service connections have reduced I/I from this drainage area.

In 1994 a 14-inch diameter parallel Lewis Run force main and a flow meter were installed at a cost of $248,437. The larger force main allows more flow to be pumped and reduces overflow occurrences.

The waterline serving the sewage treatment plant was replaced in 1995 at a cost of $35,500.

In 1996 a hydrogen peroxide feed system was installed in the Lewis Run Pumping Station by Plant Personnel to prevent odors at the force main discharge. The Authority currently utilizes calcium nitrate at the Lewis Run Pumping Station for odor control.

Approximately 1,100 LF of the Colewood Drive Trunk Sewer was replaced in 1998 at a cost of $95,493.

The roofs at the Office, Laboratory, Chlorine Room, Motor Room and the Lewis Run Pumping Station were replaced in 1998. The total cost of these roof replacements was $46,320.

In 1998 the thickened sludge pump in the Belt Filter Press Building was replaced with a larger pump. The replacement cost was $43,715.

The gas chlorination system was replaced with an ultraviolet light disinfection system in 1999. The new UV System went on-line during early June 1999. The type of disinfection was changed to comply with a stringent TRC limit of 0.017 mg/l that became effective September 1999.

The East Bruceton Road Trunk Sewer from S.R. 51 to the Pleasant Hills Borough Building was replaced in 2000. The project was completed at a cost of $296,626.

The Leland Park Trunk Sewer was replaced in Baldwin Borough in 2000. The project was completed at a cost of $110,545.

Fill material that was placed by a property owner in the Authority right-of-way over a section of 14-inch diameter force main from the Lewis Run Pumping Station was removed in 2000.

The gas engine cooling water piping was replaced in 2000 at a cost of $37,775.

Major Sewer System activities during 2001 included the following:

1. Five new plant flow recorders were installed at a cost of $19,000.
2. The six-cylinder gas engine for driving Pump No. 2 at the sewage treatment plant was rebuilt at a cost of $42,000.
3. Chain and sprockets on #1 and #2 primary sludge collectors were replaced at a cost of $32,000.

4. Ten flow meters were installed in key sewer system manholes, at a cost of $30,000, including a laptop computer and other pertinent equipment.
5. Two 25-inch comminutors were rebuilt, one each at the Lewis Run Pumping Station and at the sewage treatment plant, at a total cost of $24,000.
6. A new air compressor to provide more reliable motor speed controls was installed in the south blower building at a cost of $3,000.

Major Sewer System activities during 2002 included the following:

1. Final clarifier launder covers were installed at a cost of $81,475.
2. Grating platform was installed over the screw pumps in the second stage of the sewage treatment plant at a cost of $25,931.
3. Geographic Information System (GIS) mapping of the Sewer System was undertaken, with input for the sewage collection facilities provided by each of the served municipalities.
4. Chain and sprockets on #3 and #4 primary sludge collectors were replaced at a cost of $42,000.
5. Chain on the #1 tubular conveyor grit remover was replaced at a cost of $4,000.
6. The flow transmitter and recorder at the Lewis Run Pumping Station were replaced at a cost of $6,000.

Major Sewer System activities during 2003 included the following:

1. The roof on Building No. 3 was replaced at a cost of $11,500.
2. One complete replacement M25" comminutor was purchased for $28,000.
3. Two new spare pumps, including one with clockwise rotation and one with counter clockwise rotation, were purchased at a total cost of $42,000 for future use at the Lewis Run Pumping Station.
4. Conveyor chain and associated piping for Grit Removal Unit No. 2 were replaced at a cost of $6,020.
5. Flow transmitter at the Lewis Run Pumping Station was replaced at a cost of $12,000.
6. Internal inspection was completed on approximately 7,000 feet of sewer, and cleaning was completed on approximately 5,000 feet of sewer, for a total cost of $9,000.
7. Eight skimming troughs were replaced in the primary tanks at a cost of $21,064.
8. Four air compressors were replaced in the liquid motor speed controls at a cost of $6,600.
9. One motor speed control board was replaced for the Lewis Run Pumping Station at a cost of $3,335.
10. New V-notch weirs were installed in four of the original 1958 primary clarifiers at a cost of $22,000.

Major Sewer System activities during 2004 included the following:

1. Cleaned and televised various sewer lines, and cleaned the wet wells at the plant and Lewis Run Pumping Station at a cost of $6,500.
2. Sludge heat exchanger replacement began, with completion expected by the end of 2004, at a cost of approximately $257,000.
3. An odor control system pilot test system was installed at the Lewis Run Pumping Station.
4. One complete replacement M25" comminutor was purchased for $27,000.
5. Approximately 50 feet of handrail was replaced at the plant.
6. The 15-inch comminutor at the Sunrise Drive Pumping Station, with new shear bars and drum, was rebuilt for $7,000.
7. The 25-inch comminutor at the plant was rebuilt, with all new parts, at a cost of $16,500.
8. No. 2 grit collector replacements, including 90 feet of conveyor chain and some gears, were completed at a cost of $13,974.
9. Two new well sump pumps were installed at the plant for $2,426.
10. Brick and concrete parapets at the plant were rebuilt for $2,591.
11. New V-notch weirs were installed in four of the original 1958 primary clarifiers at a cost of $12,977.
12. Air filter charcoal was replaced at the Sunrise Drive Pumping Station.

Major Sewer System activities during 2005 included the following:

1. The inside and outside of the lime storage silo were sand blasted and painted at a cost of approximately $25,000.
2. Cured-in-place pipe reconstruction was completed from Manhole N-10 to Manhole N-7 (+/-742 feet) for the Lump Sum Price of $65,000.00.
3. New pick-up truck was purchased at a cost of $22,000.00.
4. Sludge heat exchanger replacement was completed at a cost of $275,000.

Major Sewer System activities during 2006 included the following:

1. The Lick Run Interceptor was replaced and relocated just upstream of the treatment plant in the vicinity of the entrance road to U.S. DOE and NIOSH at a cost of approximately $192,000.
2. New interceptor sewer was constructed along Gill Hall Road around the Mowry Park residential area to convey the discharge from the Lewis Run Pumping Station at a cost of approximately $750,000.
3. Lick Run interceptor cleaning and inspection was initiated above Stilley Road and along the railroad tracks up to Curry Hollow Road at a cost of approximately $60,000.
4. The flight drive on one primary tank was replaced at a cost of $13,680.
5. Hand rail around the two original primary tanks was replaced at a cost of $13,700.

6. Original grating between #1 and #2 grit hoppers over the primary channels was replaced with aluminum grating at a cost of $4,542.
7. An automatic transfer switch was installed at the Sunrise Drive Pumping Station for generator startup at a cost of $13,705.
8. New sleeves were installed on an ultraviolet unit at a cost of $15,351.
9. A new khrone meter was installed to measure nutrient from the first stage to the second stage at a cost of $3,419.

Major Sewer System activities during 2007 included the following:

1. The Lewis Run Drainage System was completed, including installation of a trench dam and drainage sewer, at a cost of approximately $42,000.
2. Comminutor #2 was replaced with a new M25" unit at a total cost of approximately $75,000, including pre-purchase of the unit.
3. A new 14-foot wide plant entrance gate with electronic security controls was installed for approximately $10,000.
4. Digester #1 contract award was issued for sludge removal, cleaning, and hauling in the amount of $120,785.
5. Interceptor sewer line between MH 5A and MH 6 south of McElheny Road in South Park Township was scheduled for updated internal inspection starting October 1 to determine the extent of infiltration of creek water, and to recommend any necessary repairs.
6. Flow meters were installed at four locations within the service area that were previously identified as substantial sources of infiltration.
7. Automatic samplers were installed at the treatment plant, as well as automatic dialers at the treatment plant and at the two pump stations, at a cost of approximately $17,500.

Major Sewer System activities during 2008 included the following:

1. The Route 51 abandoned sewer was plugged at both ends and also in the middle to eliminate infiltration and inflow sources from the sanitary sewer system, at a cost of approximately $5,000.
2. A contract was awarded for digester control building repairs, including replacement of valves and piping. Construction is expected to be complete by the end of 2008 for a cost of approximately $88,000.
3. A general contract was awarded for installation of the pre-purchased M25" comminutor #3 at the treatment plant, including associated grating, slide gate, stairs, handrail and sluice gate actuator modifications for a cost of approximately $88,000.
4. An electrical contract was awarded for work associated with the above contract, as well as installation of new motors and variable frequency drives (VFDs) at the Lewis Run Pump Station and replacement of the pump control system for a cost of approximately $206,000.

5. A contract was awarded for trenchless lining of approximately 2,800 feet of interceptor sewer in the Lick Run watershed for a cost of approximately $208,000.
6. Digester #1 sludge removal, cleaning and hauling was completed.
7. Plant seal water control system with filtration, to replace the use of public water, was installed for pump operation at a cost of approximately $4,500.

Major Sewer System activities during 2009 included the following:

1. WWTP and LRPS Improvements were completed, including installation of a third comminutor at the WWTP and new motors and VFDs at the LRPS in the total amount of approximately $284,000.
2. Television inspection and sliplining of a portion of the Lick Run Watershed interceptor was completed, at a cost of approximately $216,000.
3. A contract was awarded for Security System Upgrades at the WWTP for a cost of approximately $44,000.
4. A new four-wheel drive four-door pickup truck was purchased for a cost of approximately $23,000.

Major Sewer System activities during 2010 included the following:

1. Lick Run Manhole Rehabilitation and Internal Interceptor Cleaning and Inspection were completed in the total amount of approximately $60,000.
2. WWTP VFDs and Control Panels were installed in the total amount of approximately $94,000.
3. Flow metering program was completed for approximately $52,000.
4. Plant security lock system was installed for all buildings at the treatment plant in the total amount of approximately $43,000.

Major Sewer System activities during 2011 included the following:

1. Brownsville Road Interceptor Sewer Relocation was completed for a total project cost of approximately $70,000, with reimbursement from Allegheny County.
2. Sunrise Drive Pump Station Modifications, due to flooding of the existing facility, are designed and permitted with construction to be completed in the last quarter of 2011, at a total project cost of approximately $550,000, with reimbursement from the insurance carrier.

Major Sewer System activities during 2012 included the following:

1. The interceptor tributary to the Sunrise Drive Pump Station was lined at a construction cost of approximately $112,000.
2. Surge protection was installed at the Lewis Run Pump Station at a cost of approximately $10,000.

3. The existing generator at the Sunrise Drive Pump Station was relocated inside the new control building at a cost of approximately $16,000.

Major Sewer System activity during 2013 included replacement of chains and cross collectors for Primary Tank #3 at an equipment cost of approximately $10,000, and the use of force account labor.

Major Sewer System activities during 2014 included the following:

1. Upgrade of the plant alarm system at a cost of approximately $7,000.
2. Electrical upgrades at the plant to allow for Screw Pumps and First Stage Blowers to automatically turn on after generator exercise at a cost of approximately $2,400.
3. Purchase of a new truck mounted salt spreader at a cost of approximately $2,000.
4. Replacement of Return Pump Impeller and Sludge Pump Rotor Case at a cost of approximately $10,000.
5. Purchase of maintenance software for a cost of approximately $3,500.
6. Purchase of two portable samplers for a cost of approximately $2,900.
7. Installation of odor control system in Filter Building for a cost of approximately $5,800.
8. Replacement of existing slip tube sludge valves in Primary Clarifiers #1 and #2 at an approximate cost of $13,000.
9. Repair of leaking 20-inch force main in Main Equipment Building Basement at an estimated cost of $12,700.

Major Sewer System activities during 2015 included the following:

1. Installed new surge protection at the Lewis Run Pump Station at a cost of approximately $2,000.
2. Replaced steel frame supports and fiberglass roof over both Grit Chambers at a cost of approximately $1,500.
3. Installed and started up new Mission Monitoring alarm and dialer system at treatment plant at a cost of approximately $8,000.
4. Purchased and installed new MLSS meter at a cost of approximately $2,111.
5. Replaced comminutor at Lewis Run Pump Station with new dimminutor at a cost of approximately $51,750.
6. Upgraded phone system at treatment plant at a cost of approximately $4,700.
7. Rebuilt Raw Sewage Pump #1 at treatment plant at a cost of approximately $9,000.
8. Installed new security camera and monitoring system at the treatment plant at a cost of approximately $12,000.
9. Replaced all emergency generator batteries as a cost of approximately $1,700.

10. Rebuilt comminutor at the treatment plant at a cost of approximately $6,900.
11. Replaced pump controller for one of the First Stage Return Pumps at a cost of approximately $1,300.
12. Replaced the rotor assembly on the Thickened Sludge Pump for a cost of approximately $1,800.
13. Replaced the Stage 2 Transfer Switch for a cost of approximately $2,500.
14. Started 2015 Capital Improvement Project that consists of construction of new Grit Dewatering Pad and replacement of Plant Water Pumps for an estimated cost of $256,130.

Major Sewer System activities during 2016 included the following:

1. Purchased Stage 2 WAS Pumps with controls and VFDs for a cost of $46,000.
2. Continued construction of the 2015 Capital Improvement Project that consists of construction of new Grit Dewatering Pad and replacement of Plant Water Pumps for an estimated cost of $256,130.
3. Started 2016 Capital Improvement projects that consist of the following:
   a. Contract 2016-1 – Sludge Recirculation Pump Replacement which is the removal and replacement of two (2) sludge recirculation pumps and installation of two (2) VFD control panels one for each pump for an estimated cost of $159,000. Added the installation of the Stage 2 WAS Pumps, VFDs and controls for an estimated cost of $23,900.
   b. Contract 2016-2 – Anaerobic Digester #2 Sludge Removal, Cleaning & Hauling which is the removal and proper disposal of the contents of Digester #2 and the cleaning of the interior of Digester #2 for an estimated cost of $115,100.
4. Execution of Project Partnership Agreement and payment of $297,200 for the Authority portion of the total project cost of $867,000 for the WWTP Streambank Restoration – Army Corps of Engineers project. Work on this project is anticipated to start in 2017.
5. Started Lewis Run Interceptor Cleaning and Televising that consists of the cleaning and televising of approximately 8,012 linear feel of interceptor sewer in the Lewis Run Drainage basin.
6. Purchased a new F-250 Pick-up Truck for a cost of $28,585.00.
7. Purchased a golf cart at a cost of $4,000.00.
8. Replaced the dimminutor screen at a cost of $4,538.00.
9. Installed a new flowmeter and converter on the filter press for $2,287.00 and on the 2nd stage waste pumps for $2,036.00.
10. Replaced the belt on the Filter Press at a cost of $1,915.00.
11. Repaired the shaft on #1 Raw Sewage Pump for a cost of $3,380.00.
12. Replaced the UV system Coolant Pump at a cost of $1,592.00.
13. Rebuilt the Lewis Run Pump Station Pump Seals at a cost of $3,230.00.
14. Performed televising on Rte. 51 at a cost of $2,031.25
15. Purchased Idexx Sealer at a cost of $5,021.36.

Major Sewer System activities during 2017 included the following:

1. Completed Lewis Run Interceptor Cleaning and Televising that consisted of cleaning and televising of approximately 8,012 linear feel of interceptor sewer in the Lewis Run Drainage basin for a cost of $21,986.41.
2. Removed grit from the plant and Lewis Run Pump Station.
3. Demolished storage building and installed bar screen in wetwell.
4. Cleaned and televised a portion of the interceptor along Rte. 51 and East Bruceton.
5. Removed all steel posts and concrete dividers from sludge drying beds.
6. Installed new overflow meter at the Lewis Run Pump Station at a cost of $4,466.00.
7. Replaced speed reducer for screw pump at a cost of $2,250.00.
8. Replaced pump shaft and fabricated a set of wear rings for the Lewis Run Pump Station at a cost of $2,925.00 as well as the pump motor at a cost of $1,655.00.
9. Agreement with West Penn Power for installation of a transfer switch for use with a secondary power source for a cost of $30,224.00.
10. Removal of asbestos containing materials, including pipe insulation from the Main Equipment Building Basement at the STP at a cost of $62,320.00.
11. Installed digester valves and recirculation pump for a cost of $59,079.00.
12. Replaced bearings and repaired the shaft for the 2nd stage RAS pumps for a total cost of $3,481.00.
13. Replaced the wearing rings of the raw sewage pumps for a cost of $1,814.00.
14. Replaced cross collector flights for the Primary Tanks at a cost of $1,260.00.
15. Purchased mechanic tools at a cost of $1,471.00.

Projected expenditures for Capital Additions during 2018 include the following:

1. Digester No. 2 Cover Replacement Project - The Project consists of complete removal and replacement of the existing Digester No. 2 cover with a steel or dual-membrane option, piping and pipe supports within Digester No. 2, and the Digester Control Building membrane roof. The estimated budget is $650,000.

2. Transfer Switch - Installation of a transfer switch by West Penn Power for use with a secondary power source. This was paid for in 2017.

The current operating personnel consist of nine (9) full time operations staff members, of which eight (8) are licensed operators. In addition to the full-time employees, temporary summer staff is hired to assist in the general maintenance of grounds and buildings. In April 2008, the Authority hired a full-time Manager to address administrative matters.

The Authority maintains operation records that are submitted to the Pennsylvania Department of Environmental Protection (PADEP) and the Consulting Engineer each month. Based on a review of the operating records, the plant produced an effluent better than the NPDES effluent limitations. Under the NPDES Permit issued June 17, 1991 the Authority was required to monitor for Mercury, Free Cyanide, Phenolics and Chloroform and comply with specified limits after June 17, 1994. Free Cyanide and Mercury occasionally exceeded the Permit limits during the period from July 1994 through June 1995. As a result of these exceedances, the U.S. Environmental Protection Agency (EPA) by letter dated May 30, 1996 notified the Authority to develop, submit for approval and implement an EPA approved Pretreatment Program.

The Authority developed the Pretreatment Program and EPA approved the program on January 27, 1999. The Industrial Sewer Use Permits were revised to include the new local limits and reissued to U.S. DOE and NIOSH on September 28, 2016. The permits are in effect for five years from the date of adoption.

The current NPDES Permit is effective July 1, 2013 and shall expire on June 30, 2018. An NPDES renewal application was submitted to PADEP on September 14, 2017. The current NPDES permit includes a requirement to conduct a reevaluation of the local limits for "pollutants of concern" currently in place. The reevaluation consists of testing the plant influent and effluent as well as the contribution of domestic users of these pollutants of concern. This Local Limits Revaluation was performed during 2013 and 2014 and accepted by USEPA in October 2014. The Authority adopted the new local limits on March 25, 2015 and the contributing jurisdictions also adopted the limits.

Plant operating data for the period from July 1, 2016 to June 30, 2017 are summarized in the following tabulation and compared with the previous year and the NPDES Permit requirements.

	Summary of Operating Data		
	July 1, 2015 to June 30, 2016	July 1, 2016 to June 30, 2017	NPDES Permit Effluent Limitations
Raw Sewage Flow (Avg. MGD)	2.84	3.2	5.0
CBOD-5 day (mg/l)			
5/1 to 10/31	2	2	20
11/1 to 4/30	2	3	25
Suspended Solids (mg/l)	12	11	30
Ammonia Nitrogen (mg/l)			
5/1 to 10/31	0.6	0.4	1.5
11/1 to 4/30	0.4	0.4	2.5
Dissolved Oxygen (mg/l)	8.6	8.5	6.0
Total Residual Chlorine (mg/l)	Not measured*	Not measured*	---
Fecal Coliforms, Number per 100 ml.			
5/1 to 9/30	24	37	200
10/1 to 4/30	23	22	2,000
pH	7.3 to 7.9	7.3 to 7.8	6 to 9

* UV disinfection system placed into service June 1, 1999.

Extensive efforts have been made to assure that all of the sewage flow is received at the sewage treatment plant. Bypasses occur at the Lewis Run Pumping Station and the sewage treatment plant only during extremely heavy runoff when the facilities are incapable of handing the hydraulic overload. As presented in the tabulation below, overflows occurred on seventeen (17) days at the Plant and on ten (10) at the Lewis Run Pumping Station during the period from July 1, 2016 to June 30, 2017.

OVERFLOWS July 1, 2016 To June 30, 2017							
Date Started	Date Ended	Duration (Hours) WWTP	Duration (Hours) LRPS	Cause or Weather Conditions	Precipitation (Inches)	OVERFLOW WWTP (GAL.)	OVERFLOW LRPS (GAL.)
07/07/2016	07/07/2016		0.75	Rain	0.48		19,711
07/07/2016	07/08/2016	3.17		Rain	0.35	760,294	
07/22/2016	07/22/2016	0.33		Rain	0.91	7,222	
07/30/2016	07/30/2016	1.75		Rain	2.12	216,266	
08/01/2016	08/01/2016	0.50		Rain	0.49	12,186	
08/28/2016	08/28/2016	1.00		Rain	0.50	24,741	
10/21/2016	10/21/2016		3.00	Rain	2.29		*
10/21/2016	10/22/2016	13.25		Rain	2.66	1,424,500	
12/18/2016	12/18/2016	14.17		Rain	2.18	3,783,700	
12/18/2016	12/18/2016		9.5	Rain	2.67		*
01/23/2017	01/23/2017	6.33		Rain	1.28	515,380	
01/23/2017	01/23/2017		1.58	Rain	1.24		*
03/01/2017	03/01/2017	5.50		Rain	1.29	461,723	
03/31/2017	04/01/2017	8.33		Rain	1.32	117,257	
05/01/2017	05/01/2017	3.00		Rain	0.99	253,811	
06/14/2017	06/14/2017	4.75		Rain	1.83	1,097,713	
06/14/2017	06/14/2017		1.00	Rain	1.11		92,220
06/15/2017	06/16/2017	13.00		Rain	1.50	2,215,774	
06/15/2017	06/16/2017		7.50	Rain	1.85		704,340**
06/16/2017	06/16/2017	3.33		Rain	0.34	148,734	
06/16/2017	06/16/2017		2.00	Rain	0.56		42,250
06/18/2017	06/18/2017	0.92		Rain	1.28	44,618	
06/18/2017	06/18/2017		0.50	Rain	1.03		6,097
06/19/2017	06/19/2017	7.00		Rain	0.85	805,231	
06/19/2017	06/19/2017		2.50	Rain	0.85		50,641

OVERFLOWS (continued) July 1, 2016 To June 30, 2017							
Date Started	Date Ended	Duration (Hours) WWTP	LRPS	Cause or Weather Conditions	Precipitation (Inches)	OVERFLOW WWTP (GAL.)	LRPS (GAL.)
06/23/2017	06/23/2017		2.00	Rain	1.75		40,610
06/23/2017	06/24/2017	16.58		Rain	1.73	1,103,666	

* Malfunction in recording
** Occurred in two stages

All of the served municipalities except for Bethel Park Borough previously adopted a PADEP approved Corrective Action Plan to reduce infiltration/inflow (I/I) in their respective sewer systems. Extensive investigations to identify sources of I/I have been made and corrective work performed. The municipalities and the Authority have submitted quarterly progress reports, which have been monitored by the PADEP and the Authority.

The new equalization basin constructed by Baldwin Borough in Colewood Park went on line during 2017 and is expected to reduce overflows from the Baldwin sewer system. Pleasant Hills Borough is currently constructing an equalization basin along Route 51 by the Lewis Run Pumping Station that is anticipated to be on line in 2018.

INSURANCE

As required by Section 2.08 of the Agreement between the Contracting Municipalities, the Authority's Sewer System properties are insured against loss or damage by fire or other hazards. The Authority also maintains public liability and workers' compensation insurance. The insurance policies currently in effect are as follows:

1.	Property Damage	Building; $19,836,021 Contents/Equipment; $14,910,525 Special Form; Blanket Rated Replacement Cost, Agreed Value
2.	Public Liability (Combined Bodily Injury and Property Damage)	
	(a) General Aggregate	$3,000,000 Aggregate Limit
	(b) Products and Completed Operation Aggregate	$3,000,000 Aggregate Limit
	(c) Personal Injury	$1,000,000
	(d) Each Occurrence	$1,000,000
	(e) Umbrella	$5,000,000
3.	Automobile Liability	$1,000,000
4.	Contractor's Equipment	$25,900 Scheduled Equipment $12,400 Blanket Tools & Equipment $100,000 Rented or Borrowed Equipment
5.	Workers' Compensation	$100,000/500,000/100,000
6.	Boiler and Machinery	$34,746,546
7.	Employee Dishonesty Bond	$250,000 Limit

ESTIMATE OF OPERATING EXPENSES

The operating expenses include monies for operating, maintenance and administration. The estimated operating costs for the year 2018 are as follows:

1. OPERATING AND MAINTENANCE EXPENSES

(a)	Salaries and Wages		
	1 Superintendent		$84,957
	1 Assistant Superintendent		70,169
	1 Head Mechanic/Operator - Licensed A		65,104
	1 Mechanic with 4 years		48,984
	1 Lab Tech/ Operator - Licensed A		62,379
	4 Plant Operator / Licensed A		239,616
	0.25 Plant Operator - Non-Licensed A with 3 years		-
	0.75Plant Operator - Non-Licensed A with 2 years		-
	Operator Entry Level		-
	Temporary Employee - A (480 hours)		5,170
	Temporary Employee - B (480 hours)		4,982
	Holidays and Overtime		54,100
	Sick Time Buyback		-
		Sub-Total	$635,461
(b)	Payroll Tax Costs		$48,613
(c)	Utilities		
	Electric Power - Sewage Treatment Plant		$220,000
	Electric Power - Pumping Stations		60,000
	Purchased Gas		21,000
	Purchased Water		9,500
		Sub-Total	$310,500
(d)	Ordinary Repair and Maintenance		
	Maintenance Contracts (window cleaning, computer system, refuse service, etc.)		$11,000
	PA One Call Charges		900
	Chemicals (Hydrogen Peroxide, Polymers, Activated Charcoal and EPA Landfill test)		12,000
	Materials and Supplies		24,000
	Maintenance, Machinery & Equipment		150,000
	Automotive Expenses		7,000
		Sub-Total	$204,900
(e)	Personnel Uniform Service		$9,000
(f)	Laboratory Equipment / Testing		$19,200
(g)	Sludge Disposal		$65,000
(h)	Pretreatment Program		$3,000
TOTAL OPERATING AND MAINTENANCE EXPENSES			$1,295,674

2. ADMINISTRATIVE EXPENSES

(a)	Management Agreement Administrative		
	Benefits		$135,000
	Insurance - Group		12,000
	Insurance - Worker's Compensation		34,000
	PHB Expenses - Misc.		1,200
		Sub-Total	$182,200
(b)	Administrative Personnel		
	Board Members		$8,400
	Manager		74,160
	Employee Retirement Program		2,966
	Benefits		11,000
	Insurance - Group		400
	Payroll Tax - Administrative		6,400
		Sub-Total	$103,326
(c)	Administrative and General		
	Accounting Service		$15,000
	Consulting Engineer		40,000
	Legal Fees		15,000
	Trustee		-
	Office Rental		8,000
	Office Expense		8,000
	Telephone		8,400
	Safety Shoes		1,500
	Insurance		72,000
	Fire, Lightning, Extended Coverage, Vandalism and Malicious Mischief, Boilers and Pressure Vessel, Comprehensive General Liability, Automotive Liability, Physical Damage and Miscellaneous		
	Publication		3,000
	Membership and Education		9,500
	Annual Licenses/Permits		8,000
	Miscellaneous Expenses		5,000
	Tapping Fee - Discount Expense		1,200
		Sub-Total	$194,600
(d)	Contingency		$25,000
	TOTAL ADMINISTRATIVE EXPENSES		$505,126

3. CAPITAL ADDITIONS

(a)	Digester Lid and Repairs		$650,000
	TOTAL CAPITAL ADDITIONS		$650,000
GRAND TOTAL			**$2,450,800**

CALCULATION OF SERVICE FEES

Each Contracting Municipality is presently charged a proportionate share of the total annual debt service and operation expenses for the Pleasant Hills Authority Sewer System. The proportioning is in accordance with a water usage schedule based on the total water consumption in each municipality during the period from November 2016 through April 2017. Information received from each Contracting Municipality regarding water consumption for that period is as follows:

Municipality	No. of Users	Water Usage In Gallons During Period
Baldwin Borough (Part)	3,321	62,800,962
Pleasant Hills Borough	3,147	96,898,811
South Park Township (Part)	1,369	31,922,037
Whitehall Borough (Part)	326	7,680,800
Total	8,163	199,302,610

On the basis of the estimated operating expenses during the year ending December 31, 2018, the total service fee for operating expenses and capital additions payable by the Contracting Municipalities during this year will be $2,450,800.

On September 1, 2012, the final debt service payment was made for the Guaranteed Sewer Revenue Bonds, Refunding Series of 2001. However, the Authority also borrowed $1,000,000 by bank loan in December 2005 for construction projects. The remaining balance of this loan of $326,458.69 was paid off by the Authority during year ending December 31, 2017.

The aggregate of the total service fees to be paid by the Contracting Municipalities during the year ending December 31, 2017 will be the sum of $2,450,800 and $326,458.69, which is $2,777,258.69, less Item I, Item II and Item III Credits.

On the basis of the above, the following proportionate shares and amounts are chargeable to each Contracting Municipality.

1. Gross Service Fees Chargeable to Contracting Municipalities (not including Item I, Item II and Item III Credits)

Municipality	2017 Percentage of Aggregate Gross Service Fee	Amount of Gross Service Fee
Baldwin Borough	31.5104 %	$875,125.32
Pleasant Hills Borough	48.6189 %	1,350,272.63
South Park Township	16.0169 %	444,830.74
Whitehall Borough	3.8538 %	107,030.00
Totals	100.0000 %	$2,777,258.69

2. Item I - Credits for monies received by Pleasant Hills Authority from Contract Customers during period from October 1, 2016 through September 30, 2017 - $23,699.63

Municipality	2016 Percentage of Aggregate Gross Service Fee	Proportionate Share
Baldwin Borough	32.8290 %	$7,780.35
Pleasant Hills Borough	48.9436 %	11,599.46
South Park Township	14.5613 %	3,450.97
Whitehall Borough	3.6661 %	868.85
Totals	100.0000 %	$23,699.63

3. Item II - Credits for monies received by Pleasant Hills Authority from Commonwealth of Pennsylvania under P.L. Act 339 of August 20, 1953 for Operating Year 2016 - $0.00

Municipality		2016 Percentage of Aggregate Gross Service Fee	Proportionate Share
Baldwin Borough		32.8290 %	$ 0.00
Pleasant Hills Borough		48.9436 %	0.00
South Park Township		14.5613 %	0.00
Whitehall Borough		3.6661 %	0.00
	Totals	100.0000 %	$ 0.00

4. Item III - Credits for Interest Earned on Monies in Excess of $500,000 in the Surplus Fund from January 1, 2016 to December 31, 2016 as computed by Authority's Auditor - $0.00

Municipality		2016 Percentage of Aggregate Gross Service Fee	Proportionate Share
Baldwin Borough		32.8290 %	$ 0.00
Pleasant Hills Borough		48.9436 %	0.00
South Park Township		14.5613 %	0.00
Whitehall Borough		3.6661 %	0.00
	Totals	100.0000 %	$ 0.00

5. Total Credits to be applied to 2018 Service Fees

Baldwin Borough (Part)		$7,780.35
Pleasant Hills Borough		11,599.46
South Park Township (Part)		3,450.97
Whitehall Borough (Part)		868.85
	Totals	$23,699.63

6. Net Service Fee Chargeable to Contracting Municipalities (Including Item I, Item II and Item III Credits)

Municipality	Gross Service Fee	Less Credits	Amount of Net Service Fee
Baldwin Borough	$875,125.32	$7,780.35	$867,344.97
Pleasant Hills Borough	1,350,272.63	11,599.46	1,338,673.17
South Park Township	444,830.74	3,450.97	441,379.77
Whitehall Borough	107,030.00	868.85	106,161.15
Total	$2,777,258.69	$23,699.63	$2,735,559.06

CAPITAL ADDITIONS

In order to maintain the Sewer System in good condition, repair and working order, the following future Capital Additions beyond 2018 are recommended:

1. Digester No. 2 Cover Replacement Project - The Project consists of complete removal and replacement of the existing Digester No. 2 cover with a steel or dual-membrane option, piping and pipe supports within Digester No. 2, and the Digester Control Building membrane roof. The estimated budget is $650,000.

PLEASANT HILLS AUTHORITY

Allegheny County, Pennsylvania

FIFTY-NINTH ANNUAL REPORT

SEWER SYSTEM

OCTOBER 2017
REVISED DECEMBER 2017

CALCULATION OF SERVICE FEES

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Municipality	No. of Users	Water Usage In Gallons During Period
Baldwin Borough (Part)	3,321	62,800,962
Pleasant Hills Borough	3,147	96,898,811
South Park Township (Part)	1,369	30,231,330
Whitehall Borough (Part)	326	7,680,800
Total	8,163	197,611,903

On the basis of the estimated operating expenses during the year ending December 31, 2018, the total service fee for operating expenses and capital additions payable by the Contracting Municipalities during this year will be $2,450,800.

On September 1, 2012, the final debt service payment was made for the Guaranteed Sewer Revenue Bonds, Refunding Series of 2001. However, the Authority also borrowed $1,000,000 by bank loan in December 2005 for construction projects. The remaining balance of this loan of $326,458.69 was paid off by the Authority during year ending December 31, 2017.

The aggregate of the total service fees to be paid by the Contracting Municipalities during the year ending December 31, 2017 will be the sum of $2,450,800 and $326,458.69, which is $2,777,258.69, less Item I, Item II and Item III Credits.

On the basis of the above, the following proportionate shares and amounts are chargeable to each Contracting Municipality.

1. Gross Service Fees Chargeable to Contracting Municipalities (not including Item I, Item II and Item III Credits)

Municipality	2017 Percentage of Aggregate Gross Service Fee	Amount of Gross Service Fee
Baldwin Borough	31.7799 %	$882,610.03
Pleasant Hills Borough	49.0349 %	1,3561,826.02
South Park Township	15.2984 %	424,876.15
Whitehall Borough	3.8868 %	107,946.49
Totals	100.0000 %	$2,777,258.69

2. Item I - Credits for monies received by Pleasant Hills Authority from Contract Customers during period from October 1, 2016 through September 30, 2017 - $23,699.63

Municipality	2016 Percentage of Aggregate Gross Service Fee	Proportionate Share
Baldwin Borough	32.8290 %	$7,780.35
Pleasant Hills Borough	48.9436 %	11,599.46
South Park Township	14.5613 %	3,450.97
Whitehall Borough	3.6661 %	868.85
Totals	100.0000 %	$23,699.63

3. Item II - Credits for monies received by Pleasant Hills Authority from Commonwealth of Pennsylvania under P.L. Act 339 of August 20, 1953 for Operating Year 2016 - $0.00

Municipality	2016 Percentage of Aggregate Gross Service Fee	Proportionate Share
Baldwin Borough	32.8290 %	$ 0.00
Pleasant Hills Borough	48.9436 %	0.00
South Park Township	14.5613 %	0.00
Whitehall Borough	3.6661 %	0.00
Totals	100.0000 %	$ 0.00

4. Item III - Credits for Interest Earned on Monies in Excess of $500.000 in the Surplus Fund from January 1, 2016 to December 31, 2016 as computed by Authority's Auditor - $0.00

Municipality	2016 Percentage of Aggregate Gross Service Fee	Proportionate Share
Baldwin Borough	32.8290 %	$ 0.00
Pleasant Hills Borough	48.9436 %	0.00
South Park Township	14.5613 %	0.00
Whitehall Borough	3.6661 %	0.00
Totals	100.0000 %	$ 0.00

5. Total Credits to be applied to 2018 Service Fees

Baldwin Borough (Part)	$7,780.35
Pleasant Hills Borough	11,599.46
South Park Township (Part)	3,450.97
Whitehall Borough (Part)	868.85
Totals	$23,699.63

6. Net Service Fee Chargeable to Contracting Municipalities (Including Item I, Item II and Item III Credits)

Municipality	Gross Service Fee	Less Credits	Amount of Net Service Fee
Baldwin Borough	$882,610.03	$7,780.35	$874,829.68
Pleasant Hills Borough	1,361,826.02	11,599.46	1,350,226.56
South Park Township	424,876.15	3,450.97	421,425.18
Whitehall Borough	107,946.49	868.85	107,077.64
Total	$2,777,258.69	$23,699.63	$2,753,559.06