



LEHIGH COUNTY AUTHORITY

LCA Main Office:
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Agendas & Minutes Posted:
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BOARD MEETING AGENDA – June 27, 2022 – 12:00 p.m.

In-Person or Virtual Meeting Attendance Options Available: Meetings of the LCA Board of Directors will be held at LCA's Main Office as well as online using the Zoom Meetings application, which includes a telephone option. Public participation is welcomed both in-person or virtually. Instructions for joining the meeting online or by phone are posted on the LCA website in the morning on the day of the meeting, prior to the start of each meeting. You may also issue comment to LCA via email to LCABoard@lehighcountyauthority.org in advance of any meeting or view the meeting at a later time by visiting the LCA website. Please visit <https://www.lehighcountyauthority.org/about/lca-board-meeting-videos/> for specific instructions to join the meeting if you are attending virtually. If attending in-person at LCA's Main Office, please follow all safety and sanitation protocols posted.

1. Call to Order

- **NOTICE OF MEETING RECORDINGS**

Meetings of Lehigh County Authority's Board of Directors that are held at LCA's Main Office at 1053 Spruce Road, Wescosville, PA, may be recorded for viewing online at lehighcountauthority.org. Recordings of LCA meetings are for public convenience and internal use only and are not considered as minutes for the meeting being recorded, nor are they part of public record. Recordings may be retained or destroyed at LCA's discretion.

- *Public Participation Sign-In Request*

2. Review of Agenda / Executive Sessions

- Additions to Agenda (vote required if action will be taken)

3. Approval of Minutes

- *June 13, 2022 Board meeting minutes*

4. Public Comments

5. Action / Discussion Items:

FINANCE AND ADMINISTRATION

- *Resolution No. 6-2022-2: Suburban Division Wastewater Tapping Fees (Approval) (tan)* (digital Board packet, Resolution pages 7-38)

WATER

- *Water Filtration Plant: Filter Upgrade Project (Approval) (blue)* (digital Board packet, pages 39-42)

WASTEWATER

- *Regional Sewer Capacity & Wet-Weather Planning: Engineering & Program Support (Approval) (goldenrod)* (digital Board packet, pages 43-52)
- *Park Pump Station Phase 2 Upgrade (Approval) (purple)* (digital Board packet, pages 53-58)

6. Monthly Project Updates / Information Items (1st Board meeting per month) (digital Board packet, pages)

7. Monthly Financial Review (2nd Board meeting per month) (digital Board packet, pages 59-70) – **May 2022 report attached**

8. Monthly System Operations Overview (2nd Board meeting per month) (digital Board packet, page 71) – **May 2022 report attached**
9. Staff Comments
10. Solicitor's Comments
11. Public Comments / Other Comments
12. Executive Sessions
13. Adjournment

UPCOMING BOARD MEETINGS		
July 11, 2022	July 25, 2022	August 8, 2022

PUBLIC PARTICIPATION POLICY

In accordance with Authority policy, members of the public shall record their name, address, and discussion item on the sign-in sheet at the start of each meeting; this information shall also be stated when addressing the meeting. During the Public Comment portions of the meeting, members of the public will be allowed 5 minutes to make comments/ask questions regarding non-agenda items, but time may be extended at the discretion of the Chair; comments/questions regarding agenda items may be addressed after the presentation of the agenda item. Members of the public may not request that specific items or language be included in the meeting minutes.

REGULAR MEETING MINUTES

June 13, 2022

Notice of Preparation of Authority Meeting Minutes: Authority staff who are in attendance at each Authority Board meeting prepare a draft of the Minutes, which are subsequently distributed to all Board members for review. Board members may offer corrections prior to a vote of the full Board of Directors to approve the Minutes.

The Regular Meeting of the Lehigh County Authority Board of Directors was called to order at 12:01 p.m. on Monday, June 13, 2022. Chairman Brian Nagle presiding. The meeting was hybrid via in-person and video and audio advanced communication technology ("ACT"), using the Zoom internet application, including telephone option. Each Board member and other attendees of the meeting were able to hear each other attendee and be heard by each other attendee. The public could also participate in the meeting in-person or via ACT, using the Zoom internet application, including telephone option. A Roll Call of Board members present was taken. Brian Nagle, Richard Bohner, Norma Cusick, Jeff Morgan, and Amir Famili were present for the duration of the meeting. Ted Lyons and Scott Bieber arrived after the Roll Call, as noted below.

Solicitor Michael Gaul of KingSpry was present along with Authority Staff, Ed Klein, Chuck Volk, Phil DePoe, Andrew Moore, Chris Moughan, and Lisa Miller.

Chairman Nagle announced that the Board received their electronic and hard copies of the Board packet in advance and asked if anyone did not receive their copy of the packet. A copy of the packet is also available online.

REVIEW OF AGENDA

Ed Klein announced that there are no changes or additions to the agenda and no Executive Session planned.

Ted Lyons arrived at the meeting at 12:02 p.m.

APPROVAL OF MINUTES

May 23, 2022 Meeting Minutes

On a motion by Norma Cusick, seconded by Jeff Morgan, the Board approved the minutes of the May 23, 2022 Board meeting as presented (5-0). Richard Bohner abstained.

PUBLIC COMMENTS

None.

ACTION AND DISCUSSION ITEMS

SmartBall Inspection – 30" and 36" Transmission Main – East Side

Chris Moughan presented an overview of the project. An acoustic leak detection survey will be performed to identify and locate leaks along the steel water main starting at the Water Filtration Plant and ending at the East Side Reservoir. Numerous catch basins have been installed so that the SmartBall can be captured, and the data downloaded. The data will be used to help prioritize the Authority's ongoing water main replacements.

Scott Bieber arrived at the meeting at 12:06 p.m.

There was some discussion about the accuracy of the SmartBall leak detection system under different operating conditions. Jennifer McKenna, City of Allentown Compliance Office, commented that the City used Pure Technologies to conduct leak detection on the Schantz Spring transmission line in 2009, and the City was satisfied with the work.

On a motion by Amir Famili, seconded by Ted Lyons, the Board approved the Professional Services Authorization to Pure Technologies, a Xylem Brand, in the amount of \$70,500.00 (7-0).

A roll call vote was taken with the following votes cast:

Brian Nagle – yes
Scott Bieber – yes
Richard Bohner – yes
Norma Cusick – yes
Ted Lyons – yes
Jeff Morgan – yes
Amir Famili – yes

KISS System Modeling – Capacity Problem Definition

Phil DePoe presented an overview of the Kline's Island Sewer System (KISS) Capacity Problem Definition project, which will define the scope of system challenges to be addressed as part of the regional Act 537 Plan, currently under development. The work includes using the KISS system hydraulic model to identify where existing overflows are occurring during rain events and predict the extent of future overflows that may occur during the Act 537 planning period through the year 2050. During this phase of the project, specific rain events will be selected to be used as the basis of future alternatives analyses. Arcadis, who has been completing the KISS system modeling work, will use these selected rain events to document current and future flow conditions, including identifying the trunklines and interceptors subject to surcharges during dry weather conditions, and modeling the impact of various approaches to reducing or eliminating inflow and infiltration into the system. These steps need to be completed to fully define the scope of the current and future system problems, prior to modeling the alternatives for facility upgrades to address the problems.

There was some discussion about the scope of work, and whether this phase of the project will be used to identify the facility options for the Act 537 Plan. Mr. DePoe explained the scope of work and reviewed the five tasks included in the Arcadis proposal.

Board members asked about the method of selecting storm events to be used for the alternatives analysis. Mr. DePoe explained the process to be used and the involvement of the KISS municipalities in this project. As part of this phase of work, the goal is to select historical rain events that will represent a 3-year, 5-year, 10-year, and 20-year storm recurrence interval.

Some additional Board discussion followed.

On a motion by Jeff Morgan, seconded by Ted Lyons, the Board approved the Capital Project Authorization for the Kline's Island Sewer System Capacity Problem Definition, Planning Phase, in the amount of \$236,000.00, which includes the Professional Services Authorization to Arcadis in the amount of \$196,000.00 (7-0).

A roll call vote was taken with the following votes cast:

Brian Nagle – yes
Scott Bieber – yes
Richard Bohner – yes
Norma Cusick – yes
Ted Lyons – yes
Jeff Morgan – yes
Amir Famili – yes

Resolution 6-2022-1: Trexlertown Act 537 Special Study

Phil DePoe described the short-term solution to address an existing bottleneck in the Western Lehigh Interceptor in the Trexlertown area, known as the “Trexlertown Bottleneck.” A long-term solution will be developed as part of the future regional Act 537 Plan. The interim solution to the Trexlertown Bottleneck is to install a pump station near the Authority’s Pretreatment Plant in Fogelsville on the effluent side and pump approximately 2.5 million gallons per day into the Upper Macungie Trunk Line. This trunk line has adequate capacity to transport this additional flow and connects with the Western Lehigh Interceptor downstream of the bottleneck area.

Mr. DePoe explained that the Pa. Department of Environmental Protection (DEP) requires an Act 537 Special Study to be completed and submitted for DEP approval prior to completing the facility design. The Act 537 Special Study was presented to the Upper Macungie Planning Commission, Lower Macungie Planning Commission, and Lehigh Valley Planning Commission for review and comment. No comments were received. The Act 537 Special Study also required municipal approval by Resolution as part of the submission to DEP. He noted that the Authority is not required to take official action because the Resolutions must come from Upper Macungie and Lower Macungie Townships. However, due to the leadership role of the Authority, the Act 537 Special Study was posted to the Authority’s website for review and comment, and Mr. DePoe recommends the Board approve Resolution 6-2022-1 to indicate its support for the Study and project approach.

Solicitor Mike Gaul reviewed Resolution No. 6-2022-1. There was some Board discussion about other municipal agreements that will be required for this project to move forward, and the status of design work that is currently under way. Scott Bieber asked about the current status of sewer overflows in the Trexlertown area. Mr. DePoe explained that overflows have occurred in this area during wet-weather events, and the Western Lehigh Interceptor is surcharged in this area more often when the groundwater table is high.

On a motion by Scott Bieber, seconded by Amir Famili, the Board adopted Resolution No. 6-2022-1 approving adoption of the Trexlertown Act 537 Special Study (7-0).

A roll call vote was taken with the following votes cast:

Brian Nagle – yes
Scott Bieber – yes
Richard Bohner – yes
Norma Cusick – yes
Ted Lyons – yes
Jeff Morgan – yes
Amir Famili – yes

MONTHLY PROJECT UPDATES / INFORMATION ITEMS

Ed Klein highlighted the items shown in the report that will be on the agenda for the June 27th Board meeting.

STAFF COMMENTS

None.

SOLICITOR'S COMMENTS

None.

PUBLIC COMMENTS / OTHER COMMENTS

None.

EXECUTIVE SESSION

None.

ADJOURNMENT

There being no further business, the Chairman adjourned the meeting at 1:04 p.m.

Richard Bohner
Secretary

RESOLUTION No. 6-2022-2

(Duly adopted 27 June 2022)

A RESOLUTION ESTABLISHING THE VARIOUS COMPONENTS OF THE LEHIGH COUNTY AUTHORITY CAPITAL RECOVERY FEES FOR THE VARIOUS SUBURBAN DIVISION WASTEWATER SYSTEMS.

WHEREAS, Lehigh County Authority ("Authority") is a Pennsylvania municipal authority incorporated by the County of Lehigh in accordance with the Municipality Authorities Act to provide, among other services, wastewater and water services; and

WHEREAS, the Authority owns and/or operates water and wastewater systems throughout the Lehigh Valley of Pennsylvania, which systems are divided between its City of Allentown and Suburban Divisions; and

WHEREAS, the Authority charges certain rates and fees for use of and connection to its systems; and

WHEREAS, the Authority desires to establish its fees in accordance with §5607 of the Municipality Authorities Act, as amended by legislative action in December 2003, setting forth the appropriate fee components; and

WHEREAS, the Authority has calculated the allowable basis for such fees for certain of its wastewater systems in accordance with the attached calculations and its summary of the Suburban Division Wastewater Systems Capital Recovery Fees (as Attachment A), the current version of which, as well as any future changes thereto, is made a part hereof as if included herein; and

NOW THEREFORE, the Lehigh County Authority, pursuant to powers invested in it by the Pennsylvania Municipality Authorities Act, as amended, hereby resolves that:

1. The capital recovery fees for wastewater and water service in various of the Authority's wastewater and water systems as indicated and shown on Attachment A, *Lehigh County Authority Sewer System Tapping Fee Calculations for Suburban Wastewater Division, June 2022*, attached hereto and made a part hereof, are adopted effective 1 July 2022.

2. The Authority's Schedules of Rates and Charges shall be amended to reflect the fees hereby adopted, which fees shall be effective as of 1 July 2022.

3. All other Authority cost recovery fees, customer facilities fees, connection fees, and tapping fees, not contained in Attachment A hereto, continue in place, and are unaffected hereby.

On motion of _____, seconded by _____, this Resolution was adopted the 27th day of June 2022.

Tally of Votes: Yeas _____ Nays _____



I, Michael A. Gaul, Esquire, of the law firm of King, Spry, Herman Freund & Faul, LLC, Solicitor of Lehigh County Authority, do hereby certify that the foregoing is a true, correct and complete copy of a resolution which was duly adopted by the Authority at a public meeting of the Authority held on 27 June 2022, after notice thereof had been duly given as required by law, at which meeting a quorum was present and voting and which resolution No. 6-2022-2 is now in full force and effect on the date of this certification.

_____ Michael A. Gaul, Esquire King, Spry, Herman Freund & Faul, LLC Lehigh County Authority Solicitor	_____ Date
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Attest:

_____ Lisa J. Miller Executive Administrative Support Specialist	_____ Date
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Attachment A



LEHIGH COUNTY AUTHORITY

SEWER SYSTEM TAPPING FEE CALCULATIONS FOR SUBURBAN WASTEWATER DIVISION

June 2022

Keystone Alliance Consulting, Inc.



**LEHIGH COUNTY AUTHORITY – SUBURBAN WASTEWATER DIVISION
SEWER SYSTEM TAPPING FEE CALCULATIONS**

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EXHIBITS

Table 1 – Fee Schedule / Summary

Exhibit A – Interceptor System (Western Lehigh Interceptor Capacity) - Calculation of Sewer Tapping Fee

Exhibit B – Interceptor System (Western Lehigh Interceptor) - Calculation of Sewer Tapping Fee

Exhibit B-1 – Interceptor System (Western Lehigh Interceptor) – Capacity Assets

Exhibit C – Little Lehigh Relief Interceptor - Calculation of Sewer Tapping Fee

Exhibit D1 – Upper Milford Township - Calculation of Sewer Tapping Fee

Exhibit D1-1 – Upper Milford Township – Assets

Exhibit D1-2 – Upper Milford Township – Contributions

Exhibit D2 – Lower Macungie Connection to UMiT Interceptor - Calculation of Sewer Tapping Fee

Exhibit E – Heidelberg Heights System - Calculation of Sewer Tapping Fee

Exhibit F – Wynnewood System - Calculation of Sewer Tapping Fee

Exhibit G – Sand Springs Wastewater System - Calculation of Sewer Tapping Fee

Exhibit H – Western Weisenberg Wastewater System - Calculation of Sewer Tapping Fee

Exhibit I – Western Weisenberg Treatment Plant - Calculation of Sewer Tapping Fee

**LEHIGH COUNTY AUTHORITY – SUBURBAN WASTEWATER DIVISION
SEWER SYSTEM TAPPING FEE CALCULATIONS****SUMMARY OF FEES CALCULATED FOR
ACT 57 TAPPING FEE STUDY**

On December 19, 1990, the Pennsylvania State Legislature enacted Act 209 of 1990, which amends the Act of July 31, 1968 (P.L. 805, No. 247). One of the provisions of that law requires municipalities that assess tapping or similar water and sewer fees to comply with the requirements of Act 203 of 1990, which amended Section 4 of the Municipalities Authorities Act. Subsequently, on December 30, 2003, the aforesaid Act 203 was amended by Act 57 of 2003 (hereinafter referred to as the “Act”). The intent of the Act was to clarify certain sections of the aforesaid Act 203. As a result, no municipality is permitted to impose any connection fee, customer facilities fee, tapping fee or any similar fee, except as provided specifically under the Act. The various provisions of the Act are effective on or about June 30, 2005 or immediately upon any revision of a municipality’s tapping fee.

Similar to the aforesaid Act 203, the Act provides for the imposition of a tapping fee with three separate components that are designed to allow the Lehigh County Authority (the “Authority”) to recover specific capital costs. With the exception of assessments and to some extent reserve capacity fees, these are the only capital charges that an Authority may impose. Water rents and other charges that are intended to recover operation, maintenance, and debt service costs are unaffected by the Act.

The three components of the Authority’s tapping fee are (1) connection fee; (2) customer facilities fee; and (3) tapping fee. Parenthetically, it should be noted that the term “tapping fee” refers to a one of the three components of the overall fee as well as the overall fee itself. Generally, the connection fee focuses on the cost of the facilities between the sewer and the property line while the customer facilities fee deals with the cost from the property line to the building. The tapping fee component covers the costs associated with the sewer collection lines and capacity related facilities and may, under certain circumstances, include any projected capital improvement costs approved by the Authority. The tapping fee calculation is comprised of four parts – capacity, collection, special purpose and reimbursement. Each part of the tapping fee may not be applicable to every municipality. In the case of the Lehigh County Authority’s tapping fees for the Suburban Wastewater Division, the calculations are broken down by service area and the only pertinent parts are capacity and/or collection. The situations surrounding the imposition of the special purpose and/or reimbursement portions of the tapping fee are not applicable to the Authority at this point in time but may be imposed at a later date, if warranted.

The amounts shown in Table 1 reflect the tapping fees calculated for the Authority in accordance with Act 57 of 2003 and Act 209 of 1990. The Authority is justified in charging these figures or any lesser amount.

**LEHIGH COUNTY AUTHORITY – SUBURBAN WASTEWATER DIVISION
SEWER SYSTEM TAPPING FEE CALCULATIONS****SCHEDULE A****CONNECTION FEE COMPONENT**

The connection fee recovers the cost of the installation of the service line from the Authority's sewer to the property line or curb stop of the dwelling or building being connected. When the Authority does incur costs associated with the installation of these facilities, the fee may be calculated using either: (1) the actual costs of the particular installation; or (2) the average cost of similar installations or (3) the current/trended value of the average cost. The Authority may require this cost to be borne by the property owner. Costs associated with the connection fee may include materials, rental equipment, labor, inspection, engineering, legal and administration.

The Authority may also require, at its discretion, that an Escrow Account be established to cover any expenditure that the Authority may incur associated with making the connection. The amount of any Escrow can be based upon an estimate of actual costs or based upon a flat fee. In lieu of payment of a connection fee, the Authority may require the construction and dedication of these facilities by the property owner.

The Authority has selected to charge the average cost of similar installation to all customers. The costs of these connections have been calculated by the Authority staff and are shown in the fee schedule.

**LEHIGH COUNTY AUTHORITY – SUBURBAN WASTEWATER DIVISION
SEWER SYSTEM TAPPING FEE CALCULATIONS**

SCHEDULE B

CUSTOMER FACILITY FEE COMPONENT

This fee covers the cost of the facilities from the property line or curb stop to the proposed dwelling or building being connected to the Authority's sewer system.

The developer is responsible for the installation and cost of the service line beyond the curb stop. In the event that the service involves a single property, the installation and cost will be the responsibility of the property owner. However, whether the developer or the property owner installs the service line, the installation of the water meter is the responsibility of the Authority. The cost of the water meter and its installation is borne by the developer or the property owner and is paid to the Authority.

The Authority may be required to provide inspection to insure that the facilities have been installed properly and in conformance with its regulations. Any costs attendant to inspection will be passed onto the property owner.

The Authority has selected to charge the average cost of similar installation to all customers. The costs of these connections have been calculated by the Authority staff and are shown in the fee schedule.

**LEHIGH COUNTY AUTHORITY – SUBURBAN WASTEWATER DIVISION
SEWER SYSTEM TAPPING FEE CALCULATIONS****SCHEDULE C****TAPPING FEE COMPONENT**

The tapping fee is charged to allow the Authority to recover capital costs associated with the original construction and any additions or improvements to the Authority's sewer system as long as these facilities are still used on a regular basis. Facilities funded by others, such as a developer, and dedicated to the Authority are considered contributed capital and therefore not included in the computation of this fee.

All property owners or developers connecting to the Authority's sewer system are subject to a tapping fee, which may consist of up to four parts, which are calculated separately. The capacity part includes costs for the construction of those facilities that are related to the system's capacity, such as, interceptors, pumping stations, and the treatment plant. The collection part covers costs for the installation of collection mains. The remainder of the tapping fee includes the special purpose and the reimbursement parts. These are not applicable to the Lehigh County systems. Accordingly the tapping fee will focus on the capacity and collection parts only.

The Act provides for the determination of the capital costs of the system based on either:

- Original or historical costs of the system plus any capital improvement projects as well as the interest paid to date on any indebtedness associated with the system or
- Original costs trended to current dollars plus any capital improvement projects less any remaining indebtedness (principal only) associated with the system

The net capital costs (either original or trended) are divided by the capacity amount, resulting in the tapping fee per gallon. For Lehigh County sewer systems, the capacity is generally determined by the permitted capacity of the system or component in question.

The tapping fee calculation under the original cost and the trended original cost methodologies are presented for each component or system. The tapping fee per is disaggregated between the capacity and collection part of the sewer system where applicable. However, in some cases, such as interceptors there is no collection part. In some cases the asset details are shown on a separate exhibit if necessary.

Some of the capital costs incurred by the Authority have been funded by state and federal grants. These costs are, for the purposes of this calculation, considered to be contributed and therefore subtracted from the total capital costs incurred by the Authority. If necessary, the contribution details are shown on a separate exhibit in some cases.

Debt is either added or subtracted in some aspect from the calculation depending on the methodology. The interest paid on the loans is added to the original cost base while the outstanding principal on the loans is subtracted from the trended original cost base.

The Authority is permitted under the Act to choose the methodology that produces the highest tapping fee, which in the case of all the calculations contained in this report is the trended original cost approach.

The Act references two other aspects to the tapping fee component, specifically the special purpose part and the reimbursement part. These are not currently applicable to the Authority's tapping fees. However, if the situation arises, then either or both could be addressed and incorporated into the calculations.

The special purpose part is only applicable to a particular group of customers. The special purpose part is designed to recover the Authority's cost for facilities that service a special purpose or specific area, such as a pump station and transmission main. Fees would be separately calculated for each applicable group and applied to new users as appropriate. The same calculation methodology used for the capacity part and the collection part would apply. At this time, the Authority has not designated any special purpose part.

Where appropriate, a reimbursement component may be included in the tapping fee charged for new connections to facilities constructed by others for which a reimbursement is due to the person/developer constructing the facilities. Generally, this reimbursement will be defined in a written reimbursement agreement between the Authority and the person constructing the facilities. Typically such agreements reimburse the cost of the excess capacity available for use by future connections. At this time the Authority has no agreement(s) with any developer(s) which would require the calculation of a reimbursement part.

Table 1
LEHIGH COUNTY AUTHORITY
SUMMARY OF WASTEWATER FUND CAPITAL RECOVERY FEES
Updated June 2022

		Per Gallon			Per EDU			(1)	(2)	
		Existing	Maximum	New	Existing	Maximum	New	Gallons	Change	
Exhibit	Charge	12/13/2021	6/6/2022	Charge	12/13/2021	6/6/2022	Charge	per EDU	%	Costing Method
Interceptor System:										
A	Western Lehigh Interceptor Capacity	\$7.13	\$7.39	\$7.39	\$1,590.74	\$1,648.99	\$1,648.99	223.0	3.66%	Historical Trended Cost
B	Western Lehigh Interceptor	4.80	5.03	5.03	1,070.83	1,121.76	1,121.76	223.0	4.76%	Historical Trended Cost
C	Little Lehigh Relief Interceptor	1.83	1.93	1.93	407.90	429.93	429.93	223.0	5.40%	Historical Trended Cost
Total Western Lehigh Service Area		13.76	14.35	14.35	3,069.46	3,200.68	3,200.68			
Upper Milford System										
D1	Capacity	\$6.49	\$6.76	\$6.76	\$1,523.74	\$1,606.85	\$1,606.85	237.6	5.45%	Historical Trended Cost
D1	Collection	10.77	11.94	11.94	2,530.77	2,836.55	2,836.55	237.6	12.08%	Historical Trended Cost
D1	Planning Costs Capacity	0.67	0.70	0.70	157.90	165.57	165.57	237.6	4.85%	Historical Trended Cost
Lower Macungie										
D2	Capacity	\$2.99	\$3.10	\$3.10	\$713.37	\$703.22	\$703.22	226.8	-1.42%	Historical Trended Cost
	MFR Charge	1.79	1.86	1.86	428.02	421.93	421.93		-1.42%	
Heidelberg Heights Wastewater System										
E	Capacity	\$32.44	\$33.97	\$33.97	\$7,825.31	\$8,131.33	\$8,131.33	239.4	3.91%	Historical Trended Cost
E	Collection	4.16	4.31	4.31	1,003.78	1,032.78	1,032.78	239.4	2.89%	Historical Trended Cost
Wynnewood Terrace Wastewater System										
F	Capacity	\$80.99	\$86.46	\$86.46	\$19,535.57	\$20,154.63	\$20,154.63	233.1	3.17%	Historical Trended Cost
F	Collection	18.77	20.12	20.12	4,527.03	4,690.87	4,690.87	233.1	3.62%	Historical Trended Cost
Sand Springs Wastewater System										
G	Capacity	\$130.46	\$154.72	\$154.72	\$31,466.19	\$36,064.52	\$36,064.52	233.1	14.61%	Historical Trended Cost
	MFR Charge	84.80	100.57	100.57	20,453.02	23,441.94	23,441.94		14.61%	
G	Collection	4.11	4.26	4.26	991.38	993.17	993.17	233.1	0.18%	Historical Trended Cost
	MFR Charge	2.67	2.77	2.77	644.40	645.56	645.56		0.18%	
Western Weisenberg System										
H	LCA Land Fee	5.06	5.31	5.31	1,327.65	\$1,394.03	1,394.03	262.5	5.00%	Historical Trended Cost
H	LCA Collection Fee	3.08	3.19	3.19	807.91	\$837.50	837.50	262.5	3.66%	Historical plus Financing Costs
I	W Weisenberg Treatment Plant	\$47.11	\$48.84	48.84	12,367.26	\$12,820.18	12,820.18	262.5	3.66%	Historical Trended Cost

(1) The gallons per EDU figure to calculate the per gallon rate has changed with the 2010 census data

(2) Based on Charge Per EDU

Exhibit A
Lehigh County Authority - Suburban Wastewater Division
Lehigh County, Pennsylvania
Calculation of Sewer Tapping Fee
Interceptor System: Western Lehigh Interceptor Capacity

A. <u>Capacity Part</u>	<u>Original Cost</u>	<u>Trended Cost</u>
General Pool	\$1,152,500	\$1,761,466
Salisbury Portion	600,000	826,639
	<hr/>	<hr/>
	\$1,752,500	\$2,588,105
Less: Contributions	-	-
Net Capital	<hr/>	<hr/>
	\$1,752,500	\$2,588,105
Financing Costs for Capacity Part	-	-
Total Cost of Capacity Part	<hr/>	<hr/>
	\$1,752,500	\$2,588,105
Plus: Interest Paid On Debt	-	n/a
Less: Outstanding Debt	n/a	-
Eligible Cost for Capacity Part	<hr/>	<hr/>
	\$1,752,500	\$2,588,105
Total Capacity	350,000	350,000
Capacity Tapping Fee per Gallon	\$5.01	\$7.39
Gallon per EDU for Capacity Part (1)	223.0	223.0
Capacity Tapping Fee per EDU	\$1,116.59	\$1,648.99
(1) Total Gallons Per Day Per EDU Per Agreements	223	

Exhibit B
Lehigh County Authority - Suburban Wastewater Division
Lehigh County, Pennsylvania
Calculation of Sewer Tapping Fee
Interceptor System: Western Lehigh Interceptor

A. <u>Capacity Part</u>	<u>Exhibit Reference</u>	<u>Original Cost</u>	<u>Trended Cost</u>
Original Interceptor	B - 1	\$5,215,326	\$39,004,867
Phase II, Stage 1	B - 1	884,097	2,414,279
Phase II, Stage 2	B - 1	6,069,549	13,542,175
Phase II, Stage 4	B - 1	3,315,228	5,714,627
Flow Equaliz. Basin	B - 1	5,495,586	8,047,858
Iron Run PS & Force Main	B - 1	30,139	36,891
Wastewater Treatment Capacity	B - 1	601,763	835,934
WLI - WW Capacity Prg Dev	B - 1	1,063,791	1,363,675
Interceptor Conn	B - 1	1,984	2,655
Flow Monitoring Network	B - 1	419	568
Spring Creek PS Improvements	B - 1	574,566	696,187
Meter Stat. No. 5 Improvements	B - 1	172,176	226,148
Trexlerstown Wastewater Storage Facility	B - 1	227,167	261,993
		<hr/>	<hr/>
		\$23,651,791	\$72,147,857
Less: Contributions		2,536,420	18,969,615
Net Capital		<hr/>	<hr/>
		\$21,115,371	\$53,178,242
 Financing Costs for Capacity Part		 -	 -
Total Cost of Capacity Part		<hr/>	<hr/>
		\$21,115,371	\$53,178,242
 Plus: Interest Paid On Debt		 5,572,767	 n/a
 Less: Outstanding Debt		 n/a	 2,558,220
Eligible Cost for Capacity Part		<hr/>	<hr/>
		\$26,688,137	\$50,620,022
 Total Capacity		 10,063,000	 10,063,000
 Capacity Tapping Fee per Gallon		 \$2.65	 \$5.03
 Gallon per EDU for Capacity Part (1)		 223.0	 223.0
 Capacity Tapping Fee per EDU		 \$591.42	 \$1,121.76
 (1) Total Gallons Per Day Per EDU		 223	
Per Agreements			

Exhibit B - 1
Lehigh County Authority - Suburban Wastewater Division
Lehigh County, Pennsylvania
Interceptor System: Western Lehigh Interceptor
Capacity Assets

Expenditure	Placed in Service			Original Cost	Cost Index		Trended Current Replacement Cost
					Original	Current	
Original Interceptor							
Interceptor	Jan	1972	\$5,215,326	1753	13111	\$39,004,867	
Phase II, Stage 1							
Interceptor	May	1991	\$884,097	4801	13111	\$2,414,279	
Phase II, Stage 2							
Interceptor	Jan	1998	\$2,449,063	5852	13111	\$5,486,747	
PS Structure	Jan	1998	2,044,224	5852	13111	4,579,768	
Pump & Elect	Jan	1998	1,506,462	5852	13111	3,374,995	
Land	Jan	1998	44,915			44,915	
Metering	Jan	1998	24,885	5852	13111	55,751	
Phase II, Stage 4							
Interceptor	Sep	2005	\$3,247,728	7540	13111	\$5,647,127	
Land	Sep	2005	67,500			67,500	
Flow Equaliz. Basin							
	Dec	2010	\$5,488,588	8952	13111	\$8,037,859	
	Jan	2012	6,998	9176	13111	9,998	
Iron Run PS & Force Main							
	Prior to	Jan	2012	\$1,086,546	Excluded - Previously counted		
		Jan	2012	1,782	9176	13111	\$2,546
		Jan	2013	200	9437	13111	278
		Jan	2014	106	9664	13111	143
		Jan	2015	209	9972	13111	275
		Jan	2017	3,172	10542	13111	3,945
		Jan	2018	23,986	10878	13111	28,909
		Jan	2019	566	11206	13111	662
		Jan	2021	117	11628	13111	132
Wastewater Treatment Capacity							
		Jan	2012	\$350	9176	13111	\$500
		Jan	2013	600,369	9437	13111	834,048
		Jan	2014	298	9664	13111	404
		Jan	2015	747	9972	13111	982
WLI - WW Capacity Prg Dev							
	Prior to	Jan	2012	\$546,637	Excluded - Previously counted		
		Jan	2012	66,774	9176	13111	\$95,405
		Jan	2013	246,735	9437	13111	342,770
		Jan	2014	213,732	9664	13111	289,956
		Jan	2015	91,472	9972	13111	120,261
		Jan	2016	41,663	10133	13111	53,908
		Jan	2017	216	10542	13111	269
		Jan	2019	49,312	11206	13111	57,694
		Jan	2020	188,927	11392	13111	217,419
		Jan	2021	164,961	11628	13111	185,993

Exhibit B - 1
Lehigh County Authority - Suburban Wastewater Division
Lehigh County, Pennsylvania
Interceptor System: Western Lehigh Interceptor
Capacity Assets

Expenditure	Placed in Service		Original Cost	Cost Index Original Current		Trended Current Replacement Cost
Signatory I&I Program	Prior to	Jan 2012	\$2,291,652	Excluded - Repairs		
		Jan 2012	438,574	Excluded - Repairs		
		Jan 2013	400,188	Excluded - Repairs		
		Jan 2014	467,300	Excluded - Repairs		
		Jan 2015	324,637	Excluded - Repairs		
		Jan 2016	296,267	Excluded - Repairs		
		Jan 2017	491,531	Excluded - Repairs		
		Jan 2018	438,574	Excluded - Repairs		
		Jan 2019	630,016	Excluded - Repairs		
		Jan 2020	601,479	Excluded - Repairs		
		Jan 2021	64,092	Excluded - Repairs		
Interceptor Conn		Jan 2014	\$1,823	9664	13111	\$2,473
		Jan 2021	161	11628	13111	182
Flow Monitoring Network						
		Jan 2014	\$419	9664	13111	\$568
Spring Creek PS Improvements						
		Jan 2014	\$528	9664	13111	\$716
		Jan 2015	413	9972	13111	543
		Jan 2016	49,537	10133	13111	64,096
		Jan 2017	75,841	10542	13111	94,319
		Jan 2018	343,731	10878	13111	414,274
		Jan 2019	102,233	11206	13111	119,611
		Jan 2020	2,283	11392	13111	2,628
Meter Stat. No. 5 Improvements						
		Jan 2015	\$161,709	9972	13111	\$212,605
		Jan 2016	10,466	10133	13111	13,542
Test & Seal - Cycle 1						
		Jan 2016	\$534,283	Excluded - Repairs		
		Jan 2017	498,251	Excluded - Repairs		
		Jan 2018	45,209	Excluded - Repairs		
		Jan 2019	64,871	Excluded - Repairs		
		Jan 2020	27,065	Excluded - Repairs		
		Jan 2021	2,261	Excluded - Repairs		
Spring Creek Force Main AARV Rep						
		Jan 2017	\$12,751	Excluded - Repairs		
		Jan 2018	15,665	Excluded - Repairs		
		Jan 2019	22,929	Excluded - Repairs		
		Jan 2020	12,014	Excluded - Repairs		
High Flow Emergency Response						
		Jan 2018	\$96,725	Excluded - Maintenance		
		Jan 2019	1,929,162	Excluded - Maintenance		
		Jan 2020	8,455	Excluded - Maintenance		

Exhibit B - 1
Lehigh County Authority - Suburban Wastewater Division
Lehigh County, Pennsylvania
Interceptor System: Western Lehigh Interceptor
Capacity Assets

Expenditure	Placed in Service		Original Cost	Cost Index Original Current		Trended Current Replacement Cost
Trexlerstown Wastewater Storage Facility	Jan	2018	\$34,858	10878	13111	\$42,012
	Jan	2019	54,778	11206	13111	64,089
	Jan	2020	35,427	11392	13111	40,769
	Jan	2021	102,104	11628	13111	115,123
Rehab - Cycle 1	Jan	2019	\$2,147	Excluded - Maintenance		
	Jan	2020	279,080	Excluded - Maintenance		
	Jan	2021	187,016	Excluded - Maintenance		
Act 537 - CRB Tool	Jan	2020	\$60,260	11392	13111	\$69,348
	Jan	2021	133,347	11628	13111	150,349
Act 537 - Jacobs PTP	Jan	2020	\$99,070	11392	13111	\$114,010
	Jan	2021	245,215	11628	13111	276,480
Act 537 - AECOM PTP Phase 2	Jan	2020	\$108,613	11392	13111	\$124,993
	Jan	2021	283,012	11628	13111	319,096
Spring Creek Force Main AARV Rep	Jan	2021	\$933	Excluded - Repairs		
			\$24,581,307			\$73,202,132

Exhibit C
Lehigh County Authority - Suburban Wastewater Division
Lehigh County, Pennsylvania
Calculation of Sewer Tapping Fee
Little Lehigh Relief Interceptor

A. <u>Capacity Part</u>	<u>Original Cost</u>	<u>Trended Cost</u>
Project Costs - Dec. 1986	\$4,750,332	\$14,313,773
Park PS Improvements Ph1 - Prior to 2012	34,670	49,536
Park PS Improvements Ph1 - 2012	102,160	145,964
Park PS SCADA Gen - Prior to 2012	34,421	49,180
Park PS SCADA Gen - 2012	11,326	16,183
Park PS Improvements Ph1 - 2013	21,619	30,034
Park PS SCADA Gen - 2013	6,189	8,598
Park PS Improvements Ph1 - 2014	74	101
Park PS SCADA Gen - 2014	140,634	190,789
Park PS Improvements Ph1 - 2015	973	1,280
Park PS SCADA Gen - 2015	72,378	95,158
Park PS Improvements Ph1 - 2016	98,867	127,924
Park PS Force Main Upgrade - 2016	101	131
Park PS Improvements Ph1 - 2017	283,576	352,667
Park PS Force Main Upgrade - 2017	2,402	2,988
Park PS Force Main Extension - 2017	7,087	8,814
Park PS Improvements Ph1 - 2018	380,094	458,100
Park PS Force Main Upgrade - 2018	19,225	23,170
Park PS Force Main Extension - 2018	710	856
Park PS Improvements Ph1 - 2019	3,590,626	4,200,964
Park PS Force Main Upgrade - 2019	12,092	14,147
Park PS SCADA Gen - 2020	2,079	2,393
Park PS Improvements Ph1 - 2020	478,040	550,134
Park PS Force Main Upgrade - 2020	64,833	74,610
Park PS Force Main Extension - 2020	886	1,020
Park PS SCADA Gen - 2021	9,445	10,649
Park PS Improvements Ph1 - 2021	75,794	85,457
Park PS Force Main Upgrade - 2021	196,843	221,940
	\$10,397,478	\$21,036,560

Exhibit C
Lehigh County Authority - Suburban Wastewater Division
Lehigh County, Pennsylvania
Calculation of Sewer Tapping Fee
Little Lehigh Relief Interceptor

A. <u>Capacity Part</u>	<u>Original Cost</u>	<u>Trended Cost</u>
Total Costs	\$10,397,478	\$21,036,560
Less: Contributions	583,221	1,757,370
Net Capital	\$9,814,257	\$19,279,190
Financing Costs for Capacity Part	-	-
Total Cost of Capacity Part	\$9,814,257	\$19,279,190
Plus: Interest Paid On Debt	4,890,657	n/a
Less: Outstanding Debt	n/a	-
Eligible Cost for Capacity Part	\$14,704,914	\$19,279,190
Total Capacity	10,000,000	10,000,000
Capacity Tapping Fee per Gallon	\$1.47	\$1.93
Gallon per EDU for Capacity Part (1)	223.0	223.0
Capacity Tapping Fee per EDU	\$327.92	\$429.93
(1) Total Gallons Per Day Per EDU Per Agreements	223	

Exhibit D1
Lehigh County Authority - Suburban Wastewater Division
Lehigh County, Pennsylvania
Calculation of Sewer Tapping Fee
Upper Milford Township

A. <u>Capacity Part</u>	<u>Exhibit Reference</u>	<u>Original Cost</u>	<u>Trended Cost</u>
Rt. 29 Project Cost & Capitalized Interest	D1 - 1	\$987,650	\$2,803,938
		<hr/>	<hr/>
		\$987,650	\$2,803,938
Less: Contributions		-	-
Net Capital		<hr/>	<hr/>
		\$987,650	\$2,803,938
Financing Costs for Capacity Part		-	-
Total Cost of Capacity Part		<hr/>	<hr/>
		\$987,650	\$2,803,938
Plus: Interest Paid On Debt		46,904	n/a
Less: Outstanding Debt		n/a	188,956
Eligible Cost for Capacity Part		<hr/>	<hr/>
		\$1,034,554	\$2,614,982
Total Capacity		386,669	386,669
Capacity Tapping Fee per Gallon		\$2.68	\$6.76
Gallon per EDU for Capacity Part (1)		237.6	237.6
Capacity Tapping Fee per EDU		\$635.71	\$1,606.85

Exhibit D1
Lehigh County Authority - Suburban Wastewater Division
Lehigh County, Pennsylvania
Calculation of Sewer Tapping Fee
Upper Milford Township

B. <u>Collection Part</u>	<u>Exhibit Reference</u>	<u>Original Cost</u>	<u>Trended Cost</u>
Rt. 29 Project Cost & Capitalized Interest	D1 - 1	\$658,434	\$1,869,294
South 7th Street - Ph - 1	D1 - 1	204,222	313,189
South 7th Street - Ph - 2	D1 - 1	233,261	342,823
Ramer Heights Project & Capitalized Interest	D1 - 1	148,811	385,647
Vera Cruz Project	D1 - 1	4,284,326	6,120,119
Additional Project Costs	D1 - 1	327,137	384,380
		<hr/>	<hr/>
		\$5,856,191	\$9,415,452
Less: Contributions	D1 - 2	<hr/>	<hr/>
Net Capital		2,688,249	3,784,671
		<hr/>	<hr/>
		\$3,167,942	\$5,630,781
Financing Costs for Collection Part		-	-
Total Cost of Collection Part		<hr/>	<hr/>
		\$3,167,942	\$5,630,781
Plus: Interest Paid On Debt		251,846	n/a
Less: Outstanding Debt		n/a	1,014,588
Eligible Cost for Capacity Part		<hr/>	<hr/>
		\$3,419,788	\$4,616,194
Total Capacity		386,669	386,669
Collection Tapping Fee per Gallon		\$8.84	\$11.94
Gallon per EDU for Capacity Part (1)		237.6	237.6
Collection Tapping Fee per EDU		\$2,101.39	\$2,836.55

Exhibit D1
Lehigh County Authority - Suburban Wastewater Division
Lehigh County, Pennsylvania
Calculation of Sewer Tapping Fee
Upper Milford Township

C. <u>Capacity Part - Planning Costs</u>	<u>Exhibit Reference</u>	<u>Original Cost</u>	<u>Trended Cost</u>
Planning Costs		\$186,279	\$266,268
		<hr/>	<hr/>
		\$186,279	\$266,268
Less: Contributions		-	-
Net Capital		<hr/>	<hr/>
		\$186,279	\$266,268
Financing Costs for Capacity Part		1,184	3,175
Total Cost of Capacity Part		<hr/>	<hr/>
		\$187,463	\$269,443
Plus: Interest Paid On Debt		29,122	n/a
Less: Outstanding Debt		n/a	-
Eligible Cost for Capacity Part		<hr/>	<hr/>
		\$216,585	\$269,443
Total Capacity		386,669	386,669
Capacity Tapping Fee per Gallon		\$0.56	\$0.70
Gallon per EDU for Capacity Part (1)		237.6	237.6
Capacity Tapping Fee per EDU		\$133.09	\$165.57
(1) Average Household Size Per 2020 Census for Upper Milford		2.64	
Gallons Per Capita Per Day Allowed Per Act 57 of 2003		<hr/>	
Total Gallons Per Day Per EDU		237.6	

Exhibit D1 - 1
Lehigh County Authority - Suburban Wastewater Division
Lehigh County, Pennsylvania
Upper Milford Township

Capacity Assets

<u>Expenditure</u>	<u>Placed in Service</u>		<u>Original Cost</u>	<u>Cost Index</u> <u>Original Current</u>		<u>Trended Current Replacement Cost</u>
Rt. 29 Project Cost & Capitalized Interest Interceptor	Aug	1989	\$987,650	4618	13110.50	\$2,803,938
			\$987,650			\$2,803,938

Collection Assets

Expenditure	Placed			Cost Index		Trended Current Replacement Cost	
	in Service		Original Cost	Original	Current		
Rt. 29 Project Cost & Capitalized Interest							
Collector	Aug	1989	\$658,434	4618	13110.50	\$1,869,294	
Ramer Heights Project & Capitalized Interest							
Collector	Dec	1992	\$148,811	5059	13110.50	\$385,647	
South 7th Street - Ph - 1							
Collector	Jan	2009	\$204,222	8549	13110.50	\$313,189	
South 7th Street - Ph - 2							
Collector	Oct	2010	\$233,261	8921	13110.50	\$342,823	
Vera Cruz Project							
	Prior to	Jan	2012	\$2,495,282	9176	13110.50	\$3,565,213
		Jan	2012	1,765,192	9176	13110.50	2,522,074
		Jan	2013	18,891	9437	13110.50	26,243
		Jan	2014	1,572	9664	13110.50	2,132
		Jan	2015	3,390	9972	13110.50	4,457

Exhibit D1 - 1
Lehigh County Authority - Suburban Wastewater Division
Lehigh County, Pennsylvania
Upper Milford Township

Capacity Assets

Expenditure	Placed		Original Cost	Cost Index		Trended Current
	in Service			Original	Current	Replacement Cost
Additional Project Costs						
South 7th Street Extension	Jan	2012	\$458	9176	13110.50	\$654
South 7th Street Extension - Ph - 2	Jan	2012	2,701	9176	13110.50	3,859
Weaver - 4751 Mill Road	Jan	2012	1,650	9176	13110.50	2,357
Weaver - 4751 Mill Road	Jan	2013	8,555	9437	13110.50	11,884
Fields at Indian Creek	Jan	2014	2,048	9664	13110.50	2,779
Weaver - 4751 Mill Road	Jan	2015	150	9972	13110.50	198
Fields at Indian Creek	Jan	2015	4,433	9972	13110.50	5,828
Fields at Indian Creek	Jan	2016	25,037	10133	13110.50	32,395
Fields at Indian Creek	Jan	2017	12,829	10542	13110.50	15,954
Kohler Tract - Sewer	Jan	2017	442	10542	13110.50	549
New Tripoli Bank - Buckeye	Jan	2017	809	10542	13110.50	1,006
Fields at Indian Creek	Jan	2018	266	10878	13110.50	320
Kohler Tract - Sewer	Jan	2018	39,264	10878	13110.50	47,322
New Tripoli Bank - Buckeye	Jan	2018	226	10878	13110.50	273
Fields at Indian Creek - Ph 3	Jan	2018	6,536	10878	13110.50	7,878
Weaver - 4251 Chestnut Street	Jan	2018	874	10878	13110.50	1,053
Fields at Indian Creek	Jan	2019	48	11206	13110.50	56
Kohler Tract - Sewer	Jan	2019	13,193	11206	13110.50	15,435
Fields at Indian Creek - Ph 3	Jan	2019	1,233	11206	13110.50	1,442
Weaver - 4251 Chestnut Street	Jan	2019	349	11206	13110.50	408
Fields at Indian Creek - Ph 4	Jan	2019	6,401	11206	13110.50	7,489
Kohler Tract - Sewer	Jan	2020	924	11392	13110.50	1,063
Fields at Indian Creek - Ph 3	Jan	2020	901	11392	13110.50	1,037
Fields at Indian Creek - Ph 4	Jan	2020	4,563	11392	13110.50	5,252
Kohler Tract - Sewer	Jan	2021	3,620	11628	13110.50	4,082
Fields at Indian Creek - Ph 3	Jan	2021	1,251	11628	13110.50	1,411
Fields at Indian Creek - Ph 4	Jan	2021	3,872	11628	13110.50	4,365
Manhole Lining	Jan	2021	184,506	11628	13110.50	208,030
			\$5,856,191			\$9,415,452

Exhibit D1 - 2
Lehigh County Authority - Suburban Wastewater Division
Lehigh County, Pennsylvania
Upper Milford Township

Expenditure	Contributions - Collection			Cost Index		Trended Current Replacement Cost
	Placed in Service		Original Cost	Original	Current	
South 7th Street - Ph - 1						
Federal Grant	Jan	2009	\$172,100	8549	13110.50	\$263,928
South 7th Street - Ph - 2						
Federal Grant	Oct	2010	\$206,649	8921	13110.50	\$303,712
Vera Cruz Project Costs thru 4/30/14						
Federal Grant	Dec	2012	\$1,309,500	9412	13110.50	\$1,824,076
State Grant	Dec	2012	1,000,000	9412	13110.50	1,392,956
			\$2,688,249			\$3,784,671

Exhibit D2
Lehigh County Authority - Suburban Wastewater Division
Lehigh County, Pennsylvania
Calculation of Sewer Tapping Fee
Lower Macungie Connections to UMiT Interceptor

A. <u>Capacity Part</u>		<u>Original Cost</u>	<u>Trended Cost</u>
Rt. 29 Project Cost	\$1,646,084		
% of Project applicable to LMT Interceptor	24.79%	\$408,064	\$1,158,494
		<hr/>	<hr/>
		\$408,064	\$1,158,494
Less: Contributions		<hr/>	<hr/>
Net Capital		-	-
		<hr/>	<hr/>
		\$408,064	\$1,158,494
Financing Costs for Capacity Part		<hr/>	<hr/>
Total Cost of Capacity Part		-	-
		<hr/>	<hr/>
		\$408,064	\$1,158,494
Plus: Interest Paid On Debt		-	n/a
Less: Outstanding Debt		n/a	-
Eligible Cost for Capacity Part		<hr/>	<hr/>
		\$408,064	\$1,158,494
Total Capacity		373,632	373,632
Capacity Tapping Fee per Gallon		\$1.09	\$3.10
Gallon per EDU for Capacity Part (1)		226.8	226.8
Capacity Tapping Fee per EDU		\$247.70	\$703.22
(1) Average Household Size Per 2020 Census for Lower Macungie Twp		2.52	
Gallons Per Capita Per Day Allowed Per Act 57 of 2003		90	
Total Gallons Per Day Per EDU		<hr/>	<hr/>
		226.8	

Exhibit E
Lehigh County Authority - Suburban Wastewater Division
Lehigh County, Pennsylvania
Calculation of Sewer Tapping Fee
Heidelberg Heights System

A. <u>Capacity Part</u>	<u>Original Cost</u>	<u>Trended Cost</u>
Project Costs	\$785,141	\$1,650,143
WWTP Upgrades - 2017	85,762	106,657
WWTP Upgrades - 2018	17,879	21,548
WWTP Upgrades - 2019	192,887	225,675
WWTP Upgrades - 2020	12,044	13,861
WWTP Upgrades - 2021	17,777	20,043
	<hr/>	<hr/>
	\$1,111,490	\$2,037,927
Less: Contributions	-	-
Net Capital	<hr/>	<hr/>
	\$1,111,490	\$2,037,927
Financing Costs for Capacity Part	-	-
Total Cost of Capacity Part	<hr/>	<hr/>
	\$1,111,490	\$2,037,927
Plus: Interest Paid On Debt	-	n/a
Less: Outstanding Debt	n/a	-
Eligible Cost for Capacity Part	<hr/>	<hr/>
	\$1,111,490	\$2,037,927
Total Capacity	60,000	60,000
Capacity Tapping Fee per Gallon	\$18.52	\$33.97
Gallon per EDU for Capacity Part (1)	239.4	239.4
Capacity Tapping Fee per EDU	\$4,434.85	\$8,131.33

Exhibit E
Lehigh County Authority - Suburban Wastewater Division
Lehigh County, Pennsylvania
Calculation of Sewer Tapping Fee
Heidelberg Heights System

B. <u>Collection Part</u>		<u>Original Cost</u>	<u>Trended Cost</u>
Project Costs		\$123,157	\$258,841
I&I Removal Project - 2016	Excluded - Repairs	57,099	
I&I Removal Project - 2017	Excluded - Repairs	1,729	
I&I Removal Project - 2018	Excluded - Repairs	352,619	
I&I Removal Project - 2019	Excluded - Repairs	385,652	
I&I Removal Project - 2020	Excluded - Repairs	221,028	
I&I Removal Project - 2021	Excluded - Repairs	418,477	
		<hr/>	<hr/>
		\$123,157	\$258,841
Less: Contributions		-	-
Net Capital		<hr/>	<hr/>
		\$123,157	\$258,841
Financing Costs for Collection Part		-	-
Total Cost of Collection Part		<hr/>	<hr/>
		\$123,157	\$258,841
Plus: Interest Paid On Debt		-	n/a
Less: Outstanding Debt		n/a	-
Eligible Cost for Capacity Part		<hr/>	<hr/>
		\$123,157	\$258,841
Total Capacity		60,000	60,000
Collection Tapping Fee per Gallon		\$2.05	\$4.31
Gallon per EDU for Capacity Part (1)		239.4	239.4
Collection Tapping Fee per EDU		\$491.40	\$1,032.78
(1) Average Household Size Per 2020 Census for Heidelberg Township		2.66	
Gallons Per Capita Per Day Allowed Per Act 57 of 2003		90	
Total Gallons Per Day Per EDU		<hr/>	
		239.4	

Exhibit F
Lehigh County Authority - Suburban Wastewater Division
Lehigh County, Pennsylvania
Calculation of Sewer Tapping Fee
Wynnewood System

A. Capacity Part

	<u>Original Cost</u>	<u>Trended Cost</u>
Acquisition Costs	\$247,393	\$484,458
System Improvements - Prior to 2012	3,990	5,701
System Improvements - 2012	32,645	46,643
System Improvements - 2013	55,264	76,774
System Improvements - 2014	67,642	91,765
WWTP Improvements - 2015	21,241	27,926
WWTP Improvements - 2016	5,080	6,574
WWTP Improvements - 2017	85,467	106,290
WWTP Improvements - 2018	80,619	97,165
WWTP Improvements - 2019	2,362,497	2,764,076
WWTP Improvements - 2020	1,155,877	1,330,195
WWTP Improvements - 2021	133,252	150,241
	<u>\$4,250,967</u>	<u>\$5,187,808</u>
Less: Contributions	-	-
Net Capital	<u>\$4,250,967</u>	<u>\$5,187,808</u>
Financing Costs for Capacity Part	-	-
Total Cost of Capacity Part	<u>\$4,250,967</u>	<u>\$5,187,808</u>
Plus: Interest Paid On Debt	-	n/a
Less: Outstanding Debt	n/a	-
Eligible Cost for Capacity Part	<u>\$4,250,967</u>	<u>\$5,187,808</u>
Total Capacity	60,000	60,000
Capacity Tapping Fee per Gallon	\$70.85	\$86.46
Gallon per EDU for Capacity Part (1)	233.1	233.1
Capacity Tapping Fee per EDU	\$16,515.01	\$20,154.63

Exhibit F
Lehigh County Authority - Suburban Wastewater Division
Lehigh County, Pennsylvania
Calculation of Sewer Tapping Fee
Wynnewood System

B. <u>Collection Part</u>	<u>Original Cost</u>	<u>Trended Cost</u>
Acquisition Costs	\$406,318	\$795,673
Riverside Prof Cntr Additions - 2012	132	189
Riverside Prof Cntr Additions - 2013	1,476	2,050
Wynnewood I&I Project - 2013	Excluded - Repairs ———— 24,096	
Wynnewood I&I Project - 2014	Excluded - Repairs ———— 17,020	
Wynnewood I&I Project - 2019	Excluded - Repairs ———— 5,120	
Wynnewood I&I Project - 2020	Excluded - Repairs ———— 28,413	
Main, PS & Force Main - 2015	645,390	848,518
Main, PS & Force Main - 2016	102,876	133,112
Main, PS & Force Main - 2017	691	859
Main, PS & Force Main - 2020	569	654
	<hr/> \$1,157,452	<hr/> \$1,781,056
Less: Contributions	-	-
Net Capital	<hr/> \$1,157,452	<hr/> \$1,781,056
Financing Costs for Collection Part	-	-
Total Cost of Collection Part	<hr/> \$1,157,452	<hr/> \$1,781,056
Plus: Interest Paid On Debt	48,176	n/a
Less: Outstanding Debt	n/a	573,625
Eligible Cost for Capacity Part	<hr/> \$1,205,628	<hr/> \$1,207,431
Total Capacity	60,000	60,000
Collection Tapping Fee per Gallon	\$20.09	\$20.12
Gallon per EDU for Capacity Part (1)	233.1	233.1
Collection Tapping Fee per EDU	\$4,683.87	\$4,690.87
(1) Average Household Size Per 2020 Census for North Whitehall Township	2.59	
Gallons Per Capita Per Day Allowed Per Act 57 of 2003	<hr/> 90	
Total Gallons Per Day Per EDU	233.1	

Exhibit G
Lehigh County Authority - Suburban Wastewater Division
Lehigh County, Pennsylvania
Calculation of Sewer Tapping Fee
Sand Spring Wastewater System

A. <u>Capacity Part</u>	<u>Original Cost</u>	<u>Trended Cost</u>
Acquisition Costs	\$88,048	\$158,196
System Improvements - 2005	6,358	11,333
WWTP Improvements - 2015	20,683	27,193
WWTP Improvements - 2016	14,546	18,821
WWTP Improvements - 2017	95,588	118,877
WWTP Improvements - 2018	54,764	66,004
WWTP Improvements - 2019	161,528	188,985
WWTP Improvements - 2020	3,600,767	4,143,799
WWTP Improvements - 2021	592,526	681,885
	<hr/>	<hr/>
	\$4,634,809	\$5,415,093
Less: Contributions	-	-
Net Capital	<hr/>	<hr/>
	\$4,634,809	\$5,415,093
Financing Costs for Capacity Part	-	-
Total Cost of Capacity Part	<hr/>	<hr/>
	\$4,634,809	\$5,415,093
Plus: Interest Paid On Debt	-	n/a
Less: Outstanding Debt	n/a	-
Eligible Cost for Capacity Part	<hr/>	<hr/>
	\$4,634,809	\$5,415,093
Total Capacity	35,000	35,000
Capacity Tapping Fee per Gallon	\$132.42	\$154.72
Gallon per EDU for Capacity Part (1)	233.1	233.1
Capacity Tapping Fee per EDU	\$30,867.83	\$36,064.52

Exhibit G
Lehigh County Authority - Suburban Wastewater Division
Lehigh County, Pennsylvania
Calculation of Sewer Tapping Fee
Sand Spring Wastewater System

B. <u>Collection Part</u>	<u>Original Cost</u>	<u>Trended Cost</u>
Acquisition Costs	\$58,452	\$105,021
System Improvements - 2010	5,980	9,053
System Improvements - 2012	3,256	4,652
System Improvements - 2013	21,882	30,399
	<hr/>	<hr/>
	\$89,570	\$149,125
Less: Contributions	-	-
Net Capital	<hr/>	<hr/>
	\$89,570	\$149,125
Financing Costs for Collection Part	-	-
Total Cost of Collection Part	<hr/>	<hr/>
	\$89,570	\$149,125
Plus: Interest Paid On Debt	-	n/a
Less: Outstanding Debt	n/a	-
Eligible Cost for Capacity Part	<hr/>	<hr/>
	\$89,570	\$149,125
Total Capacity	35,000	35,000
Collection Tapping Fee per Gallon	\$2.56	\$4.26
Gallon per EDU for Capacity Part (1)	233.1	233.1
Collection Tapping Fee per EDU	\$596.54	\$993.17
(1) Average Household Size Per 2020 Census for North Whitehall Township	2.59	
Gallons Per Capita Per Day Allowed Per Act 57 of 2003	90	
Total Gallons Per Day Per EDU	<hr/>	
	233.1	

Exhibit I
Lehigh County Authority - Suburban Wastewater Division
Lehigh County, Pennsylvania
Calculation of Sewer Tapping Fee
Western Weisenberg Treatment Plant

A. <u>Capacity Part</u>	<u>Original Cost</u>	<u>Trended Cost</u>
W. Weisenberg Treatment Plant Estimated Cost (1)	\$3,247,214	
Portion attributable to New Customers	43.7%	
 Total Attributable to New Customers	\$1,417,652	\$1,923,234
New Propane Tank	15,658	17,655
 Less: Contributions		-
Net Capital		<u>\$1,940,888</u>
 Financing Costs for Capacity Part		-
Total Cost of Capacity Part		<u>\$1,940,888</u>
 Plus: Interest Paid On Debt		n/a
 Less: Outstanding Debt		792,456
Eligible Cost for Capacity Part		<u>\$1,148,433</u>
 Prorated Share of Design Capacity		17,463
Capacity Tapping Fee per Gallon		\$65.76
 2014 Original Fee		\$36.00
2020 Existing Fee		\$42.44
2021 Recommended fee per gallon (1)		\$48.84

(1) The unrecovered capital costs will be captured through ongoing user fees.

The Plant fee per gallon is increased by the change in the ENR index since project completion in 2014.

Note: These fees exclude existing Western Weisenberg customers and the West Hills

Business Center, which is constructing the plant and contributing towards the plant.

Plant Allocation:	Total Allocation (gpd)	LCA Share
Western Weisenberg	10,537	-
Western Weisenberg - Remaining Commercial	1,463	1,463
West Hills Business Ctr	12,000	-
Weisenberg Elementary School	8,000	8,000
Bandit Truck Stop	3,000	3,000
Unallocated	5,000	5,000
	<u>40,000</u>	<u>17,463</u>
		<u>43.7%</u>

MEMORANDUM

Date: June 27, 2022

To: Lehigh County Authority Board of Directors
From: Charles Volk, Chief Capital Works Officer
Subject: Allentown Division - WFP Filter Upgrade Project: Design and Bid Phase

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization – Design and Bid Phase	\$239,792
2	Professional Services Authorization – Hazen & Sawyer (1), (2)	\$199,792

(1) Included in the Capital Project Authorization

(2) Does not include construction phase related engineering services

PROJECT BACKGROUND

LCA operates the Allentown Division Water Filtration Plant (WFP), located at 1300 Martin Luther King Jr. Drive in Allentown, Pennsylvania. The WFP utilizes coagulation, flocculation, clarification, filtration, and disinfection to treat a daily production range of 14 to 17 mgd. The finished water from the treatment process is augmented by flows from Schantz Spring and Crystal Spring, which only receive disinfection in the clearwell.

The filtration process consists of eight (8) dual media gravity filters constructed in the 1950s. Major filter components have exceeded their useful service life, including the existing clay tile underdrains. This project was identified as a “near term” project in the 2017 Allentown Water System Master Plan.

Hazen & Sawyer (Hazen) was retained to perform preliminary engineering for the filter rehabilitation project, based on the firm’s significant experience in water treatment engineering and familiarity with the WFP. The recommendations of the February 2022 Hazen Conceptual Design Technical Memorandum will be used as the basis of design. Hazen is the preferred firm to perform design phase services.

PROJECT SCOPE

The Filter Upgrade project consists of the following major components:

- 1) Removal of existing clay tile underdrains and replacement with new stainless-steel equipment
- 2) Installation of an air scour filter backwash system. including blowers and air piping
- 3) Removal of media and damaged and obsolete equipment
- 4) Filter basin structural repairs
- 5) Replacement of media
- 6) New control system with SCADA integration
- 7) Start-up and training

An important element to be included in the design documents will be the required phasing of construction, in order to maintain treatment capacity and minimize operational interruptions.

FINANCIAL

This Project will be funded by the LCA Allentown Division. Pending City review and approval of the Conceptual Design Submission, this project will be classified as a Major Capital Improvement, thereby allowing the cost to be recovered via a capital cost recovery charge in the LCA Allentown Division and the LCA Suburban Division via the Water Supply Agreement. However, the City has committed American Rescue Plan Act funds for this project to reduce/eliminate the rate impact of this project for Allentown customers.

PROJECT STATUS

The Conceptual Design was submitted to the City of Allentown Office of Compliance on 5/11/22 in accordance with the Lease requirements. The City issued review comments to LCA in a letter dated 6/10/22. LCA issued a response to the City's review comments in a letter dated 6/16/22. Design phase will commence following Board authorization.

THIS APPROVAL – DESIGN AND BID PHASE ENGINEERING

Lehigh County Authority (LCA) intends to retain the services of Hazen to provide the design and bid related services. The following table summarizes the professional services to be performed under this approval:

Professional Services ⁽¹⁾
1. Attend kick-off meeting and perform field survey
2. Attend progress meetings and provide monthly updates
3. Preparation and submission of 30%, 60%, 90% and final design; conduct design phase workshops at each stage.
4. Prepare construction cost estimates at 30%, 60%, 90% and final design completion stages.
5. Prepare bid-ready plans and specifications.
6. Administer the PennBID process
7. Respond to bidder RFIs, issue addenda as required
8. Attend pre-bid meeting
9. Bid tabulation and review

(1) For Design and Bid Phase Only

PROJECT SCHEDULE

The project is anticipated to begin design in July 2022. The project is anticipated to be bid ready by the end of January 2023, with bid phase and an anticipated two-year construction period to follow.

FUTURE AUTHORIZATIONS – CONSTRUCTION PHASE

Following Design and Bid phase completion, LCA Board authorization of construction phase is anticipated in Q1 of 2023.

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	<u>AD-W-22</u>	BUDGET FUND:	<u>Allentown Div\Water\Capital</u>
PROJECT TITLE:	<u>Allentown Division – WFP Filter Upgrade Project: Design and Bid Phase</u>		PROJECT TYPE:
THIS AUTHORIZATION:	<u>\$239,792</u>	<input type="checkbox"/>	Construction
TO DATE (W/ ABOVE)	<u>\$279,691</u>	<input checked="" type="checkbox"/>	Engineering Design
		<input type="checkbox"/>	Equipment Purchase
		<input type="checkbox"/>	Amendment No. 1

DESCRIPTION AND BENEFITS:

The Allentown Water Filtration Plant (WFP) filtration process consists of eight (8) dual media gravity filters constructed in the 1950s. Major filter components have exceeded their useful service life, including the existing clay tile underdrains. This project was identified as a “near term” project in the 2017 Allentown Water System Master Plan. Hazen and Sawyer will be used for the engineering design and bid phase services. The project is anticipated to be bid ready early in 2023 with bid phase to follow.

Please see attached LCA Board Memo for additional project details.

Authorization Status:

Requested This Authorization	
Design and Bid Phase	
Staff	\$25,000
Engineering Consultant – Hazen & Sawyer	\$199,792
Contingencies	\$15,000
Total This Authorization	\$239,792

Future Authorizations	
Construction Phase	TBD

Total Estimated Project	\$5,750,000
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REVIEW AND APPROVALS:

_____ Project Manager	_____ Date	_____ Chief Executive Officer	_____ Date
_____ Chief Capital Works Officer	_____ Date	_____ Chairman	_____ Date



Lehigh County Authority

1053 Spruce Street * P.O. Box 3348 * Allentown, PA 18106-0348
(610)398-2503 * FAX (610)398-8413 * Email: service@lehighcountyauthority.org

PROFESSIONAL SERVICES AUTHORIZATION

Professional: HAZEN AND SAWYER
One South Broad Street
Philadelphia, PA 19107

Date: June 27, 2022

Requested By: Charles Volk

Approvals

Department Head:

Chief Executive

Officer:

Allentown Division – Water Filtration Plant Filter Upgrade Project: Design and Bid Phase

Hazen and Sawyer (Hazen) will perform the design and bid related services for the Filter Upgrade project in accordance with their proposal dated June 10, 2022, including the following major items of work:

Professional Services ⁽¹⁾
1. Attend kick-off meeting and perform field investigations
2. Attend progress meetings and provide monthly updates
3. Preparation and submission of 30%, 60%, 90% completion and final design stages; conduct design phase workshops at each stage.
4. Prepare construction cost estimates at 30%, 60%, 90% completion and final design completion stages.
5. Prepare bid-ready plans and specifications.
6. Administer the PennBID process
7. Respond to bidder RFIs, issue addenda as required
8. Attend pre-bid meeting
9. Bid tabulation and review

(1) For Design and Bid Phase Only

Design and Bid Phase

This Authorization: \$199,792

Prior Authorization: \$38,899

Total Authorization to Date (not to be exceeded without further authorization): \$279,691

Time Table and Completion Deadline: Design completion and bid phase anticipated for Q1 of 2023.

(For Authority Use Only)

Authorization Completion:

Approval: _____ **Actual Cost:** _____ **Date:** _____

MEMORANDUM

Date: June 27, 2022

To: LCA Board of Directors
Liesel Gross, CEO

From: Phil DePoe, Senior Planning Engineer

Subject: Regional Act 537 Plan Program Management: Planning Phase

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization: Regional Act 537 Plan Program Management, Planning Phase	\$310,000
1A	Professional Services Authorization: AECOM – Regional Act 537 Plan Program Management Amendment	\$270,000*

**Included in the Capital Project Authorization*

1. Regional Act 537 Plan Program Management

AUTHORIZATION OVERVIEW:

To begin the process of developing the long-term Regional Act 537 Plan, the evaluation of the LCA Pretreatment Plant (PTP) Alternatives was identified as an immediate need to assist with completing the full alternatives analysis to be completed by March 2025. AECOM began this initial effort in late 2019 and was fully authorized in August 2020. Work has progressed since August of 2020 and additional authorization requests have been granted through June 2022. An additional authorization is requested to continue the Act 537 Plan Program Management planning efforts. This Program Management effort will cover a work scope that continues to evolve. An emphasis on finalizing the preferred PTP option for modeling purposes is also a major driver for this request.

FINANCIAL:

The LCA Suburban Division will fund these 2022 services.

CURRENT STATUS:

In late 2019, AECOM was re-engaged to review the current Act 537 planning status. From August 2020 through October 2021, AECOM was authorized (along with major assistance from Jacobs) to perform a detailed Pretreatment Plant direct discharge analysis for Act 537 planning. In February 2022, AECOM was authorized to continue Act 537 planning efforts. The continuation of the Program Management services from June 2022 and beyond are pending approval of this authorization.

Major program management deliverables to date (since August 2019) include the following:

- Western Lehigh Interceptor Capacity Planning – Phase 1 Report (March 2020)
- DRBC Regulatory Assessment – LCA Direct Discharge to the Lehigh River (August 2020)
- Revenue Planning Tool Phase 1 Memo (November 2020)
- Act 537 Plan Report: Lehigh River PTP Direct Discharge Force Main (June 2021)
- BioActiflo Treatability Study (KIWWTP and PTP) (July 2021)
- Revenue Planning Tool, Phase 2, and User's Manual (July 2021)
- CEPT Bench Study at PTP (September 2021)
- Act 537 Plan – AECOM Report 2021 (October 2021)

- BioActiflo Additional Study (January 2022)
- Miscellaneous items
 - 2022 DRBC Meeting Notes (February 2022)
 - PTP Fact Sheet (June 2022)
 - Microsoft Project Schedule (June 2022)
 - Extensive review of 1981 Agreement (ongoing)

THIS APPROVAL – PLANNING PHASE:

AECOM serves as the Program Manager for the Regional Act 537 Plan development and this authorization will continue their current role. These services include, but are not limited to, the following:

Professional Services
<ul style="list-style-type: none"> • Continued support as the PTP direct discharge option is further refined
<ul style="list-style-type: none"> • Continued support with discussions around KIWWTP associated with scenario planning and wet weather needs
<ul style="list-style-type: none"> • Continued support with further review and evaluation around collection and conveyance system needs, including engineering review of KISS hydraulic model outputs
<ul style="list-style-type: none"> • On-going general program management support
<ul style="list-style-type: none"> • Attendance at various KISS and regulatory meetings
<ul style="list-style-type: none"> • Update cost estimates as appropriate

Major program management deliverables within this current authorization request include the following:

- PTP value engineering technical memorandum
- Preparation of anticipated KIWWTP NDPES permit
- Summary of process modeling evaluations (if warranted)
- Development of conceptual sketch for proposed use of KIWWTP Outfall 002
- Preparation of conceptual layout for equalization storage needs for the Spring Creek Pump Station alternatives
- Refinement of wet weather scenarios and alternatives planning
- Updated permitting technical memorandum (PTP and KIWWTP outfalls)
- Compilation of updated opinions of probable construction
- Updating the Microsoft Project Act 537 schedule
- Documentation of key findings, decisions, and analyses completed for future inclusion in Act 537 Plan submission

CONSULTANT SELECTION PROCESS:

AECOM was retained by LCA during the 2013-2016 Act 537 era timeframe to investigate wastewater treatment capacity options for the Western Lehigh service area. In late 2019, they were once again retained to compile a status update on recent planning efforts. And in August 2020, AECOM was authorized as Program Manager to perform a detailed analysis on the PTP direct discharge option (along with many other items). Due to their intimate knowledge acquired through the prior planning process, LCA recommends AECOM be retained once again for this current phase of the Regional Act 537 Plan development.

SCHEDULE:

This authorization is a continuation of their Regional Act 537 Plan Program Management services granted by the Board in August 2020 and February 2022. This Act 537 planning work is mandated by PA DEP to be submitted by March 2025.

FUTURE AUTHORIZATIONS:

Future authorizations are anticipated in 2023 and beyond, spanning throughout the remainder of the Regional Act 537 planning process.



AECOM
625 West Ridge Pike, Suite E-100
Conshohocken, PA 19428

610.832.3500 tel
610.832.3501 fax

June 20, 2022

Ms. Liesel M. Gross
Chief Executive Officer
Lehigh County Authority
1053 Spruce Street
Allentown, PA 18106-0348

RE: **Lehigh County Authority Act 537 Support Proposal, 2022 Second Amendment**

Dear Ms. Gross,

AECOM Technical Services, Inc. (AECOM) appreciates the opportunity to provide this proposal to Lehigh County Authority (the “Authority”, or “LCA”) for continuing our support of the ACT 537 planning effort as described herein. The prior Phase ran through May 2022 and we have been continuing our support of LCA with the Program based on your direction. As such, we are requesting additional budget to continue our support as Program Manager now through 2022 based on the additions in scope to the prior Professional Services Authorization titled: **Regional Act 537 Plan Alternatives Analysis: Pretreatment Plant Upgrade Option - Planning Phase (signed August 24, 2020).**

As this work progresses and as additional information is better understood from the previously completed work under this scope, new meaningful tasks have been requested by LCA to further this effort. AECOM will continue to collaborate with the LCA and your other consultant partners and act as the overall Act 537 Program Manager to facilitate efforts, provide coordination, and provide critical technical insight for specific components to meet LCA’s program goals. The following section identifies the details of the anticipated proposed scope of work for 2022. We recognize that priorities shift as new information is made available and AECOM will continue to work closely with LCA and communicate regularly to monitor progress and any alterations to the currently defined scope of work to focus our efforts and budget where LCA feels most necessary.

1.0 Scope of Work

The following sections outline AECOM’s anticipated additional scope elements, assumptions, schedule, and proposed budget for this calendar year 2022 of this Project:

Task A Pretreatment Plant Capacity and Direct Discharge Options

AECOM will continue providing support to LCA as the PTP direct discharge option is further refined based on flow and load refinements, process considerations, review of master planning efforts as prepared by Jacobs, new outfall criteria based on evolving input from DRBC and negotiations with the City on the Inter Municipal Agreement for the transfer of flow and load from KIWWTP to the PTP. The elements of this anticipated Work include:

- Review of additional scenarios including Boston Beer segregation for pre-treatment.
- Review projections for Boston Beer using the anticipated confidentiality agreement to better understand when and how they may expand their Lehigh Valley operations in the future.
- Review the implications of separation of residential flows (per ARCADIS modeling) in base case scenario to KIWWTP.

- Evaluate scenarios of partial treatment at the PTP for a new direct discharge of dry weather flows to comply with anticipated DRBC EEC effluent requirements. This approach has been identified as the 4/30 MGD concept which includes an additional 4 MGD train for effluent that meets DRBC discharge criteria for a new outfall as well as a wet weather management strategy with BIOACTIFLO considering the Spring Creek PS reversal.
- Evaluate dry and wet weather by-pass discharge of flows around Trexlertown interceptor area.
- Evaluate wet weather treatment with BIOACTIFLO at the PTP including Spring Creek PS reversal flows and direct discharge without dry weather improvements (0/30 scenario).
- Review Phosphorus data available in influent and effluent for consideration with DRBC regulations.
- Review process simulations for alternate effluent goals to find most cost-effective scenario
- Oversight of Jacobs Master Planning and definition of base case and direct discharge scenarios. Assist with another round of refinement.
- Evaluate opportunities to optimize PTP for LCA and current needs to improve performance: EQ / Primary Clarifiers / HPO RAS-REGEN.
- HPO Step Feed evaluation to eliminate BIOACTIFLO for wet weather. This includes conceptual modeling as AECOM recently performed on another HPO Plant of larger scale (develop conceptual mini-model).

Deliverables for this task will include:

1. Preparation of technical memorandum that captures proposed value additions to either base case or IPPDD scenarios proposed (HPO step feed, CEPT and Bio-augmentation).

Task B Kline's Island WWTP Coordination

AECOM will continue providing support to LCA with discussions around Kline's Island needs associated with the base case, IPPDD scenario and wet weather needs. The elements of this anticipated Work include:

- Additional review of alternate wet weather treatment scenarios at Kline's Island to reduce overall costs including running the two trickling filters in parallel (as developed by Kleinfelder).
- Coordination with Veolia and detailed discussion of their subsequent bench test protocols and results with City.
- Development of BIOACTIFLO costs for piloting and also capital considerations under Phase 1 and 2 wet weather flow scenarios for comparison with alternate concepts.
- Review Phosphorus data available in influent and effluent.
- Review of impacts to Kline's Island permitting (PADEP and DRBC) and meetings with the City of Allentown to discuss impacts associated proposed alternatives.
- Evaluate City concerns of co-use of Outfall 002 during scenario when 001 may be offline to KIWWTP such as auxiliary extension of proposed IPPDD force main over flood wall for emergency relief.

- Evaluate wet weather treatment with BIOACTIFLO and direct discharge at KIWWTP for 15 MGD from the PTP main plant and Spring Creek Pump Station (SCPS) by-pass wet weather flows of 25 MGD. This scenario evaluates wet weather treatment at KIWWTP and provisions for a dry weather by-pass around the stressed interceptors upstream of SCPS and no dry weather direct discharge considerations. This scenario has also been referred to as the 0/40 Option.
- Continued coordination with Kleinfelder and City of Allentown regarding wastewater planning implications related to dry weather flows / loads and wet weather flow scenarios.
- Leverage and update 2014 process model of KIWWTP to run up to two requested scenarios and issue summary of results for new dry weather simulations or proposed improvements.

Deliverables for this task will include:

1. Preparation of anticipated KIWWTP NPDES permits and future flow / load calculations based on regulatory input on alternatives considered.
2. Provide summary of process modeling evaluations.
3. Development of more detailed conceptual sketch for Outfall 002 arrangement considering emergency access for the City.

Task C PTP Effluent PS and Force Main Alignment

We have not budgeted any effort during 2022 for further refinement of the effluent force main routes aside from updating costs which is included in Task E. The two remaining alternative alignments can serve to convey flow from the PTP to the discharge in the remaining scenarios.

Task D ARCADIS Coordination

AECOM will continue providing support to LCA with further review and evaluation around collection and conveyance system needs associated with the near term 10 year horizon as well as 2050 conditions. The elements of this anticipated Work include:

- Investigate better understanding of flow conditions and opportunities to improve conveyance during base case in Q2CY22.
- Collaborate with ARCADIS on modeling, source reduction impacts and overall alternative evaluations for long-term needs.
- Request model simulations and review results with ARCADIS.
- Investigate conceptual layout for SCPS reversal equalization storage needs sizing and location.
- Assist with identification of project elimination vs. just reduction in scale for proposed improvements to attain more significant cost savings.

Deliverables for this task will include:

1. Preparation of a conceptual layout for EQ storage needs for the SCPS reversal during wet weather flow events based on sizing requirements provided by ARCADIS.
2. Refinement of wet weather scenarios for communication to KISS partners.

Task E General Coordination

- On-going general program management support (6 months at \$10,000/month)
- Attendance at monthly KISS meetings (6 in total).
- Update schedule in Microsoft Project to illustrate critical path components of submitting the ACT 537 plan based on the interdependencies of tasks.
- Evaluate the preliminary screening of alternatives for the wastewater improvements.
- Attendance at four meeting with the City of Allentown.
- Attendance at two meetings with PADEP.
- Support discussions with DRBC and PADEP regarding new Part II WQS permit and Ch 94 Implications of direct discharge. Preparation and attendance at one DRBC virtual meeting associated with an IPPDD scenario and implications to both outfalls.
- Update estimates 6 months out (after equipment / material pricing settles down).
- In addition, AECOM anticipates meetings with the WLI and at LCA regarding the project as part of the continuation of the wastewater planning effort, and more are anticipated as we collaboratively form the next steps and develop a sharper, more actionable timeline.

Deliverables for this task will include:

1. An updated permitting technical memorandum to summarize input received and implications to both IPPDD and KIWWTP outfalls.
2. Compilation of Updated opinions of probable construction costs for scenarios to append to prior 2022 Technical Memo.
3. Microsoft Project Schedule detailing the overall progression of ACT 537 Planning needs.

2.0 Assumptions

The proposal has been based on the following assumptions:

1. Local travel will be based on mileage from AECOM's Conshohocken Office to LCA's offices or facilities. No air travel or overnight stays are included.
2. Virtual meetings will be used in lieu of in-person meetings whenever feasible.

3.0 Schedule and Budget Estimate

AECOM is continuing services on this project and has already been in active consultation with the Authority staff through studies, meetings and conference calls in order to be responsive to LCA's questions and needs, avoid delays and enable initial planning and insight on the project objectives.

A proposed Phase 2 amendment budget to complete the additional requested scope of anticipated services extending through 2022 is indicated below:

Item	Estimated Budget
General Program Management Support (Task E)	\$ 111,000
Task A - D	\$ 159,000
Total (Labor)	\$ 270,000

Item	Estimated Hours	Estimated Budget
Labor	1,694	\$ 266,500
ODCs	-	\$ 3,500
TOTAL	1,694	\$ 270,000

AECOM proposes to conduct this project on a Time and Materials basis in accordance with the Engineering Services Agreement between Lehigh County Authority and AECOM Technical Services, dated February 21, 2020.

Once again, we appreciate the opportunity to provide this proposal to you and look forward to assisting the Authority with this important project. Please reply that we are authorized to proceed in accordance with this proposal for our records. If you have any questions or need additional information, please contact me at 302-379-0267 or chris.curran@aecom.com.

Sincerely,



Christopher Curran, PE
VP, Project Director

Cc: Mr. Philip DePoe, PE

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	SD-S-3	BUDGET FUND:	Suburban Div\Wastewater\Capital
PROJECT TITLE:	Regional Act 537 Plan Program Management – Planning Phase	PROJECT TYPE:	<input type="checkbox"/> Construction <input checked="" type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input type="checkbox"/> Amendment
THIS AUTHORIZATION:	\$310,000		
TO DATE (W/ ABOVE)	\$964,276		

DESCRIPTION AND BENEFITS:

To begin the process of developing the long-term Regional Act 537 Plan, the evaluation of the LCA Pretreatment Plant (PTP) Alternatives was identified as an immediate need to assist with completing the full alternatives analysis to be completed by March 2025. AECOM began this initial effort in late 2019 and was fully authorized in August 2020. Work has progressed since August of 2020 and additional authorization requests have been granted through June 2022. An additional authorization is requested to continue the Act 537 Plan Program Management planning efforts. This Program Management effort will cover a work scope that continues to evolve. An emphasis on finalizing the preferred PTP option for modeling purposes is also a major driver for this request.

Prior Authorizations: In late 2019, AECOM was re-engaged to review the current Act 537 planning status. From August 2020 through October 2021, AECOM was authorized (along with major assistance from Jacobs) to perform a detailed Pretreatment Plant direct discharge analysis for Act 537 planning. In February 2022, AECOM was authorized to continue Act 537 planning efforts.

This Authorization: Act 537 Program Management Support Amendment for the remainder of 2022 and beyond. See attached Board Memo and proposal for further project details.

Authorization Status:

Requested This Authorization	
Design Phase	
Staff	\$20,000
Contractor	\$0
Engineering Consultant	\$270,000
Contingency	\$20,000
Total This Authorization	\$310,000

Prior Authorizations	\$654,276
Subtotal (Prior + This Authorization)	\$964,276
<i>Future Authorizations (2023 and beyond)</i>	<i>TBD</i>

REVIEW AND APPROVALS:

_____ Project Manager	_____ Date	_____ Chief Executive Officer	_____ Date
_____ Chief Capital Works Officer	_____ Date	_____ Chairman	_____ Date



Lehigh County Authority

1053 Spruce Street * P.O. Box 3348 * Allentown, PA 18106-0348
(610)398-2503 * FAX (610)398-8413 * Email: service@lehighcountyauthority.org

PROFESSIONAL SERVICES AUTHORIZATION AMENDMENT NO. 5

Professional: AECOM
625 West Ridge Pike, Suite E-100
Conshohocken, PA 19428

Date: June 27, 2022

Requested By: Phil DePoe

Approvals

Department Head: _____

Chief Executive

Officer: _____

Suburban Division: Regional Act 537 Plan Program Management* - Planning Phase

To begin the process of developing the long-term Regional Act 537 Plan, the evaluation of the LCA Pretreatment Plant (PTP) Alternatives was identified as an immediate need to assist with completing the full alternatives analysis to be completed by March 2025. AECOM began this initial effort in late 2019 and was fully authorized in August 2020. Work has progressed since August of 2020 and additional authorization requests have been granted through June 2022. An additional authorization is requested to continue the Act 537 Plan Program Management planning efforts. This Program Management effort will cover a work scope that continues to evolve. An emphasis on finalizing the preferred PTP option for modeling purposes is also a major driver for this request.

This additional scope of services include, but are not limited to, the following:

Professional Services ⁽¹⁾
1. Continued support as the PTP direct discharge option is further refined
2. Continued support with discussions around KIWWTP associated with scenario planning and wet weather needs
3. Continued support with further review and evaluation around collection and conveyance system needs
4. On-going general program management support
5. Attendance at various KISS and regulatory meetings
6. Update cost estimates as appropriate

(1) Please reference the cover Memo for additional information.

- **Prior Program Manager Approvals:**
(\$39,696 in August 2019; \$203,500 in August 2020; \$37,100 in June 2021; \$40,000 in October 2021; \$100,000 in February 2022): **\$420,296**
- **This Program Manager Approval #6 (June 2022): \$270,000**
**(with a continued strong focus on the Pretreatment Plant Upgrade Option)*
- **Approval Amount (not to be exceeded without further authorization): \$690,296**

Time Table and Completion Deadline: As required to meet various critical deadlines as set forth in the proposal.

(For Authority Use Only)

Authorization Completion:

Approval: _____ **Actual Cost:** _____ **Date:** _____



Lehigh County Authority

1053 Spruce Road * P.O. Box 3348 * Allentown, PA 18106-0348
(610)398-2503 * FAX (610)398-8413 * Email: service@lehighcountyauthority.org

MEMORANDUM

Date: June 27, 2022

To: Lehigh County Authority Board of Directors

From: Amy Kunkel, P.E., Project Engineer and Charles Volk, P.E.

Subject: Suburban Division – Park Pump Station Phase 2 Upgrade - Construction Phase

MOTIONS /APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization – Construction Phase	\$2,177,476.25
2	Construction Contract – Electrical*: Albarell Electric, Inc.	\$1,830,000.25
3	Professional Services Authorization*: Construction Phase Engineering – Whitman, Requardt, and Associates, LLP (WRA)	\$151,876
4	Professional Services Authorization*: Construction Phase Inspection – Cowan Associates, Inc.	\$22,600

**Included in the Capital Project Authorization*

PROJECT BACKGROUND:

The Park Pump Station was constructed in the early 1980s and is located in Little Lehigh Parkway within the City of Allentown. The station conveys wastewater from ten municipalities to just upstream of Kline's Island Wastewater Treatment Plant and is a critical component of the sewerage infrastructure network. Phase 1 of the project was completed in 2020 and included replacement of the pumps and other mechanical, electrical and structural upgrades.

Phase 2 of the project will replace the existing original backup generator which has reached the end of its useful life and is slightly undersized for the upgraded station. Work includes the installation of a new natural gas sound attenuated generator, including the construction of a new concrete pad, retaining wall, fencing, demolition of the existing interior generator and

appurtenances (including the demolition of the roof mounted radiator system), exhaust system, day tank, 8000-gallon fuel tank, concrete pad and fuel lines. The contractors will coordinate with UGI for bringing natural gas service to the site.

PROJECT OBJECTIVE:

The purpose of this project is to replace the existing generator and perform other related upgrade work in order to allow the station to perform uninterrupted at its full capacity in the event of a power outage, enhancing station reliability, preventing catastrophic failure, and thereby preventing sanitary sewer overflows in the Little Lehigh Parkway.

FINANCIAL:

The Project will be funded by the LCA Suburban Division.

PROJECT STATUS

Construction Phase will begin upon board approval.

THIS APPROVAL – CONSTRUCTION PHASE

BIDDING SUMMARY

The project consists of two contracts. For this project the Electrical Contract was considered the prime contract since most of the work falls under that contract scope. The project was advertised for bid on May 9, 2022. A mandatory pre-bid meeting was held on May 17, 2022. Bids were received via PennBid on June 14, 2022, the results of which are as follows:

Electrical Contract	
Bidder	Bid Amount
Albarell Electric, Inc.	\$1,830,000.25
Garden Spot Electric, Inc.	\$1,830,500.00
BSI	\$2,223,575.00
General Contract	
Bidder	Bid Amount
No Bids	

No bids were submitted for the General Construction contract. We contacted the general contractors who attended the pre-bid meeting to get feedback on why they did not bid on the project. The general consensus was that material cost volatility and availability combined with the delay in starting construction (due to an almost one-year lead time on the generator) made accurate pricing difficult and risky.

The Electrical Construction bids were below the \$2.3 million Engineer's construction cost estimate. Albarell Electric, Inc. has completed numerous projects of similar scope and appears well qualified to perform the work. In order to keep this project on schedule, and not prolong the risk issues related to the old generator, our intent is to award the Electrical Contract, order the generator and rebid the General Contract closer to the date of delivery of the generator.

The Engineer's General construction cost estimate is \$500,000. When the contract is re-bid an

amendment to the Capital Project Authorization will be requested. The professional services requested with this CPA will cover both Electrical and General Construction contracts.

Note that there is a potential \$414,000 cost savings (in an Alternate deduct item on the bid form) for providing a generator with a slightly higher decibel rating, pending approval from the City of Allentown code department. If approved, the savings will be realized through a change order credit.

MATERIAL PROCUREMENT: N/A

PROFESSIONAL SERVICES

Construction engineering is to be performed by Whitman, Requardt & Associates, LLP, the design engineer for the project. Part-time inspection services are to be performed by Cowan Associates, Inc, who inspected Phase 1 of the Park Pump Station project.

SCHEDULE

Assuming approval at the June 27, 2022 Board meeting, it is anticipated that the project will be completed by January 2024, assuming a one year lead time for the generator.

FUTURE AUTHORIZATIONS

Award of Contract 2 – General Construction after rebidding.

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	SD-S-21-1	BUDGET FUND:	Suburban Div\Wastewater\Capital
PROJECT TITLE:	Park Pump Station Phase 2 Upgrade	PROJECT TYPE:	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Design <input type="checkbox"/> Equipment Purchase <input type="checkbox"/> Amendment
THIS AUTHORIZATION:	\$ 2,177,476.25		
TO DATE (W/ ABOVE)	\$ 2,425,930.25		

DESCRIPTION AND BENEFITS:

Park Pump Station Phase 2 Upgrade - Construction Phase:

This Capital Project Authorization is for construction phase of the Phase 2 Upgrade Project for the replacement of the original backup generator system and associated equipment. This project includes removal of the existing generator, fuel tank and slab, construction of a new concrete pad and retaining wall, installation of a natural gas generator, temporary bypass pumping and ancillary work. The objective of the project is to ensure station reliability and enhance resiliency of the pump station in the event of a power outage. This Authorization includes only the Electrical Contract (see Board Memo for details).

Previous Authorizations	
Design Phase	\$248,454

REQUESTED THIS AUTHORIZATION	
Construction Phase	
Staff	\$30,000
Professional Services:	
Construction Engineering - Whitman, Requardt & Associates, LLP	\$151,876
Construction Inspection – Cowan Associates, Inc.	\$22,600
Contract 1 – Electrical Construction – Albarell Electric, Inc.	\$1,830,000.25
UGI Service Installation	\$43,000
Contingency	\$100,000
Total This Authorization	\$2,177,476.25

Future Authorization	
Contract 2 – General Construction	\$500,000

Total Estimated Project	\$2,925,930.25
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REVIEW AND APPROVALS:

Project Manager	Date	Chief Executive Officer	Date
Chief Capital Works Officer	Date	Chairman	Date



Lehigh County Authority

1053 Spruce Road * P.O. Box 3348 * Allentown, PA 18106-0348
(610)398-2503 * FAX (610)398-8413

PROFESSIONAL SERVICES AUTHORIZATION

Professional: Whitman, Requardt and
Associates, LLP
1500 Market Street
Suite W2750
Philadelphia, PA 19102

Date: June 27, 2022

Requested By: Charles Volk

Approvals

Department Head:

Chief Executive

Officer:

Suburban Division- Park Pump Station Phase 2 Upgrade

Previous Authorizations- Design: \$209,618

This Authorization – Phase 2 - Construction: \$151,876

Whitman Requardt and Associates, LLP will provide construction engineering related services for the aforementioned project.

Professional Services
1. Attend Pre-construction and Progress meetings and prepare/distribute minutes.
2. Respond to design related requests for information (RFIs).
3. Log, review, and process shop drawing submittals.
4. Attend Substantial and Final Completion Inspections.
5. Perform site visits as required.

Cost Estimate (not to be exceeded without further authorization):

\$ 361,494

Timetable and Completion Deadline: As required to meet design timeline requirements

(For Authority Use Only)

Authorization Completion:

Approval: _____ **Actual Cost:** _____ **Date:** _____



Lehigh County Authority

1053 Spruce Road * P.O. Box 3348 * Allentown, PA 18106-0348
(610)398-2503 * FAX (610)398-8413 * Email: service@lehighcountyauthority.org

PROFESSIONAL SERVICES AUTHORIZATION

Professional: Cowan Associates, Inc.
120 Penn Am Drive
PO Box 949
Quakertown, PA 18951

Date: June 27, 2022

Requested By: Charles Volk

Approvals

Department Head:

Chief Executive

Officer:

Suburban Division - Park Pump Station Phase 2 Upgrade

This Authorization - Construction Phase: \$22,600

Cowan Associates, Inc. will provide part-time construction inspection related services for the aforementioned project.

Professional Services
1. Attend Pre-Construction Meeting
2. Attend Progress Meeting
3. Provide Part-Time Inspection Services
4. Review contractor applications for payment; recommend applications for payment.
5. Attend substantial and final completion inspections; compile punch lists for contractor work completion.
6. Compile and review as-built drawings from Contractors

Cost Estimate (not to be exceeded without further authorization): **\$22,600**

Timetable and Completion Deadline: As required to meet construction timeline requirements.

(For Authority Use Only)

Authorization Completion:

Approval: _____ **Actual Cost:** _____ **Date:** _____

**LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS
MAY 2022**

LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS - SUMMARY
For the Period Ended May 31, 2022

	Consolidated Financial Statements														
	Month					Year To Date					FULL YEAR				
	Actual	Q2 FC	Prior Year	FC Var	PY Var	Actual	Q2 FC	Prior Year	FC Var	PY Var	Q2 FC	Budget	Prior Year	Bud Var	PY Var
Income Statement															
Suburban Water	117,419	104,795	76,658	12,624	40,762	737,644	708,901	381,054	28,743	356,590	2,688,125	2,094,223	4,780,026	593,902	(2,091,901)
Suburban Wastewater	419,977	394,543	(27,530)	25,434	447,507	336,080	276,988	1,342,151	59,092	(1,006,072)	1,471,921	1,788,879	(2,252,986)	(316,959)	3,724,907
City Division	539,932	464,468	1,185,442	75,464	(645,510)	3,237,305	3,127,810	2,272,163	109,494	965,141	3,041,993	2,194,319	4,431,771	847,673	(1,389,778)
Total LCA	1,077,328	963,806	1,234,570	113,522	(157,242)	4,311,028	4,113,699	3,995,369	197,329	315,659	7,202,038	6,077,421	6,958,811	1,124,617	243,227
Cash Flow Statement															
Suburban Water	181,402	218,602	(19,773)	(37,201)	201,175	962,870	1,000,071	(387,718)	(37,201)	1,350,589	2,464,111	402,292	(2,927,414)	2,061,819	5,391,525
Suburban Wastewater	917,705	963,313	(702,534)	(45,608)	1,620,238	(549,825)	(504,217)	(580,373)	(45,608)	30,547	4,727,509	4,353,353	(1,133,048)	374,156	5,860,558
City Division	805,813	779,860	1,565,182	25,954	(759,368)	6,514,691	6,402,572	8,157,264	112,118	(1,642,573)	5,931,966	5,439,552	9,094,925	492,414	(3,162,959)
Total LCA	1,904,920	1,961,775	842,874	(56,855)	1,062,045	6,927,736	6,898,427	7,189,173	29,309	(261,437)	13,123,587	10,195,198	5,034,463	2,928,389	8,089,124
Debt Service Coverage Ratio															
Suburban Water	1.81	2.01	3.47	(0.20)	(1.66)	1.90	1.94	3.12	(0.03)	(1.22)	2.23	2.03	5.84	0.19	(3.62)
Suburban Wastewater	15.90	14.95	6.31	0.95	9.59	9.83	9.62	11.31	0.21	(1.48)	10.73	10.82	6.56	(0.09)	4.17
City Division	2.08	2.06	2.60	0.01	(0.52)	2.16	2.16	1.98	0.01	0.18	1.87	1.67	1.79	0.20	0.08

LEHIGH COUNTY AUTHORITY
CONSOLIDATED FINANCIAL STATEMENTS
For the Period Ended May 31, 2022

STATEMENTS OF ACTIVITIES	Consolidated Financial Statements															
	Month				Year To Date				Q2 FULL YEAR FORECAST				Full Year Budget			
	Sub W	Sub WW	City	LCA	Sub W	Sub WW	City	LCA	Sub W	Sub WW	City	LCA	Sub W	Sub WW	City	LCA
Operating Revenues:																
User Charges	1,157,407	1,266,359	3,929,996	6,353,762	5,872,931	6,577,759	18,411,987	30,862,677	15,658,044	20,182,698	46,289,422	82,130,164	15,321,204	20,282,051	46,388,630	81,991,885
Connection & System Charges	30,782	472,463	130,737	633,982	115,530	871,539	1,801,560	2,788,629	938,533	962,706	4,574,143	6,475,382	933,476	875,254	4,488,054	6,296,784
Other Miscellaneous Revenues	3,035	75	6,485	9,595	10,940	135	23,235	34,310	30,553	1,745	61,901	94,200	33,078	2,247	67,475	102,800
Total Operating Revenues	1,191,224	1,738,897	4,067,219	6,997,340	5,999,401	7,449,433	20,236,782	33,685,616	16,627,130	21,147,149	50,925,466	88,699,746	16,287,758	21,159,552	50,944,159	88,391,469
Operating Expenses:																
Personnel	292,118	121,034	993,631	1,406,783	1,357,417	578,713	4,725,971	6,662,101	3,170,535	1,514,143	12,483,574	17,168,252	3,135,717	1,557,088	12,623,714	17,316,519
Shared Services - General & Administrative	60,963	25,461	161,026	247,450	218,053	92,920	629,028	940,000	695,641	219,897	1,734,961	2,650,499	777,905	230,022	1,872,369	2,880,296
Utilities	27,405	16,627	152,650	196,683	256,029	130,653	731,014	1,117,696	563,513	343,336	1,857,268	2,764,116	520,914	355,937	2,037,742	2,914,594
Materials and Supplies	29,874	28,466	130,160	188,500	327,981	127,478	751,634	1,207,093	815,518	494,287	2,188,454	3,498,529	816,837	496,550	2,334,092	3,647,479
Miscellaneous Services	310,486	714,517	113,009	1,138,012	1,339,069	2,659,471	452,158	4,450,698	4,411,338	6,656,930	1,932,710	13,000,978	4,728,534	6,804,359	2,184,774	13,717,667
Treatment and Transportation	-	(141,006)	-	(141,006)	-	787,547	-	787,547	-	4,072,170	13,800	4,085,970	-	3,844,405	13,800	3,858,205
Depreciation and Amortization	255,300	532,812	528,103	1,316,215	1,253,423	2,581,267	2,607,544	6,442,233	3,111,258	6,195,099	6,294,299	15,600,657	3,063,453	5,996,555	6,178,570	15,238,577
Major Maintenance Expenses	419	6,308	71,751	78,478	3,221	13,083	144,037	160,341	2,444	3,271	4,264,384	4,270,098	-	-	4,206,200	4,206,200
Other Miscellaneous	-	-	-	-	-	-	5,200	5,200	-	-	-	-	-	-	-	-
Total Operating Expenses	976,565	1,304,220	2,150,330	4,431,115	4,755,192	6,971,132	10,046,586	21,772,910	12,770,246	19,499,134	30,769,449	63,038,829	13,043,359	19,284,917	31,451,261	63,779,537
Net Operating Profit	214,659	434,678	1,916,889	2,566,225	1,244,209	478,301	10,190,196	11,912,707	3,856,884	1,648,016	20,156,017	25,660,916	3,244,399	1,874,636	19,492,897	24,611,931
Non-Operating Income (Expense)																
Interest Income	4,400	5,899	18,065	28,363	18,902	22,622	19,285	60,809	48,286	70,081	175,531	293,898	50,125	87,943	176,419	314,487
Interest (Expense)	(100,943)	(16,896)	(1,395,021)	(1,512,860)	(502,048)	(79,063)	(6,972,177)	(7,553,289)	(1,199,550)	(184,454)	(17,289,555)	(18,673,559)	(1,200,301)	(173,721)	(17,474,997)	(18,849,019)
Other Miscellaneous	(696)	(3,704)	-	(4,400)	(23,420)	(85,780)	-	(109,200)	(17,495)	(61,722)	-	(79,217)	-	22	-	22
Net Non-Operating Income (Expense)	(97,239)	(14,701)	(1,376,957)	(1,488,897)	(506,565)	(142,222)	(6,952,892)	(7,601,679)	(1,168,759)	(176,095)	(17,114,024)	(18,458,878)	(1,150,176)	(85,756)	(17,298,578)	(18,534,510)
Net Income (Loss)	117,419	419,977	539,932	1,077,328	737,644	336,080	3,237,305	4,311,028	2,688,125	1,471,921	3,041,993	7,202,038	2,094,223	1,788,879	2,194,319	6,077,421
CASH FLOW STATEMENT																
Cash Flows From Operating Activities																
Operating Revenues	1,191,224	1,738,897	4,067,219	6,997,340	5,999,401	7,449,433	20,236,782	33,685,616	16,627,130	21,147,149	50,925,466	88,699,746	16,287,758	21,159,552	50,944,159	88,391,469
Operating Expenses (ex D&A)	(721,265)	(771,408)	(1,622,227)	(3,114,900)	(3,501,769)	(4,389,865)	(7,439,042)	(15,330,676)	(9,658,988)	(13,304,034)	(24,475,150)	(47,438,172)	(9,979,907)	(13,288,362)	(25,272,691)	(48,540,960)
Non-Cash Working Capital Changes	295,836	795,708	(922,633)	168,912	(17,968)	(308,913)	(3,120,478)	(3,447,360)	144,009	(349,881)	509	(205,364)	(417,694)	(0)	2,197,478	1,779,783
Net Cash Provided by (Used in) Operating Activities	765,795	1,763,197	1,522,359	4,051,352	2,479,663	2,750,655	9,677,262	14,907,580	7,112,151	7,493,234	26,450,825	41,056,210	5,890,157	7,871,190	27,868,945	41,630,292
Cash Flows From Financing Activities																
Capital Contributions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Proceeds New Borrowing	-	-	-	-	-	-	-	-	3,075,000	-	1,200,000	4,275,000	3,075,000	-	1,200,000	4,275,000
Interest Payments	(594,656)	(11,812)	-	(606,469)	(599,394)	(59,566)	-	(658,960)	(1,201,467)	(179,353)	(11,565,086)	(12,945,906)	(1,200,301)	(173,721)	(12,799,531)	(14,173,553)
Principal Payments	(16,905)	(46,725)	-	(63,631)	(84,186)	(232,679)	-	(316,865)	(1,942,027)	(552,300)	(2,660,831)	(5,155,158)	(1,925,189)	(562,081)	(2,660,831)	(5,148,101)
Net Cash Provided by (Used in) Financing Activities	(611,561)	(58,538)	-	(670,099)	(683,580)	(292,245)	-	(975,825)	(68,495)	(731,653)	(13,025,917)	(13,826,064)	(50,490)	(735,802)	(14,260,362)	(15,046,654)
Cash Flows from Capital and Related Activities																
Non-Operating Income (Expenses)	(696)	(3,704)	-	(4,400)	(23,420)	(85,780)	(643,325)	(752,525)	(17,495)	(61,722)	(1,286,650)	(1,365,867)	-	22	(1,286,650)	(1,286,628)
Capital Expenditures, net	(227,535)	(299,151)	(734,610)	(1,261,297)	(1,079,695)	(1,194,077)	(2,538,531)	(4,812,304)	(4,610,018)	(2,377,431)	(6,381,823)	(13,369,272)	(5,487,500)	(2,870,000)	(7,058,800)	(15,416,300)
Net Cash Provided By (Used In) Capital and Related Activities	(228,231)	(302,854)	(734,610)	(1,265,696)	(1,103,115)	(1,279,857)	(3,181,856)	(5,564,828)	(4,627,513)	(2,439,153)	(7,668,473)	(14,735,139)	(5,487,500)	(2,869,978)	(8,345,450)	(16,702,928)
Cash Flows From Investing Activities																
Investments Converting To Cash	496,000	245,000	-	741,000	745,000	2,167,000	-	2,912,000	742,682	4,599,000	-	5,341,682	-	-	-	-
Purchased Investments	(245,000)	(735,000)	-	(980,000)	(494,000)	(3,918,000)	-	(4,412,000)	(743,000)	(4,264,000)	-	(5,007,000)	-	-	-	-
Interest Income	4,400	5,899	18,065	28,363	18,902	22,622	19,285	60,809	48,286	70,081	175,531	293,898	50,125	87,943	176,419	314,487
Net Cash Provided By (Used In) Investing Activities	255,400	(484,101)	18,065	(210,637)	269,902	(1,728,378)	19,285	(1,439,191)	47,968	405,081	175,531	628,581	50,125	87,943	176,419	314,487
FUND NET CASH FLOWS	181,402	917,705	805,813	1,904,920	962,870	(549,825)	6,514,691	6,927,736	2,464,111	4,727,509	5,931,966	13,123,587	402,292	4,353,353	5,439,552	10,195,198
DEBT SERVICE RATIO																
Debt Service Ratio (Indenture Based)																
Total Operating Revenues	1,157,407	1,266,359	3,929,996	6,353,762	5,872,931	6,577,759	18,411,987	30,862,677	15,658,044	20,182,698	46,289,422	82,130,164	15,321,204	20,282,051	46,388,630	81,991,885
Total Operating Expenses (Cash Based)	(721,265)	(771,408)	(1,622,227)	(3,114,900)	(3,501,769)	(4,389,865)	(7,439,042)	(15,330,676)	(9,658,988)	(13,304,034)	(24,475,150)	(47,438,172)	(9,979,907)	(13,288,362)	(25,272,691)	(48,540,960)
Interest Income	4,400	5,899	18,065	28,363	18,902	22,622	19,285	60,809	48,286	70,081	175,531	293,898	50,125	87,943	176,419	314,487
Annual Lease Payment (City)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-Operating Revenues (Expenses)	33,121	468,835	137,222	639,178	103,051	785,894	1,824,795	2,713,740	951,591	902,729	4,636,045	6,490,365	966,554	877,523	4,555,529	6,399,606
Cash Available For Debt Service	473,662	969,685	2,463,056	3,906,403	2,493,114	2,996,410	12,817,025	18,306,550	6,998,933	7,851,474	26,625,848	41,476,254	6,357,976	7,959,156	25,847,886	40,165,018
Interest Paid	100,122	14,946	963,757	1,078,826	500,611	74,730	4,818,786	5,394,128	1,201,467	179,353	11,565,086	12,945,906	1,200,301	173,721	12,799,531	14,173,553
Debt Retirement (Principal Payments)	161,836	46,025	221,736	429,597	809,178	230,125	1,108,680	2,147,983	1,942,027	552,300	2,660,831	5,155,158	1,925,189	562,081	2,660,831	5,148,101
Total Debt Service	261,958	60,971	1,185,493	1,508,422	1,309,789	304,855	5,927,465	7,542,110	3,143,495	731,653	14,225,917	18,101,064	3,125,490	735,802	15,460,362	19,321,654
Debt Service Ratio	1.81	15.90	2.08	2.59	1.90	9.83	2.16	2.43	2.23	10.73	1.87	2.29	2.03	10.82	1.67	2.08

LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS - SUBURBAN WATER
For the Period Ended May 31, 2022

STATEMENTS OF ACTIVITIES	Suburban - Water														
	Month					Year To Date					Full Year				
	Actual	Q2 FC	Prior Year	FC Var	PY Var	Actual	Q2 FC	Prior Year	FC Var	PY Var	Q2 FC	Budget	Prior Year	Bud Var	PY Var
Operating Revenues:															
User Charges	1,157,407	1,166,902	941,201	(9,495)	216,206	5,872,931	5,866,640	4,798,260	6,291	1,074,671	15,658,044	15,321,204	12,433,466	336,840	3,224,578
Connection & System Charges	30,782	73,587	73,900	(42,805)	(43,118)	115,530	287,204	278,563	(171,674)	(163,033)	938,533	933,476	1,559,023	5,056	(620,491)
Other Miscellaneous Revenues	3,035	2,756	10,455	279	(7,420)	10,940	11,258	22,565	(318)	(11,625)	30,553	33,078	131,831	(2,524)	(101,278)
Total Operating Revenues	1,191,224	1,243,245	1,025,556	(52,021)	165,668	5,999,401	6,165,102	5,099,388	(165,701)	900,013	16,627,130	16,287,758	14,124,320	339,372	2,502,810
Operating Expenses:															
Personnel	292,118	247,974	167,811	(44,144)	(124,306)	1,357,417	1,306,724	1,178,913	(50,694)	(178,504)	3,170,535	3,135,717	3,168,152	(34,817)	(2,383)
Shared Services - General & Administrative	60,963	64,825	51,403	3,862	(9,560)	218,053	241,863	204,474	23,811	(13,579)	695,641	777,905	506,957	82,264	(188,684)
Utilities	27,405	43,410	32,958	16,004	5,553	256,029	279,646	182,869	23,618	(73,160)	563,513	520,914	423,326	(42,599)	(140,186)
Materials and Supplies	29,874	53,000	28,773	23,126	(1,101)	327,981	336,518	137,177	8,536	(190,804)	815,518	816,837	475,374	1,319	(340,144)
Miscellaneous Services	310,486	314,702	294,652	4,215	(15,834)	1,339,069	1,460,445	1,369,276	121,376	30,207	4,411,338	4,728,534	3,433,851	317,196	(977,487)
Treatment and Transportation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Depreciation and Amortization	255,300	262,371	217,141	7,071	(38,159)	1,253,423	1,274,661	1,085,705	21,238	(167,718)	3,111,258	3,063,453	3,350,988	(47,805)	239,730
Major Maintenance Expenses	419	-	300	(419)	(119)	3,221	2,444	2,635	(777)	(586)	2,444	-	-	(2,444)	(2,444)
Other Miscellaneous	-	-	3,786	-	3,786	-	-	3,786	-	3,786	-	-	80,020	-	80,020
Total Operating Expenses	976,565	986,282	796,825	9,716	(179,741)	4,755,192	4,902,301	4,164,834	147,109	(590,358)	12,770,246	13,043,359	11,438,668	273,113	(1,331,578)
Net Operating Profit	214,659	256,963	228,731	(42,305)	(14,072)	1,244,209	1,262,801	934,554	(18,592)	309,655	3,856,884	3,244,399	2,685,652	612,485	1,171,232
Non-Operating Income (Expense)															
Interest Income	4,400	4,196	4,160	204	240	18,902	18,973	20,358	(70)	(1,455)	48,286	50,125	47,412	(1,839)	874
Interest (Expense)	(100,943)	(156,370)	(159,333)	55,427	58,391	(502,048)	(555,331)	(569,852)	53,283	67,804	(1,199,550)	(1,200,301)	(1,026,223)	751	(173,327)
Other Miscellaneous	(696)	6	3,100	(702)	(3,796)	(23,420)	(17,542)	(4,005)	(5,878)	(19,415)	(17,495)	-	3,073,185	(17,495)	(3,090,680)
Net Non-Operating Income (Expense)	(97,239)	(152,168)	(152,073)	54,929	54,834	(506,565)	(553,900)	(553,500)	47,335	46,934	(1,168,759)	(1,150,176)	2,094,374	(18,583)	(3,263,133)
Net Income (Loss)	117,419	104,795	76,658	12,624	40,762	737,644	708,901	381,054	28,743	356,590	2,688,125	2,094,223	4,780,026	593,902	(2,091,901)
CASH FLOW STATEMENT															
Cash Flows From Operating Activities															
Operating Revenues	1,191,224	1,243,245	1,025,556	(52,021)	165,668	5,999,401	6,165,102	5,099,388	(165,701)	900,013	16,627,130	16,287,758	14,124,320	339,372	2,502,810
Operating Expenses (ex D&A)	(721,265)	(723,911)	(579,684)	2,645	(141,581)	(3,501,769)	(3,627,640)	(3,079,129)	125,871	(422,640)	(9,658,988)	(9,979,907)	(8,087,680)	320,919	(1,571,308)
Non-Cash Working Capital Changes	295,836	291,110	117,124	4,726	178,712	(17,968)	(18,787)	(897,888)	818	879,919	144,009	(417,694)	(5,849,126)	561,703	5,993,135
Net Cash Provided by (Used in) Operating Activities	765,795	810,445	562,997	(44,650)	202,799	2,479,663	2,518,675	1,122,371	(39,012)	1,357,292	7,112,151	5,890,157	187,514	1,221,993	6,924,637
Cash Flows From Financing Activities															
Capital Contributions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Proceeds New Borrowing	-	-	-	-	-	-	-	-	-	-	3,075,000	3,075,000	21,679,902	-	(18,604,902)
Interest Payments	(594,656)	(595,381)	(670,774)	725	76,118	(599,394)	(600,151)	(696,202)	756	96,808	(1,201,467)	(1,200,301)	(1,344,261)	(1,166)	142,793
Principal Payments	(16,905)	(17,346)	(31,459)	440	14,553	(84,186)	(84,595)	(156,715)	409	72,529	(1,942,027)	(1,925,189)	(21,902,961)	(16,838)	19,960,933
Net Cash Provided by (Used in) Financing Activities	(611,561)	(612,726)	(702,233)	1,165	90,671	(683,580)	(684,745)	(852,917)	1,165	169,337	(68,495)	(50,490)	(1,567,319)	(18,005)	1,498,825
Cash Flows from Capital and Related Activities															
Non-Operating Income (Expenses)	(696)	6	3,100	(702)	(3,796)	(23,420)	(17,542)	(4,005)	(5,878)	(19,415)	(17,495)	-	3,073,185	(17,495)	(3,090,680)
Capital Expenditures, net	(227,535)	(228,000)	(132,480)	465	(95,056)	(1,079,695)	(1,079,972)	(918,207)	277	(161,488)	(4,610,018)	(5,487,500)	(4,667,888)	877,482	57,869
Net Cash Provided By (Used In) Capital and Related Activities	(228,231)	(227,994)	(129,379)	(237)	(98,852)	(1,103,115)	(1,097,514)	(922,212)	(5,601)	(180,903)	(4,627,513)	(5,487,500)	(1,594,703)	859,987	(3,032,810)
Cash Flows From Investing Activities															
Investments Converting To Cash	496,000	244,682	244,682	251,318	251,318	745,000	493,682	244,682	251,318	500,318	742,682	-	493,682	742,682	249,000
Purchased Investments	(245,000)	-	-	(245,000)	(245,000)	(494,000)	(249,000)	-	(245,000)	(494,000)	(743,000)	-	(494,000)	(743,000)	(249,000)
Interest Income	4,400	4,196	4,160	204	240	18,902	18,973	20,358	(70)	(1,455)	48,286	50,125	47,412	(1,839)	874
Net Cash Provided By (Used In) Investing Activities	255,400	248,878	248,842	6,521	6,557	269,902	263,655	265,040	6,247	4,862	47,968	50,125	47,095	(2,157)	874
FUND NET CASH FLOWS	181,402	218,602	(19,773)	(37,201)	201,175	962,870	1,000,071	(387,718)	(37,201)	1,350,589	2,464,111	402,292	(2,927,414)	2,061,819	5,391,525
DEBT SERVICE RATIO															
Debt Service Ratio (Indenture Based)															
User Charges	1,157,407	1,166,902	941,201	(9,495)	216,206	5,872,931	5,866,640	4,798,260	6,291	1,074,671	15,658,044	15,321,204	12,433,466	336,840	3,224,578
Operating Expenses (Cash Based)	(721,265)	(723,911)	(579,684)	2,645	(141,581)	(3,501,769)	(3,627,640)	(3,079,129)	125,871	(422,640)	(9,658,988)	(9,979,907)	(8,087,680)	320,919	(1,571,308)
Interest Income	4,400	4,196	4,160	204	240	18,902	18,973	20,358	(70)	(1,455)	48,286	50,125	47,412	(1,839)	874
Annual Lease Payment (City)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-Operating Revenues (Expenses)	33,121	76,349	87,455	(43,228)	(54,334)	103,051	280,920	297,123	(177,869)	(194,072)	951,591	966,554	4,764,039	(14,963)	(3,812,448)
Cash Available For Debt Service	473,662	523,536	453,132	(49,874)	20,530	2,493,114	2,538,892	2,036,612	(45,778)	456,503	6,998,933	6,357,976	9,157,236	640,956	(2,158,304)
Interest Paid	100,122	100,122	112,022	-	(11,899)	500,611	500,611	560,109	-	(59,497)	1,201,467	1,200,301	1,344,261	1,166	(142,793)
Debt Retirement (Principal Payments)	161,836	160,432	18,588	1,403	143,247	809,178	809,178	92,941	-	716,237	1,942,027	1,925,189	223,059	16,838	1,718,969
Total Debt Service	261,958	260,555	130,610	1,403	131,348	1,309,789	1,309,789	653,050	-	656,740	3,143,495	3,125,490	1,567,319	18,005	1,576,175
Debt Service Ratio	1.81	2.01	3.47	(0.20)	(1.66)	1.90	1.94	3.12	(0.03)	(1.22)	2.23	2.03	5.84	0.19	(3.62)

LEHIGH COUNTY AUTHORITY
VARIANCE ANALYSIS - MONTH
For the Period Ended May 31, 2022

STATEMENTS OF ACTIVITIES

Operating Revenues:

User Charges
Connection & System Charges
Other Miscellaneous Revenues

Total Operating Revenues

Operating Expenses:

Personnel
Shared Services - General & Administrative
Utilities
Materials and Supplies
Miscellaneous Services
Treatment and Transportation
Depreciation and Amortization
Major Maintenance Expenses
Other Miscellaneous

Total Operating Expenses

Net Operating Profit

Non-Operating Income (Expense)

Interest Income
Interest (Expense)
Other Miscellaneous

Net Non-Operating Income (Expense)

Net Income (Loss)

CASH FLOW STATEMENT

Cash Flows From Operating Activities

Operating Revenues
Operating Expenses (ex D&A)
Non-Cash Working Capital Changes

Net Cash Provided by (Used in) Operating Activities

Cash Flows From Financing Activities

Capital Contributions
Proceeds New Borrowing
Interest Payments
Principal Payments

Net Cash Provided by (Used in) Financing Activities

Cash Flows from Capital and Related Activities

Non-Operating Income (Expenses)
Capital Expenditures, net

Net Cash Provided By (Used In) Capital and Related Activities

Cash Flows From Investing Activities

Investments Converting To Cash
Purchased Investments
Interest Income

Net Cash Provided By (Used In) Investing Activities

FUND NET CASH FLOWS

Suburban - Water			
Actual	Q2 FC	FC Var	Comments
1,157,407	1,166,902	(9,495)	Lower tapping fees along with lower inspection & review fees
30,782	73,587	(42,805)	
3,035	2,756	279	
1,191,224	1,243,245	(52,021)	Lower user charges and lower system fees
292,118	247,974	(44,144)	Higher labor & fringes charged in
60,963	64,825	3,862	
27,405	43,410	16,004	
29,874	53,000	23,126	
310,486	314,702	4,215	
-	-	-	
255,300	262,371	7,071	
419	-	(419)	Higher personnel costs more than offset by lower spending across other expenses categories
-	-	-	
976,565	986,282	9,716	
214,659	256,963	(42,305)	Lower operating revenues with some offset from lower operating expenses
4,400	4,196	204	
(100,943)	(156,370)	55,427	
(696)	6	(702)	
(97,239)	(152,168)	54,929	Lower interest expense
117,419	104,795	12,624	Lower net operating profit more than offset by lower interest expense

1,191,224	1,243,245	(52,021)	
(721,265)	(723,911)	2,645	
295,836	291,110	4,726	
765,795	810,445	(44,650)	Lower operating income
-	-	-	
-	-	-	
(594,656)	(595,381)	725	
(16,905)	(17,346)	440	
(611,561)	(612,726)	1,165	
(696)	6	(702)	
(227,535)	(228,000)	465	
(228,231)	(227,994)	(237)	
496,000	244,682	251,318	
(245,000)	-	(245,000)	
4,400	4,196	204	
255,400	248,878	6,521	
181,402	218,602	(37,201)	Lower cash from operations

LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS - SUBURBAN WASTEWATER
For the Period Ended May 31, 2022

STATEMENTS OF ACTIVITIES	Suburban - Wastewater														
	Month					Year To Date					Full Year				
	Actual	Q2 FC	Prior Year	FC Var	PY Var	Actual	Q2 FC	Prior Year	FC Var	PY Var	Q2 FC	Budget	Prior Year	Bud Var	PY Var
Operating Revenues:															
User Charges	1,266,359	1,506,045	1,496,220	(239,686)	(229,861)	6,577,759	6,792,080	7,691,987	(214,320)	(1,114,228)	20,182,698	20,282,051	15,823,055	(99,353)	4,359,643
Connection & System Charges	472,463	49,965	49,470	422,499	422,994	871,539	493,209	401,740	378,330	469,799	962,706	875,254	757,041	87,452	205,665
Other Miscellaneous Revenues	75	187	60	(112)	15	135	435	1,805	(300)	(1,670)	1,745	2,247	45,691	(502)	(43,945)
Total Operating Revenues	1,738,897	1,556,197	1,545,750	182,700	193,148	7,449,433	7,285,723	8,095,532	163,710	(646,099)	21,147,149	21,159,552	16,625,786	(12,403)	4,521,363
Operating Expenses:															
Personnel	121,034	123,834	49,681	2,800	(71,353)	578,713	590,467	485,507	11,754	(93,206)	1,514,143	1,557,088	1,341,997	42,945	(172,147)
Shared Services - General & Administrative	25,461	19,169	24,731	(6,293)	(730)	92,920	85,717	94,527	(7,202)	1,607	219,897	230,022	211,387	10,125	(8,513)
Utilities	16,627	29,661	21,323	13,034	4,696	130,653	155,706	121,251	25,053	(9,402)	343,336	355,937	269,553	12,601	(73,782)
Materials and Supplies	28,466	41,379	11,914	12,913	(16,552)	127,478	154,633	62,240	27,155	(65,239)	494,287	496,550	233,440	2,263	(260,847)
Miscellaneous Services	714,517	567,030	489,591	(147,487)	(224,926)	2,659,471	2,522,721	2,457,171	(136,750)	(202,300)	6,656,930	6,804,359	6,407,539	147,429	(249,391)
Treatment and Transportation	(141,006)	(140,680)	569,217	325	710,223	787,547	786,859	1,489,218	(688)	701,670	4,072,170	3,844,405	3,899,503	(227,765)	(172,668)
Depreciation and Amortization	532,812	516,262	384,727	(16,550)	(148,085)	2,581,267	2,581,267	1,923,635	-	(657,632)	6,195,099	5,996,555	6,694,237	(198,545)	499,137
Major Maintenance Expenses	6,308	-	11,276	(6,308)	4,967	13,083	3,271	59,140	(9,812)	46,058	3,271	-	-	(3,271)	(3,271)
Other Miscellaneous	-	-	-	-	-	-	-	-	-	-	-	-	55,412	-	55,412
Total Operating Expenses	1,304,220	1,156,654	1,562,460	(147,566)	258,240	6,971,132	6,880,641	6,692,688	(90,491)	(278,444)	19,499,134	19,284,917	19,113,067	(214,217)	(386,066)
Net Operating Profit	434,678	399,543	(16,710)	35,135	451,388	478,301	405,083	1,402,844	73,219	(924,543)	1,648,016	1,874,636	(2,487,282)	(226,620)	4,135,297
Non-Operating Income (Expense)															
Interest Income	5,899	8,000	7,117	(2,101)	(1,218)	22,622	27,081	40,843	(4,459)	(18,221)	70,081	87,943	80,219	(17,862)	(10,138)
Interest (Expense)	(16,896)	(13,000)	(15,847)	(3,896)	(1,049)	(79,063)	(73,454)	(78,109)	(5,610)	(954)	(184,454)	(173,721)	(213,026)	(10,733)	28,572
Other Miscellaneous	(3,704)	-	(2,090)	(3,704)	(1,614)	(85,780)	(81,722)	(23,426)	(4,058)	(62,354)	(61,722)	22	367,102	(61,744)	(428,824)
Net Non-Operating Income (Expense)	(14,701)	(5,000)	(10,820)	(9,701)	(3,881)	(142,222)	(128,095)	(60,693)	(14,127)	(81,529)	(176,095)	(85,756)	234,295	(90,339)	(410,390)
Net Income (Loss)	419,977	394,543	(27,530)	25,434	447,507	336,080	276,988	1,342,151	59,092	(1,006,072)	1,471,921	1,788,879	(2,252,986)	(316,959)	3,724,907
CASH FLOW STATEMENT															
Cash Flows From Operating Activities															
Operating Revenues	1,738,897	1,556,197	1,545,750	182,700	193,148	7,449,433	7,285,723	8,095,532	163,710	(646,099)	21,147,149	21,159,552	16,625,786	(12,403)	4,521,363
Operating Expenses (ex D&A)	(771,408)	(640,392)	(1,177,733)	(131,016)	406,324	(4,389,865)	(4,299,374)	(4,769,053)	(90,491)	379,188	(13,304,034)	(13,288,362)	(12,418,831)	(15,672)	(885,203)
Non-Cash Working Capital Changes	795,708	889,623	(1,210,971)	(93,915)	2,006,679	(308,913)	(261,843)	(1,613,213)	(47,070)	1,304,300	(349,881)	(0)	35,368	(349,881)	(385,249)
Net Cash Provided by (Used in) Operating Activities	1,763,197	1,805,428	(842,954)	(42,231)	2,606,151	2,750,655	2,724,507	1,713,266	26,148	1,037,389	7,493,234	7,871,190	4,242,323	(377,956)	3,250,911
Cash Flows From Financing Activities															
Capital Contributions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Proceeds New Borrowing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest Payments	(11,812)	(12,899)	(12,899)	1,087	1,087	(59,566)	(70,975)	(72,324)	11,409	12,758	(179,353)	(173,721)	(160,037)	(5,632)	(19,316)
Principal Payments	(46,725)	(45,600)	(45,600)	(1,125)	(1,125)	(232,679)	(229,471)	(227,564)	(3,208)	(5,115)	(552,300)	(562,081)	(549,370)	9,781	(2,930)
Net Cash Provided by (Used in) Financing Activities	(58,538)	(58,499)	(58,499)	(38)	(38)	(292,245)	(300,446)	(299,888)	8,201	7,643	(731,653)	(735,802)	(709,407)	4,149	(22,246)
Cash Flows from Capital and Related Activities															
Non-Operating Income (Expenses)	(3,704)	-	(2,090)	(3,704)	(1,614)	(85,780)	(81,722)	(23,426)	(4,058)	(62,354)	(61,722)	22	367,102	(61,744)	(428,824)
Capital Expenditures, net	(299,151)	(301,616)	(299,108)	2,465	(42)	(1,194,077)	(1,280,637)	(1,516,167)	86,560	322,089	(2,377,431)	(2,870,000)	(4,250,286)	492,569	1,872,855
Net Cash Provided By (Used In) Capital and Related Activities	(302,854)	(301,616)	(301,198)	(1,239)	(1,656)	(1,279,857)	(1,362,359)	(1,539,593)	82,501	259,736	(2,439,153)	(2,869,978)	(3,883,184)	430,825	1,444,031
Cash Flows From Investing Activities															
Investments Converting To Cash	245,000	245,000	493,000	-	(248,000)	2,167,000	2,170,000	1,484,000	(3,000)	683,000	4,599,000	-	2,851,000	4,599,000	1,748,000
Purchased Investments	(735,000)	(735,000)	-	-	(735,000)	(3,918,000)	(3,763,000)	(1,979,000)	(155,000)	(1,939,000)	(4,264,000)	-	(3,714,000)	(4,264,000)	(550,000)
Interest Income	5,899	8,000	7,117	(2,101)	(1,218)	22,622	27,081	40,843	(4,459)	(18,221)	70,081	87,943	80,219	(17,862)	(10,138)
Net Cash Provided By (Used In) Investing Activities	(484,101)	(482,000)	500,117	(2,101)	(984,218)	(1,728,378)	(1,565,919)	(454,157)	(162,459)	(1,274,221)	405,081	87,943	(782,781)	317,138	1,187,862
FUND NET CASH FLOWS	917,705	963,313	(702,534)	(45,608)	1,620,238	(549,825)	(504,217)	(580,373)	(45,608)	30,547	4,727,509	4,353,353	(1,133,048)	374,156	5,860,558
DEBT SERVICE RATIO															
Debt Service Ratio (Indenture Based)															
User Charges	1,266,359	1,506,045	1,496,220	(239,686)	(229,861)	6,577,759	6,792,080	7,691,987	(214,320)	(1,114,228)	20,182,698	20,282,051	15,823,055	(99,353)	4,359,643
Operating Expenses (Cash Based)	(771,408)	(640,392)	(1,177,733)	(131,016)	406,324	(4,389,865)	(4,299,374)	(4,769,053)	(90,491)	379,188	(13,304,034)	(13,288,362)	(12,418,831)	(15,672)	(885,203)
Interest Income	5,899	8,000	7,117	(2,101)	(1,218)	22,622	27,081	40,843	(4,459)	(18,221)	70,081	87,943	80,219	(17,862)	(10,138)
Annual Lease Payment (City)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-Operating Revenues (Expenses)	468,835	50,152	47,440	418,683	421,395	785,894	411,922	380,118	373,972	405,775	902,729	877,523	1,169,833	25,206	(267,104)
Cash Available For Debt Service	969,685	923,805	373,045	45,880	596,640	2,996,410	2,931,709	3,343,896	64,701	(347,485)	7,851,474	7,959,156	4,654,276	(107,682)	3,197,198
Interest Paid	14,946	14,946	13,336	-	1,610	74,730	74,730	66,682	-	8,048	179,353	173,721	160,037	5,632	19,316
Debt Retirement (Principal Payments)	46,025	46,840	45,781	(815)	244	230,125	230,125	228,904	-	1,221	552,300	562,081	549,370	(9,781)	2,930
Total Debt Service	60,971	61,786	59,117	(815)	1,854	304,855	304,855	295,586	-	9,269	731,653	735,802	709,407	(4,149)	22,246
Debt Service Ratio	15.90	14.95	6.31	0.95	9.59	9.83	9.62	11.31	0.21	(1.48)	10.73	10.82	6.56	(0.09)	4.17

LEHIGH COUNTY AUTHORITY
VARIANCE ANALYSIS - MONTH
For the Period Ended May 31, 2022

STATEMENTS OF ACTIVITIES

Operating Revenues:

User Charges
Connection & System Charges
Other Miscellaneous Revenues

Total Operating Revenues

Operating Expenses:

Personnel
Shared Services - General & Administrative
Utilities
Materials and Supplies
Miscellaneous Services
Treatment and Transportation
Depreciation and Amortization
Major Maintenance Expenses
Other Miscellaneous

Total Operating Expenses

Net Operating Profit

Non-Operating Income (Expense)

Interest Income
Interest (Expense)
Other Miscellaneous

Net Non-Operating Income (Expense)

Net Income (Loss)

CASH FLOW STATEMENT

Cash Flows From Operating Activities

Operating Revenues
Operating Expenses (ex D&A)
Non-Cash Working Capital Changes

Net Cash Provided by (Used in) Operating Activities

Cash Flows From Financing Activities

Capital Contributions
Proceeds New Borrowing
Interest Payments
Principal Payments

Net Cash Provided by (Used in) Financing Activities

Cash Flows from Capital and Related Activities

Non-Operating Income (Expenses)
Capital Expenditures, net

Net Cash Provided By (Used In) Capital and Related Activities

Cash Flows From Investing Activities

Investments Converting To Cash
Purchased Investments
Interest Income

Net Cash Provided By (Used In) Investing Activities

FUND NET CASH FLOWS

Suburban - Wastewater			
Actual	Q2 FC	FC Var	Comments
1,266,359	1,506,045	(239,686)	Lower residential, commercial, and municipal charges
472,463	49,965	422,499	Higher tapping fees
75	187	(112)	
1,738,897	1,556,197	182,700	Higher tapping fees partially eroded by lower user charges
121,034	123,834	2,800	Higher contract operating services
25,461	19,169	(6,293)	
16,627	29,661	13,034	
28,466	41,379	12,913	
714,517	567,030	(147,487)	
(141,006)	(140,680)	325	
532,812	516,262	(16,550)	
6,308	-	(6,308)	
-	-	-	
1,304,220	1,156,654	(147,566)	Higher services from higher contract operating services
434,678	399,543	35,135	Higher operating revenues mostly offset by higher operating expenses
5,899	8,000	(2,101)	
(16,896)	(13,000)	(3,896)	
(3,704)	-	(3,704)	
(14,701)	(5,000)	(9,701)	
419,977	394,543	25,434	Higher net operating income with some offset from unfavorable financial activity
1,738,897	1,556,197	182,700	
(771,408)	(640,392)	(131,016)	
795,708	889,623	(93,915)	
1,763,197	1,805,428	(42,231)	Higher net operating income with unfavorable working capital movements to more than offset
-	-	-	
-	-	-	
(11,812)	(12,899)	1,087	
(46,725)	(45,600)	(1,125)	
(58,538)	(58,499)	(38)	
(3,704)	-	(3,704)	
(299,151)	(301,616)	2,465	
(302,854)	(301,616)	(1,239)	
245,000	245,000	-	
(735,000)	(735,000)	-	
5,899	8,000	(2,101)	
(484,101)	(482,000)	(2,101)	
917,705	963,313	(45,608)	Lower cash from operations driven by unfavorable working capital movements

LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS - CITY DIVISION
For the Period Ended May 31, 2022

STATEMENTS OF ACTIVITIES	City Division														
	Month					Year To Date					Full Year				
	Actual	Q2 FC	Prior Year	FC Var	PY Var	Actual	Q2 FC	Prior Year	FC Var	PY Var	Q2 FC	Budget	Prior Year	Bud Var	PY Var
Operating Revenues:															
User Charges	3,929,996	3,980,608	3,784,528	(50,612)	145,469	18,411,987	18,481,181	16,872,675	(69,194)	1,539,312	46,289,422	46,388,630	42,276,435	(99,208)	4,012,987
Connection & System Charges	130,737	131,205	350,482	(468)	(219,745)	1,801,560	1,782,313	1,212,310	19,247	589,250	4,574,143	4,488,054	3,511,291	86,089	1,062,852
Other Miscellaneous Revenues	6,485	5,623	8,738	862	(2,253)	23,235	22,541	28,738	694	(5,503)	61,901	67,475	113,357	(5,574)	(51,456)
Total Operating Revenues	4,067,219	4,117,437	4,143,748	(50,218)	(76,529)	20,236,782	20,286,035	18,113,723	(49,253)	2,123,059	50,925,466	50,944,159	45,901,083	(18,692)	5,024,383
Operating Expenses:															
Personnel	993,631	980,855	587,677	(12,776)	(405,954)	4,725,971	4,714,409	4,045,899	(11,562)	(680,071)	12,483,574	12,623,714	10,681,433	140,140	(1,802,140)
Shared Services - General & Administrative	161,026	156,031	153,558	(4,996)	(7,468)	629,028	642,745	636,462	13,717	7,434	1,734,961	1,872,369	1,529,986	137,409	(204,974)
Utilities	152,650	169,812	141,043	17,162	(11,608)	731,014	768,584	813,799	37,570	82,785	1,857,268	2,037,742	1,705,824	180,475	(151,444)
Materials and Supplies	130,160	193,482	131,697	63,322	1,537	751,634	784,079	516,215	32,445	(235,418)	2,188,454	2,334,092	1,486,676	145,638	(701,778)
Miscellaneous Services	113,009	171,419	54,517	58,410	(58,491)	452,158	542,780	409,796	90,621	(42,363)	1,932,710	2,184,774	1,513,870	252,064	(418,841)
Treatment and Transportation	-	-	5,813	-	5,813	-	-	5,813	-	5,813	13,800	13,800	12,480	-	(1,320)
Depreciation and Amortization	528,103	525,527	491,154	(2,577)	(36,949)	2,607,544	2,615,613	2,455,770	8,069	(151,774)	6,294,299	6,178,570	4,348,808	(115,729)	(1,945,491)
Major Maintenance Expenses	71,751	-	10,510	(71,751)	(61,240)	144,037	58,184	46,938	(85,854)	(97,100)	4,264,384	4,206,200	3,679,342	(58,184)	(585,042)
Other Miscellaneous	-	-	-	-	-	5,200	-	-	(5,200)	(5,200)	-	-	7,540	-	7,540
Total Operating Expenses	2,150,330	2,197,126	1,575,970	46,796	(574,360)	10,046,586	10,126,393	8,930,692	79,807	(1,115,894)	30,769,449	31,451,261	24,965,960	681,812	(5,803,489)
Net Operating Profit	1,916,889	1,920,311	2,567,778	(3,422)	(650,889)	10,190,196	10,159,642	9,183,031	30,555	1,007,166	20,156,017	19,492,897	20,935,123	663,120	(779,106)
Non-Operating Income (Expense)															
Interest Income	18,065	407	399	17,658	17,666	19,285	1,976	2,808	17,310	16,478	175,531	176,419	5,374	(888)	170,158
Interest (Expense)	(1,395,021)	(1,456,250)	(1,382,735)	61,228	(12,286)	(6,972,177)	(7,033,807)	(6,913,675)	61,630	(58,502)	(17,289,555)	(17,474,997)	(16,508,725)	185,442	(780,830)
Other Miscellaneous	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Non-Operating Income (Expense)	(1,376,957)	(1,455,843)	(1,382,336)	78,886	5,380	(6,952,892)	(7,031,831)	(6,910,867)	78,940	(42,024)	(17,114,024)	(17,298,578)	(16,503,352)	184,554	(610,672)
Net Income (Loss)	539,932	464,468	1,185,442	75,464	(645,510)	3,237,305	3,127,810	2,272,163	109,494	965,141	3,041,993	2,194,319	4,431,771	847,673	(1,389,778)
CASH FLOW STATEMENT															
Cash Flows From Operating Activities															
Operating Revenues	4,067,219	4,117,437	4,143,748	(50,218)	(76,529)	20,236,782	20,286,035	18,113,723	(49,253)	2,123,059	50,925,466	50,944,159	45,901,083	(18,692)	5,024,383
Operating Expenses (ex D&A)	(1,622,227)	(1,671,599)	(1,084,816)	49,372	(537,411)	(7,439,042)	(7,510,780)	(6,474,922)	71,738	(964,120)	(24,475,150)	(25,272,691)	(20,617,152)	797,541	(3,857,998)
Non-Cash Working Capital Changes	(922,633)	(931,201)	(1,205,335)	8,568	282,702	(3,120,478)	(3,192,817)	(1,715,412)	72,339	(1,405,067)	509	2,197,478	2,989,796	(2,196,969)	(2,989,287)
Net Cash Provided by (Used in) Operating Activities	1,522,359	1,514,637	1,853,597	7,722	(331,238)	9,677,262	9,582,437	9,923,389	94,824	(246,127)	26,450,825	27,868,945	28,273,727	(1,418,120)	(1,822,902)
Cash Flows From Financing Activities															
Capital Contributions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Proceeds New Borrowing	-	-	-	-	-	-	-	-	-	-	1,200,000	1,200,000	-	-	1,200,000
Interest Payments	-	-	-	-	-	-	-	-	-	-	(11,565,086)	(12,799,531)	(11,600,444)	1,234,445	35,358
Principal Payments	-	-	-	-	-	-	-	-	-	-	(2,660,831)	(2,660,831)	(2,514,642)	-	(146,189)
Net Cash Provided by (Used in) Financing Activities	-	-	-	-	-	-	-	-	-	-	(13,025,917)	(14,260,362)	(14,115,086)	1,234,445	1,089,169
Cash Flows from Capital and Related Activities															
Non-Operating Income (Expenses)	-	-	-	-	-	(643,325)	(643,325)	-	-	(643,325)	(1,286,650)	(1,286,650)	(1,243,524)	-	(43,126)
Capital Expenditures, net	(734,610)	(735,184)	(288,814)	573	(445,796)	(2,538,531)	(2,538,516)	(1,768,932)	(15)	(769,599)	(6,381,823)	(7,058,800)	(3,825,566)	676,977	(2,556,258)
Net Cash Provided By (Used In) Capital and Related Activities	(734,610)	(735,184)	(288,814)	573	(445,796)	(3,181,856)	(3,181,841)	(1,768,932)	(15)	(1,412,924)	(7,668,473)	(8,345,450)	(5,069,090)	676,977	(2,599,384)
Cash Flows From Investing Activities															
Investments Converting To Cash	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Purchased Investments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest Income	18,065	407	399	17,658	17,666	19,285	1,976	2,808	17,310	16,478	175,531	176,419	5,374	(888)	170,158
Net Cash Provided By (Used In) Investing Activities	18,065	407	399	17,658	17,666	19,285	1,976	2,808	17,310	16,478	175,531	176,419	5,374	(888)	170,158
FUND NET CASH FLOWS	805,813	779,860	1,565,182	25,954	(759,368)	6,514,691	6,402,572	8,157,264	112,118	(1,642,573)	5,931,966	5,439,552	9,094,925	492,414	(3,162,959)
DEBT SERVICE RATIO															
Debt Service Ratio (Indenture Based)															
User Charges	3,929,996	3,980,608	3,784,528	(50,612)	145,469	18,411,987	18,481,181	16,872,675	(69,194)	1,539,312	46,289,422	46,388,630	42,276,435	(99,208)	4,012,987
Operating Expenses (Cash Based)	(1,622,227)	(1,671,599)	(1,084,816)	49,372	(537,411)	(7,439,042)	(7,510,780)	(6,474,922)	71,738	(964,120)	(24,475,150)	(25,272,691)	(20,617,152)	797,541	(3,857,998)
Interest Income	18,065	407	399	17,658	17,666	19,285	1,976	2,808	17,310	16,478	175,531	176,419	5,374	(888)	170,158
Annual Lease Payment (City)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-Operating Revenues (Expenses)	137,222	136,828	359,220	394	(221,998)	1,824,795	1,804,854	1,241,048	19,941	583,747	4,636,045	4,555,529	3,624,648	80,516	1,011,396
Cash Available For Debt Service	2,463,056	2,446,244	3,059,331	16,812	(596,274)	12,817,025	12,777,230	11,641,608	39,795	1,175,417	26,625,848	25,847,886	25,289,305	777,961	1,336,543
Interest Paid	963,757	963,757	966,704	-	(2,947)	4,818,786	4,818,786	4,833,518	-	(14,733)	11,565,086	12,799,531	11,600,444	(1,234,445)	(35,358)
Debt Retirement (Principal Payments)	221,736	221,736	209,554	-	12,182	1,108,680	1,108,680	1,047,768	-	60,912	2,660,831	2,660,831	2,514,642	-	146,189
Total Debt Service	1,185,493	1,185,493	1,176,257	-	9,236	5,927,465	5,927,465	5,881,286	-	46,180	14,225,917	15,460,362	14,115,086	(1,234,445)	110,831
Debt Service Ratio	2.08	2.06	2.60	0.01	(0.52)	2.16	2.16	1.98	0.01	0.18	1.87	1.67	1.79	0.20	0.08

LEHIGH COUNTY AUTHORITY
VARIANCE ANALYSIS - MONTH
For the Period Ended May 31, 2022

STATEMENTS OF ACTIVITIES

Operating Revenues:

User Charges
Connection & System Charges
Other Miscellaneous Revenues

Total Operating Revenues

Operating Expenses:

Personnel
Shared Services - General & Administrative
Utilities
Materials and Supplies
Miscellaneous Services
Treatment and Transportation
Depreciation and Amortization
Major Maintenance Expenses
Other Miscellaneous

Total Operating Expenses

Net Operating Profit

Non-Operating Income (Expense)

Interest Income
Interest (Expense)
Other Miscellaneous

Net Non-Operating Income (Expense)

Net Income (Loss)

CASH FLOW STATEMENT

Cash Flows From Operating Activities

Operating Revenues
Operating Expenses (ex D&A)
Non-Cash Working Capital Changes

Net Cash Provided by (Used in) Operating Activities

Cash Flows From Financing Activities

Capital Contributions
Proceeds New Borrowing
Interest Payments
Principal Payments

Net Cash Provided by (Used in) Financing Activities

Cash Flows from Capital and Related Activities

Non-Operating Income (Expenses)
Capital Expenditures, net

Net Cash Provided By (Used In) Capital and Related Activities

Cash Flows From Investing Activities

Investments Converting To Cash
Purchased Investments
Interest Income

Net Cash Provided By (Used In) Investing Activities

FUND NET CASH FLOWS

City Division			
Actual	Q1 FC	FC Var	Comments
3,929,996	3,980,608	(50,612)	Lower water purchase revenues
130,737	131,205	(468)	
6,485	5,623	862	
4,067,219	4,117,437	(50,218)	Lower user charges
993,631	980,855	(12,776)	
161,026	156,031	(4,996)	
152,650	169,812	17,162	
130,160	193,482	63,322	
113,009	171,419	58,410	
-	-	-	
528,103	525,527	(2,577)	
71,751	-	(71,751)	
-	-	-	
2,150,330	2,197,126	46,796	Lower utilities and services
1,916,889	1,920,311	(3,422)	Lower operating revenues mostly offset by lower operating expenses
18,065	407	17,658	
(1,395,021)	(1,456,250)	61,228	
-	-	-	
(1,376,957)	(1,455,843)	78,886	Lower interest expense along with higher interest income
539,932	464,468	75,464	Lower net operating income more than made up by favorable financial activity

4,067,219	4,117,437	(50,218)	
(1,622,227)	(1,671,599)	49,372	
(922,633)	(931,201)	8,568	
1,522,359	1,514,637	7,722	Lower net operating income aided by a small favorable swing in working capital
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
(734,610)	(735,184)	573	
(734,610)	(735,184)	573	
-	-	-	
-	-	-	
18,065	407	17,658	
18,065	407	17,658	Higher interest income
805,813	779,860	25,954	Higher cash from operations along with favorable financial activity

LEHIGH COUNTY AUTHORITY
CASH & INVESTMENT SUMMARY
For the Period Ended May 31, 2022

	Suburban Internal Service	Suburban Water				Suburban Wastewater				City Division				Global	Total			
	5/31/2022	5/31/2022	2022	2022	2021	5/31/2022	2022	2022	2021	5/31/2022	2022	2022	2021	5/31/2022	5/31/2022	2022	2022	2021
	Actual	Actual	Forecast	Budget	Actual	Actual	Forecast	Budget	Actual	Actual	Forecast	Budget	Actual	Actual	Actual	Forecast	Budget	Actual
Cash																		
Operating																		
Unrestricted	(339,048)	5,310,986	6,812,547	4,277,520	4,348,472	677,455	4,832,126	8,147,829	442,983	6,699,063	9,780,829	14,389,739	6,779,585	(90,656)	12,257,800	21,425,502	26,815,088	11,571,041
Restricted	-	-	-	-	-	-	428	272	-	17,773,545	33,294,883	18,916,191	25,794,847	-	17,773,545	33,295,311	18,916,463	25,794,847
Total Operating	(339,048)	5,310,986	6,812,547	4,277,520	4,348,472	677,455	4,832,554	8,148,101	442,983	24,472,608	43,075,712	33,305,930	32,574,433	(90,656)	30,031,345	54,720,813	45,731,551	37,365,888
Capital																		
Unrestricted	-	320,002	319,727	2,042,457	319,718	5,171,074	6,293,745	7,672,019	5,955,385	11,022,821	11,022,717	169,980	3,022,601	-	16,513,897	17,636,189	9,884,456	9,297,704
Restricted	-	-	-	-	-	338,374	337,932	337,932	338,360	7,500,034	7,500,034	7,500,000	7,500,035	-	7,838,408	7,837,966	7,837,932	7,838,396
Total Capital	-	320,002	319,727	2,042,457	319,718	5,509,448	6,631,677	8,009,951	6,293,745	18,522,855	18,522,751	7,669,980	10,522,636	-	24,352,305	25,474,155	17,722,388	17,136,099
Other Restricted																		
Debt Reserves	-	1,648,641	1,648,596	1,858,493	1,648,569	-	-	-	-	34,109,693	14,923,968	28,976,677	27,493,396	-	35,758,334	16,572,564	30,835,170	29,141,965
Escrow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Other Restricted	-	1,648,641	1,648,596	1,858,493	1,648,569	-	-	-	-	34,109,693	14,923,968	28,976,677	27,493,396	-	35,758,334	16,572,564	30,835,170	29,141,965
Total Cash	(339,048)	7,279,630	8,780,870	8,178,470	6,316,759	6,186,903	11,464,231	16,158,052	6,736,728	77,105,156	76,522,431	69,952,587	70,590,465	(90,656)	90,141,985	96,767,532	94,289,109	83,643,953
Investments																		
Operating																		
Unrestricted	-	1,703,270	1,474,940	1,497,825	1,974,940	-	-	(589,802)	-	-	-	-	-	-	1,703,270	1,474,940	908,023	1,974,940
Restricted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Operating	-	1,703,270	1,474,940	1,497,825	1,974,940	-	-	(589,802)	-	-	-	-	-	-	1,703,270	1,474,940	908,023	1,974,940
Capital																		
Unrestricted	-	1,000,588	1,000,184	1,000,000	1,000,184	8,643,886	6,977,548	6,977,548	6,977,548	-	-	-	-	-	9,644,474	7,977,731	7,977,548	7,977,731
Restricted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital	-	1,000,588	1,000,184	1,000,000	1,000,184	8,643,886	6,977,548	6,977,548	6,977,548	-	-	-	-	-	9,644,474	7,977,731	7,977,548	7,977,731
Other Restricted																		
Debt Reserves	-	-	-	244,924	-	-	-	-	-	-	-	-	-	-	-	-	244,924	-
Escrow	-	163,575	295,372	4,210,752	295,372	-	-	-	-	-	-	-	-	-	163,575	295,372	4,210,752	295,372
Total Other Restricted	-	163,575	295,372	4,455,676	295,372	-	-	-	-	-	-	-	-	-	163,575	295,372	4,455,676	295,372
Total Investments	-	2,867,433	2,770,496	6,953,501	3,270,496	8,643,886	6,977,548	6,387,746	6,977,548	-	-	-	-	-	11,511,319	9,748,043	13,341,247	10,248,043
Total Cash and Investments	(339,048)	10,147,063	11,551,366	15,131,971	9,587,255	14,830,788	18,441,779	22,545,798	13,714,276	77,105,156	76,522,431	69,952,587	70,590,465	(90,656)	101,653,304	106,515,576	107,630,356	93,891,996
Summary																		
Cash																		
Unrestricted	(339,048)	5,630,989	7,132,274	6,319,977	4,668,190	5,848,529	11,125,871	15,819,848	6,398,368	17,721,884	20,803,546	14,559,719	9,802,186	(90,656)	28,771,698	39,061,691	36,699,544	20,868,744
Restricted	-	1,648,641	1,648,596	1,858,493	1,648,569	338,374	338,360	338,204	338,360	59,383,272	55,718,885	55,392,868	60,788,279	-	61,370,287	57,705,841	57,589,565	62,775,208
Total Cash	(339,048)	7,279,630	8,780,870	8,178,470	6,316,759	6,186,903	11,464,231	16,158,052	6,736,728	77,105,156	76,522,431	69,952,587	70,590,465	(90,656)	90,141,985	96,767,532	94,289,109	83,643,953
Investments																		
Unrestricted	-	2,703,858	2,475,123	2,497,825	2,975,123	8,643,886	6,977,548	6,387,746	6,977,548	-	-	-	-	-	11,347,744	9,452,671	8,885,571	9,952,671
Restricted	-	163,575	295,372	4,455,676	295,372	-	-	-	-	-	-	-	-	-	163,575	295,372	4,455,676	295,372
Total Investments	-	2,867,433	2,770,496	6,953,501	3,270,496	8,643,886	6,977,548	6,387,746	6,977,548	-	-	-	-	-	11,511,319	9,748,043	13,341,247	10,248,043
Total Cash and Investments	(339,048)	10,147,063	11,551,366	15,131,971	9,587,255	14,830,788	18,441,779	22,545,798	13,714,276	77,105,156	76,522,431	69,952,587	70,590,465	(90,656)	101,653,304	106,515,576	107,630,356	93,891,996

DEVELOPMENT ACTIVITY

Water system construction is occurring in the following developments:

5420 Crackersport Road, 1 commercial lot, UMT
8323/8449 Congdon Hill Drive, 2 industrial lots with warehouses, LMT
Fields at Indian Creek, Phases 4 & 5, 86 residential units (sfd), water and sewer, UMiLT & Emmaus
Kohler Tract, 123 residential lots (sfa), water and sewer, UMiLT
Lehigh Hills, Lot 5 Phase 2, 240 residential units (sfd.), UMT
Lehigh Hills Townhouses, 24 townhouse units (sfa), UMT
Mountain View Estates, 27 residential units (sfd), LMT
Sauerkraut Lane Extension, Roadway & water line extension, LMT
West Hills Business Center Lot H, 1 commercial lot, Weisenberg T

Water system plans are being reviewed for the following developments:

749 Route 100, 1 industrial lot with warehouse, UMT
3369 Rt 100 Neighborhood Hospital & Medical Offices, 1 commercial lot, LMT
5329-5347-5357 Hamilton Blvd., 1 commercial lot, LMT
ABE Doors & Windows Redevelopment, 1 commercial lot, LMT
Advanced Health Care of Allentown, 1 commercial lot, LMT
Air Products & Chemicals-Cetronia Road, 1 commercial lot, UMT
ATAS International, 1 industrial lot, UMT
Carriage East Residential Development, 11 residential units, (sfd), UMT
Estates at Maple Ridge, 30 residential units (sfd), UMiLT
Fallbrooke Residential Subdivision, 90 sf residential units, UMT
Fields at Brookside, water main relocation, LMT
Grant Street Townes, 18 townhouse units, WT -New
Green Hills Commerce Center III, 1 commercial lot, UMT
Guardian Self-Storage, 1 commercial lot, LMT
Hidden Meadows - Phase 3, 20 townhouse units, UMT
Laurel Field, Phase 5, 25 townhouses, UMT
Macungie Crossings Home Depot, 4 Commercial lots, LMT-New
Madison Village at Penn's View, 66 manufactured homes, 1 lot, water and sewer, LynnT
Mertztown Residential Subdivision, 264 sf units & 136 townhouse units, LMT
Mosser Road Subdivision, 10 sf units, UMT
Parkland Crossing (formerly 1224 Weilers Rd Twins), 144 townhouse units, UMT
Ridings at Parkland, Phase 2, 38 residential units (sfd), NWT
Schoeneck Road, Lot 1, 1 lot, warehouse, LMT
Self-Storage Facility, Cedarbrook Road – 1 Commercial Lot, LMT
Sheetz, Cetronia Road, 1 commercial lot, UMT
Spring Creek Properties, Lot 12, 1 lot, warehouse, LMT
The Annex at Fields at Indian Creek, 22 sf residential units, Emmaus Borough
Towneplace Suites by Marriott, 91-room hotel, UMT
Towns At Schaefer Run, 128 townhouse unit (sfa), UMT

Sewage Facilities Planning Modules Reviewed in Prior Month:

4541 Indian Creek Road, LMT, 223 gpd.
212 Quarry St / 217 Chestnut St, Whitehall, 1,505 gpd.
Millipore Sigma Distribution Center, UMT, 2,130 gpd.
Whitehall Plaza, Whitehall, 5,875 gpd.
417 N 15th St Adaptive Reuse, Allentown, 3,808 gpd.
1453 Lehigh Ave / Marie Searfoss, Salisbury, 430 gpd.
839 E Lynnwood St / Marie Searfoss, Salisbury, 430 gpd.
215 Quarry St, Whitehall, 6,020 gpd.
Glenlivet Drive West Extension and Residential Subdivision, UMT, 11,596 gpd.

CERTIFICATES OF DEPOSIT

May 2022

Fund	Bank	Location	Gross Amount	Date of Purchase	Date Due	Net Rate %
LLRI CR	Ally Bank	Sandy, UT	245,000.00	5/26/22	5/28/24	2.850
LLRI CR	Morgan Stanley Bank, National Assn	Salt Lake City, UT	245,000.00	5/26/22	5/28/24	2.850
LLRI CR	Morgan Stanley Private Bank, National Assn	Purchase, NY	245,000.00	5/26/22	5/28/24	2.850
Cons Wtr (2)	Israel Discount Bank of New York	New York, NY	245,000.00	5/27/22	5/28/24	2.850
LLRI CR	Discover Bank	Greenwood, DE	245,000.00	6/1/22	6/3/24	2.850
Cons Wtr (2)	Barclay's Bank Delaware	Wilmington, DE	245,000.00	6/2/22	6/3/24	2.850

Presented: June 27, 2022

Critical Activities	System	Description	May-22	2022 Totals	2021 Totals	Permit
			Daily Avg (MGD)	Daily Avg (MGD)	Daily Avg (MGD)	Daily Max (MGD)
Water Production	Allentown	Total	22.96	21.94	22.00	39.0
		Schantz Spring	7.75	7.11	7.29	9.0
		Crystal Spring	3.85	3.86	3.75	4.0
		Little Lehigh Creek	11.37	10.94	10.84	30.0
		Lehigh River	0.00	0.04	0.11	28.0
	Central Lehigh	Total	12.29	10.98	10.98	19.04 MGD Avg
		Feed from Allentown	7.48	7.07	7.29	7.0 MGD Avg 10.5 MGD Max
		Well Production (CLD)	4.81	3.92	3.69	8.54 MGD Avg
		Sum of all (12) other Suburban Water Systems	0.15	0.13	0.13	1.71 Sum of all wells
Wastewater Treatment		Kline's Island	35.82	34.15	32.27	40.0
		Pretreatment Plant	5.58	5.23	5.17	5.75 (design capacity)
		Sum of all (5) other Suburban WW Systems	0.25	0.21	0.21	0.36
			May-22	2022 Totals	2021 Totals	2020 Totals
Precipitation Totals (inches)			5.27	21.6	44.67	60.66
Compliance Reports Submitted to Allentown			18	135	280	278
Notices of Violation (NOVs)		(Allentown + Suburban)	0	1	3	1
Sanitary Sewer Overflows (SSOs)/Bypasses		(Allentown + Suburban)	3	12	26	37
Main Breaks Repaired		Allentown	1	13	20	20
		Suburban	1	6	14	12
Customer Service Phone Inquiries		(Allentown + Suburban)	865	4,332	15,857	22,992
Water Shutoffs for Non-Payment		(Allentown + Suburban)	168	750	1,773	1,956
Injury Accidents		(Allentown + Suburban)	0	2	8	10
Emergency Declarations		Allentown	0	2 @ \$213,993	0	(2)@ \$152,053
		Suburban	0	(1) @ \$800,000	(1) @ \$48,000	(1) @ \$19,335
Significant Repairs/Upgrades:						
Devonshire Road from Mack Blvd to S 11th completely restored						
One Calls - 625 (sub) 749 (COA)						
CCTV Footage - 8,930 ft (sub) 3,233 ft (COA)						
Description of NOVs and/or SSOs:						
A heavy rain event in early May produced over 2.2" of rain and resulted in a bypass at the Heidelberg Heights and Lynn Township WWTP. The Heidelberg bypass lasted from 5/7 to 5/11 and discharged 0.477 MG. The Lynn Township bypass lasted from 5/7 to 5/10 and discharged 0.240 MG. On 5/12 a SSO occurred from air release valve 1 on the Western Lehigh Interceptor due to a faulty valve. A Boil Water Advisory was issued for the Pine Lakes Division on 5/14 and was lifted on 5/16.						
Other Highlights: The temporary sodium bisulfite system at Kline's Island was placed online May 18th. This system is being used for a dechlorination pilot study.						