



## LEHIGH COUNTY AUTHORITY

**LCA Main Office:**  
1053 Spruce Road  
Wescosville, PA 18106  
610-398-2503

**Agendas & Minutes Posted:**  
[www.lehighcountyauthority.org](http://www.lehighcountyauthority.org)

Published: November 21, 2016

### BOARD MEETING AGENDA – November 28, 2016

1. Call to Order
  - *Public Participation Sign-In Request*
2. Review of Agenda / Executive Sessions
3. Approval of Minutes
  - *October 24, 2016 Board meeting minutes*
4. Public Comments
5. Action / Discussion Items:

#### **FINANCE AND ADMINISTRATION**

- *2017 Water & Sewer Rates (blue)*

#### **WATER**

- *Drought Status Report*
- *Suburban Division – Asset Management Facility Upgrades (yellow)*
- *Suburban Division – Water Main Replacement Program Design Phase Cycles 1 – 3 (amendment approval) (green)*
- *Allentown Division – Schantz Spring Main Replacement Design Phase (tan)*
- *Allentown Division – PA Rapid Bridge Replacement Project of the Hamilton Street Bridge crossing Cedar Creek (purple)*

#### **WASTEWATER**

- *2017 Arcadis SCARP Program Management Services (grey)*

6. Monthly Project Updates / Information Items (1<sup>st</sup> Board meeting per month) – **November Board Notes attached**
7. Monthly Financial Review (2<sup>nd</sup> Board meeting per month) – **October 2016 report and 2016 Q4 Forecast attached**
8. Monthly System Operations Overview (2<sup>nd</sup> Board meeting per month) – **October 2016 report attached**
9. Staff Comments
10. Solicitor's Comments
11. Public Comments / Other Comments
12. Executive Sessions
13. Adjournment

#### **UPCOMING BOARD MEETINGS**

*Meetings begin at Noon at LCA's Main Office, unless noted otherwise below.*

December 12, 2016

January 9, 2017

January 23, 2017

#### **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**

### **October 24, 2016**

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The Regular Meeting of the Lehigh County Authority was called to order at 12:14 p.m. on Monday, October 24, 2016, Chairman Brian Nagle presiding. Other Members present at the commencement of the meeting were: Linda Rosenfeld, Kevin Baker, Tom Muller, Norma Cusick, Scott Bieber, Ted Lyons and Deana Zosky. Authority Staff present were Liesel Gross, Ed Klein, Pat Mandes, Brad Landon, John Parsons, Chuck Volk, Phil DePoe and Lisa Miller.

#### **REVIEW OF AGENDA**

Liesel Gross stated that there is one item for Executive Session regarding personnel.

#### **APPROVAL OF MINUTES**

##### **October 10, 2016 Regular Meeting Minutes**

On a motion by Linda Rosenfeld, seconded by Tom Muller, the Board approved the Minutes of the October 10, 2016 meeting (8-0).

#### **PUBLIC COMMENTS**

Jan Keim requested the record of wastewater treatment allocations to date that were given out by the City of Allentown to each municipal signatory, including the Authority. Pat Mandes responded that the Authority will provide Ms. Keim with the record.

John Donches asked the Board for their thoughts on the possibility of blending as one of the Administrative Order solutions for surcharging during unusual weather events. Chairman Nagle noted a meeting on November 9<sup>th</sup> at 5:00 PM in Allentown City Council chambers, hosted by Allentown Public Works Committee, which is an update from the City staff/consulting engineers to Public Works regarding the City's Administrative Order. He said the Board will defer discussion until after they hear from the City. He encouraged everyone to attend that meeting for more information. The Authority will make the Signatories aware of the meeting as well as post a notice on the website when the Authority receives official notification by the City.

#### **ACTION AND DISCUSSION ITEMS**

##### **2017 Preliminary Budget**

Liesel Gross provided the Board with an Executive Summary outlining the 2017 Preliminary Budget. Deana Zosky asked that an overview of the highlights and assumptions of the 2017 Budget be presented for the purpose of the public attending the meeting. Liesel Gross gave an overview of the 2017 Budget Executive Summary that was provided with the agenda. Ms. Gross noted that the development of the budget focused on meeting certain financial criteria – positive cash flow, meeting all debt service coverage requirements, and finding ways to limit the need to borrow in the future for capital improvements. She also reviewed the operational priorities included in the 2017 budget proposal including some staffing and other operating cost increases to address asset management and succession planning needs of the organization. Ed Klein commented that the Authority has met its first Budget criteria, positive cash flow, even with some significant employee benefits costs inflation and additional operating expenses. Ms. Gross noted that to meet the cash flow requirements, there will be a rate increase of 3.3% in the City Division in accordance with the Concession agreement. The Wastewater rates for the Signatories are per agreements but were calculated and included. There is also a proposed 3% increase in the water rates in the Suburban Division. After the Budget is approved, the new rate proposal will be presented to the Board.

On a motion by Norma Cusick, seconded by Linda Rosenfeld, the Board approved the 2017 Budget (8-0).

**2017 Goals & Strategic Plan**

Liesel Gross presented a memorandum for establishing 2017 Goals and asked the Board how they would like to be involved in the discussion of organizational philosophies and strategic objectives. Several Board members expressed willingness to conduct a strategic planning discussion through upcoming meeting agendas and suggested the use of an independent facilitator. Ms. Gross said that she will develop a recommendation for continued discussion.

**Resolution #10-2016-2 - designating signers with M&T Bank accounts**

Brad Landon reviewed Resolution #10-2016-2 which designates Authority personnel to execute transactions and other functions with M&T Bank.

On a motion by Norma Cusick, seconded by Tom Muller, the Board approved Resolution #10-2016-2 (8-0).

**Resolution #10-2016-3 - Commonwealth Financial Authority Grant for the Crestwood Alternate Water Supply Project**

Brad Landon reviewed Resolution #10-2016-3 which authorizes the submission of a financial assistance application to Commonwealth Financing Authority for a grant for the Crestwood Alternate Water Supply project.

On a motion by Norma Cusick, seconded by Linda Rosenfeld, the Board approved Resolution #10-2016-3 (8-0).

**Resolution #10-2016-4 - Commonwealth Financing Authority Grant for the Heidelberg Heights Wastewater Tank Re-Coating project**

Brad Landon review Resolution #10-2016-4 which authorizes the submission of a financial assistance application to Commonwealth Financing Authority for a grant for the Heidelberg Heights Wastewater Tank Re-Coating project.

On a motion by Norma Cusick, seconded by Scott Bieber, the Board approved Resolution #10-2016-4 (8-0).

**Park Pump Station Upgrade Project**

Chuck Volk gave an overview of the project to replace pumps, replace the electrical controls and drives and perform any other related upgrade work which would restore the station to its original design capacity and extend the service life of the station. The project will be funded by the LCA Suburban Division. Mr. Volk is asking for approval of the Capital Project Authorization – Design & Bid Phase in the amount of \$302,775.00 which includes the Professional Services Authorization – Design & Bid Phase in the amount of \$227,755.00 and the award of the design work to Whitman, Requardt and Associates, LLP.

Jan Keim asked what would happen if a parallel line was put in instead. Mr. Volk said that a parallel line would not solve the pump problem and would be very costly due to the environmentally sensitive areas some of that line would need to transverse. John Donches asked if this was the main reason for the overflows. Mr. Volk said the pump station is not directly responsible for upstream overflows, but that the refurbishment is one of several projects associated with the regional plan to address the Administrative Order to eliminate the overflows, as upgrades to the pump station will restore the capacity of this facility to its original pumping capacity.

On a motion by Norma Cusick, seconded by Tom Muller, the Board approved the Capital Project Authorization – Design & Bid Phase in the amount of \$302,775.00 which includes the Professional Services Authorization – Design & Bid Phase in the amount of \$227,755.00 and award the work to Whitman, Requardt and Associates, LLP (8-0).

**MONTHLY FINANCIAL REVIEW**

Ed Klein reviewed the September 2016 Financial report. There was some discussion on variances and the use of forecasted figures versus budget figures for the performance comparison.

**SYSTEM OPERATIONS OVERVIEW**

John Parsons reviewed the September 2016 report that was attached to the Board agenda.

Liesel Gross provided a handout on the results of the Authority's lead testing. In addition to the regulatory monitoring that the Authority was required to complete in 2016, 12 customers requested to have their water tested under the special program approved by the Board this past summer. Of all the customers who participated in either the regulatory or voluntary testing program, three customers had a level above the DEP action level. The Authority will continue to assist these customers with additional testing, advice and public education.

**STAFF COMMENTS**

Liesel Gross noted that with the passing of the 2017 budget, the October 31, 2016 scheduled Board meeting would be canceled.

**SOLICITOR'S COMMENTS**

None.

**PUBLIC COMMENTS / OTHER COMMENTS**

None.

**EXECUTIVE SESSION**

Chairman Nagle called an Executive Session at 1:22 p.m. to discuss personnel.

The Executive Session ended at 1:32 p.m.

**ADJOURNMENT**

There being no further business, the Chairman adjourned the meeting at 1:32 p.m.

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Norma A. Cusick  
Assistant Secretary



1053 SPRUCE ROAD \* P.O. BOX 3348 \* ALLENTOWN, PA 18106-0348  
610-398-2503 \* FAX 610-398-8413 \* [www.lehighcountyauthority.org](http://www.lehighcountyauthority.org)  
email: [service@lehighcountyauthority.org](mailto:service@lehighcountyauthority.org)

## MEMORANDUM

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**TO:** LCA Board of Directors  
**FROM:** Liesel Gross, CEO  
**DATE:** November 7, 2016  
**RE:** 2017 Water & Sewer Rates

The 2017 water and sewer rates are presented in the attached schedules for the Board of Director's consideration for adoption on November 28, 2016. They are being submitted early so that they can be posted on the LCA website in advance of their proposed adoption. Should any Board member, customer, or member of the general public, have any questions or comments about these rates, we request these be submitted to me by November 25, 2016 so they can be entered into the public record and considered by the Board during the meeting on November 28<sup>th</sup>.

To assist the Board and the public with reviewing the proposed rates, a summary of the proposed rate changes is shown on the table below, and all changes are highlighted / shaded grey within the rate schedule documents.

In addition, it is important to note that these rates were discussed, reviewed and preliminarily approved as part of the 2017 budget process that began in August and was concluded in October. This submission represents formal adoption of the rates that were previously discussed, presented and incorporated into the 2017 budget calculations. In other words, there are "no surprises" included in the attached rate schedules.

### Water Rates

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Rate	Page #	Description / Discussion
Suburban Water Volume Charge	1	Proposed change in volume rates are calculated based prior 12-month water volume sales and 2017 budget requirement of a 3% increase in overall water revenues. Proposed rates follow recommendations from LCA's 2012 cost-of-service rate study. A new rate study will be conducted in 2017.
Hydrant Security Device Fee	4	Updated fee reflecting actual cost of the device.
Allentown Water Rates	10	The 2017 rates reflect increases based on the terms of the Concession Agreement with the City of Allentown. Such increases include an overall 3.3% increase in general rates, plus an updated calculation of the Capital Cost Recovery Charge per the methodology included in the agreement.

## Wastewater Rates

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Rate	Page #	Description / Discussion
Suburban Exceptional Strength Charge	5	As calculated in the Western Lehigh Interceptor User Charge Report that was submitted to municipal signatories in October 2016. Rates are calculated by formula in compliance with municipal agreements.
Western Lehigh Interceptor & Little Lehigh Relief Interceptor User Charges	7	As calculated in the Western Lehigh Interceptor User Charge Report that was submitted to municipal signatories in October 2016. Rates are calculated by formula in compliance with municipal agreements.
Allentown Sewer Rates	9	The 2017 rates reflect increases based on the terms of the Concession Agreement with the City of Allentown. Such increases include an overall 3.3% increase in general rates, plus an updated calculation of the Capital Cost Recovery Charge and Administrative Order Fee per the methodology included in the agreement.
Allentown Exceptional Strength Charge	10	As calculated in the Western Lehigh Interceptor User Charge Report that was submitted to municipal signatories in October 2016. Rates are calculated by formula in compliance with municipal agreements.

## 2017 Rates “To be determined / submitted”

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Throughout both the water and wastewater rate schedules, several items are marked with a notation that the 2017 rate is “to be determined / submitted” at a later date. These rates all fall in the category of tapping fees or customer facilities fees that impact future customers and must be calculated in accordance with current legislation for such fees and adopted by formal Resolution of the Board. Therefore, these rates will be submitted separately by the end of the year with the appropriate Resolution and supporting documentation as required by law.

## LCA Rate Approval Process

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Developing the 2017 rate schedules has been an iterative process that was discussed by the LCA Board of Directors several times over the past three months as the 2017 budget was developed and approved. With this submission, LCA seeks to formally codify these rates into our published rate schedule. Approval of the rate schedules is requested at the November 28, 2016 Board meeting to allow for adequate time to notify customers of the final adopted rates that will be reflected on their water/sewer bills in 2017.

**LEHIGH COUNTY AUTHORITY  
SCHEDULE OF WATER RATES AND CHARGES**

**CENTRAL LEHIGH, NORTH WHITEHALL, WASHINGTON TOWNSHIP,  
HEIDELBERG HEIGHTS, ARCADIA, PINE LAKES, MILL CREEK, BEVERLY HILLS,  
CLEARVIEW FARM ESTATES, UPPER MILFORD CENTRAL, EMMAUS CONSECUTIVE,  
AND MADISON PARK NORTH DIVISIONS**

**I. Schedule of Water Rates**

**A. Metered Water Use**

**Central Lehigh, North Whitehall, Washington Township, Heidelberg Heights,  
Arcadia, Pine Lakes, Mill Creek, Beverly Hills, Emmaus Consecutive  
Divisions & Clearview Farm Estates**  
(adopted 11/28/16; effective 1/1/17)

<b>Fixed Charges</b>	
<b>Meter Size</b>	<b>Fixed Charge</b>
<i>Quarterly</i>	
5/8" & 3/4" *	\$ 11.70
1"	21.60
<i>Monthly</i>	
1-1/2"	14.10
2"	21.00
3"	43.80
4"	64.20
6"	120.30
8"	186.90
10"	263.10

\*Typical residential.

<b>Volume Charges</b>		
<b>Quarterly Usage (gal.)</b>	<b>Monthly Usage (gal.)</b>	<b>Rate per 1,000 Gal.</b>
First 120,000	First 0 - 40,000	\$2.25
Next 2,880,000	Next 960,000	\$2.06
Next 24,000,000	Next 8,000,000	\$1.70
Next 147,000,000	Next 49,000,000	\$1.47
Over 174,000,000	Over 58,000,000	\$1.26

<b>2016 Volume Charges</b>		
<b>Quarterly Usage (gal.)</b>	<b>Monthly Usage (gal.)</b>	<b>Rate per 1,000 Gal.</b>
First 120,000	First 0 - 40,000	\$2.39
Next 2,880,000	Next 960,000	\$2.19
Next 24,000,000	Next 8,000,000	\$1.79
Next 147,000,000	Next 49,000,000	\$1.51
Over 174,000,000	Over 58,000,000	\$1.26

**LEHIGH COUNTY AUTHORITY**  
**SCHEDULE OF WATER RATES AND CHARGES (cont'd)**

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**Welshtown Road (Washington Township Division)**

(adopted 9/19/95; effective 10/1/95)

Volume		Rate per 1,000 Gal.
First	8,000 gal./qtr.	*Minimum Charge/Quarter
All over	8,000 gal./qtr.	\$ 5.50
Meter Size		*Minimum Charge/Quarter
5/8" & 3/4"		\$ 60.00
1"		72.00
1-1/4"		84.00
1-1/2"		108.00
2"		133.00
3"		169.00
4"		266.00
6"		459.00

**Upper Milford Central Division**

(adopted 3/26/07; effective 4/1/07)

Fixed Charge
Quarterly – All Meter Sizes \$21.00

Volume	Rate per 1,000 Gallons
All Volume	\$ 5.47

**Madison Park North Division**

(adopted 7/12/10; effective 7/8/10)

Fixed Charge
Quarterly – (5/8" & 3/4" meter) \$11.70

Volume	Rate per 1,000 Gallons
All Volume	\$ 7.50

**B. Public Fire Protection**

**Central Lehigh, North Whitehall & Washington Township Divisions**

(adopted 2/13/06; effective 4/1/06)

Each Public Fire Hydrant (O&M Charge)	\$7.87/month
Each Inch-Squared Foot (System Charge)	\$0.00152/year



**LEHIGH COUNTY AUTHORITY**  
**SCHEDULE OF WATER RATES AND CHARGES (cont'd)**

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**C. Private Fire Protection**

**Central Lehigh, North Whitehall & Washington Township Divisions**

(adopted 7/12/10; effective 7/12/10)

Fire Line Size	Charge per Month
Single Family Residential	\$ 5.00
2"	13.61
2-1/2"	21.26
3"	30.62
4"	54.43
6"	122.47
8"	217.72
10"	340.18
12"	489.87

**Arcadia Division**

(adopted 5/12/03; effective 5/12/03)

	Charge per Sq. Ft. of Building Space
Monthly	\$.00321
Quarterly	.00963

**II. Meter Test Fee**

(adopted 12/15/14; effective 1/1/15)

Meter Size	Fee
5/8", 3/4", 1"	\$50.00
Larger than 1"	Actual Cost if >\$50

**III. Meter Inspection Fee**

(adopted 12/15/14; effective 1/1/15)

**\$50.00**

**IV. Service Order / Site Visit Fees**

(adopted 12/15/14; effective 1/1/15)

Business Hours – 7:00 a.m. and 4:45 p.m., Monday through Friday (except holidays)	<b>\$50.00</b>
After Hours	<b>\$150.00</b>
Service Termination & Restoration Charge	<b>\$100.00</b>

**V. Site Revisitation Charge**

(adopted 12/15/14; effective 1/1/15)

**\$100.00**

**VI. Lien Administration Fee**

(adopted 12/13/04; effective 01/1/05)

**\$56.50 + Current Lehigh County Clerk of Court's Filing Fee**

**LEHIGH COUNTY AUTHORITY**  
**SCHEDULE OF WATER RATES AND CHARGES (cont'd)**

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<b>VII. <u>Hydrant Security Device Fee</u></b> <b><u>Central Lehigh Division</u></b> (adopted 06/27/05; effective 07/1/05)	<b>\$115.00</b>	<b><u>2017 Rate:</u></b> \$140.00
<b>VIII. <u>Fire Flow Test Charge</u></b> (adopted 12/07/11; effective 01/01/12)	<b>\$180.00</b>	
<b>IX. <u>Use of Easement Preparation Fee</u></b> (adopted 12/07/11; effective 01/01/12)	<b>\$90.00</b>	
<b>X. <u>Backflow Prevention Non-compliance Charge</u></b> (adopted 12/07/11; effective 01/01/12)	<b>\$50.00</b>	

**LEHIGH COUNTY AUTHORITY**  
**SCHEDULE OF WATER RATES AND CHARGES (cont'd)**

**IX. Tapping, Connection and Customer Facilities Fees**

**Central Lehigh Division**

(adopted 8/27/12; effective 10/1/12)

Size of Service Line	Tapping Fee			Connection Fee	Customer Facilities Fee
	Distribution		Capacity		
	Type 1	Type 2			
MFR*	\$ 1,150	\$ 150	\$ 340	*	*
3/4"	1,880	300	605	*	*
1"	3,000	480	1,085	*	*
1-1/2"	4,350	705	2,420	*	*
2"	6,350	1,035	4,280	*	*
3"	10,190	1,690	9,675	*	*
4"	13,940	2,350	17,165	*	*
6"	20,050	3,520	38,695	*	*
8"	26,000	4,750	68,805	*	*
10"	30,700	5,865	107,500	*	*
12"	35,600	N/A	154,790	*	*

(\* See Notes on page 8) N/A – Not Available

**Washington Township Division – Excluding Welshtown Road**

(adopted 8/27/12; effective 10/1/12)

Size of Service Line	Tapping Fee		Connection Fees	Customer Facilities Fees
	Distribution	Capacity		
MFR*	\$ 855	\$ 430	*	*
3/4"	1,550	1,000	*	*
1"	2,400	1,800	*	*
1-1/2"	3,470	4,000	*	*
2"	5,100	7,100	*	*
3"	8,320	16,000	*	*
4"	11,580	28,400	*	*
6"	17,350	64,000	*	*
8"	23,420	113,800	*	*
10"	28,930	177,800	*	*
12"	35,075	256,000	*	*

(\* See Notes on page 8) N/A – Not Available

**Central Lehigh Division – Lehigh Valley South Industrial Park**

(adopted 07/25/05; effective 07/1/11)

Special Tapping Fee - \$2,095.37 per equivalent dwelling unit (EDU)

EDU = 220 gallons per day

Central Lehigh Division fees also apply

**LEHIGH COUNTY AUTHORITY**  
**SCHEDULE OF WATER RATES AND CHARGES (cont'd)**

**IX. Tapping, Connection and Customer Facilities Fees (cont'd)**

**North Whitehall Township Division**

(adopted 8/27/12; effective 10/1/12)

Size of Service Line	Tapping Fee			Connection Fee	Customer Facilities Fee
	Distribution		Capacity		
	Type 1	Type 2			
MFR*	\$ 1,030	N/A	\$ 295	*	*
3/4"	2,000	N/A	575	*	*
1"	3,200	N/A	1,035	*	*
1-1/2"	4,700	N/A	2,300	*	*
2"	6,900	N/A	4,080	*	*
3"	11,250	N/A	9,200	*	*
4"	15,650	N/A	16,330	*	*
6"	23,450	N/A	36,800	*	*
8"	31,650	N/A	65,435	*	*
10"	39,100	N/A	102,235	*	*
12"	47,400	N/A	147,200	*	*

(\* See Notes on page 8)      N/A - Not Available (Type 2 Fee has not been established)

**Arcadia Division**

(adopted 8/27/12; effective 10/1/12)

Tapping Fee		
Part	Amount	Units
Capacity	\$ 1.55	Per Gallon per day
Distribution	0.67	Per Gallon per day
Special Purpose Fire Service	0.12	Per Square Foot of Building Space

**Mill Creek Division**

(adopted 8/27/12; effective 10/1/12)

Size of Service Line	Tapping Fee			Connection Fee	Customer Facilities Fee
	Distribution		Capacity		
	Type 1	Type 2			
MFR*	\$ 1,130	N/A	\$ 109	*	*
3/4"	2,000	N/A	192	*	*
1"	2,360	N/A	N/A	*	*
1-1/2"	3,470	N/A	N/A	*	*
2"	5,100	N/A	N/A	*	*
3"	8,320	N/A	N/A	*	*
4"	11,580	N/A	N/A	*	*
6"	17,350	N/A	N/A	*	*
8"	23,420	N/A	N/A	*	*
10"	28,930	N/A	N/A	*	*
12"	35,075	N/A	N/A	*	*

(\* See Notes on page 8)      N/A - Not Available (Type 2 Fee has not been established)

**LEHIGH COUNTY AUTHORITY**  
**SCHEDULE OF WATER RATES AND CHARGES (cont'd)**

**IX. Tapping, Connection and Customer Facilities Fees (cont'd)**

**Pine Lakes Division**

(adopted 8/27/12; effective 10/1/12)

Size of Service Line	Tapping Fee			Connection Fee	Customer Facilities Fee
	Distribution		Capacity		
	Type 1	Type 2			
MFR*	\$ 1,130	N/A	\$ 109	*	*
3/4"	2,000	N/A	192	*	*
1"	2,360	N/A	N/A	*	*
1-1/2"	3,470	N/A	N/A	*	*
2"	5,100	N/A	N/A	*	*
3"	8,320	N/A	N/A	*	*
4"	11,580	N/A	N/A	*	*
6"	17,350	N/A	N/A	*	*
8"	23,420	N/A	N/A	*	*
10"	28,930	N/A	N/A	*	*
12"	35,075	N/A	N/A	*	*

(\* See Notes on page 8) N/A - Not Available (Type 2 Fee has not been established)

**Beverly Hills Division**

(adopted 8/27/12; effective 10/1/12)

Size of Service Line	Tapping Fee			Connection Fee	Customer Facilities Fee
	Distribution		Capacity		
	Type 1	Type 2			
MFR*	\$ 1,130	N/A	\$ 109	*	*
3/4"	2,000	N/A	192	*	*
1"	2,360	N/A	N/A	*	*
1-1/2"	3,470	N/A	N/A	*	*
2"	5,100	N/A	N/A	*	*
3"	8,320	N/A	N/A	*	*
4"	11,580	N/A	N/A	*	*
6"	17,350	N/A	N/A	*	*
8"	23,420	N/A	N/A	*	*
10"	28,930	N/A	N/A	*	*
12"	35,075	N/A	N/A	*	*

(\* See Notes on page 8) N/A - Not Available (Type 2 Fee has not been established)

**Heidelberg Heights Division**

(adopted 8/27/12; effective 10/1/12)

Size of Service Line	Tapping Fee			Connection Fee	Customer Facilities Fee
	Distribution		Capacity		
	Type 1	Type 2			
MFR*	\$ 1,030	N/A	\$ 364	*	*
3/4"	2,000	N/A	708	*	*
1"	2,360	N/A	1,490	*	*
1-1/2"	3,470	N/A	3,320	*	*
2"	5,100	N/A	5,890	*	*
3"	8,320	N/A	13,280	*	*
4"	11,580	N/A	23,570	*	*
6"	17,350	N/A	53,120	*	*
8"	23,420	N/A	94,950	*	*
10"	28,930	N/A	147,570	*	*
12"	35,075	N/A	N/A	*	*

N/A - Not Available (Type 2 Fee has not been established)

**LEHIGH COUNTY AUTHORITY**  
**SCHEDULE OF WATER RATES AND CHARGES (cont'd)**

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**IX. Tapping, Connection and Customer Facilities Fees (cont'd)**

**Emmaus Consecutive Division**

(adopted 08/13/07; effective 08/13/07)

Size of Service Line	Tapping Fee			Connection Fee	Customer Facilities Fee
	Distribution		Capacity		
	Type 1	Type 2			
MFR*	\$ 1,000	N/A	\$200	*	*
3/4"	1,480	N/A	400	*	*
1"	2,360	N/A	580	*	*
1-1/2"	3,470	N/A	1,600	*	*
2"	5,100	N/A	2,840	*	*
3"	8,320	N/A	6,400	*	*
4"	11,580	N/A	11,360	*	*
6"	17,350	N/A	25,600	*	*
8"	23,420	N/A	45,520	*	*

N/A - Not Available (Type 2 Fee has not been established)

**Upper Milford Central Division**

(adopted 8/27/12; effective 10/1/12)

Size of Service Line	Tapping Fee	
	Distribution	Capacity
3/4"	\$ 2,000	\$ 235

**Notes:**

**MFR** - Applicable to each dwelling unit in a mobile home park or multi-family dwelling with individual service and individually metered.

**Connection Fee** is based on actual cost of connecting to the Authority water line, extending the service line to the property line, and inspecting the Customer Service Line.

**LEHIGH COUNTY AUTHORITY**  
**SCHEDULE OF WATER RATES AND CHARGES (cont'd)**

**Customer Facilities Fee**
**2017 Rates:** To be determined / submitted.

This fee includes the supply and installation of a water meter and a backflow protection device for residential facilities (meter component). The fee can also include, at the customer's option and based on actual cost, installation of a service line from the property line to the customer's facility by the Authority.

All service lines must have an approved backflow protection device installed. The Authority will furnish a DC (dual check) device for residential facilities.

<b>Meter Size</b>	<b>Meter Fee - With DC Backflow</b>	<b>Meter Fee - With No Backflow</b>
5/8"	\$ 370	\$ 342
5/8" Pit	\$ 389	\$ 361
3/4"	\$ 376	\$ 348
3/4" Pit	\$ 395	\$ 367
1"		\$ 406
1" Pit		\$ 426
1 1/2" Displacement *		\$ 739
1 1/2" Turbine *		\$ 972
1 1/2" Compound *		\$ 1,304
2" Displacement *		\$ 949
2" Turbine *		\$ 1,156
2" Compound *		\$ 1,529

\* LCA will install all meters 1" or smaller. Larger meters may be purchased from LCA at the prices listed above, which includes a \$50 inspection fee. If LCA installation of a larger meter is requested, the customer will pay actual costs, on a time and materials basis.

**Notes:**

Backflow protection devices for commercial/industrial facilities shall be approved by the Authority, and supplied, installed and tested by the applicant. Meters larger than 2" shall be approved by the Authority, supplied and installed by the applicant, and inspected by the Authority at the applicant's expense.

**X. Non-Sufficient Funds (NSF) Fee****All Divisions****\$25.00**

(adopted 9/24/01, effective 1/1/02)

**XI. Service Initiation Fee****All Divisions****\$15.00**

(adopted 9/24/01, effective 1/1/02)

**LEHIGH COUNTY AUTHORITY**  
**SCHEDULE OF WATER RATES AND CHARGES (cont'd)**

**CITY OF ALLENTOWN**

Adopted 11/28/16; Effective 1/1/17

**NOTE:** Unless expressed specifically in this Schedule of Rates and Charges, customers of the City of Allentown water system are subject to any and all additional charges, fees, penalties and policies stated in Lehigh County Authority's Rules & Regulations for Water Service and its Schedule of Water Rates and Charges duly adopted for its non-City systems.

**A. Metered Water Use**

Meter Size	Monthly Charge	2017 Monthly Charge	Quarterly Charge	2017 Quarterly Charge
5/8"	n/a	\$18.49	\$ 25.84	\$26.78
3/4"	n/a	\$20.51	\$ 31.68	\$32.84
1"	n/a	\$24.66	\$ 43.35	\$44.94
1 1/2"	\$ 33.26	\$34.86	n/a	\$75.56
2"	\$ 44.93	\$47.08	n/a	\$112.23
3"	\$ 75.95	\$79.60	n/a	\$210.11
4"	\$ 111.04	\$116.37	n/a	\$320.12
6"	\$ 208.19	\$218.19	n/a	\$625.89
8"	\$ 324.90	\$340.52	n/a	\$992.54

Volume	Rate per 1,000 Gallons	2017 Rate:
All Volume	\$ 3.17878	\$3.28368

**B. Capital Cost Recovery Charge** **\$0.04617 per 1000 gallons**

**2017 Rate:** \$0.09323

**C. Private Fire Protection**

Each Hydrant	<b>\$317.75 per year</b> (may be billed monthly or quarterly)	<b>2017 Rate:</b> \$328.24
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**D. Tapping Fees**

**Part 1 – Pre-Concession Rate for Pre-Concession Capital Cost Recovery**

\$5.21 per gallon

**2017 Rate:** \$5.38

**Part 2 – Post-Concession Rate for LCA Capital Cost Recovery**

Capacity Part                      \$0.00016 per gallon  
Distribution Part                    \$0.00328 per gallon

**2017 Rates:** To be determined / submitted.



**LEHIGH COUNTY AUTHORITY**  
**SCHEDULE OF WATER RATES AND CHARGES (cont'd)**

**E. Customer Facilities Fees**
**2017 Rates:** To be determined / submitted.

Fees includes the supply and installation of a water meter and associated components.

Meter Size	With LCA Installation*	Without LCA Installation*
5/8"	\$272	
3/4"	\$294	
1"	\$313	
1 1/2"	\$489	
2"	\$613	
3" Compound		\$1,572
3" Turbine		\$1,134
4" Compound		\$2,622
4" Turbine		\$2,068
6" Compound		\$4,424
6" Turbine		\$3,606
8" Compound		\$7,053
8" Turbine		\$6,013
* LCA will install all meters 2" or smaller. Larger meters may be purchased from LCA at the prices listed above, which includes a \$50 inspection fee. If LCA installation of a larger meter is requested, the customer will pay actual costs, on a time and materials basis.		

Other Components	Price	2016 Price
5/8" Meter Horn	\$49.00	\$41.00
3/4" Meter Horn	\$59.00	\$59.00
Curb Box	\$53.33	\$53.33

**LEHIGH COUNTY AUTHORITY**  
**SCHEDULE OF WATER RATES AND CHARGES (cont'd)**

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**F. Connection Fee**
**2017 Rates:** To be determined / submitted.

Actual cost of connecting to the Authority water line, completed by Authority personnel. Additional fees may apply for service line inspection, plan review, construction permits and/or capital recovery charges. Please contact the Authority's Capital Works department for more information.

Tap Size	Connection Fee
3/4"	\$314
1"	\$336
1 1/2"	\$493
2"	\$609
4" x 4"	\$1,860
6" x 4"	\$1,830
6" x 6"	\$2,009
8" x 4"	\$1,845
8" x 6"	\$2,019
8" x 8"	\$2,521
12" x 4"	\$1,980
12" x 6"	\$2,184
12" x 8"	\$2,606
12" x 12"	\$3,863

**LEHIGH COUNTY AUTHORITY  
SCHEDULE OF WASTEWATER RATES AND CHARGES**

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**UPPER MILFORD TOWNSHIP, WEISENBERG TOWNSHIP,  
HEIDELBERG HEIGHTS, WYNNEWOOD, SAND SPRING, WASHINGTON  
TOWNSHIP, LOWHILL TOWNSHIP, LYNN TOWNSHIP, WESTERN LEHIGH  
INTERCEPTOR & LITTLE LEHIGH RELIEF INTERCEPTOR SYSTEMS**

**I. Schedule of Wastewater Rates**

**A. Lowhill Township System**

(adopted 06/13/16; effective 06/08/16)

<b>Flow Charge</b>	<b><u>\$/1,000 gals</u></b>
All Flow	4.53
<b>Fixed Charge per Quarter</b>	<b><u>\$ per Equivalent Dwelling Unit (EDU)</u></b>
- Multi-Family Residential	10.50
- All Other Accounts	21.00

**B. Upper Milford Township System**

(adopted 12/10/12; effective 01/01/13)

<b>Flow Charge</b>	<b><u>\$/1,000 gals</u></b>
All Flow	4.53
<b>Fixed Charge per Quarter</b>	<b><u>\$ per Equivalent Dwelling Unit (EDU)</u></b>
- Multi-Family Residential	10.50
- All Other Accounts	21.00

**C. Weisenberg Township System**

(adopted 12/10/12; effective 01/01/13)

<b>Flow Charge</b>	<b><u>\$/1,000 gals</u></b>
All Flow	4.53
<b>Fixed Charge per Quarter</b>	<b><u>\$ per Equivalent Dwelling Unit (EDU)</u></b>
- Multi-Family Residential	10.50
- All Other Accounts	21.00

**LEHIGH COUNTY AUTHORITY  
SCHEDULE OF WASTEWATER RATES AND CHARGES**

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**Weisenberg Township System (Arcadia West)**

(adopted 12/11/06; effective 01/01/07)

<b>Quarterly Flow Charge</b>	<b><u>\$/1,000 gals</u></b> 58.00
<b>Quarterly Fixed Charge</b>	<b><u>\$/1000 gals of Allocation per day</u></b> 7.55

**C. Heidelberg Heights System**

(adopted 12/10/12; effective 01/01/13)

<b>Flow Charge</b>	<b><u>\$/1,000 gals</u></b>
All Flow	9.53
<b>Fixed Charge per Quarter</b>	<b><u>\$ per Equivalent Dwelling Unit (EDU)</u></b>
- Multi-Family Residential	10.50
- All Other Accounts	21.00

**D. Wynnewood System**

(adopted 12/10/12; effective 01/01/13)

<b>Flow Charge</b>	<b><u>\$/1,000 gals</u></b>
All Flow	9.53
<b>Fixed Charge per Quarter</b>	<b><u>\$ per Equivalent Dwelling Unit (EDU)</u></b>
- Multi-Family Residential	10.50
- All Other Accounts	21.00

**E. Sand Spring System**

(adopted 12/10/12; effective 01/01/13)

<b>Flow Charge</b>	<b><u>\$/1,000 gals</u></b>
All Flow	9.53
<b>Fixed Charge per Quarter</b>	<b><u>\$ per Equivalent Dwelling Unit (EDU)</u></b>
- Multi-Family Residential	10.50
- All Other Accounts	21.00

**LEHIGH COUNTY AUTHORITY  
SCHEDULE OF WASTEWATER RATES AND CHARGES**

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**F. Wastewater Treatment Plant Direct Customer**

(adopted 12/10/12; effective 01/01/13)

<b>Flow Charge</b>	<b><u>\$/1,000 gals</u></b>
All Flow	4.53
<b>Fixed Charge per Quarter</b>	<b>\$21.00*</b>

\* Per Equivalent Dwelling Unit (EDU)

**G. Washington Township System**

(adopted by resolution of Washington Township Board of Supervisors 12/2/08; effective 1/1/09 – Administered by Lehigh County Authority per agreement, as operator, approved 4/13/09; effective 1/1/09. Current rate adopted by LCA 12/10/12; effective 01/01/13). All other Authority administrative fees shall apply to these customers, including those set forth in the Metering Fees and Other Charges categories of this schedule.

<b>Fixed Charge</b>	<b><u>\$/qtr</u></b>
All customers	\$124.00

<b>Flow Charge</b>	<b><u>\$/1,000 gals</u></b>
All flow	\$5.00

**H. Lynn Township**

(adopted 12/07/11; effective 01/01/12)

<b>Flow Charge</b>	<b><u>\$/1,000 gals</u></b>
Commercial accounts, flow in excess of 15,000 gallons per quarter	7.20
<b>Fixed Charge per EDU per Quarter</b>	<b>\$158.98</b>

**LEHIGH COUNTY AUTHORITY  
SCHEDULE OF WASTEWATER RATES AND CHARGES**

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## **II. Metering Fees**

### **A. Meter Purchase/Installation Fee** (adopted 12/14/15; effective 1/1/16)

**2017 Rates:** To be determined / submitted.

<b>Meter Size</b>	<b>Purchase &amp; Inspection *</b>
5/8"	\$ 305
5/8" Pit	324
3/4"	311
3/4" Pit	330
1"	370
1" Pit	390
1-1/2"	739
1-1/2" Pit	972
2" Displacement	1,304
2" Displacement Pit	949
2" Turbine	1,156
2" Compound	1,529

\* Prices include ECR meter with touchpad, radio read unit and installation wire, plus \$50 inspection fee. Plumber shall install all components and call for meter inspection by LCA personnel.

### **B. Meter Inspection Fee**

**\$50.00**

(adopted 12/15/14; effective 1/1/15)

### **C. Meter Test Fee**

(adopted 12/15/14; effective 1/1/15)

<b>Meter Size</b>	<b>Fee</b>
5/8", 3/4", 1"	\$50.00
Larger than 1"	Actual Cost if >\$50

## **III. Other Charges**

### **A. Service Order / Site Visit Fee**

(adopted 12/15/14; effective 1/1/15)

Business Hours – 7:00 a.m. and 4:45 p.m.,  
Monday through Friday (except holidays) **\$50.00**

After Hours **\$150.00**

### **B. Site Revisitation Charge**

**\$100.00**

(adopted 12/15/14; effective 1/1/15)

**LEHIGH COUNTY AUTHORITY  
SCHEDULE OF WASTEWATER RATES AND CHARGES**

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- C. Lien Administration Fee**  
(adopted 12/13/04; effective 01/01/05)

**\$56.50 + Current Lehigh County Clerk of Court's Filing Fee**

- D. Non-Sufficient Funds (NSF) Fee** **\$25.00**  
(adopted 9/24/01, effective 1/01/02)

- E. Service Initiation Fee** **\$15.00**  
(adopted 9/24/01, effective 1/01/02)

- F. Sampling and Testing Charges** **\$170.00/day**  
(adopted 12/18/00; effective 1/1/01)  
(Commercial & Industrial)

**Fats-Oils-Greases Analysis** **\$36.00/sample**  
(adopted 7/27/09; effective 8/1/09)

- G. Exceptional Strength Charges**  
(adopted 11/28/16; effective 1/1/17)

(Commercial & Industrial)	<u><b>\$/pound</b></u>	<u><b>2017 Rates</b></u>
BOD	0.23	0.26
TSS	0.21	0.24
TKN	0.31	0.40

- H. Use of Easement Preparation Fee** **\$90.00**  
(adopted 12/07/11; effective 01/01/12)

**LEHIGH COUNTY AUTHORITY**  
**SCHEDULE OF WASTEWATER RATES AND CHARGES**

**IV. Capital Recovery Charges**

<b>System</b>	<b>Tapping Fee \$/gallon/day</b>	<b>Tapping Fee \$/EDU</b>	<b>Connection Fee</b>	<b>Customer Facilities Fee</b>
<b>Upper Milford System</b> (adopted 6/27/16; effective 7/1/16)				
Route 29 Service Area			Actual Cost Trended*	Actual Cost Trended*
Contributed Area (includes Western Lehigh fees plus UMiT Capacity Part)	12.80	2,886.00		
LCA-Installed Area (includes Contributed Area fees plus UMiT Collection Part)	22.72	5,217.00		
Lower Macungie Twp. Customer	2.44	585.00		
Other Service Areas				
Contributed Area (includes Western Lehigh fees plus UMiT Capacity Part- Other)	10.95	2,451.00		
Non-Contributed Area (includes Contributed Area fees plus UMiT Collection Part)	20.87	4,782.00		
<b>Western Weisenberg Twp System</b> (adopted 6/27/16; effective 7/1/16)				
LCA Planning Fee	2.52	661.50	Historical Cost plus Financing	
LCA Land Fee	3.96	1,040.25	Historical Cost plus Financing	
Wastewater Treatment Plant	38.51	10,108.10	Actual Cost Trended	
<b>Arcadia West Only:</b>				
Reimbursement Fee – Collection Part	50.02	13,130.32	Actual Cost Trended	
Reimbursement Fee – Capacity Part	33.06	8,678.82	Actual Cost Trended	
<b>Wynnewood System</b> (adopted 6/27/16; effective 7/1/15)				
Capacity	6.37	1,534.48	Actual Cost	Actual Cost
Collection	10.46	2,520.23		
<b>Heidelberg Heights System</b> (adopted 6/27/16; effective 7/1/16)				
Capacity	19.73	4,754.29	Actual Cost	Actual Cost
Collection	2.60	626.55		
<b>Sand Spring System</b> (adopted 6/27/16; effective 7/1/16)				
Capacity	3.82	920.38	Actual Cost	Actual Cost
Collection	2.56	617.88		

\*If constructed by Authority; if constructed by property owner, a \$90 inspection fee applies.

The capital recovery fees set forth in this schedule do not apply to the Washington Township sewer system since the Washington Township Board of Supervisors establishes such fees and administers capital recovery fees directly.



**LEHIGH COUNTY AUTHORITY  
SCHEDULE OF WASTEWATER RATES AND CHARGES**

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**WESTERN LEHIGH INTERCEPTOR SYSTEM**

**I. Schedule of Wastewater Rates**

(adopted 11/28/16; effective 1/1/17)

<b>LCA Signatories</b>	<b>Rate (\$)</b>	<b>2017 Rates</b>
Flow (per 1,000 gallons)	1.28	1.13
BOD (per pound)	0.23	0.26
TSS (per pound)	0.21	0.24
TKN (per pound)	0.31	0.40
Allocation (per 1,000 gallons per day)	0.22	0.20
<b>Emmaus</b>		
Flow (per 1,000 gallons)	0.73	0.33

**II. Tapping Fee**

(adopted 6/27/16; effective 7/1/16)

<b><u>System</u></b>	<b>Tapping Fee \$/gal/day</b>	<b>Tapping Fee \$/EDU</b>	<b>Costing Method</b>
<b>Treatment Allocation</b>	<b>5.84</b>	<b>1,302.00</b>	<b>Actual Cost Trended</b>
<b>Western Lehigh Interceptor</b>	<b>3.56</b>	<b>795.00</b>	

**LITTLE LEHIGH RELIEF INTERCEPTOR SYSTEM**

**I. Schedule of Wastewater Rates**

(adopted 11/28/16; effective 1/1/17)

	<b>Rate (\$)</b>	<b>2017 Rates</b>
<b>LCA Signatories – Phase 1</b>	0.12	0.15
Flow (per 1,000 gallons)		
<b>Other Users – Lower Macungie Phase 2 &amp; Brookside Road, Salisbury, and So. Whitehall Townships</b>		
Flow (per 1,000 gallons)	0.09	0.11
<b>LCA Signatories – Phase 2 Flow (per 1,000 gallons)</b>	0.03	0.02

**II. Tapping Fee**

(adopted 6/27/16; effective 7/1/16)

<b><u>System</u></b>	<b>Tapping Fee \$/gal/day</b>	<b>Tapping Fee \$/EDU</b>	<b>Costing Method</b>
<b>Little Lehigh Relief Interceptor</b>	<b>0.99</b>	<b>222.00</b>	<b>Actual Cost Trended</b>

**LEHIGH COUNTY AUTHORITY  
SCHEDULE OF WASTEWATER RATES AND CHARGES**

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**LINE INSPECTION AND CLEANING SERVICES**

(adopted 7/27/09; effective 8/1/09)

<b><u>Crew Size</u></b>	<b><u>TV Inspection (\$/hr)</u></b>	<b><u>Sewer Cleaning (\$/hr)</u></b>	<b><u>Flow Monitoring (\$/hr)</u></b>
One Technician			
Regular Rate	\$111	\$116	\$68
Overtime Rate	\$140	\$144	\$96
Two Technicians			
Regular Rate	\$168	\$173	\$125
Overtime Rate	\$226	\$230	\$182
Three Technicians			
Regular Rate	\$226	\$230	N/A
Overtime Rate	\$311	\$316	N/A

# LEHIGH COUNTY AUTHORITY SCHEDULE OF WASTEWATER RATES AND CHARGES

## CITY OF ALLENTOWN

Adopted 11/28/16; Effective 1/1/17

**NOTE:** Unless expressed specifically in this Schedule of Rates and Charges, customers of the City of Allentown wastewater system are subject to any and all additional charges, fees, penalties and policies stated in Lehigh County Authority's Rules & Regulations for Sewerage Service and its Schedule of Wastewater Rates and Charges duly adopted for its non-City systems.

### A. Sewer Usage Charges

Meter Size	Monthly Charge	2017 Monthly Charge	Quarterly Charge	2017 Quarterly Charge
5/8"	n/a	\$6.43	\$ 8.97	\$9.29
3/4"	n/a	\$7.12	\$ 10.99	\$11.39
1"	n/a	\$8.52	\$ 15.02	\$15.57
1 1/2"	\$ 11.45	\$12.00	n/a	\$26.02
2"	\$ 15.45	\$16.18	n/a	\$38.56
3"	\$ 26.16	\$27.42	n/a	\$72.02
4"	\$ 38.13	\$39.96	n/a	\$109.89
6"	\$ 71.45	\$74.89	n/a	\$214.67
8"	\$131.09	\$137.38	n/a	\$338.75

Flow Charge	Rate per 1,000 Gallons	2017 Rate:
All flow based on metered water usage***	\$ 2.29358	\$2.36927

\*\*\* Unmetered residential accounts will be charged for flow based on an average usage of 180 gallons per day.

### B. Capital Cost Recovery Charge

**\$0.02272 per 1000 gallons**

#### 2017 Rates:

\$0.05012

### C. Administrative Order Fee

**\$0.13074 per 1000 gallons**

\$0.20251

Administrative Order Fee is collected to reimburse the City of Allentown for expenses associated with complying with the USEPA Administrative Order to correct / eliminate sanitary sewer system overflows.

### D. Tapping Fees

#### Part 1 – Pre-Concession Rate for Pre-Concession Capital Cost Recovery

\$3.91 per gallon

**2017 Rate: \$4.10**

#### Part 2 – Post-Concession Rate for LCA Capital Cost Recovery

Capacity Part \$0.00242 per gallon

Collection Part \$0.00010 per gallon

**2017 Rates:** To be determined / submitted.

**LEHIGH COUNTY AUTHORITY  
SCHEDULE OF WASTEWATER RATES AND CHARGES**

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**E. Exceptional Strength Charges**

(Commercial & Industrial)	<u>\$/pound</u>	<u>2017 Rates</u>
BOD	0.226	0.255
TSS	0.192	0.220
TKN	0.336	0.375

**F. Industrial Pretreatment Program Fees**

Issue Initial Two (2) Year Permit	\$1,200.00
Renewal Fee	\$575.00
Review of Monitoring Reports Required by Federal Regulations	\$275.00
Single Occurrence Review	\$350.00
Site Visitations and Inspection	\$130.00
Monitoring Reports Preparation	\$135.00
Placement of Chemical Samplers	\$105.00
Sample Collection and Preparation	\$52.50
Biochemical Oxygen Demand	\$27.50
Cyanide, Total	\$43.00
Oil & Grease	\$48.50
pH	\$12.00
Phenols	\$42.50
Solids, Total Dissolved	\$14.50
Solids, Total Suspended	\$17.50
Solids, Total	\$14.50
Sulfides	\$25.50
Total Kjeldahl Nitrogen (TKN)	\$28.50
Total Petroleum Hydrocarbons	\$40.00
Total Phosphorous as P	\$21.00
Cadmium	\$15.00
Chromium	\$15.00
Copper	\$15.00
Lead	\$15.00
Molybdenum	\$15.00
Nickel	\$15.00
Silver	\$15.00
Selenium	\$15.00
Zinc	\$15.00
Mercury	\$23.00
Cobalt	\$15.00
Lithium	\$15.00



**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](mailto:service@lehighcountyauthority.org)

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**MEMORANDUM**

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**Date:** November 28, 2016

**To:** Authority Board

**From:** Charles Volk, P.E., Asset Management Engineer

**Subject:** Asset Management Upgrade of Suburban Facilities

**MOTIONS /APPROVALS REQUESTED:**

No.	Item	Amount
1	<u>Capital Project Authorization – Design &amp; Bid Phase</u>	\$110,000
2	<u>Professional Services Authorization:</u> <u>Design &amp; Bid Phase – D’Huy Engineering, Inc.</u>	\$79,500

**PROJECT BACKGROUND:**

This project is part of LCA’s Asset Management initiative and follows the Suburban Division Facility Condition Assessment Report for Water and Wastewater Facilities, performed by D’Huy Engineering, Inc. (D’Huy) The purpose of the initial study was to document the condition of Suburban water and wastewater facilities and evaluate the data in an asset management framework to prioritize necessary repairs or replacements. Based on the Report, nine (9) water and two (2) wastewater facilities were selected for upgrade based on a high risk assessment rating (high probability and high consequence of failure).

**PROJECT OBJECTIVE:**

The purpose of this project includes the following:

- 1) To perform necessary building improvements to extend the useful life of each structure.
- 2) To address criticality issues to reduce risk assessment rating.
- 3) To bring each structure into compliance with current codes.
- 4) To improve the access and safety aspects of each facility.

**FINANCIAL:**

The Project will be funded by the LCA Suburban Division.

## **PROJECT STATUS**

A scope of design was developed with D'Huy Engineering, based on addressing the most critical facilities and based on budget allocation. D'Huy is considered most qualified to perform the design, given their familiarity with the facilities and their deficiencies. A proposal cost was developed with D'Huy, and final proposal was received on November 11, 2016. The proposal was reviewed by LCA staff and is acceptable.

## **THIS APPROVAL:** Design and Bid Phase

## **BID**

The proposal amount is \$79,500 for design and bid phase services. The recommendation of this memorandum is authorization to award the work to D'Huy Engineering, Inc. D'Huy has extensive experience in building design including structures, HVAC, and electrical system, and is familiar with code compliance regulations.

## **MATERIAL PROCUREMENT:** N/A

## **PROFESSIONAL SERVICES :**

D'Huy's services consist of the following scope:

1. Conduct a project kickoff meeting to review the specific scope items to be performed at each location.
2. Perform site visits to siphon chambers to confirm dimensions and review access and safety requirements.
3. Make site visits to each building location to verify work and create schematic as-built plans for each facility. These basic plans will include enough detail to generally orientate the contractors and to provide overall dimensional information. Complete as-built drawings are not included but can be provided as an additional service.
4. Prepare general and electrical drawings for each site. General drawings will include mechanical, structural and civil work. Drawings will generally consist of photos and notes outlining the areas of work. See Attachment A for the anticipated scope of work to be completed at each location and Attachment B for the anticipated drawing list. We anticipate a total of 33 drawings (including two cover sheets) will be prepared.
5. Facilitate one design review meeting with LCA at approximately 90% design completion.
6. Prepare a cost estimate after the 90% review and prior to issuing bid documents.
7. Preparation of contract front end documents and Division 1 specifications. All technical information for the project will be included on the Drawings. Bid form will include alternate bid items to allow LCA to adjust the scope of work to be completed based on the prices received.
8. Facilitate a pre-bid meeting and site visit.
9. Prepare addendum as required.
10. Review bids received and make a recommendation for award.

## **SCHEDULE**

Assuming approval at the November 28, 2016 Board meeting, the Work is anticipated to be started immediately with design completion scheduled for early February 2017, with bid phase anticipated to conclude by the end of March 2017.

## **FUTURE AUTHORIZATIONS**

Construction phase.

# CAPITAL PROJECT AUTHORIZATION

<b>PROJECT NO.:</b>	<u>SD-W-11</u>	<b>BUDGET FUND:</b>	<u>Suburban Div\Wastewater\Capital</u>
<b>PROJECT TITLE:</b>	<u>Asset Management Facility Upgrades</u>	<b>PROJECT TYPE:</b>	<input type="checkbox"/> Construction <input checked="" type="checkbox"/> Engineering Design <input type="checkbox"/> Equipment Purchase <input type="checkbox"/> Amendment
<b>THIS AUTHORIZATION:</b>	<u>\$ 110,000</u>		
<b>TO DATE (W/ ABOVE)</b>	<u>\$ 230,000</u>		

## DESCRIPTION AND BENEFITS:

### Asset Management Facility Upgrades - Design & Bid Phase Contract:

This contract consists of providing design and bid phase services for Suburban Division facilities identified in the Facility Condition Assessment Report as having the highest risk rating. This design includes, but is not limited to, structural, HVAC and electrical upgrades. The objectives of the project are: to perform necessary building improvements to extend the useful life of each structure; to address criticality issues to reduce risk assessment rating; to bring each structure into compliance with current codes; and to improve the access and safety aspects of each facility.

Previous Authorizations	
Study Phase	\$120,000

REQUESTED THIS AUTHORIZATION	
Design & Bid Phase	
Staff	\$20,000
Professional Services:	
Design & Bid Phase Services - D'Huy	\$79,500
Contingency	\$10,500
Total This Authorization	\$110,000

Future Authorization	
Construction Phase	\$

Total Estimated Project	\$
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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:** D;HUY ENGINEERING, INC.  
One East Broad St., Suite 310  
Bethlehem, PA 18018

**Date:** November 28, 2016

**Requested By:** Charles Volk

**Approvals**

**Department Head:** \_\_\_\_\_

**Chief Executive**

**Officer:** \_\_\_\_\_

### Suburban Division – Asset Management Facility Upgrades, Water and Sewer Facilities

D'Huy Engineering, Inc. will perform the design and bid phase services (upon LCA authorization) for the Asset Management Facility Upgrades for Suburban Division water and sewer facilities, including addressing criticality, safety, and code compliance issues..

Professional Services <sup>(1)</sup>
1. Perform Suburban Division Asset Management Facility Upgrade Design
2. Provide Bid phase services.

(1) For Design Phase Only.

Please reference the cover Memo for additional information.

**Study Phase:**

**Cost Estimate (not to be exceeded without further authorization): \$79,500.00**

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

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(For Authority Use Only)

**Authorization Completion:**

**Approval:** \_\_\_\_\_ **Actual Cost:** \_\_\_\_\_ **Date:** \_\_\_\_\_



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## MEMORANDUM

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**Date:** November 18, 2016

**To:** Authority Board  
**From:** Jason Peters, Frank Leist  
**Subject:** Suburban Division- Water Main Replacement Program  
Amendment to Design Phase - Cycles 1-3

**MOTIONS / APPROVALS REQUESTED:**

No.	Item	Amount
1	Capital Project Authorization – (Amendment) Design Phase Cycles 1-3	\$60,000
2	Professional Services Authorization – Gannett Fleming, Inc. (1), (2)	\$60,000

- (1) *Included in the Capital Project Authorization.*  
(2) *Does not include Construction phase related engineering services.*

**BACKGROUND**

The Board authorized the design phase for three- miles of main replacement in January 2015 which included a Professional Service Authorization awarded to Gannett Fleming, Inc. At that time it was envisioned that of approximately one mile of main per cycle (year) a total of three-miles of main in the three-year period (2015, 2016 & 2017) would be replaced. However, during the evaluation process for Cycles 1 & 2 to identify the mains to be replaced it was determined because of the potential for repeated main failures and private property damage; and the necessity to replace water mains between intersections approximately 3-miles of main should be replaced in Cycles 1& 2, rather than the two-miles that was initially anticipated. The Board previously approved the Construction Phase for Cycles 1& 2, which replaced 3.11 miles of main and is near completion.

**THIS APPROVAL- AMENDMENT TO DESIGN PHASE- CYCLES 1 -3**

Board approval is requested for the applicable amendments to the Professional Services and Capital Project Authorizations for an additional 1.17 miles of design phase work, so that design for Cycle 3 can be started as soon as possible to assure the completion of construction by the end of October 2017. The following table summarizes the additional design lengths for cycles 1-3.

	Distance (Miles)		
Cycle	Projected	Actual	Additional
1	1	1.77	.77
2	1	1.34	.34
3	1	1.06	.06
<b>Total</b>	<b>3</b>	<b>4.17</b>	<b>1.17</b>

**FUTURE AUTHORIZATIONS:**

Construction Phase – Cycle 3: in late March or early April 2017 after bids are received.

# CAPITAL PROJECT AUTHORIZATION

<b>PROJECT NO.:</b>	SD-W-15-1	<b>BUDGET FUND:</b>	Allentown Div\Water\Capital
<b>PROJECT TITLE:</b>	<b>Suburban Division -Water Main Replacement Program Cycles 1-3</b>	<b>PROJECT TYPE:</b>	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase  <input checked="" type="checkbox"/> Amendment No.2
<b>THIS AUTHORIZATION TO DATE (W/ABOVE)</b>	<b><u>\$ 60,000</u></b> <b><u>\$ 3,959,580</u></b>		

## DESCRIPTION AND BENEFITS:

The Suburban Division water systems serve multiple townships, municipalities, boroughs, and communities in Lehigh and Northampton Counties. It was the intention of this Project to replace approximately one mile of water main per cycle (years 1-3) for a total of three-miles. However, during the evaluation process for Cycles 1 & 2 it was determined to replace an approximate 3-miles of main rather than the two-miles that was initially anticipated; in doing so an additional 1.17 of a mile of water main replacements were added to the initial project scope.

## THIS AMENDMENT –Design Phase, Cycles 1-3

Please reference the cover Memo for additional information.

REQUESTED THIS AUTHORIZATION			
(Amendment) Design Phase - Cycles 1-3			
Phase/Item	Authorizations		
	Previous	This	Total
<i>Design Phase Cycles 1-3</i>			
Staff	\$ 90,000	\$ -	\$ 90,000
Professional Services	178,358	60,000	238,358
Miscellaneous	50,000	-	50,000
Contingencies	35,000	-	35,000
Sub-total	\$ 353,358	<b>\$ 60,000</b>	\$ 413,358
<i>Construction Phase Cycles 1 &amp; 2</i>			
Staff	\$ 90,000	\$ -	\$ 90,000
Professional Services	152,078	-	152,078
Construction Contracts	2,926,000	-	2,926,000
LCA Procured Materials	218,144	-	218,144
Miscellaneous	10,000	-	10,000
Contingencies	150,000	-	150,000
Sub-total	\$ 3,546,222	\$ -	\$ 3,546,222
Totals	\$ 3,899,580	<b>\$ 60,000</b>	<b>\$ 3,959,580</b>

Future Authorization- Construction Phase Cycle-3	\$ 1,500,000
Total Estimated Project Cost	\$ 5,459,580

## 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. 2**

**Professional:** GANNETT FLEMING, INC.  
P.O. Box 67100  
Harrisburg, PA 17106

**Date:** November 18, 2016

**Requested By:** Jason Peters

**Approvals**

**Department Head:** \_\_\_\_\_

**General Manager:** \_\_\_\_\_

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**Description of Services (Work Scope, Steps, Check Points, etc.):**

**Allentown Division – Water Main Replacement Program Cycles 1-3**

Previous Authorizations- *Design Phase, Cycles 1-3: \$178,358*  
*Construction Phase, Cycle 1&2: \$62,078*

**This Authorization- Amendment to Design phase Cycles 1-3: \$60,000**

Gannett Fleming, Inc. will perform the design related for the additional 1.17 miles of main replacement in Cycles 1-3.

**Design Phase:**

**Cost Estimate (not to be exceeded without further authorization):** \$300,436

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**(For Authority Use Only)**

**Authorization Completion:**

**Approval:** \_\_\_\_\_ **Actual Cost:** \_\_\_\_\_ **Date:** \_\_\_\_\_

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## MEMORANDUM

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**Date:** November 18, 2016

**To:** Authority Board  
**From:** Jason Peters, Frank Leist  
**Subject:** Allentown Division- Schantz Spring Main Replacement  
Design Phase

**MOTIONS / APPROVALS REQUESTED:**

No.	Item	Amount
1	Capital Project Authorization – Design Phase	\$187,635
2	Professional Services Authorization – Gannett Fleming, Inc. (1), (2)	\$127,635

- (1) *Included in the Capital Project Authorization.*  
(2) *Does not include Construction phase related engineering services.*

**PROJECT OVERVIEW:** This project involves the replacement of approximately 2,000 linear feet of 1903 vintage 30-inch diameter water main that conveys the water from Schantz Spring to the Water Filtration Plant (WFP) for an approximate 4.80 miles. The aforementioned water main will be replaced in Martin Luther King, Jr. Boulevard from Schribers Bridge to the WFP. The project also includes addressing approximately 15 leaks that were identified during the SmartBall leak detection work undertaken by the City prior to the Lease. These leaks are located at various areas throughout the water main from Schantz Spring to Schribers Bridge.

At present it is envisioned that the main replacement and leak repairs will be covered by a single construction contract and be completed by the end of 2017.

This project is identified in the Lease as one LCA must execute (Schedule -7). Upon completion of this project all Schedule-7 Work, excepting the on-going annual water main replacements will be completed. Reference attached location map.

**FUNDING:**

The Project will be funded by the LCA Allentown Division, and is classified as a Major Capital Improvement where the cost of the project will be recovered from the rate payers over a 30-year period through a Capital Cost Recovery Charge.

**PROJECT STATUS:**

Pending Board approval of the Design Phase

**THIS APPROVAL- DESIGN PHASE**

To assure continued continuity and efficiencies that resulted an excellent product for Lehigh County Authority (LCA) and the local community during the ongoing main replacement program; the LCA Staff recommends retaining the services of Gannett Fleming, Inc. (GF) to

provide, design related services for the Allentown Division Schantz Spring Main Replacement Project. Optional construction related engineering services, is not requested at this time and will be requested when the Construction Phase is presented to the Board for approval. The following table summarizes the professional services to be performed:

<b>Professional Services <sup>(1)</sup></b>
1. Coordinate with City Streets Program, other City departments, outside agencies and utilities.
2. Prepare plans and specifications for segments of water main to be replaced and leak repair areas that are to be addressed.
3. Prepare and obtain regulatory and municipal permits as required.
4. Provide bidding services.
5. Provide construction engineering services. <i>(optional future authorization)</i>
6. Provide construction management services. <i>(optional future authorization)</i>
7. Provide construction inspection services. <i>(optional future authorization)</i>

*(1) THE FOLLOWING SERVICES ARE NOT INCLUDED: The design and permitting of ADA ramps at intersections pursuant to the Americans With Disabilities Act that may be required in some cases by street paving restoration; permitting for railroad borings, creek/river crossings; design of water mains that are affixed to bridges. If deemed necessary, a cost will be negotiated for the required service.*

#### **CONSULTANT PROJECT BACKGROUND:**

Among other projects, GF is currently our consultant for both the Allentown Division Cycles 1-6 and Suburban Division Cycles 1-3 Main Replacement Projects. During these projects both GF and LCA have established an excellent partnership working directly with the City of Allentown (COA), other municipalities, and local agencies thus producing highly detailed and all-encompassing projects that have met and exceeded many goals. These goals include areas such as scheduling and planning, permitting approval, COA department approvals as well as cooperatively working with other agencies and utility owners. All of which have mitigated many potential costs and or delays to the design while providing minimal construction cost change orders during the respective construction phase of each project.

#### **FUTURE AUTHORIZATIONS:**

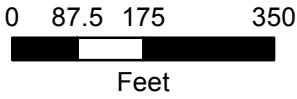
Construction Phase: Request for Board approval in late March or early April 2017 after bids are received.





2000 L.F. Main Replacement

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## CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	AD-W-16-7	BUDGET FUND:	Allentown Div\Water\Capital
PROJECT TITLE:	Allentown Division –Schantz Spring Main Replacement	PROJECT TYPE:	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input type="checkbox"/> Amendment
THIS AUTHORIZATION:	\$ 187,635		

### DESCRIPTION AND BENEFITS:

Through the Schedule 7 of the Lease Agreement Lehigh County Authority is required to replace approximately 2,000 linear feet of 30-inch diameter water main and repair an approximate 15 leaks on the Schantz Spring water main. All of which were identified during the SmartBall leak detection work conducted by the City of Allentown.

The replacements of this main and repair of these leaks are critical in meeting the requirements of the Lease Agreement but also will provide increased reliability of water service for our customers.

Please reference the cover Memo for additional information.

### Authorization Status:

REQUESTED THIS AUTHORIZATION	
Design Phase	
Staff	\$30,000
Engineering Consultant Design & Bid phase Services	\$127,635
Miscellaneous <sup>(1)</sup>	\$20,000
Contingencies	\$10,000
Total This Authorization	\$187,635

Future Authorization	
Construction Phase	\$1,982,365

Total Estimated Project	\$2,170,000
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*(1) Includes subsurface investigations such as geo-tech work, soft digs, ground penetrating radar if required; also permit fees and other miscellaneous costs.*

### 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:** GANNETT FLEMING, INC.  
P.O. Box 67100  
Harrisburg, PA 17106

**Date:** November 18, 2016

**Requested By:** Jason Peters

**Approvals**

**Department Head:** \_\_\_\_\_

**General Manager:** \_\_\_\_\_

### **Allentown Division – Schantz Spring Main Replacement**

Gannett Fleming, Inc. will perform the design and bid related service for the Allentown Division – Schantz Spring Main Replacement Project in the following Professional Services.

<b>Professional Services<sup>(1)</sup></b>
1. Coordinate with City Streets Program, other City departments, outside agencies and utilities.
2. Prepare plans and specifications for segments of water main to be replaced and leak repair areas that are to be addressed.
3. Perform and obtain regulatory and municipal permits as required.
4. Perform bidding services.

*(1) THE FOLLOWING SERVICES ARE NOT INCLUDED: The design and permitting of ADA ramps at intersections pursuant to the Americans With Disabilities Act that may be required in some cases by street paving restoration; permitting for railroad borings, creek/river crossings; design of water mains that are affixed to bridges . If deemed necessary, a cost will be negotiated for the required service.*

Please reference the cover Memo for additional information.

### **Design Phase:**

**Cost Estimate (not to be exceeded without further authorization):** \$127,635

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

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(For Authority Use Only)

**Authorization Completion:**

**Approval:** \_\_\_\_\_ **Actual Cost:** \_\_\_\_\_ **Date:** \_\_\_\_\_



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## MEMORANDUM

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**Date:** November 18, 2016

**To:** Authority Board  
**From:** Jason Peters, Frank Leist  
**Subject:** Allentown Division- Hamilton Street Cedar Creek Bridge Water Main  
Relocation Project  
Design Phase

**MOTIONS / APPROVALS REQUESTED:**

No.	Item	Amount
1	Capital Project Authorization – Design Phase	\$124,500
2	Professional Services Authorization – Gannett Fleming, Inc. (1), (2)	\$97,000

- (1) *Included in the Capital Project Authorization.*  
(2) *Does not include Construction phase related engineering services.*

**PROJECT OVERVIEW:** As part of the Pennsylvania Department of Transportations (PennDOT) Rapid Bridge Replacement Program, this project involves the super structure replacement of the Cedar Creek Bridge (Project) located on Hamilton Street in the vicinity of Hamilton Family Restaurant. LCA Allentown Division water facilities are impacted by the Project requiring the relocation of approximately 500 linear feet of 6-inch diameter water main. The new water main will be replaced within newly acquired state right-of-way and City of Allentown property just south of the new bridge while still maintaining private status of the line. At present it is envisioned that the water main relocation will be incorporated in PennDOT construction contract for the Project and be completed by 2018. Reference attached location plan and information regarding the Rapid Bridge Replacement Program

**FUNDING:**

At present the Project will be funded by the LCA Allentown Division, however based upon the current bridge design it is envisioned that the water main relocation costs for both design and construction will be approximately 100-percent reimbursable by PennDOT because the existing facilities are located in private easement and not in the existing PennDOT right-of-Way (“private status”). The exact reimbursable amount will be determined by PennDOT.

**PROJECT STATUS:**

Pending Board approval of the Design Phase

**THIS APPROVAL- DESIGN PHASE**

To assure continued continuity and efficiencies that resulted an excellent product for Lehigh County Authority (LCA) and the local community during the ongoing main replacement program; the LCA Staff recommends retaining the services of Gannett Fleming, Inc. (GF) to provide, design related services for the Allentown Division- Hamilton Street Cedar Creek Bridge Relocation Project. Optional construction related engineering services, is not requested at this

time and will be requested when the Construction Phase is presented to the Board for approval. The following table summarizes the professional services to be performed:

<b>Professional Services</b>
1. Coordinate with State Program, City of Allentown departments, outside agencies and utilities.
2. Prepare plans and specifications for segments of water main to be relocated.
3. Prepare and obtain regulatory and municipal permits as required.
4. Provide construction engineering services. <i>(future authorization)</i>
5. Provide construction management services. <i>(future authorization)</i>
6. Provide construction inspection services. <i>(future authorization)</i>

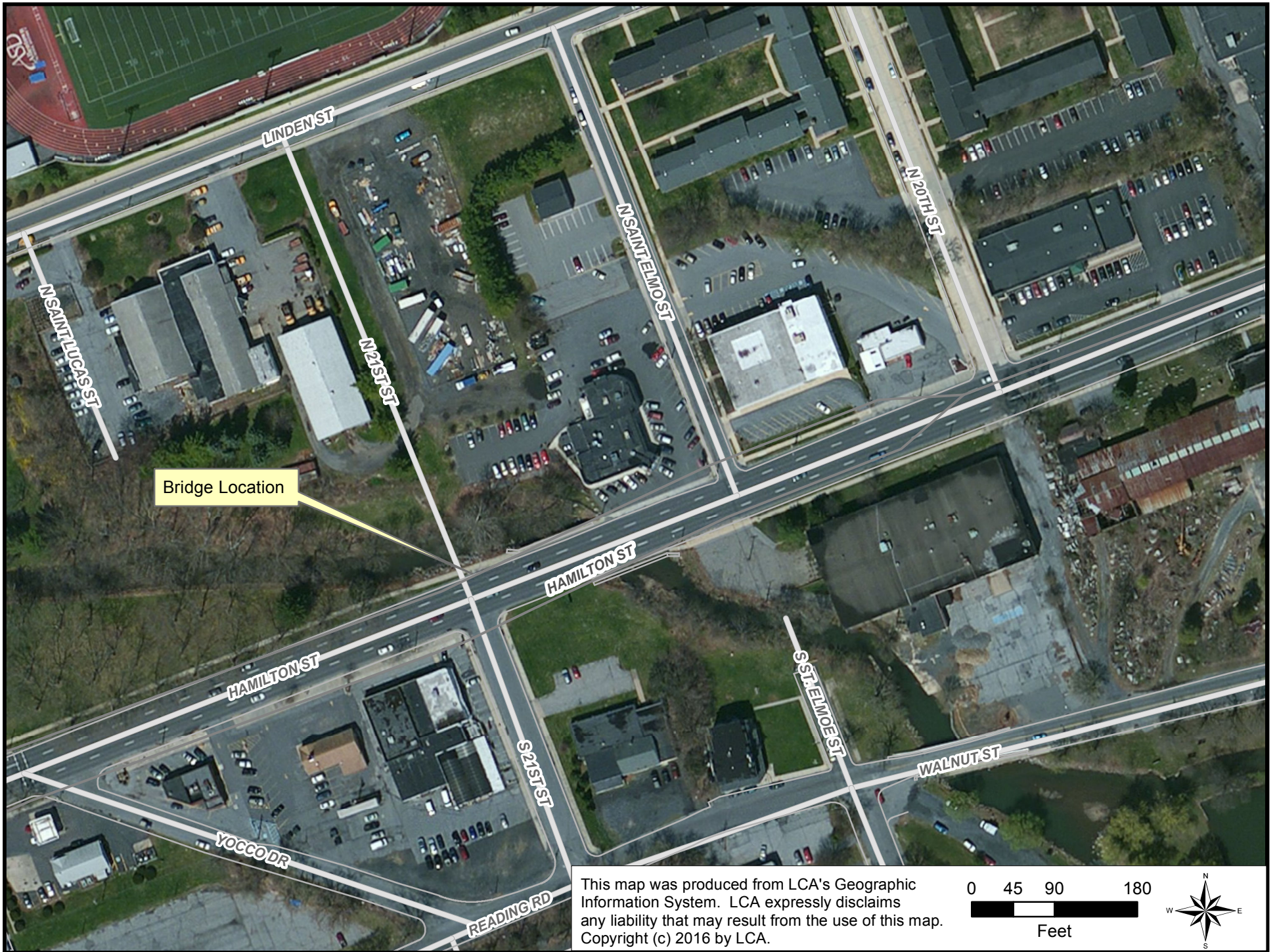
**CONSULTANT PROJECT BACKGROUND:**

Among other projects, GF is currently our consultant for both the Allentown Division Cycles 1-6 and Suburban Division Cycles 1-3 Main Replacement Projects. During these projects both GF and LCA have established an excellent partnership working directly with the City of Allentown (COA), other municipalities, and local agencies thus producing highly detailed and all-encompassing projects that have met and exceeded many goals. These goals include areas such as scheduling and planning, permitting approval, COA department approvals as well as cooperatively working with other agencies and utility owners. All of which have mitigated many potential costs and or delays to the design while providing minimal construction cost change orders during the respective construction phase of each project.

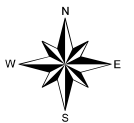
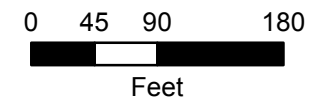
**FUTURE AUTHORIZATIONS:**

Construction Phase: Request for Board approval, currently estimated in the 2<sup>nd</sup> quarter of 2017 after PADOT receives bids for the Project.





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## **Pennsylvania's Rapid Bridge Replacement Program**

The Rapid Bridge Replacement Program is a public-private partnership designed to bolster PennDOT's ongoing effort to address the state's nearly 4,200 structurally deficient (SD) bridges. With this approach, 558 SD bridges across the state will be replaced more quickly; help achieve significant savings for taxpayers; and minimize the impact on the traveling public. The initiative was approved by the Public-Private Transportation Partnership Board in September 2013.

Pennsylvania confronts a significant and somewhat unique challenge among the 50 states: roughly 18 percent of Pennsylvania's bridges are structurally deficient, while the national average is 7.3 percent. Unless replaced, these bridges will ultimately have to be closed, jeopardizing public safety and harming the state's ability to grow economically and create jobs. A SD bridge is not unsafe. The designation means that one or more of its major components is deteriorating. PennDOT has been aggressively addressing this problem, reducing the total number of SD bridges from 6,000 to roughly 4,200. The Rapid Bridge Replacement Program will allow PennDOT to intensify this effort. The Program will:

- Allow PennDOT to replace SD bridges more quickly and minimize impact on the traveling public.
- Generate savings for Pennsylvania's taxpayers by bundling bridges into one contract and taking advantage of economies of scale.
- Allow PennDOT to use these savings to address other infrastructure needs.

# CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	AD-W-16-8	BUDGET FUND:	Allentown Div\Water\Capital
PROJECT TITLE:	Allentown Division –Hamilton Street Cedar Creek bridge Water Main Relocation Project		PROJECT TYPE:
THIS AUTHORIZATION:	\$124,500	<input checked="" type="checkbox"/>	Construction
		<input type="checkbox"/>	Engineering Study
		<input type="checkbox"/>	Equipment Purchase
		<input type="checkbox"/>	Amendment

## DESCRIPTION AND BENEFITS:

As part of the Pennsylvania Rapid Bridge Replacement Program, the replacement of the Cedar Creek Bridge on Hamilton Street has required the relocation of approximately 500 linear feet of 6-inch water main.

The relocation of this main is critical for the reliability of water service for our customers and the replacement of the Cedar Creek Bridge.

Please reference the cover Memo for additional information.

## Authorization Status:

+

REQUESTED THIS AUTHORIZATION	
Design Phase	
Staff	\$20,000
Engineering Consultant	\$97,000
Design & Bid phase Services	
Miscellaneous <sup>(1)</sup>	\$2,500
Contingencies	\$5,000
Total This Authorization	\$124,500

Future Authorization	
Construction Phase	\$156,000

Total Estimated Project	\$280,500
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*(1) Includes subsurface investigations such as geo-tech work, soft digs, ground penetrating radar if required; also permit fees and other miscellaneous costs.*

## 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:** GANNETT FLEMING, INC.  
P.O. Box 67100  
Harrisburg, PA 17106

**Date:** November 18, 2016

**Requested By:** Jason Peters

**Approvals**

**Department Head:**

**General Manager:**

### **Allentown Division – Hamilton Street Cedar Creek Bridge Relocation Project**

Gannett Fleming, Inc. will perform the design and bid related service for the Allentown Division – Hamilton Street Cedar Creek Bridge Relocation Project in the following Professional Services.

<b>Professional Services<sup>(1)</sup></b>
1. Coordinate with State Program, City of Allentown departments, outside agencies and utilities.
2. Prepare plans and specifications for segments of water main to be relocated.
3. Perform and obtain regulatory and municipal permits as required.

Please reference the cover Memo for additional information.

### **Design Phase:**

**Cost Estimate (not to be exceeded without further authorization):** \$97,000

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

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(For Authority Use Only)

**Authorization Completion:**

**Approval:** \_\_\_\_\_ **Actual Cost:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**CAPITAL PROJECT AUTHORIZATION  
AMENDMENT NUMBER 25**

<b>PROJECT No.:</b>	<u>S-08-5</u>	<b>BUDGET FUND:</b>	<u>WLI Sewer Capital</u>
<b>PROJECT TITLE:</b>	<u>Signatory I &amp; I Investigation/Remediation Program</u>		<b>PROJECT TYPE:</b>
<b>TOTAL PROJECT</b>	<b>Prior:</b>	<b>\$6,074,331</b>	<input type="checkbox"/> Construction
<b>THIS AUTHORIZATION</b>	<b>Current:</b>	<b>\$125,000</b>	<input type="checkbox"/> Engineering Study
			<input type="checkbox"/> Equipment Purchase
			<input checked="" type="checkbox"/> Amendment

**DESCRIPTION AND BENEFITS:**

**Full Project Overview:**

Based on the EPA Compliance Order and the PADEP Chapter 94 requirements, LCA and the LCA Signatories are required to reduce infiltration and inflow from the system and eliminate SSOs from the LCA and Signatory sewer systems. The SCARP Program has been developed to investigate the sources of I & I and to remediate areas identified as having excessive I & I. The SCARP Program consists of engineering tasks necessary to define and quantify the problems, to evaluate methods of redress and to determine the corrective actions required to meet the regulatory requirements.

**Program Management:**

The work completed by the Arcadis, the LCA I & I Program Consultant will include on-call services, preparation of the EPA semi-annual report and annual DEP report, attending meetings with DEP and EPA, the Partner I & I committee, Partner Engineer's Subcommittee and the City I & I Committee, technical evaluations as needed, tracking the program progress schedule and other coordination or services as needed. In 2017 there will continue to be significant time meeting with the Signatories to develop a Memo of Understanding related to the capital improvements and developing the program for submission to EPA in December 2017.

Program Management for previous years:

2009 - \$30,000  
 2010 - \$20,000  
 2011 - \$25,000  
 2012 - \$50,000  
 2013 - \$50,000  
 2014 - \$50,000  
 2015 - \$50,000  
 2016 - \$100,000

Previously Approved		This Amendment	Total Approval
Flow Monitoring ADS (thru 2014)	\$1,775,031		\$ 1,775,031
Flow Monitoring TFE			
Engineering Consulting	\$2,359,300	\$125,000	\$2,484,300
Rehabilitation	\$1,590,000		\$1,590,000
Staff	\$330,000		\$330,000
Contingencies	\$20,000		\$20,000
<b>Totals</b>	<b>\$ 6,074,331</b>	<b>\$125,000</b>	<b>\$6,199,331</b>

**REVIEW AND APPROVALS:**

<u>Pat Mandes</u>	<u>11/01/2016</u>		
Project Manager	Date	Chief Executive Officer	Date
Capital Works Manager	Date	Chairman	Date



Lehigh County Authority

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

## PROFESSIONAL SERVICES AUTHORIZATION

### AMENDMENT NUMBER 25

**Professional:**

Arcadis  
Jim Shelton  
1128 Walnut St.  
Philadelphia, PA 19107

**Date:** 11/1/16

**Requested By:** Pat Mandes

**Approvals**

**Department Head:** \_\_\_\_\_

**Chief Executive**

**Officer:** \_\_\_\_\_

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**Description of Services (Work Scope, Steps, Check Points, etc.):**

This is an amendment to the current Arcadis authorization for the WLI Infiltration and Inflow Project: The work covered by this amendment includes Program Management for 2017.

Program Management includes work that is not defined by other approved tasks. The work will include on-call services, EPA semi-annual report, annual DEP report, attending meetings with DEP and EPA, attend meetings with Partners, attend meetings with the City, prepare cost estimates for AO Capital Improvements Plan (CIP), develop the CIP for submission to DEP/EPA, I & I Committee, development and negotiations with Partner on the CIP Memo of Cooperation, technical evaluations as needed and other coordination or services as needed. The total "Not to Exceed" cost is \$125,000 for the period ending December 2017.

The scope of work is described in more detail in the proposal dated October 25, 2016.

**Cost Estimate (not to be exceeded without further authorization):** This amendment is not to exceed \$125,000 for Program Management.

**Time Table and Completion Deadline:**

Current through December 2017.

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**(For Authority Use Only)**

**Authorization Completion:**

**Approval:** \_\_\_\_\_ **Actual Cost:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Capital Project S-08-05, Signatory I & I Investigation/Remediation Program



Arcadis U.S., Inc.  
1128 Walnut St., 4<sup>th</sup> Floor  
Philadelphia  
Pennsylvania 19107  
Tel 215.931.4372  
[www.arcadis-us.com](http://www.arcadis-us.com)

Ms. Pat Mandes  
Compliance Director  
Lehigh County Authority  
P.O. Box 3348  
Allentown, PA 18106

Subject:

Sewer Capacity Assurance and Rehabilitation Program  
Scope and Budget for SCARP Program Management through 2017

Dear Ms. Mandes:

Date:  
10/25/2016

Arcadis is pleased to offer this scope and budget proposal for program management services related to the Sewer Capacity Assurance and Rehabilitation Program (SCARP).

Contact:  
Anthony J. Dill

#### PROPOSED SCOPE OF SERVICES

Phone:  
215.931.4372

ARCADIS will provide coordination and on-call services to LCA and the Western Lehigh SCARP Partnership (Partnership) to facilitate implementation of the SCARP. These program management services will be for tasks not defined in other project specific authorizations. Historically, these services have included:

Email:  
[Anthony.Dill@arcadis.com](mailto:Anthony.Dill@arcadis.com)

Our ref:  
66000247.0066

- Meetings with PADEP and USEPA and preparation of responses to USEPA regarding the Order of Compliance
- Preparation of PADEP Annual report and EPA Semiannual Reports
- Meetings with Partnership Engineering team and Municipal Leaders
- Development and negotiation facilitation for Memorandum of Cooperation between Partners for the implementation of the SCARP
- Preparation of cash flow projections
- Status meetings with LCA for the overall program
- Technical evaluations and data reviews
- AO Program Managers Meetings with COA
- COA Engineering meeting participation
- City MOU review
- Other on-call services as requested by LCA

*This proposal and its contents shall not be duplicated, used or disclosed — in whole or in part — for any purpose other than to evaluate the proposal. This proposal is not intended to be binding or form the terms of a contract. The scope and price of this proposal will be superseded by the contract. If this proposal is accepted and a contract is awarded to Arcadis as a result of — or in connection with — the submission of this proposal, Arcadis and/or the client shall have the right to make appropriate revisions of its terms, including scope and price, for purposes of the contract. Further, client shall have the right to duplicate, use or disclose the data contained in this proposal only to the extent provided in the resulting contract.*

We anticipate that the services required through 2017 will be similar to those listed above. As in 2016, 2017 will require significantly more meetings and workshops than in prior years as we support LCA in negotiating a memoranda and agreements with the Partnership members, and negotiating capital cost splits with City of Allentown.

#### DELIVERABLES AND SCHEDULE

Deliverables and schedule for delivery will be determined on an assignment by assignment basis.

#### BUDGET

As this is undefined work, we recommend allocating \$125,000 to cover the work anticipated through the end of 2017. We propose to complete these services on a time and materials basis in accordance with the Agreement between LCA and Malcolm Pirnie, Inc. and the current Summary of Standard Charges for Lehigh County Authority. We will track the costs associated with this work and report them to LCA monthly throughout the program. We will not exceed the authorized budget without written professional services authorization from LCA.

Please contact me with your authorization to proceed if this scope and budget are acceptable to you. If you have any questions please do not hesitate to call me at 215-931-4372 or 610-761-3253 (mobile).

Sincerely,

ARCADIS U.S., Inc.

A handwritten signature in blue ink, appearing to read "Tony Dill".

Tony Dill, PE, BCEE  
Program Manager – Buried Infrastructure Team

Cc: Jim Shelton, Arcadis

**FINANCE & ADMINISTRATION****ACTION ITEMS****1. 2017 Water & Sewer Rates - November 28, 2016**

LCA Board consideration of user rates should be completed in November if possible to allow for customer notification prior to implementation on January 1, 2017. Other rate components with a lesser impact may be brought forward to the Board at subsequent meetings prior to year-end.

**DISCUSSION ITEMS****INFORMATION ITEMS****1. Recently Purchased Investments – Certificates of Deposit (CDs)**

<b>CERTIFICATES OF DEPOSIT</b>						
26-Oct-16						
Fund	Bank	Location	Gross Amount	Date of Purchase	Date Due	Net Rate %
Cons Wtr (2)	First Farmers Bank and Trust Company	Converse, IN	245,000.00	10/17/16	10/17/18	1.05
Cons Wtr (2)	JP Morgan Chase Bank	Columbus, OH	245,000.00	10/19/16	10/19/18	1.2
Cons Wtr (2)	Lakeside Bank	Chicago, IL	245,000.00	10/19/16	10/19/18	1.05
WW Capac	Great Southern Bank	Reeds Spring, MO	245,000.00	10/19/16	10/19/17	0.8
WW Capac	Thomasville National Bank	Thomasville, GA	245,000.00	10/19/16	4/19/18	0.9
WW Capac	Franklin Synergy Bank	Franklin, TN	245,000.00	10/21/16	10/20/18	0.95
Cons Wtr (2)	Merchants & Farmers B&T Company	Leesville, LA	245,000.00	10/25/16	10/25/18	1
Cons Wtr (2)	First Bank of Charleston Inc	Charleston, WV	245,000.00	10/26/16	10/26/18	1.1

**Fund Descriptions for Investments:**

Cons Wtr (2)	Consolidated Water (2)
LLRI CR	Little Lehigh Relief Interceptor Capital Reserves
Cons LL2 (314)	Consolidated Little Lehigh Relief Interceptor 2
WW Capac	Wastewater Capacity
2010 Wtr Cons A	2010 Water Construction, Series A Bond
Wtr R&R	Renewal and Replacement

## WATER

### **ACTION ITEMS**

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**1. Suburban Division – Asset Management Facility Upgrades – November 28, 2016**

This project includes the design and construction of improvements that were identified and prioritized in the Building Condition Assessment prepared by D'Huy Engineering, in accordance with LCA's Asset Management goal. The project scope includes structural, HVAC, and electrical/code improvements to be performed on facilities that were assigned a risk score in excess of 20 (moderately high to severe risk). Nine (9) SD water facilities are part of the preliminary project scope. An engineering proposal from D'Huy Engineering for design and bid phase services will be recommended for authorization at the November 28 board meeting.

**2. Suburban Division – Water Main Replacement Program Design Phase Cycles 1 – 3 (amendment approval) – November 28, 2016**

The Board authorized the design phase for three- miles of main replacement in January 2015 which included a Professional Service Authorization awarded to Gannett Fleming, Inc. The approved 2015 Capital Plan projected the replacement of one mile of main per cycle (years 1-3) for a total of three-miles. In reality because of the necessity to replace water mains between intersections thus allowing future replacements to be easily extended without interruptions in service to customers in the area; and the internal decision to replace an additional one- mile of main in cycles 1 and 2 (*rather than the projected two-miles*); an additional 1.11 of a mile of water main replacements were added to the initial project scope. Board approval is requested for the applicable amendments to the Professional Services and Capital Project Authorizations for the added design phase work. The amended Design Phase Cycles 1-3 will be recommended for authorization at the November 28<sup>th</sup> board meeting.

**3. Allentown Division – Schantz Spring Main Replacement Design Phase – November 28, 2016**

The project includes the replacement of approximately 2,000 lf of 1903 vintage 30-inch diameter main in Martin Luther King, Jr. Boulevard from Schribers Bridge to the Water Filtration plant. The project also includes addressing other leaks that were identified during the Smart Ball leak detection work. This Project is identified as Schedule-7 Work and will be funded by LCA Allentown Division. The Design Phase of this project will be recommended for authorization at the November 28<sup>th</sup> board meeting.

**4. Allentown Division – PA Rapid Bridge Replacement Project of the Hamilton Street Bridge crossing Cedar Creek – November 28, 2016**

The project includes the replacement and relocation of approximately 500 lf of water main due to the super structure replacement of the Hamilton Street Bridge crossing Cedar Creek. At this time it is anticipated that the relocation will be incorporated with the States contract as this project is being conducted in a design build fashion leaving little to no time for utility relocations. Additionally it is anticipated that a majority of the relocation will be 100% reimbursable in cost due to the existing location of the water main and the easements it resides in. The Design Phase of this project will be recommended for authorization at the November 28<sup>th</sup> board meeting.

### **DISCUSSION ITEMS**

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**INFORMATION ITEMS**

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**1. Suburban Division – CLD Auxiliary Pump Station Project**

The project will feature the installation of a new booster station and water main extension to pump water from the Lower System to the Upper System. The project will also involve installation of a SCADA system. We returned comments on the Public Water Supply (PWS) permit application.

**2. Suburban Division – Crestwood Alternate Water Supply**

The project consists of abandonment of existing wells and storage tank currently serving higher elevation customers and a connection of the pumping station to the main North Whitehall Division System. The project will also involve installation of a SCADA system. The design phase is underway. We are reviewing the 100% design plans and specifications. A grant application for the construction costs has been submitted to the Commonwealth Finance Authority (CFA). Bidding and construction of the project will be delayed until after grant awards are announced, which is expected to be March 2017.

**3. Suburban Division – Route 309 Crossing at Sand Spring Road**

A 12" water line will cross Route 309 through a previously installed 24" casing. Completion of this line will bring public water to the property line of Lehigh Carbon Community College. The design phase is under way. PennDOT Highway Occupancy Permits have been obtained. An easement agreement was sent to LCCC for their signatures. **(No Change)**

**4. Allentown Division – Prelease Valve Replacements**

The project is the replacement of approximately 55 inoperable valves in multiple locations throughout the City that existed prior to the lease settlement. Design is currently under way. This project is identified as Un-Completed Work and will be funded by the City. **(No Change)**

**5. Suburban Division - Water Main Replacement Program Cycles 1 & 2**

The project consists of the replacement of 2.85 miles of aged and/or failing Cast Iron water main. The Construction phase was approved at the 4/11/16 Board meeting. Anrich Inc., our contractor is progressing according to schedule. **(No Change)**

**6. Allentown Division – Water Main Replacement Program- Cycle 3**

The project is the replacement of 4.39 miles of aged and/or failing Cast Iron water main in multiple locations throughout the City. The Construction phase was approved at the 4/11/16 Board meeting. JOAO & Bradley, Inc. our contractor has completed construction according to schedule and are currently in discussion with LCA for project documentation closeout and billing. This Project is identified as Schedule-7 Work and will be funded by LCA Allentown Division.

**7. Allentown Division – Water Filtration Plant: Filter Room Ceiling Improvements**

This project will involve the installation of a new ceiling system at the Water Filtration Plant's filter room. This system was already installed above the filters themselves approximately 10 years ago. The project is needed for both a combination of aesthetic (highly visible location to guests) and operational issues (to eliminate the possibility of chipped paint to enter the filters). Bids were received on 4/26/16 and Board approval for the construction phase was granted at 5/23/16 Board Meeting. Construction began in the middle of July and was completed in late September. **(No Change)**

**8. Allentown Division - Miscellaneous Water Filtration Plant / Water Distribution**

- WFP Stormwater Pump/Control - Upgrades to the existing stormwater pump/control for the WFP and D&C parking lot is needed due to equipment age. Design is currently underway with a likely March 2017 construction start date. **(No Change)**

This capital project is funded by the LCA Allentown Division.

**9. Allentown Division – Water System Master Plan**

This project involves the creation of a Master Plan for the Allentown Water Plant, water storage tanks, water storage reservoirs, pressure booster stations, raw water springs, and surface water intakes. The Master Plan will involve several key sections including, but not limited to: full-scale condition assessments, treatment process optimization, and development of short term/long term capital plans. The Master Plan is a requirement included within the City of Allentown lease, and it also needs to be updated every 5 years throughout the life of the lease. The project kick-off meeting with Arcadis was held on May 4, 2016. Multiple workshops have also been held. Condition Assessments and process control audits/optimizations are in-progress. The project is scheduled to be finished early in 2017. The project will be funded by the LCA Allentown Division.

**10. Developments (No Change)**

Water system construction is occurring in the following developments:

Fields at Indian Creek, Phase 1, 43 private, age-restricted/senior residential units (sfd), with a community clubhouse, UMiT & LMT, water & sewer  
Grandview, 6 commercial units and 204 apartment units, LMT  
Hidden Meadows, Phase 1B, 72 residential lots (sfa), UMT  
West Hills Business Center, 2 industrial lots, WeisT, water & sewer

Water system plans are being reviewed for the following developments:

67 Werley Road, 112 apartments & clubhouse, UMT  
Ciocca Subaru, 1 additional commercial building at existing business, LMT  
Diocesan Pastoral Center, 2 commercial lots, 3 additional lots and residual lot for existing cemetery, LMT  
Farr Tract, 17 residential lots (sfd), LMT  
Grant Street Townes, 18 residential lots (sfa), WashT  
Hickory Park Estates, 3 residential lots (sfd), UMT  
Hillview Farms, 31 residential lots (sfd), LMT/SWT  
Indian Creek Industrial Park, 6 commercial lots, UMiT, water and sewer  
Lehigh Hills, Lot 5, Phase 1, 273 apartments & clubhouse, UMT  
Mary Ann's Plaza, 1 lot with 12 commercial units, NWT  
Morgan Hills, 40 residential lots (sfd), WeisT, water and sewer  
North Whitehall Commercial Center (Walmart), 5 commercial lots, NWT, water & sewer  
Shepherd's Corner, 1 commercial lot, LMT  
Stone Hill Meadows, 24 residential lots (sfd), LMT  
Trexler Business Center, 1 Commercial Lot with 6 commercial buildings, LMT  
Weilers Road Twins, 82 residential lots (sfa), UMT  
Woodmere Estates, 60 residential units (sfd), UMT

**11. Suburban Division – Capece Tract, WL #20 and Res #3 Improvements**

WL #20 will be switched over to a variable frequency drive motor to better control power usage and maintain steady output. Reservoir #3 will receive a motor activated control valve to maintain filling capabilities and chlorine contact levels. Both facilities will receive an upgrade to their SCADA systems. The Notice to Proceed has been issued to Blooming Glen Contractors.

## **WASTEWATER**

### **ACTION ITEMS**

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1. **2017 Arcadis SCARP Program Management Services – Approval – November 28, 2016**

A Professional Services Authorization and Capital Project Amendment is being presented to the Board for consideration for Arcadis for work related to the I & I SCARP Program. The work includes Program Management for 2017. Attached is a Professional Services Authorization, Capital Project Amendment, and Arcadis Scope of Work.

### **DISCUSSION ITEMS**

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### **INFORMATION ITEMS**

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1. **Wastewater Treatment Capacity**

The PaDEP has suggested that a 537 Plan for the additional 4 MGD of capacity be submitted to them at the time when the 4 MGD is needed or after the SCARP improvements are made. They anticipate that if the 537 Plan is submitted in the near term, the Department will require a revised Plan prior to any capital improvements. The 537 planning process has currently been side-lined until such time as the wastewater capacity is limited or a 537 plan update is needed for an Administrative Order project must be submitted. A 537 Planning summary report has been completed by the engineering team and has been posted to the LCA website.

2. **Suburban Division - Lynn Township – WWTP Improvements, Phases 1 & 2**

The project will upgrade the WWTP head works. The project is out to bid with bids to be opened via the PennBid Program on November 28<sup>th</sup>. The project is being funded by the Lynn Township Suburban Division.

3. **Allentown Division – Sanitary Sewer Manhole Lining: Cycle 3**

This annual project will install a lining system (to eliminate infiltration) in approximately 111 aged brick manholes identified by LCA staff. The City approved the Conceptual Design Report and the project was advertised on May 17, 2016. Board approval of the construction phase was granted at the 6/27/16 Board Meeting. The project is identified as Administrative Order Work and will be funded by the City. Construction began in mid-July and is expected to be complete in early November.

4. **Allentown Division – Manhole Collars with Water Tight Frame and Covers: Cycle 3**

This project will permanently secure the frame and cover of approximately 57 aged brick manholes identified by current LCA staff. This work will eliminate inflow from entering these manholes and eliminate the potential for sanitary sewer overflows (SSO's) from these manholes. The City approved the Conceptual Design Report and the project was advertised on May 17, 2016. Board approval of the construction phase was granted at the 6/27/16 Board Meeting. The project is identified as Administrative Order and will be funded by the City. Construction began in early August and was completed in mid-October.

5. **Allentown Division – WWTP: Replacement of Motor Control Centers**

This Project replaced five aged motor control centers that provide power on a 24/7 basis to various parts of the WWTP. The project was approved by the City as a Major Capital Improvement (MCI). The project was 100% completed in late September. This Project is identified in the Lease as Schedule 7 (required) project and was funded by the LCA Allentown Division. **(No change)**

6. **Allentown Division – Wastewater Treatment Plant: Miscellaneous Improvements**

- Main Pump Station Suction Piping – This project involves the replacement of the suction piping for Pump #1 at the Main Pumping Station. Holes have developed in the suction piping and without this repair, the ability to operate this pump properly may be compromised in the future. The piping will be replaced in early November.
- Condition Assessment of Trickling Filters and Clarifiers – An onsite inspection will investigate the need to repair the exterior and interior components of the trickling filters and clarifiers. This inspection occurred in late September and the report is expected in late November.

All of these capital projects are funded by the LCA Allentown Division.

7. **Allentown Division – Wastewater Treatment Plant: Digester Cover Replacements**

This project involves the cover replacement of both the Primary Digester No. 1 and the Secondary Digester (the cover for Primary Digester No. 2 was previously replaced in 2010). A Major Capital Improvement (MCI) Conceptual Design has been approved by the City. Board approval of the construction phase was received at the 2/8/16 Board Meeting. The new Secondary Digester cover was installed in late October 2016 and the new Primary No. 1 Digester is expected to be installed by October 2017. This Project is identified in the Lease as a Schedule 7 (required) project and will be funded by the LCA Allentown Division.

8. **Consolidated Systems - SharePoint**

SharePoint made available to plant and customer service. Not tracking any usage at this time. Waiting for feedback on problems.

9. **Suburban Division – Spring Creek Pump Station**

This project involves the following upgrades to the existing pumping station: Evaluate the feasibility of installing a comminutor to reduce buildup of debris on the bar screens, replace the manually operated weir gates with new motorized weir gates, and upgrades to the SCADA system. The project has been identified as a Major Capital Improvement (MCI). An Alternatives Evaluation Report was prepared by the Engineer and is under review by LCA staff.

10. **Suburban Division – Western Weisenberg Wastewater Treatment Plant Improvements**

This project includes the improvements necessary to rectify the cold weather nitrification issue at the WWTP. The Board approved the construction phase of the project at the May 9, 2016 meeting. Notices to Proceed have been issued to both the general and electrical contractors. A pre-construction meeting was held on June 24, 2016. The parts and equipment have been delivered to the site and the work is progressing on schedule. This project will be funded by the LCA Suburban Western Weisenberg Division.

11. **Suburban Division – Test & Seal Project, Western Lehigh Interceptor Service Area**

Project consists of sanitary sewer cleaning, inspections via CCTV, cured-in-place point repairs, pressure testing and chemical grout sealing of joints, and post construction inspection for sanitary sewer lines located in western and central Lehigh County previously identified as areas subject to leakage. This project is part of the SCARP program. Construction began in August 2016 and is expected to finish by Spring 2017. **No change.**

12. **Suburban Division – Test & Seal Project, Wynnewood Terrace**

Project consists of sanitary sewer cleaning, inspections via CCTV, cured-in-place point repairs, pressure testing and chemical grout sealing of joints, and post construction inspection for sanitary sewer lines located in the Wynnewood Terrace development in North Whitehall Township, previously identified as areas subject to leakage. This project is part of the single contract Test & Seal project. Construction began in August 2016 and is expected to finish by the end of 2016. **No change.**



**13. Suburban Division – SCARP**

Monthly meetings with the LCA Suburban Division Signatories began in January to negotiate a Memo of Cooperation for completion of the SCARP Capital Improvements Plan. Cash flow plans prepared by the Program Consultant have been presented to the Signatories so they can begin analyzing their borrowing needs and schedule. A communications plan has been developed to help the Signatories with discussions with their Boards and the public. The LCA AO Program Consultant will be making a presentation at both LMT and Macungie Borough at their request.

A follow-up meeting was held at the EPA Office in the City of Philadelphia. Representatives from DEP, the City of Allentown and LCA were present as well as the consultants from Allentown and LCA. The objective for LCA and the City was to receive a response from the regulators on the City and LCA plan presented in June. The regulators provided us with positive feedback on both the City and LCA plans, the phasing of the plans and the timing of the phases. EPA and PADEP send a letter reflecting the consensus of the meeting and accepting the plans presented.  
**(No change)**

**14. Wynnewood and Sand Spring Wastewater Treatment Plant Replacement**

These facilities were investigated in 2015 as part of a wastewater treatment plant condition assessment and found to be in urgent need of replacement, due to impending equipment and tank failure and high consequence of risk. Both facilities are aging developer-installed plants, consisting of steel tanks utilizing extended aeration process technology. Based on the similarities between the sites, LCA may realize some economy of scale in having a single consultant design both projects. The request for proposals will be issued in November, with consultant(s) selection in December.



# LEHIGH COUNTY AUTHORITY

FINANCIAL REPORT – OCTOBER 2016

# FINANCIAL REPORT

## OCTOBER 2016

### 1. SUMMARY

MONTH	City Division			Suburban Division			LCA TOTAL		
	Actual	Forecast	Variance	Actual	Forecast	Variance	Actual	Forecast	Variance
Net Income (Loss)	194,198	(846,000)	1,040,198	478,860	(693,000)	1,171,860	673,058	(1,539,000)	2,212,058
Net Cash Flows	853,960	526,000	327,960	(1,642,353)	(2,912,000)	1,269,647	(788,393)	(2,386,000)	1,597,607
YEAR-TO-DATE	City Division			Suburban Division			LCA TOTAL		
	Actual	Forecast	Variance	Actual	Forecast	Variance	Actual	Forecast	Variance
Net Income (Loss)	(6,291,848)	(7,332,000)	1,040,152	1,087,052	(85,000)	1,172,052	(5,204,797)	(7,417,000)	2,212,203
Net Cash Flows	(3,723,570)	(4,052,000)	328,430	1,018,521	(251,000)	1,269,521	(2,705,050)	(4,303,000)	1,597,950
Debt Service Coverage	1.47	1.36	0.11	2.42	2.12	0.30	3.88	3.48	0.41

For the month, LCA finished with a positive net income that was higher than forecast, and finished with a negative cash flow that was lower than the forecasted loss.

The favorable variance to forecast on net income was driven by higher than forecasted net income from the City Division which had positive net income for the month and by higher than forecasted net income from the Suburban Division that also had positive net income.

The favorable variance on cash flows for the month against a negative cash flow in total was driven by positive cash flows from the City Division that were significantly better than forecast and by negative cash flows from the Suburban Division that were significantly higher than the negative cash flow forecast for the month.

Year-to-date LCA net income and cash flows were both higher than forecast with a net loss that is significantly better than forecast and a net negative cash flow that is better than forecast.

YTD net loss of \$5.2m is lower than the forecast loss by \$2.2m. This favorable variance is both the City Division and Suburban Division had significantly favorable variance to forecast. The City Division is at a net loss of \$6.2m that is \$1.0m higher than the YTD loss forecasted. The Suburban Division is reporting a net income of \$1.1m and that is \$1.2m better than the YTD forecast.

YTD Cash Flows of (\$2.7m) is lower than the forecasted negative cash flow by \$1.6m. This is due to a favorable variance from the City Division and a favorable variance from the Suburban Division.

Year-to-date debt service coverage ratios are better than forecast and better than internal target of 1.20 across both divisions. City is at 1.47 compared to forecast of 1.36 and is 0.27 better than the indenture requirement of 1.20. Suburban is at 2.42 compared to forecast of 2.12 and internal target of 1.20.

## 2. MONTH - INCREASE (DECREASE) IN NET POSITION

### A. City

	Month				Forecast
	Actual	Forecast	Budget	Prior Yr	Variance
<b>OPERATING REVENUES</b>					
Charges for Service	3,170,778	2,300,000	2,297,378	2,638,830	870,778
Rent	-	-	-	-	-
Other Income	29,179	10,000	25,233	17,349	19,179
Total Operating Revenues	3,199,957	2,310,000	2,322,611	2,656,179	889,957
<b>OPERATING EXPENSES</b>					
Salaries, Wages, and Benefits	750,799	770,000	938,712	889,903	19,201
General & Administrative	51,193	60,000	45,785	9,593	8,807
Utilities	64,641	160,000	175,398	163,072	95,359
Materials & Supplies	133,953	120,000	190,405	208,363	(13,953)
Miscellaneous Services	268,149	206,000	128,828	189,286	(62,149)
Treatment & Transportation	-	-	-	-	-
Depreciation & Amortization	450,000	450,000	450,000	441,114	-
Total Operating Expenses	1,718,735	1,766,000	1,929,128	1,901,331	47,265
<b>OPERATING INCOME (LOSS)</b>	1,481,223	544,000	393,483	754,848	937,223
<b>NONOPERATING REVENUES (EXPENSES)</b>					
Tapping and Capital Recovery Fees	36,119	30,000	17,750	(948)	6,119
Meter Sales	1,307	1,000	1,417	1,054	307
Inspection & Plan Reviews	2,500	3,000	2,250	(6,230)	(500)
Other Income	4,080	5,000	1,667	3,600	(920)
Other Expense	(194,815)	(134,000)	(193,775)	-	(60,815)
Interest Earnings	179,242	20,000	35,833	261,624	159,242
Interest Expense	(1,315,458)	(1,315,000)	(1,315,458)	(1,001,195)	(458)
Total Nonoperating Expenses	(1,287,025)	(1,390,000)	(1,450,316)	(742,094)	102,975
<b>INCREASE (DECREASE) IN NET POSITION BEFORE CAPITAL CONTRIBUTIONS</b>	194,198	(846,000)	(1,056,833)	12,753	1,040,198
<b>CAPITAL CONTRIBUTIONS</b>					
Capital Grant	-	-	-	-	-
Capital Assets Provided By Developers and Others	-	-	-	-	-
Total Capital Contributions	-	-	-	-	-
<b>INCREASE (DECREASE) IN NET POSITION</b>	<b>194,198</b>	<b>(846,000)</b>	<b>(1,056,833)</b>	<b>12,753</b>	<b>1,040,198</b>

For the month, the City had a net income of \$194k. This was around \$1.0m better than the forecasted loss for the month. Primary drivers of the higher income level to forecast were significantly higher operating revenues along with lower operating expenses and higher non-operating revenues.

Operating Revenues were \$890k higher than forecast with customer charges up by \$871k from higher water charges along with significantly higher wastewater charges and due to higher other revenues of \$19k. Water charges were up by \$188k on higher residential and commercial charges while wastewater charges were up by \$683k on higher residential charges and higher signatory revenues.

Operating expenses were \$47k favorable to forecast with favorable variances reported for employee costs as well as general & administrative and utilities while materials & supplies was slightly unfavorable and along with miscellaneous services was unfavorable. Utilities was significantly favorable due to the

true-up of last month's accrual while outside services was higher on the volume of work being performed on sanitary sewer lines

Non-operating expenses were higher than forecast due, mainly, to the recognition of interest expense on an invested balance of treasury bills that have matured.

## B. Suburban

	Month				Forecast Variance
	Actual	Forecast	Budget	Prior Yr	
<b>OPERATING REVENUES</b>					
Charges for Service	2,721,900	1,720,000	1,707,188	2,360,452	1,001,900
Rent	8,010	15,000	14,917	9,871	(6,990)
Other Income	(21,612)	-	50,799	2,695	(21,612)
Total Operating Revenues	2,708,298	1,735,000	1,772,904	2,373,019	973,298
<b>OPERATING EXPENSES</b>					
Salaries, Wages, and Benefits	218,357	220,000	275,976	231,441	1,643
General & Administrative	18,978	50,000	19,530	6,108	31,022
Utilities	59,234	70,000	64,259	64,659	10,766
Materials & Supplies	89,316	91,000	142,578	113,028	1,684
Miscellaneous Services	660,157	855,000	666,383	545,970	194,843
Treatment & Transportation	531,937	550,000	450,321	460,793	18,063
Depreciation & Amortization	572,918	573,000	572,926	591,210	82
Total Operating Expenses	2,150,898	2,409,000	2,191,973	2,013,208	258,102
<b>OPERATING INCOME (LOSS)</b>	557,400	(674,000)	(419,069)	359,811	1,231,400
<b>NONOPERATING REVENUES (EXPENSES)</b>					
Tapping and Capital Recovery Fees	168,327	60,000	112,415	52,024	108,327
Meter Sales	7,356	10,000	6,250	5,384	(2,644)
Inspection & Plan Reviews	1,500	5,000	8,000	550	(3,500)
Other Income	4,808	5,000	458	3,855	(192)
Other Expense	(219)	-	(583)	(40,113)	(219)
Interest Earnings	5,497	6,000	3,152	4,465	(503)
Interest Expense	(265,810)	(105,000)	(139,076)	(111,638)	(160,810)
Total Nonoperating Expenses	(78,540)	(19,000)	(9,384)	(85,473)	(59,540)
<b>INCREASE (DECREASE) IN NET POSITION BEFORE CAPITAL CONTRIBUTIONS</b>	478,860	(693,000)	(428,453)	274,338	1,171,860
<b>CAPITAL CONTRIBUTIONS</b>					
Capital Grant	-	-	-	-	-
Capital Assets Provided By Developers and Others	-	-	-	-	-
Total Capital Contributions	-	-	-	-	-
<b>INCREASE (DECREASE) IN NET POSITION</b>	<b>478,860</b>	<b>(693,000)</b>	<b>(428,453)</b>	<b>274,338</b>	<b>1,171,860</b>

Suburban net income of \$479k was favorable to forecast by \$1.2m. This was driven by significantly higher operating revenues along with lower operating revenues partially offset by higher non-operating expenses.

Operating revenues were \$973k higher than forecast with user charges up by \$1,002k offset partly by lower rental income and lower miscellaneous other income. User revenues were up on both water and wastewater. Water revenues were up across industrial and residential areas. Wastewater revenues were up in the Western Lehigh Interceptor area partly offset and for excess removal credits at the wastewater treatment plant.

Operating expenses were favorable across the board.

Non-operating expenses for interest expense were unfavorable to forecast due to lower invested balances.

### 3. MONTH – NET CASH FLOWS

#### A. City

	Month				Forecast
	Actual	Forecast	Budget	Prior Year	Variance
Increase (Decrease) in Net position	194,198	(846,000)	(1,056,833)	12,753	1,040,198
Depreciation (non-cash)	450,000	450,000	450,000	441,114	-
Non-Cash Interest expenses	1,315,458	1,315,000	1,315,458	1,001,195	458
Expenses from Capital Projects	193,775	134,000	193,775	-	59,775
Cash generated by Operations	2,153,431	1,053,000	902,400	1,455,062	- 1,100,431
Capex spending	(1,299,471)	(527,000)	(1,391,425)	(892,075)	(772,471)
Principal Payments	-	-	-	-	-
Concession Lease Payment	-	-	-	-	-
<b>NET CASH FLOWS</b>	<b>853,960</b>	<b>526,000</b>	<b>(489,025)</b>	<b>562,987</b>	<b>327,960</b>

Cash flow for the month was on the positive side but and was higher than forecast on higher cash generated by operations along with lower capital spending.

#### B. Suburban

	Month				Forecast
	Actual	Forecast	Budget	Prior Year	Variance
Increase (Decrease) in Net position	478,860	(693,000)	(428,453)	274,338	1,171,860
Depreciation (non-cash)	572,918	573,000	572,926	591,210	(82)
Non-Cash Interest Expenses	(240,595)	(401,000)	(367,329)	(388,362)	160,405
Cash generated by Operations	811,183	(521,000)	(222,856)	477,186	1,332,183
Capex spending	(1,085,782)	(1,023,000)	(998,023)	(523,549)	(62,782)
Principal Payments	(1,367,753)	(1,368,000)	(1,367,753)	(1,300,000)	247
<b>NET CASH FLOWS</b>	<b>(1,642,353)</b>	<b>(2,912,000)</b>	<b>(2,588,632)</b>	<b>(1,346,363)</b>	<b>1,269,647</b>

Cash flow for the month was negative but was better than forecast due to higher cash generated by operations partially offset by higher capital spending.

## 4. YTD – INCREASE (DECREASE) IN NET POSITION

### A. City

	YTD				Forecast
	Actual	Forecast	Budget	Prior Yr	Variance
<b>OPERATING REVENUES</b>					
Charges for Service	26,460,954	25,590,000	26,039,882	24,326,457	870,954
Rent	-	-	-	-	-
Other Income	312,620	293,000	252,330	208,205	19,620
Total Operating Revenues	26,773,574	25,883,000	26,292,212	24,534,662	890,574
<b>OPERATING EXPENSES</b>					
Salaries, Wages, and Benefits	7,231,998	7,251,000	6,883,888	7,091,686	19,002
General & Administrative	543,286	552,000	457,850	461,565	8,714
Utilities	1,550,736	1,646,000	1,753,980	1,681,284	95,264
Materials & Supplies	1,603,815	1,590,000	2,158,944	1,749,289	(13,815)
Miscellaneous Services	2,072,340	2,010,000	1,288,280	1,909,987	(62,340)
Treatment & Transportation	5,429	5,000	-	5,301	(429)
Depreciation & Amortization	4,500,000	4,500,000	4,500,000	4,411,140	-
Total Operating Expenses	17,507,605	17,554,000	17,042,942	17,310,253	46,395
<b>OPERATING INCOME (LOSS)</b>	9,265,969	8,329,000	9,249,270	7,224,410	936,969
<b>NONOPERATING REVENUES (EXPENSES)</b>					
Tapping and Capital Recovery Fees	374,021	368,000	177,500	248,740	6,021
Meter Sales	12,667	12,000	14,170	12,154	667
Inspection & Plan Reviews	29,572	30,000	22,500	18,520	(428)
Other Income	45,324	46,000	16,670	32,775	(676)
Other Expense	(3,248,240)	(3,187,000)	(3,239,400)	7,800	(61,240)
Interest Earnings	383,418	224,000	358,330	549,936	159,418
Interest Expense	(13,154,580)	(13,154,000)	(13,154,580)	(10,011,950)	(580)
Total Nonoperating Expenses	(15,557,818)	(15,661,000)	(15,804,810)	(9,142,025)	103,182
<b>INCREASE (DECREASE) IN NET POSITION BEFORE CAPITAL CONTRIBUTIONS</b>	(6,291,848)	(7,332,000)	(6,555,540)	(1,917,615)	1,040,152
<b>CAPITAL CONTRIBUTIONS</b>					
Capital Grant	-	-	-	-	-
Capital Assets Provided By Developers and Others	-	-	-	-	-
Total Capital Contributions	-	-	-	-	-
<b>INCREASE (DECREASE) IN NET POSITION</b>	<b>(6,291,848)</b>	<b>(7,332,000)</b>	<b>(6,555,540)</b>	<b>(1,917,615)</b>	<b>1,040,152</b>

City net income YTD is \$1.0m better than forecast YTD. This is primarily due to significantly higher operating revenues along with lower operating expenses and higher nonoperating revenues.

YTD Operating revenues are up to forecast by \$890k with customer charges up by \$871 and other miscellaneous up by \$19k. User charges were up to forecast with Wastewater up by \$684k while water was up by \$188k.

YTD operating expenses are \$46k lower than forecast with favorable variances on employee costs, administrative, and utilities, while supplies and services were slightly higher than forecast

YTD Non-operating revenues are higher than forecast due to additional interest income from matured treasury bills.

## B. Suburban

	YTD				Forecast
	Actual	Forecast	Budget	Prior Yr	Variance
<b>OPERATING REVENUES</b>					
Charges for Service	22,451,528	21,450,000	20,410,578	21,665,585	1,001,528
Rent	83,643	90,000	149,170	106,469	(6,357)
Other Income	165,626	187,000	507,990	456,503	(21,374)
Total Operating Revenues	22,700,797	21,727,000	21,067,738	22,228,557	973,797
<b>OPERATING EXPENSES</b>					
Salaries, Wages, and Benefits	2,309,906	2,312,000	2,023,832	2,046,195	2,094
General & Administrative	222,529	254,000	195,300	211,246	31,471
Utilities	582,487	593,000	642,590	599,688	10,513
Materials & Supplies	868,718	870,000	1,645,824	1,479,032	1,282
Miscellaneous Services	7,326,832	7,522,000	6,663,830	5,994,214	195,168
Treatment & Transportation	5,287,157	5,305,000	4,472,588	4,439,238	17,843
Depreciation & Amortization	5,737,007	5,737,000	5,729,260	5,912,100	(7)
Total Operating Expenses	22,334,636	22,593,000	21,373,224	20,681,711	258,364
<b>OPERATING INCOME (LOSS)</b>	366,161	(866,000)	(305,486)	1,546,846	1,232,161
<b>NONOPERATING REVENUES (EXPENSES)</b>					
Tapping and Capital Recovery Fees	1,578,714	1,470,000	1,124,150	1,814,698	108,714
Meter Sales	136,854	140,000	62,500	74,732	(3,146)
Inspection & Plan Reviews	71,391	75,000	80,000	163,662	(3,609)
Other Income	91,477	92,000	4,580	31,051	(523)
Other Expense	(6,269)	(6,000)	(5,830)	(84,512)	(269)
Interest Earnings	55,254	56,000	31,520	29,991	(746)
Interest Expense	(1,206,530)	(1,046,000)	(1,390,760)	(1,140,525)	(160,530)
Total Nonoperating Expenses	720,891	781,000	(93,840)	889,097	(60,109)
<b>INCREASE (DECREASE) IN NET POSITION BEFORE CAPITAL CONTRIBUTIONS</b>	1,087,052	(85,000)	(399,326)	2,435,942	1,172,052
<b>CAPITAL CONTRIBUTIONS</b>					
Capital Grant	-	-	-	-	-
Capital Assets Provided By Developers and Others	-	-	-	-	-
Total Capital Contributions	-	-	-	-	-
<b>INCREASE (DECREASE) IN NET POSITION</b>	<b>1,087,052</b>	<b>(85,000)</b>	<b>(399,326)</b>	<b>2,435,942</b>	<b>1,172,052</b>

YTD Suburban net income is \$1.1m higher than forecast. This is due to higher operating revenues and lower operating expenses.

YTD operating revenues were \$973k higher than forecast with user charges up by \$1,002k offset partly by lower rental income and lower miscellaneous other income. User revenues were up on both water and wastewater. Water revenues were up across industrial and residential areas. Wastewater revenues were up in the Western Lehigh Interceptor area partly offset and for excess removal credits at the wastewater treatment plant.

YTD operating expenses were favorable across the board.

YTD non-operating expenses were unfavorable due to lower interest income from lower invested balances.



## 5. YTD – NET CASH FLOWS

### A. City

	YTD				Forecast
	Actual	Forecast	Budget	Prior Yr	Variance
Increase (Decrease) in Net position	(6,291,848)	(7,332,000)	(6,555,540)	(1,917,615)	1,040,152
Depreciation (non-cash)	4,500,000	4,500,000	4,500,000	4,411,140	-
Non-Cash Interest expenses	6,630,719	6,630,000	6,630,719	3,488,089	719
Expenses from Capital Projects	3,239,400	3,179,000	3,239,400	-	60,400
Cash generated by Operations	8,078,271	6,977,000	7,814,579	5,981,614	1,101,271
Capex spending	(11,301,841)	(10,529,000)	(13,914,250)	(6,838,335)	(772,841)
Principal Payments	-	-	-	-	-
Annual Payment	(500,000)	(500,000)	(500,000)	-	-
<b>NET CASH FLOWS</b>	<b>(3,723,570)</b>	<b>(4,052,000)</b>	<b>(6,599,671)</b>	<b>(856,721)</b>	<b>328,430</b>

YTD cash flow in the City is a negative \$3.7m as capital spending has exceeded cash generated by operations. This negative balance, however, is favorable to YTD forecast by \$328k as cash generated by operations was higher with a partial reduction from higher capital spending.

### B. Suburban

	YTD				Forecast
	Actual	Forecast	Budget	Prior Yr	Variance
Increase (Decrease) in Net position	1,087,052	(85,000)	(399,326)	2,435,942	1,172,052
Depreciation (non-cash)	5,737,007	5,737,000	5,729,260	5,912,100	7
Non-Cash Interest expenses	28,846	(132,000)	213,076	140,525	160,846
Cash generated by Operations	6,852,905	5,520,000	5,543,010	8,488,567	1,332,905
Capex spending	(3,716,120)	(3,653,000)	(9,980,230)	(2,458,445)	(63,120)
Principal Payments	(2,118,264)	(2,118,000)	(2,118,264)	(2,100,000)	(264)
Annual Payment	-	-	-	-	-
<b>NET CASH FLOWS</b>	<b>1,018,521</b>	<b>(251,000)</b>	<b>(6,555,484)</b>	<b>3,930,123</b>	<b>1,269,521</b>

YTD Suburban cash flow is a positive \$1.0m which is \$1.3m better than forecast due to significantly higher gas generated by operations.

## 6. FULL YEAR FORECAST

We submitted the 2016 Q4 FC which showed we are going to get closer back to budget in total from as Suburban Water has gone from negative income to positive and City is showing a favorable reduction in the forecasted loss for the year, while Suburban Wastewater is showing an increase in the loss to partially offset.

Cash flows, in total, lost a little with respect to budget as cash flows got more favorable in Suburban Water, but were slightly lower in Suburban Wastewater and in the City.

We have completed one month in the quarter and were better, in total, on net income and cash flows.

The following is the Q4 FC Summary:

<b>SUMMARY (\$000)</b>	<b>2016 Q4 FC</b>	<b>2016 Q3 FC</b>	<b>2016 BUDGET</b>	<b>VARIANCE TO</b>	
				<b>FCST</b>	<b>BUDGET</b>
<b>NET INCOME (LOSS)</b>					
Suburban Water	322	(322)	(62)	644	384
Suburban Wastewater	(1,315)	(1,094)	(309)	(221)	(1,006)
City Division	(8,509)	(9,059)	(7,845)	550	(664)
<b>TOTAL</b>	<b>(9,502)</b>	<b>(10,475)</b>	<b>(8,216)</b>	<b>973</b>	<b>(1,286)</b>
<b>NET CASH FLOWS</b>					
Suburban Water	(1,096)	(1,794)	(4,619)	698	3,523
Suburban Wastewater	2,689	2,878	951	(189)	1,738
City Division	3,656	4,418	(940)	(762)	4,596
<b>TOTAL</b>	<b>5,249</b>	<b>5,502</b>	<b>(4,608)</b>	<b>(253)</b>	<b>9,857</b>

## 7. FINANCIAL STATEMENTS

### A. City

LEHIGH COUNTY AUTHORITY STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION CITY DIVISION	Oct-2016				2016 YTD				Annual				Month Variance to				YTD Variance to			
	Forecast		Budget		Forecast		Budget		Forecast		Budget		Forecast		Budget		Forecast		Budget	
	Actual			Prior Yr				Prior Yr				Prior Yr				Prior Yr				Prior Yr
<b>OPERATING REVENUES</b>																				
Charges for Service	3,170,778	2,300,000	2,297,378	2,638,830	26,460,954	25,590,000	26,039,882	24,326,457	31,529,219			531,949	870,778	873,400		531,949	870,954	421,072		2,134,497
Rent	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Income	29,179	10,000	25,233	17,349	312,620	293,000	253,330	208,205	302,800			11,830	19,179	3,946		11,830	19,620	60,290		104,415
Total Operating Income	3,199,957	2,310,000	2,322,611	2,656,179	26,773,574	25,883,000	26,293,212	24,534,662	31,832,019			543,779	889,957	877,346		543,779	890,574	481,362		2,238,912
<b>OPERATING EXPENSES</b>																				
Salaries, Wages, and Benefits	750,799	770,000	938,712	889,903	7,231,998	7,251,000	6,883,888	7,091,886	8,135,510			139,105	19,201	187,913		139,105	19,002	(348,110)		(140,312)
General & Administrative	51,193	60,000	45,785	9,593	543,266	552,000	457,850	461,565	549,424			(41,600)	8,807	(5,408)		(41,600)	8,714	(85,436)		(81,720)
Utilities	64,641	160,000	175,398	163,072	1,550,736	1,646,000	1,753,980	1,681,284	2,104,778			98,430	95,359	110,757		98,430	95,264	203,244		130,548
Materials & Supplies	133,953	120,000	190,465	208,363	1,603,815	1,590,000	2,153,944	1,749,289	2,652,252			74,410	(13,953)	56,452		74,410	(13,815)	555,129		145,474
Miscellaneous Services	268,149	206,000	128,628	189,286	2,072,340	2,010,000	1,288,280	1,909,987	2,947,154			(78,863)	(62,149)	(139,321)		(78,863)	(62,340)	(794,060)		(162,353)
Treatment & Transportation	-	-	-	-	5,429	5,000	-	5,301	-			-	-	-	-	-	(429)	(5,429)	-	(128)
Depreciation & Amortization	450,000	450,000	450,000	441,114	4,500,000	4,500,000	4,500,000	4,411,140	5,400,000			(8,886)	-	-		(8,886)	-	-		(88,860)
Total Operating Expenses	1,718,735	1,766,000	1,929,128	1,901,331	17,507,605	17,554,000	17,042,942	17,310,253	21,181,118			182,596	47,265	210,363		182,596	46,395	(464,663)		(197,352)
<b>OPERATING INCOME (LOSS)</b>	1,481,223	544,000	393,483	754,848	9,265,969	8,329,000	9,249,270	7,224,410	10,642,901			726,375	937,223	1,087,740		726,375	936,969	16,699		2,041,560
<b>NONOPERATING REVENUES (EXPENSES)</b>																				
Tapping and Capital Recovery Fees	36,119	30,000	17,750	(948)	374,021	368,000	177,500	249,740	213,000			37,067	6,119	18,369		37,067	6,021	196,521		125,281
Meter Sales	1,307	1,000	1,417	1,054	12,667	12,000	14,170	12,154	17,000			253	307	(110)		253	667	(1,503)		513
Inspection & Plan Reviews	2,500	3,000	2,250	(6,230)	29,572	30,000	22,500	18,520	27,000			8,730	(500)	250		8,730	(428)	7,072		11,052
Other Income	4,080	5,000	1,867	3,600	45,324	46,000	16,670	32,775	20,000			480	(920)	2,413		480	(676)	28,654		12,549
Other Expense	(194,815)	(134,000)	(193,775)	-	(3,248,240)	(3,187,000)	(3,239,400)	7,800	-			(194,815)	(60,815)	(1,040)		(194,815)	(61,240)	(8,940)		(3,256,040)
Interest Earnings	179,242	20,000	35,633	261,624	383,418	224,000	398,330	548,936	430,000			(82,362)	159,242	143,409		(82,362)	159,418	25,088		(166,518)
Interest Expense	(1,315,459)	(1,315,000)	(1,315,459)	(1,001,195)	(13,154,580)	(13,154,000)	(13,154,580)	(10,011,950)	(15,785,500)			(314,263)	(458)	-		(314,263)	(560)	-		(3,142,530)
Total Nonoperating Expenses	(1,287,025)	(1,390,000)	(1,450,316)	(742,094)	(15,557,818)	(15,661,000)	(15,804,810)	(9,142,025)	(15,078,500)			(544,930)	102,975	163,291		(544,930)	103,182	246,983		(6,415,793)
<b>INCREASE (DECREASE) IN NET POSITION BEFORE CAPITAL CONTRIBUTIONS</b>	194,198	(846,000)	(1,056,633)	12,753	(6,291,848)	(7,332,000)	(6,555,540)	(1,917,615)	(4,435,599)			181,445	1,040,198	1,251,031		181,445	1,040,152	263,692		(4,374,233)
<b>CAPITAL CONTRIBUTIONS</b>																				
Capital Grant	-	-	-	-	-	-	-	-	-			-	-	-		-	-	-		-
Capital Assets Provided By Developers and Others	-	-	-	-	-	-	-	-	-			-	-	-		-	-	-		-
Total Capital Contributions	-	-	-	-	-	-	-	-	-			-	-	-		-	-	-		-
<b>INCREASE (DECREASE) IN NET POSITION</b>	194,198	(846,000)	(1,056,633)	12,753	(6,291,848)	(7,332,000)	(6,555,540)	(1,917,615)	(4,435,599)			181,445	1,040,198	1,251,031		181,445	1,040,152	263,692		(4,374,233)

## B. Suburban

LEHIGH COUNTY AUTHORITY															
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION															
SUBSARIN DIVISION															
	Oct-2016				2016 YTD				Annual	Month Variance to			YTD Variance to		
	Actual	Forecast	Budget	Prior Yr	Actual	Forecast	Budget	Prior Yr	Budget	Forecast	Budget	Prior Yr	Budget	Forecast	Prior Yr
OPERATING REVENUES															
Charges for Service	2,721,900	1,720,000	1,707,188	2,380,452	22,451,528	21,450,000	20,410,578	21,665,585	24,301,607	1,001,900	1,014,712	361,447	1,001,528	2,040,950	785,944
Rent	8,010	15,000	14,917	9,871	83,643	90,000	148,170	106,469	179,004	(6,990)	(6,907)	(1,861)	(6,357)	(65,527)	(22,826)
Other Income	(21,612)	-	-	2,695	165,626	187,000	507,990	456,603	609,592	(21,612)	(72,411)	(24,307)	(21,374)	(342,364)	(230,878)
Total Operating Income	2,708,298	1,735,000	1,772,904	2,373,019	22,700,797	21,727,000	21,067,738	22,228,557	25,090,203	973,288	935,394	335,280	973,797	1,533,059	472,240
OPERATING EXPENSES															
Salaries, Wages, and Benefits	219,357	220,000	275,976	231,441	2,309,906	2,312,000	2,023,832	2,046,195	2,391,801	1,643	57,619	13,083	2,094	(286,074)	(263,711)
General & Administrative	18,978	50,000	13,530	6,108	222,529	254,000	195,300	211,246	234,354	31,022	552	(12,870)	31,471	(27,229)	(11,283)
Utilities	59,234	70,000	64,259	64,659	582,487	593,000	642,590	599,688	771,112	107,665	5,025	5,424	10,513	60,103	17,201
Materials & Supplies	88,316	91,000	142,578	113,028	868,718	870,000	1,645,824	1,479,032	2,029,590	1,684	53,262	23,712	1,282	777,106	60,314
Miscellaneous Services	660,157	865,000	666,383	545,970	7,326,832	7,522,000	6,663,830	5,994,214	7,996,600	194,843	6,226	(114,187)	195,168	(663,002)	(1,332,618)
Treatment & Transportation	531,937	550,000	450,321	480,793	5,287,157	5,305,000	4,472,588	4,439,238	5,331,851	18,063	(81,616)	(2,145)	17,843	(814,569)	(947,919)
Depreciation & Amortization	572,918	573,000	572,926	591,210	5,737,007	5,737,000	5,729,260	5,912,100	6,875,111	82	8	18,292	(7)	(7,747)	175,093
Total Operating Expenses	2,150,888	2,403,000	2,191,973	2,013,208	22,334,636	22,593,000	21,373,224	20,681,711	25,630,419	258,102	41,075	(137,690)	258,364	(961,412)	(1,632,924)
OPERATING INCOME (LOSS)	557,400	(67,000)	(419,069)	359,811	366,161	(866,000)	(305,486)	1,546,846	(540,216)	1,231,400	976,469	197,539	1,232,161	671,647	(1,180,684)
NONOPERATING REVENUES (EXPENSES)															
Tapping and Capital Recovery Fees	168,327	60,000	112,415	52,024	1,578,714	1,470,000	1,124,150	1,814,688	1,348,980	108,327	55,912	116,303	108,714	454,564	(235,983)
Meter Sales	7,356	10,000	6,250	5,384	138,854	140,000	62,500	74,732	75,000	(2,644)	1,106	1,972	(3,146)	74,354	62,122
Inspection & Plan Reviews	1,500	5,000	8,000	550	71,391	75,000	80,000	163,662	96,000	(3,500)	(6,500)	950	(3,609)	(8,609)	(92,271)
Other Income	4,808	5,000	458	3,855	91,477	92,000	4,580	31,051	5,500	(192)	4,350	953	(523)	86,897	60,426
Other Expense	(219)	-	(583)	(40,113)	(6,289)	(6,000)	(5,630)	(84,512)	(7,000)	(219)	364	38,884	(289)	(439)	78,242
Interest Earnings	5,487	6,000	3,152	4,465	55,254	56,000	31,520	29,991	37,826	(503)	2,945	1,032	(746)	23,734	25,263
Interest Expense	(265,810)	(105,000)	(138,076)	(111,638)	(1,206,530)	(1,046,000)	(1,390,760)	(1,140,525)	(1,668,907)	(160,810)	(126,734)	(154,172)	(160,530)	184,230	(66,005)
Total Nonoperating Expenses	(76,540)	(19,000)	(9,394)	(85,473)	720,891	781,000	(93,840)	889,197	(112,601)	(59,540)	(68,156)	6,933	(60,109)	814,731	(168,206)
INCREASE (DECREASE) IN NET POSITION BEFORE CAPITAL CONTRIBUTIONS	479,860	(693,000)	(428,463)	274,338	1,087,052	(85,000)	(399,326)	2,435,942	(652,817)	1,171,860	907,313	204,522	1,172,052	1,486,378	(1,348,891)
CAPITAL CONTRIBUTIONS															
Capital Grant	-	-	-	-	-	-	-	-	75,000	-	-	-	-	-	-
Capital Assets Provided By Developers and Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital Contributions	-	-	-	-	-	-	-	-	75,000	-	-	-	-	-	-
INCREASE (DECREASE) IN NET POSITION	479,860	(693,000)	(428,463)	274,338	1,087,052	(85,000)	(399,326)	2,435,942	(577,817)	1,171,860	907,313	204,522	1,172,052	1,486,378	(1,348,891)

# LEHIGH COUNTY AUTHORITY

## 2016 Q4 FORECAST REPORT

### 1. SUMMARY

This is a report of the 2016 Q4 Forecast. The forecast covers the entire year and is based upon the actuals through September of this year with a forecast for the remaining three months of the year. The forecast figures for the last quarter of the year are based upon historical trends adjusted for the impacts of any anticipated changes to trends and any anticipated economic impacts. The forecast was done for the three funds that are reported on our annual audited financial statements: Suburban Water, Suburban Wastewater, and City Division. A summary of the forecast for the year compared to the last forecast (Q3 Forecast) and Budget for the year is in the following table (all figures in \$000's):

SUMMARY (\$000)	2016 Q4 FC	2016 Q3 FC	2016 BUDGET	VARIANCE TO FCST BUDGET	
<b>NET INCOME (LOSS)</b>					
Suburban Water	322	(322)	(62)	644	384
Suburban Wastewater	(1,315)	(1,094)	(309)	(221)	(1,006)
City Division	(8,509)	(9,059)	(7,845)	550	(664)
<b>TOTAL</b>	<b>(9,502)</b>	<b>(10,475)</b>	<b>(8,216)</b>	<b>973</b>	<b>(1,286)</b>
<b>NET CASH FLOWS</b>					
Suburban Water	(1,096)	(1,794)	(4,619)	698	3,523
Suburban Wastewater	2,689	2,878	951	(189)	1,738
City Division	3,656	4,418	(940)	(762)	4,596
<b>TOTAL</b>	<b>5,249</b>	<b>5,502</b>	<b>(4,608)</b>	<b>(253)</b>	<b>9,857</b>

#### THIS FORECAST VS. LAST FORECAST

This forecast is a net loss of \$9.5m for LCA. The loss, however, is lower than the loss predicted for the last forecast by \$973k, so there is forecasted improvement in our loss position. Suburban Water has a lower projected loss for the year as does the City Division, while the forecasted loss for Suburban Wastewater is higher.

The total cash flow on this forecast of \$5.2m is down to the last forecast by \$253k. A higher cash flow from Suburban Water is being negated by lower cash flows from Suburban Wastewater and City Division.

#### THIS FORECAST VS. BUDGET

The forecasted net loss of \$9.5m is higher than the budgeted loss by \$1.3m with Suburban Water up while Suburban Wastewater and City Division are down to budget.

The forecasted cash flow of \$5.2m is up significantly to budget on better cash flows from all three funds.

Each of the three funds will be discussed further in the upcoming sections.



## 2. SUBURBAN WATER

### A. Income (Loss) Statement (\$000's)

SUBURBAN WATER INCOME STATEMENT (\$000)	2016	2016	2016	VARIANCE TO	
	Q4 FC	Q3 FC	BUDGET	FCST	BUDGET
Operating Revenues	8,774	8,787	8,787	(13)	(13)
Operating Expenses	(7,963)	(8,142)	(8,090)	179	127
Operating Income	811	645	697	166	114
Non-Operating Rev(Exp)	610	580	466	30	144
Interest Income	57	50	50	7	7
Interest Expense	(1,056)	(1,497)	(1,275)	441	219
Capex Expensed	(100)	(100)	-	-	(100)
<b>NET INCOME (LOSS)</b>	<b>322</b>	<b>(322)</b>	<b>(62)</b>	<b>644</b>	<b>384</b>

#### THIS FORECAST VS. LAST FORECAST

Net income has swung from a negative to a positive figure on this forecast and is \$644k better than the previous forecast. This positive variance is driven by lower operating expenses and lower interest expenses along with higher non-operating revenues.

#### THIS FORECAST VS. BUDGET

Net income is also better than the budgeted loss for the year by \$384k. Again, this is being driven by lower operating expenses, higher non-operating revenues, and lower interest expenses with a partial offset from higher capital projects spending going to expense.

### B. Cash Flows (\$000's)

SUBURBAN WATER CASH FLOW STATEMENT (\$000)	2016	2016	2016	VARIANCE TO	
	Q4 FC	Q3 FC	BUDGET	FCST	BUDGET
Operating Revenues	8,774	8,787	8,787	(13)	(13)
Op Exp (ex Depreciation)	(5,013)	(5,192)	(5,140)	179	127
Cash Flows From Operations	3,761	3,595	3,647	166	114
Interest Income	57	50	50	7	7
Net Available For Debt Service	3,818	3,645	3,697	173	121
Debt Service	(2,693)	(3,129)	(2,798)	436	105
Net Available For Capital	1,125	516	899	609	226
Non-Op Rev (Exp)	610	580	466	30	144
Annual Lease Payment	-	-	-	-	-
Cash provided by maturing investments	-	-	-	-	-
New Borrowing	-	-	-	-	-
Capital Spending	(2,831)	(2,890)	(5,984)	59	3,153
<b>NET FUND CASH FLOW</b>	<b>(1,096)</b>	<b>(1,794)</b>	<b>(4,619)</b>	<b>698</b>	<b>3,523</b>

#### THIS FORECAST VS. LAST FORECAST

Cash flow is still negative but is significantly better compared to the last forecast driven by better cash flows from operations, lower debt service, higher non-operating revenues, and lower capital spending.

#### THIS FORECAST VS. BUDGET

Cash flow is significantly higher than budget due to all of the factors above along with lower capital spending against budget.

#### C. Debt Service Coverage and Balances (\$000's)

SUBURBAN WATER	2016	2016	2016	VARIANCE TO	
	Q4 FC	Q3 FC	BUDGET	FCST	BUDGET
Debt Service Coverage Ratio	1.61	1.34	1.45	0.27	0.16
Operating Cash Balance	4,744	5,840	3,103	(1,096)	1,641
Project Reserve Balance	1,882	88	-	1,794	1,882

#### THIS FORECAST VS. LAST FORECAST

Debt service coverage ratio is improved and is better than internal target of 1.20.

Operating cash balance is down despite better cash flows from a higher amount of cash going to capital projects.

Project reserve balance is up due to lower capital spending along with higher provisions from operations reserves.

#### THIS FORECAST VS. BUDGET

Debt service coverage ratio is improved and is better than internal target of 1.20.

Operating cash balance is down despite better cash flows from a higher amount of cash going to capital projects.

Project reserve balance is up due to lower capital spending along with higher provisions from operations reserves.

### 3. SUBURBAN WASTEWATER

#### A. Income (Loss) Statement (\$000's)

SUBURBAN WASTEWATER INCOME STATEMENT (\$000)	2016	2016	2016	VARIANCE TO	
	Q4 FC	Q3 FC	BUDGET	FCST	BUDGET
Operating Revenues	16,431	16,149	15,949	282	482
Operating Expenses	(18,677)	(18,046)	(17,197)	(631)	(1,480)
Operating Income	(2,246)	(1,897)	(1,248)	(349)	(998)
Non-Operating Rev(Exp)	1,326	1,093	1,093	233	233
Interest Income	10	119	119	(109)	(109)
Interest Expense	(205)	(209)	(273)	4	68
Capex Expensed	(200)	(200)	-	-	(200)
<b>NET INCOME (LOSS)</b>	<b>(1,315)</b>	<b>(1,094)</b>	<b>(309)</b>	<b>(221)</b>	<b>(1,006)</b>



#### THIS FORECAST VS. LAST FORECAST

Net income is negative and is worse than the last forecast by \$221k driven by higher operating expenses and lower interest income with a partial offset from higher operating revenues and higher non-operating revenues. Operating expenses were unfavorable with \$2.6m of unfavorable treatment & transportation costs from the signatory true-up partially offset by significant favorable variances on outside services spending. Interest income is lower on lower invested balances. Non-operating revenues were aided by higher tapping & connection fees.

#### THIS FORECAST VS. BUDGET

Net income is unfavorable to budget with operating expenses being the primary driver negatively impacted by the signatory true-up with a partial favorable offset from lower outside services spending. Against budget, capex charged to expense is unfavorable to budget.

#### B. Cash Flows (\$000's)

<b>SUBURBAN WASTEWATER CASH FLOW STATEMENT (\$000)</b>	<b>2016 Q4 FC</b>	<b>2016 Q3 FC</b>	<b>2016 BUDGET</b>	<b>VARIANCE TO FCST BUDGET</b>	
Operating Revenues	16,431	16,149	15,949	282	482
Op Exp (ex Depreciation)	(14,751)	(14,121)	(13,187)	(630)	(1,564)
Cash Flows From Operations	1,680	2,028	2,762	(348)	(1,082)
Interest Income	10	119	119	(109)	(109)
Net Available For Debt Service	1,690	2,147	2,881	(457)	(1,191)
Debt Service	(1,174)	(900)	(1,244)	(274)	70
Net Available For Capital	516	1,247	1,637	(731)	(1,121)
Non-Op Rev (Exp)	1,326	1,093	1,093	233	233
Annual Lease Payment	-	-	-	-	-
Cash provided by maturing investments	3,617	3,617	3,617	-	-
New Borrowing	-	-	-	-	-
Capital Spending	(2,770)	(3,079)	(5,396)	309	2,626
<b>NET FUND CASH FLOW</b>	<b>2,689</b>	<b>2,878</b>	<b>951</b>	<b>(189)</b>	<b>1,738</b>

#### THIS FORECAST VS. LAST FORECAST

Cash flow is positive and is slightly unfavorable to last forecast due to the income variances described negatively affecting cash flows more partially offset by lower total capital spending.

#### THIS FORECAST VS. BUDGET

Compared to budget, cash flow is up significantly as capital spending is \$2.6m lower to more than offset the unfavorable net income variance effect on cash flows.



### C. Debt Service Coverage and Balances (\$000's)

SUBURBAN WASTEWATER	2016	2016	2016	VARIANCE TO	
	Q4 FC	Q3 FC	BUDGET	FCST	BUDGET
Debt Service Coverage Ratio	2.56	3.60	3.19	(1.04)	(0.64)
Operating Cash Balance	10,816	13,156	12,453	(2,340)	(1,637)
Project Reserve Balance	4,308	2,157	933	2,151	3,375

#### THIS FORECAST VS. LAST FORECAST

Debt Service coverage ratio dropped from the last forecast but is still significantly higher than internal target of 1.20.

Operating cash is down from the unfavorable net income cash effect.

Project reserves are up, however, on lower capital spending.

#### THIS FORECAST VS. BUDGET

Debt service coverage ratio is down to budget driven by the lower net income.

Operating cash is down due to lower net income.

Project reserves are up on lower capital spending.

## 4. CITY DIVISION

### A. Income (Loss) Statement (\$000's)

CITY DIVISION INCOME STATEMENT (\$000)	2016	2016	2016	VARIANCE TO	
	Q4 FC	Q3 FC	BUDGET	FCST	BUDGET
Operating Revenues	30,703	30,637	31,832	66	(1,129)
Operating Expenses	(20,806)	(20,818)	(20,998)	12	192
Operating Income	9,897	9,819	10,834	78	(937)
Non-Operating Rev(Exp)	534	271	277	263	257
Interest Income	264	302	430	(38)	(166)
Interest Expense	(15,785)	(15,785)	(15,786)	-	1
Capex Expensed	(3,419)	(3,666)	(3,600)	247	181
<b>NET INCOME (LOSS)</b>	<b>(8,509)</b>	<b>(9,059)</b>	<b>(7,845)</b>	<b>550</b>	<b>(664)</b>

#### THIS FORECAST VS. LAST FORECAST

Net income is negative but is better than the last forecast by \$550k. This is driven by higher operating revenue and higher non-operating revenues with lower operating expenses and lower capital spending expensed with just a small unfavorable effect from lower interest income. Non-operating revenues are up on higher tapping & connections fees as well as higher meter sales and higher inspection & plan review revenues.

#### THIS FORECAST VS. BUDGET

Net income is worse to budget by \$664k due, mainly, to lower operating revenues. We had already recognized lower operating revenues in the previous forecast.

#### B. Cash Flows (\$000's)

CITY DIVISION	2016	2016	2016	VARIANCE TO	
CASH FLOW STATEMENT (\$000)	Q4 FC	Q3 FC	BUDGET	FCST	BUDGET
Operating Revenues	30,703	30,637	31,832	66	(1,129)
Op Exp (ex Depreciation)	(15,406)	(15,418)	(15,598)	12	192
Cash Flows From Operations	15,297	15,219	16,234	78	(937)
Interest Income	264	302	430	(38)	(166)
Net Available For Debt Service	15,561	15,521	16,664	40	(1,103)
Debt Service	(13,047)	(13,047)	(13,047)	-	-
Net Available For Capital	2,514	2,474	3,617	40	(1,103)
Non-Op Rev (Exp)	534	271	277	263	257
Annual Lease Payment	(500)	(500)	(500)	-	-
Cash provided by maturing investments	12,363	12,363	12,363	-	-
New Borrowing	-	-	-	-	-
Capital Spending	(11,255)	(10,190)	(16,697)	(1,065)	5,442
<b>NET FUND CASH FLOW</b>	<b>3,656</b>	<b>4,418</b>	<b>(940)</b>	<b>(762)</b>	<b>4,596</b>

#### THIS FORECAST VS. LAST FORECAST

Cash flows are positive but are lower than last forecast by \$762k due to higher capital project spending.

#### THIS FORECAST VS. BUDGET

Cash flow is significantly higher than budget as capital spending forecasted is well below budgeted levels.

#### C. Debt Service Coverage and Balances (\$000's)

CITY DIVISION	2016	2016	2016	VARIANCE TO	
	Q4 FC	Q3 FC	BUDGET	FCST	BUDGET
<b>Debt Service Coverage Ratio</b>	<b>1.34</b>	<b>1.34</b>	<b>1.41</b>	<b>(0.00)</b>	<b>(0.07)</b>
<b>Operating Cash Balance</b>	<b>2,157</b>	<b>4,402</b>	<b>5,274</b>	<b>(2,245)</b>	<b>(3,117)</b>
<b>Project Reserve Balance</b>	<b>8,597</b>	<b>7,114</b>	<b>884</b>	<b>1,483</b>	<b>7,713</b>

#### THIS FORECAST VS. LAST FORECAST

Debt service coverage ratio is about the same as last forecast and is above internal target of 1.20

Operating cash is down due to higher forecasted provision of operating cash to Capital Projects.

Project Reserves are up due to higher funding from operations

## THIS FORECAST VS. BUDGET

Debt service coverage ratio is lower than budget but better than internal target of 1.20.

Operating cash is lower due to provision to capital projects.

Project reserves are up due to lower capital spending along with higher funding from operations.

## 5. SUMMARY REPORT

### A. Income (Loss) Statement (\$000's)

INCOME STATEMENT (\$000)	Suburban Water			Suburban Wastewater			City Division			TOTAL LCA		
	Budget	Q3 FC	Q4 FC	Budget	Q3 FC	Q4 FC	Budget	Q3 FC	Q4 FC	Budget	Q3 FC	Q4 FC
<b>Operating Revenues</b>												
Customer charges	8,657	8,627	8,597	15,744	15,726	16,293	31,529	30,344	30,390	55,930	54,697	55,280
Other revenues	130	160	177	205	423	138	303	293	313	638	876	628
<b>Total Operating Revenues</b>	<b>8,787</b>	<b>8,787</b>	<b>8,774</b>	<b>15,949</b>	<b>16,149</b>	<b>16,431</b>	<b>31,832</b>	<b>30,637</b>	<b>30,703</b>	<b>56,568</b>	<b>55,573</b>	<b>55,908</b>
<b>Operating Expenses</b>												
Salaries, wages, and benefits	(1,220)	(1,243)	(1,290)	(453)	(567)	(651)	(6,894)	(7,053)	(6,746)	(8,567)	(8,863)	(8,687)
General & administrative	(764)	(715)	(737)	(225)	(358)	(317)	(3,594)	(3,568)	(3,108)	(4,583)	(4,641)	(4,162)
Utilities	(483)	(558)	(480)	(262)	(274)	(236)	(1,972)	(1,900)	(1,895)	(2,717)	(2,732)	(2,611)
Materials & supplies	(488)	(461)	(390)	(247)	(282)	(170)	(1,636)	(1,359)	(1,300)	(2,371)	(2,102)	(1,860)
Outside services	(2,185)	(2,215)	(2,116)	(8,621)	(8,771)	(6,971)	(1,502)	(1,527)	(2,352)	(12,308)	(12,513)	(11,439)
Treatment & transportation	-	-	-	(3,379)	(3,869)	(6,406)	-	(11)	(5)	(3,379)	(3,880)	(6,411)
Depreciation & Amortization	(2,950)	(2,950)	(2,950)	(4,010)	(3,925)	(3,926)	(5,400)	(5,400)	(5,400)	(12,360)	(12,275)	(12,276)
<b>Total Operating Expenses</b>	<b>(8,090)</b>	<b>(8,142)</b>	<b>(7,963)</b>	<b>(17,197)</b>	<b>(18,046)</b>	<b>(18,677)</b>	<b>(20,998)</b>	<b>(20,818)</b>	<b>(20,806)</b>	<b>(46,285)</b>	<b>(47,006)</b>	<b>(47,446)</b>
<b>Operating Income</b>	<b>697</b>	<b>645</b>	<b>811</b>	<b>(1,248)</b>	<b>(1,897)</b>	<b>(2,246)</b>	<b>10,834</b>	<b>9,819</b>	<b>9,897</b>	<b>10,283</b>	<b>8,567</b>	<b>8,462</b>
<b>Non-Operating Revenues (Expenses)</b>												
Tapping & capital recovery fees	194	280	300	1,000	1,000	1,291	213	250	428	1,407	1,530	2,019
Meter sales	92	80	159	-	-	-	17	15	14	109	95	173
Inspection & plan reviews	75	200	63	93	93	22	27	300	36	195	593	121
Other non-operating revenues	105	20	88	-	-	13	20	500	56	125	520	157
Other non-operating expenses	-	-	-	-	-	-	-	(794)	-	-	(794)	-
<b>Total Non-Operating Revenues (Expenses)</b>	<b>466</b>	<b>580</b>	<b>610</b>	<b>1,093</b>	<b>1,093</b>	<b>1,326</b>	<b>277</b>	<b>271</b>	<b>534</b>	<b>1,836</b>	<b>1,944</b>	<b>2,470</b>
<b>Income Before Interest</b>	<b>1,163</b>	<b>1,225</b>	<b>1,421</b>	<b>(155)</b>	<b>(804)</b>	<b>(920)</b>	<b>11,111</b>	<b>10,090</b>	<b>10,431</b>	<b>12,119</b>	<b>10,511</b>	<b>10,932</b>
<b>Interest Income</b>	<b>50</b>	<b>50</b>	<b>57</b>	<b>119</b>	<b>119</b>	<b>10</b>	<b>430</b>	<b>302</b>	<b>264</b>	<b>599</b>	<b>471</b>	<b>331</b>
<b>Interest Expense</b>	<b>(1,275)</b>	<b>(1,497)</b>	<b>(1,056)</b>	<b>(273)</b>	<b>(209)</b>	<b>(205)</b>	<b>(15,786)</b>	<b>(15,785)</b>	<b>(15,785)</b>	<b>(17,334)</b>	<b>(17,491)</b>	<b>(17,046)</b>
<b>Capital Projects Expensed</b>	<b>-</b>	<b>(100)</b>	<b>(100)</b>	<b>-</b>	<b>(200)</b>	<b>(200)</b>	<b>(3,600)</b>	<b>(3,666)</b>	<b>(3,419)</b>	<b>(3,600)</b>	<b>(3,966)</b>	<b>(3,719)</b>
<b>NET INCOME (LOSS)</b>	<b>(62)</b>	<b>(322)</b>	<b>322</b>	<b>(309)</b>	<b>(1,094)</b>	<b>(1,315)</b>	<b>(7,845)</b>	<b>(9,059)</b>	<b>(8,509)</b>	<b>(8,216)</b>	<b>(10,475)</b>	<b>(9,502)</b>



## B. Cash Flows (\$000's)

CASH FLOW STATEMENT (\$000)	Suburban Water			Suburban Wastewater			City Division			TOTAL LCA		
	Budget	Q3 FC	Q4 FC	Budget	Q3 FC	Q4 FC	Budget	Q3 FC	Q4 FC	Budget	Q3 FC	Q4 FC
<b>Operating Revenues</b>												
Customer charges	8,657	8,627	8,597	15,744	15,726	16,293	31,529	30,344	30,390	55,930	54,697	55,280
Other revenues	130	160	177	205	423	138	303	293	313	638	876	628
Total Operating Revenues	8,787	8,787	8,774	15,949	16,149	16,431	31,832	30,637	30,703	56,568	55,573	55,908
<b>Operating Expenses (ex Depreciation &amp; Amortization)</b>												
Salaries, wages, and benefits	(1,220)	(1,243)	(1,290)	(453)	(567)	(651)	(6,894)	(7,053)	(6,746)	(8,567)	(8,863)	(8,687)
General & administrative	(764)	(715)	(737)	(225)	(358)	(317)	(3,594)	(3,568)	(3,108)	(4,583)	(4,641)	(4,162)
Utilities	(483)	(558)	(480)	(262)	(274)	(236)	(1,972)	(1,900)	(1,895)	(2,717)	(2,732)	(2,611)
Materials & supplies	(488)	(461)	(390)	(247)	(282)	(170)	(1,636)	(1,359)	(1,300)	(2,371)	(2,102)	(1,860)
Outside services	(2,185)	(2,215)	(2,116)	(8,621)	(8,771)	(6,971)	(1,502)	(1,527)	(2,352)	(12,308)	(12,513)	(11,439)
Treatment & transportation	-	-	-	(3,379)	(3,869)	(6,406)	-	(11)	(5)	(3,379)	(3,880)	(6,411)
Total Operating Expenses	(5,140)	(5,192)	(5,013)	(13,187)	(14,121)	(14,751)	(15,598)	(15,418)	(15,406)	(33,925)	(34,731)	(35,170)
<b>Cash Flows From Operations</b>	3,647	3,595	3,761	2,762	2,028	1,680	16,234	15,219	15,297	22,643	20,842	20,738
<b>Interest Income</b>	50	50	57	119	119	10	430	302	264	599	471	331
<b>Net Available For Debt Service</b>	3,697	3,645	3,818	2,881	2,147	1,690	16,664	15,521	15,561	23,242	21,313	21,069
<b>Debt Service</b>												
Interest Payments	(1,275)	(1,497)	(1,056)	(273)	(209)	(205)	(13,047)	(13,047)	(13,047)	(14,595)	(14,753)	(14,308)
Principal Payments	(1,523)	(1,632)	(1,637)	(971)	(691)	(969)	-	-	-	(2,494)	(2,323)	(2,606)
Total Debt Service	(2,798)	(3,129)	(2,693)	(1,244)	(900)	(1,174)	(13,047)	(13,047)	(13,047)	(17,089)	(17,076)	(16,914)
<b>Net Available for Capital</b>	899	516	1,125	1,637	1,247	516	3,617	2,474	2,514	6,153	4,237	4,155
<b>Non-Operating Revenues (Expenses)</b>												
Tapping & capital recovery fees	194	280	300	1,000	1,000	1,291	213	250	428	1,407	1,530	2,019
Meter sales	92	80	159	-	-	-	17	15	14	109	95	173
Inspection & plan reviews	75	200	63	93	93	22	27	300	36	195	593	121
Other non-operating revenues	105	20	88	-	-	13	20	500	56	125	520	157
Other non-operating expenses	-	-	-	-	-	-	-	(794)	-	-	(794)	-
Total Non-Operating Revenues (Expenses)	466	580	610	1,093	1,093	1,326	277	271	534	1,836	1,944	2,470
<b>Annual Lease Payment</b>	-	-	-	-	-	-	(500)	(500)	(500)	(500)	(500)	(500)
<b>Capital Funding</b>												
Conversion of investments to cash	-	-	-	3,617	3,617	3,617	12,363	12,363	12,363	15,980	15,980	15,980
New debt	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital Funding	-	-	-	3,617	3,617	3,617	12,363	12,363	12,363	15,980	15,980	15,980
<b>Capital Spending</b>												
Expense projects	-	(100)	(100)	-	(200)	(200)	(3,600)	(3,666)	(3,419)	(3,600)	(3,966)	(3,719)
Capex	(5,984)	(2,790)	(2,731)	(5,396)	(2,879)	(2,570)	(13,097)	(6,524)	(7,836)	(24,477)	(12,193)	(13,137)
Total Capital Spending	(5,984)	(2,890)	(2,831)	(5,396)	(3,079)	(2,770)	(16,697)	(10,190)	(11,255)	(28,077)	(16,159)	(16,856)
<b>NET FUND CASH FLOWS</b>	<b>(4,619)</b>	<b>(1,794)</b>	<b>(1,096)</b>	<b>951</b>	<b>2,878</b>	<b>2,689</b>	<b>(940)</b>	<b>4,418</b>	<b>3,656</b>	<b>(4,608)</b>	<b>5,502</b>	<b>5,249</b>

## C. Debt Service Coverage and Balances (\$000's)

<b>DEBT SERVICE CALCULATION (Basic)</b>												
Available for Debt Service	3,697	3,645	3,818	2,881	2,147	1,690	16,664	15,521	15,561	23,242	21,313	21,069
Debt Service	2,798	3,129	2,693	1,244	900	1,174	13,047	13,047	13,047	17,089	17,076	16,914
Calculated DSCR (Basic)	1.32	1.16	1.42	2.32	2.39	1.44	1.28	1.19	1.19	1.36	1.25	1.25
<b>DEBT SERVICE CALCULATION (Indenture)</b>												
Available For Debt Service	3,697	3,645	3,818	2,881	2,147	1,690	16,664	15,521	15,561	23,242	21,313	21,069
Non-Operating Revenues	361	560	522	1,093	1,093	1,313	257	565	478	1,711	2,218	2,313
Balance in Lease Reserve	-	-	-	-	-	-	500	500	500	500	500	500
Adjusted Available for debt Service	4,058	4,205	4,340	3,974	3,240	3,003	17,421	16,586	16,539	25,453	24,031	23,882
Debt Service	2,798	3,129	2,693	1,244	900	1,174	13,047	13,047	13,047	17,089	17,076	16,914
Interest Adjustments	-	-	-	-	-	-	(675)	(675)	(675)	(675)	(675)	(675)
Adjusted Debt Service	2,798	3,129	2,693	1,244	900	1,174	12,372	12,372	12,372	16,414	16,401	16,239
Calculated DSCR (Indenture)	1.45	1.34	1.61	3.19	3.60	2.56	1.41	1.34	1.34	1.55	1.47	1.47
<b>OPERATING CASH BALANCE</b>												
Beginning Balance	4,744	4,744	4,744	10,816	10,816	10,816	2,157	2,157	2,157	17,717	17,717	17,717
Net Cash Flows	899	516	1,125	1,637	1,247	516	3,117	1,974	2,014	5,653	3,737	3,655
Reserves provided to Capital	(2,540)	580	(1,125)	-	1,093	(516)	-	271	(2,014)	(2,540)	1,944	(3,655)
Ending Balance	3,103	5,840	4,744	12,453	13,156	10,816	5,274	4,402	2,157	20,830	23,398	17,717
<b>PROJECT RESERVE BALANCE</b>												
Beginning Balance	2,978	2,978	2,978	1,619	1,619	1,619	4,941	4,941	4,941	9,538	9,538	9,538
Net Cash Flows	(5,518)	(2,310)	(2,221)	(686)	1,631	2,173	(4,057)	2,444	1,642	(10,261)	1,765	1,594
Reserves provided by Operations	2,540	(580)	1,125	-	(1,093)	516	-	(271)	2,014	2,540	(1,944)	3,655
Ending Balance	-	88	1,882	933	2,157	4,308	884	7,114	8,597	1,817	9,359	14,787

Presented: November 28, 2016

Critical Activities	System	Description	Oct-16	2016-to-Date	2015 Totals	Permit
			Daily Avg (MGD)	Daily Avg (MGD)	Daily Avg (MGD)	Daily Max (MGD)
Water Production	Allentown	Total	20.31	20.64	19.99	39.0
		Schantz Spring	5.51	6.01	6.16	9.0
		Crystal Spring	3.91	3.86	3.88	4.0
		Little Lehigh Creek	10.64	10.56	9.85	30.0
		Lehigh River	0.25	0.19	0.10	28.0
	Central Lehigh	Total	8.84	9.40	9.08	19.04 MGD Avg
		Feed from Allentown	6.01	6.02	4.95	6.0 MGD Avg 10.5 MGD Max
		Well Production (CLD)	2.83	3.39	4.13	8.54 MGD Avg
		Sum of all (12) other Suburban Water Systems	0.17	0.18	0.17	1.71 Sum of all wells
Wastewater Treatment		Kline's Island	28.13	29.97	30.44	40.0
		Pretreatment Plant	4.06	4.40	4.34	5.75 (design capacity)
		Sum of all (5) other Suburban WW Systems	0.15	0.17	0.21	0.36
			Oct-16	2016-to-Date	2015 Totals	
Precipitation Totals (inches)			1.23	31.06	40.24	
Compliance Reports Submitted to Allentown			27	233	246	
Notices of Violation (NOVs)		(Allentown + Suburban)	0	3	3	
Sanitary Sewer Overflows (SSOs)/Bypasses		(Allentown + Suburban)	0	14	13	
Main Breaks Repaired		Allentown	1	15	29	
		Suburban	2	8	12	
Customer Service Phone Inquiries		(Allentown + Suburban)	2,170	24,038	35,983	
Water Shutoffs for Non-Payment		(Allentown + Suburban)	147	1,393	1,844	
Injury Accidents		(Allentown + Suburban)	0	7	9	
Emergency Declarations		Allentown	0	(1) @ \$27,679		
		Suburban	0	(1) @ \$33,495		
Significant Repairs: The secondary digester cover at KIWWTW has been removed and a new cover is being erected. Completion is expected by late November/early December 2016. Remediation continues at the Arcadia WWTP in an effort to address poor plant performance during cold weather. New equipment includes aeration basin covers and immersion heaters.						
Description of NOVs and/or SSOs: There were no SSOs or NOVs in the suburban or city systems during October 2016.						
Other Highlights: Lehigh County and (3) other surrounding counties have now been moved into a Drought Warning. Drought Watches remain in effect for (30) other PA counties. Current status of LCA ground water and surface water supplies are being checked routinely, as are local monitoring wells. Weekly and monthly reports are being posted on the LCA website.						