



## 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: June 20, 2016

### BOARD MEETING AGENDA – JUNE 27, 2016

1. Call to Order
  - *Public Participation Sign-In Request*
2. Review of Agenda / Executive Sessions
4. Approval of Minutes
  - *June 13, 2016 Board meeting minutes*
5. Public Comments
6. Action / Discussion Items:

#### **FINANCE AND ADMINISTRATION**

- *Wastewater Capital Recovery Fees (green)*
- *Organizational Goal # 2 – Asset Management – Discussion only (yellow)*

#### **WATER**

- *Suburban Division – Spring Creek Pump Station – Design Phase (blue)*

#### **WASTEWATER**

- *Allentown Division – Sanitary Sewer Manhole Lining: Cycle 3 (tan)*
- *Allentown Division – Manhole Collars with Water Tight Frame and Covers: Cycle 3 (purple)*

7. Monthly Project Updates / Information Items (1<sup>st</sup> Board meeting per month)
8. Monthly Financial Review (2<sup>nd</sup> Board meeting per month)
9. Monthly System Operations Overview (2<sup>nd</sup> Board meeting per month)
10. Staff Comments
11. Solicitor's Comments
12. Public Comments / Other Comments
13. Executive Sessions
14. Adjournment

#### **UPCOMING BOARD MEETINGS**

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

\*July 11, 2016

\* Special Meeting @ 6:30 pm to discuss EPA Administrative Order

July 25, 2016

August 8, 2016

#### **PUBLIC PARTICIPATION POLICY**

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

## **REGULAR MEETING MINUTES**

### **June 13, 2016**

---

The Regular Meeting of the Lehigh County Authority was called to order at 12:18 p.m. on Monday, June 13, 2016, Chairman Brian Nagle presiding. Other Members present at the commencement of the meeting were: Linda Rosenfeld, Kevin Baker, Richard Bohner, Norma Cusick, and Scott Bieber. Deana Zosky called in and was listening to the meeting on the conference phone. Authority Staff present were Liesel Gross, Ed Klein, Pat Mandes, Frank Leist, Brad Landon, Chuck Volk, John Parsons and Lisa Miller.

#### **REVIEW OF AGENDA**

Liesel Gross stated that there are two additional items under Staff Comments and two additional items are also planned for Executive Session. Brad Landon also has an item to add under Solicitor's Comments.

#### **APPROVAL OF MINUTES**

Ms. Zosky mentioned that she was having difficulty hearing everything that was transpiring in the meeting and therefore would not be voting on action items.

#### **May 9, 2016 Regular Meeting Minutes - amended**

On a motion by Richard Bohner, seconded by Norma Cusick, the Board approved the Minutes of the May 9, 2016 Regular meeting as amended (6-0).

#### **May 23, 2016 Regular Meeting Minutes**

Richard Bohner said there are two corrections to be made. Under *System Operations Overview*, the word *sine* needs to be corrected to read *since*, and on the same page under *Staff Comments*, the quotation marks need to be removed.

On a motion by Richard Bohner, seconded by Norma Cusick, the Board approved the Minutes of May 23, 2016 as corrected (5-0). Kevin Baker abstained.

#### **PUBLIC COMMENTS**

None.

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

##### **Suburban Division – Heidelberg Heights Sewer Lateral Rehabilitation Project**

Chuck Volk gave a background and overview of the project. The project is needed to reduce groundwater infiltration into the Heidelberg Heights wastewater system by rehabilitating four leaking sewer laterals via internal cured-in-place liner installation. Mr. Volk requested approval of the Capital Project Authorization – Construction Phase in the amount of \$50,000.00 which includes the award of the construction contract to National Water Main Cleaning Company in the amount of \$46,660.00. The project will be funded by the LCA Suburban Heidelberg Heights Division.

On a motion by Norma Cusick, seconded by Kevin Baker, the Board approved the Capital Project Authorization – Construction Phase in the amount of \$50,000.00 which includes the award of the construction contract to National Water Main Cleaning Company in the amount of \$46,660.00 (6-0).

##### **Wastewater Rate Schedule – Addition of Lowhill Township to Rate Schedule**

Liesel Gross explained that the Lowhill Township system acquisition has been finalized and the system was transferred to the Authority on June 8, 2016. The Lowhill Township system will be maintained as a separate fund in the Authority's financials and, as a result, the sewer rates need to be adopted separately. However, the Lowhill Township sewer rates will be the same as all other systems the Authority operates that are

connected to the Western Lehigh Interceptor. Ms. Gross asked for approval of the updated schedule of wastewater rates for the Lowhill Township System as presented.

On a motion by Linda Rosenfeld, seconded by Norma Cusick, the Board approved the updated schedule of Wastewater Rates for the Lowhill Township System as presented (6-0).

### **Administrative Order – Discussion of Future Board Presentations**

Liesel Gross explained that Authority staff and project consultants are preparing for public presentation of the status of planning efforts related to addressing sanitary sewer overflows throughout the system tributary to the Kline's Island Wastewater Treatment Plant in Allentown. Several municipalities in Western Lehigh County have expressed their desire to begin discussions with their communities and the Authority would also like to present similar information to its Board and the public.

Pat Mandes informed the Board that there will be a meeting at the Authority on June 14, 2016 with representatives from the Environmental Protection Agency (EPA), Department of Environmental Protection (DEP), the Authority, Authority signatories, and the City of Allentown. The purpose of the meeting is to update EPA and DEP with corrective action plans under development by the Authority, its municipal signatories and City of Allentown. The plans will be presented to EPA and DEP in general terms, to solicit feedback from the regulators prior to seeking public input or municipal approvals. After receiving feedback from EPA and DEP, the Authority and its signatories will finalize a presentation of current efforts for communication with the public, municipal and authority boards and counsels. Liesel Gross stated that the Authority is only one of many signatories participating in this collaborative effort, and the signatories are working together to present one combined final plan.

Ms. Gross said that discussion is required by the Board as to how they would like to receive the presentation and how to incorporate public input at a meeting. Staff is proposing that the Board conduct this meeting at night as its first "Special Purpose Meeting" of 2016 to allow for broader public participation.

Board discussion occurred on how they would like to conduct the meeting.

The Board agreed to have a meeting in the evening on July 11 as an "event", and not an extension of its public Board meeting earlier that day, seeking input from the public. Ms. Gross said Staff will work out the details for the meeting.

### **PROJECT UPDATES/INFORMATION ITEMS**

Liesel Gross brought to the attention of the Board items for upcoming meetings.

Norma Cusick asked about the status of the plan for Walmart on Rt. 309 and Richard Bohner asked about the Strawberry Ridge system, both in North Whitehall Township. Frank Leist said that both of these plans have been removed from the Authority's agenda for the foreseeable future.

Chairman Nagle asked about an update regarding an article on new investment strategies for municipalities. Ed Klein will look into it and make recommendations to the Board.

### **FINANCIAL REVIEW**

None.

### **SYSTEM OPERATIONS OVERVIEW**

None.

### **STAFF COMMENTS**

Liesel Gross asked the Board how they would like to address spam/marketing emails that go into the Board's group inbox. The Board requested that the staff use its discretion to delete them or forward any that are of importance to the Board.

Richard Bohner inquired about using the group email address. Ms. Gross said that she will send out instructions on this.

Liesel Gross updated the Board on a recent visit to Lower Macungie Township to review their meeting room sound and visual system. The Authority's meeting room is not equipped with a robust sound system, which would be required for recording and webcasting its meetings in the future. The IT Manager is soliciting a proposal for this work and Ms. Gross will provide the information to the Board once received.

### **SOLICITOR'S COMMENTS**

Brad Landon presented Resolution 6-2016-1 to the Board. The resolution authorizes applications for disaster financial assistance and authorizes Authority personnel to execute and process such documents.

On motion made by Linda Rosenfeld, seconded by Norma Cusick, the Board approved Resolution 6-2016-1 (6-0).

### **PUBLIC COMMENTS / OTHER COMMENTS**

Scott Bieber asked for an update on the injection wells proposed in Upper Macungie Township and discussed at the last Board meeting. Frank Leist said the Authority has not received a submittal or an update since the last meeting.

### **EXECUTIVE SESSION**

The Chairman called an Executive Session at 1:06 p.m. to discuss potential litigation.

The Executive Session ended at 1:20 p.m.

### **ADJOURNMENT**

There being no further business, the Chairman adjourned the meeting at 1:20 p.m.

---

Richard H. Bohner  
Secretary

# **RESOLUTION No. 6-2016-2**

(Duly adopted 27 June 2016)

---

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

---

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

WHEREAS, the Authority owns and/or operates wastewater systems throughout the Lehigh Valley of Pennsylvania; and

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

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

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

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

1. The capital recovery fees for wastewater service in various of the Authority's Suburban Division wastewater systems as indicated and shown on Summary of Selected Wastewater Fund Capital Recovery Fees, with supporting calculations reflected on Exhibits A through I, attached hereto and made a part hereof, are adopted effective 1 July 2016.

2. The Authority's Wastewater Schedules of Rates and Charges shall be amended to reflect the fees hereby adopted, which fees shall be effective as of 1 July 2016.

On motion of \_\_\_\_\_, seconded by \_\_\_\_\_, this Resolution was adopted the 27<sup>th</sup> day of June 2016.

**LEHIGH COUNTY AUTHORITY**  
**SUMMARY OF WASTEWATER FUND CAPITAL RECOVERY FEES**  
**EFFECTIVE 7/1/16**

Exhibit	Charge	Per Gallon			Per EDU			(1) Gallons per EDU	(2) Change %	Costing Method
		Existing Charge	Maximum Charge	New Charge	Existing Charge	Maximum Charge	New Charge			
	<b>Interceptor System:</b>									
A	Wastewater Capacity	\$ 5.67	\$ 5.84	\$ 5.84	\$ 1,264.00	\$ 1,302.00	\$ 1,302.00	223	2.94%	Historical Trended Cost
B	Western Lehigh Interceptor	2.80	3.56	3.56	\$ 623.00	795.00	\$ 795.00	223	27.14%	Historical Trended Cost
C	Little Lehigh Relief Interceptor	0.97	0.99	0.99	215.00	222.00	\$ 222.00	223	2.06%	Historical Trended Cost
	<b>Total Western Lehigh Service Area</b>	<b>9.44</b>	<b>10.39</b>	<b>10.39</b>	<b>2,102.00</b>	<b>2,319.00</b>	<b>\$ 2,319.00</b>			
D	<b>Upper Milford System - Details provided in Exhibit D</b>									Historical Trended Cost
	<b>Heidelberg Heights Wastewater System</b>									
E	Capacity	15.37	19.73	19.73	3,704.17	4,754.29	\$ 4,754.29	241	28.37%	Historical Trended Cost
E	Collection	2.39	2.60	2.60	575.99	626.55	\$ 626.55	241	8.79%	Historical Trended Cost
	<b>Wynnewood Terrace Wastewater System</b>									
F	Capacity	6.01	6.37	6.37	1,448.41	1,534.48	\$ 1,534.48	241	5.99%	Historical Trended Cost
F	Collection	9.86	10.46	10.46	2,376.26	2,520.23	\$ 2,520.23	241	6.09%	Historical Trended Cost
	<b>Sand Springs Wastewater System</b>									
G	Capacity	3.60	3.82	3.82	867.60	920.38	\$ 920.38	241	6.11%	Historical Trended Cost
G	Collection	2.42	2.56	2.56	583.22	617.88	\$ 617.88	241	5.79%	Historical Trended Cost
	<b>Arcadia West, Western Weisenberg:</b>									
H	Reimbursement Fee - Collection Part	47.64	50.02	50.02	12,505.50	\$ 13,130.32	\$ 13,130.32	262.5	5.00%	Historical Trended Cost
H	Reimbursement Fee - Capacity Part	31.49	33.06	33.06	8,266.13	\$ 8,678.82	\$ 8,678.82	262.5	4.99%	Historical Trended Cost
H	LCA Land Fee	3.80	3.96	3.96	997.50	\$ 1,040.25	\$ 1,040.25	262.5	4.29%	Historical Trended Cost
H	LCA Planning	2.44	2.52	2.52	640.50	\$ 661.50	\$ 661.50	262.5	3.28%	Historical plus Financing Costs
I	W Weisenberg Treatment Plant	37.40	38.51	38.51	9,817.50	\$ 10,108.10	\$ 10,108.10	262.5	2.96%	Historical Trended Cost

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

(2) Based on Charge Per Gallon

# **EXHIBIT A** **2016 CAPITAL RECOVERY FEES** **WASTEWATER TREATMENT CAPACITY**

	(A)		
	General Pool	Salisbury Portion	Blended Total
Capacity Cost (06/2009 Purchase)	\$ 1,152,500	\$ 600,000	\$ 1,752,500
ENR Index Increase (see figures below)	1.2051	1.0899	
<b>Trended Capacity Cost</b>	<b>\$ 1,388,831</b>	<b>\$ 653,965</b>	<b>\$ 2,042,796</b>
Capacity in Gallons	250,000	100,000	350,000

**Calculated Charge per Gallon** **\$ 5.84**

Current charge per Gallon \$ 5.67

**Calculation of Gallons per Household:**  
 2010 Census figure per Household - Lehigh County 2.54  
 # of Gallons per day per Capita 90  
 Calculated Gallons per EDU 223

**Charge per EDU** **\$ 1,302.00**

Current Charge per EDU 1,264.00  
 Change 3.01%

(A) Allocation purchased on 4/18/13 at \$6.00 per gallon.

	General	Salisbury
ENR Index June 2009 (Last Purchase Date)	8,578	9,484
ENR Index Salisbury (5/18/13)		10,337
ENR Index June 2016	10,337	10,337
ENR Index Factor	1.2051	1.0899

# **EXHIBIT B** **2016 CAPITAL RECOVERY FEES** **WESTERN LEHIGH INTERCEPTOR** **CAPACITY PART** **TRENDING COST METHOD**

	(A) Original Interceptor	(B) Phase II, Sfg 1	(C) Phase II, Stage 2	(D) Phase II, Stage 4	(E) Flow Equaliz. Basin	Total System
Project Costs	\$ 5,215,326	\$ 884,097	\$ 6,044,664	\$ 3,327,473	\$ 5,495,586	\$ 20,967,146
Contributions/Grants	(2,536,420)	-	-	-	-	(2,536,420)
NET COSTS	2,678,906	884,097	6,044,664	3,327,473	5,495,586	18,430,726
Trend Factor (G)	6.1493	2.1531	1.7664	1.3711	1.1547	
Trended Value	16,473,439	1,903,543	10,677,323	4,562,421	6,345,830	39,962,556
Outstanding Debt (F)	-	-	(48,776)	-	(4,061,255)	(4,110,031)
Cost Basis	16,473,439	1,903,543	10,628,547	4,562,421	2,284,575	35,852,525
System Capacity (Avg Daily Flow)	7,023,000			3,040,000		10,063,000

Calculated Change per gallon **\$ 3.56**

**Calculation of Gallons per Household:**  
 Census figure per Household - Lehigh County  
 # of Gallons per day per Capita  
 Gallons per EDU

2.54  
 90  
 223

Calculated Change per EDU **\$ 795.00**  
 Current Change **\$ 623.00**  
 Change **27.61%**

- (A) Substantial completion 1/1/72.
  - (B) Substantial completion 5/1/991.
  - (C) Spring Creek PS and Force Main - Substantial completion 1/1/98. No capacity added by this project due to downstream limitations.
  - (D) Substantial completion 9/1/05. System Capacity is 7 mgd / 2.3 peaking factor.
  - (E) Includes actual costs through 12/31/12. Substantial Completion was 12/1/10.
  - (F) As of 5/30/16
  - (G) ENR Index
- |                        |               |               |               |               |               |
|------------------------|---------------|---------------|---------------|---------------|---------------|
|                        | <b>1972</b>   | <b>1991</b>   | <b>1998</b>   | <b>2005</b>   | <b>2010</b>   |
| Substantial Completion | 1,681         | 4,801         | 5,852         | 7,539         | 8,962         |
| June 1, 2016           | <b>10,337</b> | <b>10,337</b> | <b>10,337</b> | <b>10,337</b> | <b>10,337</b> |
| Trend Factor           | <b>6.1493</b> | <b>2.1531</b> | <b>1.7664</b> | <b>1.3711</b> | <b>1.1547</b> |
- (H) Substantial completion 10/24/08.



**EXHIBIT C**  
**2016 CAPITAL RECOVERY FEES**  
**LITTLE LEHIGH RELIEF INTERCEPTOR- PHASE 1 ONLY**  
**TRENDING COST METHOD**

Project Cost		Phase 2, Stage 1
		<u>\$ 4,750,332</u>
Contributions		(583,221)
Less: Outstanding Debt		<u>-</u>
Total Cost Basis		\$ 4,167,111
Trending Factor (2)		<u>2.38675</u>
Trending Cost Basis		<u>\$ 9,945,838</u>
System Capacity (Avg. Daily Flow)	(1)	10,000,000
<b>Maximum Charge per gallon (proposed)</b>		<b>\$0.99</b>

**Calculation of Gallons per Household:**

Census figure per Household - Lehigh County	2.54
# of Gallons per day per Capita	90
Gallons per EDU	223

<b>Calculated Charge per EDU</b>	<b>\$ 222.00</b>
Current Charge	\$ 215.00
Change	3.26%

(1) PPS Peak flow of 24 MGD / 2.4 peaking factor.  
(2) ENR Index 12/31/86 (Substantial Completion)  
ENR Index June 2016 4,331  
ENR Multiplier 10,337  
2.38675

# SUMMARY OF 2016 UPPER MILFORD SYSTEM CAPITAL RECOVERY FEES EFFECTIVE JULY 1, 2016

Rev: 06/17/2016

Fee	CHARGE PER GALLON		EDU CHARGE (A)		MFR CHARGE (B)		CHARGE PER 1000 GALLONS		Chnge %	Costing Method
	Existing Charge	New Charge	Existing Charge	New Charge	Existing Charge	New Charge	Existing Charge	New Charge		
RT 29, Ramer Heights, Vera Cruz Areas Only										
Collection Part	\$ 9.16	\$ 9.92	\$2,153.00	\$2,331.00	\$1,292.00	\$1,399.00	\$ 9,160.00	\$ 9,920.00	8.30%	Historical Cost Trended
Capacity Part (F)	\$ 1.71	\$ 1.85	\$ 401.00	\$ 435.00	\$ 241.00	\$ 261.00	\$ 1,710.00	\$ 1,850.00	8.19%	Historical Cost Trended
Planning Cost; All Areas Capacity Part	\$ 0.56	\$ 0.56	\$ 132.00	\$ 132.00	\$ 79.00	\$ 79.00	\$ 560.00	\$ 560.00	0.00%	Historical Cost plus Financing
WLI Area Fees (D)	\$ 9.44	\$ 10.39	\$2,102.00	\$2,319.00	\$1,262.00	\$1,392.00	\$ 9,440.00	\$ 10,386.56	10.03%	
Total Cost for Rt 29, Ramer Heights and Vera Cruz	\$ 20.87	\$ 22.72	\$4,788.00	\$5,217.00	\$2,874.00	\$3,131.00	\$ 20,870.00	\$ 22,716.56	8.85%	
Total Cost For Other UNIT Areas	\$ 10.00	\$ 10.95	\$2,234.00	\$2,451.00	\$1,341.00	\$1,471.00	\$ 10,000.00	\$ 10,946.56	9.47%	
Lower Macungie (E):										
Total Cost per EDU	\$ 2.37	\$ 2.44	\$ 565.00	\$ 585.00	\$ 339.00	\$ 353.00	\$ 2,370.00	\$ 2,440.00	2.95%	Historical Cost Trended

Note: All detail related to calculation of the Upper Milford is shown on Exhibit D

- (A) Upper Milford EDU = 250 gallons in 2011 and 235 gallons in 2012 and thereafter
- (B) 2016 MFR for Upper Milford fees equates to 141 gallons per day or 60% of EDU.
- (C) Includes Upper Milford & WLI fees.
- (D) Wastewater Capacity and Interceptor fees for a 2016 EDU equates to 223 gallons which reflects EDU capacity across entire WLI service areas
- (E) Represents the capacity charge to a Lower Macungie resident connecting to the Upper Milford Interceptor System.
- (F) Only applies to connections where flow is transported by Upper Milford interceptors.
- (G) Based on Charge per Gallon

**EXHIBIT D**  
**2016 CAPITAL RECOVERY FEES**  
**UPPER MILFORD TOWNSHIP**  
**RT 29 AREA - COLLECTION & CAPACITY PARTS**  
**TRENDING METHOD**

	Project Cost	ENR Multiplier	Trended Cost
Rt. 29 Project Cost			
S. 7th St Ph 1 (D)	\$ 1,646,084	2.2384	\$3,684,619
S. 7th St Ph 2 (D)	32,122	2.0736	\$66,609
Vera Cruz	26,612	1.2114	\$32,238
Ranmer Heights Project	1,963,256	1.1548	\$2,267,253
Net Project Cost	148,811	1.0983	\$163,436
	<u>\$3,816,885</u>		<u>\$6,214,154</u>

Outstanding Debt 5/31/16

\$1,664,306

Cost Basis for Capital Recovery Fee

\$4,549,848

% of Collector Cost  
 % of Capacity Cost (C)

84.3%  
 15.7%

\$3,835,522  
\$714,326

Limiting System Capacity per agreement (gpd)

386,689

Maximum Charge per Gallon - Collector Part (proposed)

\$9.92

Maximum Charge per Gallon - Capacity Part (proposed)

\$1.85

Calculation of Gallons per Household:

Census figure per Household - UMIT  
 # of Gallons per day per Capita  
 Gallons per EDU

2.61

90

235

Gallons per MFR - 60% of EDU (E)

141

Maximum Charge per EDU - Collector Part  
Maximum Charge per EDU - Capacity Part

\$2,331.00  
\$435.00

Maximum Charge per MFR Unit - Collector Part  
Maximum Charge per MFR Unit - Capacity Part

\$1,399.00  
\$261.00

**NOTES:**

A) Excludes treatment capacity purchases & capitalized interest.

(B) ENR Index	Subs. Comp	ENR	6/1/16	ENR Chg
Rt 29 System	8/22/89	4,618	10,337	2.2384
Ranmer Heights	12/15/92	4,985	10,337	2.0736
S. 7th St - Ph 1	1/26/09	8,533	10,337	1.2114
S. 7th St - Ph 2	10/15/10	8,951	10,337	1.1548
Vera Cruz	12/01/12	9,412	10,337	1.0983

C) Includes 100% of sewers transporting sewage from a collector system to an interceptor.

D) Net of federal and state grants.

(E) Per 2011 Water usage, MFR equates to 60% of EDU usage.

**EXHIBIT D**  
**2016 CAPITAL RECOVERY FEE**  
**UNIT CAPACITY OTHER**  
**CARRYING COST METHOD**

Unreimbursed Planning Costs (B)	\$ 186,279
Less: Contributions	-
Less: Outstanding Debt	-
Plus: Financing & Interest Expenses (A)	30,306
Total Cost Basis	<u>\$ 216,585</u>

Limiting System Capacity per agreement 386,669

**Calculated Charge Per Gallon \$ 0.56**

**Calculation of Gallons per Household:**

Census figure per SF Household	2.61
# of Gallons per day per Capita	90
Gallons per EDU	235
Gallons per MFR (C)	141

<b>Maximum Planning Charge per EDU (proposed)</b>	<b>\$ 132.00</b>
<b>Maximum Planning Charge per MFR (proposed)</b>	<b>\$ 79.00</b>

- (A) Includes interest expense (\$29,122) on \$77,487 borrowed as part of December 1991 loan and the portion of prorated financing costs \$1,184.  
 (B) Planning costs thru 12/31/11. Excludes costs for LMT agreement (1993 = \$3,696 & 1994 = \$2,820).  
 (C) Per 2011 Water usage, MFR equates to 60% of EDU usage.

# **EXHIBIT D** **2016 CAPITAL RECOVERY FEES** **LOWER MACUNGIE CONNECTIONS TO UNIT INTERCEPTOR** **TRENDING METHOD**

<b>Project Costs: (A)</b>		
Rt. 29 Project Cost		\$ 1,646,084
<b>ENR Index Increase (B)</b>		2.2384
<b>Cost Basis</b>		<u>\$ 3,684,619</u>
Less O/S Debt (C)		-
<b>Project Cost Basis</b>		<u>\$ 3,684,619</u>
% of Project applicable to LMT Interceptor	24.79%	
<b>LMT Interceptor Cost Basis</b>		<u>\$ 913,417</u>
<b>Avg Day Capacity in GPD (D)</b>		373,632
<b>Charge per Gallon</b>		<u>\$ 2.44</u>
<b>Calculation of Gallons per Household:</b>		
Census figure per Household - LMT		2.65
# of Gallons per day per Capita		90
Gallons per EDU		239
Gallons per MFR		144
<b>Maximum charge per EDU</b>		<u>\$ 585.00</u>
<b>Maximum charge per MFR (E)</b>		<u>\$ 353.00</u>

**NOTES:**

- (A) Includes Capitalized interest but excludes treatment capacity purchases.
- (B) ENR Index
- |            |       |             |         |
|------------|-------|-------------|---------|
| Subs. Comp | ENR   | ENR 6/01/16 | ENR Chg |
| 8/22/89    | 4,618 | 10,337      | 2,2384  |
- (C) Since the projects were built to serve exclusively new customers, outstanding debt does not need to be subtracted.
- (D) Equates to 1.5 mgd / 4 peaking factor.
- (E) Based on 2011 water usage in LMT, an MFR (Apts/Mobile Homes) uses 60% the amount of water of an EDU (SFA/SFD)

# **EXHIBIT E** **2016 CAPITAL RECOVERY FEES** **HEIDELBERG HEIGHTS SYSTEM** **TRENDING METHOD**

	Collection	Capacity
Project Costs	\$ 123,157	\$ 785,141

Total System Costs	\$ 123,157	\$ 785,141
--------------------	------------	------------

ENR Index Increase (A)	1.6584	1.6584
------------------------	--------	--------

Total Project Cost Basis	\$ 204,247	\$ 1,302,102
--------------------------	------------	--------------

O/S Debt 5/31/16	(48,261)	(118,462)
------------------	----------	-----------

Cost Basis for Capital Recovery Fee	\$ 155,986	\$ 1,183,640
-------------------------------------	------------	--------------

## **Capacity:**

Total WW Plant Permitted Capacity (Gpd)	60,000	60,000
---	--------	--------

Maximum charge per gallon	\$ 2.60	\$ 19.73
---------------------------	---------	----------

## **Calculation of Gallons per Household:**

Census figure per Household - Heidelberg Twp	2.68	2.68
# of Gallons per day per Capita	90	90
Gallons per EDU	241	241

Maximum charge per EDU	\$ 626.55	\$ 4,754.29
------------------------	-----------	-------------

(A) Plant operations initiated on 6/1/00 - Final Acceptance

ENR Index 6/1/00 6,233

ENR Index 6/01/16 10,337

1.658430932

**EXHIBIT F**  
**2016 CAPITAL RECOVERY FEES**  
**WYNNWOOD TERRACE WASTEWATER SYSTEM**  
**TRENDING METHOD**

	Collection	Capacity
<b>Total Costs:</b>		
Acquisition Costs	\$ 406,318	\$ 247,393
Improvements	-	-

Total Costs	406,318	247,393
ENR Index Increase (A)	1.5442	1.5442
Total Trended Costs	627,444	382,029

**Outstanding Debt**

Total Net Costs	\$ 627,444	\$ 382,029
-----------------	------------	------------

**Capacity:**

Total WW Plant Permitted Capacity (GPD)	60,000	60,000
---	--------	--------

<b>Maximum charge per gallon</b>	<b>\$ 10.46</b>	<b>\$ 6.37</b>
----------------------------------	-----------------	----------------

**Calculation of Gallons per Household:**

Census figure per Household - NWT	2.68	2.68
# of Gallons per day per Capita	90	90
Gallons per Household	241	241

<b>Maximum charge per EDU</b>	<b>\$ 2,520.23</b>	<b>\$ 1,534.48</b>
-------------------------------	--------------------	--------------------

(A)	
ENR Index 7/1/03	6.694
ENR Index 6/01/16	10.337
	1.54422

**EXHIBIT G**  
**2016 CAPITAL RECOVERY FEES**  
**SAND SPRING WASTEWATER SYSTEM**  
**TRENDING METHOD**

	Collection	Capacity
<b>Acquisition Costs</b>		
ENR Index Increase (A)	\$ 58,452	\$ 88,048
Total Trended Acquisition Costs	<u>1,4166</u>	<u>1,4166</u>
	\$ 82,804	\$ 124,730
<b>System Improvements - 2005</b>		
ENR Index Increase (B)	\$ -	\$ 6,356
Total Trended Sys Improvement Costs	<u>1,4054</u>	<u>1,4054</u>
	-	\$ 8,936
<b>System Improvements - 2010</b>		
ENR Index Increase (C)	\$ 5,980	\$ -
Total Trended Sys Improvement Costs	<u>1,1589</u>	<u>1,1589</u>
	\$ 6,930	-
<b>Total Cost Basis</b>	\$ 89,734	\$ 133,665
<b>Outstanding Debt</b>	-	-
<b>Total Net Costs</b>	<u>\$ 89,734</u>	<u>\$ 133,665</u>
<b>Capacity:</b>		
Total WW Plant Permitted Capacity (Gpd)	35,000	35,000
<b>Maximum charge per gallon</b>	<u>\$ 2.56</u>	<u>\$ 3.82</u>
<b>Calculation of Gallons per Household:</b>		
Census figure per Household - NWT	2,68	2,68
# of Gallons per day per Capita	90	90
Gallons per Household	241	241
<b>Maximum charge per EDU</b>	\$ 617.88	\$ 920.38
<b>Maximum charge per MFR (D)</b>	<u>\$ 401.62</u>	<u>\$ 598.25</u>
<b>(A) Acquisition</b>		
ENR Index 1/1/05	7,297	
ENR Index 6/01/16	<u>10,337</u>	
<b>(B) System Improvement - 2005</b>		
ENR Index 4/1/05	7,355	
ENR Index 6/01/16	<u>10,337</u>	
<b>(C) System Improvements 2010</b>		
ENR Index 10/01/10	8,920	
ENR Index 6/01/16	<u>10,337</u>	
<b>(D) Based on 2011 water usage in NWT, an MFR uses 65% the amount of water of an EDU.</b>		



# **EXHIBIT H** **2016 CAPITAL RECOVERY FEES** **ARCADIA WEST WASTEWATER SYSTEM**

	(A)		(A)		(C)	
	Reimbursement Fees		Capacity		Land	Collection
Total	Collector					
Arcadia Cost for Collector System	\$	318,322	\$	318,322		
Land - Arcadia System		210,403		210,403		
LCA Costs for Arcadia System		19,548			82,800	19,548
Original Plant		196,463				
Inflation / Trend Factor (B)			1.885648	1.885648	1.340096	1.544219
Total Cost	\$	1,138,136	\$	600,243	\$	110,960
Prorated Share of Design Capacity		12,000		12,000		28,000
Maximum Fee per Gallon	\$	50.02	\$	33.06	\$	3.96
						2.52

- (A) Only applicable to the remaining 5.57 EDU's available in the Arcadia West Commercial area.  
 After 6/12/13, only 50% of reimbursement fee is returned to Arcadia through 6/12/18. Excludes portion of lateral costs.
- (B) The reimbursement rates are inflated by 5% annually beginning in July 2004 per agreement with Arcadia and LCA. LCA Land fee is included by 5% beginning in 2010. LCA Collection system is inflated by the ENR index
- (C) The Land fee was established in 2010 and will replace the Reimbursement Fees after the remaining 5.57 EDUs have been sold to the Arcadia West Commercial area.

ENR Index 6/1/03 6.694  
 ENR Index 6/1/16 10.337  
 Change in ENR Index 54.4219%

Note: By agreement with Arcadia West, an EDU is equal to 262.5 gallons.

# **EXHIBIT I** **2016 CAPITAL RECOVERY FEES** **WESTERN WEISENBERG TREATMENT PLANT**

	<u>Total</u>	<u>Capacity Portion</u>
W. Weisenberg Treatment Plant Estimated Cost (A)	\$ 3,247,214	\$ 3,247,214

Portion attributable to New Customers

0.437

Total \$ attributable to new customers	<u>\$ 1,417,652</u>
ENR multiplier	1.06964
Recoverable Cost	\$1,516,378

Design Capacity (Prorated) GPD

17,463

Maximum Fee per Gallon	\$ 86.83
2014 Original Fee	\$ 36.00
2015 Existing Fee	\$ 37.40
2016 Recommended fee per gallon (A)	\$ 38.51

Plant Allocation:

Arcadia West  
 Arcadia - Remaining Commercial  
 West Hills Business Ctr  
 Weisenberg Elementary School  
 Bandit Truck Stop  
 Unallocated

	Total Allocation (gpd)	LCA Share	Expected Fees	12/31/12 Paymts To Date	Total Payments Expected	Gallons Purch
	10,537	-	\$ -	-	\$ -	-
Arcadia West	1,463	1,463	181,566	-	181,566	-
Arcadia - Remaining Commercial	12,000	-	-	-	-	-
West Hills Business Ctr	8,000	8,000	250,296	37,500	212,796	1,500
Weisenberg Elementary School	3,000	3,000	115,521	-	115,521	-
Bandit Truck Stop	5,000	5,000	192,535	61,850	130,685	2,474
Unallocated	40,000	17,463	\$ 739,918	\$ 99,350	\$ 640,568	3,974
		<u>43.7%</u>				

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

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

Note: These fees exclude existing Arcadia West customers and the West Hills Business Center, which is constructing the plant and contributing towards the plant.

ENR Multiplier	June 1, 2016	10337
	Substantial Completion Date 1/10/2014	9664
	Multiplier	1.069639901



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

---

**TO:** LCA Board of Directors  
**FROM:** Liesel Gross  
**DATE:** June 20, 2016  
**RE:** 2<sup>nd</sup> Quarter Goal Update – Asset Management

At our upcoming Board meeting on June 27, 2016, we will present a status report on one of Lehigh County Authority's four organizational goals for 2016. The presentation will focus on **Goal # 2 – Asset Management**. Please reference the attached goal statement form, which was discussed earlier this year.

Some of the specific topics we will cover will include:

- Status of Suburban Division facility condition assessment
- Implementation of CityWorks maintenance management system
- Status of 5-year capital planning process
- Future of LCA's asset management program

We plan to review the status of each of the remaining organizational goals through Board presentations and discussions planned for July.

## 2016 Organizational Goal # 2 – Asset Management

---

### LCA Strategic Plan Components:

1. **Goal Category – Capital Asset Management:** Manage our assets to maintain an acceptable level of service and plan for the future, by prioritizing projects and evaluating ways to enhance and perpetuate performance and quality at the lowest life cycle cost.
2. **Goal Category – Organizational Synergy:** Create a dynamic and unified organizational culture that drives performance and teamwork.

### 2016 Vision / Goal(s):

- Create an organizational vision to guide the future of our asset management program, including how we prioritize work and the desired level of service we seek to provide.
- Develop an inventory of our physical assets, including an assessment of their condition and probability and consequence of failure, in order to assign criticality and establish a risk ranking system. (*Suburban Division focus*)
- Use the risk ranking system to prioritize the critical maintenance, rehabilitation and/or replacement activities (across Capital Works and Operations) required to maintain our desired level of service at the lowest life-cycle cost.
- Collaborate with others to develop shared understanding of the level of funding available for asset management activities, in order to strategize capital renewal/replacement improvements.
- Leverage successful programs already in place in the Allentown Division to build similar successes in the Suburban Division and generate an LCA standard for asset management.
- Define our next steps.

### Critical Milestones:

1 <sup>st</sup> Quarter 2016	<ul style="list-style-type: none"><li>• Internal asset management team assembled to develop program goals and definitions.</li><li>• Review Allentown Division (AD) use of CityWorks and lease Operating Standards; develop similar goals/concepts for Suburban Division.</li></ul>
2 <sup>nd</sup> Quarter 2016	<ul style="list-style-type: none"><li>• Suburban Division (SD) facility mechanical inventory completed.</li><li>• Collaborate with finance to develop timelines for capital plan / budget preparation, to incorporate funding availability into asset management planning / prioritization.</li><li>• Initiate asset management programming for SD linear assets (water mains) to parallel similar work already in place in AD.</li></ul>
3 <sup>rd</sup> Quarter 2016	<ul style="list-style-type: none"><li>• SD facility condition assessment project completed. Incorporate results from mechanical inventory.</li><li>• Initial development of 10-year Capital Plan utilizing preliminary recommendations from condition assessment.</li></ul>
4 <sup>th</sup> Quarter 2016	<ul style="list-style-type: none"><li>• Populate SD data into CityWorks, including facility data, operating standards and weekly preventive maintenance tasks to parallel similar features already in place in AD.</li><li>• Develop asset management program goals for 2017, including review of SOPs and development of LCA standard for risk-based project prioritization.</li></ul>

---

## MEMORANDUM

---

**Date:** June 15, 2016

**To:** Authority Board  
**From:** Amy Kunkel, Frank Leist  
**Subject:** Suburban Division - Spring Creek  
Pump Station Improvements- Design Phase

**MOTIONS / APPROVALS REQUESTED:**

No.	Item	Amount
1	Capital Project Authorization – Design Phase	\$138,129
2	Professional Services Authorization – JMT, Inc. (1), (2)	\$59,129

*(1) Included in the Capital Project Authorization.*

*(2) Does not includes Construction phase related engineering services.*

**PROJECT OVERVIEW:**

The Spring Creek Pump Station (SCPS) is a submersible sewage pumping station with a rated capacity of 7 MGD. It was constructed in 1996 to relieve excess gravity flows in the section of LCA Western Lehigh Interceptor (WLI) from the SCPS to just past the Meter Station in the Lehigh Parkway.

The pump station wet well and mechanical components are located near the intersection of Spring Creek Road and Mill Creek Road, and within the floodplain of the Little Lehigh Creek in Lower Macungie Township, Lehigh County. Wastewater flow from the upstream interceptor channel is diverted into the wet well by two manually adjustable side by side 30" x 48" weir gates. These gates are adjusted in accordance with the flow conditions to increase or decrease the flow entering the wet well thereby influencing the amount of wastewater pumped by the station. Prior to a wet weather event, the gates are adjusted to allow more flow into the wet well, which increases the amount of wastewater pumped, resulting in added temporary capacity for I/I in the section of the WLI that is relieved by the SCPS. As flows approach the capacity of the SCPS the gates must be adjusted so the station is not damaged (see attached pictures of flooding conditions).

The above grade pump station service building is located approximately 1000' to the northwest of the pumping station, out of the 500 year floodplain, and houses instrumentation, controls, SCADA communication, and emergency power.

Upgrades to the pumping station include the following:

1. Evaluate the feasibility of installing a comminutor prior to the weir gates to reduce the amount of debris accumulation on the existing bar screens. The bar screens are located just prior to the weir gates. Debris accumulates on the bar screens, reduces the capacity of sewage that can be diverted to the wet well, and must be manually cleaned.
2. Replace the weir gates with new motorized weir gates automated by an ultrasonic level detector located upstream of the wet well. Automating the gates will allow remote operation to maximize the pump station capabilities prior to wet weather events. Under the current situation, we cannot access the station when the area floods.

3. Evaluate the existing PLC configuration and make recommendations to replace the two existing Modicon Programmable Logic Controllers (PLC) located in the service building with new Modicon M340 PLCs. Convert the existing Modbus+ program to UnityPro and modify to include station upgrades. The existing SCADA system is obsolete; parts needed for repairs and replacements are difficult to obtain.

**FUNDING:**

This Project will be funded by the LCA Suburban Division

**BUDGET AMENDMENT**

Not required for this approval

**PROJECT STATUS:**

Pending Board approval of the Design Phase.

**THIS APPROVAL-DESIGN PHASE**

Lehigh County Authority (LCA) intends to retain the services of an engineering consulting firm to provide, design related services. Approval for construction related engineering services will be requested with the Construction Phase. The following table summarizes the professional services to be performed:

<b>Professional Services <sup>(1)</sup></b>
1. Attend kickoff meeting.
2. Evaluate weir gates and actuators, feasibility of comminutor installation, and SCADA upgrades.
3. Comminutor design (if authorized by LCA).
4. Apply for state and local permits.
5. Prepare Construction Bid Documents (plans and specifications).
6. Provide Bidding Services (if authorized by LCA).

1. For Design Phase Only.

**CONSULTANT SELECTION PROCESS:**

Four engineering firms, JMT, Gannett Fleming, Arcadis, and Hazen-Sawyer were invited to submit proposals for the project in April 2016. The firms were selected based on prior LCA project performance and general expertise with sanitary sewage pump stations. A pre-proposal meeting was held April 28, 2016 at LCA's main office followed by a site visit where the consultants were able to tour the facility, access the conditions and ask questions related to the design work. Proposals were received on May 19, 2016 the results of which follow:

<b>Consultant</b>	<b>Cost <sup>(1)</sup></b>
JMT	\$59,129
Gannett Fleming	\$66,365
Hazen-Sawyer	\$89,900
ARCADIS.	\$141,000

(1) Total Proposal Cost

Based upon our review of all aspects of both the Technical and Cost Proposals submitted by the four firms, we recommend award of the Design Phase services to JMT, Inc. Their proposal is on scope and represents what we believe is the best overall value for the Authority. JMT, Inc. will perform the services outlined in their proposal dated May 19, 2016.

**JMT INC -COMPANY INFORMATION & REFERENCE CHECK:**

Established in 1971, Johnson, Mirmiran & Thompson, Inc. (JMT) is a multi-disciplinary engineering consulting firm headquartered in Sparks, MD, with a local office in nearby Allentown, PA plus three other regional offices located throughout Pennsylvania. With staff strategically placed along the Eastern United States and Midwest, JMT has more than 1,300 engineering, construction management and surveying professionals. In the past 44 years, their diverse staff has developed the reputation of providing innovative, cost sensitive solutions to clients. This has propelled JMT to No. 67 in ENR's Top 500 Design Firms for 2016. In addition, in 2015, JMT was recognized as the Mid-Atlantic Design Firm of the Year.

JMT is currently working as design engineer on three projects for LCA: the Pine Lakes Pump Station Upgrades, the Crestwood Heights Alternate Water Supply, and the CDL Pump Station.

**PROJECT SCHEDULE:** At this juncture the construction portion of this project is anticipated to be bid in January 2017 with completion of the work in June 2016.

**FUTURE AUTHORIZATIONS- CONSTRUCTION PHASE**

After the construction contract(s) bids are received, a Capital Project Authorization (CPA) Amendment will be presented to the Board for approval of the Construction Phase; and will include construction contract award(s), professional services amendment for construction related services, staff costs and other related components.

### Spring Creek Pump Station Facilities in Flood Plain



Entrance to Wet Well from Spring Creek Road -Normal Day



Spring Creek Road Proximity of Entrance - Flooded



# CAPITAL PROJECT AUTHORIZATION

<b>PROJECT NO.:</b>	<u>SD-S-16-5</u>	<b>BUDGET FUND:</b>	<u>Suburban Div\Wastewater\Capital</u>
<b>PROJECT TITLE:</b>	<u>Spring Creek Pump Station Upgrades</u>	<b>PROJECT TYPE:</b>	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input type="checkbox"/> Amendment
<b>THIS AUTHORIZATION:</b>	<u>\$138,129</u>		
<b>TO DATE (W/ ABOVE)</b>	<u>\$138,129</u>		

## DESCRIPTION AND BENEFITS:

This Project will include evaluating the feasibility of installing a comminutor prior to the weir gates to reduce debris buildup on the bar screens, install new automated weir gates to allow for remote operation, and upgrade of the SCADA system. JMT will be used for the engineering consulting services. The project is anticipated to be bid ready by January of 2017.

Reference the attached Memorandum for additional information.

Previous Authorizations	
Planning	\$13,015

REQUESTED THIS AUTHORIZATION	
Design Phase	
Staff	\$50,000
Engineering Consultant - JMT	\$59,129
Misc.	\$11,000
Contingency	\$18,000
<b>Total This Authorization</b>	<b>\$138,129</b>

Future Authorization	
Construction Phase	\$315,000

<i>Total Estimated Project</i>	<i>\$466,144</i>
--------------------------------	------------------

## REVIEW AND APPROVALS:

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



Lehigh County Authority

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

## PROFESSIONAL SERVICES AUTHORIZATION

**Professional:** JMT, Inc.  
7535 Windsor Drive  
Suite 204B  
Allentown, PA 18195

**Date:** June 16, 2016

**Requested By:** Amy Kunkel

**Approvals**

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

**Chief Executive**

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

### Suburban Division- Spring Creek Pump Station Upgrades

Previous Authorizations-

None.

**This Authorization – Design Phase: \$59,129**

JMT, Inc. will provide Design Services for the aforementioned project in accordance with the RFP and as outlined in their proposal dated May 19, 2016.

Professional Services <sup>(1)</sup>
1. Attend kickoff meeting.
2. Evaluate weir gates and actuators, feasibility of comminutor installation, and SCADA upgrades.
3. Comminutor design (if authorized by LCA).
4. Apply for state and local permits.
5. Prepare construction bid documents (plans and specifications).
6. Provide bidding services (if authorized by LCA).

(1) For Design Phase Only

**Cost Estimate** (not to be exceeded without further authorization): **\$ 59,129**

**Time Table and Completion Deadline:** As required to meet design timeline requirements

---

---

(For Authority Use Only)

**Authorization Completion:**

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

---

## MEMORANDUM

---

**Date:** June 27, 2016

**To:** LCA Board of Directors  
**From:** Phil DePoe  
**Subject:** Allentown Division  
Sanitary Sewer Manhole Lining (Cycle 3) – Construction Phase

**MOTIONS / APPROVALS REQUESTED:**

No.	Item	Amount
1	<i>Capital Project Authorization Amendment No. 1 - Construction Phase</i>	\$271,610
2	<i>Professional Services Authorization Amendment No. 1 – Construction Phase: Barry Isett &amp; Associates (*)</i>	\$24,065
3	<i>Contract Awards – Construction Phase: SWERP Incorporated (*)</i>	\$148,325

(\*)Included in the Capital Project Authorization.

**PROJECT OVERVIEW:**

This project will install a lining system for approximately 111 aged brick manholes identified by current LCA and City staff. This lining system will eliminate infiltration and will provide additional structural reinforcement to the manholes.

**FINANCIAL:**

The project is identified as Administrative Order Work and will be funded by the City.

**PROJECT STATUS:**

In accordance with the Lease Agreement, the City is responsible for determining what Administrative Order (AO) work is to take place, and LCA is responsible to execute said work. The design phase of this project was previously authorized by LCA.

The project was advertised for bid on May 18, 2016. A mandatory pre-bid meeting was held on May 24, 2016. Bids were received on June 15, 2016.

**THIS APPROVAL: CONSTRUCTION PHASE**

Award is contingent upon receipt of the signed Agreement, Performance and Payment Bond, and required insurance paperwork.

**BIDDING SUMMARY: CONSTRUCTION CONTRACT**

This project requires a General Construction Contract. The bidding results, which reflect the Base Bid, are as follows:

Consultant	Cost
<i>SWERP Incorporated</i>	<i>\$148,325.00</i>
National Water Main Cleaning Co.	\$174,525.00
PIM Corporation	\$183,535.00

Advanced Underground Inspection	\$184,625.00
National Gunitite	\$186,136.57
Lake County Sewer Company	\$208,981.00
Tri-State Grouting	\$217,000.00
Mr. Rehab, Inc.	\$217,588.50
Utility Services Group, Inc.	\$256,350.00

Reference checks for the low bidder, SWERP Incorporated, have no identified no issues. Therefore, we recommend awarding the General Constriction to SWERP Incorporated subject to receipt of the necessary Performance Bonds, Insurance and other required documentation.

**PROFESSIONAL SERVICES:**

Barry Isett and Associates will provide construction administrative phase services and inspection phase services.

**PROJECT SCHEDULE:**

Assuming approval of the Constriction Phase at the June 27, 2016 Board Meeting, Notice to Proceed will be issued early July 2016 with an estimated completion date of early September 2016.

**FUTURE AUTHORIZATIONS:**

None anticipated.

# CAPITAL PROJECT AUTHORIZATION

<b>PROJECT NO.:</b>	<u>AD-S-16-1</u>	<b>BUDGET FUND:</b>	<u>Allentown Div\Wastewater\Capital</u>
<b>PROJECT TITLE:</b>	<u>Allentown Division Sanitary Sewer Manhole Lining (Cycle 3) - Construction Phase</u>	<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. 1
<b>THIS AUTHORIZATION:</b>	<u>\$271,610</u>		
<b>TO DATE (W/ABOVE):</b>	<u>\$295,000</u>		

## DESCRIPTION AND BENEFITS:

This project will install a lining system for approximately 111 aged brick manholes identified by current LCA and City staff. This lining system will eliminate infiltration and will provide additional structural reinforcement to the manholes.

The design phase of this project was previously authorized. The project is identified as Administrative Order Work and will be funded by the City. The project is anticipated to be complete by September 2016.

Please reference the cover Memo for additional information.

## Authorization Status:

Previous Authorizations	
Design Phase	\$23,390
REQUESTED THIS AUTHORIZATION	
Construction Phase	
Staff	\$ 12,500
Professional Services	24,065
General Construction Contract	148,325
Additional Authorization <sup>(1)</sup>	81,720
Contingencies	5,000
<b>Total This Authorization</b>	<b>\$ 271,610</b>
(1) This project will be funded by the City - the intent is to utilize a total sum of \$295,000. The City will provide authorization to line additional manholes if necessary to reach their targeted budget goal.	
Future Authorization	
None Anticipated	\$0
<b>Total Estimated Project</b>	<b>\$295,000</b>

## 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. 1**

**Professional:** BARRY ISETT & ASSOCIATES  
85 S. Route 100  
Allentown, PA 18106

**Date:** June 27, 2016

**Requested By:** Phil DePoe

**Approvals**

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

**Chief Executive**

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

**Allentown Division – Sanitary Sewer Manhole Lining (Cycle 3) – Construction Phase**

Barry Isett & Associates will perform the construction administration and inspection phase services for the Sanitary Sewer Manhole Lining Project (for approximately 111 brick sanitary sewer manholes in the City of Allentown).

Professional Services <sup>(1)</sup>
1. Provide construction administration phase services
2. Provide inspection phase inspections

*(1) For Construction Phase Only.*

Please reference the cover Memo for additional information.

**Previous Authorization - Design Phase:**

*Cost Estimate (not to be exceeded without further authorization): \$12,390*

**This Authorization - Construction Phase:**

*Cost Estimate (not to be exceeded without further authorization): \$24,065*

*Cost Estimate (not to be exceeded without further authorization): \$36,455*

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

---

---

**(For Authority Use Only)**

**Authorization Completion:**

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

---

## MEMORANDUM

---

**Date:** June 27, 2016

**To:** LCA Board of Directors  
**From:** Phil DePoe  
**Subject:** Allentown Division  
Manhole Chimneys (*i.e. Methodologies of Affixing Frame and Covers to Brick Sanitary Sewer Manholes*) – (Cycle 3) Construction Phase

**MOTIONS / APPROVALS REQUESTED:**

No.	Item	Amount
1	Capital Project Authorization Amendment No. 1 – Construction Phase	\$315,320
2	Professional Services Authorization Amendment No. 1 – Construction Phase: Barry Isett & Associates (*)	\$23,210
3	Contract Awards – Construction: Joao & Bradley (*)	\$184,584

(\*) Included in the Capital Project Authorization.

**PROJECT OVERVIEW:**

This project will install a frame and cover anchoring system for approximately 56 aged brick manholes identified by previous City staff. The selected anchoring systems are intended to eliminate sewage overflows during high flow events. In addition, all manholes for this project will receive new bolt down frames if not installed.

**FINANCIAL:**

The project is identified as Administrative Order Work and will be funded by the City.

**PROJECT STATUS:**

In accordance with the Lease Agreement, the City is responsible for determining what Administrative Order (AO) work is to take place, and LCA is responsible to execute said work. The design phase of this project was previously authorized by LCA.

The project was advertised for bid on May 18, 2016. A pre-bid meeting was held on May 24, 2016. Bids were received on June 15, 2016.

**THIS APPROVAL: CONSTRUCTION PHASE**

Award is contingent upon receipt of the signed Agreement, Performance and Payment Bond, and required insurance paperwork.

**BIDDING SUMMARY: CONSTRUCTION CONTRACT:**

This project requires a General Construction Contract. The bidding results, which reflect the Base Bid, are as follows:

<b>Contractor</b>	<b>Cost</b>
<i>Joao &amp; Bradley</i>	<i>\$184,584</i>
Tri-State Grouting	\$188,900

Joao & Bradley successfully executed this project in both 2014 and 2015. Therefore, we recommend awarding the General Construction to Joao & Bradley subject to receipt of the necessary Performance Bonds, Insurance and other required documentation.

**PROFESSIONAL SERVICES:**

Barry Isett and Associated will provide construction administration phase services and inspection phase services.

**PROJECT SCHEDULE:**

Assuming approval of the Construction Phase at the June 27, 2016 Board Meeting, Notice to Proceed will be issued early July 2016 with an estimated completion date of early September 2016.

**FUTURE AUTHORIZATIONS:**

None anticipated.



# CAPITAL PROJECT AUTHORIZATION

<b>PROJECT NO.:</b>	<u>AD-S-16-2</u>	<b>BUDGET FUND:</b>	<u>Allentown Div\Wastewater\Capital</u>
<b>PROJECT TITLE:</b>	<u>Allentown Division Manhole Chimneys (Cycle 3) - Construction Phase</u>	<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. 1
<b>THIS AUTHORIZATION:</b>	<u>\$315,320</u>		
<b>TO DATE (W/ABOVE):</b>	<u>\$340,000</u>		

## DESCRIPTION AND BENEFITS:

This project will install a frame and cover anchoring system for approximately 56 aged brick manholes identified by current LCA and City staff. The selected anchoring systems are intended to eliminate sewage overflows during high flow events. In addition, all manholes for this project will receive new bolt down frames if not installed.

The design phase of this project was previously authorized. The project is identified as Administrative Order Work and will be funded by the City. The project is anticipated to be complete by late September 2016.

Please reference the cover Memo for additional information.

## Authorization Status:

Previous Authorizations	
Design Phase	\$24,680
REQUESTED THIS AUTHORIZATION	
<b>Construction Phase</b>	
Staff	\$ 12,500
Professional Services	23,210
General Construction Contract	184,584
Additional Authorization <sup>(1)</sup>	90,026
Contingencies	5,000
<b>Total This Authorization</b>	<b>\$ 315,320</b>

(1) This project will be funded by the City - the intent is to utilize a total sum of \$340,000. The City will provide authorization for additional manholes if necessary to reach their targeted budget goal.

Future Authorization	
None Anticipated	\$0
<b>Total Estimated Project</b>	<b>\$340,000</b>

## 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. 1**

**Professional:** BARRY ISETT & ASSOCIATES  
85 S. Route 100  
Allentown, PA 18106

**Date:** June 27, 2016

**Requested By:** Phil DePoe

**Approvals**

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

**Chief Executive**

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

**Allentown Division – Manhole Chimneys (i.e. Methodologies of Affixing Frame and Covers to Brick Sanitary Sewer Manholes) – (Cycle 3) - Construction Phase**

Barry Isett & Associates (BIA) will perform the construction administration and inspection phase services for the MH Frame and Cover Project (affixing frame and covers for approximately 56 brick sanitary sewer manholes in the City of Allentown).

Professional Services <sup>(1)</sup>
1. Provide construction administration phase services
2. Provide inspection phase services.

(1) For Construction Phase Only.

Please reference the cover Memo for additional information.

**Previous Authorization – Design Phase:**

**Cost Estimate (not to be exceeded without further authorization):** \$13,680

**This Authorization – Construction Phase:**

**Cost Estimate (not to be exceeded without further authorization):** \$23,210

**Cost Estimate (not to be exceeded without further authorization):** \$36,890

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

---

---

**(For Authority Use Only)**

**Authorization Completion:**

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

**LEHIGH COUNTY AUTHORITY**  
**STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION**  
**MONTH OF MAY 2016**

	CITY			SUBURBAN			TOTAL	
	Actual	Budget	Prior Yr	Actual	Budget	Prior Yr	Actual	Budget
<b>OPERATING REVENUES</b>								
Charges for Service	2,358,598	2,795,591	1,877,216	2,171,835	1,151,276	2,227,526	4,530,433	3,946,867
Rent	-	-	-	8,506	14,917	9,176	8,506	14,917
Other Income	31,696	25,233	24,955	23,992	50,799	2,467	55,688	76,033
Total Operating Income	2,390,293	2,820,824	1,902,172	2,204,333	1,216,992	2,239,169	4,594,626	4,037,817
<b>OPERATING EXPENSES</b>								
Salaries, Wages, and Benefits	643,346	625,808	1,167,014	209,851	183,985	253,643	853,196	809,793
General & Administrative	28,908	45,785	50,514	14,483	19,530	17,766	43,391	65,315
Utilities	153,200	175,398	195,923	51,068	64,259	63,632	204,268	239,657
Materials & Supplies	122,642	231,798	237,484	97,508	96,067	122,986	220,150	327,865
Miscellaneous Services	189,741	128,828	420,342	731,688	666,383	588,607	921,429	795,211
Treatment & Transportation	-	-	-	581,721	450,321	231,880	581,721	450,321
Depreciation & Amortization	450,000	450,000	441,114	572,918	572,926	591,210	1,022,918	1,022,926
Total Operating Expenses	1,587,837	1,657,617	2,512,391	2,259,237	2,053,471	1,869,725	3,847,074	3,711,088
<b>OPERATING INCOME (LOSS)</b>	802,457	1,163,207	(610,219)	(54,904)	(836,479)	369,444	747,552	326,729
<b>NONOPERATING REVENUES (EXPENSES)</b>								
Tapping and Capital Recovery Fees			1,832	1,348,980	112,415	182,763	1,416,033	123,915
Meter Sales	67,053	11,500	-	75,000	6,250	7,882	126,240	12,500
Inspection & Plan Reviews	51,240	6,250	-	96,000	8,000	15,623	96,738	9,417
Other Income	738	1,417	200	5,500	458	2,390	7,500	2,708
Other Expense	2,000	2,250	2,700	(1,070)	(583)	(35,756)	1,872	1,084
Interest Earnings	2,942	1,667	105,319	5,270	3,152	2,582	5,646	38,985
Interest Expense	376	35,833	(1,001,195)	(104,860)	(139,076)	(117,493)	(1,420,318)	(1,454,534)
Total Nonoperating Expenses	(1,315,458)	(1,315,458)	(891,144)	1,424,820	(9,383)	57,992	233,712	(1,265,924)
<b>INCREASE (DECREASE) IN NET POSITION BEFORE CAPITAL CONTRIBUTIONS</b>	(388,651)	(93,334)	(1,501,363)	1,369,916	(845,862)	427,436	981,264	(939,196)
<b>CAPITAL CONTRIBUTIONS</b>								
Capital Grant	-	-	-	-	-	-	-	-
Capital Assets Provided By Developers and Others	-	-	-	-	-	-	-	-
Total Capital Contributions	-	-	-	-	-	-	-	-
<b>INCREASE (DECREASE) IN NET POSITION</b>	(388,651)	(93,334)	(1,501,363)	1,369,916	(845,862)	427,436	981,264	(939,196)

**LEHIGH COUNTY AUTHORITY**  
**STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION**  
**YTD MARCH 2016**

	CITY			SUBURBAN			TOTAL		
	Actual	Budget	Prior Yr	Actual	Budget	Prior Yr	Actual	Budget	Prior Yr
<b>OPERATING REVENUES</b>									
Charges for Service	12,398,141	12,758,453	10,999,962	10,800,145	9,409,050	10,401,974	23,198,286	22,167,503	21,401,937
Rent	-	-	-	42,951	74,585	58,538	42,951	74,585	58,538
Other Income	125,122	126,165	113,582	71,975	253,995	69,987	197,098	380,160	183,569
Total Operating Income	12,523,263	12,884,618	11,113,545	10,915,072	9,737,630	10,530,499	23,438,335	22,622,248	21,644,044
<b>OPERATING EXPENSES</b>									
Salaries, Wages, and Benefits	3,570,903	3,441,944	3,869,105	1,134,730	1,011,916	1,025,176	4,705,633	4,453,860	4,894,281
General & Administrative	250,648	228,925	247,492	107,711	97,650	98,166	358,358	326,575	345,658
Utilities	804,539	876,990	799,461	295,915	321,295	293,225	1,100,454	1,198,285	1,092,685
Materials & Supplies	724,509	1,058,121	842,717	418,898	727,099	555,702	1,143,406	1,785,220	1,398,419
Miscellaneous Services	802,747	644,140	1,136,919	3,839,207	3,331,915	2,755,850	4,641,954	3,976,055	3,892,769
Treatment & Transportation	-	-	-	2,429,594	2,221,983	2,179,573	2,429,594	2,221,983	2,179,573
Depreciation & Amortization	2,250,000	2,250,000	2,205,570	2,864,590	2,864,530	2,956,050	5,114,590	5,114,630	5,161,620
Total Operating Expenses	8,403,346	8,500,120	9,101,264	11,080,645	10,576,488	9,863,741	19,493,991	19,076,608	18,965,005
<b>OPERATING INCOME (LOSS)</b>	4,119,917	4,384,498	2,012,281	(175,573)	(838,858)	666,758	3,944,345	3,545,640	2,679,038
<b>NONOPERATING REVENUES (EXPENSES)</b>									
Tapping and Capital Recovery Fees	-	-	-	-	-	-	-	-	-
Meter Sales	68,199	57,500	131,001	1,954,039	562,075	779,450	2,022,238	619,575	910,451
Inspection & Plan Reviews	51,927	31,250	107,058	135,338	31,250	39,715	187,265	62,500	146,773
Other Income	3,046	7,085	6,684	126,413	40,000	90,677	129,459	47,085	97,360
Other Expense	13,410	11,250	13,200	25,645	2,290	14,276	39,055	13,540	27,476
Interest Earnings	15,902	8,335	15,960	(4,370)	(2,915)	(37,772)	11,532	5,420	(21,812)
Interest Expense	1,815	179,165	286,783	43,567	15,760	13,538	45,381	194,925	300,321
Total Nonoperating Expenses	(6,577,290)	(6,577,290)	(5,005,975)	(522,203)	(695,380)	(588,104)	(7,099,493)	(7,272,670)	(5,594,079)
	(6,422,992)	(6,282,705)	(4,445,289)	1,758,428	(46,920)	311,781	(4,664,564)	(6,329,625)	(4,133,509)
<b>INCREASE (DECREASE) IN NET POSITION BEFORE CAPITAL CONTRIBUTIONS</b>	(2,303,074)	(1,898,207)	(2,433,009)	1,582,855	(885,778)	978,539	(720,219)	(2,783,985)	(1,454,470)
<b>CAPITAL CONTRIBUTIONS</b>									
Capital Grant	-	-	-	-	-	-	-	-	-
Capital Assets Provided By Developers and Others	-	-	-	-	-	-	-	-	-
Total Capital Contributions	-	-	-	-	-	-	-	-	-
<b>INCREASE (DECREASE) IN NET POSITION</b>	(2,303,074)	(1,898,207)	(2,433,009)	1,582,855	(885,778)	978,539	(720,219)	(2,783,985)	(1,454,470)

**LEHIGH COUNTY AUTHORITY  
STATEMENT OF CASH FLOWS  
YTD MARCH 2016**

	<b>CITY</b>			<b>SUBURBAN</b>			<b>TOTAL</b>		
	Actual	Budget	Prior Yr	Actual	Budget	Prior Yr	Actual	Budget	Prior Yr
Increase (Decrease) in Net position	(2,303,074)	(1,898,207)	(2,433,009)	1,582,855	(885,778)	978,539	(720,219)	(2,783,985)	(1,454,470)
Depreciation (non-cash)	2,250,000	2,250,000	2,205,570	2,884,590	2,864,630	2,956,050	5,114,590	5,114,630	5,161,620
Cash generated by Operations	(53,074)	351,793	(227,439)	4,447,445	1,978,852	3,934,589	4,394,371	2,330,645	3,707,150
Capex spending	(3,227,787)	(6,957,125)	(2,055,566)	(1,007,318)	(4,990,115)	(815,591)	(4,235,105)	(11,947,240)	(2,871,156)
Principal Payments	-	-	-	(1,114,876)	(762,025)	(1,050,423)	(1,114,876)	(762,025)	(1,050,423)
Annual Payment	-	-	-	-	-	-	-	-	-
<b>NET CASH FLOWS</b>	<b>(3,280,861)</b>	<b>(6,605,332)</b>	<b>(2,283,004)</b>	<b>2,325,251</b>	<b>(3,773,288)</b>	<b>2,068,575</b>	<b>(955,610)</b>	<b>(10,378,620)</b>	<b>(214,430)</b>

LEHIGH COUNTY AUTHORITY  
COMPARATIVE STATEMENT FORMAT  
CITY DIVISION

	May-2016		2016 YTD		Annual Budget	Month Variance to		YTD Variance to	
	Actual	Budget	Actual	Budget		Budget	Prior Yr	Budget	Prior Yr
<b>OPERATING REVENUES</b>									
Customer Charges	2,358,598	2,795,591	12,398,141	12,758,453	31,529,219	(438,993)	481,381	(360,312)	1,398,179
Rental Income	31,686	25,233	125,122	126,165	302,800	6,462	6,740	(1,043)	11,540
Other Operating Income	2,390,293	2,820,824	12,523,263	12,884,618	31,832,019	(430,551)	488,122	(361,355)	1,409,719
Total Operating Revenues									
<b>OPERATING EXPENSES</b>									
Salaries & Wages	406,451	394,921	2,266,831	2,172,085	5,133,971	(11,530)	412,662	(84,766)	223,011
Overtime	38,510	57,864	263,928	318,362	752,495	19,374	35,790	54,434	13,510
Employee Benefits	198,384	173,003	1,040,144	951,517	2,249,045	(25,381)	75,216	(68,627)	61,681
Utilities	153,200	175,368	804,539	876,990	2,104,778	22,198	42,723	72,451	(5,079)
Insurance	23,527	38,752	206,007	198,760	477,027	16,225	5,036	(7,247)	1,341
Maintenance	28,655	73,886	248,257	337,279	833,305	45,231	56,773	89,022	(1,134)
Engineering	-	2,040	5,505	9,311	23,000	2,040	-	3,808	2,901
Legal	5,382	6,033	44,641	30,165	72,396	651	16,570	(14,476)	(4,497)
Lab Analysis	388	1,774	2,584	8,097	20,000	1,386	(388)	5,513	1,226
Supplies & Equipment	93,598	154,098	468,164	703,434	1,737,946	60,500	58,457	235,270	115,215
Other Outside Services	140,502	77,573	621,978	387,865	930,882	(62,929)	129,839	(234,113)	187,858
Treatment & Transportation									
Miscellaneous Operating Expenses	49,240	51,255	180,769	256,275	615,066	2,015	100,762	75,506	146,315
Depreciation & Amortization	450,000	450,000	2,250,000	2,250,000	5,400,000	-	(6,889)	-	(44,430)
Total Operating Expenses	1,587,837	1,657,617	8,403,346	8,500,120	20,349,911	69,780	924,554	96,774	697,918
<b>OPERATING INCOME(LOSS)</b>	802,457	1,163,207	4,119,917	4,384,498	11,482,108	(360,750)	1,412,676	(264,581)	2,107,637
<b>NON-OPERATING REVENUES (EXPENSES)</b>									
Water Tapping Fees	-	-	-	-	138,000	-	-	-	-
WW Capacity & Connection Fees	67,053	11,600	68,169	57,500	75,000	55,553	65,221	10,699	(62,802)
Meter Sales	51,240	6,250	51,927	31,250	17,000	44,990	51,240	20,677	(55,132)
Inspection & Plan Reviews	738	1,417	3,046	7,085	27,000	(679)	738	(4,039)	(3,636)
Other Non-Operating Income	2,000	2,260	13,410	11,250	20,000	(250)	1,800	2,160	210
Other Non-Operating Expense	2,942	1,667	15,902	15,960	-	1,275	242	7,567	(58)
Total Non-Operating Income (Expenses)	123,973	23,084	152,484	115,420	277,000	100,869	119,241	37,064	(121,419)
<b>INCREASE (DECREASE) IN NET POSITION BEFORE INTEREST AND CAPITAL CONTRIBUTIONS</b>	926,430	1,186,291	4,272,401	4,499,918	11,759,108	(259,861)	1,531,917	(227,517)	1,986,218
<b>INTEREST INCOME (EXPENSES)</b>									
Interest Income	376	35,833	1,815	178,165	430,000	(35,457)	(104,942)	(177,350)	(264,968)
Interest Expense	(1,315,458)	(1,315,458)	(6,577,290)	(6,577,290)	(15,785,500)	-	(314,263)	-	(1,571,315)
Total Interest Income (Expenses)	(1,315,082)	(1,279,625)	(6,575,475)	(6,399,125)	(15,355,500)	(35,457)	(419,205)	(177,350)	(1,856,283)
<b>CAPITAL CONTRIBUTIONS</b>									
Capital Grants	-	-	-	-	-	-	-	-	-
Capital Assets Provided	-	-	-	-	-	-	-	-	-
Total Capital Contributions	-	-	-	-	-	-	-	-	-
<b>INCREASE (DECREASE) IN NET POSITION</b>	(388,651)	(83,334)	(2,303,074)	(1,899,207)	(3,596,392)	(295,318)	1,112,712	(404,867)	129,934
<b>CAPITAL EXPENDITURES</b>									
LCA Costs (1)	(92,990)	(1,391,425)	(441,384)	(6,957,125)	(16,697,100)	1,298,435	(21,371)	6,615,741	(115,227)
Contractor/Other Costs (1)	(573,891)	(71,403)	(2,768,403)	-	(15,697,100)	(573,891)	(502,488)	(2,788,403)	(1,056,954)
Total Capital Expenditures	(666,881)	(1,391,425)	(3,227,787)	(6,957,125)	(31,394,200)	724,544	(523,859)	3,729,338	(1,172,222)
<b>PRINCIPAL REDUCTION</b>	-	-	-	-	-	-	-	-	-
<b>KEY METRICS</b>									
Operating Income (Expense) Before Depreciation	1,252,457	1,913,207	6,369,917	6,634,498	16,892,108				
Operating Income (Expense) Before Depreciation / Operating Revenues (%)	52.4%	57.2%	50.9%	51.5%	53.0%				
Operating Income (Expense) / Operating Revenues (%)	33.6%	41.2%	32.9%	34.0%	36.1%				
Net Position Before Interest & Capital Contrib. / Operating Revenue (%)	38.8%	42.1%	34.1%	34.9%	36.9%				
Interest Coverage Ratio	0.705	0.929	0.650	0.711	0.514				
Debt Service Coverage Ratio	0.899	1.185	0.829	0.906	0.985				
Debt Service Coverage Ratio (excluding depreciation)	1.335	1.622	1.266	1.344	1.422				

**LEHIGH COUNTY AUTHORITY  
COMPARATIVE STATEMENT FORMAT  
SUBURBAN DIVISION**

	May-2016		2016 YTD		Annual		Month Variance to		YTD Variance to	
	Actual	Budget	Prior Yr	Actual	Budget	Prior Yr	Budget	Prior Yr	Budget	Prior Yr
<b>OPERATING REVENUES</b>										
Customer Charges	2,171,835	1,151,276	2,227,526	10,800,145	9,409,050	10,401,974	1,020,559	(55,691)	1,391,095	398,171
Rental Income	8,506	14,917	9,176	42,951	74,585	58,538	(6,411)	(31,634)	(31,634)	(15,587)
Other Operating Income	23,992	50,799	2,467	71,975	253,995	69,987	(26,807)	21,525	(182,020)	1,989
Total Operating Revenues	2,204,333	1,216,992	2,239,169	10,915,072	9,737,630	10,530,499	987,341	(34,836)	1,177,442	394,573
<b>OPERATING EXPENSES</b>										
Salaries & Wages	138,079	130,930	198,573	757,243	720,114	715,942	(7,149)	60,494	(37,129)	(41,301)
Overtime	8,483	8,508	11,718	53,589	46,794	46,357	25	3,235	(6,795)	(7,233)
Employee Benefits	63,289	44,547	43,353	323,897	245,008	282,877	(16,742)	(19,936)	(78,889)	(91,020)
Utilities	61,068	64,259	63,632	295,915	321,295	293,225	771,112	12,564	25,380	(2,600)
Insurance	12,456	16,563	15,957	91,234	82,815	90,070	4,107	3,501	(8,419)	(1,164)
Maintenance	14,526	42,845	75,635	162,410	324,282	318,001	28,319	61,109	161,872	155,590
Engineering	33,055	8,780	2,593	59,428	66,454	17,054	(24,272)	(30,472)	7,028	(42,372)
Legal	2,027	2,987	1,809	16,477	14,835	8,096	940	(219)	(1,642)	(8,860)
Lab Analysis	9,820	7,119	3,635	27,277	53,880	32,481	(2,701)	(6,185)	26,603	5,204
Supplies & Equipment	40,108	37,323	41,133	169,784	282,483	188,166	(2,785)	1,026	112,699	18,382
Other Outside Services	717,607	630,960	569,332	3,735,706	3,154,800	2,609,028	(86,647)	(148,276)	(560,905)	(1,126,678)
Treatment & Transportation	581,721	450,821	231,880	2,429,594	2,221,983	2,179,573	(131,400)	(349,841)	(207,611)	(250,023)
Miscellaneous Operating Expenses	14,081	35,423	19,275	103,501	177,115	146,822	21,342	5,195	73,614	43,321
Depreciation & Amortization	572,918	572,926	591,210	2,884,580	2,884,630	2,866,050	8	18,292	40	91,480
Total Operating Expenses	2,299,237	2,053,471	1,869,725	11,090,645	10,576,488	9,863,741	(205,766)	(369,512)	(514,157)	(1,226,903)
<b>OPERATING INCOME(LOSS)</b>	(54,904)	(836,479)	369,444	(175,573)	(838,858)	666,758	781,574	(424,348)	663,285	(842,331)
<b>NON-OPERATING REVENUES (EXPENSES)</b>										
Water Tapping Fees	193,980	16,165	8,485	275,120	80,825	73,060	177,815	185,495	194,295	202,060
WW Capacity & Capital Recovery Fees	1,155,000	96,250	174,278	1,678,919	481,250	706,390	1,058,750	980,722	1,197,689	972,529
Meter Sales	75,000	6,250	7,882	135,338	31,250	39,715	68,750	67,118	104,088	95,623
Inspection & Plan Reviews	96,000	8,000	15,623	126,413	40,000	90,677	88,000	96,000	86,413	35,736
Other Non-Operating Income	458	458	2,390	25,645	2,290	14,276	5,042	3,110	23,355	11,369
Other Non-Operating Expense	(1,070)	(563)	(35,756)	(4,370)	(2,915)	(37,772)	(487)	34,686	(1,455)	33,401
Total Non-Operating Income (Expenses)	1,524,410	128,540	(172,502)	2,237,065	632,700	886,346	1,397,870	1,351,506	1,604,385	1,350,719
<b>INCREASE (DECREASE) IN NET POSITION BEFORE INTEREST AND CAPITAL CONTRIBUTIONS</b>	1,469,506	(708,939)	542,346	2,061,492	(206,158)	1,553,104	2,179,444	927,160	2,267,650	508,388
<b>INTEREST INCOME (EXPENSES)</b>										
Interest Income	5,270	3,152	2,582	43,567	15,760	13,538	2,116	2,688	27,807	30,028
Interest Expense	(104,860)	(139,076)	(117,493)	(522,203)	(695,380)	(588,104)	34,216	12,633	173,177	65,901
Total Interest Income (Expenses)	(99,590)	(135,923)	(114,911)	(478,636)	(679,620)	(574,565)	36,333	15,320	200,984	96,929
<b>CAPITAL CONTRIBUTIONS</b>										
Capital Grants	-	-	-	-	-	-	-	-	-	-
Capital Assets Provided	-	-	-	-	-	-	-	-	-	-
Total Capital Contributions	-	-	-	-	-	-	-	-	-	-
<b>INCREASE (DECREASE) IN NET POSITION</b>	1,369,916	(845,882)	427,436	1,582,855	(865,778)	978,539	2,215,777	942,480	2,468,633	604,317
<b>CAPITAL EXPENDITURES</b>										
LCA Costs (1)	(62,779)	(998,023)	(107,344)	(299,160)	(4,990,115)	(335,270)	935,244	44,565	4,590,955	36,110
Contractor/Other Costs (1)	(133,577)	-	(198,518)	(708,158)	-	(480,321)	(133,577)	64,941	(708,158)	(227,837)
Total Capital Expenditures	(196,356)	(998,023)	(305,862)	(1,007,318)	(4,990,115)	(815,591)	801,667	109,506	3,982,797	(191,727)
<b>PRINCIPAL REDUCTION</b>	(225,472)	(152,405)	(212,566)	(1,114,876)	(762,025)	(1,050,423)	(73,087)	(12,906)	(362,851)	(64,453)
<b>KEY METRICS</b>										
Operating Income (Expense) Before Depreciation	518,014	(263,553)	960,654	2,689,017	2,025,772	3,622,808	6,334,895	25.2%		
Operating Income (Expense) After Depreciation / Operating Revenues (%)	23.5%	-21.7%	42.9%	24.6%	20.8%	34.4%	25.2%			
Operating Income (Expense) / Operating Revenues (%)	-2.5%	-68.7%	16.5%	-1.6%	-6.3%	6.3%	-2.2%			
Net Position Before Interest & Capital Contrib. / Operating Revenue (%)	66.7%	-58.3%	24.2%	18.9%	-2.1%	14.7%	3.9%			
Interest Coverage Ratio	14,064	-5,062	4,638	-0.274	2,664	4,031	0.609			
Debt Service Coverage Ratio	4.465	-2,425	1.651	1.286	-0.131	0.956	0.290			
Debt Service Coverage Ratio (excluding depreciation)	6.199	-0.459	3.442	3.036	1.835	2.780	2.256			

Presented: June 27, 2016

Critical Activities	System	Description	May-16	2016-to-Date	2015 Totals	Permit
			Daily Avg (MGD)	Daily Avg (MGD)	Daily Avg (MGD)	Daily Max (MGD)
Water Production	Allentown	Total	20.02	20.02	19.99	39.0
		Schantz Spring	5.78	6.38	6.16	9.0
		Crystal Spring	3.89	3.91	3.88	4.0
		Little Lehigh Creek	10.26	9.50	9.85	30.0
		Lehigh River	0.09	0.23	0.10	28.0
	Central Lehigh	Total	9.73	8.81	9.08	19.04 MGD Avg
		Feed from Allentown	6.02	6.03	4.95	6.0 MGD Avg 10.5 MGD Max
		Well Production (CLD)	3.71	2.79	4.13	8.54 MGD Avg
		Sum of all (12) other Suburban Water Systems	0.16	0.17	0.17	1.71 Sum of all wells
Wastewater Treatment	Kline's Island	30.51	31.07	30.44	40.0	
	Pretreatment Plant	4.46	4.39	4.34	5.75 (design capacity)	
	Sum of all (5) other Suburban WW Systems	0.16	0.20	0.21	0.36	
			May-16	2016-to-Date	2015 Totals	
Precipitation Totals (inches)			4.05	15.83	40.24	
Compliance Reports Submitted to Allentown			18	120	246	
Notices of Violation (NOVs)	(Allentown + Suburban)		1	2	3	
Sanitary Sewer Overflows (SSOs)/Bypasses	(Allentown + Suburban)		0	12	13	
Main Breaks Repaired	Allentown		0	10	29	
	Suburban		1	3	12	
Customer Service Phone Inquiries	(Allentown + Suburban)		2,169	12,951	35,983	
Water Shutoffs for Non-Payment	(Allentown + Suburban)		141	552	1,844	
Injury Accidents	(Allentown + Suburban)		0	3	9	
Significant Repairs: The Halstead Water Tank (Allentown system) was taken out of service on 4/22/2016 for maintenance projects. All work has been completed and the tank was placed back on-line on 5/24/2016. The Schnecksville Water Tank (North Whitehall system) was taken off-line on 5/31/2016 for external painting. All work is complete and the tank was returned to service on 6/3/2016.						
Description of NOVs and/or SSOs: There was one NOV on the Central Lehigh water system resulting from a delinquent payment for fuel tank registrations. LCA personnel do not have any records of receiving the original invoice and once past the deadline for payment of the \$165, PaDEP issued an NOV. The invoice has now been paid and PaDEP has indicated that the NOV will be removed once the payment is posted. LCA staff will discuss this issue with PaDEP in an attempt to avoid a reoccurrence.						
Other Highlights: The Arcadia WWTP did not meet the ammonia discharge limits for May. The average discharge was 3.81 mg/L (limit is 2.7 mg/L). LCA staff are currently looking who may be discharging slug loads that are difficult for the WWTP to treat.						