



## 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: July 16, 2018 \* **REVISED: July 20, 2018**

### BOARD MEETING AGENDA – July 23, 2018

1. Call to Order

- NOTICE OF MEETING RECORDINGS

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

- *Public Participation Sign-In Request*

2. Review of Agenda / Executive Sessions

3. Approval of Minutes

- *July 9, 2018 Board meeting minutes*

4. Public Comments

5. Action / Discussion Items:

#### **FINANCE AND ADMINISTRATION**

- *2017 Audit and Financial Statements (provided at July 9, 2018 Board meeting) Electronic version included*

#### **WATER**

- *Suburban Division – Water Main Replacement Program Cycle 4 (yellow)*
- *Suburban Division – CLD Auxiliary Pump Station Project (blue)*
- *Allentown Division – Water Main Replacement Program Cycle 4 – Rejection of Bids (white)*

#### **WASTEWATER**

6. Monthly Project Updates / Information Items (1<sup>st</sup> Board meeting per month)
7. Monthly Financial Review (2<sup>nd</sup> Board meeting per month) – **June 2018 report attached**
8. Monthly System Operations Overview (2<sup>nd</sup> Board meeting per month) – **June 2018 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.*

August 13, 2018

August 27, 2018

September 10, 2018

#### **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**

### **July 9, 2018**

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The Regular Meeting of the Lehigh County Authority was called to order at 12:01 p.m. on Monday, July 9, 2018, Chairman Brian Nagle presiding. Other Members present at the commencement of the meeting were: Linda Rosenfeld, Jeff Morgan, Richard Bohner, Norma Cusick, Scott Bieber and Deana Zosky. Authority Staff present were Liesel Gross, Ed Klein, Chuck Volk, Chris Moughan, Susan Sampson, John Parsons, Phil DePoe and Lisa Miller.

#### **REVIEW OF AGENDA**

Chairman Nagle announced that today's Board meeting is being videotaped and streaming live and recordings will be posted to the Authority's website.

Liesel Gross said the two items under Finance and Administration on the agenda would not be discussed because all the information was not yet available. There will also be an executive session at the end of the regular meeting regarding potential litigation. Deana Zosky asked that any material to support Board agenda items be provided to the Board in advance to allow time for review. Ms. Gross agreed and explained that was the reason for removing the two items from the agenda.

#### **APPROVAL OF MINUTES**

##### **June 25, 2018 Regular Meeting Minutes**

The Board noted minor corrections to the Minutes of June 25, 2018.

On a motion by Richard Bohner, seconded by Norma Cusick, the Board approved the Minutes of June 25, 2018 meeting as corrected (6-0). Jeff Morgan abstained.

#### **PUBLIC COMMENTS**

None.

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

Liesel Gross clarified that the two items under Water are actually items for Wastewater.

##### **Allentown Division – Kline's Island WWTP: Electrical Substation Replacement**

Chuck Volk summarized the project and noted there was an irregularity in the bidding process which Phil DePoe will discuss in his overview of the project. Mr. DePoe stated that there are two primary transmission line feeds going into the primary switch gear at the Kline's Island Wastewater Treatment Plant. Based on a 2005 report recommending that Substation No. 2 be replaced, the Authority engaged Keystone Engineering in 2016 to do full design. This report was submitted to and approved by the City as a Major Capital Improvement, allowing for cost recovery through the rates. Mr. DePoe explained that the bid for BSI Electrical Contractors (BSI) needs to be rejected because they deviated from the engineer's design as it related to providing temporary power to the plant during construction. It was requested that the contractor tap the existing power line and provide a temporary substation with a backup power generator. Mr. Volk informed the Board that Authority Solicitor Brad Landon was consulted on this, reviewed the bids/contract documents and advised that the BSI bid was non-responsive because they did not follow the contract documents.

Mr. DePoe is asking for approval of the Capital Project Authorization for the Construction Phase in the amount of \$2,638,500.00 which includes the Professional Services Authorization to Keystone Engineering Group in the amount of \$136,500.00 and the Electrical Contract Award to Phillips Brothers Electrical Contractors, Inc. in the amount of \$2,382,000.00.

Deana Zosky asked about the budgeting process for this project. Mr. Volk said the majority of the contract will be billed in 2019 and will be taken into account for the 2019 capital plan budgeting process. Chairman Nagle asked if BSI's plan would have worked but been a risk on our part. Mr. Volk said it was plausible that BSI's plan would work, but it did not provide the level of assurance that is needed for such a critical project. Norma Cusick asked what BSI's response was as to why they bid this way. Mr. Volk replied that they chose an alternate means and method which the Authority feels is too risky.

On a motion by Linda Rosenfeld, seconded by Norma Cusick, the Board formally rejected the non-responsive bid from BSI Electrical Contractors and approved the Capital Project Authorization for the Construction Phase in the amount of \$2,638,500.00 which includes the Professional Services Authorization to Keystone Engineering Group in the amount of \$136,500.00 and the Electrical Contract Award to Phillips Brothers Electrical Contractors, Inc. in the amount of \$2,382,000.00 (7-0).

**Allentown Division – Kline's Island WWTP: Primary No. 2 Digester Cleaning (Change Order #1)**

Chuck Volk explained that when cleaning Digester No. 2, more dry tons of residual sludge were removed than originally estimated in the bid documents. The underestimation of dry tons was due to the accumulation of snail shells and the amount of time from the last cleaning. Mr. Volk noted that the additional quantity of dry tons will be paid at the unit price per the contract.

Robert Kerchusky was present and explained the difficulties of calculating the volume of snail shells and debris that sloughs off during the cleaning process of the rock media trickling filters, which were installed in 1931.

Jeff Morgan ask for clarification that the contractor brought in their own dewatering equipment during the cleaning process; therefore, all the debris that was left behind stayed out of the Authority's system. Mr. Volk confirmed that was correct.

Mr. DePoe is asking for approval of the Capital Project Authorization – Construction Phase Amendment No. 1, Change Order No. 1 to Denali in the amount of \$95,173.00.

On a motion by Jeff Morgan, seconded by Norma Cusick, the Board approved the Capital Project Authorization for the Construction Phase Amendment No.1, Change Order No. 1 to Denali in the amount of \$95,173.00 (7-0).

**MONTHLY PROJECT UPDATES / INFORMATION ITEMS**

Liesel Gross highlighted items on the July 2018 report including today's items under Finance and Administration which will now be discussed at the July 23<sup>rd</sup> meeting. The Auditors will be present at the July 23<sup>rd</sup> meeting to discuss the 2017 Audit and Financial Statements. A copy of the Comprehensive Annual Financial Report, which the Board received today, will be posted on the website. Ms. Gross noted there are three items under Water requiring Board action at the next meeting. The Water Main Replacement project for the Suburban Division has a bid opening on July 18<sup>th</sup>. Because the Board packet is mailed on July 16<sup>th</sup>, the information about the project will be included but the bid results won't be published until after that date.

**STAFF COMMENTS**

None.

**SOLICITOR'S COMMENTS**

Not present.

**PUBLIC COMMENTS / OTHER COMMENTS**

None.

Chairman Nagle called a recess at 12:28 p.m. The meeting reconvened at 12:32 p.m.

**EXECUTIVE SESSION**

An Executive Session was held at 12:32 p.m. to discuss potential litigation. The Executive Session ended at 12:55 p.m.

Chairman Nagle asked for an update to the proposed land development plan in Lower Macungie Township regarding the truck depot. Liesel Gross stated that both the Authority and the Township have opposed the plan.

**ADJOURNMENT**

There being no further business, the Chairman adjourned the meeting at 12:55 p.m.

---

Richard H. Bohner  
Secretary

**COMPREHENSIVE ANNUAL FINANCIAL REPORT**  
**FOR THE YEARS ENDED**  
**DECEMBER 31, 2017 AND 2016**  
**LEHIGH COUNTY AUTHORITY**  
**ALLENTOWN, PENNSYLVANIA**

**PREPARED BY:**

**EDWARD C. KLEIN**  
**CHIEF FINANCIAL OFFICER**

**LINDA M. EBERHARDT**  
**ACCOUNTING SUPERVISOR**

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**COMPREHENSIVE ANNUAL FINANCIAL REPORT  
For the Years Ended December 31, 2017 and 2016**

**TABLE OF CONTENTS**

	<b><u>Page No.</u></b>
<b>INTRODUCTORY SECTION</b>	
Letter of Transmittal	1-7
GFOA Certificate of Achievement	8
Organizational Chart	9
Principal Authority Officials	10
Lehigh County Authority Water Service Area	11
Lehigh County Authority Wastewater Service Area	12
<b>FINANCIAL SECTION</b>	
INDEPENDENT AUDITORS' REPORT	13-15
MANAGEMENT DISCUSSION AND ANALYSIS	16-24
FINANCIAL STATEMENTS:	
Statements of Net Position	25-26
Statements of Revenues, Expenses and Changes in Net Position	27
Statements of Cash Flows	28-29
Statements of Fiduciary Net Position	30
Statements of Changes in Fiduciary Net Position	31
Notes to Financial Statements	32-71
REQUIRED SUPPLEMENTARY INFORMATION:	
Schedule of Changes in the Authority's Net Pension Liability and Related Ratios	72
Schedule of Authority Contributions Pension Plan	73
Schedule of Changes in the Suburban Net OPEB Liability and Related Ratios	74
Schedule of Authority Contributions Suburban OPEB Plan	75
Schedule of Investment Returns Suburban OPEB Plan	76
Other Postemployment Benefits – Schedules of Funding Progress	77
Other Postemployment Benefits – Schedules of Employer Contributions	78
OTHER SUPPLEMENTARY INFORMATION:	
Combining Schedule of Revenues, Expenses and Changes in Net Position – Suburban Wastewater Fund	79
SUPPLEMENTAL SCHEDULES:	
Schedule of Cash and Cash Equivalents	80
Combined Schedule of Certificates of Deposit – All Funds	81-82
Schedule of Cash Receipts and Disbursements and Changes in Suburban Water Fund Account Balances – Trustee Accounts Fixed Rate Water Revenue Bonds, 2001, 2010 and 2015 Series	83
Budgetary Comparison Schedule	84

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**COMPREHENSIVE ANNUAL FINANCIAL REPORT  
For the Years Ended December 31, 2017 and 2016**

**TABLE OF CONTENTS (continued)**

	<b><u>Page No.</u></b>
 <b>STATISTICAL SECTION</b>	
FINANCIAL TRENDS:	
Net Assets/Net Position By Component	85
Changes In Net Assets/Net Position	86
REVENUE CAPACITY:	
Revenues by Source	87
Operating Expenses by Function	88
Nonoperating Expenses	89
Capital Contributions By Source	90
Schedule of Water Capital Recovery Fees	91
Schedule of Wastewater Capital Recovery Fees	92
Schedule of Water Rates and Charges – Suburban Division	93
Schedule of Water Rates and Charges – City Division	94
Schedule of Wastewater Rates and Charges – Suburban Division Collector Systems	95
Schedule of Wastewater Rates and Charges – Suburban Division Interceptor Systems	96
Schedule of Wastewater Rates and Charges – City Division	97
Comparative Water Charges	98
Ten Largest Industrial & Commercial Water Customers	99
Water Billing Collections – Suburban and City Divisions	100
DEBT CAPACITY:	
Ratios of Outstanding Debt by Type – Suburban Division Water System	101
Ratios of Outstanding Debt by Type – Suburban Division Wastewater Systems	102
Ratios of Outstanding Debt by Type – City Division	103
Summary of Debt Service	104
Debt Service Coverage – Suburban Water System	105
Schedule of Overlapping Debt	106
DEMOGRAPHIC AND ECONOMIC:	
Major Employers	107
Economic and Social Indicators	108
Municipal Population Trends	109
Comparative Population Statistics	110
New Industrial, Commercial and Institutional Customers – Suburban Div.	111
New Industrial, Commercial and Institutional Customers – City Div.	112
Major Industrial and Commercial Complexes	113
Housing Growth Trends	114
Average Annual Unemployment Rates	115
Personal Income	116
Civilian Labor Force	117

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**COMPREHENSIVE ANNUAL FINANCIAL REPORT  
For the Years Ended December 31, 2017 and 2016**

**TABLE OF CONTENTS (continued)**

	<b><u>Page No.</u></b>
OPERATING INFORMATION:	
Water Sales and Customer Growth	118
Water Supply Sources, Demand and Capacity Information	119-120
Wastewater Collector System Growth and Billable Flow	121
Western Lehigh Interceptor Average Daily Wastewater Flow	122
Little Lehigh Relief Interceptor Billable Flows	123
Operating and Capital Indicators	124
Number of Employees by Fund	125
OTHER INFORMATION:	
Profile of Authority Management Staff	126-129
Profile of Authority Board Members	130-132
Strategic Plan	133-140
Acquisitions/Leases/Operating Contracts	141



# **INTRODUCTORY SECTION**



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)

June 29, 2018

Lehigh County Authority Customers  
Chairman and Members  
Lehigh County Authority  
Allentown, PA 18106

It is our pleasure to present the 2017 Lehigh County Authority (LCA or Authority) Comprehensive Annual Financial Report which includes the results of 2017 operations and activities.

Results from 2017 reflect the fourth full year of operation at the City of Allentown water and wastewater systems (City Systems) under a 50-year Concession Lease (Concession) which commenced on August 8, 2013. Concession activities for the year included a number of significant items:

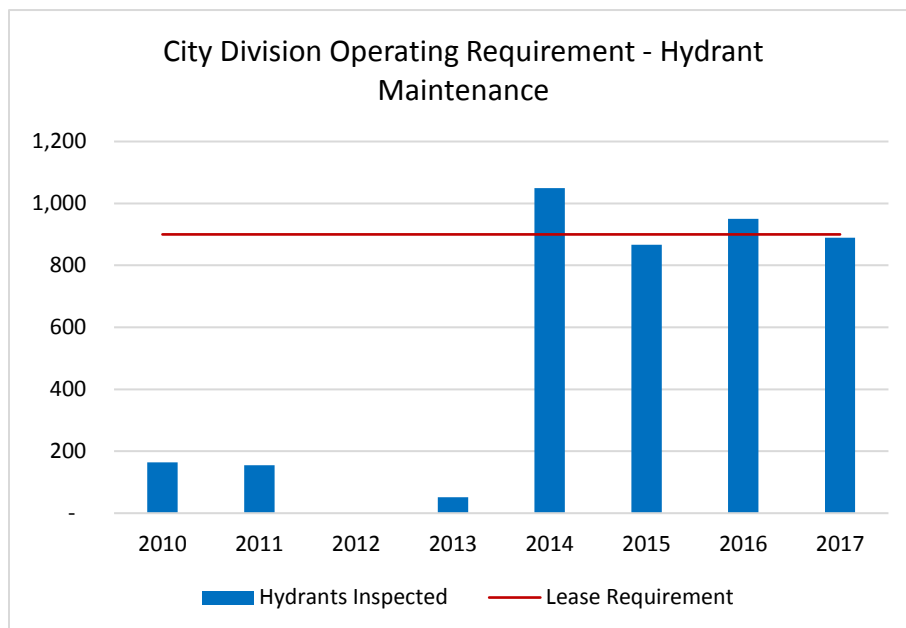
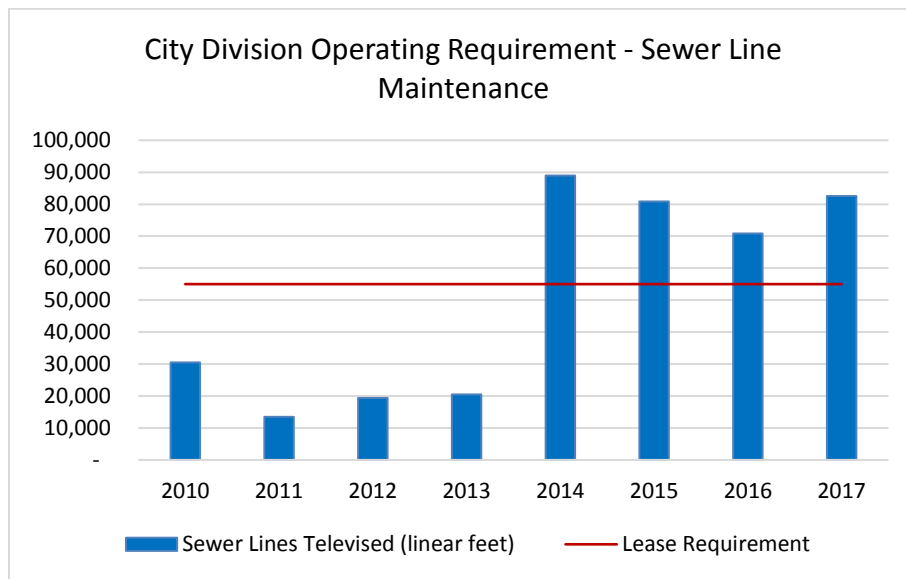
- The 2017 bond coverage was 140%, exceeding the 120% requirement under the 2013 Concession Bond Financing;<sup>1</sup>
- LCA made capital improvements of \$7,825,678 to the City System including the replacement and repair of portions of the 1920s-era Schantz Spring transmission line (\$2,290,000 estimated final project cost) and final completion of digester cover replacements at the wastewater treatment plant (\$1,414,873 in 2017). These improvements were primarily funded from proceeds of the 2013 Bonds.
- The City distribution and collections systems faced their fourth full calendar year of operating standards requirements under the Concession, and met or exceeded all requirements, far surpassing historical levels of preventive maintenance completed under the City's operation. The Authority's performance on selected operating standards are displayed in the graphs below.

(Note that the performance levels shown on these graphs indicate actual tasks completed within the calendar year and that full compliance with the Concession operating standards has been met through a combination of both current year and prior-year activity totals, which accumulate to achieve compliance.)

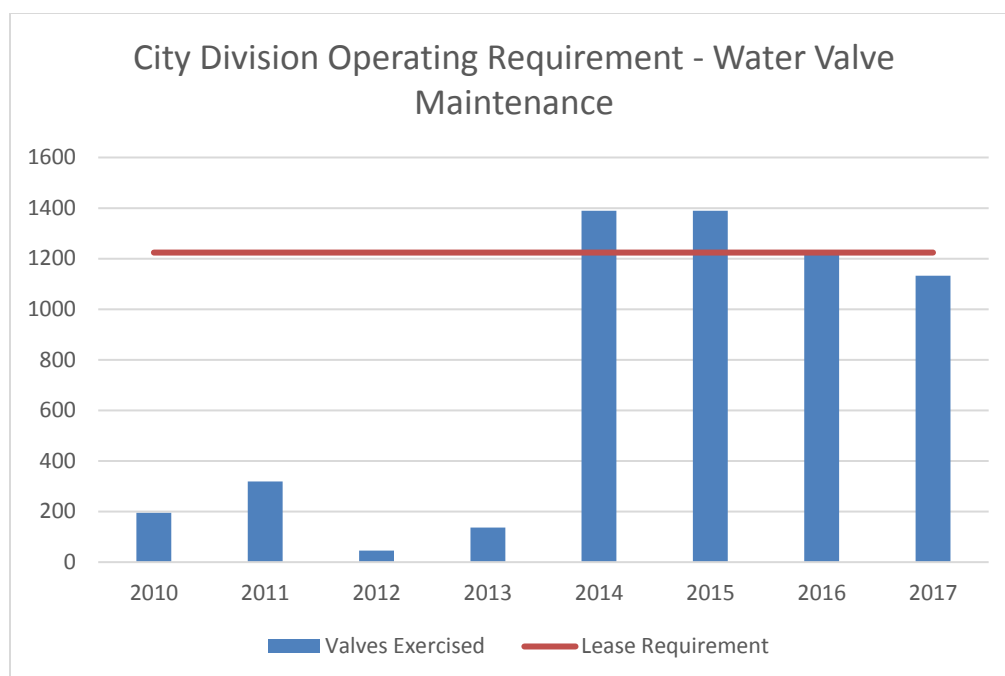
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<sup>1</sup> While the statement of Revenues, Expenses and changes in Net Position indicates Interest Expense of \$18,516,650, the present value of future interest payable (\$5,152,308) and amortized bond discount (\$316,620) were both excluded from the calculation of 2017 interest expense for bond coverage calculation purposes. The 2017 interest expense used for bond coverage calculation was \$13,047,722.

*Every drop matters. Every customer counts.*



*Every drop matters. Every customer counts.*



On an organization-wide basis LCA achieved the following in 2017:

- In 2016, the Authority developed four organization-wide strategic goals encompassing the top priorities for the organization around issues including financial performance, environmental compliance, asset management and workforce development. In 2017, this approach was expanded to develop a 3-year action plan (called “LCA 2020”) to align staff operational priorities with the overarching goals of the organization.
- In November 2017, LCA completed negotiations with CH2M for a long-term operational contract of the Authority’s industrial wastewater pretreatment facility. This new 10-year contract includes key provisions, not previously possible under a shorter-term contract, to allow the operator to invest in capital improvements that will generate operational savings that will be shared with the Authority over the life of the contract.
- As part of the environmental compliance goal, the Authority continued to lead regional efforts to develop a collaborative approach among local municipal partners to develop an integrated plan to address sanitary sewer overflows. In addition, outreach to federal and state regulatory agencies was conducted in 2017 to support this effort and increase understanding of the regional challenges regarding provision of wastewater services in Lehigh County.

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- To address asset management needs and support the overall advancement of the use of technology, the Authority's information technology team was expanded in 2017 to include new staff and updated priorities. In particular, the organization-wide adoption of the computerized maintenance management system was significantly enhanced in 2017 through the redeployment of the software through the Suburban Division and the establishment of internal user groups and mobile technology to support operations department adoption of the system.
- Finally, 2017 marked a year of difficult but necessary conversations about the Authority's financial performance under the Concession. Through significant Board discussion and financial analysis, it was determined that revenue projections will be lower than originally forecasted and additional evaluation would be needed to determine how to achieve the Authority's financial goals in the City Division. A financial evaluation project was authorized in October 2017 to develop a financial model for the remaining years of the Concession and to develop recommendations for enhancing financial performance.

These items among others are intended to promote synergies between the former City and Suburban systems and lead to enhanced integration and economies in every aspect of LCA's ongoing responsibilities. For more on 2017 results, additional information is included in Management's Discussion and Analysis on pages 16-24 of the Report.

Responsibility for the accuracy, completeness and fairness of the report, including all disclosures, rests with the Authority. We believe that this report, which was prepared by the administrative staff, is accurate in all material aspects, is presented in a manner designed to fairly present the financial position and results of operation as measured by the Authority's financial activity, and includes all disclosures necessary to enable the reader to gain an understanding of the Authority's financial activity.

**Overview of Annual Financial Report:** Management's Discussion and Analysis (MD&A) serves as an introduction to, and should be read in conjunction with, the basic audited financial statements and supplementary information. The MD&A represents management's examination and analysis of the Authority's financial condition and performance during the last three years. Summary financial statement data, key financial and operational indicators included in the Authority's Strategic Plan, benchmark program, budget, bond documents and other management tools were used for the analysis.

**Accounting System and Internal Control:** The Authority's accounting system is maintained on an accrual basis of accounting in accordance with United States generally accepted accounting principles. In developing the Authority's accounting system, consideration was given to the adequacy of internal accounting controls. These controls are designed to provide reasonable, but not absolute, assurance regarding: (1) safeguarding assets against loss from unauthorized use or disposition; and (2) the reliability of financial records for preparing financial statements and maintaining accountability for assets. The concept of reasonable assurance recognizes that: (1) the cost of a control should not exceed the benefits likely to be delivered; and, (2) the evaluation of costs and benefits require estimates and judgments by management. We believe the Authority's internal accounting controls

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adequately safeguard assets and provide reasonable assurance of proper recording of financial transactions.

**Independent Audit:** The Pennsylvania Municipality Authorities Act requires an annual audit of the books of account, financial records and transactions of the Authority by an independent certified public accountant selected by the Authority. In addition, various financing documents require such an audit. The auditors' opinion for the 2017 audit has been included in this report.

### **GOVERNMENT PROFILE**

LCA was incorporated in 1966 by the Lehigh County Commissioners and thereafter was directed to plan and construct a water system and a wastewater interceptor system in Western Lehigh County. The systems were needed to serve proposed industrial and commercial developments and serve new residences driven by the growing population of the area. Thereafter, acquiring existing systems and developer extensions were the prime vehicles for LCA's expansion in Western Lehigh County. LCA also expanded into other areas of Lehigh and Northampton counties by acquiring satellite water and wastewater systems and wherever possible integrating them with other LCA systems.

As mentioned previously, in 2013, a major step towards regionalization of Lehigh County water and wastewater systems was accomplished through the Concession for the City Systems, which created a regional service approach for many communities in Lehigh County.

LCA currently provides two types of services to communities in the City Division. Through the Water Plant and Distribution System (the City Water System) LCA serves 46,770 residential and business units in the City of Allentown and supplies water under Municipal Services Agreements to Lehigh County Municipalities of South Whitehall, Hanover, Salisbury, Whitehall, and to the LCA service area adjacent to the City of Allentown (the Suburban Division) under various water supply agreements. Through the Sewer Utility System (the City Sewer System) LCA provides sewage collection, treatment and disposal services to 46,738 residential and business units in the City of Allentown and to the Lehigh County Municipalities of Emmaus, Hanover, Salisbury, Lower Macungie and South Whitehall, the Coplay-Whitehall Sewer Authority, and to the LCA Suburban Division under several inter-municipal agreements.

LCA currently provides four types of service to communities in the Suburban Division. Through the Western Lehigh Interceptor System, LCA provides sewage transportation service to the Townships of Lower Macungie, Upper Macungie, Upper Milford, Weisenberg and the Boroughs of Alburtis, Emmaus and Macungie. LCA also owns and operates wastewater collection systems in the Upper Milford, Heidelberg, Lowhill, Lynn, North Whitehall, Weisenberg and Washington Townships serving a total of 2,786 customers as of December 31, 2017. Through the Little Lehigh Relief Interceptor System, the Authority provides sewage transportation service to Salisbury and South Whitehall Townships along with the other users of the Western Lehigh Interceptor System excluding Emmaus. As of December 31, 2017, the Suburban Water System serves 21,825 residential and business units in the Lehigh County Municipalities of Upper and Lower Macungie, North Whitehall, Washington, Weisenberg, South Whitehall, Heidelberg, Lower Milford, Lowhill, Lynn, Salisbury and Upper Milford Townships and Moore Township in Northampton County.

In aggregate, LCA serves a population of over 200,000 with water, wastewater, or both services throughout its service areas.

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**Budgetary Control:** LCA annually adopts operating and capital budgets based on an assumed level of water and wastewater system operation. Monthly reports are prepared to monitor each budget.

The Chief Executive Officer is authorized to transfer budgeted amounts between line items within any budget; however, any revisions that alter the total expenses or revenue of any budget must be approved by the Authority Board. The level of control (level at which expenses may not exceed budget) is the individual budget within each fund. Budgets for all funds are adopted on a basis consistent with generally accepted accounting principles.

### **ECONOMIC CONDITIONS**

The Lehigh Valley saw continued economic recovery in 2017, with the unemployment rate dropping from 5.0% as of year-end 2016 to 4.8% as of year-end 2017 in Lehigh County. In addition, over the years, the Lehigh Valley has built a diversified residential and industrial base, which has mitigated the economic volatility experienced in other larger east coast cities. The City of Allentown has experienced significant redevelopment over the past 4 years with projects like the PPL Arena, the NIZ Development Zone, Waterfront Development and other construction.

This increased usage of both water and wastewater services by the Suburban Division's industrial customer base has allowed rates to remain among the lowest in the Commonwealth, although a 3% increase was implemented in 2017, and additional increases are expected in the years ahead to ensure revenues are sufficient to keep pace with increased capital improvement requirements. Under the Concession, rates to City residents and businesses rose in 2017 reflecting the change in the Consumer Price Index in 2016 plus Capital Cost Recovery Charges to recover the cost of Major Capital Improvements (>\$1,000,000) completed in 2015 and 2016. The total increase in water and sewer charges to the average residential customer in the Authority's Allentown Division in 2017 was 5.1%.

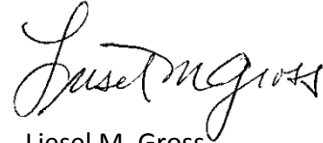
### **AWARDS AND ACKNOWLEDGEMENTS**

- LCA was recognized by the Government Finance Officers Association of The United States and Canada with a Certificate of Achievement for Excellence in Financial Reporting for its Comprehensive Annual Financial Report (CAFR) for the year ended December 31, 2016. The Certificate of Achievement is a prestigious national award, recognizing conformance with highest standards for preparation of state and local government financial reports.
- The City Water Filtration Plant was awarded the Area Wide Optimization Award and Directors Award from the Association of State Drinking Water Administrators and the American Water Works Association, respectively, (for the tenth consecutive year). These awards recognize the staff's outstanding efforts towards optimizing filter plant performance.

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**Acknowledgements:** We recognize and thank LCA employees and the Board for their focus and dedication which underlie our 2017 accomplishments. We also thank the Board for its continued encouragement and support in planning, operating and managing the Authority's affairs in a forward looking and business-like manner.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Liesel M. Gross". The script is fluid and cursive.

Liesel M. Gross  
Chief Executive Officer

A handwritten signature in black ink, appearing to read "Edward C. Klein". The script is fluid and cursive.

Edward C. Klein  
Chief Financial Officer

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**Lehigh County Authority  
Pennsylvania**

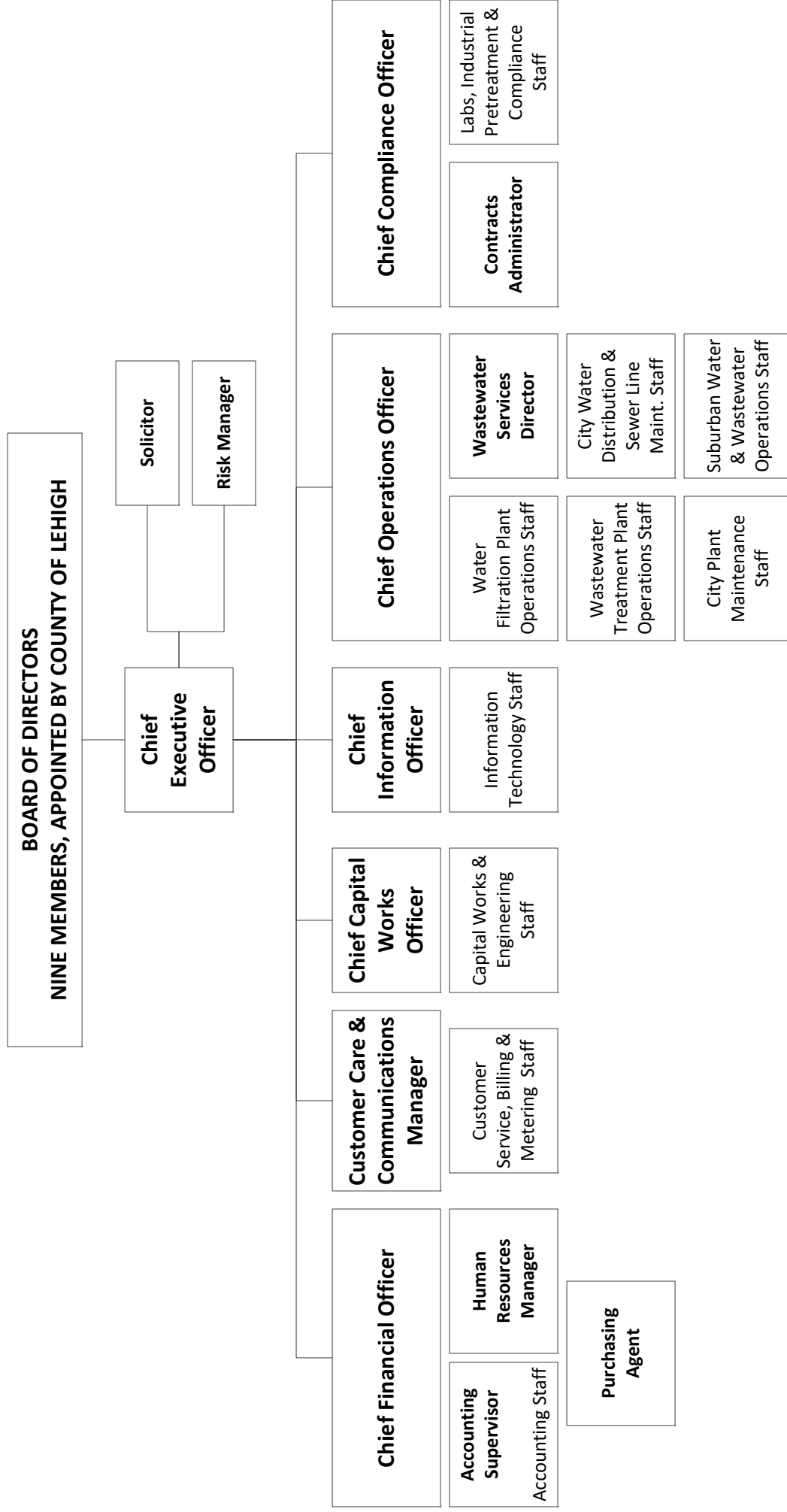
For its Comprehensive Annual  
Financial Report  
for the Fiscal Year Ended

**December 31, 2016**

*Christopher P. Morrell*

Executive Director/CEO

# Lehigh County Authority Organizational Chart – December 31, 2017



**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
LIST OF PRINCIPAL OFFICIALS  
December 31, 2017**

**AUTHORITY BOARD**

Brian C. Nagle  
Chairman

Scott C. Bieber  
Vice Chairman

Ted Lyons  
Treasurer

Richard H. Bohner  
Secretary

Norma A. Cusick  
Assistant Secretary

Jeff Morgan  
Member

Linda Rosenfeld  
Member

Deana Zosky  
Member

Kevin Baker  
Member

**AUTHORITY STAFF**

Liesel M. Gross  
Chief Executive  
Officer

Edward C. Klein  
Chief Financial  
Officer

John W. Parsons  
Chief Operating  
Officer

Christopher W. Moughan  
Chief Information  
Officer

Charles E. Volk  
Chief Capital Works  
Officer

Patricia L. Mandes  
Chief Compliance  
Officer

Bradford E. Landon  
Solicitor

Susan L. Sampson  
Customer Care &  
Communications Manager

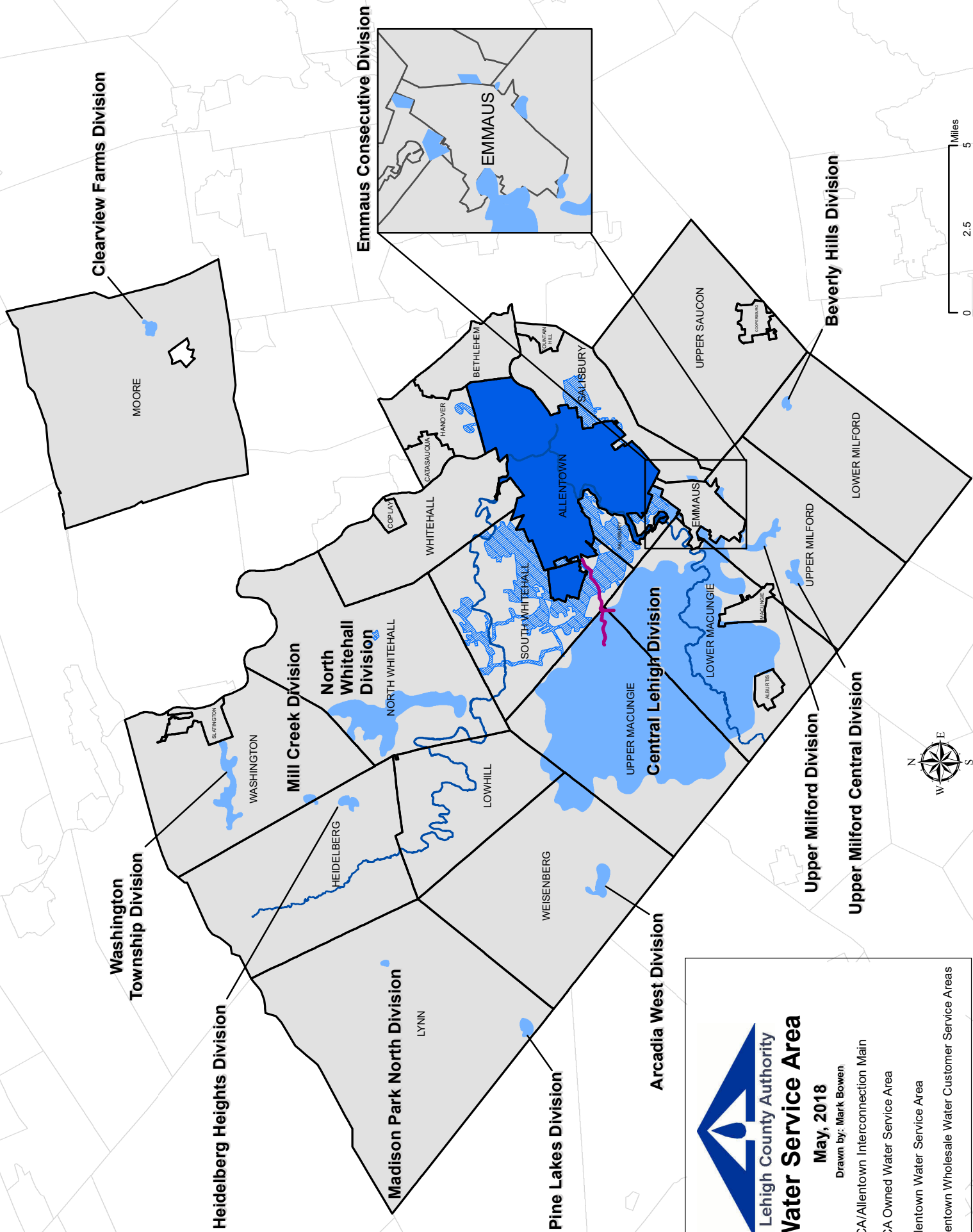
**PROFESSIONAL SERVICES**

Trustees  
Bank of New York Mellon  
M & T Bank Corporation

Auditor  
Zelenkofske Axelrod LLC

Water Consultant  
ARRO Consulting, Inc.

Wastewater Consultant  
Arcadis, U.S.





**Lehigh County Authority**  
**Water Service Area**  
 May, 2018  
 Drawn by: Mark Bowen

 LCA/Allentown Interconnection Main  
 LCA Owned Water Service Area  
 Allentown Water Service Area  
 Allentown Wholesale Water Customer Service Areas

**Washington Township Division**  
(Discharge to Slatington Borough)

**Slatington Wastewater Treatment Plant**

**Wynnewood Terrace System**

**Sand Spring System**

**Heidelberg Heights Division**

**Lynn Township System**

**Lowhill Township System**

**Weisenberg Township System**

**Arcadia West System**

UPPER SAUCON

**Upper Milford System**

LOWER MILFORD

**Western Lehigh Service Area**

(Transmission from Municipalities to Allentown for Treatment)

Signatories include: Allentown, Lower Macungie Township, Lowhill Township, Macungie & Upper Macungie Township



# Wastewater Service Area

May, 2018

Drawn by: Mark Bowen

● LCA Small Collection Systems WWTP

~ LCA Interceptor System

■ LCA Wastewater (WW) Service Areas

■ City Signatories include: Coplay-Whitehall Sewer Authority, Emmaus, Salisbury Twp & South Whitehall Twp



## **FINANCIAL SECTION**

**This section is composed of the following four parts:**

**INDEPENDENT AUDITORS' REPORT**

**MANAGEMENTS DISCUSSION AND ANALYSIS**

**FINANCIAL STATEMENTS**

**SUPPLEMENTAL SCHEDULES**

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**INDEPENDENT AUDITORS' REPORT**

Board of Directors  
Lehigh County Authority  
Allentown, Pennsylvania

***Report on the Financial Statements***

We have audited the accompanying financial statements of the business-type activities, each major fund, and the aggregate remaining fund information of the Lehigh County Authority, Pennsylvania, as of and for the years ended December 31, 2017 and 2016, and the related notes to the financial statements, which collectively comprise the Lehigh County Authority's basic financial statements as listed in the table of contents.

***Management's Responsibility for the Financial Statements***

Lehigh County Authority's management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

***Auditor's Responsibility***

Our responsibility is to express opinions on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.





### **Opinions**

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities, each major fund, and the aggregate remaining fund information of the Lehigh County Authority, Pennsylvania, as of December 31, 2017 and 2016, and the respective changes in financial position and, where applicable, cash flows, thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

### **Adoption of Governmental Accounting Standards Board Pronouncements**

As discussed in Note 1 to the financial statements, in 2017 Lehigh County Authority adopted the provisions of GASB Statement No. 74 "*Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*", GASB Statement No. 80, "*Blending Requirements for Certain Component Units-an amendment of GASB Statement No. 14*", GASB Statement No. 81, "*Irrevocable Split-Interest Agreements*", and GASB Statement No. 82 "*Pension Issues – an amendment of GASB Statements No. 67, No. 68 and No. 73*". Our opinion is not modified with respect to these matters.

### **Other Matters**

#### *Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 16 through 24 and the schedule of changes in the net pension liability and related ratios, schedule of contributions for the pension plan, schedule of changes in net OPEB liability and related ratios – Suburban Employees, schedule of contributions – Suburban Employees OPEB Plan, schedule of investment returns – Suburban Employees OPEB Plan, and schedule of funding progress and employer contributions for post employment benefits other than pensions on pages 72 through 78 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

#### *Other Information*

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise Lehigh County Authority's basic financial statements. The Introductory Section, Other Supplementary Information, Supplemental Schedules, and Statistical Section are presented for the purpose of additional analysis and is not a required part of the basic financial statements.



## *Zelenkofske Axlerod LLC*

*CERTIFIED PUBLIC ACCOUNTANTS*

*Experience. Expertise. Accountability.*

The Other Supplementary Information and the Supplemental Schedules are the responsibility of management and were derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the Other Supplementary Information and the Supplemental Schedules are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The Introductory and Statistical Sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

*Zelenkofske Axlerod LLC*

ZELENKOFSCHE AXELROD LLC

Harrisburg, Pennsylvania  
June 29, 2018

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## INTRODUCTION

Lehigh County Authority is pleased to present its Annual Financial Report for the year ended December 31, 2017. The Authority is a water and wastewater agency created by the County of Lehigh, Pennsylvania in 1966 under the Pennsylvania Municipality Authorities Act. Management's Discussion and Analysis (MDA) is intended to serve as an introduction to the Authority's basic financial statements.

Certain prior year amounts have been reclassified to conform with current year presentation.

Information in this MDA is presented under the following headings:

- Authority Activities and Highlights
- Overview of the Financial Statements
- Financial Analysis
- Capital Assets & Service Concession Arrangement
- Debt Administration
- Economic Factors and Rates
- Contacting the Authority's Financial Management

## MANAGEMENT'S DISCUSSION AND ANALYSIS

### Authority Activities and Highlights

2017 marked the fourth full year of operations for the Authority's City Division, which was created on August 7, 2013, when the Authority acquired the rights to lease and operate the City of Allentown's Water and Wastewater Systems for a term of 50 years. This transaction, which was memorialized by the Allentown Water and Sewer Utility System Concession and Lease Agreement, was financed through the issuance of \$307,683,599 of bonds.

The assets of the Authority exceeded its liabilities at the close of 2017 by \$153,125,552 (net position). The portion of net position that can be used to meet the Authority's on-going obligations to customers and creditors, unrestricted net position, is (\$10,549,848).

The Authority's net position decreased in 2017 by \$2,463,357, primarily as a result of amortization of the City Division's intangible service concession arrangement asset.

Operating revenues increased from \$53,361,394 in 2016 to \$54,808,820 in 2017 due to increased Suburban Water Revenues along with increased City Revenues with Suburban Wastewater Revenues relatively flat to last year. Operating expenses increased from \$44,722,023 in 2016 to \$46,719,135 in 2017 due to inflationary effect on employee cost and purchased cost along with higher treatment & transportation costs on higher Signatory volumes.

### Overview of the Financial Statements

Lehigh County Authority's basic financial statements include statements of net position, statements of revenues, expenses and changes in net position, statements of cash flows and notes to the financial statements. This report also includes other supplementary information in addition to the basic financial statements themselves.

The Authority's financial statements are prepared on an accrual basis in accordance with generally accepted accounting principles promulgated by the Governmental Accounting Standards Board (GASB).

**Government-wide financial statements:** The government-wide financial statements are designed to provide readers with a broad overview of the Authority's finances in a manner similar to private sector business.

**Statement of net position:** The statement of net position presents the financial position of the Authority. It presents information on the Authority's assets, deferred outflows of resources, and liabilities, with the difference between the three reported as net position. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position of the Authority is improving or deteriorating.

**Statement of revenues, expenses, and changes in net position:** The statement of revenues, expenses, and changes in net position presents information showing how the Authority's net position changed during the most recent fiscal year. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of related cash flows. Revenues are recognized when earned, not when they are received. Expenses are recognized when incurred, not when they are paid. Thus, revenues and expenses are reported in this statement for some items that will result in cash flows in future fiscal periods (e.g. accrued wages).

**Statement of cash flows:** The statement of cash flows presents information on the effects changes in assets, liabilities and operations have on cash during the course of the fiscal year.

**Statement of fiduciary net position:** This statement presents the financial position of the Authority's OPEB Trust Fund. It presents information on the funds, assets, and liabilities, with the difference between two reported as net position held in trust for employees' post-retirement benefits.

**Statement of changes in fiduciary net position:** The statement presents information on the contributions, changes in the fair value of investments and expenses of the Authority's Other Post Employment Benefit (OPEB) Trust Fund.

**Notes to the financial statements:** The notes provide additional information that is essential to a full understanding of the data provided in the Authority-wide financial statements.

**Proprietary funds:** The Authority maintains proprietary funds. Enterprise funds are used to report functions presented as business-type activities, accounting for its suburban water, suburban wastewater, and city division operations.

**Other information:** In addition to the basic financial statements and accompanying notes, this report also presents certain required supplementary information concerning the Authority's obligation to provide pension benefits and OPEB for its employees.

## Financial Analysis

### Net Position (City Division):

A summary of the Authority's City Division Statements of Net Position at December 31 are presented as follows:

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Current Assets, Unrestricted	\$ 13,114,412	\$ 15,194,720	\$ 16,661,831
Non-current Assets:			
Restricted	53,358,211	52,012,045	58,956,009
Capital Assets, Net	1,071,187	1,436,157	1,738,299
Other Assets, Net	<u>248,035,503</u>	<u>248,921,598</u>	<u>244,834,004</u>
Total Assets	315,579,313	317,564,520	322,190,143
Deferred Outflows of Resources	<u>2,382,072</u>	<u>1,738,603</u>	<u>925,625</u>
Total Assets & Deferred Outflows	\$ 317,961,385	\$ 319,303,123	\$ 323,115,768
Current Liabilities	\$ 22,369,076	\$ 2,753,830	\$ 4,073,094
Non-current Liabilities	<u>339,772,403</u>	<u>352,376,338</u>	<u>346,360,062</u>
Total Liabilities	\$ 362,141,479	\$ 355,130,168	\$ 350,433,156
Net Position:			
Net Investment in Capital Assets	\$ 936,731	\$ 1,014,508	\$ 1,007,853
Unrestricted	<u>(45,116,825)</u>	<u>(36,841,553)</u>	<u>(28,325,241)</u>
Total Net Position	<u>\$ (44,180,094)</u>	<u>\$ (35,827,045)</u>	<u>\$ (27,317,388)</u>

As would be expected for a water/sewer authority, the largest portion of the City Division's assets are Capital Assets and Other Assets (78.3%). These categories reflect the Authority's total investment in the leased Concession assets and the purchased rolling stock and other fleet of vehicles, less any depreciation and amortization.

- Current and noncurrent assets other than capital assets and other assets in 2017 decreased \$734,142, or 1.1%. This decrease was primarily due to the use of the funds set aside for capital projects.
- Capital assets, net and other assets, net in 2017 decreased by \$1,251,065, which was the net increase after considering new acquisitions offset by depreciation and amortization of \$5,887,307.
- Current liabilities in 2017 increased \$19,615,246 from 2016. This increase was primarily due to the current debt payment due in 2018.
- Noncurrent liabilities in 2017 decreased \$12,603,935 from 2016. The decrease was primarily due to the 2018 current debt payment due.

### Net Position (Suburban Division):

A three-year condensed summary of the Authority's Suburban Division Statements of Net Position as of December 31 of each year is presented as follows:

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Current assets, unrestricted	\$ 34,869,626	\$ 36,955,569	\$ 36,975,338
Non-current Assets:			
Restricted	21,445,778	8,441,763	8,585,979
Capital assets, net	198,417,167	189,152,068	184,958,647
Other assets, net	<u>3,538,758</u>	<u>4,149,187</u>	<u>4,666,540</u>
Total Assets	258,271,329	238,698,587	235,186,504
Deferred Outflows	<u>1,177,302</u>	<u>1,010,709</u>	<u>775,477</u>
Total Assets & Deferred Outflows	<u>\$ 259,448,631</u>	<u>\$ 239,709,296</u>	<u>\$ 235,961,981</u>

**LEHIGH COUNTY AUTHORITY**

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Current liabilities	\$ 6,456,654	\$ 5,769,138	\$ 4,626,636
Non-current liabilities	<u>55,686,331</u>	<u>42,524,204</u>	<u>43,408,229</u>
Total Liabilities	<u>\$ 62,142,985</u>	<u>\$ 48,293,342</u>	<u>\$ 48,034,865</u>
Net position:			
Net Investment in Capital Assets	\$ 161,373,199	\$ 151,420,469	\$ 146,734,208
Restricted	1,365,470	1,209,379	1,209,239
Unrestricted	<u>34,566,977</u>	<u>38,786,106</u>	<u>39,983,669</u>
Total Net Position	<u>\$ 197,305,646</u>	<u>\$ 191,415,954</u>	<u>\$ 187,927,116</u>

Again, as would be expected for a water/sewer authority, the largest portion of the Suburban Division's total assets & deferred outflows are Capital Assets and Other Assets (77.8%). These categories reflect the Authority's total investment in the capital and other assets (e.g. infrastructure, buildings, machinery and equipment), less any depreciation and amortization.

- Current, and noncurrent assets other than capital assets and other assets in 2017 increased \$10,918,072, or 24.1%. This increase was primarily due to unspent bond proceeds from the 2017 debt issuance.
- Capital assets, net and other assets, net in 2017 increased \$8,654,670 or 4.5%. This was due to capital spending on projects.
- Current liabilities in 2017 increased \$687,516 or 11.9% from 2016. This increase was primarily due to increases in trade and construction payables.
- Noncurrent liabilities in 2017 increased \$13,162,127 or 31.0% from 2016, as a result of the Authority issuing new Bonds in 2017.

#### **Changes in Net Position (City Division):**

A summary of the Authority's City Division Statement of Revenue, Expenses and Changes in Net Position for the years ended December 31 are presented as follows:

<b>Operating Revenues:</b>	<u>2017</u>	<u>2016</u>	<u>2015</u>
User Charges	\$ 32,802,663	\$ 31,599,212	\$ 26,878,499
Other Income & Rent	<u>93,262</u>	<u>74,245</u>	<u>85,530</u>
Total Operating Revenues	<u>32,895,925</u>	<u>31,673,457</u>	<u>26,964,029</u>
<b>Operating Expenses:</b>			
Salaries & Administrative	11,025,417	10,026,536	9,490,741
Utilities, Supplies & Services	5,836,761	5,387,867	5,698,303
Treatment & Transportation	10,096	11,011	11,043
Depreciation & Amortization	<u>5,887,307</u>	<u>5,834,285</u>	<u>5,530,078</u>
Total Operating Expenses	<u>22,759,581</u>	<u>21,259,699</u>	<u>20,730,165</u>
Operating Income	<u>10,136,344</u>	<u>10,413,758</u>	<u>6,233,864</u>
<b>Non-Operating Revenues (Expenses):</b>			
Tapping & Capital Recovery Fees	725,230	764,853	236,343
Meter Sales	17,187	13,319	13,272
Inspection, Plan Reviews & Project Reimbursements	1,132,206	1,396,588	1,295,847
Interest Earnings	341,431	386,754	424,171
Other Income	1,123,827	821,530	543,291

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Interest Expense	( 18,516,650)	( 18,280,300)	( 18,024,646)
Other Expense	<u>(3,312,624)</u>	<u>(4,026,159)</u>	<u>(2,047,608)</u>
Total Net Non-Operating Revenues (Expenses)	<u>(18,489,393)</u>	<u>(18,923,415)</u>	<u>(17,559,330)</u>
Increase (Decrease) in Net Position	<u>(8,353,049)</u>	<u>(8,509,657)</u>	<u>(11,325,466)</u>
Beginning Net Position	<u>(35,827,045)</u>	<u>(27,317,388)</u>	<u>(15,991,922)</u>
Ending Net Position	<u>\$ (44,180,094)</u>	<u>\$ (35,827,045)</u>	<u>\$ (27,317,388)</u>

Year over year changes are as follows:

- Operating Revenue for 2017 for the City Division was \$32,895,925, compared to previous year of \$31,673,457 with most of the increase attributable to a rate increase, higher signatory revenues, and rebalancing of signatory revenues following a large credit given in 2015.
- Operating expenses, net of depreciation and amortization were \$16,872,274 compared to previous year of \$15,425,414, an increase of \$1,446,860. The increase was due to inflationary effects on employee cost and purchased goods and services along with higher system maintenance spending.
- Operating Income, net of depreciation and amortization was \$16,023,651 compared to previous year of \$16,248,043, a decrease of \$224,392.

It should be noted that interest expense of \$18,516,650 in 2017 is comprised of actual interest paid (\$13,047,722), accretion (\$3,029,308), amortization of the SCA Payable (\$2,123,000), and amortization of bond discount (\$316,620).

The City Division's Annual Debt Service Coverage Ratio exceeded the indenture requirement of 1.20. The ratio for all years of operation has exceeded 1.20.

#### **Changes in net position (Suburban Division):**

A condensed summary of the Authority's Suburban Division Statements of Revenues, Expenses and Changes in Net Position for the years ended December 31 is presented below:

	<u>2017</u>	<u>2016</u>	<u>2015</u>
<b>Operating Revenues:</b>			
User Charges	\$ 21,432,163	\$ 21,433,507	\$ 20,097,733
Other Income & Rent	<u>480,732</u>	<u>254,430</u>	<u>415,874</u>
Total Operating Revenues	<u>21,912,895</u>	<u>21,687,937</u>	<u>20,513,607</u>
<b>Operating Expenses:</b>			
Salaries & Administrative	3,283,747	3,078,832	2,477,334
Utilities, Supplies & Services	9,864,615	10,273,359	9,889,553
Treatment & Transportation	3,516,548	3,021,234	2,347,975
Depreciation & Amortization	<u>7,294,644</u>	<u>7,088,899</u>	<u>6,867,560</u>
Total Operating Expenses	<u>23,959,554</u>	<u>23,462,324</u>	<u>21,582,422</u>
<b>Non-Operating Revenues (Expenses):</b>			
Tapping & Capital Recovery Fees	\$ 904,781	\$ 1,591,549	\$ 2,661,318
Meter Sales	112,468	168,365	88,082
Inspection, Plan Reviews & Project Reimbursements	166,877	191,932	208,681
Interest Earnings	289,520	210,148	164,251
Other Income	116,863	113,516	54,443



	<b><u>2017</u></b>	<b><u>2016</u></b>	<b><u>2015</u></b>
Interest Expense	( 1,576,214)	( 1,335,646)	( 1,420,974)
Other Expense	<u>(458,095)</u>	<u>(222,336)</u>	<u>(148,865)</u>
Total Net Non-Operating Revenues (Expenses)	<u>\$ (443,800)</u>	<u>\$ 717,528</u>	<u>\$ 1,606,936</u>
Increase (Decrease) in Net Position before Capital Contributions	<u>\$ (2,490,459)</u>	<u>\$ (1,056,859)</u>	<u>\$ 538,121</u>

**Capital Contributions:**

Grants	211,892	211,552	421,853
Capital Assets Provided by Developers & Other	<u>8,168,259</u>	<u>4,334,145</u>	<u>1,270,958</u>
Total Capital contributions	<u>8,380,151</u>	<u>4,545,697</u>	<u>1,692,811</u>
Increase (Decrease) in Net Position	<u>5,889,692</u>	<u>3,488,838</u>	<u>2,230,932</u>
Beginning Net Position, as restated	<u>\$ 191,415,954</u>	<u>\$ 187,927,116</u>	<u>\$ 185,696,184</u>
Ending Net Position	<u>\$ 197,305,646</u>	<u>\$ 191,415,954</u>	<u>\$ 187,927,116</u>

Changes in the Statements of Revenues, Expenses and Changes in Net Position were as follows:

- Operating Revenue in 2017 for the Suburban Division was \$21,912,895 compared to last year of \$21,687,937. The Suburban Division's Water Fund contributed \$9,054,114 in revenue compared to last year of \$8,815,007, while the Wastewater Fund added another \$12,858,781 compared to previous year of \$12,872,930. The primary driver for the increase in Wastewater Fund revenue was the rebalancing of signatory revenues following a large credit given in 2015.
- As an indication of the new growth in the Suburban Division territory, the following table illustrates the three year trend of Water System connections and Wastewater capacity sales to new and expanding users.

	<b><u>2017</u></b>	<b><u>2016</u></b>	<b><u>2015</u></b>
<b>Water System # of Units Connected:</b>			
Single Family Detached	99	95	92
Single Family Attached (Townhouses)	119	113	95
Apartments and Mobile Homes	97	288	0
Commercial	<u>22</u>	<u>34</u>	<u>14</u>
Total Water System Connections	<u>337</u>	<u>530</u>	<u>201</u>
<b>Wastewater Capacity Sales in Gallons:</b>			
Residential	53,297	87,161	39,025
Commercial	<u>22,179</u>	<u>14,634</u>	<u>234,367</u>
Total Sales	<u>75,476</u>	<u>101,795</u>	<u>273,392</u>

The table reflects an increase in new Water System connections for both detached and attached single family homes, apartments, and commercial properties. Wastewater capacity sales trended lower primarily as a result of residential growth concentration vs. commercial growth experienced in 2015.

- The Suburban Water System purchased 6 million gallons a day from the interconnection with its City Division in 2016. The purchase obligation grew to 7 mgd in 2017. This added capacity is projected to meet the Authority's needs for at least ten years.
- The Suburban Division's Annual Water System Operating Coverage, which is determined by dividing net operating revenues by annual debt service, was above the 110% required by the Suburban Water Bond Indenture.

## Changes in Net Position (Suburban Division Summary):

A summary of the Authority's Statement of Changes in Net Position Suburban Division is presented as follows:

### Statement of Changes in Net Position Year Ended December 31, 2017

	<u>Beginning Balance</u>	<u>Increased / (Decreased)</u>	<u>Ending Balance</u>
Net Investment in Capital			
Assets	\$ 151,420,469	\$ 9,952,730	\$ 161,373,199
Restricted Net Position	1,209,379	156,091	1,365,470
Unrestricted Net Position	<u>38,786,106</u>	<u>(4,219,129)</u>	<u>34,566,977</u>
Total Net Position	<u>\$ 191,415,954</u>	<u>\$ 5,889,692</u>	<u>\$ 197,305,646</u>

## Other Selected Information:

	<u>2017</u>	<u>2016</u>	<u>2015</u>
<b>Equivalent Fulltime Employees at Year-End</b>	155	148	148
<b>Units Served:</b>			
<u>Suburban Division:</u>			
Water – Residential	21,103	20,788	20,292
Water – Industrial & Commercial	<u>722</u>	<u>700</u>	<u>670</u>
Total Water Billable Units	21,825	21,488	20,962
Wastewater Collection – Residential	2,660	2,614	2,553
Wastewater Collection – Commercial	<u>126</u>	<u>125</u>	<u>124</u>
Total Wastewater Billable Units	2,786	2,739	2,677
<u>City Division:</u>			
Water:			
Water – Residential	41,620	41,615	41,588
Water – Industrial & Commercial	<u>5,150</u>	<u>5,147</u>	<u>5,160</u>
Total Water Billable Units	46,770	46,762	46,748
Wastewater:			
Wastewater – Residential	41,598	41,593	41,567
Wastewater – Commercial	<u>5,140</u>	<u>5,137</u>	<u>5,150</u>
Total Wastewater Billable Units	46,738	46,730	46,717
<b>Customers:</b>	<u>2017</u>	<u>2016</u>	<u>2015</u>
<u>Suburban Division:</u>			
Water – Residential	19,308	19,085	18,867
Water – Industrial & Commercial	<u>718</u>	<u>696</u>	<u>671</u>
Total Water Customers	20,026	19,781	19,538
Wastewater Collection – Residential	2,300	2,254	2,196
Wastewater Collection – Commercial	<u>122</u>	<u>121</u>	<u>120</u>
Total Wastewater Customers	2,422	2,375	2,316
<u>City Division:</u>			
Water – Residential	30,334	30,329	30,310
Water – Industrial & Commercial	<u>3,022</u>	<u>3,019</u>	<u>3,031</u>

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Total Water Customers	33,356	33,348	33,341
Wastewater Collection – Residential	30,312	30,307	30,289
Wastewater Collection – Commercial	<u>3,012</u>	<u>3,009</u>	<u>3,019</u>
Total Wastewater Customers	33,324	33,316	33,308

#### **Ratios**

##### **Suburban Division:**

##### **Ratio of Operating Revenue to:**

Operating Expenses, Net of Depreciation & Amortization	1.31	1.23	1.39
Total Assets	0.08	0.11	0.09
Total Net Position	0.11	0.14	0.11

##### **Debt Related Ratios:**

Net Position to Long-Term Debt	3.54	4.50	4.33
Current Ratio (Current Assets/Current Liabilities)	5.40	6.41	7.99

##### **City Division:**

##### **Ratio of Operating Revenue to:**

Operating Expenses, Net of Depreciation & Amortization	1.95	1.96	1.77
Total Assets (Annualized)	0.10	0.10	0.08
Total Net Position	N/A	N/A	N/A

##### **Debt Related Ratios:**

Net Position to Long-Term Debt	N/A	N/A	N/A
Current Ratio (Current Assets/Current Liabilities)	0.59	5.52	4.09

#### **Capital Contributions**

The Authority received grants related to construction in 2017 of \$211,892 compared to \$211,552 last year. Other major source of capital contributions is derived from developer installed Systems donated to the Authority as \$8,168,259 was received in 2017 compared to \$4,334,145 in 2016.

#### **Capital Assets & Service Concession Arrangement:**

The largest investment in the Authority's history occurred on August 7, 2013 with the financing of the acquisition of the City of Allentown's Water and Sewer System through a 50 year lease concession. The Authority's Net Capital Investment in intangible and other assets decreased from \$247,290,575 in 2016 to \$246,460,723 in 2017, and the City Divisions net capital assets decreased from \$1,436,157 in 2016 to \$1,071,187 in 2017. More detail on the Service Concession Arrangement can be found in Note 6 to the financial statements.

Net capital assets in the Suburban Systems increased by \$9,265,099. This increase can be attributed to increased accumulated depreciation which partially offset capital projects executed in 2017. More detail on the Authority's capital assets can be found in Note 5 to the financial statements.

**Debt Administration:**

In 2013 the Authority issued \$307,683,599 million in three series of bonds to fund the upfront payment to the City of Allentown, capital improvements, create various reserves necessary under the Indenture and to fund financing and other transaction costs related to the Concession. Increases to debt in 2016 consisted of additional draws on one of the Authority's Notes Payable and accreted interest on the 2013 Series B Capital Appreciation Revenue Bonds.

In 2017 the Authority issued Water Revenue Bond Series 2017 in the amount of \$14,900,000 to fund various capital projects, fund a deposit to the Debt Service Reserve Fund, and pay the costs related to the issuance of the Bonds.

See note 8 of the Notes to the Financial Statements for further detail on outstanding debt.

**Economic Factors and Rates:****Suburban Division:**

From the Suburban Division perspective, the Authority elected to increase water rates in 2017 to cover the additional debt service for the funding of capital projects. The Suburban Division's rates continue to be among the lowest in the Lehigh Valley region.

With higher treatment and transportation costs from the former City of Allentown water and wastewater departments and significant maintenance required on the Authority's interceptor System, annual Wastewater rate increases have been enacted since 2007. The last wastewater collection system rate increase was on January 1, 2013, a 5% increase.

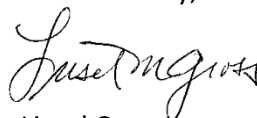
**City Division:**

City Division rates increased by 3.3% in January 2017 per the Concession agreement.

**Contacting the Authority's Financial Management:**

This financial report is designed to provide our customers, creditors and funding agencies with a general overview of the Authority's finances and to show the Authority's accountability for the money it receives. If you have any questions about this report or need additional information, contact Edward C. Klein, the Lehigh County Authority's Chief Financial Officer, P.O. Box 3348, Allentown, PA 18106.

Submitted by,



Liesel Gross

Chief Executive Officer



Edward C. Klein

Chief Financial Officer

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**  
**STATEMENTS OF NET POSITION**  
December 31, 2017 AND 2016

**- ASSETS AND DEFERRED OUTFLOWS OF RESOURCES-**

<b>Current Assets:</b>									
Cash and Cash Equivalents (Note 2)	\$	2,124,701	\$	3,347,384	\$	6,209,379	\$	9,267,852	\$
Certificates of Deposit (Note 2)		7,151,903		8,248,825		8,506,119		8,332,560	
Accounts Receivable:									
Customers		1,594,030		1,443,375		2,978,550		3,058,247	
Financing Contracts (Note 4)		-		-		310,150		303,306	
Others		205,592		177,841		107,047		66,704	
Due from (to) Other Funds (Note 9)		3,083,440		2,249,241		2,266,994		219,725	
Inventory		34,170		45,359		-		-	
Accrued Interest Receivable		854		11,737		16,896		10,183	
Prepaid Expenses		179,831		91,007		99,970		82,223	
Total Current Assets		14,374,521		15,614,769		20,495,105		21,340,800	
<b>Noncurrent Assets:</b>									
<b>Restricted:</b>									
Cash and Cash Equivalents (Note 2)		8,299,174		2,827,830		337,271		336,972	
Certificates of Deposit (Note 2)		25,508		925,498		-		-	
Investment U.S. Treasury Obligations (Note 2)		8,750,850		-		-		-	
Developer Escrow Deposit (Note 3)		4,017,759		4,351,110		-		-	
Accrued Interest Receivable		15,216		353		-		-	
Total Restricted Assets		21,108,507		8,104,791		337,271		336,972	
<b>Capital Assets: (Notes 1 and 5)</b>									
Land		1,979,296		1,704,406		1,802,997		1,733,997	
Construction in progress		3,818,074		5,015,672		9,012,605		6,644,610	
Wells & Reservoirs		9,107,259		8,966,440		3,494,643		3,494,643	
Transmission & Distribution Mains		77,398,129		68,692,948		-		-	
Services & Hydrants		16,871,358		14,592,810		-		-	
Interceptor & Collector Systems		-		-		38,035,012		37,723,778	
Building Structure & Appurtenances		22,847,846		22,377,675		53,561,605		53,038,870	
Metering System		8,641,522		8,484,524		421,474		421,474	
Equipment and Furnishings		6,620,625		6,282,968		22,187,756		21,884,835	
Capacity		1,207,901		1,207,901		2,442,164		1,116,214	
Less accumulated depreciation		(37,780,438)		(35,337,812)		(43,252,661)		(38,893,885)	
Total Capital Assets		110,711,572		101,987,532		87,705,595		87,164,536	
<b>Other Assets:</b>									
Long-Term Portion of Receivables - Financing Contracts (Note 4)		-		-		2,165,508		2,483,058	
Intangible Service Concession		-		-		-		-	
Arrangement (Note 6)		1,182,363		1,133,284		-		-	
OPEB Asset (Note 12)		-		-		-		-	
Other Assets		-		-		-		-	
Facilities Planning Costs		-		-		-		-	
(Net of Accumulated Amortization) (Note 7)		39,185		162,398		151,702		370,447	
Total Other Assets		1,221,548		1,295,682		2,317,210		2,853,505	
Total Noncurrent Assets		133,041,627		111,388,005		90,360,076		90,355,013	
<b>Total Assets</b>		<b>147,416,148</b>		<b>127,002,774</b>		<b>110,855,181</b>		<b>111,695,813</b>	
<b>Deferred Outflows of Resources</b>									
Pensions		641,532		468,237		322,941		235,706	
Refunding Loss on Bonds		212,829		306,766		-		-	
<b>Total Deferred Outflows</b>		<b>854,361</b>		<b>775,003</b>		<b>322,941</b>		<b>235,706</b>	
<b>Total Assets and Deferred Outflows of Resources</b>		<b>\$ 148,270,509</b>		<b>\$ 127,777,777</b>		<b>\$ 111,178,122</b>		<b>\$ 111,931,519</b>	

This statement is continued on the next page

The accompanying notes are an integral part of the financial statements.

LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA

STATEMENTS OF NET POSITION (CONTINUED)  
December 31, 2017 AND 2016

- LIABILITIES AND NET POSITION -

	Suburban Water Fund		Suburban Wastewater Fund		City Division Fund		Total	
	2017	2016	2017	2016	2017	2016	2017	2016
<b>Current Liabilities:</b>								
Accounts Payable - Trade	\$ 1,863,715	\$ 971,224	\$ 1,356,135	\$ 1,299,252	\$ 1,884,346	\$ 1,147,617	\$ 5,104,196	\$ 3,418,093
Accounts Payable - Capital	140,928	248,184	122,658	58,236	148,816	80,958	412,402	387,378
Accrued Interest Payable	241,716	159,936	3,346	3,346	1,087,310	1,087,309	1,332,372	1,250,591
Notes Payable (Note 8)	239,333	237,113	415,684	408,824	-	-	655,017	645,937
Revenue Bonds Payable (Note 8)	1,445,700	1,422,735	63,300	61,108	18,735,000	-	20,244,000	1,483,843
Developer Deposits and Other (Note 10)	192,998	544,928	6,019	6,019	14,456	21,667	213,473	572,614
Accrued Payroll & Other	190,395	185,331	174,727	162,902	499,148	416,279	864,270	764,512
Total Current Liabilities	4,314,785	3,769,451	2,141,869	1,999,687	22,369,076	2,753,830	28,825,730	8,522,968

<b>Noncurrent Liabilities:</b>								
Developer Deposits and Other (Note 10)	4,828,202	5,156,062	-	-	-	-	4,828,202	5,156,062
SCA Payable (Note 6)	-	-	-	-	44,248,993	42,629,993	44,248,993	42,629,993
Notes Payable (Note 8)	2,730,296	2,969,626	6,449,820	6,865,502	-	-	9,180,116	9,835,128
OPEB Liability	-	-	-	-	884,981	662,695	884,981	662,695
Net Pension Liability	822,165	567,970	413,870	285,911	3,052,774	2,108,923	4,288,809	2,962,804
Revenue Bonds Payable								
(Net of Premium/Discount) (Note 8)	38,875,220	25,043,420	1,566,758	1,635,713	291,585,655	306,974,727	332,027,633	333,653,860
Total Noncurrent Liabilities	47,255,883	33,737,078	8,430,448	8,787,126	339,772,403	352,376,338	395,458,734	394,900,542
<b>Total Liabilities</b>	51,570,668	37,506,529	10,572,317	10,786,813	362,141,479	355,130,168	424,284,464	403,423,510

<b>Net Position: (Notes 1 and 13)</b>								
Net Investment in Capital Assets	82,163,166	73,227,080	79,210,033	78,193,389	936,731	1,014,508	162,309,930	152,434,977
Restricted for Debt Service	1,365,470	1,209,379	-	-	-	-	1,365,470	1,209,379
Unrestricted	13,171,205	15,834,789	21,395,772	22,951,317	(45,116,825)	(36,841,553)	(10,549,848)	1,944,553
Total Net Position	96,699,841	90,271,248	100,605,805	101,144,706	(44,180,094)	(35,827,045)	153,125,552	155,588,909

<b>Total Liabilities and Net Position</b>	\$ 148,270,509	\$ 127,777,777	\$ 111,178,122	\$ 111,931,519	\$ 317,961,385	\$ 319,303,123	\$ 577,410,016	\$ 559,012,419
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The accompanying notes are an integral part of the financial statements.

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**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION  
For the Years Ended December 31, 2017 and 2016**

	Suburban Water Fund		Suburban Wastewater Fund		City Division Fund		Total	
	2017	2016	2017	2016	2017	2016	2017	2016
<b>OPERATING REVENUES:</b>								
Charges for Services	\$ 8,863,788	\$ 8,676,844	\$ 12,568,375	\$ 12,756,663	\$ 32,802,663	\$ 31,599,212	\$ 54,234,826	\$ 53,032,719
Rent	91,019	97,011	-	-	-	-	91,019	97,011
Other Income	99,307	41,152	290,406	116,267	93,262	74,245	482,975	231,664
Total Operating Revenues	9,054,114	8,815,007	12,858,781	12,872,930	32,895,925	31,673,457	54,808,820	53,361,394
<b>OPERATING EXPENSES</b>								
Salaries and Wages	1,042,565	1,028,004	424,208	440,614	3,756,508	3,665,069	5,223,281	5,133,687
General and Administrative	1,257,063	1,045,634	559,911	564,580	7,268,909	6,361,467	9,085,883	7,971,681
Utilities	420,812	426,230	226,197	204,648	1,903,666	1,863,839	2,550,675	2,494,717
Materials and Supplies	422,730	288,550	155,503	189,418	1,312,551	1,333,225	1,890,784	1,811,193
Miscellaneous Services	2,270,359	2,024,840	6,369,014	7,139,673	2,620,544	2,190,803	11,259,917	11,355,316
Treatment and Transportation	-	-	3,516,548	3,021,234	10,096	11,011	3,526,644	3,032,245
Depreciation and Amortization	2,695,548	2,587,430	4,599,096	4,501,469	5,887,307	5,834,285	13,181,951	12,923,184
Total Operating Expenses	8,109,077	7,400,688	15,850,477	16,061,636	22,759,581	21,259,699	46,719,135	44,722,023
<b>OPERATING INCOME (LOSS)</b>	945,037	1,414,319	(2,991,696)	(3,188,706)	10,136,344	10,413,758	8,089,685	8,639,371
<b>NONOPERATING REVENUES (EXPENSES):</b>								
Tapping and Capital Recovery Fees								
Meter Sales	455,405	426,177	449,376	1,165,372	725,230	764,853	1,630,011	2,356,402
Inspection, Plan Reviews, and Project Reimbursements	112,468	156,365	-	12,000	17,187	13,319	129,655	181,684
Investment Earnings	154,433	160,751	12,444	31,181	1,132,206	1,396,588	1,299,083	1,588,520
Interest Expense	127,486	91,619	162,034	118,529	341,431	386,754	630,951	596,902
Other Expense	(1,371,796)	(1,140,565)	(204,418)	(195,081)	(18,516,650)	(18,280,300)	(20,092,864)	(19,615,946)
Other Income	(427,991)	(157,016)	(30,104)	(65,320)	(3,312,624)	(4,026,159)	(3,770,719)	(4,248,495)
Total Nonoperating (Expenses)	109,343	112,426	7,520	1,090	1,123,827	821,530	1,240,690	935,046
	(840,652)	(350,243)	396,852	1,067,771	(18,489,393)	(18,923,415)	(18,933,193)	(18,205,887)
Increase (Decrease) in net position before capital contributions	104,385	1,064,076	(2,594,844)	(2,120,935)	(8,353,049)	(8,509,657)	(10,843,508)	(9,566,516)
<b>Capital Contributions:</b>								
Capital Grant	211,892	211,552	-	-	-	-	211,892	211,552
Capital Assets Provided by Developers and Others	6,112,316	3,348,066	2,055,943	986,079	-	-	8,168,259	4,334,145
Total Capital Contributions	6,324,208	3,559,618	2,055,943	986,079	-	-	8,380,151	4,545,697
<b>Increase (Decrease) in Net Position</b>	6,428,593	4,623,694	(538,901)	(1,134,856)	(8,353,049)	(8,509,657)	(2,463,357)	(5,020,819)
<b>Net Position at Beginning of Year</b>	90,271,248	85,647,554	101,144,706	102,279,562	(35,827,045)	(27,317,388)	155,588,909	160,609,728
<b>Net Position at End of Year</b>	\$ 96,699,841	\$ 90,271,248	\$ 100,605,805	\$ 101,144,706	\$ (44,180,094)	\$ (35,827,045)	\$ 153,125,552	\$ 155,588,909

The accompanying notes are an integral part of the financial statements.



**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**STATEMENTS OF CASH FLOWS  
Years Ended December 31, 2017 AND 2016**

	Suburban Water Fund		Suburban Wastewater Fund		City Division Fund		Total	
	2017	2016	2017	2016	2017	2016	2017	2016
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>								
Cash Received From Customers	\$ 8,713,133	\$ 8,608,912	\$ 12,918,435	\$ 12,292,289	\$ 32,057,170	\$ 31,340,407	\$ 53,688,738	\$ 52,241,608
Cash Payments To Suppliers For Goods And Services	(2,299,045)	(2,097,850)	(10,228,126)	(10,041,809)	(5,122,375)	(6,620,932)	(17,649,546)	(18,760,591)
Cash Payments To Employees For Services	(2,262,743)	(1,922,998)	(931,570)	(1,457,301)	(10,419,880)	(9,540,887)	(13,614,193)	(12,921,186)
Other Operating Cash Receipts	162,575	127,192	290,406	116,267	93,262	74,245	546,243	317,704
<b>Net Cash Provided By Operating Activities</b>	<b>4,313,920</b>	<b>4,715,256</b>	<b>2,049,145</b>	<b>909,446</b>	<b>16,608,177</b>	<b>15,252,833</b>	<b>22,971,242</b>	<b>20,877,535</b>
<b>CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES</b>								
Interest Paid on Revenue Bonds and Notes	-	-	-	-	(13,047,721)	(13,047,722)	(13,047,721)	(13,047,722)
Facility Improvement Payments	-	-	-	-	(4,586,867)	(9,464,852)	(4,586,867)	(9,464,852)
Upfront Service Concession Arrangement Payment	-	-	-	-	-	-	-	-
Payments to the City of Allentown	-	-	-	-	(504,000)	(500,000)	(504,000)	(500,000)
Transfers From Other Funds	-	-	-	-	2,881,468	2,447,637	2,881,468	2,447,637
Transfers To Other Funds	(834,199)	(855,368)	(2,047,269)	(1,592,269)	-	-	(2,881,468)	(2,447,637)
<b>Net Cash Provided By (Used in) Noncapital Financing Activities</b>	<b>(834,199)</b>	<b>(855,368)</b>	<b>(2,047,269)</b>	<b>(1,592,269)</b>	<b>(15,257,120)</b>	<b>(20,564,937)</b>	<b>(18,138,588)</b>	<b>(23,012,574)</b>
<b>CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES</b>								
Receipts/(Release) of Developer Deposits	340,669	60,967	-	-	(7,211)	(7,555)	333,458	53,412
Payments of Developer Deposits	(687,108)	(6,940)	-	(196)	-	-	(687,108)	(7,136)
Payments of Facilities Planning Costs	(20,431)	(71,338)	(130)	(3,700)	-	-	(20,561)	(75,038)
Acquisition and Construction of Property and Equipment	(5,163,628)	(4,175,541)	(2,865,337)	(2,375,156)	(121,398)	(182,582)	(8,150,363)	(6,733,279)
Cash Received from Tapping and Capital Recovery Fees	455,405	426,177	449,376	1,165,372	725,230	764,853	1,630,011	2,356,402
Cash Received from Meter Sales	112,488	156,365	-	12,000	17,187	13,319	129,655	181,684
Cash Received from Inspection, Plan Reviews, and Project Reimbursements	154,433	160,751	12,444	31,181	1,132,206	1,396,588	1,299,083	1,588,520
Other Capital Cash Receipts	321,235	323,978	41,838	1,090	1,123,827	876,924	1,486,900	1,201,992
Other Capital Cash Payments	(635,247)	(10,416)	-	(50,254)	(3,172,743)	(4,229,370)	(3,707,990)	(4,290,040)
Revenue Bond and Note Issuance Proceeds	15,292,006	-	-	394,994	-	-	15,292,006	394,994
Principal Paid On Revenue Bonds	(1,430,708)	(1,406,180)	(66,763)	(214,115)	-	-	(1,497,471)	(1,620,295)
Principal Paid On Revenue Notes	(237,110)	(233,816)	(408,822)	(404,383)	-	-	(645,932)	(638,199)
Interest Paid On Revenue Bonds and Notes	(1,202,612)	(1,050,935)	(204,418)	(195,081)	-	-	(1,407,030)	(1,246,016)
<b>Net Cash Provided by (Used in) Capital and Related Financing Activities</b>	<b>7,399,372</b>	<b>(5,826,928)</b>	<b>(3,041,812)</b>	<b>(1,638,248)</b>	<b>(302,902)</b>	<b>(1,367,823)</b>	<b>4,054,658</b>	<b>(8,832,999)</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>								
Maturities of Certificates Of Deposit	5,520,144	6,740,194	5,445,346	5,464,167	-	-	10,965,490	12,204,361
Purchase of Certificates Of Deposit	(3,525,605)	(6,410,202)	(5,618,502)	(6,090,512)	-	-	(9,144,107)	(12,500,714)
Purchase of U.S. Treasury Obligations	(8,784,195)	-	-	-	-	-	(8,784,195)	-
Maturities of U.S. Treasury Obligations	-	-	-	-	10,136,160	10,019,500	10,136,160	10,019,500
Interest Received On Investments	159,224	90,470	154,918	116,882	370,712	365,448	684,854	572,800
<b>Net Cash Provided by (Used in) Investing Activities</b>	<b>(6,630,432)</b>	<b>420,462</b>	<b>(18,238)</b>	<b>(509,463)</b>	<b>10,506,872</b>	<b>10,384,948</b>	<b>3,858,202</b>	<b>10,295,947</b>
<b>Net Increase (Decrease) in Cash</b>	<b>4,248,661</b>	<b>(1,546,578)</b>	<b>(3,058,174)</b>	<b>(2,830,534)</b>	<b>11,555,027</b>	<b>3,705,021</b>	<b>12,745,514</b>	<b>(672,091)</b>
<b>Cash:</b>								
Beginning	6,175,214	7,721,792	9,604,824	12,435,358	42,790,986	39,085,965	58,571,024	59,243,115
Ending	<b>\$ 10,423,875</b>	<b>\$ 6,175,214</b>	<b>\$ 6,546,650</b>	<b>\$ 9,604,824</b>	<b>\$ 54,346,013</b>	<b>\$ 42,790,986</b>	<b>\$ 71,316,538</b>	<b>\$ 58,571,024</b>
<b>Cash Consisted of the Following:</b>								
Cash and Cash Equivalents	\$ 2,124,701	\$ 3,347,384	\$ 6,209,379	\$ 9,267,852	\$ 8,928,442	\$ 8,918,821	\$ 17,262,522	\$ 21,534,057
Restricted Cash and Cash Equivalents	8,299,174	2,827,830	337,271	336,972	45,417,571	33,872,165	54,054,016	37,036,967
Total Cash and Cash Equivalents	<b>\$ 10,423,875</b>	<b>\$ 6,175,214</b>	<b>\$ 6,546,650</b>	<b>\$ 9,604,824</b>	<b>\$ 54,346,013</b>	<b>\$ 42,790,986</b>	<b>\$ 71,316,538</b>	<b>\$ 58,571,024</b>

This statement is continued on the next page

The accompanying notes are an integral part of the financial statements.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**STATEMENTS OF CASH FLOWS (CONTINUED)  
Years Ended December 31, 2017 AND 2016**

	Suburban Water Fund		Suburban Wastewater Fund		City Division Fund		Total	
	2017	2016	2017	2016	2017	2016	2017	2016
<b>Reconciliation Of Operating Income (Loss) To Net Cash Provided By Operating Activities</b>								
Operating Income (Loss)	\$ 945,037	\$ 1,414,319	\$ (2,991,696)	\$ (3,188,706)	\$ 10,136,344	\$ 10,413,758	\$ 8,089,685	\$ 8,639,371
Adjustments to Reconcile Operating Income (Loss) to Net Cash Provided by/(Used In) Operating Activities:								
Depreciation and Amortization	2,695,548	2,587,430	4,599,096	4,501,469	5,887,307	5,834,285	13,181,951	12,923,184
Change in Assets and Liabilities:								
(Increase)/Decrease in Accounts Receivable Customers	(150,655)	(67,932)	79,697	(877,912)	(360,475)	110,240	(431,433)	(835,604)
(Increase)/Decrease in Financing								
Contract Receivable	-	-	310,706	440,166	-	-	310,706	440,166
(Increase)/Decrease in Other Operating Receivable	(27,751)	(10,971)	(40,343)	(26,628)	(385,018)	(369,045)	(453,112)	(406,644)
(Increase)/Decrease in Inventory	11,189	18,556	-	-	-	-	11,189	18,556
(Increase)/Decrease in Prepaid Expense	(88,824)	46,925	(17,747)	33,276	(12,247)	(70,930)	(118,818)	9,271
Increase in OPEB Liability	-	-	-	-	222,286	196,612	222,286	196,612
Decrease in OPEB Asset	(49,079)	15,242	-	-	-	-	(49,079)	15,242
Increase/(Decrease) in Accounts Payable - Trade	892,491	576,289	56,883	479,888	736,729	(1,151,124)	1,686,103	(94,947)
Increase in Net Pension Liability	254,195	292,772	127,959	147,379	943,851	1,087,085	1,326,005	1,527,236
(Increase) in Pension Deferred Outflows	(173,295)	(218,951)	(87,235)	(110,218)	(643,469)	(812,978)	(903,999)	(1,142,147)
Increase/(Decrease) in Accrued Wages and Other	5,064	61,577	11,825	(489,268)	82,869	14,930	99,758	(412,761)
<b>Net Cash Provided By Operating Activities</b>	<b>\$ 4,313,920</b>	<b>\$ 4,715,256</b>	<b>\$ 2,049,145</b>	<b>\$ 909,446</b>	<b>\$ 16,608,177</b>	<b>\$ 15,252,833</b>	<b>\$ 22,971,242</b>	<b>\$ 20,877,535</b>
<b>Noncash Investing, Capital, and Financing Activities</b>								
Noncash Capital Activities, Contribution of Capital								
Assets From Developers and Others	\$ 6,112,316	\$ 3,348,066	\$ 2,055,943	\$ 986,079	\$ -	\$ -	\$ 8,168,259	\$ 4,334,145
Noncash Noncapital Activities, Accretion on Bonds Payable	-	-	-	-	3,029,308	2,862,150	3,029,308	2,862,150
Noncash Noncapital Activities, Change in Present Value of SCA Payable	-	-	-	-	2,123,000	2,053,809	2,123,000	2,053,809
Change in Fair Value of Investments	35,718	1,714	(403)	2,409	63,080	(19,500)	98,395	(15,377)

The accompanying notes are an integral part of the financial statements.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**STATEMENTS OF FIDUCIARY NET POSITION  
FIDUCIARY FUND  
DECEMBER 31, 2017 and 2016**

		Suburban Post Employment Health Fund	
		2017	2016
Assets			
	Investments:		
	Mutual Funds (Note 2)	\$ 3,127,964	\$ 2,703,553
	Total Assets	\$ 3,127,964	\$ 2,703,553
Net Position Restricted for			
Post Retirement Health Benefits		\$ 3,127,964	\$ 2,703,553

The accompanying notes are an integral part of the financial statements.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION  
FIDUCIARY FUND  
FOR THE YEARS ENDED DECEMBER 31, 2017 and 2016**

	Suburban Post Employment Health Fund	
	2017	2016
Additions:		
Contributions:		
Employer	\$ -	\$ -
Total Contributions	-	-
Investment Income:		
Net Increase in Fair Value of Investments	488,731	201,019
Less Investment Expense	(2,794)	(225)
Net Investment Income/(Loss)	485,937	200,794
Total Additions	485,937	200,794
Deductions:		
Reimbursement of Benefits Expense	61,526	42,676
Total Deductions	61,526	42,676
Net Increase/(Decrease) in Net Position	424,411	158,118
Net Position Restricted for Post Retirement Health Benefits:		
Beginning of Year	2,703,553	2,545,435
End of Year	\$ 3,127,964	\$ 2,703,553

The accompanying notes are an integral part of the financial statements.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**A. Reporting Entity**

The Lehigh County Authority (the Authority) was incorporated under the Pennsylvania Municipal Authorities Act, by the Lehigh County Commissioners in 1966, "... for the purpose of accumulating, conserving and distributing fresh water ..." Under the Act, an authority is an independent municipal corporation and a separate governmental agency of the state. In 1969, the County Commissioners advanced the Authority from a paper organization to an operating unit to plan and construct a water supply system and a wastewater interceptor system to serve residential, commercial and industrial users in the western part of Lehigh County. In 2013, the Authority started serving other areas of Lehigh County when it acquired the rights to lease and operate the City of Allentown's Water and Sewer Systems under a 50 year Concession and Lease Agreement (the Concession). As a result of this Agreement, the Authority created both City and Suburban Divisions, in recognition of the various agreements and financings, related to each entity.

The Authority currently provides two types of services to communities in the City Division. Through the Water Plant and Distribution System (the City Water System) the Authority serves 46,770 residential and business units in the City of Allentown and supplies water under Municipal Services Agreements to Lehigh County Municipalities of South Whitehall, Hanover, Salisbury, Whitehall, Bethlehem and to the Suburban Division under a previously executed water supply agreement. Through the Sewer Utility System (the City Sewer System) the Authority provides sewage collection, treatment and disposal services to 46,738 residential and business units in the City of Allentown and to the Lehigh County Municipalities of Coplay-Whitehall, Emmaus, Hanover, Salisbury, Lower Macungie, South Whitehall and to the Suburban Division, under a previously executed sewer services agreement.

The Authority currently provides four types of service to communities in the Suburban Division. Through the Western Lehigh Interceptor System, the Authority provides sewage transportation service to the Townships of Lower Macungie, Lowhill, Upper Macungie, Upper Milford, and Weisenberg and the Boroughs of Alburtis, Emmaus and Macungie. The Authority owns and operates wastewater collection systems in the Townships of Upper Milford, Heidelberg, Lynn, North Whitehall and Weisenberg serving a total of 2,786 customers as of December 31, 2017. Through the Little Lehigh Relief Interceptor System, the Authority provides sewage transportation service to Salisbury and South Whitehall Townships along with the other users of the Western Lehigh Interceptor System excluding Emmaus. As of December 31, 2017 the Water System serves 21,825 residential and business units in the Lehigh County Municipalities of Upper and Lower Macungie, North Whitehall, Washington, Weisenberg, South Whitehall, Heidelberg, Lower Milford, Lowhill, Lynn, Salisbury and Upper Milford Townships and in Moore Township of Northampton County.

The accompanying financial statements include all funds which are "controlled by or are dependent on" the Authority. The funds included are the Suburban Water Fund, both operating and capital, the Suburban Wastewater Fund, both operating and capital for the Western Lehigh Interceptor System, Little Lehigh Relief Interceptor System, Wastewater Collector Systems in Upper Milford, Weisenberg, Washington, Lynn, Heidelberg and North Whitehall Townships, a Wastewater Treatment Plant and planning activity for providing wastewater service, and the City Division Fund, both operating and capital.

Accordingly, the accompanying financial statements do not include the financial activities of the County of Lehigh (the County), nor are the Authority's financial activities included in the County's financial statements, since each is considered a separate entity under the Governmental Accounting Standards Board (GASB) criteria.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

For purposes of financial reporting, the Authority is considered to be a related organization to the County. The criteria used in determining the scope of the reporting entity are outlined below.

The Authority members are appointed to five-year terms by the County Executive, with concurrence by the County Commissioners, in an authoritative, official capacity. After confirmation, only the Court of Common Pleas can remove a member for cause. While there is continuing communication with the County, there is little linkage to the elected County officials thereafter.

The management and employees of the Authority responsible for the operations of the Authority are appointed by and held accountable to the Authority. The County does not possess powers of appointment over any Authority employee.

The Authority reviews and approves all budgets, sets rates, and exercises control over facilities, property and policies relating to the services provided by the Authority. The County is under no obligation to finance operating deficits and does not have claim to any surpluses. The Authority has the power to issue bonds and other financing, with the County having no legal responsibility for debt issued by the Authority.

The accounting policies of the Lehigh County Authority conform to generally accepted accounting principles as established by the Governmental Accounting Standards Board. The following is a summary of the significant policies:

**B. Measurement Focus, Basis of Accounting and Financial Statement Presentation**

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and deferred outflows of resources, liabilities and deferred inflows of resources, and net position and disclosures at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

The financial statements are reported using the economic resources measurement focus and the accrual basis of accounting. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of timing of related cash flows. Grants and similar items are recognized as revenues as soon as all eligibility requirements imposed by the provider have been met.

Operating revenues and expenses are distinguished from non-operating items in the statement of revenues, expenses and changes in net position. Operating revenues and expenses result from providing services in connection with the Authority's principal ongoing operations. Principal operating revenues of the Authority are charges to customers for water use and wastewater collection, transmission and treatment. When calculating user fees charged to customers, the Authority includes a component for the repayment of principal on the Authority's outstanding debt. Operating expenses include the cost of providing water and wastewater services, administrative expenses and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as non-operating revenues and expenses. The principal non-operating revenues of the Authority are capital recovery fees, plan review and inspection fees and investment income. The principal non-operating expenses of the Authority include interest expense and cost of goods sold.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

Capital grant funding represents amounts received from capital project grants, which are restricted to capital acquisition or construction. The Authority recognizes capital grant funding when the grants are earned which is generally when the related capital expenditure is made.

The funds of the Authority are grouped in the financial statements in this report as follows:

1. Proprietary Funds:

Enterprise Funds - are used to account for business-like activities provided to the general public. These activities are financed primarily by user charges, and the measurement of financial activity focuses on net income measurement similar to the private sector. The reporting entity includes the following enterprise funds, which are reported as major funds:

Suburban Water Fund - Used to account for the operations of the suburban water supply and distribution system. The suburban water system is a public utility service, which is intended to be maintained on a self-supporting basis.

Suburban Wastewater Fund - Used to account for the operations of the suburban wastewater interceptor, collector systems, and treatment facilities. The suburban wastewater system is a public utility service, which intends to be maintained on a self-supporting basis.

City Division Fund – Used to account for the operations of the City Concessions System. The City Division Fund is a public utility service, which intends to be maintained on a self supporting basis. This fund was added in 2013 as a result of the Service Concession Arrangement discussed in Note 6.

2. Fiduciary Fund:

The Suburban Post-Employment Health Trust Fund was created in 2010 to accumulate assets to be used for payment of health benefits to qualified retirees.

**C. Budgets and Budgetary Accounting**

The Lehigh County Authority follows these procedures in establishing the annual budgets:

1. In November department heads develop a preliminary budget, including personnel needs, for all capital and operating programs and for all line items for the coming calendar year. Supporting detail provides justification for each budget component, including calculations, quotations, project timetables, outlines, etc.
2. The budget is given to the Authority Board in late November for review. A formal presentation is made the second week of December with final adoption at the Authority's final December meeting. The final copy of the budget includes an individual budget for City and Suburban Divisions, including Water and Wastewater Operating, and Water and Wastewater Capital sections. The officially adopted budget is the financial plan for the ensuing year.
3. Each month, a Budget Comparative Report is prepared. The report cites monthly and year-to-date activity as well as unused budgeted monies. All department heads are responsible for evaluating their areas for compliance with the budget and taking appropriate remedial action.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

4. The General Manager is authorized to transfer budgeted amounts between line items within any budget; however, any revisions that alter the total expenses or revenues of any fund must be approved by the Authority Board. For the year ended December 31, 2017, there were no budget amendments.
5. The level of control (level at which expenses may not exceed budget) is the individual budgets within each fund. Budgets lapse at year-end.
6. Budgets for the Enterprise Funds are adopted on a basis consistent with accounting principles generally accepted in the United States of America. The budgets of the Authority are maintained and are prepared using the accrual basis of accounting. Budgeted amounts are as originally adopted, as amended by the General Manager, or as amended by the Authority Board.

**D. Cash and Cash Equivalents**

For purposes of the statement of cash flows, the Authority considers all highly liquid investments, including investments in external investment pools and money market mutual funds as discussed in Note 2, with a maturity of three months or less when purchased to be cash equivalents.

Restricted Cash and Certificates of Deposit include escrow accounts established in the Authority's name for maintenance security by developers, funds held by the trustee in debt service accounts, and other special purpose trustee accounts which include unspent bond proceeds.

**E. Trade Receivables**

All trade receivables are shown net of an allowance for uncollectables, as applicable, trade receivables are evaluated for collectability and an allowance is established, as deemed necessary based on the best information available and in an amount that management believes is adequate. Trade receivables are written off when deemed uncollectible. Recoveries of trade receivables previously written off are recorded when received.

**F. Inventory**

Inventory of the Suburban Water Fund consists of meters and related components and is stated at cost (first-in, first-out). It is the policy of the Authority to expense all other materials and supplies on a current basis for all of the funds.

**G. Investments, External Investment Pools, Certificates of Deposit**

The Authority invests its idle funds in various instruments, including external investment pools which invest in government secured instruments and certificates of deposit with federally-insured financial institutions. The investments, as listed on the balance sheet, include an equity security held in escrow as security for Developer system extensions. This investment is valued at fair value. The Authority's investment in external investment pools, as discussed in Note 2, and government secured money market instruments are valued at fair value, or amortized cost, which approximates cost and is classified as cash and cash equivalents in the balance sheet. The Authority invests in both negotiable and non-negotiable certificates of deposit (CD) in federally insured financial institutions. Negotiable CD's are valued at fair value while non-negotiable CD's are valued at cost because they are considered non-participating contracts for which redemption terms do not consider market rates.



**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

**H. Capital Assets & Depreciation, and Service Concession Arrangement & Amortization**

The Authority uses a capitalization threshold of \$5,000 to record capital assets purchased and constructed. The expenses are recorded at cost including any liability for contract retainage and construction costs payable. In addition, the Authority included any water rights associated with a project as part of the cost of that project and depreciated them accordingly. Intangible assets acquired in the Service Concession Arrangement are amortized over 50 years. Intangible assets with an indefinite life are not subject to amortization. The construction accounts have also been charged with applicable administrative expenses.

Contributed assets are carried at estimated market value at the time of contribution. Depreciation is determined using the straight-line method based upon the following estimated useful lives:

	<u>Years</u>
Wells	45
Transmission and Distribution Mains	100
Services	60
Fire Hydrants	65
Reservoirs	55
Pumping Station – Structures	45
Pumping Station - Electrical and Pumping Appurtenances	35
Pumping Station – Purification	33.5
Metering System	20
Transportation and Computer Equipment	5
Communication and Miscellaneous Equipment	5 - 20
Wastewater Collector System	100
Western Lehigh Interceptor System	50
Relief Interceptor Systems	100
Office Equipment and Furnishings	10
Office Building and Site Improvements	20 - 40
Water Capacity	40

Normal maintenance and repairs are charged to operations as incurred. Renewals and betterments are capitalized and depreciated based upon the expected life of such improvements.

Interest is capitalized on assets acquired with tax-exempt debt. The amount of interest to be capitalized is calculated by offsetting interest expense incurred from the date of the borrowing until completion of the project with interest earned on invested proceeds over the same period.

Non-exchange transactions, such as donated system assets and assets acquired by contributions, are recognized as capital contributions in accordance with GASB Statement No. 33.

**I. Facilities Planning Costs**

The Authority has adopted a policy of amortizing planning costs related to all Water and Wastewater activity. With the exception of the development of a Water System hydraulic model, a Financial Information System Selection, an Integrated Computer System study, a Methane Gas Energy Study and the costs of negotiating a lease agreement with the County of Lehigh for oversight of a wastewater treatment plant, all of which are being amortized over 7 years, and a future water supply drilling program and a wastewater hydraulic model, which are being amortized over 10 years, all other planning costs are amortized over a 3-year period.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

The period over which the costs are amortized and the amortization expense for 2017 and 2016 are as follows:

	<u>Amortization Period (Years)</u>	<u>2017 Amortization</u>	<u>2016 Amortization</u>
<b>Suburban Water Fund:</b>			
Facilities Planning Costs	3-10	\$ 143,644	\$ 174,932
<b>Suburban Wastewater Fund:</b>			
Facilities Planning Costs	3-7	<u>218,875</u>	<u>222,546</u>
Total Amortization		<u>\$ 362,519</u>	<u>\$ 397,478</u>

**J. Compensated Absences**

The Authority has an incentive excused absence policy, which annually compensates employees who are absent from work less than a specific number of days during the year. Excused absences include employee and dependent illness, medical or dental appointments, or any other valid reason approved by the employee's immediate supervisor. There is no carryover of the excused absence allowance.

With approval up to 25 days of unused vacation can accumulate for 18 months beyond the year in which it is earned.

The following table summarizes unused vacation liability:

	<u>2017</u>	<u>2016</u>
Balance at Beginning of Year	\$ 235,208	\$ 167,873
Additions	268,361	235,208
Retirements	<u>(235,208)</u>	<u>(167,873)</u>
Balance at End of Year	<u>\$ 268,361</u>	<u>\$ 235,208</u>

Unused vacation days are generally utilized within 12 months and are reported in current liabilities as a component of Accrued Payroll and Other.

**K. Deferred Outflows of Resources**

The statement of Net Position reports a separate section for deferred outflows of resources. This separate financial statement element represents consumption of net position that applies to a future period(s) and so will not be recognized as an outflow of resources (expense) until then. The Authority has two items that qualify for reporting in this category: deferred outflows related to pensions, and deferred outflows related to refunding losses on bonds.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

**L. Adoption of Governmental Accounting Standards Board Statements**

The Authority adopted the provisions of GASB Statement No. 74 "*Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*", GASB Statement No. 80 "*Blending Requirements for Certain Component Units-an amendment of GASB Statement No. 14*", GASB Statement No. 81, "*Irrevocable Split-Interest Agreements*", and GASB Statement No. 82 "*Pension Issues-an amendment of GASB Statements No. 67, No. 68, and No. 73*". The adoption of GASB Statement No. 74 resulted in modification of Note 12 of the financial statements and the addition of three schedules that are included as required supplementary information in the financial statements. The adoption of the remaining GASB Statements did not result in modification of previously reported amounts.

**M. Pending Changes in Accounting Principles**

In June 2015, the GASB issued Statement No. 75, "*Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*". The Authority is required to adopt statement No. 75 for its calendar year 2018 financial statements.

In November 2016, the GASB issued Statement No. 83, "*Certain Asset Retirement Obligations*". The Authority is required to adopt statement No. 83 for its calendar year 2019 financial statements.

In January 2017, the GASB issued Statement No. 84, "*Fiduciary Activities*". The Authority is required to adopt statement No. 84 for its calendar year 2019 financial statements.

In March 2017, the GASB issued Statement No. 85, "*Omnibus 2017*". The Authority is required to adopt statement No. 85 for its calendar year 2018 financial statements.

In May 2017, the GASB issued Statement No. 86, "*Certain Debt Extinguishment Issues*". The Authority is required to adopt statement No. 86 for its calendar year 2018 financial statements.

In June 2017, the GASB issued Statement No. 87, "*Leases*". The Authority is required to adopt statement No. 87 for its calendar year 2020 financial statements.

In April 2018, the GASB issued Statement No. 88, "*Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements*". The Authority is required to adopt statement No. 88 for its calendar year 2019 statements.

The Authority has not yet completed the various analysis required to estimate the financial statement impact of these new pronouncements.

**N. Reclassifications**

Certain prior year amounts have been reclassified to conform with current year presentation.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 2 – DEPOSITS AND INVESTMENTS**

The carrying amounts of the cash and investments at December 31 consist of the following:

	<b><u>2017</u></b>	<b><u>2016</u></b>
Demand deposit, money market, and savings accounts	\$ 66,849,224	\$ 48,956,734
Certificates of deposit, nonnegotiable	2,425,508	3,325,498
Overnight repurchase	2,067,929	7,327,838
Certificates of deposit, negotiable	13,258,022	14,181,385
U.S. Treasury Obligations	16,691,490	18,139,880
OPEB Mutual Funds	3,127,964	2,703,553
Pennsylvania School District Liquid Asset Fund	2,399,385	2,286,452
	<u>\$106,819,522</u>	<u>\$96,921,340</u>
Classification per statements of net position:		
Unrestricted current assets		
Cash and cash equivalents	\$ 17,262,522	\$ 21,534,057
Certificates of deposit	15,658,022	16,581,385
Restricted non-current assets		
Cash and cash equivalents	54,054,016	37,036,967
Certificates of deposit	25,508	925,498
Investment U.S. treasury obligations	16,691,490	18,139,880
OPEB Mutual Funds	3,127,964	2,703,553
	<u>\$106,819,522</u>	<u>\$96,921,340</u>

**Deposits:**

The Authority has a policy that requires all deposits and investments, other than U.S. government obligations, to be covered by Federal insurance or to be fully collateralized by the financial institution issuing the investment or acquiring the deposit. Deposits that are not insured by the Federal Deposit Insurance Corporation are collateralized using the pooled asset method to 100% of value as required by Pennsylvania Law.

The securities pledged as collateral are held by the trust department of a financial institution or by its agent in the financial institution's name. When certificates of deposit are purchased, the Authority or its agent either holds the actual certificate of deposit or receives a safekeeping certificate as its proof of ownership.

The Authority has custodial credit risk on cash and investment deposits. This is the risk that, in the event of a financial institution failure, the Authority's deposits may not be returned. At December 31, 2017 and 2016, the carrying amounts of the Authority's bank deposits were \$9,515,703 and \$16,385,656 respectively, and the bank balance of \$10,589,992 and \$16,410,091, respectively. As of December 31, 2017 and 2016 \$7,664,484 and \$12,584,594 of deposits were exposed to custodial risk because they were uninsured and collateralized with securities held by the pledging financial institution's trust department or agent, but not in the Authority's name. At December 31, 2017 and 2016 none of the Authority's investments were subject to custodial credit risk.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 2 – DEPOSITS AND INVESTMENTS (Continued)**

**Investments:**

Pennsylvania Law limits investment and deposit types the Authority may purchase as follows:

- (a) U.S. Treasury bills
- (b) Short-term obligations of the U.S. government or its agencies
- (c) Demand, savings and time deposits with institutions insured by the FDIC or the National Credit Union Share Funds or collateralized with securities as provided by law.
- (d) Obligations of the United States or any of its agencies, the Commonwealth of Pennsylvania or any of its agencies or any political subdivisions of the Commonwealth of Pennsylvania or any of its agencies providing the obligations are backed by the full faith and credit of the political subdivisions.

Pennsylvania School District Liquid Asset Fund

The Authority has funds invested with the Pennsylvania School District Liquid Asset Fund (PSDLAF), an investment pool managed by RBC Capital Markets. In 2001, PSDLAF amended its bylaws to allow Pennsylvania municipal entities besides school districts to participate in the fund. The purpose of the pool is to enhance investment potential through cash pooling while providing security and liquidity. Pool participants are allocated a pro-rata share of each investment purchased by the pool.

Purchased securities, placed in the name of PSDLAF, serve as collateral and are held in safekeeping at PNC Bank. A liquid fund and MAX fund require no advance notice for withdrawals; however, since the MAX fund does not provide check writing services, a higher rate of return is earned.

In addition, each member can purchase certificates of deposit and other investments through the pool. Security for collateralized certificate of deposit purchases are held at the Bank of New York or the Federal Reserve Bank of Boston. The PSDLAF fund is regulated by the Municipal Securities Rulemaking Board. Investment policy is guided by Pennsylvania statute. The Authority's fair value of its position in the pool is measured at amortized cost and is the same as the value of the pool shares.

International City Managers Association Trust Fund

The Authority entered into an agreement with the International City Managers Association (ICMA) to place its future obligation for Other Post-employment Benefits into an irrevocable trust fund.

The Authority invested the funds in a long-term growth mutual fund (98%) and a Low Duration Bond fund (2%). Since the funds are not part of a pool, they are held in the name of Lehigh County Authority.

Money Market Funds

The Authority invests in various money market mutual funds. The money market accounts are secured only by the investments within the fund, which are generally U.S. Government obligations.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 2 – DEPOSITS AND INVESTMENTS (Continued)**

Investment Maturities

As of December 31, 2017 and 2016, the Authority had the following investments and maturities:

<b><u>2017</u></b>						
<b><u>Investment Type</u></b>	<b><u>Cost</u></b>	<b><u>Fair Value</u></b>	<b><u>% of Total</u></b>	<b>Investment Maturities (In Years)</b>		<b>Rating as of Year-End</b>
				<b><u>Less than One Year</u></b>	<b><u>One-to-Five Years</u></b>	
Certificates of Deposit, negotiable	\$13,297,000	\$13,258,022	40.98%	\$7,247,009	\$6,011,013	N/A
U.S. Treasury Obligations	16,737,181	16,691,490	51.60%	10,545,016	6,146,474	N/A
Pennsylvania School District Liquid Asset Fund	<u>2,399,385</u>	<u>2,399,385</u>	<u>7.42%</u>	<u>2,399,385</u>	<u>-</u>	AAA Standard & Poors
Total	<u>\$32,433,566</u>	<u>\$32,348,897</u>	<u>100.00%</u>	<u>\$20,191,410</u>	<u>\$12,157,487</u>	

<b><u>2016</u></b>						
<b><u>Investment Type</u></b>	<b><u>Cost</u></b>	<b><u>Fair Value</u></b>	<b><u>% of Total</u></b>	<b>Investment Maturities (In Years)</b>		<b>Rating as of Year-End</b>
				<b><u>Less than One Year</u></b>	<b><u>One-to-Five Years</u></b>	
Certificates of Deposit, negotiable	\$14,197,000	\$14,181,385	40.98%	\$7,665,490	\$6,515,895	N/A
U.S. Treasury Obligation	18,263,544	18,139,880	52.42%	10,136,160	8,003,720	N/A
Pennsylvania School District Liquid Asset Fund	<u>2,286,452</u>	<u>2,286,452</u>	<u>6.60%</u>	<u>2,286,452</u>	<u>-</u>	AAA Standard & Poors
Total	<u>\$34,746,996</u>	<u>\$34,607,717</u>	<u>100.00%</u>	<u>\$20,088,102</u>	<u>\$14,519,615</u>	

**Interest Rate Risk:**

As a means of managing its exposure to fair value losses arising from increasing interest rates, the Authority's investment policy limits the value of investments with maturities to no greater than five years.

**Credit Risk:**

The Authority limits the type of investments permitted as defined in the Municipality Authorities Act and the related trust indentures. Permitted investments are defined above. The Authority's investment policy is consistent with these limitations.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 2 – DEPOSITS AND INVESTMENTS (Continued)**

**Fair Value:**

The Authority categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the assets. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs.

The Authority's investments in negotiable certificates of deposit are valued using quoted market prices (Level 1 inputs).

The Authority's investments in U.S. Treasury Obligations are valued using a matrix pricing model (Level 2 inputs).

The Authority's investments in OPEB Mutual Funds are valued using quoted market prices (Level 1 inputs).

**NOTE 3 – DEVELOPER ESCROW DEPOSIT**

The Authority requires developers to provide improvement security for system extensions. To meet this requirement, the majority of developers provide such security in cash or a letter of credit. With one larger developer, however, the Authority has agreed to hold 350,896 shares of stock as collateral. Although the stock certificate is issued in the developer's name, the Authority holds the original stock certificate. Each quarter the market value of the shares held is compared to total maintenance security required for all of this developer's extensions to ensure that enough security is being held. An offsetting liability for all developer deposits is shown as a current and non-current liability on the Statement of Net Position.

**NOTE 4 – RECEIVABLES – DEVELOPER CONTRACTS**

As of December 31, 2017 the Authority has five agreements with customers, which allow for the financing of wastewater capital recovery fees over a multi-year period. The purpose of these arrangements is to make it more affordable for high-volume wastewater users to locate in the Authority service area. The total amounts of unpaid fees have been recorded as current (\$310,150) and long-term receivables (\$2,165,508). At year-end 2016, there were five agreements and the unpaid fees were recorded as current (\$303,306) and long-term receivables (\$2,483,058). The Authority is recording interest income on the receivables in the year of receipt, which is not materially different than the accrual method.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 5 – CAPITAL ASSETS**

Capital assets of the Authority for 2017 and 2016 consist of the following:

	<u>Balance at 12/31/16</u>	<u>Additions</u>	<u>Retirements</u>	<u>Balance at 12/31/17</u>
<b>Suburban Water Fund</b>				
Non-depreciable Assets:				
Land	\$ 1,704,406	\$ 274,890	\$ -	\$ 1,979,296
Construction in progress	5,015,672	5,238,556	(6,436,154)	3,818,074
Total Capital Assets Not Being Depreciated	<u>6,720,078</u>	<u>5,513,446</u>	<u>(6,436,154)</u>	<u>5,797,370</u>
Depreciable Assets:				
Wells & Reservoirs	8,966,440	140,819	-	9,107,259
Transmission & Distribution Mains	68,692,948	8,705,181	-	77,398,129
Service & Hydrants	14,592,810	2,278,548	-	16,871,358
Building Structure & Appurtenances	22,377,675	470,171	-	22,847,846
Metering System	8,484,524	156,998	-	8,641,522
Equipment	6,282,968	446,935	(109,278)	6,620,625
Capacity	1,207,901	-	-	1,207,901
Total Capital Assets Being Depreciated	<u>130,605,266</u>	<u>12,198,652</u>	<u>(109,278)</u>	<u>142,694,640</u>
Less Accumulated Depreciation for:				
Wells & Reservoirs	(2,847,982)	(167,830)	-	(3,015,812)
Transmission & Distribution Mains	(11,417,925)	(728,871)	-	(12,146,796)
Service & Hydrants	(3,764,864)	(256,140)	-	(4,021,004)
Building Structure & Appurtenances	(7,482,985)	(591,750)	-	(8,074,735)
Metering System	(4,070,631)	(374,310)	-	(4,444,941)
Equipment	(5,097,883)	(401,169)	109,278	(5,389,774)
Capacity	(655,542)	(31,834)	-	(687,376)
Total Accumulated Depreciation	<u>(35,337,812)</u>	<u>(2,551,904)</u>	<u>109,278</u>	<u>(37,780,438)</u>
Total Net Capital Assets Being Depreciated	<u>95,267,454</u>	<u>9,646,748</u>	<u>-</u>	<u>104,914,202</u>
Total Capital Assets, Net	<u>\$ 101,987,532</u>	<u>\$ 15,160,194</u>	<u>\$ (6,436,154)</u>	<u>\$ 110,711,572</u>



**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 5 – CAPITAL ASSETS (Continued)**

	<b>Balance at 12/31/16</b>	<b>Additions</b>	<b>Retirements</b>	<b>Balance at 12/31/17</b>
<b>Suburban Wastewater Fund</b>				
Non-depreciable Assets:				
Land	\$ 1,733,997	\$ 69,000	\$ -	\$ 1,802,997
Capacity	1,116,214	1,690,500	(364,550)	2,442,164
Construction in progress	6,644,610	3,183,454	(815,459)	9,012,605
Total Capital Assets Not Being Depreciated	9,494,821	4,942,954	(1,180,009)	13,257,766
Depreciable Assets:				
Interceptor & Collector Systems	37,723,778	311,234	-	38,035,012
Wells & Reservoirs	3,494,643	-	-	3,494,643
Building Structure & Appurtenances	53,038,870	522,735	-	53,561,605
Metering System	421,474	-	-	421,474
Equipment	21,884,835	324,366	(21,445)	22,187,756
Total Capital Assets Being Depreciated	116,563,600	1,158,335	(21,445)	117,700,490
Less Accumulated Depreciation for:				
Interceptor & Collector Systems	(9,815,381)	(438,988)	-	(10,254,369)
Wells & Reservoirs	(412,604)	(63,539)	-	(476,143)
Building Structure & Appurtenances	(14,808,040)	(1,753,852)	-	(16,561,892)
Metering System	(228,845)	(12,083)	-	(240,928)
Equipment	(13,629,015)	(2,111,759)	21,445	(15,719,329)
Total Accumulated Depreciation	(38,893,885)	(4,380,221)	21,445	(43,252,661)
Total Net Capital Assets Being Depreciated	77,669,715	(3,221,886)	-	74,447,829
Total Capital Assets, Net	<u>\$ 87,164,536</u>	<u>\$ 1,721,068</u>	<u>\$ (1,180,009)</u>	<u>\$ 87,705,595</u>
	<b>Balance at 12/31/16</b>	<b>Additions</b>	<b>Retirements</b>	<b>Balance at 12/31/17</b>
<b>City Division Fund</b>				
Non-depreciable Assets:				
Construction in progress	\$ -	\$ -	\$ -	\$ -
Total Capital Assets Not Being Depreciated	-	-	-	-
Depreciable Assets:				
Transportation Equipment	2,473,706	233,385	(52,599)	2,654,492
Miscellaneous Equipment & Computers	248,981	-	-	248,981
Office Furniture & Equipment	23,116	-	-	23,116
Total Capital Assets Being Depreciated	2,745,803	233,385	(52,599)	2,926,589
Less Accumulated Depreciation for:				
Transportation Equipment	(1,195,269)	(528,935)	36,819	(1,687,385)
Miscellaneous Equipment & Computers	(98,196)	(49,017)	-	(147,213)
Office Furniture & Equipment	(16,181)	(4,623)	-	(20,804)
Total Accumulated Depreciation	(1,309,646)	(582,575)	36,819	(1,855,402)
Total Net Capital Assets Being Depreciated	1,436,157	(349,190)	(15,780)	1,071,187
Total Capital Assets, Net	<u>\$ 1,436,157</u>	<u>\$ (349,190)</u>	<u>\$ (15,780)</u>	<u>\$ 1,071,187</u>

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 5 – CAPITAL ASSETS (Continued)**

	<b>Balance at 12/31/16</b>	<b>Additions</b>	<b>Retirements</b>	<b>Balance at 12/31/17</b>
<b>Total Funds</b>				
Total Capital Assets Not Being Depreciated	\$ 16,214,899	\$ 10,456,400	\$ (7,616,163)	\$ 19,055,136
Total Capital Assets Being Depreciated	249,914,669	13,590,372	(183,322)	263,321,719
Total Accumulated Depreciation	(75,541,343)	(7,514,700)	167,542	(82,888,501)
Total Net Capital Assets Being Depreciated	174,373,326	6,075,672	(15,780)	180,433,218
Total Capital Assets, Net	<u>\$ 190,588,225</u>	<u>\$ 16,532,072</u>	<u>\$ (7,631,943)</u>	<u>\$ 199,488,354</u>
	<b>Balance at 12/31/15</b>	<b>Additions</b>	<b>Retirements</b>	<b>Balance at 12/31/16</b>
<b>Suburban Water Fund</b>				
Non-depreciable Assets:				
Land	\$ 1,620,385	\$ 84,021	\$ -	\$ 1,704,406
Construction in progress	1,504,873	4,300,049	(789,250)	5,015,672
Total Capital Assets Not Being Depreciated	3,125,258	4,384,070	(789,250)	6,720,078
Depreciable Assets:				
Wells & Reservoirs	8,810,950	155,490	-	8,966,440
Transmission & Distribution Mains	66,135,395	2,557,553	-	68,692,948
Service & Hydrants	13,817,079	775,731	-	14,592,810
Building Structure & Appurtenances	22,321,604	56,071	-	22,377,675
Metering System	8,337,266	147,258	-	8,484,524
Equipment	6,046,284	236,684	-	6,282,968
Capacity	1,207,901	-	-	1,207,901
Total Capital Assets Being Depreciated	126,676,479	3,928,787	-	130,605,266
Less Accumulated Depreciation for:				
Wells & Reservoirs	(2,681,123)	(166,859)	-	(2,847,982)
Transmission & Distribution Mains	(10,748,637)	(669,288)	-	(11,417,925)
Service & Hydrants	(3,533,591)	(231,273)	-	(3,764,864)
Building Structure & Appurtenances	(6,895,810)	(587,175)	-	(7,482,985)
Metering System	(3,698,766)	(371,865)	-	(4,070,631)
Equipment	(4,743,678)	(354,205)	-	(5,097,883)
Capacity	(623,709)	(31,833)	-	(655,542)
Total Accumulated Depreciation	(32,925,314)	(2,412,498)	-	(35,337,812)
Total Net Capital Assets Being Depreciated	93,751,165	1,516,289	-	95,267,454
Total Capital Assets, Net	<u>\$ 96,876,423</u>	<u>\$ 5,900,359</u>	<u>\$ (789,250)</u>	<u>\$ 101,987,532</u>

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 5 – CAPITAL ASSETS (Continued)**

	<b>Balance at 12/31/15</b>	<b>Additions</b>	<b>Retirements</b>	<b>Balance at 12/31/16</b>
<b>Suburban Wastewater Fund</b>				
Non-depreciable Assets:				
Land	\$ 1,726,197	\$ 7,800	\$ -	\$ 1,733,997
Capacity	1,116,214	111,114	(111,114)	1,116,214
Construction in progress	6,122,862	2,466,510	(1,944,762)	6,644,610
Total Capital Assets Not Being Depreciated	8,965,273	2,585,424	(2,055,876)	9,494,821
Depreciable Assets:				
Interceptor & Collector Systems	37,199,069	524,709	-	37,723,778
Wells & Reservoirs	3,494,643	-	-	3,494,643
Building Structure & Appurtenances	52,003,140	1,035,730	-	53,038,870
Metering System	249,298	172,176	-	421,474
Equipment	20,785,763	1,099,072	-	21,884,835
Total Capital Assets Being Depreciated	113,731,913	2,831,687	-	116,563,600
Less Accumulated Depreciation for:				
Interceptor & Collector Systems	(9,380,573)	(434,808)	-	(9,815,381)
Wells & Reservoirs	(349,065)	(63,539)	-	(412,604)
Building Structure & Appurtenances	(13,077,943)	(1,730,097)	-	(14,808,040)
Metering System	(220,468)	(8,377)	-	(228,845)
Equipment	(11,586,913)	(2,042,102)	-	(13,629,015)
Total Accumulated Depreciation	(34,614,962)	(4,278,923)	-	(38,893,885)
Total Net Capital Assets Being Depreciated	79,116,951	(1,447,236)	-	77,669,715
Total Capital Assets, Net	\$ 88,082,224	\$ 1,138,188	\$ (2,055,876)	\$ 87,164,536
<b>City Division Fund</b>				
Non-depreciable Assets:				
Construction in progress	\$ -	\$ -	\$ -	\$ -
Total Capital Assets Not Being Depreciated	-	-	-	-
Depreciable Assets:				
Transportation Equipment	2,346,518	182,582	(55,394)	2,473,706
Miscellaneous Equipment & Computers	248,981	-	-	248,981
Office Furniture & Equipment	23,116	-	-	23,116
Total Capital Assets Being Depreciated	2,618,615	182,582	(55,394)	2,745,803
Less Accumulated Depreciation for:				
Transportation Equipment	(819,579)	(403,387)	27,697	(1,195,269)
Miscellaneous Equipment & Computers	(49,179)	(49,017)	-	(98,196)
Office Furniture & Equipment	(11,558)	(4,623)	-	(16,181)
Total Accumulated Depreciation	(880,316)	(457,027)	27,697	(1,309,646)
Total Net Capital Assets Being Depreciated	1,738,299	(274,445)	(27,697)	1,436,157
Total Capital Assets, Net	\$ 1,738,299	\$ (274,445)	\$ (27,697)	\$ 1,436,157

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 5 – CAPITAL ASSETS (Continued)**

	<b>Balance at 12/31/15</b>	<b>Additions</b>	<b>Retirements</b>	<b>Balance at 12/31/16</b>
<b>Total Funds</b>				
Total Capital Assets Not Being Depreciated	\$ 12,090,531	\$ 6,969,494	\$ (2,845,126)	\$ 16,214,899
Total Capital Assets Being Depreciated	243,027,007	6,943,056	(55,394)	249,914,669
Total Accumulated Depreciation	(68,420,592)	(7,148,448)	27,697	(75,541,343)
Total Net Capital Assets Being Depreciated	174,606,415	(205,392)	(27,697)	174,373,326
Total Capital Assets, Net	<u>\$ 186,696,946</u>	<u>\$ 6,764,102</u>	<u>\$ (2,872,823)</u>	<u>\$ 190,588,225</u>

Under an agreement dated December 29, 1981, the Authority acquired 1,400,000 gallons per day of sewage treatment capacity ("grandfathered capacity") from the City of Allentown in addition to the amortized costs. This capacity was available to municipalities in Western Lehigh County for developments connected to the wastewater system. When a municipality required capacity to serve a business or residence, a fee was paid and recorded as a sale of capacity on the Authority's books. In addition, on an as-needed basis, the Authority purchases sewage treatment capacity from the City for non-grandfathered users ("General Pool Capacity"). This capacity is recorded on the books at the date of purchase and is reduced as such capacity is sold to the various municipalities and is included as a capital asset in the above table. At year-end 2017 and 2016 the total value of this capacity was \$2,442,164 and \$1,116,214 respectively.

**NOTE 6 – SERVICE CONCESSION ARRANGEMENT**

On August 7, 2013, the Lehigh County Authority ("LCA") entered into the Allentown Water and Sewer Utility System Concession and Lease Agreement (the "Service Concession Arrangement") with the City of Allentown, under which the LCA leased the Water and Sewer Utility Systems and retained the right and related obligation to operate those systems as the Concessionaire for 50 years. The LCA is required to operate and maintain the systems in accordance with the Service Concession Arrangement. The LCA entered into the Service Concession Arrangement to aid further regionalization of water and sewer services in the Lehigh Valley and to benefit the ratepayers with the overall organizational efficiencies. The LCA paid the City an upfront payment of \$211,332,218. The LCA also agreed to make required annual payments of \$500,000 starting in 2016, and every year thereafter, adjusted for inflation using the consumer price index. In addition to the required annual payments, the LCA must establish a Capex Fund (held in trust) no later than January 1, 2033. The LCA is required to make annual deposits into the Capex Fund in the amounts of \$1,000,000 for years 2033 to 2042, \$2,000,000 for years 2043 to 2052, and \$3,000,000 for years 2053 to 2062, adjusted for inflation using the consumer price index. These funds can be withdrawn by the LCA to pay costs incurred with respect to major capital improvements meeting certain requirements of the concession agreement. On the reversion date of the Water and Sewer Utility System, any moneys or securities held in the Capex Fund shall be applied first to pay any unpaid termination compensation, AA-Compensation and Concession Compensation and any amount remaining shall be remitted to the City. In conjunction with the execution of the service concession arrangement capital assets with an approximate fair value of \$1,485,804 were conveyed to LCA from the City.

This transaction meets the criteria for reporting under Governmental Accounting Standards Board (GASB) Statement No. 60 "Accounting and Financial Reporting for Service Concession Arrangements".

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 6 – SERVICE CONCESSION ARRANGEMENT (Continued)**

As a result, an intangible asset (Service Concession Arrangement) of \$246,205,824, representing: I) the upfront payment, less the fair value of conveyed capital assets, II) the discounted future annual payments, and III) the discounted future Capex Fund funding requirements was recorded by LCA on the execution date. The intangible asset will be amortized on the straight line method over the life of the agreement (50 years). Cost of improvements to the facility during the term of the Service Concession Arrangement that increase capacity or efficiency of the facility are recorded as increases to the intangible asset and amortized systematically over the term of the arrangement. Costs of \$4,586,867 and \$8,990,398 were recorded as increases to the intangible asset in 2017 and 2016, respectively. Amortization expense in the amount of \$5,416,719 and \$5,318,077 was recognized in 2017 and 2016, respectively related to the intangible asset. The net book value of the asset was \$246,460,723 and \$247,290,575 at December 31, 2017 and 2016, respectively.

In addition to the intangible asset, LCA recorded an initial liability ("SCA Payable") of \$36,359,411 representing: I) the present value of future annual payments, and II) the present value of future Capex Fund deposit requirements on the execution date. This liability is adjusted annually to reflect the present value of the future payments. Interest expense of \$2,123,000 and \$2,053,089 was recognized in 2017 and 2016, respectively. The liability was \$44,248,993 and \$42,629,993 at December 31, 2017 and 2016, respectively.

As part of the Service Concession Agreement the LCA was required to offer employment to substantially all existing employees of the Water and Sewer System. The LCA was required to provide existing levels of certain benefits to these employees, including OPEB and Pension. This resulted in the adoption of a new OPEB plan in 2013 (Note 12) and the addition of new employees into the LCA Pension. The impact of the addition of these new employees into the plan resulted in an unfunded actuarial accrued liability of \$220,059 at August 8, 2013.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 7 – FACILITIES PLANNING COSTS**

Facilities Planning Costs for 2017 and 2016 consist of the following:

	<u><b>As of 12/31/16</b></u>	<u><b>Additions</b></u>	<u><b>Retirements</b></u>	<u><b>As of 12/31/17</b></u>
<b>Suburban Water Fund</b>				
Facilities Planning Costs	\$ 896,731	\$ 20,431	\$ (114,305)	\$802,857
Less Accumulated Amortization	<u>(734,333)</u>	<u>(143,644)</u>	<u>114,305</u>	<u>(763,672)</u>
Total Suburban Water Facilities Costs - Net	<u>162,398</u>	<u>(123,213)</u>	<u>-</u>	<u>39,185</u>
<b>Suburban Wastewater Fund</b>				
Facilities Planning Costs	1,078,201	130	(11,151)	1,067,180
Less Accumulated Amortization	<u>(707,754)</u>	<u>(218,875)</u>	<u>11,151</u>	<u>(915,478)</u>
Total Suburban Wastewater Facilities Planning Costs - Net	<u>370,447</u>	<u>(218,745)</u>	<u>-</u>	<u>151,702</u>
Total Facilities Planning Costs - Net	<u>\$ 532,845</u>	<u>\$ (341,958)</u>	<u>\$ -</u>	<u>\$ 190,887</u>
	<u><b>As of 12/31/15</b></u>	<u><b>Additions</b></u>	<u><b>Retirements</b></u>	<u><b>As of 12/31/16</b></u>
<b>Suburban Water Fund</b>				
Facilities Planning Costs	\$ 944,771	\$ 71,338	\$ (119,378)	\$ 896,731
Less Accumulated Amortization	<u>(678,779)</u>	<u>(174,932)</u>	<u>119,378</u>	<u>(734,333)</u>
Total Suburban Water Facilities Planning Costs - Net	<u>265,992</u>	<u>(103,594)</u>	<u>-</u>	<u>162,398</u>
<b>Suburban Wastewater Fund</b>				
Facilities & Planning Costs	1,107,917	3,700	(33,416)	1,078,201
Less Accumulated Amortization	<u>(518,624)</u>	<u>(222,546)</u>	<u>33,416</u>	<u>(707,754)</u>
Total Suburban Wastewater Planning Facilities Costs - Net	<u>589,293</u>	<u>(218,846)</u>	<u>-</u>	<u>370,447</u>
Total Planning Facilities Costs - Net	<u>\$ 855,285</u>	<u>\$ (322,440)</u>	<u>\$ -</u>	<u>\$ 532,845</u>

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 8 – LONG-TERM DEBT**

Long-term debt for 2017 and 2016 consists of the following:

	Balance Outstanding As of <u>12/31/16</u>	Additions / <u>Accretions</u>	<u>Retirements</u>	Balance Outstanding As of <u>12/31/17</u>	Principal Due Within One <u>Year</u>
<b>Suburban Water Fund</b>					
Water Revenue Bonds Series of 2010 A	\$ 11,590,000	\$ -	\$ -	\$ 11,590,000	\$ -
Water Revenue Bonds Series of 2011	659,940	-	(112,388)	547,552	107,340
Water Revenue Bonds Series of 2015	5,272,815	-	(1,021,120)	4,251,695	1,038,960
Water Revenue Bonds Series of 2015 A	8,943,400	-	(297,200)	8,646,200	299,400
Water Revenue Bonds Series of 2017	-	14,900,000	-	14,900,000	-
2007 State Pennw orks Note	1,986,995	-	(165,929)	1,821,066	169,281
2011 Pennsylvania Infrastructure Investment Authority Note	1,219,744	-	(71,181)	1,148,563	70,052
Subtotal	<u>\$ 29,672,894</u>	<u>\$ 14,900,000</u>	<u>\$ (1,667,818)</u>	<u>\$ 42,905,076</u>	<u>\$ 1,685,033</u>
Add Bond Premium	-	392,006	(6,533)	385,473	
Total Suburban Wastew ater Fund Debt	<u>\$ 29,672,894</u>	<u>\$ 15,292,006</u>	<u>\$ (1,674,351)</u>	<u>\$ 43,290,549</u>	
Less Current Maturities				(1,685,033)	
Net Suburban Wastew ater Fund Long-Term Debt				<u>\$ 41,605,516</u>	
<b>Suburban Wastewater Fund</b>					
2009 Pennsylvania Infrastructure Investment Authority Note	\$ 3,927,001	\$ -	\$ (234,834)	\$ 3,692,167	\$ 240,890
2011 Sew er Revenue Bonds Series A	1,696,821	-	(66,763)	1,630,058	63,300
2013 Pennsylvania Infrastructure Investment Authority Note	2,568,833	-	(136,414)	2,432,419	137,785
2015 Pennsylvania Infrastructure Investment Authority Note	778,492	-	(37,574)	740,918	37,009
Total Suburban Wastew ater Fund Debt	<u>\$ 8,971,147</u>	<u>\$ -</u>	<u>\$ (475,585)</u>	<u>\$ 8,495,562</u>	<u>\$ 478,984</u>
Less Current Maturities				(478,984)	
Net Suburban Wastew ater Fund Long-Term Debt				<u>\$ 8,016,578</u>	
<b>City Division Fund</b>					
2013 Water and Sew er Revenue Bonds, Series A	\$ 245,590,000	\$ -	\$ -	\$ 245,590,000	\$ -
2013 Water and Sew er Capital Appreciation Revenue Bonds, Series B	52,465,010	3,029,308	-	55,494,318	-
2013 Water and Sew er Revenue Bonds, Series C	18,735,000	-	-	18,735,000	18,735,000
Subtotal	<u>\$ 316,790,010</u>	<u>\$ 3,029,308</u>	<u>\$ -</u>	<u>\$ 319,819,318</u>	<u>\$ 18,735,000</u>
Less Bond Discount	(9,815,283)	-	316,620	(9,498,663)	
Total City Division Fund Debt	<u>\$ 306,974,727</u>	<u>\$ 3,029,308</u>	<u>\$ 316,620</u>	<u>310,320,655</u>	
Less Current Maturities				(18,735,000)	
Net City Division Fund Long-Term Debt				<u>\$ 291,585,655</u>	
Total Net Long-Term Debt				<u>\$ 341,207,749</u>	

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 8 – LONG-TERM DEBT (Continued)**

	Balance Outstanding As of 12/31/15	Additions / Accretions	Retirements	Balance Outstanding As of 12/31/16	Principal Due Within One Year
<b>Suburban Water Fund</b>					
Water Revenue Bonds					
Series of 2010 A	\$ 11,590,000	\$ -	\$ -	\$ 11,590,000	\$ -
Water Revenue Bonds					
Series of 2011	769,280	-	(109,340)	659,940	104,415
Water Revenue Bonds					
Series of 2015	6,281,055	-	(1,008,240)	5,272,815	1,021,120
Water Revenue Bonds					
Series of 2015 A	9,232,000	-	(288,600)	8,943,400	297,200
2007 State Pennw orks					
Note	2,149,641	-	(162,646)	1,986,995	165,931
2011 Pennsylvania Infrastructure					
Investment Authority Note	1,290,914	-	(71,170)	1,219,744	71,182
Total Suburban Water Fund Debt	<u>\$ 31,312,890</u>	<u>\$ -</u>	<u>\$ (1,639,996)</u>	<u>29,672,894</u>	<u>\$ 1,659,848</u>
Less Current Maturities				(1,659,848)	
Net Suburban Water Fund					
Long-Term Debt				<u>\$ 28,013,046</u>	
<b>Suburban Wastewater Fund</b>					
2009 Pennsylvania Infrastructure					
Investment Authority Note	\$ 4,157,973	\$ -	\$ (230,972)	\$ 3,927,001	\$ 234,836
2011 Sew er Revenue Bonds					
Series A	1,782,769	-	(85,948)	1,696,821	61,108
2011 Sew er Revenue Bonds					
Series B	128,167	-	(128,167)	-	-
2013 Pennsylvania Infrastructure					
Investment Authority Note	2,703,890	-	(135,057)	2,568,833	136,414
2015 Pennsylvania Infrastructure					
Investment Authority Note	421,852	394,994	(38,354)	778,492	37,574
Total Suburban Wastew ater Fund Debt	<u>\$ 9,194,651</u>	<u>\$ 394,994</u>	<u>\$ (618,498)</u>	<u>\$ 8,971,147</u>	<u>\$ 469,932</u>
Less Current Maturities				(469,932)	
Net Suburban Wastew ater Fund					
Long-Term Debt				<u>\$ 8,501,215</u>	
<b>City Division Fund</b>					
2013 Water and Sew er Revenue					
Bonds, Series A	\$ 245,590,000	\$ -	\$ -	\$ 245,590,000	\$ -
2013 Water and Sew er Capital					
Appreciation Revenue Bonds,					
Series B	49,602,860	2,862,150	-	52,465,010	-
2013 Water and Sew er Revenue					
Bonds, Series C	18,735,000	-	-	18,735,000	-
Subtotal	<u>\$ 313,927,860</u>	<u>\$ 2,862,150</u>	<u>\$ -</u>	<u>\$ 316,790,010</u>	<u>\$ -</u>
Less Bond Discount	(10,131,903)	-	316,620	(9,815,283)	
Total City Division Fund Debt	<u>\$ 303,795,957</u>	<u>\$ 2,862,150</u>	<u>\$ 316,620</u>	<u>306,974,727</u>	
Total Net Long-Term Debt				<u>\$ 343,488,988</u>	



**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 8 – LONG-TERM DEBT (Continued)**

A summary of the long-term payable is provided in the ensuing paragraphs.

**A. Suburban Division Water Fund**

On December 21, 2011, the Authority issued \$1,185,400 of 2011 Water Bonds to refinance the balance of the 2001 Pennvest loan and to cover financing costs. The maturity date for the new bonds remained at July 1, 2022 and carries a fixed interest rate of 2.75%. The loan is secured by a pledge of the gross receipts and revenues of the water system and resulted in a 2% present value savings of refunded principal.

On October 10, 2007 the Authority entered into an agreement with the Commonwealth of Pennsylvania for a “Pennworks” loan and grant. The \$3,000,000 loan was used to reimburse the Authority for a portion of the cost of various Water projects with a \$2,000,000 grant also available to cover additional expenditures. The loan that matures on November 1, 2027 are secured by water system revenues and carry a 2% interest rate.

On March 30, 2010, the Authority issued Series A taxable Build America Bonds in the amount of \$11,590,000 to be used to finance water capital projects over the next several years. The bond issue matures in November 2031 and carries a net effective interest rate of 3.75876% when considering a 35% subsidy interest expense return from the Federal government. Water system revenue serves as collateral for the bonds.

On May 20, 2015 the Authority issued Water Revenue Bond Series 2015 in the amount of \$6,486,000. The bonds were issued to currently refund the 2010 outstanding water revenue bonds Series AA bonds and to fund issuance costs. The bond carries a fixed interest rate of 1.6% per annum, payable commencing on November 1, 2015 and semi-annually thereafter on the interest payment date until November 1, 2020, at which time the fixed rate shall be reset by the Bank to a floating or variable interest rate equivalent to the rate which is 60% of the National Prime Rate of Interest as published in the Wall Street Journal. At no time and in no instance shall the variable interest rate exceed 2.75% during the variable rate period. The bond matures in November 2021 and is secured by a pledge of system revenues. The refunding decreased the Authority’s total debt service payments by \$755,492 and resulted in an economic gain of \$757,165.

In determining the variable interest rate for the issue the Authority used the National Prime Interest Rate as published in the Wall Street Journal as of December 31, 2017 to calculate an applicable effective rate of 2.7%.

On October 29, 2015 the Authority issued Water Revenue Bond Series A of 2015 in the amount of \$9,232,000. The bond was issued to currently refund the 2008 outstanding water revenue bond and to fund issuance costs. The bond carries a fixed interest rate of 2.41% per annum, payable commencing on May 1, 2016 and semi-annually thereafter on the interest payment date until November 1, 2023, at which time the fixed rate shall be reset to a floating or variable interest rate equivalent to the rate which is 66% of the 30 day London Inter Bank Offering Rate (“30 Day LIBOR) plus 135 basis points or its equivalent. At no time and in no instance shall the variable interest rate exceed 3.75% during the variable rate period. The bond matures in November 2026 and is secured by a pledge of system revenues. The refunding increased the Authority’s total debt service payments by \$719,340 and resulted in an economic loss of \$684,295.

In determining the variable interest rate for the issue the Authority used the 30 Day LIBOR as of December 31, 2017 to calculate an applicable effective rate of 2.33%.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 8 – LONG-TERM DEBT (Continued)**

On June 29, 2011, Pennvest approved a \$1,660,303 loan to the Authority for a Water Meter Replacement program. Terms of the loan provide that the Authority will be reimbursed up to the limit of the loan amount. Interest payments commenced on November 1, 2011. Principal payments began on October 1, 2012. The loan carries a 1% interest rate for the first five years and a 1.51% annual interest rate for the remainder of the 20 year term. The debt is secured by the project collateral.

On June 20, 2017, the Authority issued Water Revenue Bond Series 2017 in the amount of \$14,900,000. The bond was issued to fund capital projects under the Authority's Capital Improvements Program, fund a deposit to the Debt Service Reserve Fund, and pay the costs related to the issuance of the Bonds. Interest payments commenced on November 1, 2017 and are payable every May and November. Principal payments begin on November 1, 2020 and commence on November 1, 2047. The bonds carry fixed annual interest rates ranging from of 3% to 5%.

The schedule of principal maturity and annual debt service for the suburban water fund is as follows:

<b>Year</b>	<b>Principal Amount</b>	<b>Total Interest</b>	<b>Total Debt Service</b>
2018	\$ 1,685,033	\$ 1,500,010	\$ 3,185,043
2019	1,724,917	1,468,478	3,193,395
2020	2,081,153	1,436,287	3,517,440
2021	2,101,455	1,405,784	3,507,239
2022	2,147,519	1,351,168	3,498,687
2023-2027	11,646,872	5,888,087	17,534,959
2028-2032	11,853,127	3,168,309	15,021,436
2033-2037	2,710,000	1,438,492	4,148,492
2038-2042	3,185,000	965,924	4,150,924
2043-2047	<u>3,770,000</u>	<u>390,149</u>	<u>4,160,149</u>
	<u>\$ 42,905,076</u>	<u>\$ 19,012,688</u>	<u>\$61,917,764</u>

**B. Suburban Wastewater Fund**

On December 21, 2011, the Authority refinanced the balance of the 1997 Pennvest loan with the 2011 Sewer Series B bonds (\$868,900). The maturity date of September 1, 2016 remained the same, with the new bonds carrying a fixed interest rate 2.19%. The bonds are secured by the revenues collected in the Western Lehigh Interceptor System and the refunding resulted in a 2.88% present value savings.

On December 21, 2011, the balance of the 2000 Pennvest loan was refinanced by the 2011 Sewer Series A bonds. The new bonds (\$2,166,100) also provided additional funds to pay for a portion of the Vera Cruz sewer project and to cover bond issue financing costs. The funds are to be drawn down as needed by the Authority to fund the Vera Cruz project. Through December 31, 2015, \$2,048,006 was drawn down to the Authority. The maturity date for the new bonds is November 1, 2031. The revenues of the common rate collector systems are serving as loan collateral. The loan carries an interest rate of 2.25% for the first 5 years and a variable rate thereafter, which equates to 70% of the 10 year average prime rate with 3% minimum and 5.5% maximum rate caps.

On November 16, 2009, the Pennsylvania Infrastructure Investment Authority (Pennvest) approved a loan of \$5,878,847 to the Authority to fund the design and construction of a 3 million gallon flow equalization basin and pump station. The purpose of the project is to shave off and hold wet weather flows to address system capacity deficiencies during precipitation events. The loan carries an annual interest rate of 1.274% for the first five years and 2.547% for the remainder of the loan.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 8 – LONG-TERM DEBT (Continued)**

The loan is secured by a pledge of gross receipts and revenues obtained from users of the Western Lehigh Interceptor System. The Authority may not prepay at any time all or any portion of the unpaid principal without the prior written consent of Pennvest. As of December 31, 2012, the Authority received all (\$5,389,323) of the reimbursements for project expenditures. The Authority began paying both interest and principal on February 1, 2011.

On June 19, 2013 the Pennsylvania Infrastructure Investment Authority (Pennvest) approved a loan of \$2,931,170 to the Authority to fund the design and construction of a 40,000 gpd wastewater treatment plant to be built at Arcadia West to replace the existing plant. As of December 31, 2015 the Authority received all (\$2,931,170) of the reimbursement for project expenditures. The loan carries an interest rate of 1% for the first 5 years and 1.51% thereafter, for a period of 15 years.

On February 25, 2015 the Pennsylvania Infrastructure Investment Authority (Pennvest) approved a loan of \$1,000,000 to the Authority to fund the Wynnewood Terrace pump station and force main replacement. The loan carries an interest rate of 1% for the first 5 years and 1.743% thereafter, for a period of 15 years.

The schedule of principal maturity and debt service for the suburban wastewater fund is as follows:

<b>Year</b>	<b>Principal Amount</b>	<b>Total Interest</b>	<b>Total Debt Service</b>
2018	\$ 478,984	\$ 202,915	\$ 681,899
2019	491,634	206,115	697,749
2020	546,029	195,887	741,916
2021	549,034	184,072	733,106
2022	562,081	169,411	731,492
2023-2027	3,026,507	593,667	3,620,174
2028-2032	2,471,964	154,544	2,626,508
2033-2036	369,329	6,717	376,046
Total	<u>\$ 8,495,562</u>	<u>\$ 1,713,328</u>	<u>\$ 10,208,890</u>

**C. CITY DIVISION FUND**

On July 31, 2013, the Authority issued, in aggregate \$307,683,599 of Water and Sewer Revenue Bonds comprised of \$245,590,000 of Series 2013A Revenue Bonds, \$43,358,599 of Series 2013B Capital Appreciation Revenue Bonds and \$18,735,000 of Series 2013C Federally Taxable Revenue Bonds. The bonds were issued at a discount of \$10,923,458.

The 2013 bonds were issued to provide funding for i) a single, up-front concession and lease payment to the City of Allentown pursuant to the Allentown Water and Sewer utility system Concession and Lease Agreement, ii) projected capital improvements to the Concessioned System, iii) deposits to certain reserve and other funds, and iv) transaction costs and expenses incurred in connection with the acquisition of the Concessioned System and the issuance of the 2013 Bonds.

The 2013 Bonds were issued under and secured by a Trust Indenture between the Authority and Manufacturers and Traders Trust Company, the concession trustee. The 2013 Bonds are payable from and secured by a pledge and an assignment by the authority of all the concessionaire interest, including revenues derived from operating the Concessioned System certain service charges imposed by the Authority for use of the Concessioned System and certain payments received from the municipal customers of the Concessioned System.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 8 – LONG TERM DEBT (Continued)**

The 2013 Bonds are also secured by a Debt Service Reserve Fund initially funded at \$28,090,273 and held by the Concession Trustee and other funds including an Operations and Maintenance Reserve Fund and a Major Maintenance Reserve Fund in the amounts of \$9,199,515 and \$7,500,000 respectively. These funds are available to pay shortfalls in the scheduled debt service on the 2013 Bonds.

The Series 2013A bonds bear interest of 5% - 5.125% with final maturity on December 1, 2047. The Series 2013 Appreciation bonds bear interest of 3.21% - 6.21% with final maturity on December 1, 2038. The Series 2013C Federally Taxable bonds bear interest of 3.44% and mature on December 1, 2018.

The schedule of principal maturity and debt service for the City division is as follows:

<b>Year</b>	<b>Principal Amount</b>	<b>Total Interest</b>	<b>Total Debt Service</b>
2018	\$ 18,735,000	\$ 13,047,722	\$ 31,782,722
2019	422,231	12,431,007	12,853,238
2020	820,664	12,497,573	13,318,237
2021	1,186,420	12,611,817	13,798,237
2022	1,521,412	12,776,826	14,298,238
2023-2027	11,481,174	68,105,013	79,586,187
2028-2032	15,434,452	79,456,735	94,891,187
2033-2037	19,886,469	101,794,719	121,681,188
2048-2042	19,006,496	70,601,692	89,608,188
2043-2047	<u>231,325,000</u>	<u>31,982,938</u>	<u>263,307,938</u>
Total	<u>\$ 319,819,318</u>	<u>\$ 415,306,042</u>	<u>\$ 735,125,360</u>

**NOTE 9 – INTERFUND BALANCES**

During the course of its operations, the Authority has numerous transactions between funds to finance operations and provide services. The Suburban Water fund has financed the construction and expansion of the Authority's Operation Center and Information Technology Upgrades and is being reimbursed over time by the Suburban Wastewater fund for its share of the costs. Certain cost incurred by the City Division fund, were initially paid by the Suburban Water fund, and will be reimbursed to the Suburban Water fund from the City Division fund. For reporting purposes, the transactions of the Internal Service are included with the Suburban Water and Suburban Wastewater and City Division funds on a proportional basis. The interfund receivables and payables are as follows:

<b>Fund</b>	<b>2017</b>		<b>2016</b>	
	<b>Interfund Receivables</b>	<b>Interfund Payables</b>	<b>Interfund Receivables</b>	<b>Interfund Payables</b>
Enterprise Funds:				
City Division	\$ -	\$ 5,350,434	\$ -	\$ 2,468,966
Suburban Water	3,083,440	-	2,249,241	-
Suburban Wastewater	<u>2,266,994</u>	<u>-</u>	<u>219,725</u>	<u>-</u>
Total	<u>\$ 5,350,434</u>	<u>\$ 5,350,434</u>	<u>\$ 2,468,966</u>	<u>\$ 2,468,966</u>

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 10 – DEVELOPER DEPOSITS**

Developer Deposits represent funds received by the Authority from developers to cover the costs of plan reviews and project inspections and to ensure that infrastructure improvements are constructed in accordance with approved plans. Deposits for developments to be completed within one year are recorded as current liabilities in the amount of \$213,473 and \$572,614 as of December 31, 2017 and 2016, respectively. Deposits for developments not expected to be completed by the end of one year are recorded as long-term liabilities in the amount of \$4,828,202 and \$5,156,062 as of December 31, 2017 and 2016, respectively.

**NOTE 11 – COMMITMENTS & CONTINGENCIES**

In addition to the commitments disclosed in Note 6 related to the Service Concession Arrangement, the Authority as of December 31, 2017, through contractual agreements, had construction commitments of \$4,606,755 for various capital projects as compared to \$3,744,059 at year-end 2016. Operating and Capital reserves, construction note proceeds and grants will fund these expenditures.

**NOTE 12 – OTHER POSTEMPLOYMENT BENEFITS**

**A. Health & Welfare Plan For Suburban Employees (Suburban Plan)**

Suburban Plan Reporting:

*Plan Description:* The Authority through the Pennsylvania Municipal Health Insurance Cooperative offers a single employer defined benefit plan to eligible retirees for health insurance benefits. The Suburban Plan is reported as the Post Employment Health Trust Fund in the accompanying financial statements, and does not issue stand-alone statements.

Management of the Suburban Plan is vested in the Authority's nine members Board of Directors, who are appointed by the Lehigh County Executive and approved by the Lehigh County Commissioners.

*Suburban Plan Membership:* At December 31, 2017 Plan membership consisted of the following:

Inactive plan members or beneficiaries currently receiving benefit payments	18
Inactive plan members entitled to but not yet receiving benefit payments	-
Active plan members	16
Total	<hr/> 34

The Suburban Plan is closed to new entrants (employees) hired on or after January 1, 2005.

*Benefits Provided:* Any employee hired prior to January 1, 2005 and retiring with at least 10 years of service is eligible to receive medical and prescription drug coverage at age 65 (as a supplement to Medicare). This coverage will include the spouse of the retiree as long as the retiree is living. The authority to establish and amend the benefit terms of the Suburban Plan resides with the nine member Board of Directors.

*Contributions:* The authority to establish and amend the contribution requirements of the Authority and plan members also resides with the nine member Board of Directors. The Board establishes rates based on an actuarially determined rate. Based on the funded status of the Suburban Plan and the latest actuarial valuations neither the plan members or the Authority were required to make contributions for the year ended December 31, 2017.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 12 – OTHER POSTEMPLOYMENT BENEFITS (Continued)**

*Investments:* The Suburban Plan's policy in regard to the allocation of invested assets is established and may be amended by the nine member Board of Directors. It is the policy of the Board of Directors to pursue an investment strategy that reduces risk through diversification of the portfolio by investing in several mutual funds. The following is the Suburban Plan's target asset allocation as of December 31, 2017:

<u>Asset Class</u>	<u>Target Allocation</u>
Mutual funds	100%
Total	100%

For the year ended December 31, 2017, the annual money-weighted rate of return on investments, net of investment expense, was 18.18%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

See Note 2 to the financial statements for additional details on the plan's investments.

*Net OPEB Liability of the Suburban Plan:* The components of the net OPEB liability of the Suburban Plan at December 31, 2017, were as follows:

Total Plan OPEB Liability	\$ 2,018,060
Plan Fiduciary Net Position	3,127,964
Plan's Net OPEB Liability/(Asset)	<u>\$ (1,109,904)</u>
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability/(Asset)	155.0%

*Actuarial Assumptions:* The Suburban Plan's net OPEB liability was measured as of December 31, 2017, and the plan's total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of January 1, 2017. The actuary utilized update procedures to roll forward the Suburban Plan's total OPEB liability in the January 1, 2017 actuarial valuation to the December 31, 2017 measurement date.

The Suburban Plan's total OPEB liability in the January 1, 2017 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

Inflation	2.3 %
Salary Increases	5.0%, average, including inflation
Investment Rate of Return	8.0%, net of OPEB plan investment expense, including inflation
Healthcare Cost Trend Rates	(3.5%) for 2018 followed by 5% per year thereafter.
Cost Sharing with Inactive Plan Members	Eligible retirees who retired prior to January 1, 2005 contribute 50% of premiums, retirees who retire after January 1, 2005 contribute 21% of the premiums.

Mortality rates were based on the RP-2014 at 2006 Blue Collar Generational Tables using Scale MP-2017.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 12 – OTHER POSTEMPLOYMENT BENEFITS (Continued)**

The actuarial assumptions used in the January 1, 2017 valuation were based on historical results, as a recent experience study was not completed.

The long-term expected rate of return on the Suburban Plan's OPEB investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the target asset allocation as of December 31, 2017 are summarized in the following table:

<u>Asset Class</u>	<u>Long-Term Expected Real Rate of Return</u>
Mutual funds	6.0%

*Discount Rate:* The discount rate used to measure the Suburban Plan's total OPEB liability was 8.0%. The projection of cash flows used to determine the discount rate assumed that the Authority's contributions to the plan will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the Suburban Plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on Suburban Plan's investments was applied to all periods of projected benefit payments to determine the Suburban Plan's total OPEB liability.

*Sensitivity of the Suburban Plan Net OPEB Liability to Changes in the Discount Rate:* The following presents the net OPEB liability of the Suburban Plan, as well as what the Suburban Plan's net OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower (7.0%) or 1-percentage-point higher (9.0%) than the current discount rate:

	<u>1 % Decrease (7.0%)</u>	<u>Discount Rate (8.0%)</u>	<u>1% Increase (9.0%)</u>
Net OPEB Liability (Asset)	\$ (873,219)	\$ (1,109,904)	\$ (1,310,673)

*Sensitivity of the Suburban Plan Net OPEB Liability to Changes in the Healthcare Cost Trend Rates:* The following presents the net OPEB liability of the Suburban Plan, as well as what the Suburban Plan's net OPEB liability would be if it were calculated using healthcare cost trend rates that are 1-percentage-point lower ((4.5%) increasing to 4.0%) or 1-percentage-point higher ((2.5%) increasing to 6.0%) than the current healthcare cost trend rates:

	<u>1 % Decrease ((4.5%) increasing to 4.0%)</u>	<u>Discount Rate ((3.5%) increasing to 5.0%)</u>	<u>1% Increase ((2.5%) increasing to 6.0%)</u>
Net OPEB Liability (Asset)	\$ (1,334,557)	\$ (1,109,904)	\$ (843,997)

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 12 – OTHER POSTEMPLOYMENT BENEFITS (Continued)**

Employer Reporting:

*Funding Policy:* The contribution requirement was established through a resolution and may be amended at board discretion. For active employees, however, it is the board's opinion that coverage for existing retirees must be maintained. The plan currently requires eligible retirees to contribute 21% of the annual premium.

*Funding Status and Progress:* As of January 1, 2017, the most recent actuarial valuation date, the Suburban Plan was 140.79% funded. The actuarial accrued liability for benefits was \$1,920,239 and the actuarial value of assets was \$2,703,553, resulting in an unfunded actuarial accrued liability (UAAL) of (\$783,314). The Authority plans to reimburse itself semi-annually for its portion (79%) of benefit cost.

Payroll for 2017 of active employees covered by the Suburban Plan was \$1,378,259 and the ratio of UAAL to covered payroll is 56.83%.

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions on mortality and healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The schedule of funding progress, presented as required supplementary information following the notes to the financial statements, presents trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

*Annual OPEB Cost and Net Obligation:* The Authority's annual other postemployment benefit (OPEB) expense is calculated based on the annual required contribution of the employer (ARC), an amount actuarially determined in accordance with GASB statement #45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost each year and amortize any unfunded actuarial liabilities over a period not to exceed thirty years. The following table shows the components of the Authority's annual OPEB costs for Suburban Employees, contributions to the plan, and changes in the net OPEB asset:

	<u>2017</u>	<u>2016</u>
Annual Required Contribution	\$ (71,083)	\$ (11,227)
Interest on Net OPEB Asset	(92,703)	(68,912)
ARC Adjustment	<u>114,707</u>	<u>95,381</u>
OPEB Cost	(49,079)	15,242
Employer Contribution	<u>-</u>	<u>-</u>
Change in Net OPEB Asset	(49,079)	15,242
Net OPEB (Asset) Obligation – beginning of year	<u>(1,133,284)</u>	<u>(1,148,526)</u>
Net OPEB (Asset) Obligation – end of year	<u><u>\$(1,182,363)</u></u>	<u><u>\$(1,133,284)</u></u>

The Authority's annual OPEB cost, the % of annual OPEB cost contributed to the plan and the net OPEB asset were as follows:

<u>Year Ended</u>	<u>Annual OPEB Cost</u>	<u>% of Annual OPEB Cost Contributed</u>	<u>Net OPEB Obligation/(Asset)</u>
12/31/15	\$ 14,379	0%	\$ (1,148,526)
12/31/15	15,242	0%	(1,133,284)
12/31/17	(49,079)	0%	(1,182,363)



**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 12 – OTHER POSTEMPLOYMENT BENEFITS (Continued)**

*Actuarial Methods and Assumptions:* Projections of benefits for financial reporting purposes are based on the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

For the January 1, 2017 actuarial valuation, the Entry Age Normal cost method expressed as a level percent of pay was used. The actuarial assumptions also included a retirement age of 65. The UAAL is being amortized over a closed period of 30 years. The remaining amortization period at December 31, 2017 is 21 years.

**B. Health & Welfare Plan For City Division Employees (City Plan)**

*City Plan Description:* The Authority through a single employer defined benefit plan offers to eligible City Division retirees health insurance and prescription drug benefits in accordance with a memorandum of agreement with the Service Employees International Union Local 32BJ. The benefits provided to Other Key Employees hired, were the same as those provided to Union Employees. Any employee retiring with a minimum age of 55 and 20 years of service or retiring at the age of 60 with 10 years is eligible to receive medical and prescription drug coverage until they reach the age of 65. This coverage will include the spouse of the retiree until the retiree or spouse attains the age of 65 and dependent child coverage that ends when the dependent child reaches the age of 26 or the retiree reaches the age of 65. The plan does not issue a publicly available financial report.

*Funding Policy:* The plan requires eligible retirees with 15 years of service to contribute 25% of the annual premium and retirees with more than 10 years of service but less than 15 years of service to contribute 50% of the premium. The Authority funds the plan on a pay-as-you-go basis. For 2017, the Authority's contribution to the plan was \$11,677.

*Funding Status and Progress:* As of January 1, 2017, the most recent actuarial valuation date, the plan was 0% funded. The actuarial accrued liability for benefits was \$1,637,203 and the actuarial value of assets was \$0, resulting in an unfunded actuarial accrued liability (UAAL) of \$1,637,203.

Payroll for 2017 of active employees covered by the plan was \$3,370,706 and the ratio of UAAL to covered payroll is 48.57%.

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions on mortality and healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The schedule of funding progress, presented as required supplementary information following the notes to the financial statements, presents trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 12 – OTHER POSTEMPLOYMENT BENEFITS (Continued)**

*Annual OPEB Cost and Net Obligation:* The Authority's annual other postemployment benefit (OPEB) expense is calculated based on the annual required contribution of the employee (ARC), an amount actuarially determined in accordance with GASB statement #45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost each year and amortize any unfunded actuarial liabilities over a period not to exceed thirty years. The following table shows the components of the Authority's annual OPEB costs for City Division Employees, contributions to the plan, and changes in the net OPEB obligation:

	<u>2017</u>	<u>2016</u>
Annual Required Contribution	\$ 255,268	\$ 248,412
Interest on Net OPEB Obligation	24,851	18,643
ARC Adjustment	<u>(46,156)</u>	<u>(32,252)</u>
OPEB Cost	233,963	234,803
Employer Contribution	<u>11,677</u>	<u>38,191</u>
Change in Net OPEB Obligation	222,286	196,612
Net OPEB Obligation – beginning of year	<u>662,695</u>	<u>466,083</u>
Net OPEB Obligation – end of year	<u>\$ 884,981</u>	<u>\$ 662,695</u>

The Authority's annual OPEB cost, the % of annual OPEB cost contributed to the plan and the net OPEB obligation were as follows:

<u>Year Ended</u>	<u>Annual OPEB Cost</u>	<u>% of Annual OPEB Cost Contributed</u>	<u>Net OPEB Obligation</u>
12/31/15	226,816	11.96%	466,083
12/31/16	234,803	16.27%	662,695
12/31/17	233,963	4.99%	884,981

*Actuarial Methods and Assumptions:* Projections of benefits for financial reporting purposes are based on the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

For the January 1, 2017 actuarial valuation, the Entry Age Normal cost method expressed as a level percent of pay was used. The actuarial assumptions include a 3.75% investment rate of return, which is the expected long-term investment yield on the investments that are expected to be used to finance the payments of benefits and a health care cost trend rate of (-%) for 2018, 8.5% for 2019 and reduced by .25% per year thereafter to an ultimate level of 5%. Both the discount rate and the health care cost trend rate include an inflation component of 2.3%. The actuarial assumptions include 100% participation of eligible retirees, 80% of all future retirees are assumed to be married. The UAAL is being amortized over a closed period of 25 years. The remaining amortization period is 21 years at December 31, 2017.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 13 – NET POSITION**

The basic financial statements utilize a net position presentation. Net position is categorized as net investment in capital assets, restricted and unrestricted.

Net investment in capital assets is intended to reflect the portion of net position that are associated with non-liquid, capital assets, less outstanding capital asset related debt. Restricted assets are liquid assets generated from revenues that have third-party (statutory, bond covenant or water user) limitation on their use. Unrestricted net position are amounts that do not meet the definitions of “invested in capital assets” or “restricted assets” and are available for Authority operations.

It is the Authority’s policy to first use restricted assets prior to the use of unrestricted net position when an expenditure is incurred for purposes for which both restricted and unrestricted assets are available.

**NOTE 14 – DEFINED BENEFIT PENSION PLAN**

**A. General Information about the Pension Plan**

*Plan Description.* The Authority, through a January 2014 agreement, provides employee pension benefits through participation in the Pennsylvania Municipal Retirement System (PMRS). The PMRS was created by the Pennsylvania General Assembly in 1974 with the passage of the Pennsylvania Municipal Retirement Law 1974, P.L. 34, No. 15. PMRS administers pension plans on a contracted basis for any municipality or institution supported and maintained by a Pennsylvania municipality. This agent multiple-employer public employee retirement system maintains each municipality's account separately with that municipality's contributions and related employee contributions, and earnings segregated into separate accounts. PMRS issues a separate Comprehensive Annual Financial Report, which can be obtained by contacting the PMRS accounting office at P.O. Box 1165, Harrisburg, PA 17108-1165.

*Benefits Provided.* Benefit terms were established under the 2014 agreement between PMRS and the Authority, changes to benefit terms can only occur by modification of this agreement. Major provisions of the 2014 agreement include the following:

All full-time and permanent part-time Authority employees are required to participate in the System. Benefits vest after eight years of service. Employees can retire with an annual retirement benefit after 20 years of service provided age 55 has been attained, or at age 60.

The normal form of payment of retirement benefits is a monthly annuity available for the life of the retired employee. One and two-thirds percent of the employee's average salary for the three consecutive years of greatest compensation multiplied by the number of years of service, and any fraction thereof, is used to calculate the normal retirement benefit funded solely by the Authority's contributions. Supplemental benefits are derived from employee contributions and interest earnings of the fund. A retiree may elect to receive a reduced amount of benefit and provide a death benefit in the form of annuity or lump sum to the designated beneficiary. The plan also provides death and disability benefits for an active employee.

Depending upon the annual investment return, the plan may award excess interest earnings to participating municipalities. The municipalities have the option of either retaining such excess earnings or sharing the additional earnings with active employees and retirees. In all years when excess interest earnings have been awarded, the Authority has elected to pro-ratably share excess earnings resulting in a postretirement increase to retirees. Sharing of excess earnings is the only method available for increasing postretirement benefits.

The plan does not allow for any cost-of-living adjustments to an employee's retirement allowance subsequent to the employee's retirement date.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 14 – DEFINED BENEFIT PENSION PLAN (Continued)**

**A. General Information about the Pension Plan (Continued)**

*Employees Covered by Benefit Terms.* At December 31, 2016, and 2014, the following employees were covered by the benefit terms:

	12/31/16 Valuation	12/31/14 Valuation
Inactive plan members or beneficiaries currently receiving benefits	32	18
Inactive plan members entitled to but not yet receiving benefits	4	3
Active plan members	145	148
Total	181	169

*Contributions.* Required contributions to the plan are governed by the 2014 agreement. The PMRS Board will actuarially determine the normal cost of the benefits provided under the contract (2014 agreement) and any liability associated with the actuarial experience of such benefits which shall be contributed annually by the Authority. The PMRS Board shall determine and the Authority shall be charged an additional amount to be contributed annually toward a reserve account for any disability benefit which may be payable under the contract (2014 agreement). The amounts so determined shall be computed in accordance with the Municipal Pension Plan Funding Standard and Recovery Act, 53 P.S. §895.101 et seq., and the PMRL. Members shall contribute one percent of their compensation to fund the annuity. Members may optionally contribute up to, but no more than an additional ten percent of their compensation. For the years ended December 31, 2017 and 2016, the average active employee contribution rate was 1.0% of annual pay, and the Authority's average contribution rate was 12.61% and 10.12%, respectively, of covered annual payroll.

**B. Net Pension Liability**

The Authority's net pension liability was measured as of December 31, 2016 and 2015, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of December 31, 2016 and December 31, 2014, respectively. The actuary utilized update procedures to roll forward the total pension liability in the December 31, 2014 actuarial valuation to the December 31, 2015 measurement date.

*Actuarial assumptions.* The total pension liability in the December 31, 2016 and 2014 actuarial valuation were determined using the following actuarial assumptions:

	December 31, 2014 Valuation	December 31, 2016 Valuation
Investment rate of return	5.5%, net of pension plan investment expense, including inflation	5.25%, net of pension plan investment expense, including inflation
Projected salary increases	Age/Merit Scale including inflation ranging from 2.80% to 7.05%	Age/Merit Scale including inflation ranging from 2.80% to 7.05%
Inflation	3%	3%

Mortality rates Pre-Retirement for the December 31, 2016 and 2014 valuations were based on the RP-2000 Scale with 1 year set back for males and 5 year set back for females. Mortality rates Post-Retirement for the December 31, 2016 and 2014 valuations were based on the RP-2000 Sex-Distinct Mortality Table. The current mortality assumptions, while not reflecting projections for improvements are subject to experience review every four years at which time recommendations of changes to reflect changes in experience over those expected from the tables applied over the five year period preceding the experience analysis are received and reviewed by the Board. Such experience is required by State statute.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 14 – DEFINED BENEFIT PENSION PLAN (Continued)**

**B. Net Pension Liability (Continued)**

The actuarial assumptions used in the December 31, 2016 valuation were based on the PMRS Experience Study for the period covering January 1, 2009 through December 31, 2013 issued by the actuary in July 2015 as well as subsequent Board approved assumption changes.

The actuarial assumptions used in the December 31, 2014 valuation were based on the PMRS Experience Study for the period covering January 1, 2005 through December 31, 2008 issued by the actuary in July 2010 as well as subsequent Board approved assumption changes.

The PMRS system's long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimates of expected future real rates of return are developed for each major asset class, for the portfolio as a whole and at different levels of probability or confidence. There are four steps to the method:

- 1.) Expected future real rates of return are based primarily on the 20 year historic nominal rates of return as reflected by applicable return indexes and may be adjusted for specific asset classes if, in the Board's opinion, any such asset classes are expected in the future to significantly vary from its 20 year historical returns. These nominal rates of return further assume that investment expenses will be offset by the additional return performance derived from active investment management.
- 2.) The nominal rates of return by asset class are adjusted by a constant rate of expected future annual inflation rate of 3% to produce real rates of return.
- 3.) The real rates of return are further adjusted by weighting each asset class using the PMRS portfolio target asset allocations. The results from steps 1 through 3 are shown in the chart below.
- 4.) These weighted real rates of return are then subjected to a probability simulation to understand the likelihood of success in achieving various portfolio return levels. Based on the most recent asset allocation study conducted by Dahab Associates, the minimum acceptable confidence level for the PMRS Board has been determined to be 70%.

System Nominal and Real Rates of Return by Asset Class  
12/31/2016 Valuation

Asset Class	Target Allocation	Nominal Rate of Return	Long-Term Expected Real Rate of Return
Domestic Equities (large capitalized firms)	25.0%	9.4%	6.4%
Domestic Equities (small capitalized firms)	15.0%	10.0%	7.0%
International Equities (international developed markets)	15.0%	6.7%	3.7%
International Equities (emerging markets)	10.0%	10.9%	7.9%
Real Estate	20.0%	10.0%	7.0%
Fixed income	15.0%	5.4%	2.4%

System Nominal and Real Rates of Return by Asset Class  
12/31/2014 Valuation

Asset Class	Target Allocation	Nominal Rate of Return	Long-Term Expected Real Rate of Return
Domestic Equities (large capitalized firms)	25.0%	9.9%	6.9%
Domestic Equities (small capitalized firms)	15.0%	9.8%	6.8%
International Equities (international developed markets)	15.0%	7.0%	4.0%
International Equities (emerging markets)	10.0%	10.6%	7.6%
Real Estate	20.0%	10.1%	7.1%
Fixed income	15.0%	5.4%	2.4%

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 14 – DEFINED BENEFIT PENSION PLAN (Continued)**

**B. Net Pension Liability (Continued)**

Based on the four part analysis, the PMRS Board established the System's Long-Term Expected Rate of Return at 7.5%.

In addition to determining the System's Long-Term Expected Rate of Return, PMRS also develops a Long-Term Expected Rate of Return for individual participating municipalities. The Long-Term Expected Rate of Return for individual participating municipalities is also referred to as the Regular Interest Rate. Under the laws of the Commonwealth of Pennsylvania (Act 15 of 1974), the Board is obligated to apply the Regular Interest Rate to each of the individual participating municipalities' actuarial asset accounts held by PMRS. Therefore, under the law, the Long-Term Expected Rate of Return for individual participating municipalities is equal to the Regular Interest Rate. The rationale for the difference between the System's Long-Term Expected Rate of Return and the individual participating municipalities' Regular Interest Rate is described in the following section "*Discount rate*". As of December 31, 2016 and 2015, the Regular Interest Rate was 5.25% and 5.50%, respectively.

The System's policy in regards to the investment income allocation on invested assets is established and may be amended by the PMRS Board. Plan assets are managed on a total return basis with an emphasis on both capital appreciation as well as the production of income, in order to satisfy the short-term and long-term funding needs of PMRS.

*Discount rate.* While it is often common practice to establish an actuarial Discount Rate that is equal to the Long-Term Expected Rate of Return, PMRS is required by law (Act 15 of 1974) to establish a Discount Rate equal to the Regular Interest Rate. The PMRS Board establishes the Regular Interest Rate on the basis of expected stable and consistent earnings on investments to be applied to the accounts of the individual participating municipalities and includes the accounts of plan participants, municipalities, and plan retirees each year. The PMRS Board considers the following five quantitative factors in establishing the Regular Interest Rate:

- 1.) Retiree Plan liability as a percentage of total Plan liability,
- 2.) Active Plan participant liability as a percentage of total Plan liability,
- 3.) Smoothed Pension Benefit Guarantee Corporation (PBGC) annuity rates as a proxy for annuity purchase rates,
- 4.) PMRS System Long-Term Expected Rate of Return and,
- 5.) PMRS administrative expenses.

The PMRS Board may then adjust the Regular Interest Rate due to a variety of qualitative factors such as the desire to minimize Regular Interest Rate volatility, trending of PBGC annuity rates, total PMRS actuarial and market value funding ratios, feedback from existing PMRS municipalities, and recommendations from the System's investment and actuarial consultants. The Discount Rates adopted by the Board and used to measure the individual participating municipalities' total pension liability were 5.25% and 5.50%, for the December 31, 2016 and 2014 actuarial valuations, respectively.

The Regular Interest Rate / Discount Rate will likely be less than the System Long-Term Expected Rate of Return. Should the System experience a prolonged period of investment returns in excess of the Regular Interest Rate, the PMRS Board is authorized to allocate any applicable portion of such excess in accordance with PMRS Board policies in the form of Excess Interest as provided for in the law.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 14 – DEFINED BENEFIT PENSION PLAN (Continued)**

**B. Net Pension Liability (Continued)**

The projection of cash flows for each underlying municipal plan, used to determine if any adjustment to the Discount Rate was required (depletion testing”), used the following assumptions: 1.) member contributions will be made at the current contribution rate 2.) participating plan sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate, and 3.) the System’s Long-Term Expected Rate of Return will be used in the depletion testing of projected cash flows. Based on those assumptions, the PMRS pension plan’s fiduciary net position was projected to be available to make all projected future benefit payments of current plan members.

**C. Changes in the Net Pension Liability**

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a) - (b)
Balances at 12/31/2016 (based on 12/31/2015 measurement date)	\$ 22,434,490	\$ 19,471,686	\$ 2,962,804
Changes for the year:			
Service cost	1,452,861	-	1,452,861
Interest	1,276,753	-	1,276,753
Changes of benefits	-	-	-
Changes of assumptions	641,095	-	641,095
Differences between expected and actual experience	1,061,505	-	1,061,505
Contributions - employer	-	972,122	(972,122)
Contributions - member	-	526,823	(526,823)
Net investment income/(loss)	-	1,670,359	(1,670,359)
Benefit payments, including refunds of employee contributions	(915,177)	(915,177)	-
Administrative expense	-	(63,095)	63,095
Net changes	3,517,037	2,191,032	1,326,005
Balances at 12/31/17 (based on a 12/31/16 measurement date)	<u>\$ 25,951,527</u>	<u>\$ 21,662,718</u>	<u>\$ 4,288,809</u>

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 14 – DEFINED BENEFIT PENSION PLAN (Continued)**

**C. Changes in the Net Pension Liability (Continued)**

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at 12/31/2015 (based on 12/31/2014 measurement date)	\$ 20,173,343	\$ 18,737,775	\$ 1,435,568
Changes for the year:			
Service cost	1,488,350	-	1,488,350
Interest	1,163,405	-	1,163,405
Changes of benefits	-	-	-
Changes of assumptions	209,677	-	209,677
Differences between expected and actual experience	-	-	-
Contributions - employer	-	978,336	(978,336)
Contributions - member	-	507,893	(507,893)
Net investment income/(loss)	-	(99,517)	99,517
Benefit payments, including refunds of employee contributions	(600,285)	(600,285)	-
Administrative expense	-	(52,516)	52,516
Net changes	2,261,147	733,911	1,527,236
Balances at 12/31/16 (based on a 12/31/15 measurement date)	<u>\$ 22,434,490</u>	<u>\$ 19,471,686</u>	<u>\$ 2,962,804</u>

The December 31, 2015 measurement date reflects changes in assumptions for Projected salary increases for Age/Merit Scale ranging from 2.8% to 7.05%, and changes to Mortality rates Pre-Retirement RP-2000 Non-Annuitant table projected 15 years with Scale AA for males and a 5 year setback for females, Mortality rates Post-Retirement were based on the RP-2000 Annuitant table projected 5 years for males and projected 10 years for females with Scale AA.

The December 31, 2016 measurement date reflects a change in assumption related to a reduction in the discount rate from 5.50% to 5.25%



**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 14 – DEFINED BENEFIT PENSION PLAN (Continued)**

**C. Changes in the Net Pension Liability (Continued)**

*Sensitivity of the pension liability to changes in the discount rate.* The following tables present the net pension liability of the Authority, calculated using the discount rates of 5.25% and 5.50%, as well as what the Authority's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (4.25% and 4.50%) or 1-percentage-point higher (6.25% and 6.50%) than the discount rate utilized for the December 31, 2016 and 2014 actuarial valuations, respectively:

	1% Decrease (4.25%)	Discount Rate 12/31/16 Valuation (5.25%)	1% Increase (6.25%)
Authority's net pension liability 12/31/16	\$7,154,317	\$4,288,809	\$1,882,039

	1% Decrease (4.5%)	Discount Rate 12/31/14 Valuation (5.5%)	1% Increase (6.5%)
Authority's net pension liability 12/31/15	\$5,258,705	\$2,962,804	\$1,028,295

*Pension plan fiduciary net position.* Detailed information about the pension plan's fiduciary net position is available in the separately issues PMRS financial report.

**D. Pension Expense and Deferred Outflows of Resources Related to Pensions**

For the year ended December 31, 2017, the Authority recognized pension expense of \$293,845, \$147,919, and \$1,091,076 in the Suburban Water Fund, Suburban Wastewater Fund, and City Fund, respectively.

For the year ended December 31, 2016, the Authority recognized pension expense of \$260,254, \$131,010, and \$966,348 in the Suburban Water Fund, Suburban Wastewater Fund, and City Fund, respectively.

At December 31, 2017 and 2016 the Authority reported deferred outflows of resources related to pensions from the following sources:

	2017 Deferred Outflows of Resources	2016 Deferred Outflows of Resources
Differences between expected and actual experience	\$ 1,116,085	\$ 247,469
Changes in assumptions	706,767	183,467
Net difference between projected and actual earnings on pension plan investments	413,099	1,039,488
Contributions subsequent to the measurement date	<u>1,110,595</u>	<u>972,122</u>
Total	<u>\$ 3,346,546</u>	<u>\$ 2,442,546</u>

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 14 – DEFINED BENEFIT PENSION PLAN (Continued)**

**D. Pension Expense and Deferred Outflows of Resources Related to Pensions (Continued)**

The \$1,110,595 reported as deferred outflows of resources related to pensions resulting from the Authority contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ended December 31, 2018 financial statements. In 2017 the Authority recognized \$249,504, \$125,598, and \$926,432 in pension expense related to December 31, 2016 deferred pension outflows, in the Suburban Water, Suburban Wastewater, and City Division funds, respectively. Other amounts reported as deferred outflows of resources related to pensions will be recognized in pension expense as follows:

Year ended December 31:	
2018	\$ 481,533
2019	481,531
2020	473,195
2021	219,576
2022	310,683
Thereafter	269,433

**NOTE 15 – DEFERRED COMPENSATION PLAN**

In 1990, the Authority entered into an agreement with the International City Management Association (ICMA) to provide a Deferred Compensation Plan in accordance with the Internal Revenue Code, Section 457, on a voluntary basis to full-time employees. The plan permits employees to defer a portion of their salary until future years. The deferred compensation is only available to participants at employment termination, retirement or for an unforeseeable emergency. The Authority makes no contributions to the plan. In accordance with federal law, a trust fund was established for the deposit of Section 457 assets. The trust fund is for the exclusive benefit of plan participants and beneficiaries. Because the assets are not owned by the Authority but are held in a trust, the deferred compensation assets and related liabilities are not recorded in the Authority's financial statements. The Authority's fiduciary responsibilities are to submit participant payroll deductions and enrollment change forms to the plan administrator (Retirement Corporation). Other than reviewing quarterly statements for accuracy, the Authority has no other fiduciary responsibility. Investments are managed by the plan's trustee with various investment options available. The choice of the investment option(s) is made by the employee. Forty and thirty-nine employees contributed into the plan during 2017 and 2016 respectively.

**NOTE 16 – RISK MANAGEMENT**

The Authority joined the Pennsylvania Intergovernmental Risk Management Association (PIRMA) in August 1991, to obtain General, Public Officials' and Automobile Liability Coverage. PIRMA, which has operated since 1987, is a public entity risk pool providing liability insurance coverage to 622 Pennsylvania municipal entities as of December 31, 2017. In paying claims, the pool covers the first \$350,000 per claim. Thereafter, American Public Entity Excess Pool (APEEP) provides coverage of \$4,650,000 per claim and General Reinsurance Company and Market Reinsurance Company provide quota share coverage at \$5,000,000 per claim of excess coverage over APEEP for a total coverage of \$10,000,000 per claim. The intergovernmental agreement specifies that in the event a claim or claims exhausts total members' equity, plus excess insurance coverage, then payment for such claim shall be the obligation of the respective individual member. In 2016 and 2017 the Authority paid \$283,040 and \$297,581 to PIRMA as its share of liability insurance premiums, respectively.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 16 – RISK MANAGEMENT (Continued)**

The Authority has been a member of the Delaware Valley Workers' Compensation Trust (DVWCT) since 1993. The Trust, a risk sharing pool formed in 1992, is comprised of 79 municipal entities located primarily in Southeastern Pennsylvania. The DVWCT assumes the first \$750,000 of each occurrence with excess insurance providing coverage up to the PA Statutory limit. If reserve funds and surplus are exhausted by claims, the Trust Agreement allows the governing board to levy additional assessments against pool members. Any additional assessments would be equal to the ratio of the participant's annual contribution to the total annual contribution paid by all participants in the trust year in which a deficit occurred. The Trust's surplus position makes an assessment unlikely.

The Authority paid a net premium (after payroll audit) of \$186,981 in 2016 and a gross premium \$267,457 in 2017. As of January 1, 2017, the Authority had accrued \$28,547 in Rate Stabilization Fund (RSF) credits which were available to reduce the Authority's 2017 premium. Any unused RSF credits will be rolled over to 2018, and the Trust will add investment income to the unused balance. The Authority also received dividends from the Trust of \$7,476 in 2017 and \$6,949 in 2016.

The Authority offers employees health care coverage through a PPO (Preferred Provider Organization) Plan using the Pennsylvania Municipal Insurance Cooperative (PMHIC) to purchase such insurance. The purpose of the cooperative, which consists of 267 municipal entities as of October 1, 2017, is to control escalating health care premiums by allowing municipalities the potential for volume discounts. The pool utilizes an Administrative Services arrangement, which uses the insurer (Capital Blue Cross) only for network access and claims management. The pool is self-funding up to the first \$450,000 per claim with reinsurance available to cover costs in excess of the self-funded limit. Annually a reconciliation of premiums paid to claims incurred is developed and if the cooperative has favorable experience, a dividend is returned to those participants who paid more premium than claims incurred. The cooperative uses a third-party administrator to issue bills and act as the liaison and rate negotiator with the insurers. Authority health benefits payments for retirees and active employees, net of reimbursements and dividend returns, for the years ended December 31, 2017 and December 31, 2016 totaled \$888,092 and \$722,403, respectively.

The Authority also purchases property coverage through CNA, brokered through Murray Securus. For 2017 and 2016, insurance costs amounted to \$175,910 and \$177,000, respectively. All other risks of loss including employee bonding, group disability and life insurance are insured through commercial insurance. Settled claims resulting from these risks have not exceeded insurance coverage in any of the past four years.

**NOTE 17 – MAJOR CUSTOMER AND ECONOMIC DEPENDENCY**

Several service agreements specify that the Authority will provide wastewater service through use of the Western Lehigh and Little Lehigh Relief Interceptor Systems to ten municipalities. As part of this service, the Authority bills certain municipalities for their share of the City of Allentown's treatment and transportation costs and the operating costs of the Western Lehigh and Little Lehigh Relief Interceptor Systems. During 2017 and 2016, two of the municipal customers each provided in excess of 10% of the total operating revenues. Since any reduction in user discharges is offset by lower treatment and transportation costs, and all municipalities share in paying system costs, economic dependency of any one of the customers is absent.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**Notes to Financial Statements**

**NOTE 18 – SUBSEQUENT EVENT**

Lehigh County Authority has filed a dispute claim against the City of Allentown with respect to the handling of signatory revenues related to the related to the assignment of costs subsequently billed to the signatories in prior years. Additionally, a separate dispute claim has been filed against the City with respect to representations made during the course of negotiation on the concession agreement, particularly on the amount of revenues to be obtained from the signatories. Both disputes are following the dispute procedure outlined in the Concession Agreement.

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**REQUIRED  
SUPPLEMENTARY  
INFORMATION**

LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA

REQUIRED SUPPLEMENTARY INFORMATION  
SCHEDULE OF CHANGES IN THE AUTHORITY'S NET PENSION LIABILITY  
AND RELATED RATIOS  
LAST 10 FISCAL YEARS

	* 2017	* 2016	* 2015
Total Pension Liability			
Service Costs	\$ 1,452,861	\$ 1,488,350	\$ 677,165
Interest	1,276,753	1,163,405	1,038,585
Changes of Benefit Terms	-	-	-
Differences Between Expected and Actual Experience	1,061,505	-	329,959
Changes of Assumptions	641,095	209,677	-
Benefit Payments, Including Refunds of Member Contributions	(915,177)	(600,285)	(544,982)
Net Change in Total Pension Liability	3,517,037	2,261,147	1,500,727
Total Pension Liability - beginning	22,434,490	20,173,343	18,672,616
Total Pension Liability - ending (a)	<u>\$ 25,951,527</u>	<u>\$ 22,434,490</u>	<u>\$ 20,173,343</u>
Plan Fiduciary Net Position			
Contributions - Employer	\$ 972,122	\$ 978,336	\$ 365,907
Contributions - Member	526,823	507,893	473,935
Net Investment Income	1,670,359	(99,517)	947,378
Benefit Payments, Including Refunds of Member Contributions	(915,177)	(600,285)	(544,982)
Administrative Expense	(63,095)	(52,516)	(41,411)
Net Change in Plan Fiduciary Net Position	2,191,032	733,911	1,200,827
Plan Fiduciary Net Position - beginning	19,471,686	18,737,775	17,536,948
Plan Fiduciary Net Position - ending (b)	<u>\$ 21,662,718</u>	<u>\$ 19,471,686</u>	<u>\$ 18,737,775</u>
Authority's Net Pension Liability - ending (a) - (b)	<u>\$ 4,288,809</u>	<u>\$ 2,962,804</u>	<u>\$ 1,435,568</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	83.47%	86.79%	92.88%
Covered - Employee Payroll	\$ 8,807,193	\$ 8,763,140	\$ 2,314,192
Authority's Net Pension Liability as a Percentage of Covered-Employee Payroll	48.70%	33.81%	62.03%

\* - Information only available for three years. Future years will be added as information becomes available.

\*\* - The Authority had changes in assumptions related to mortality rates, retirement rates, and wage scales in the December 31, 2015 measurement date compared to previous measurement dates.

\*\*\* - The Authority had changes in assumptions related to the discount rate in the December 31, 2017 measurement date compared to previous measurement dates.

LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA

REQUIRED SUPPLEMENTARY INFORMATION  
SCHEDULE OF AUTHORITY CONTRIBUTIONS PENSION PLAN  
LAST 10 FISCAL YEARS

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Actuarially Determined Contribution	\$ 1,110,595	\$ 972,122	\$ 978,336	\$ 361,607	\$ 190,996	\$ 136,779	\$ 134,456	\$ 99,891	\$ 94,931	\$ 100,078
Contribution in Relation to the Actuarially Determined Contribution	1,110,595	972,122	978,736	365,907	190,996	136,779	134,456	99,891	94,931	100,078
Contribution Deficiency/(Excess)	\$ -	\$ -	\$ (400)	\$ (4,300)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered-Employee Payroll	\$ 8,807,193	\$ 9,608,052	\$ 8,763,140	*	\$ 2,220,914	*	\$ 2,563,288	*	\$ 2,352,616	*
Contribution as a percentage of Covered-Employee Payroll	12.61%	10.12%	11.17%	*	8.60%	*	5.25%	*	4.04%	*

Notes to Schedule:

Valuation Date:  
Actuarially determined contribution rates are calculated as of January 1 for the odd valuation year at least two years prior to the end of the fiscal year in which the contributions were reported.

Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method	Entry Age
Amortization Method	Level Dollar Closed
Remaining Amortization Period	9 years
Asset Valuation Method	Based Upon Municipal
Inflation	Reserves in PMRS (Fair Value)
Salary Increases	3.0%
Investment Rate of Return	Age/Merit Scale including
Pre-Retirement Mortality	inflation ranging from 3.0% to
Post-Retirement Mortality:	8.3%.
	5.5%, net of pension plan
	investment expense, including
	inflation.
	Males - RP 2000 with 1 year set
	back
	Females - RP 2000 with 5 year
	set back
	Sex distinct RP-2000
	Combined Mortality

\* - Information not available



**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**REQUIRED SUPPLEMENTARY INFORMATION  
SCHEDULE OF CHANGES IN THE SUBURBAN NET OPEB LIABILITY  
AND RELATED RATIOS  
LAST 10 FISCAL YEARS**

	* 2017
Total OPEB Liability Suburban Plan	
Service Cost	\$ 7,581
Interest	151,765
Changes of Benefit Terms	-
Differences Between Expected and Actual Experience	-
Changes of Assumptions	-
Benefit Payments	(61,525)
Net Change in Suburban Plan Total OPEB Liability	97,821
Suburban Plan Total OPEB Liability - Beginning	1,920,239
Suburban Plan Total OPEB Liability - Ending (a)	<u>\$ 2,018,060</u>
Suburban Plan Fiduciary Net Position	
Contributions - Employer	\$ -
Net Investment Income	485,937
Benefit Payments	(61,526)
Administrative Expense	-
Net Change in Suburban Plan Fiduciary Net Position	424,411
Suburban Plan Fiduciary Net Position - Beginning	2,703,553
Suburban Plan Fiduciary Net Position - Ending (b)	<u>\$ 3,127,964</u>
Suburban Plan Net OPEB Liability/(Asset) - Ending (a) - (b)	<u>\$ (1,109,904)</u>
Suburban Plan Fiduciary Net Position as a Percentage of the Total Suburban Plan OPEB Liability	155.00%
Covered-Employee Payroll Suburban Plan	\$ 1,045,824
Suburban Plan Net OPEB Liability/(Asset) as a Percentage of Covered-Employee Payroll	-106.13%

\* - Information only available for one year. Future years will be added as information becomes available.

LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA

REQUIRED SUPPLEMENTARY INFORMATION  
SCHEDULE OF CONTRIBUTIONS SUBURBAN OPEB PLAN

LAST 10 FISCAL YEARS

	*
	2017
Actuarially Determined Contribution	
Contribution in Relation to the Actuarially Determined Contribution	\$ -
Contribution Deficiency (Excess)	\$ -
Suburban Plan Covered-Employee Payroll	\$ 1,045,824
Contributions as a Percentage of Covered Employee Payroll	0.00%

Notes to Schedule:

Valuation Date:

Actuarially determined contribution rates are calculated as of January 1, two years prior to the end of the fiscal year in which contributions are reported.

Methods and assumptions used to determine contribution rates:

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level percentage of pay
Amortization Period	21 years
Asset Valuation Method	5-year smoothed market
Inflation	2.25%
Healthcare Cost Trend Rates	(3.5%) during 2018 and 5% per year thereafter
Salary Increases	5.00%
Investment Rate of Return	8.00%
Retirement Age	65
Mortality	RP-2014 at 2006 Blue Collar Generational Tables Using Scale MP-2017

\* - Information only available for one year. Future years will be added as information becomes available.

LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA

REQUIRED SUPPLEMENTARY INFORMATION  
SCHEDULE OF INVESTMENT RETURNS SUBURBAN OPEB PLAN

LAST 10 FISCAL YEARS

	<sup>*</sup> <u>2017</u>
Annual money-weighted rate of return, net of investment expense	18.18%

\* - Information only available for one year. Future years will be added as information becomes available.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**REQUIRED SUPPLEMENTARY INFORMATION  
OTHER POSTEMPLOYMENT BENEFITS (GASB #43 & #45)  
SCHEDULES OF FUNDING PROGRESS**

**Health & Welfare Plan For Suburban Employees**

<sup>1</sup> Actuarial Valuation Date	Actuarial Value of Assets (A)	Actuarial Accrued Liability (AAL) -Entry Age (B)	Unfunded AAL (UAAAL) (B-A)	Funded Ratio (A/B)	Covered Payroll (C)	UAAAL as a Percentage of Covered Payroll [(B-A)/C]]
01/01/11	\$1,974,410	\$ 2,043,446	\$ 69,036	96.62%	\$ 1,894,466	3.64%
01/01/14	2,534,503	2,220,252	(314,251)	114.15%	1,528,660	(20.56)%
01/01/17	2,703,553	1,920,239	(783,314)	140.79%	1,378,259	(56.83)%

**Health & Welfare Plan For City Division Employees**

<sup>1</sup> Actuarial Valuation Date	Actuarial Value of Assets (A)	Actuarial Accrued Liability (AAL) -Entry Age (B)	Unfunded AAL (UAAAL) (B-A)	Funded Ratio (A/B)	Covered Payroll (C)	UAAAL as a Percentage of Covered Payroll [(B-A)/C]]
08/08/13	\$ -	\$ 1,658,670	\$ 1,658,670	0%	\$ 1,325,125	125.17%
01/01/14	-	1,721,854	1,721,854	0%	1,325,125	129.94%
01/01/17	-	1,637,203	1,637,203	0%	3,370,706	48.57%

<sup>1</sup> Actuarial valuations are completed every three years.

Note the 01/01/17 valuations reflect changes in the discount rates, mortality rates, health care cost trend rates, and actuarial cost methods as compared to prior valuations.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**REQUIRED SUPPLEMENTARY INFORMATION  
OTHER POSTEMPLOYMENT BENEFITS  
SCHEDULES OF EMPLOYER CONTRIBUTIONS**

**Health & Welfare Plan For Suburban Employees**

<sup>1</sup> <u>Year Ended</u>	<u>Annual Required Contribution</u>	<u>Actual Employer Contributions</u>	<u>Percentage Contributed</u>	<u>Net Ending OPEB Liability/(Asset)</u>
12/31/12	\$ 83,675	\$ -	0%	\$ (1,293,589)
12/31/13	92,390	-	0%	(1,176,470)
12/31/14	(9,587)	-	0%	(1,162,905)
12/31/15	(10,366)	-	0%	(1,148,526)
12/31/16	(11,227)	-	0%	(1,133,284)

**Health & Welfare Plan For City Division Employees**

<sup>2</sup> <u>Year Ended</u>	<u>Annual Required Contribution</u>	<u>Actual Employer Contributions</u>	<u>Percentage Contributed</u>	<u>Net Ending OPEB Liability/(Asset)</u>
12/31/13	\$ 70,361	\$ 8,293	11.79%	\$ 62,068
12/31/14	220,231	14,317	6.50%	266,394
12/31/15	234,091	27,127	11.59%	466,083
12/31/16	248,412	38,191	15.37%	662,695
12/31/17	255,268	11,677	4.57%	884,981

<sup>1</sup> GASB #74 adopted in 2017, as such 12/31/17 information is provided in a separate schedule in accordance with the requirements of GASB #74.

<sup>2</sup> The 01/01/17 valuation reflects changes in the discount rate, mortality rate, health care cost trend rates, and actuarial cost methods as compared to prior valuations.

**OTHER  
SUPPLEMENTARY  
INFORMATION**

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**COMBINING SCHEDULE OF REVENUES, EXPENSES AND CHANGES IN NET POSITION  
SUBURBAN WASTEWATER FUND  
For the year ended December 31, 2017**

	Western Lehigh Interceptor System	West. Weisenberg Wastewater	Common Rate Wastewater Fund	Other Wastewater Funds	Total Wastewater Fund
<b>Operating Revenues</b>					
Charges for Services	\$ 5,422,457	\$ 284,361	\$ 744,556	\$ 6,117,001	\$ 12,568,375
Other Income	181,787	-	56,710	51,909	290,406
Total Operating Revenues	5,604,244	284,361	801,266	6,168,910	12,858,781
<b>Operating Expenses</b>					
Salaries and Wages	144,690	39,639	125,004	114,875	424,208
General and Administrative	222,068	28,219	94,305	215,319	559,911
Utilities	36,201	16,716	38,998	134,282	226,197
Materials and Supplies	27,156	16,558	45,873	65,916	155,503
Miscellaneous Services	456,822	27,573	120,483	5,764,136	6,369,014
Treatment and Transportation	3,491,850	-	24,698	-	3,516,548
Depreciation and Amortization	522,457	135,155	149,355	3,792,129	4,599,096
Total Operating Expenses	4,901,244	263,860	598,716	10,086,657	15,850,477
<b>Operating Income (Loss)</b>	703,000	20,501	202,550	(3,917,747)	(2,991,696)
<b>Nonoperating Revenues (Expenses)</b>					
Tapping and Capital Recovery Fees	355,765	-	10,359	83,252	449,376
Meter Sales	-	-	-	-	-
Inspection and Plan Reviews	-	73	11,371	1,000	12,444
Interest Earnings	110,504	313	911	50,306	162,034
Interest Expense	(97,292)	(25,064)	(79,090)	(2,972)	(204,418)
Other Expense	(17,762)	-	(1,488)	(10,854)	(30,104)
Other Income	-	5,560	495	1,465	7,520
Total Nonoperating Revenues (Expenses)	351,215	(19,118)	(57,442)	122,197	396,852
<b>Increase (Decrease) in net position before capital contributions</b>	1,054,215	1,383	145,108	(3,795,550)	(2,594,844)
<b>Capital Contributions</b>					
Capital Grant	-	-	-	-	-
Capital Assets Provided by Developers and Others	1,690,500	-	365,443	-	2,055,943
Total Capital Contributions	1,690,500	-	365,443	-	2,055,943
<b>Increase (Decrease) in Net Position</b>	2,744,715	1,383	510,551	(3,795,550)	(538,901)
<b>Net Position at Beginning of Year</b>	33,426,199	2,745,845	9,227,032	55,745,630	101,144,706
<b>Net Position at End of Year</b>	\$ 36,170,914	\$ 2,747,228	\$ 9,737,583	\$ 51,950,080	\$ 100,605,805

## **SUPPLEMENTAL SCHEDULES**

- Schedule of Cash and Cash Equivalents
- Combined Schedule of Certificates of Deposit – All Funds
- Schedule of Cash Receipts and Disbursements and Changes in Account Balances:
  - Fixed Rate Water Revenue Bonds, 2001, 2010 and 2015 Series
- Budgetary Comparison



**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**SCHEDULE OF CASH AND CASH EQUIVALENTS  
CURRENT AND RESTRICTED  
December 31, 2017**

Financial Institution	Total	Enterprise Funds		
		Suburban Division		City Division
		Water	Wastewater	Water & Wastewater
Bank of New York	\$ 7,283,833	\$ 7,283,833	\$ -	-
Financial Northeastern Companies	742,520	700,051	42,469	-
National Penn Bank	6,538,423	1,729,875	4,802,189	6,359
PNC Bank (1)	2,399,386	697,394	1,701,992	-
Wells Fargo	12,722	12,722	-	-
M & T Bank	54,339,654	-	-	54,339,654
Total	<u>\$ 71,316,538</u>	<u>\$ 10,423,875</u>	<u>\$ 6,546,650</u>	<u>\$ 54,346,013</u>

(1) Represents the Authority's share of the Pennsylvania School District Liquid Asset Fund.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**COMBINED SCHEDULE OF CERTIFICATES OF DEPOSIT - ALL FUNDS  
CURRENT AND RESTRICTED FUNDS  
December 31, 2017**

	<u>Date of Purchase</u>	<u>Date of Maturity</u>	<u>% Rate of Return</u>	<u>Amount</u>	<u>Total By Fund</u>
<b>CERTIFICATES OF DEPOSIT:</b>					
Enterprise Funds:					
<u>Suburban Water</u>					
National Penn Bank - Jaindl Elementary	7/22/14	4/22/18	0.05	\$ 25,508	
Carolina Premier Bank	10/14/15	1/16/18	1.05	248,975	
Security State Bank	10/16/15	1/16/18	1.00	248,970	
Comenity Bank	4/27/16	4/27/18	1.05	199,943	
BBCN Bank	6/24/16	6/22/18	1.00	244,424	
Bank Rhode Island	6/27/16	6/27/18	1.00	244,402	
First Farmers Bank and Trust Company	10/17/16	10/17/18	1.05	243,665	
JP Morgan Chase Bank	10/19/16	10/19/18	1.20	243,652	
Lakeside Bank	10/19/16	10/19/18	1.05	243,631	
Merchants & Farmers B&T Company	10/25/16	10/25/18	1.00	243,604	
First Bank of Charleston Inc	10/26/16	10/26/18	1.10	243,577	
Midland States Bank	11/2/16	11/2/18	1.10	243,547	
Union Bank & Trust Company	11/15/16	5/15/18	1.00	244,574	
Bank Leumi USA	12/22/16	6/22/18	1.25	244,686	
Evergreen Bank Group	12/23/16	9/24/18	1.20	244,299	
Texas Trust CU	12/30/16	11/30/18	1.40	244,348	
Sallie Mae Bank	1/11/17	1/11/19	1.55	244,510	
Whitney Bank	1/25/17	1/25/19	1.55	244,464	
Tradition Capital Bank	1/31/17	10/31/18	1.25	149,507	
BMW Bank of North America	3/31/17	3/29/19	1.45	247,907	
Capital One Bank (USA) Nat'l Assn.	4/26/17	4/26/19	1.60	248,266	
American Express Bank, FSB	5/3/17	5/3/19	1.55	246,906	
First Technology FCU	10/16/17	10/16/19	1.80	248,310	
CBC FCU	10/20/17	10/21/19	1.70	246,849	
Comenity Capital Bank	10/23/17	4/23/19	1.60	247,278	
Keybank National Assn	10/25/17	10/25/19	1.65	246,609	
PSDLAF Flex Pool	12/18/17	1/17/18	1.10	155,000	
PSDLAF Flex Pool	12/18/17	1/17/18	1.10	1,000,000	<u>\$ 7,177,411</u>

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**COMBINED SCHEDULE OF CERTIFICATES OF DEPOSIT - ALL FUNDS  
CURRENT AND RESTRICTED FUNDS (Continued)  
December 31, 2017**

	<u>Date of Purchase</u>	<u>Date of Maturity</u>	<u>% Rate of Return</u>	<u>Amount</u>	<u>Total By Fund</u>
<b>CERTIFICATES OF DEPOSIT:</b>					
Enterprise Funds:					
<u>Suburban Wastewater</u>					
Banco Popular North America	2/10/16	2/9/18	1.25	\$ 244,988	
Wells Fargo Bank	5/18/16	5/18/18	1.05	244,684	
World's Foremost Bank	6/9/16	6/11/18	1.15	199,578	
Thomasville National Bank	10/19/16	4/19/18	0.90	244,556	
Franklin Synergy Bank	10/21/16	10/20/18	0.95	244,547	
Merrick Bank	10/28/16	4/30/18	1.00	244,498	
Discover Bank	11/2/16	11/2/18	1.20	243,530	
Investors Community Bank	11/15/16	8/15/18	1.00	243,956	
Smartbank	11/18/16	4/18/18	0.90	244,554	
Triumph Bank	11/21/16	5/21/18	0.90	244,392	
Webbank	12/19/16	12/19/18	1.40	244,240	
First Priority Bank	12/23/16	12/24/18	1.35	244,094	
Ally Bank	1/12/17	1/14/19	1.55	248,492	
Yadkin Bank	1/25/17	7/25/18	1.15	244,449	
TCF National Bank	1/25/17	7/25/18	1.15	244,451	
Everbank	1/30/17	1/30/19	1.35	243,919	
Tradition Capital Bank (Split with Fund 2	1/31/17	10/31/18	1.25	94,688	
Rollstone Bank & Trust	3/1/17	3/1/19	1.40	124,446	
Rollstone Bank & Trust	3/1/17	3/1/19	1.40	124,446	
Goldman Sachs Bank USA	3/30/17	3/28/19	1.60	244,383	
Wex Bank	4/7/17	4/8/19	1.50	97,615	
American Express Centurion	4/7/17	4/5/19	1.65	247,380	
MB Financial Bank, National Association	4/26/17	4/26/19	1.40	247,611	
Medallion Bank	5/1/17	5/1/19	1.50	248,910	
Marlin Business Bank	5/10/17	5/10/19	1.50	246,877	
Synchrony Bank	5/26/17	5/28/19	1.65	247,308	
American Commerce Bank	7/7/17	4/8/19	1.50	244,035	
First National Bank of Omaha	7/12/17	7/12/19	1.65	244,130	
PSDLAF Flex Pool	12/18/17	1/17/18	1.10	245,000	
PSDLAF Flex Pool	12/18/17	1/17/18	1.10	400,000	
PSDLAF Flex Pool	12/18/17	1/17/18	0.80	600,000	
Morgan Stanley Bank, National Assn.	12/28/17	12/30/19	2.10	245,414	
Sunwest Bank	12/29/17	3/29/19	1.75	244,836	
Morgan Stanley Private Bank	12/28/18	12/30/19	2.05	245,176	
Stearns Bank National Assn.	12/28/18	12/30/19	2.00	244,936	\$ 8,506,119
TOTAL CERTIFICATES OF DEPOSIT					<u>\$ 15,683,530</u>

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**SCHEDULE OF CASH RECEIPTS AND DISBURSEMENTS AND CHANGES IN ACCOUNT BALANCES  
SUBURBAN WATER FUND - TRUSTEE ACCOUNTS - FIXED RATE WATER REVENUE BONDS,**

**December 31, 2017**

**For the Year Ended December 31, 2017**

	Debt Service Reserve Accounts	Debt Service Accounts	Construction Accounts	Total
<b>RECEIPTS:</b>				
Interest Income	\$ 3,262	\$ 3	\$ 2,929	\$ 6,194
Bonds Payable	153,335	-	5,900,500	6,053,835
Bond Refinancing	-	-	-	-
Receipts from LCA		649,230		649,230
Total Receipts	156,597	649,233	5,903,429	6,709,259
<b>DISBURSEMENTS:</b>				
Interest Payments	-	649,230	-	649,230
Water Capital Expenditures	-	-	1,102,739	1,102,739
Principal Reduction	-	-	-	-
2001 Bonds Payable	-	-	-	-
Financing Costs	-	-	-	-
Underwriters Discount	-	-	-	-
Transfers to Debt Service Accounts	-	-	-	-
Miscellaneous Expense	-	-	-	-
Total Disbursements	-	649,230	1,102,739	1,751,969
<b>EXCESS OF RECEIPTS OVER (UNDER) DISBURSEMENTS</b>	156,597	3	4,800,690	4,957,290
<b>TRANSFERS TO (FROM) - NET</b>	-	-	-	-
<b>EXCESS OF RECEIPTS OVER (UNDER) DISBURSEMENTS AND TRANSFERS</b>	156,597	3	4,800,690	4,957,290
<b>BALANCE, JANUARY 1, 2017</b>	1,281,877	4	1,191,618	1,573,499
<b>BALANCE, DECEMBER 31, 2017</b>	<u>\$ 1,438,474</u>	<u>\$ 7</u>	<u>\$ 5,992,308</u>	<u>\$ 7,430,789</u>
<b>BALANCE CONSISTS OF:</b>				
Cash and Cash Equivalents	\$ 1,438,474	\$ 7	\$ 5,992,308	\$ 7,430,789
Certificates of Deposit (CD): (none)		-		-
<b>CD Total</b>	-	-	-	-
<b>Cash and CD Total</b>	<u>\$ 1,438,474</u>	<u>\$ 7</u>	<u>\$ 5,992,308</u>	<u>\$ 7,430,789</u>

Note: The Cash and Cash Equivalent amount on this schedule balances to the financial statement as follows:

Cash and Cash Equivalent \$7,430,789 plus Other Developer Savings \$868,385 equals \$8,299,174.

The Certificates of Deposit amount on this schedule balances to the financial statement as follows:

Certificate of Deposit \$0 plus Other Developers Investment Certificates of Deposit \$25,508 equals \$25,508.

LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA

BUDGETARY COMPARISON SCHEDULE

For the Year Ended December 31, 2017

(With comparative actual amounts for Year Ended December 31, 2016)

	2017		2016		Variance of 2017 Actual Data to	
	Budgeted Amounts		Actual	2016 Actual	Final	
	Original	Final			Budget	Actual
<b>OPERATING REVENUES:</b>						
Charges for Services	\$ 57,299,592	\$ 57,299,592	\$ 54,234,826	\$ 53,032,719	\$ (3,064,766)	\$ 1,202,107
Rent	137,000	137,000	91,019	97,011	(45,981)	(5,992)
Other Income	583,400	583,400	482,975	231,664	(100,425)	251,311
Total Operating Revenues	58,019,992	58,019,992	54,808,820	53,361,394	(3,211,172)	1,447,426
<b>OPERATING EXPENSES</b>						
Salaries and Wages	7,119,391	7,119,391	5,223,281	5,133,687	1,896,110	(89,594)
General and Administrative	6,485,355	6,485,355	9,085,883	7,971,681	(2,600,528)	(1,114,202)
Utilities	2,821,125	2,821,125	2,550,675	2,494,717	270,450	(55,958)
Materials and Supplies	2,725,195	2,736,195	1,890,784	1,811,193	845,411	(79,591)
Miscellaneous Services	12,295,763	12,284,763	11,259,917	11,355,316	1,024,846	95,399
Treatment and Transportation	5,912,000	5,912,000	3,526,644	3,032,245	2,385,356	(494,399)
Depreciation and Amortization	12,572,400	12,572,400	13,181,951	12,923,184	(609,551)	(258,767)
Total Operating Expenses	49,931,229	49,931,229	46,719,135	44,722,023	3,212,094	(1,997,112)
<b>OPERATING LOSS</b>	8,088,763	8,088,763	8,089,685	8,639,371	922	(549,686)
<b>NONOPERATING REVENUES (EXPENSES):</b>						
Tapping and Capital Recovery Fees	1,280,000	1,280,000	1,630,011	2,356,402	350,011	(726,391)
Meter Sales	80,000	80,000	129,655	181,684	49,655	(52,029)
Inspection and Plan Reviews	293,000	293,000	1,299,083	1,588,520	1,006,083	(289,437)
Interest Earnings	308,600	308,600	630,951	596,902	322,351	34,049
Interest Expense	(15,557,358)	(15,557,358)	(20,092,864)	(19,615,946)	(4,535,506)	(476,918)
Other Expense	(6,875)	(6,875)	(3,770,719)	(4,248,495)	(3,763,844)	477,776
Other Income	334,000	334,000	1,240,690	935,046	906,690	305,644
Total Nonoperating Revenues (Expenses)	(13,268,633)	(13,268,633)	(18,933,193)	(18,205,887)	(5,664,560)	(727,306)
Increase (decrease) in net assets before capital contributions	(5,179,870)	(5,179,870)	(10,843,508)	(9,566,516)	(5,663,638)	(1,276,992)
<b>Capital Contributions:</b>						
Capital Grant	-	-	211,892	211,552	211,892	340
Capital Assets Provided by Developers and Others	3,648,200	3,648,200	8,168,259	4,334,145	4,520,059	3,834,114
Total Capital Contributions	3,648,200	3,648,200	8,380,151	4,545,697	4,731,951	3,834,454
<b>Increase (Decrease) in Net Position</b>	<u>\$ (1,531,670)</u>	<u>\$ (1,531,670)</u>	<u>\$ (2,463,357)</u>	<u>\$ (5,020,819)</u>	<u>\$ (931,687)</u>	<u>\$ 2,557,462</u>

## STATISTICAL SECTION

**Sources:** *Unless otherwise noted, the information in these schedules is derived from comprehensive annual financial reports for the relevant year.*

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## **FINANCIAL TRENDS**

This section provides information on Changes in Net Assets/Net Position Components and Changes in Net Assets/Net Position.



**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
NET ASSETS/ NET POSITION BY COMPONENT**

	2008	2009	2010	2011	2012
<b>Net Assets:</b>					
Invested in Capital Assets, Net of Related Debt	\$ 87,234,355	\$ 146,566,247	\$ 150,240,105	\$ -	\$ -
Restricted for Debt Service	1,215,118	1,204,730	1,734,304	-	-
Restricted for Capital Projects	2,793,475	-	-	-	-
Unrestricted	24,437,284	25,766,539	23,479,760	-	-
<b>Net Position:</b>					
Net Investment in Capital Assets				148,488,162	150,965,827
Restricted for Debt Service				1,744,341	1,733,035
Unrestricted				24,921,328	29,853,215
<b>Total Net Assets</b>	<b>\$ 115,680,232</b>	<b>\$ 173,537,516</b>	<b>\$ 175,454,169</b>	<b>\$ 175,153,831</b>	<b>\$ 182,552,077</b>
	2013	2014	2015	2016	2017
<b>Net Assets:</b>					
Invested in Capital Assets, Net of Related Debt	\$ -	\$ -	\$ -	\$ -	\$ -
Restricted for Debt Service	-	-	-	-	-
Restricted for Capital Projects	-	-	-	-	-
Unrestricted	-	-	-	-	-
<b>Net Position:</b>					
Net Investment in Capital Assets	152,069,658	149,158,789	147,742,061	152,434,977	162,309,930
Restricted for Debt Service	1,207,927	1,209,103	1,209,239	1,209,379	1,365,470
Unrestricted	23,050,748	20,106,131	11,658,428	1,944,553	(10,549,848)
<b>Total Net Assets/ Net Position</b>	<b>\$ 176,328,333</b>	<b>\$ 170,474,023</b>	<b>\$ 160,609,728</b>	<b>\$ 155,588,909</b>	<b>\$ 153,125,552</b>

**Note:** This schedule includes reclassifications for years 2008 through 2010 to comply with a change in Capital Assets to include Water and Wastewater Capacity, which had previously been reported under Other Assets and in 2009 to correct the classification of some escrow accounts.

Beginning in 2011 the amounts reported reflect the adoption of GASB 63, which resulted in replacing the term "Net Assets" with the term "Net Position". Amounts prior to 2011 have not been adjusted to reflect the adoption of GASB 63.

Beginning in 2012, the amounts reported reflect the adoption of GASB 65. Amounts prior to 2012 have not been adjusted to reflect the adoption of GASB 65.

Beginning in 2015, the amounts reported reflect the adoption of GASB 68 and 71. Amounts prior to 2015 have not been adjusted to reflect the adoption of GASB 68 and 71.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
CHANGES IN NET ASSETS/ NET POSITION**

Fiscal Year	Operating Revenues	Operating Expenses	Operating Income (Loss)	Total Nonoperating Revenues (Expenses)	(1) (2) (3) Increase (Decrease) in Net Assets/ Net Position Before Capital Contributions	Capital Contributions	(1) (2) (3) Change in Net Assets/ Net Position
2008	\$ 17,726,896	\$ 16,051,095	\$ 1,675,801	\$ 1,438,085	\$ 3,113,886	\$ 6,124,110	\$ 9,237,996
2009	19,494,619	16,773,903	2,720,716	975,655	3,696,371	54,160,913	57,857,284
2010	20,375,996	20,713,602	(337,606)	(642,365)	(979,971)	2,896,624	1,916,653
2011	21,113,193	22,492,947	(1,379,754)	(1,325,323)	(2,705,077)	2,404,739	(300,338)
2012	22,813,851	22,195,989	617,862	507,776	1,125,638	6,740,271	7,865,909
2013	37,820,024	31,578,208	6,241,816	(13,339,719)	(7,097,903)	874,159	(6,223,744)
2014	56,310,007	45,179,303	11,130,704	(17,829,251)	(6,698,547)	844,237	(5,854,310)
2015	47,477,636	42,312,587	5,165,049	(15,952,394)	(10,787,345)	1,692,811	(9,094,534)
2016	53,361,394	44,722,023	8,639,371	(18,205,887)	(9,566,516)	4,545,697	(5,020,819)
2017	54,808,820	46,719,135	8,089,685	(18,933,193)	(10,843,508)	8,380,151	(2,463,357)

**Note:** In 2008 the Authority implemented GASB Statement #45 and has since booked the Net Other Post Employment Benefit cost at year end. The significant Change in Net Assets in 2009 was a direct result of acquiring a wastewater treatment plant from the County of Lehigh.

(1) Beginning in 2011 the amounts reported reflect the adoption of GASB 63, which resulted in replacing the term "Net Assets" with the term "Net Position". Amounts prior to 2011 have not been adjusted to reflect the adoption of GASB 63.

(2) Beginning in 2012, the amounts reported reflect the adoption of GASB 65. Amounts prior to 2012 have not been adjusted to reflect the adoption of GASB 65.

(3) Beginning in 2015, the amounts reported reflect the adoption of GASB 68 and 71. Amounts prior to 2015 have not been adjusted to reflect the adoption of GASB 68 and 71.

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## **REVENUE CAPACITY**

This section provides information on the major sources of revenue, expenses, schedules of rates and charges, largest industrial and commercial revenue sources and collections information.

**LEHIGH COUNTY AUTHORITY  
ALLEN TOWN, PENNSYLVANIA  
REVENUES BY SOURCE**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Suburban - Water Fund (1)</b>										
<b>Operating Revenues:</b>										
Customer Charges:										
Large Industrial	\$ 384,505	\$ 489,561	\$ 511,935	\$ 579,532	\$ 668,025	\$ 872,859	\$ 1,052,611	\$ 1,088,772	\$ 1,101,016	\$ 1,014,054
Industrial	401,109	370,027	515,357	1,064,711	1,299,095	1,533,331	1,784,254	1,959,556	1,924,336	1,971,310
Commercial/Institutional	1,263,457	1,287,664	1,230,749	736,500	796,489	839,616	870,446	934,255	1,044,364	1,134,993
Residential	2,770,568	2,721,604	2,967,458	3,089,822	3,162,666	3,218,823	3,262,746	3,336,469	3,377,843	3,483,627
Other	39,984	55,981	64,729	70,089	75,088	88,464	79,414	102,100	116,829	107,273
Private Fire Service	529,289	583,526	574,668	588,050	602,431	617,482	667,741	709,983	757,651	795,121
Public Fire Service	326,171	329,099	330,823	331,853	344,763	346,552	348,793	350,225	354,805	357,410
Total Charges for Service	5,715,083	5,837,462	6,195,719	6,460,557	6,948,557	7,517,127	8,066,005	8,481,360	8,676,844	8,863,788
Other Income	40,379	31,939	184,544	39,915	73,532	20,941	42,121	51,327	41,152	99,307
Rent	29,808	28,584	27,861	127,819	119,003	80,930	110,396	111,745	97,011	91,019
Total Operating Revenues	5,785,270	5,897,985	6,408,124	6,628,291	7,141,092	7,618,998	8,218,522	8,644,432	8,815,007	9,054,114
<b>Nonoperating Revenues:</b>										
Tapping & Capital Recovery Fees	480,414	456,401	239,688	117,797	264,493	219,845	351,871	276,202	426,177	455,405
Meter Sales	163,115	154,999	112,034	95,160	101,659	105,361	81,781	88,082	156,365	112,468
Inspection, Plan Reviews, & Project Reimbursements	310,594	153,083	112,024	73,321	75,386	101,072	102,307	207,992	160,751	154,433
Interest Income	336,742	230,251	143,933	95,368	74,852	54,544	47,092	54,422	91,619	127,486
Other Income	135,957	128,251	203,083	291,384	326,708	302,927	134,258	53,513	112,426	109,343
Total Nonoperating Revenues	1,428,822	1,122,985	810,762	673,030	843,098	783,749	717,309	680,211	947,338	959,135
Total Water Fund Revenues	7,212,092	7,020,970	7,218,886	7,301,321	7,984,190	8,402,747	8,935,831	9,324,643	9,762,345	10,013,249
<b>Suburban - Wastewater Fund (1)</b>										
<b>Operating Revenues:</b>										
User Charges	11,847,456	13,322,554	13,773,298	14,268,656	15,508,454	15,935,816	17,290,464	11,616,373	12,756,663	12,568,375
Other Income	94,170	274,080	194,574	216,246	164,305	97,876	213,335	252,802	116,267	290,406
Total Operating Revenues	11,941,626	13,596,634	13,967,872	14,484,902	15,672,759	16,033,692	17,503,799	11,869,175	12,872,930	12,858,781
<b>Nonoperating Revenues:</b>										
Tapping & Capital Recovery Fees	603,668	795,204	204,392	142,319	1,751,039	876,328	253,524	2,385,116	1,165,372	449,376
Meter Sales	546,266	313,238	153,672	111,884	115,115	100,112	87,753	109,829	118,529	162,034
Inspection, Plan Reviews, & Project Reimbursements	17,854	2,916	23,581	573	266	26,372	502,204	689	31,181	12,444
Other Income	4,381	195	6,315	6,970	435	480	630	930	1,090	7,520
Total Nonoperating Revenues	1,172,169	1,111,553	387,960	261,746	1,866,855	1,003,292	844,111	2,496,564	1,328,172	631,374
Total Wastewater Fund Revenues	13,113,795	14,708,187	14,355,832	14,746,648	17,539,614	17,036,984	18,347,910	14,365,739	14,201,102	13,490,155
<b>City Fund (1)*</b>										
<b>Operating Revenues:</b>										
Customer Charges:										
Industrial						203,379	414,857	441,971	439,687	456,835
Commercial/Institutional						1,290,438	2,796,800	2,964,011	2,917,340	3,040,810
Residential						4,353,636	9,850,719	9,979,086	10,213,236	10,571,269
User Charges						7,296,874	14,217,123	10,376,636	14,686,290	14,984,978
Other						933,636	3,182,799	3,055,596	3,278,630	3,684,596
Private Fire Service							57,824	60,184	63,309	63,635
Public Fire Service							540	1,015	720	540
Total Charges for Service						14,077,962	30,520,662	26,878,499	31,599,212	32,802,663
Other Income						89,372	67,024	85,530	74,245	93,262
Total Operating Revenues						14,167,334	30,587,686	26,964,029	31,673,457	32,895,925
<b>Nonoperating Revenues:</b>										
Tapping & Capital Recovery Fees						12,050	58,278	236,343	764,853	725,230
Meter Sales						1,624	10,795	13,272	13,319	17,187
Inspection, Plan Reviews, & Project Reimbursements						2,600	794,269	1,295,847	1,396,588	1,132,206
Interest Income						3,497	113,361	424,171	386,754	341,431
Other Income						246,131	820,668	543,291	821,530	1,123,827
Total Nonoperating Revenues						265,902	1,797,371	2,512,924	3,383,044	3,339,881
Total Allentown Fund Revenues						14,433,236	32,385,057	29,476,953	35,056,501	36,235,806
Total Enterprise Funds	\$ 20,325,887	\$ 21,729,157	\$ 21,574,718	\$ 22,047,969	\$ 25,523,804	\$ 39,872,967	\$ 59,668,798	\$ 53,167,335	\$ 59,019,948	\$ 59,739,210

(1) This data can be compared to Expenses by Function on the following page.

\* The City Fund was new to the Authority in 2013, and as such information prior to 2013 is not applicable.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
OPERATING EXPENSES BY FUNCTION**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b><u>Suburban - Water Fund (1)</u></b>										
Salaries and Wages	\$ 600,454	\$ 651,136	\$ 763,604	\$ 738,156	\$ 733,398	\$ 743,936	\$ 755,025	\$ 801,639	\$ 1,028,004	\$ 1,042,565
General and Administration	986,681	1,028,421	1,156,795	1,073,477	1,056,894	1,007,698	883,400	770,436	1,045,634	1,257,063
Utilities	386,299	361,718	548,078	487,912	497,447	400,614	418,729	435,422	426,230	420,812
Materials and Supplies	306,838	213,095	277,762	314,711	284,164	314,809	266,886	292,395	288,550	422,730
Miscellaneous Services	706,161	741,571	814,874	1,084,945	1,173,520	1,399,343	1,518,486	1,760,084	2,024,840	2,270,359
Depreciation and Amortization (2)	1,730,476	2,229,055	2,615,095	2,606,722	2,517,142	2,494,362	2,461,079	2,508,051	2,587,430	2,695,548
<b>Total</b>	<b>\$ 4,716,909</b>	<b>\$ 5,224,996</b>	<b>\$ 6,176,208</b>	<b>\$ 6,305,923</b>	<b>\$ 6,262,565</b>	<b>\$ 6,360,762</b>	<b>\$ 6,303,605</b>	<b>\$ 6,568,027</b>	<b>\$ 7,400,688</b>	<b>\$ 8,109,077</b>
<b><u>Suburban - Wastewater Fund (1)</u></b>										
Salaries and Wages	\$ 343,806	\$ 307,196	\$ 290,957	\$ 321,524	\$ 332,227	\$ 290,338	\$ 330,595	\$ 430,271	\$ 440,614	\$ 424,208
General and Administration	501,177	425,852	335,516	453,987	474,918	370,857	412,512	474,988	564,580	559,911
Utilities	176,712	143,176	185,961	278,440	172,706	167,038	228,184	218,286	204,648	226,197
Materials and Supplies	108,343	78,909	103,089	127,977	151,279	143,800	155,820	187,328	189,418	155,503
Miscellaneous Services	4,532,177	4,183,136	4,334,666	4,735,149	5,292,287	5,413,037	6,217,734	6,996,038	7,139,673	6,369,014
Treatment and Transportation	4,880,722	5,590,998	5,483,698	6,238,733	5,539,924	7,128,163	5,523,415	2,347,975	3,021,234	3,516,548
Depreciation and Amortization	791,249	819,640	3,803,507	4,031,214	3,970,083	3,997,389	4,119,337	4,359,509	4,501,469	4,599,096
<b>Total</b>	<b>\$ 11,334,186</b>	<b>\$ 11,548,907</b>	<b>\$ 14,537,394</b>	<b>\$ 16,187,024</b>	<b>\$ 15,933,424</b>	<b>\$ 17,510,622</b>	<b>\$ 16,987,597</b>	<b>\$ 15,014,395</b>	<b>\$ 16,061,636</b>	<b>\$ 15,850,477</b>
<b><u>City Fund (1) *</u></b>										
Salaries and Wages						\$ 1,976,453	\$ 4,589,152	\$ 3,845,386	\$ 3,665,069	\$ 3,756,508
General and Administration						1,217,914	5,113,153	5,645,355	6,361,467	7,268,909
Utilities						609,454	1,900,365	1,939,560	1,863,839	1,903,666
Materials and Supplies						634,843	1,839,101	1,400,206	1,333,225	1,312,551
Miscellaneous Services						651,738	3,147,458	2,358,537	2,190,803	2,620,544
Treatment and Transportation						-	5,502	11,043	11,011	10,096
Depreciation and Amortization						2,616,422	5,293,370	5,530,078	5,834,285	5,887,307
<b>Total</b>						<b>\$ 7,706,824</b>	<b>\$ 21,888,101</b>	<b>\$ 20,730,165</b>	<b>\$ 21,259,699</b>	<b>\$ 22,759,581</b>
<b>Total Operating Expenses</b>	<b>\$ 16,051,095</b>	<b>\$ 16,773,903</b>	<b>\$ 20,713,602</b>	<b>\$ 22,492,947</b>	<b>\$ 22,195,989</b>	<b>\$ 31,578,208</b>	<b>\$ 45,179,303</b>	<b>\$ 42,312,587</b>	<b>\$ 44,722,023</b>	<b>\$ 46,719,135</b>

\* The City Fund was new to the Authority in 2013, and as such information prior to 2013 is not applicable.

- (1) This data can be compared to Revenues by Source on the previous page.  
(2) Depreciation and Amortization for 2012 was restated per GASB 65.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
NONOPERATING EXPENSES**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Suburban - Water Fund:</b>										
Interest Expense	\$ 648,187	\$ 713,355	\$ 1,068,983	\$ 1,489,721	\$ 1,431,321	\$ 1,408,407	\$ 1,377,963	\$ 1,269,864	\$ 1,140,565	\$ 1,371,796
Other Expense	120,620	109,898	95,862	79,714	160,293	106,373	108,430	68,291	157,016	427,991
Loss on Disposal of Capital Assets	138,467	-	-	-	-	-	-	-	-	-
Total	\$ 907,274	\$ 823,253	\$ 1,164,845	\$ 1,569,435	\$ 1,591,614	\$ 1,514,780	\$ 1,486,393	\$ 1,338,155	\$ 1,297,581	\$ 1,799,787
<b>Suburban - Wastewater Fund:</b>										
Interest Expense	100,300	89,099	94,769	140,538	118,992	133,737	154,205	151,110	195,081	204,418
Other Expense	153,328	346,531	581,473	550,126	491,571	561,186	63,029	80,574	65,320	30,104
Total	\$ 253,628	\$ 435,630	\$ 676,242	\$ 690,664	\$ 610,563	\$ 694,923	\$ 217,234	\$ 231,684	\$ 260,401	\$ 234,522
<b>City Fund: *</b>										
Interest Expense						\$ 7,101,736	\$ 17,940,740	\$ 18,024,646	\$ 18,280,300	\$ 18,516,650
Planning and Issuance Expense						6,081,223	-	-	-	-
Other Expense						-	1,543,675	2,047,608	4,026,159	3,312,624
Total						\$ 13,182,959	\$ 19,484,415	\$ 20,072,254	\$ 22,306,459	\$ 21,829,274
Total Nonoperating Expenses	\$ 1,160,902	\$ 1,258,883	\$ 1,841,087	\$ 2,260,099	\$ 2,202,177	\$ 15,392,662	\$ 21,188,042	\$ 21,642,093	\$ 23,864,441	\$ 23,863,583

\* The City Fund was new to the Authority in 2013, and as such information prior to 2013 is not applicable.

Note: The 2008 Loss on Disposal of Capital Assets in the Water Fund represents the undepreciated value of facilities which were abandoned and replaced because of a highway project. The increase in Other Expense in 2009 relates to the Authority taking over the operating and billing responsibilities of the Washington Township Collector System in April 2009. All revenues collected are wired to a Washington Township account to pay system expenses.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
CAPITAL CONTRIBUTIONS BY SOURCE**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Suburban - Water Fund:</b>										
Grant	\$ 880,693	\$ 315,363	\$ 1,030,138	\$ 298,300	\$ -	\$ -	\$ -	\$ 421,853	\$ 211,552	\$ 211,892
Capital Assets Provided by Developers	5,109,840	1,031,540	1,658,537	547,179	599,169	719,019	826,893	1,270,958	3,348,066	6,112,316
Total Water Fund	\$ 5,990,533	\$ 1,346,903	\$ 2,688,675	\$ 845,479	\$ 599,169	\$ 719,019	\$ 826,893	\$ 1,692,811	\$ 3,559,618	\$ 6,324,208
<b>Suburban - Wastewater Fund:</b>										
Grant	\$ -	\$ 180,100	\$ -	\$ 1,475,191	\$ 1,040,958	\$ 145,500	\$ -	\$ -	\$ -	\$ -
Capital Assets Provided by Developers	133,577	52,633,910	207,949	84,069	5,100,144	9,640	17,344	-	986,079	2,055,943
Total Wastewater Fund	\$ 133,577	\$ 52,814,010	\$ 207,949	\$ 1,559,260	\$ 6,141,102	\$ 155,140	\$ 17,344	\$ -	\$ 986,079	\$ 2,055,943
<b>City Fund:</b>										
Grant										
Capital Assets Provided by Developers						\$ -	\$ -	\$ -	\$ -	\$ -
Total Allentown Fund						\$ -	\$ -	\$ -	\$ -	\$ -
Total Enterprise Funds	\$ 6,124,110	\$ 54,160,913	\$ 2,896,624	\$ 2,404,739	\$ 6,740,271	\$ 874,159	\$ 844,237	\$ 1,692,811	\$ 4,545,697	\$ 8,380,151

\* The City Fund was new to the Authority in 2013, and as such information prior to 2013 is not applicable.

Note: The significant increase in Capital Assets Provided by Developers in 2009 is related to the Authority exercising an option in a lease agreement with The County of Lehigh to takeover ownership of a wastewater treatment plant. The significant increase in Capital Assets provided by developers in 2012 is related to the Authority taking ownership of the Lynn Township wastewater treatment facility.



**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
SCHEDULE OF WATER CAPITAL RECOVERY FEES**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>SUBURBAN DIVISION</b>										
<b>Charge per Typical Residential Customer:</b>										
Central Lehigh Division:										
Supply Tapping Fee	\$ 435	\$ 435	\$ 435	\$ 435	\$ 605	\$ 605	\$ 605	\$ 605	\$ 605	\$ 605
Distribution Tapping Fee	1,480	1,480	1,480	1,480	1,880	1,880	1,880	1,880	1,880	1,880
North Whitehall Division:										
Supply Tapping Fee	610	610	610	610	575	575	575	575	575	575
Distribution Tapping Fee	1,480	1,480	1,480	1,480	2,000	2,000	2,000	2,000	2,000	2,000
Washington Twp Division:										
Supply Tapping Fee	485	485	485	485	1,000	1,000	1,000	1,000	1,000	1,000
Distribution Tapping Fee	1,480	1,480	1,480	1,480	1,550	1,550	1,550	1,550	1,550	1,550
Heidelberg Heights Division:										
Supply Tapping Fee	830	830	830	830	708	708	708	708	708	708
Distribution Tapping Fee	1,480	1,480	1,480	1,480	2,000	2,000	2,000	2,000	2,000	2,000
Emmaus Consecutive Division:										
Supply Tapping Fee	400	400	400	400	400	400	400	400	400	400
Distribution Tapping Fee	1,480	1,480	1,480	1,480	1,480	1,480	1,480	1,480	1,480	1,480
Upper Milford Central Division:										
Supply Tapping Fee	-	-	389	389	235	235	235	235	235	235
Distribution Tapping Fee	-	-	1,480	1,480	2,000	2,000	2,000	2,000	2,000	2,000
Small System Divisions: (2)										
Supply Tapping Fee	165	165	165	165	109	192	192	192	192	192
Distribution Tapping Fee	1,480	1,480	1,480	1,480	1,130	2,000	2,000	2,000	2,000	2,000
<b>Total Fees collected: (Suburban Divisions, All Customers)</b>										
Supply & Special Tapping Fees	\$ 436,538	\$ 359,285	\$ 197,895	\$ 137,646	\$ 215,758	\$ 193,635	\$ 142,032	\$ 212,130	\$ 296,802	\$ 365,395
Distribution Tapping Fees (1)	34,708	70,970	15,504	12,500	47,295	27,650	209,839	64,072	129,375	82,010
Connection Fees	-	-	-	-	-	-	-	-	-	-
<b>Total Suburban Division</b>	<b>\$ 471,246</b>	<b>\$ 430,255</b>	<b>\$ 213,399</b>	<b>\$ 150,146</b>	<b>\$ 263,053</b>	<b>\$ 221,285</b>	<b>\$ 351,871</b>	<b>\$ 276,202</b>	<b>\$ 426,177</b>	<b>\$ 447,405</b>
<b>CITY DIVISION*</b>										
Supply Tapping Fee						\$ 810	\$ 810	\$ 810	n/a	n/a
Supply Tapping Fee - Part 1 (3)									\$5.21 per gal.	\$5.38 per gal.
Supply Tapping Fee - Part 2 Capacity Portion (3)									\$0.00016 per gal.	\$0.00851 per gal.
Supply Tapping Fee - Part 2 Distribution Portion (3)									\$0.00328 per gal.	\$0.02551 per gal.
<b>Total Fees collected: (Allentown Division, All Customers)</b>										
Supply & Special Tapping Fees										
Capacity Fees										
Distribution Fees										
<b>Total Allentown Division</b>										
					\$ 7,290	\$ 7,290	\$ 39,649	\$ 128,605	\$ 474,914	\$ 415,990
									\$ 128	\$ 435
									\$ 475,042	\$ 416,425

\* The City Fund was new to the Authority in 2013, and as such information prior to 2013 is not applicable.

- (1) Distribution Tapping fees only includes type 1 fees, which are fees charged for connections to mains installed by the Authority. Type 2 fees charged for connections to mains installed by developers are not included because such fees are reimbursed back to the developer.
- (2) Includes Mill Creek, Pine Lakes of Lynn, Beverly Hills and Clearview Farm Estates Divisions.
- (3) In 2016, City Division tapping fees were calculated per EDU rather than a flat fee. An EDU for water calculations equals 159.5 gallons.

**Note: Water charges per typical residential customer represent rates in effect as of year-end.**

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
SCHEDULE OF WASTEWATER CAPITAL RECOVERY FEES**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Interceptors - Charge per 1000 Gallons:</b>										
Western Lehigh Interceptor	\$ 2,760	\$ 2,760	\$ 2,100	\$ 2,100	\$ 2,400	\$ 2,470	\$ 2,650	\$ 2,800	\$ 2,800	\$ 3,560
Little Lehigh Relief Interceptor	780	820	840	840	870	910	940	970	970	990
Treatment Capacity	4,390	4,590	4,710	4,710	4,980	5,350	5,460	5,670	5,670	5,840
Total	\$ 7,930	\$ 8,170	\$ 7,650	\$ 7,650	\$ 8,250	\$ 8,730	\$ 9,050	\$ 9,440	\$ 9,440	\$ 10,390
<b>Annual Wastewater Capacity Sales - Interceptor System</b>										
Gallons per Day	153,572	135,269	113,021	49,879	304,569	165,903	42,007	271,831	101,795	75,476
Fees Collected (1)	\$ 1,192,719	\$ 1,277,452	\$ 644,737	\$ 380,765	\$ 2,451,607	\$ 1,425,532	\$ 187,988	\$ 2,355,746	\$ 1,123,945	\$ 435,017
					(7)	(8)		(9)	(9)	(9)
<b>Collection Systems - Charge per EDU (3)</b>										
<b>Upper Milford System:</b>										
Collection Part	\$ 1,325.00	\$ 1,442.50	\$ 1,475.00	\$ 1,520.00	\$ 2,408.75	\$ 2,432.25	\$ 2,002.20	\$ 2,002.20	\$ 2,002.20	\$ 2,635.00
Capacity Part	2,205.00	2,307.50	2,355.00	2,325.00	700.30	712.05	502.90	373.65	373.65	565.00
<b>Heidelberg Heights System:</b>										
Collection Part	324.88	337.28	349.68	362.08	359.09	395.24	600.75	359.09	359.09	626.55
Capacity Part	2,075.76	2,145.20	2,217.12	2,291.52	2,277.45	2,506.40	2,506.40	2,227.45	2,227.45	4,754.29
<b>Wynewood Terrace System:</b>										
Collection Part	2,045.16	2,141.49	2,188.42	2,257.58	2,260.58	2,311.19	2,376.26	2,260.58	2,260.58	2,520.23
Capacity Part	1,244.88	1,304.16	1,333.80	1,375.79	1,376.11	1,407.44	1,447.41	1,376.11	1,376.11	1,534.48
<b>Sand Spring System:</b>										
Collection Part	461.89	484.12	496.47	553.28	554.30	566.35	583.22	554.30	554.30	617.88
Capacity Part	745.94	782.99	800.28	824.98	826.63	843.50	867.60	826.63	826.63	920.38
<b>Arcadia West System:</b>										
Collection Part	522.38	548.63	559.13	577.50	593.25	606.38	622.84	640.50	640.50	661.50
Capacity Part	6,562.50	6,890.63	7,231.88	7,231.88	7,586.25	9,450.00	9,450.00	9,817.50	9,817.50	10,108.10
Reimbursement Part (4)	14,763.00	15,508.50	22,323.00	23,436.00	17,942.00	18,839.63	19,781.54	20,771.63	20,771.63	21,809.14
<b>Western Weisenberg Treatment Plant:</b>										
Capacity Part (5)	6,562.50	6,890.63	7,231.88	7,231.88	7,586.25	9,450.00	9,450.00	9,817.50	9,817.50	10,108.10
<b>Annual Wastewater Capacity Sales - Collector Systems</b>										
Gallons per Day (6)	4,400	8,344	5,013	19,231	2,015	3,273	1,561	1,561	8,251	7,359
Fees Collected	\$ 63,480	\$ 109,620	\$ 54,818	\$ 26,872	\$ 22,617	\$ 15,336	\$ 10,715	\$ 7,130	\$ 12,977	\$ 10,359
<b>CITY DIVISION*</b>										
Tapping Fee						\$ 680	\$ 680	\$ 680	n/a	n/a
Tapping Fee - Part 1 (10)									\$3.91 per gal.	\$4.10 per gal.
Tapping Fee - Part 2 Capacity Portion (10)									\$0.00016 per gal.	\$0.01538 per gal.
Tapping Fee - Part 2 Collection Portion (10)									\$0.00328 per gal.	\$0.00052 per gal.
<b>Total Fees Collected: (Allentown Division, All Customers)</b>										
Tapping Fees						\$ 4,760	\$ 18,629	\$ 107,739	\$ 153,591	\$ 106,094
Capacity Fees									68,249	152,502
Collection Fees									4	10
<b>Total Allentown Division</b>						\$ 4,760	\$ 18,629	\$ 107,739	\$ 221,844	\$ 259,206

\* The City Fund was new to the Authority in 2013, and as such information prior to 2013 is not applicable.

- (1) Total includes Western Lehigh Interceptor, Little Lehigh Relief Interceptor and Treatment Capacity fees plus Vera Cruz project fees recouped through grant in 2012. 2009 includes a \$195,087 settlement with a township for fees unreimbursed in prior years.
- (2) Gallons per Day and fees includes Coca-Cola purchase of 141,000 gpd and Niagara Water purchase of 125,000 gpd and present value of purchase prices, which are being paid over 15 years.
- (3) An EDU or Equivalent Dwelling Unit represents a single family residential property or in the case of the Arcadia West Industrial Park System it represents 262.5 gallons per day.
- (4) Represents the amount reimbursable to the developer for connections within the Arcadia West subdivision. This system was acquired in June 2003.
- (5) Represents a new wastewater treatment plant which will replace the Arcadia West Plant.
- (6) In 2011, the Vera Cruz Sewer project capacity sales in gallons are included but no fees were collected due to grant funding.
- (7) Gallons per Day and fees includes Ocean Spray purchase of 200,000 gpd and present value of purchase price, which is being paid over 15 years.
- (8) Gallons per Day and fees includes Ocean Spray purchase of 100,000 gpd and purchase price.
- (9) Gallons per Day and fees includes Sunopta purchase of 117,700 gpd and purchase price.
- (10) In 2016, City Division tapping fees were calculated per EDU rather than a flat fee. An EDU for wastewater calculations equals 175.5 gallons.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
SCHEDULE OF WATER RATES AND CHARGES - SUBURBAN DIVISION**

Effective Date			12/31/12		Common Rates (1)		12/31/16		12/31/17		
Metered Water Usage											
Fixed Charges:											
Meter Size											
Quarterly	5/8" & 3/4"			\$	11.70		\$	11.70		\$	11.70
	1"				21.60			21.60			21.60
Monthly	1-1/2"				14.10			14.10			14.10
	2"				21.00			21.00			21.00
	3"				43.80			43.80			43.80
	4"				64.20			64.20			64.20
	6"				120.30			120.30			120.30
	8"				186.90			186.90			186.90
	10"				263.10			263.10			263.10
Volume Charge per 1,000 gallons: (2)											
Quarterly Usage (gals.)		Monthly Usage (gals.)									
First	120,000	First	40,000		2.17		2.25		2.39		
Next	2,880,000	Next	960,000		1.99		2.06		2.19		
Next	24,000,000	Next	8,000,000		1.65		1.70		1.79		
Next	147,000,000	Next	49,000,000		1.43		1.47		1.51		
Over	174,000,000	Over	58,000,000		1.26		1.26		1.26		
Public Fire Protection (3)											
O&M per Hydrant (Rate per Month)				\$	7.87		\$	7.87		\$	7.87
Inch-Squared Foot/Year (4)					0.00152			0.00152			0.00152
Private Fire Protection (Charge per month) (5)											
Fire Line Size											
SF Residential				\$	5.00		\$	5.00		\$	5.00
2"					13.61			13.61			13.61
2 1/2"					21.26			21.26			21.26
3"					30.62			30.62			30.62
4"					54.43			54.43			54.43
6"					122.47			122.47			122.47
8"					217.72			217.72			217.72
10"					340.18			340.18			340.18
12"					489.87			489.87			489.87
Other Fees											
Meter Test Fee (5/8", 3/4" & 1")				\$	15.00		\$	50.00		\$	50.00
Meter Inspection Fee					40.00			50.00			50.00
Site Visit Charge (Normal Hrs) & Meter Inspection Fee					40.00			50.00			50.00
Site Visit Charge (After Hrs)					120.00			150.00			150.00
Service Order Charge (Normal Hrs) (6)					40.00			50.00			50.00
Service Order Charge (After Hrs) (6)					120.00			150.00			150.00
Lien Administration Fee (7)					110.40			127.40			127.40
Hydrant Security Device Fee (8)					115.00			115.00			140.00

(1) The Authority implemented common rates on 7/1/98 for the majority of the water service areas. Of 20,960 customers at year-end 2015, only 264 were on separate rate schedules.

(2) Effective 4/1/13.

(3) Municipalities are billed for this protection.

(4) Applied to total Transmission and Distribution pipe length for mains with a diameter of 6 to 16 inches.  
The latest rate change took effect on 4/1/06.

(5) SF Residential effective 7/12/10 while all other Private Fire rates effective 7/1/06.

(6) Effective 1/1/12.

(7) Effective 8/1/13.

(8) Fee charged to developers for hydrant locking device effective 7/1/05.

**Note: The Authority has the ability to change rates at any time as authorized by its Board of Directors.**

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
SCHEDULE OF WATER RATES AND CHARGES - CITY DIVISION**

<b>Effective Date</b>		<b>Rates</b>	
		<u>12/31/16</u>	<u>12/31/17</u>
<b>Metered Water Usage</b>			
<b>Fixed Charges:</b>			
<u>Meter Size</u>			
Quarterly	5/8"	\$ 25.84	\$ 26.78
	3/4"	31.68	32.84
	1"	43.35	44.94
	1-1/2"	n/a	75.56
	2"	n/a	112.23
	3"	n/a	210.11
	4"	n/a	320.12
	6"	n/a	625.89
	8"	n/a	992.54
Monthly	5/8"	n/a	18.49
	3/4"	n/a	20.51
	1"	n/a	24.66
	1-1/2"	33.26	34.86
	2"	44.93	47.08
	3"	75.95	79.60
	4"	111.04	116.37
	6"	208.19	218.19
	8"	324.90	340.52
<b>Volume Charge per 1,000 gallons:</b>		\$ 3.17878	\$ 3.28368
<b>Public Fire Protection</b>			
Each Hydrant (Rate per year)		\$ 317.75	\$ 328.24
<b>Other Fees</b>			
Meter Test Fee (5/8", 3/4" & 1")		\$ 50.00	\$ 50.00
Meter Inspection Fee		50.00	50.00
Site Visit Charge (Normal Hrs) & Meter Inspection Fee		50.00	50.00
Site Visit Charge (After Hrs)		150.00	150.00
Service Order Charge (Normal Hrs)		50.00	50.00
Service Order Charge (After Hrs)		150.00	150.00
Lien Administration Fee		127.40	127.40

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
SCHEDULE OF WASTEWATER RATES AND CHARGES - SUBURBAN DIVISION - COLLECTOR SYSTEMS**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
<u>Upper Milford System</u>											
Fixed Charge	\$ 2.00	\$ 2.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	Per 1000 gals. per Day
Fixed Charge per Quarter (2)	-	-	20.00	20.00	20.00	21.00	21.00	21.00	21.00	21.00	Per Qtr per EDU (3)
Fixed Charge per Quarter (2)	-	-	10.00	10.00	10.00	10.50	10.50	10.50	10.50	10.50	Per Multi-family Unit
Flow Charge:											
All Flow (2)	2.65	2.65	4.30	4.30	4.41	4.53	4.53	4.53	4.53	4.53	Per 1000 gals. of Flow
Up to 220 gpd	-	-	-	-	-	-	-	-	-	-	Per 1000 gals. of Flow
From 220 gpd to daily allocation	-	-	-	-	-	-	-	-	-	-	Per 1000 gals. of Flow
Greater than daily allocation	-	-	-	-	-	-	-	-	-	-	
<u>Exceptional Strength Charges (1):</u>											
Biological Oxygen Demand (BOD)	0.26	0.32	0.34	0.38	0.35	0.33	0.36	0.22	0.23	0.26	Per Pound
Total Suspended Solids (TSS)	0.22	0.27	0.31	0.33	0.33	0.30	0.35	0.20	0.21	0.24	Per Pound
Total Kjeldahl Nitrogen (TKN)	0.41	0.48	0.49	0.58	0.51	0.53	0.55	0.29	0.31	0.40	Per Pound
Sampling & Testing Charge	170.00	170.00	170.00	170.00	170.00	170.00	170.00	170.00	170.00	170.00	Per Day
<u>Weisenberg Twp. Collector System</u>											
Basic Service Charge	0.19	0.19	-	-	-	-	-	-	-	-	Per 1000 gals. of Allocation/Day
Fixed Charge per Quarter (2)	-	-	20.00	20.00	20.00	21.00	21.00	21.00	21.00	21.00	Per Equivalent Dwelling Unit
Fixed Charge per Quarter (2)	-	-	10.00	10.00	10.00	10.50	10.50	10.50	10.50	10.50	Multi-family Units
Flow Charge (2)	3.36	3.36	2.94	3.41	4.41	4.53	4.53	4.53	4.53	4.53	Per 1000 gals. of Flow
<u>Arcadia West Collector System</u>											
Flow Charge	58.00	58.00	58.00	58.00	58.00	58.00	58.00	58.00	58.00	58.00	Per 1000 gals. of Flow
Fixed Charge	7.55	7.55	7.55	7.55	7.55	7.55	7.55	7.55	7.55	7.55	Per 1000 gals. of Allocation/Day
<u>Heidelberg Heights Collector System</u>											
Monthly Charge	65.00	65.00	-	-	-	-	-	-	-	-	Per Residential Unit
Fixed Charge per Quarter (2)	-	-	20.00	20.00	20.00	21.00	21.00	21.00	21.00	21.00	Per Equivalent Dwelling Unit
Fixed Charge per Quarter (2)	-	-	10.00	10.00	10.00	10.50	10.50	10.50	10.50	10.50	Per Multi-family Unit
Flow Charge (2)	-	-	9.08	9.08	9.29	9.53	9.53	9.53	9.53	9.53	Per 1000 gals. of Flow
<u>Wynnewood Terrace Collector System</u>											
Monthly Charge	55.30	55.30	-	-	-	-	-	-	-	-	Per Residential Unit
Fixed Charge per Quarter (2)	-	-	20.00	20.00	20.00	21.00	21.00	21.00	21.00	21.00	Per Equivalent Dwelling Unit
Fixed Charge per Quarter (2)	-	-	10.00	10.00	10.00	10.50	10.50	10.50	10.50	10.50	Per Multi-family Unit
Flow Charge (2)	-	-	9.08	9.08	9.29	9.53	9.53	9.53	9.53	9.53	Per 1000 gals. of Flow
<u>Sand Spring Collector System</u>											
Fixed Charge	10.35	10.35	-	-	-	-	-	-	-	-	Per Customer per Month
Fixed Charge per Quarter (2)	-	-	20.00	20.00	20.00	21.00	21.00	21.00	21.00	21.00	Per Equivalent Dwelling Unit
Fixed Charge per Quarter (2)	-	-	10.00	10.00	10.00	10.50	10.50	10.50	10.50	10.50	Per Multi-family Unit
Flow Charge (2)	6.14	6.14	6.70	7.55	9.29	9.53	9.53	9.53	9.53	9.53	Per 1000 gals. of Flow
<u>Washington Township Collector System (3)</u>											
District 1 - Fixed Charge per Quarter	-	165.00	165.00	165.00	165.00	124.00	124.00	124.00	124.00	124.00	Per EDU
District 1 - Flow Chg per 1000 gals.	-	2.25	2.25	2.25	2.25	5.00	5.00	5.00	5.00	5.00	All flow in excess of 23,000 gals
District 2 - Fixed Charge per Quarter	-	24.00	65.00	109.00	109.00	124.00	124.00	124.00	124.00	124.00	Per EDU
District 2 - Flow Chg	-	4.80	4.80	4.80	4.80	5.00	5.00	5.00	5.00	5.00	Per 1000 gals. of Flow
<u>Lynn Township Collector System (4)</u>											
Fixed Charge per Quarter	-	-	-	-	-	158.98	158.98	158.98	158.98	158.98	Per EDU
Flow Charge	-	-	-	-	-	7.20	7.20	7.20	7.20	7.20	Per 1000 gals. of Flow
<u>Lowhill Township Collector System (5)</u>											
Fixed Charge per Quarter (2)	-	-	-	-	-	-	-	-	21.00	21.00	Per Equivalent Dwelling Unit
Fixed Charge per Quarter (2)	-	-	-	-	-	-	-	-	10.50	10.50	Multi-family Units
Flow Charge (2)	-	-	-	-	-	-	-	-	4.53	4.53	Per 1000 gals. of Flow

- (1) Applicable only to commercial and industrial customers.  
(2) Effective in 2010, the Authority took the first step of a 3 year phase-in of a common rate structure for the following collector systems:  
Upper Milford, Weisenberg, Heidelberg Heights, Wynnewood Terrace and Sand Spring.  
(3) The Authority took over operations and billing responsibilities in April 2009. Washington Township still owns the system. Effective 1/1/13, both districts will pay same fixed and flow charges.  
(4) Flow charges apply to all flow discharged.  
Lynn Township Collector System was acquired 2/28/12. The system serves 424 customers.  
(5) Lowhill Township Collector System was acquired 6/8/16. The system serves 43 customers.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
SCHEDULE OF WASTEWATER RATES AND CHARGES - SUBURBAN DIVISION - INTERCEPTOR SYSTEMS**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
<u>Little Lehigh Relief Interceptor - Phase 1</u>											
Flow Charge	\$ 0.1390	\$ 0.1400	\$ 0.1100	\$ 0.1600	\$ 0.1700	\$ 0.1700	\$ 0.1500	\$ 0.1200	\$ 0.1200	\$ 0.1500	Per 1000 gals. of Flow
<u>Little Lehigh Relief Interceptor - Phase 2</u>											
Flow Charge	-	-	-	-	0.0300	0.0300	0.0300	0.0300	0.0300	0.0200	Per 1000 gals. of Flow
<u>Western Lehigh Interceptor</u>											
Flow Charge (2)	0.7227	0.7900	0.8100	0.8000	1.0300	1.0300	0.8700	0.9700	1.2800	1.1300	Per 1000 gals. of Flow
<b>Exceptional Strength Charges (1):</b>											
BOD	0.2679	0.3200	0.3400	0.3800	0.3300	0.3300	0.3600	0.2200	0.2300	0.2600	Per Pound
TSS	0.2323	0.2700	0.3100	0.3300	0.3000	0.3000	0.3500	0.2000	0.2100	0.2400	Per Pound
TKN	0.3820	0.4800	0.4900	0.5800	0.5300	0.5300	0.5500	0.2900	0.3100	0.4000	Per Pound
<b>Allocation</b>	0.1350	0.1600	0.1700	0.2300	0.2500	0.2500	0.2200	0.2100	0.2200	0.2000	Per 1000 gals. per Day

(1) Applicable only to commercial and industrial customers.

(2) The municipalities served by this system are billed based on estimated rates during the year. By mid-year of the following year, the City of Allentown issues a final reconciled bill of actual treatment and transportation costs and these costs together with the Authority's interceptor system costs are used to develop a final actual bill to the municipalities. Based on a comparison of estimated to actual costs, the municipalities receive either an additional charge or credit. Because of a dispute with the City, the final costs for 2009 are under protest. Accordingly, the rates shown for 2009 - 2013 are as budgeted. A settlement was reached with the City in 2014.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
SCHEDULE OF WASTEWATER RATES AND CHARGES - CITY DIVISION**

Effective Date		Rates		Rates	
Metered Water Usage		12/31/16		12/31/17	
Fixed Charges:					
Meter Size					
Quarterly	5/8"	\$	8.97	\$	9.29
	3/4"		10.99		11.39
	1"		15.02		15.57
	1-1/2"		n/a		26.02
	2"		n/a		38.56
	3"		n/a		72.02
	4"		n/a		109.89
	6"		n/a		214.67
	8"		n/a		338.75
Monthly	5/8"		n/a		6.43
	3/4"		n/a		7.12
	1"		n/a		8.52
	1-1/2"		11.45		12.00
	2"		15.45		16.18
	3"		26.16		27.42
	4"		38.13		39.96
	6"		71.45		74.89
	8"		131.09		137.38
Volume Charge per 1,000 gallons:		\$	2.293580	\$	2.369270

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
COMPARATIVE WATER CHARGES  
FOR MUNICIPAL OWNED WATER UTILITIES IN  
LEHIGH VALLEY REGION OF PENNSYLVANIA  
Water bill based on 20,000 gallons consumption per Quarter**

Utility	Quarterly Amount
<b><u>Local Suppliers (1)</u></b>	
Slatington Borough	\$ 175.56
<b>Lehigh County Authority - Madison Park North Division (4)</b>	<b>161.70</b>
Lehigh County Authority - Upper Milford Central Division (3)	151.51
Easton Suburban Water Authority	<b>130.40</b>
Lower Nazareth Township Authority	128.57
<b>Lehigh County Authority - WTD Welshtown Road</b>	128.57
Whitehall Township Authority	<b>126.00</b>
Northampton Borough Municipal Authority - North Whitehall Twp.	125.00
Borough of Macungie	122.80
Upper Saucon Township	122.07
Borough of Alburtis	122.00
Northampton Borough Municipal Authority	117.09
South Whitehall Township Authority	116.20
City of Bethlehem	112.00
<b>Lehigh County Authority - City Division (5)</b>	110.07
Catasauqua Borough	100.62
<b>Lehigh County Authority - Suburban Division (2)</b>	87.75
Borough of Emmaus	<b>61.38</b>
	58.00

- (1) Quarterly amounts are based on rates in effect as of 12/31/17 unless noted.
- (2) Includes Central Lehigh (Main System), North Whitehall, Millcreek, Pine Lakes of Lynn, Heidelberg Heights, Washington Twp, Clearview Farms, Beverly Hills and Emmaus Consecutive divisions or 98.7% of total customer base.
- (3) The Authority acquired this division in April 2007 and provides service to 100 customers.
- (4) The Authority acquired this division in July 2010 and provides service to 116 residential customers.
- (5) The Authority entered into a lease concession agreement with the City of Allentown on 8/8/13 to provide service to approximately 46,650 customers.



**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
TEN LARGEST INDUSTRIAL & COMMERCIAL WATER CUSTOMERS  
CURRENT YEAR AND NINE YEARS AGO**

<b>2017</b>				
	Customer Revenues	% of Total Charges for Services	Customer Water Sales (1000 Gals)	% of Total Water Sales
Sam Adams Pa Brewery (1)	\$ 1,025,026	3.8%	653,920	10.4%
Niagara Bottling	529,663	2.0%	324,723	5.1%
Nestle Waters	484,767	1.8%	294,929	4.7%
Ocean Spray Cranberries	332,891	1.2%	192,152	3.0%
Coca-Cola	212,216	0.8%	115,285	1.8%
Hamilton Tech Partners (2)	179,748	0.7%	93,712	1.5%
Nestle Waters (Perrier)	175,790	0.7%	93,078	1.5%
Hospital Central Services	137,379	0.5%	40,021	0.6%
Amcor Pet Packaging	110,644	0.4%	58,587	0.9%
County of Lehigh	105,926	0.4%	30,687	0.5%
Totals	\$ 3,294,050	12.3%	1,897,094	30.1%
Balance from Other Customers	23,387,423	87.7%	4,415,771	69.9%
Grand Total	\$ 26,681,473	100.0%	6,312,865	100.0%

<b>2008</b>				
	Customer Revenues	% of Total Operating Revenues	Customer Water Sales (1000 Gals)	% of Total Water Sales
Nestle Waters	\$ 295,465	5.2%	208,905	9.2%
Sam Adams Pa Brewery (1)	274,561	4.8%	277,013	12.1%
Niagara Bottling	188,493	3.3%	124,997	5.5%
Kraft Foods	138,580	2.4%	89,079	3.9%
Coca-Cola	117,847	2.1%	74,534	3.3%
Diageo (1)	107,276	1.9%	75,030	3.3%
Nestle Waters (Perrier)	106,726	1.9%	66,267	2.9%
Hamilton Tech Partners (2)	88,508	1.5%	51,616	2.3%
Amcor Pet Packaging	62,090	1.1%	38,780	1.7%
Air Products & Chemicals	62,078	1.1%	35,975	1.6%
Subtotal	\$ 1,441,624	25.2%	1,042,196	45.7%
Balance from Other Customers	4,273,459	74.8%	1,240,497	54.3%
Grand Total	\$ 5,715,083	100.0%	2,282,693	100.0%

(1) Site of the former Pabst Brewery. Sam Adams Pa Brewery purchased plant from Diageo on June 2, 2008.

(2) Site of former Agere facility.

Note: Revenues include usage charges and private fire protection charges.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
WATER BILLING COLLECTIONS  
SUBURBAN AND CITY DIVISIONS**

**Suburban - Water Fund:**

Year	Water Sales	Water Revenues	% Revenues vs. Sales	Uncollectible Amount
2008	4,859,623	4,859,353	99.99%	270
2009	4,924,837	4,924,837	100.00%	-
2010	5,290,228	5,290,228	100.00%	-
2011	5,540,654	5,540,654	100.00%	-
2012	6,001,363	6,001,058	99.99%	305
2013	6,553,093	6,553,093	100.00%	-
2014	7,049,471	7,048,941	99.99%	530
2015	7,421,152	7,421,152	100.00%	-
2016	7,564,388	7,563,474	99.99%	914
2017	7,711,257	7,710,881	99.99%	376

**City\* - Water Fund:**

Year	Water Sales	Water Revenues	% Revenues vs. Sales	Uncollectible Amount
2008				
2009				
2010				
2011				
2012				
2013	\$ 6,781,088	\$ 6,781,088	100.00%	-
2014	16,245,175	16,243,410	99.99%	1,765
2015	16,440,664	16,434,872	99.96%	5,792
2016	16,848,893	16,845,133	99.98%	3,760
2017	17,753,510	17,745,266	99.95%	8,244

\* The City Fund was new to the Authority in 2013, and as such information prior to 2013 is not applicable.

**Note: Water Sales excludes private and public fire protection charges as listed on the Revenues by Source schedule.**

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## **DEBT CAPACITY**

This section provides data on outstanding debt of the Authority's Suburban and City water and wastewater systems, ratios of debt to personal income and per capita, information on pledged revenue coverage and overlapping debt of other municipal entities within the Authority's Service Area.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
RATIOS OF OUTSTANDING DEBT BY TYPE  
SUBURBAN DIVISION - WATER SYSTEM**

Year	Net Revenue Bonds	Net Notes	Net Total		Customers at Year-end	Total Debt per Customer	As a share of Personal Income (1)		Personal Income
			O/S Debt	O/S Debt			Personal Income (1)	Personal Income	
2008	13,940,096	1,640,977	15,581,073	15,581,073	18,606	837.42	2.12%	39,549	
2009	17,232,511	1,648,660	18,881,171	18,881,171	19,155	985.70	2.49%	39,551	
2010	32,140,000	4,170,815	36,310,815	36,310,815	19,780	1,835.73	4.67%	39,279	
2011	32,440,400	3,359,430	35,799,830	35,799,830	20,165	1,775.34	4.34%	40,890	
2012	31,319,228	4,062,743	35,381,971	35,381,971	20,350	1,738.67	4.01%	43,364	
2013	30,175,872	3,832,021	34,007,893	34,007,893	20,566	1,653.60	3.77%	43,897	
2014	28,901,146	3,670,418	32,571,564	32,571,564	20,758	1,569.11	3.47%	45,211	
2015	27,872,335	3,440,555	31,312,890	31,312,890	20,960	1,493.94	3.14%	47,537	
2015	26,466,155	3,206,739	29,672,894	29,672,894	21,488	1,380.91	2.83%	48,834	
2016	40,320,920	2,969,629	43,290,549	43,290,549	21,825	1,983.53	Not Available	Not Available	

(1) Although the Suburban Division's service area is in the more affluent areas of Western and Northern Lehigh County, the Personal Income level for the whole County was used to determine the share of personal income attributable to the debt load.

**LEHIGH COUNTY AUTHORITY  
ALLEN TOWN, PENNSYLVANIA  
RATIOS OF OUTSTANDING DEBT BY TYPE  
SUBURBAN DIVISION - WASTEWATER SYSTEMS**

**Common Rate Collector Systems: (1)**

Year	Revenue Bonds	Notes	Total	Customers at Year-end	Total Debt per Customer	As a share of Personal Income (2)	Personal Income
2008	-	\$ 528,862	\$ 528,862	1,237	\$ 427.54	1.08%	39,549
2009	-	454,155	454,155	1,257	361.30	0.91%	39,551
2010	-	416,078	416,078	1,260	330.22	0.84%	39,279
2011	410,176	-	410,176	1,301	315.28	0.77%	40,890
2012	1,291,538	-	1,291,538	1,405	919.24	2.12%	43,364
2013	1,952,730	-	1,952,730	1,574	1,240.62	2.83%	43,897
2014	1,868,705	-	1,868,705	1,585	1,178.99	2.61%	45,211
2015	1,782,769	421,852	2,204,621	1,605	1,373.60	2.89%	47,537
2016	1,696,821	778,492	2,475,313	1,608	1,539.37	3.15%	48,834
2017	1,630,058	740,918	2,370,976	1,689	1,403.78	Not Available	Not Available

**Western Lehigh Interceptor System:**

Year	Revenue Bonds	Notes	Total	Customers at Year-end	Total Debt per Customer	As a share of Personal Income (2)	Personal Income
2008	-	\$ 1,321,271	\$ 1,321,271	17,850	\$ 74.02	0.19%	39,549
2009	-	1,172,573	1,172,573	17,865	65.64	0.17%	39,551
2010	-	4,345,919	4,345,919	17,903	242.75	0.62%	39,279
2011	868,900	4,870,664	5,739,564	18,677	307.31	0.75%	40,890
2012	678,621	4,893,925	5,572,546	19,102	291.73	0.67%	43,364
2013	499,198	4,651,717	5,150,915	19,380	265.79	0.61%	43,897
2014	315,745	4,406,406	4,722,151	19,595	240.99	0.53%	45,211
2015	128,167	4,157,973	4,286,140	19,774	216.76	0.46%	47,537
2016	-	3,927,001	3,927,001	19,801	198.32	0.41%	48,834
2017	-	3,692,167	3,692,167	20,245	182.37	Not Available	Not Available

**Arcadia Sewer System (3):**

Year	Revenue Bonds	Notes	Total	Customers at Year-end	Total Debt per Customer	As a share of Personal Income (3)	Personal Income
2013	-	\$ 738,818	\$ 738,818	10	\$ 73,881.80	N/A	N/A
2014	-	2,691,700	2,691,700	11	244,700.00	N/A	N/A
2015	-	2,703,890	2,703,890	15	180,259.33	N/A	N/A
2016	-	2,568,833	2,568,833	18	142,712.94	N/A	N/A
2017	-	2,432,419	2,432,419	19	128,022.05	N/A	N/A

- (1) Includes Common Rate Collector Systems: Upper Milford, Heidelberg Heights, Wynnewood Terrace, Sand Spring and Weisenberg Township - Pointe West.
- (2) Although Lehigh County Authority's service area is in the more affluent areas of Western and Northern Lehigh County, the Personal Income level for the whole County was used to determine the share of personal income attributable to the debt load. Specific municipal income levels for years other than a census year were not available.
- (3) An upgrade to the wastewater treatment facility was necessary in order to maintain compliance with its NPDES permit. The eighteen customers are commercial and governmental entities.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
RATIOS OF OUTSTANDING DEBT BY TYPE  
CITY DIVISION**

Year	Net Revenue Bonds		Capital Appreciation	Net Total O/S Debt	Customers at Year-end	Total Debt per Customer	As a share of Personal Income (1)	
	Tax Exempt	Taxable					Personal Income	Personal Income
2013	\$ 234,666,542	\$ 18,735,000	\$ 44,343,347	\$ 297,744,889	46,648	\$ 6,382.80	14.54%	\$ 43,897
2014	235,141,475	18,735,000	46,898,566	300,775,041	46,781	6,429.43	14.22%	45,211
2015	235,458,097	18,735,000	49,602,860	303,795,957	46,748	6,498.59	13.67%	47,537
2016	235,774,717	18,735,000	52,465,010	306,974,727	46,762	6,564.62	13.44%	48,834
2017	236,091,337	18,735,000	55,494,318	310,320,655	46,770	6,635.04	Not Available	Not Available

\* The City Fund was new to the Authority in 2013, and as such information prior to 2013 is not applicable.

(1) The Personal Income level for the whole County was used to determine the share of personal income attributable to the debt load.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
SUMMARY OF DEBT SERVICE**

Year	Suburban Division						City Division Fund						Total Funds		Total	
	Water Fund			Wastewater Fund			Principal			Interest			Principal	Interest	Debt Service	
	Principal	Interest		Principal	Interest		Principal	Interest		Principal	Interest					
2018	1,685,033	1,500,010		478,984	202,915		18,735,000	13,047,722		20,899,017	14,750,647		20,899,017	14,750,647	35,649,664	
2019	1,724,917	1,468,478		491,634	206,115		422,231	12,431,007		2,638,782	14,105,600		2,638,782	14,105,600	16,744,382	
2020	2,081,153	1,436,287		546,029	195,887		820,664	12,497,573		3,447,846	14,129,747		3,447,846	14,129,747	17,577,593	
2021	2,101,455	1,405,784		549,034	184,072		1,186,420	12,611,817		3,836,909	14,201,673		3,836,909	14,201,673	18,038,582	
2022	2,147,519	1,351,168		562,081	169,411		1,521,412	12,776,826		4,231,012	14,297,405		4,231,012	14,297,405	18,528,417	
2023-2027	11,646,872	5,888,087		3,026,507	593,667		11,481,174	68,105,013		26,154,553	74,586,767		26,154,553	74,586,767	100,741,320	
2028-2032	11,853,127	3,168,309		2,471,964	154,544		15,434,452	79,456,735		29,759,543	82,779,588		29,759,543	82,779,588	112,539,131	
2033-2037	2,710,000	1,438,492		369,329	6,717		19,886,469	101,794,719		22,965,798	103,239,928		22,965,798	103,239,928	126,205,726	
2038-2042	3,185,000	965,924		-			19,006,496	70,601,692		22,191,496	71,567,616		22,191,496	71,567,616	93,759,112	
2043-2047	3,770,000	390,149		-			231,325,000	31,982,938		235,095,000	32,373,087		235,095,000	32,373,087	267,468,087	
	<b>\$ 42,905,076</b>	<b>\$ 19,012,688</b>	<b>\$</b>	<b>8,495,562</b>	<b>\$ 1,713,328</b>	<b>\$</b>	<b>319,819,318</b>	<b>\$ 415,306,042</b>	<b>\$</b>	<b>371,219,956</b>	<b>\$ 436,032,058</b>	<b>\$</b>	<b>371,219,956</b>	<b>\$ 436,032,058</b>	<b>\$</b>	<b>807,252,014</b>



**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
DEBT SERVICE COVERAGE - SUBURBAN - WATER SYSTEM  
(IN THOUSAND DOLLARS)**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>REVENUES:</b>										
Operating Revenues (1):	\$ 5,715	\$ 5,837	\$ 6,196	\$ 6,461	\$ 6,949	\$ 7,517	\$ 8,066	\$ 8,481	\$ 8,677	\$ 8,864
Customer Charges										
Other Income (2)	352	242	243	293	324	248	43	459	253	314
Transfer from other Funds (3)	30	29	28	128	119	81	110	112	97	91
<b>Total Revenues</b>	<b>6,097</b>	<b>6,108</b>	<b>6,467</b>	<b>6,882</b>	<b>7,392</b>	<b>7,846</b>	<b>8,219</b>	<b>9,052</b>	<b>9,027</b>	<b>9,269</b>
<b>EXPENSES:</b>										
Operating Expenses (4)	2,986	2,996	3,561	3,554	3,637	3,749	3,829	4,046	4,798	5,463
Nonoperating Expenses (5)	6	6	7	7	8	7	9	87	7	302
<b>Total Expenses</b>	<b>2,992</b>	<b>3,002</b>	<b>3,568</b>	<b>3,561</b>	<b>3,645</b>	<b>3,756</b>	<b>3,838</b>	<b>4,133</b>	<b>4,805</b>	<b>5,765</b>
<b>Total Net Revenues</b>	<b>3,105</b>	<b>3,106</b>	<b>2,899</b>	<b>3,321</b>	<b>3,747</b>	<b>4,090</b>	<b>4,381</b>	<b>4,919</b>	<b>4,222</b>	<b>3,504</b>
<b>Debt Service:</b>										
2001 Note	132	132	132	133	-	-	-	-	-	-
2007 Pennworks Note	4	20	94	204	204	204	204	204	204	204
2001 Bonds	491	1,102	622	694	-	-	-	-	-	-
2003 Bonds	822	214	5	-	-	-	-	-	-	-
2008 Bond	31	149	325	356	355	618	614	517	-	-
2010 A Bonds	-	-	490	649	649	649	649	649	649	649
2010 AA Bonds	-	-	386	471	1,150	1,102	1,105	461	-	-
2011 Pennvest Note	-	-	-	1	11	80	90	84	84	85
2011 Bond	-	-	-	1	129	129	129	129	129	129
2015 Bond	-	-	-	-	-	-	-	-	-	-
2015A Bond	-	-	-	-	-	-	-	-	-	-
2017 Bond	-	-	-	-	-	-	-	-	-	-
<b>Total Debt Service</b>	<b>1,480</b>	<b>1,617</b>	<b>2,054</b>	<b>2,509</b>	<b>2,498</b>	<b>2,782</b>	<b>2,791</b>	<b>2,480</b>	<b>2,575</b>	<b>2,870</b>
<b>Operating Cash Reserves:</b>										
Addition to Cash Reserves (6)	1,625	1,489	845	812	1,249	1,308	1,590	2,439	1,647	634
Reserves from Prior-Year (7)	7,684	8,060	8,749	5,608	5,512	6,977	5,189	8,367	10,347	11,161
Capital Reimbursement (Expenditures)	(1,249)	(870)	(2,091)	(908)	216	(3,096)	1,588	(459)	(833)	(2,162)
OPEB Transfer to Trust Fund	-	-	(1,895)	-	-	-	-	-	-	-
Operating Cash Reserves at Year End (7)	8,060	8,749	5,608	5,512	6,977	5,189	8,367	10,347	11,161	9,633
<b>Annual Debt Service Coverage (8)</b>	<b>2.10</b>	<b>1.92</b>	<b>1.41</b>	<b>1.32</b>	<b>1.50</b>	<b>1.47</b>	<b>1.57</b>	<b>1.98</b>	<b>1.64</b>	<b>1.22</b>

(1) Includes a water rate increase of 3.0% effective 4/1/13. In June 1998, the Authority implemented common rates across the three largest divisions.

(2) Includes interest income on operating reserves, miscellaneous income, federal subsidy on Build America bonds and debt service fund interest earnings applied to interest expense reduction.

(3) Represents other Authority funds share of operating and debt service cost of the Office/Operations Center.

(4) Excludes depreciation and OPEB Expense.

(5) Includes trustee, remarketing and liquidity fees.

(6) Total Net Revenues minus Total Debt Service.

(7) Represents cash and investments in the Consolidated account.

(8) Total Net Revenues divided by Total Debt Service, also known as Operating coverage.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
WATER AND WASTEWATER SERVICE AREAS  
SCHEDULE OF OVERLAPPING DEBT**

Entity	Gross Outstanding Debt 12/31/17	2017 Assessment Valuation of Taxable Property (7)	Ratio of Debt to Assessed Taxable Property
Lehigh County	\$ 118,712,452	\$ 35,266,747,900	0.0034
Borough of Alburtis	-	170,925,000	0.0000
Borough of Emmaus	-	953,252,900	-
Borough of Macungie	n/a	247,792,800	-
Heidelberg Township	n/a	443,270,300	-
Lowhill Township		308,101,400	-
Lower Macungie Township	2,046,000	3,722,125,600	-
Lynn Township	-	354,994,400	0.0000
North Whitehall Township	-	1,825,212,300	0.0000
Salisbury Township	6,000,000	1,328,240,900	0.0045
South Whitehall Township	3,678,715	2,636,053,900	0.0014
Upper Macungie Township	-	4,201,986,100	0.0000
Upper Milford Township	-	7,427,814,000	0.0000
Washington Township	705,867	569,282,900	0.0012
Weisenberg Township	n/a	867,945,300	-
East Penn School District (1)	58,034,000	5,418,329,000	0.0107
Parkland School District (2)	113,000,000	8,080,961,600	0.0140
Northern Lehigh School District (3)	17,435,000	653,841,600	0.0267
Northwestern Lehigh School District (4)	46,910,000	1,597,923,700	0.0294
Salisbury School District (5)	39,635,000	1,754,271,400	-
Northampton School District (6)	116,763,000	1,133,791,600	0.1030

- (1) East Penn School District includes Boroughs of Alburtis, Emmaus, Macungie, Lower Macungie and Upper Milford Townships.
- (2) Parkland School District includes Upper Macungie, South Whitehall and North Whitehall Townships, and portions of the City of Allentown, which are not served by LCA.
- (3) Northern Lehigh School District includes Washington Township as a portion of area served.
- (4) Northwestern Lehigh School District includes Heidelberg, Lowhill, Weisenberg and Lynn Townships.
- (5) Salisbury School District includes Salisbury Township.
- (6) Northampton School District includes Clearview Farm Estates.
- (7) Lehigh County reassessed all properties in 2012. Valuation changed from 50% to 100%.

Source: Lehigh County Assessment Office

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## **DEMOGRAPHIC AND ECONOMIC**

This section provides trend information on population, major employees, income levels, housing starts, commercial and industrial facilities and unemployment rates, which can indicate the level of economic activity.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA**

**MAJOR EMPLOYERS**

**CURRENT YEAR AND TEN YEARS AGO**

Employer	Type of Business	2017			2008		
		Employees	% to Total (A)	Rank	Employees	% to Total (A)	Rank
Lehigh Valley Hospital & Health Network	Health Services	13,910	4.1%	1	9,701	3.0%	1
St. Luke's Hospital & Health Network	Health Services	10,000	2.9%	2			
Air Products & Chemicals	Industrial Gases	2,300	0.7%	4	4,117	1.3%	2
Giant Food Stores	Grocery Store	2,449	0.7%	3	2,201	0.7%	4
PPL	Electricity	1,015	0.3%	16	2,477	0.8%	3
Sodexo / Wood Company	Food Service	2,170	0.6%	6	2,021	0.7%	5
County of Lehigh	Government	1,962	0.6%	8			
Amazon.com	E-commerce Warehouse	1,937	0.6%	9			
Mack Trucks	Vehicle Manufacturer	2,040	0.6%	7	1,500	0.5%	7
Wegmans Food Markets	Grocery Store	1,803	0.5%	10			
Allentown School District	Education	2,200	0.6%	5			
Guardian Life	Insurance	1,574	0.5%	11			
Weis Markets	Grocery Store	1,400	0.4%	12			
HCR Manorcare	Health Services	1,298	0.4%	13	1,276	0.4%	8
Kidspace	Mental Health	1,187	0.3%	14	1,250	0.4%	9
Lutron Electronics Company	Electronic Manufacturer	1,100	0.3%	15			
Walmart	Department Store	1,000	0.3%	17	1,800	0.6%	6
Lehigh Carbon Community College	Higher Education	909	0.3%	18	1,144	0.4%	10
Buckeye Partners LP	Pipe Line	321	0.1%	19			

**(A) Represents the percentage of employees to total employment in Lehigh and Northampton Counties.**

**Note: Number of employees are for all locations in Lehigh and Northampton Counties. The listed employers have at least one location in Lehigh County Authority's service area.**

Source: greaterlehighvalleyrealtors.com

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
ECONOMIC AND SOCIAL INDICATORS**

Entity	Population		Income \$			Poverty %		Education %	
	2017 Persons	Density (Sq. Mile)	Household (Median)	Family (Median)	Per Capita Income	Persons Below	Families Below	High School Graduate	College Graduate
Pennsylvania	12,805,537	284	\$ 54,895	\$ 68,158	\$ 30,137	12.9	9.3	89.5	29.3
Lehigh County	366,494	1,013	57,685	67,362	29,587	13.8	9.7	88.1	28.9
Northampton County	303,405	805	62,753	73,571	31,086	9.3	6.8	90.4	27.9
Alburtis Borough	2,622	3,325	74,697	72,950	28,054	10.0	8.1	92.0	30.8
Allentown City	121,283	6,727	37,256	40,479	18,380	26.7	22.6	78.3	15.4
Emmaus Borough	11,454	3,874	55,263	67,938	30,172	7.3	6.6	92.5	32.1
Heidelberg Township	3,480	139	61,773	64,141	28,762	3.6	1.2	94.5	23.8
Lower Macungie Township	32,405	1,371	81,929	102,319	41,369	2.8	3.5	94.0	49.2
Lower Milford Township	3,864	192	89,034	89,949	39,673	1.3	1.7	93.6	33.6
Lowhill Township	2,112	154	92,270	94,028	40,329	1.5	6.6	90.6	36.8
Lynn Township	4,314	104	66,250	79,236	31,295	6.6	1.9	90.1	23.3
Macungie Borough	3,166	3,105	60,182	73,924	30,556	7.6	8.1	90.9	29.6
Moore Township	9,326	248	62,279	68,187	29,095	7.3	2.5	90.8	16.8
North Whitehall Township	16,348	560	76,813	85,401	36,690	5.1	3.7	92.7	33.8
Salisbury Township	13,932	1,209	74,554	86,926	37,845	6.1	3.3	92.7	33.1
South Whitehall Township	19,823	1,123	76,729	81,144	40,216	4.7	2.6	92.7	42.9
Upper Macungie Township	24,356	770	91,461	103,839	43,399	2.7	1.9	96.1	46.8
Upper Milford Township	7,723	406	75,699	83,083	37,331	5.5	6.7	94.2	34.9
Washington Township	6,760	281	62,917	73,727	28,627	10.3	5.5	89.1	21.3
Weisenberg Township	5,199	184	92,004	92,750	41,333	3.0	0.3	94.5	32.9

**Note: The above-listed Boroughs and Townships are within the Lehigh County Authority service area.**

Source: US Census Bureau  
[quickfacts.census.gov](https://quickfacts.census.gov)  
[factfinder.census.gov](https://factfinder.census.gov)

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
MUNICIPAL POPULATION TRENDS**

Area	2000 Census	2010 Census	2017	Change	
				No.	%
Lehigh County	312,090	349,497	366,494	16,997	5.4%
Northampton County	267,066	297,735	303,405	5,670	2.1%
Allentown	106,632	118,032	121,283	3,251	3.0%
Borough of Alburtis	2,117	2,361	2,622	261	12.3%
Borough of Emmaus	11,313	11,211	11,454	243	2.1%
Heidelberg Township	3,279	3,416	3,480	64	2.0%
Lower Macungie Township	19,220	30,633	32,405	1,772	9.2%
Lower Milford Township	3,617	3,775	3,864	89	2.5%
Lowhill Township	1,869	2,173	2,112	(61)	-3.3%
Lynn Township	3,849	4,229	4,314	85	2.2%
Borough of Macungie	3,039	3,074	3,166	92	3.0%
Moore Township	8,673	9,198	9,326	128	1.5%
North Whitehall Township	14,731	15,703	16,348	645	4.4%
Salisbury Township	13,498	13,505	13,932	427	3.2%
South Whitehall Township	18,028	19,180	19,823	643	3.6%
Upper Macungie Township	13,895	20,063	24,356	4,293	30.9%
Upper Milford Township	6,889	7,292	7,723	431	6.3%
Washington Township	6,588	6,624	6,760	136	2.1%
Weisenberg Township	4,144	4,923	5,199	276	6.7%

**Note: Lehigh County Authority provides water and wastewater service to portions of the listed areas.**

Source: U.S. Census Quickfacts  
factfinder.census.gov

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
COMPARATIVE POPULATION STATISTICS 1950 - 2010**

Year	Lehigh County	Change (1)	(2) ABE - MSA	Change	Pennsylvania	Change (1)	United States	Change
1950	198,207		437,824		10,498,012		151,325,798	
1960	227,536	14.8%	492,168	12.4%	11,319,366	7.8%	179,323,000	18.5%
1970	255,702	12.4%	521,447	5.9%	11,811,561	4.3%	203,215,000	13.3%
1980	272,778	6.7%	551,800	5.8%	11,868,305	0.5%	226,502,000	11.5%
1990	291,946	7.0%	596,817	8.2%	11,903,299	0.3%	248,709,873	9.8%
2000	312,090	6.9%	638,867	7.0%	12,286,107	3.2%	273,643,273	10.0%
2010	349,497	12.0%	821,623	28.6%	12,702,379	3.4%	308,745,538	12.8%
2013	355,768	1.8%	829,300	0.9%	12,781,296	0.6%	316,128,839	2.4%
2014	357,823	0.6%	829,835	0.1%	12,787,209	0.0%	318,857,056	0.9%
2015	360,685	0.8%	832,327	0.3%	12,802,503	0.1%	321,418,820	0.8%
2016	356,756	-1.1%	835,652	0.4%	12,779,559	-0.2%	316,515,021	-1.5%
2017	366,494	2.7%	840,550	0.6%	12,805,537	0.2%	325,719,178	2.9%

(1) Change from prior decade.

(2) Allentown-Bethlehem-Easton Metropolitan Service Area

Source: U.S. Department of Commerce, Bureau of Economic Analysis  
HUD PD&R Housing Market Profiles  
City Population



**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
2017 New Industrial / Commercial / Institutional Customers - Suburban Division**

Name	Classification	Approximate Size in Sq. Ft.	(1) Est. Water Usage in gallons per day
<b><u>Customer Additions in 2017:</u></b>			
Buckeye Tavern	Restaurant	3,350	2,352
CKS Glenlivet LLC	Commercial/Retail Mixed Use	7,265	120
DCT Prop Mgmt LLC	Warehouse	336,000	2,200
Dunkin Donuts	Strip Stores/Restaurant	5,400	480
Heather Glen Senior Living	Personal Care Home	70,000	20,670
James Dallapalu	Machine Shop	12,000	1,000
Liberty Property Trust - 8801 Congdon Hill Road	Warehouse	110,000	N/A
Liberty Property Trust - 700 Uline Way	Warehouse/Distribution	1,008,106	N/A
Liberty Property Trust - 800 Uline Way	Warehouse/Distribution	605,510	N/A
LV Crossing DC II	Warehouse	210,000	N/A
Mack Trucks Inc	Truck Manufacturing	1,028,193	6,000
Macungie Kingdom Hall	Church	N/A	N/A
OSI Restaurant/Outback	Restaurant	6,524	N/A
TGG/TCH Hamilton Crossings Assoc LP	Bank Branch	2,559	58
VFW Post 8282	VFW	N/A	N/A
WHBC Building E LP	Warehouse	415,168	2,000
Windsor Property 7220 LLC	Commercial/Office Space	22,260	510
Woodmont Lower Mac LLC	Clubhouse/Maintenance Building	7,264	N/A
<b><u>Plans Approved or under Review:</u></b>			
3362 Schoeneck Road	Warehouse	200,000	5,250
5329-5347-5357 Hamilton Blvd	Retail Stores/Fast Food	N/A	1,300
5354 Hamilton Blvd	Medical Office	N/A	N/A
5374 Hamilton Blvd -Taco Bell	Fast Food	N/A	1,328
5392 Hamilton Blvd	Commercial/Office Space	N/A	300
5830 West Tilghman Street	Commercial	7,200	N/A
6950 Ambassador Drive - Millipore Sigma	Warehouse	350,324	2,156
6975 Ambassador Drive - Iron Run IP Lot 5	Warehouse	13,400	N/A
7368-7386 Alburtis Road	Mosque	N/A	720
Above & Beyond	Personal Care Facility	51,112	15,500
Beit Simcha	Messianic Fellowship	14,200	1,980
Ciocca Audi	Car Dealership	31,220	2,500
City Development (Hamilton Blvd. & Trexlertown Road)	Strip Mall / Shopping Center	5,400	N/A
CVS Route 100	Pharmacy/Doctor's Office	16,500	180
Golden Key Travel Center	Truck Stop	10,000	2,000
Grandview Crossings	Apartments/Shopping Center	N/A	64,442
Heather Glen Building 1	Office Building / Retail	25,200	2,560
Lehigh Hills, Lot 2	Retail Stores	19,700	1,970
Lehigh Valley South, Lots 1 & 2	Office Buildings	131,060	2,600
Lehigh Valley West IP, Lots 5-11		N/A	N/A
Lower Macungie Township Community Center Expansion	Community Center	53,405	500
Macungie Crossings (Hamilton & Grange Road)	Retail Stores	146,470	4,540
Macungie Professional Center	Office Building / Bank	11,050	400 (Bank)
Mary Ann's Plaza	Restaurant / Retail Stores	18,130	10,000
MLP - 1142 Mill Creek Road	Dentist Office	12,000	N/A
Park 100-Industrial Blvd-7352 Industrial Drive	Warehouse	730,080	11,400
Parkland Elementary School	Elementary School	59,075	1,875
Penske Truck Leasing	Truck Garage/Rentals	17,300	1,500
Route 100/222 Bypass Commercial Development	Retail Stores	23,400	N/A
Shepherd's Corner	Retail Stores	16,460	N/A
Signature Personal Care Home	Personal Care Facility	68,450	4,750
Spring Creek Properties Settlement, Lot 1	Office Building	40,000	N/A
Spring View (Bortz Tract)	Commercial Strip Mall	22,976	5,700
Towneplace Suites by Marriott	Hotel	64,000	8,190
Trexler Business Center, Lot 1	Cinema/Retail Stores	116,400	11,400
Trexler Senior Living Center	Senior Living Center / Retail Stores	132,000	37,200

N/A = Not Available

(1) Water Usage can be based on a developer estimate, LCA estimate based on submitted plans, township information, application for water service, wastewater allocation purchase, or Department of Environmental Protection sewage planning modules.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
2017 New Industrial / Commercial / Institutional Customers - City Division**

Name	Classification	Approximate Size in Sq. Ft.	(1) Est. Water Usage in gallons per day
<b><u>Customer Additions in 2017:</u></b>			
Allentown Partners LLC	Business		
Ethan Investments LLC	Auto Repair/Garage	1,789	85
Gallows Hill Spirits Co	Business		
Lafayette Ambassador Bank	Bank	3,060	97
Lehigh County Authority	Dog Park/COA		
Mobility Works	Business		
Posh Properties No 37, Lafayette Limited	Big Woody's	7,500	7,117
Sacred Heart Housing LP	Assisted Living Facility		
Strata II OP, LP	Flats/Condos	100,000	9,072
Strata III OP LP	Flats/Condos	110,000	9,605
The Baer Industrial Park LLC	Business		
Turkey Hill LP	Turkey Hill/Car Wash	6,800	3,730
<b><u>Plans Approved or under Review:</u></b>			
30 E Susquehanna St	Garage/Warehouse	1,430	68
560 Waterfront Dr	Office/Retail/Restaurant	175,000	N/A
615 Waterfront Dr	Office/Retail/Restaurant	159,000	N/A
630 Waterfront Dr	Office/Retail/Restaurant	150,000	N/A
645 Waterfront Dr	Office/Retail/Restaurant	133,000	N/A
Allentown Commerce Park	Warehouse/Office	1,316,160	8,000
Allentown Elementary School - 1227 W Gordon	School	110,000	1,766

N/A = Not Available

(1) Water Usage can be based on a developer estimate, LCA estimate based on submitted plans, township information, application for water service, wastewater allocation purchase, or Department of Environmental Protection sewage planning modules.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
2017 MAJOR INDUSTRIAL AND COMMERCIAL COMPLEXES  
WITHIN THE LCA SUBURBAN AND CITY SERVICE AREAS**

<b>Name</b>	<b>Total Acreage</b>	<b>Status</b>
Alburtis Crossing	89	Infrastructure Complete
Arcadia West Industrial Park	210	Infrastructure Complete
Boulder Business Center	256	Infrastructure Complete
Diocesan Pastoral Center	62	Design/Review
Grandview Crossings	53	Infrastructure Complete
Greentree Industrial Park	80	Infrastructure Complete
Hamilton Crossings	55	Infrastructure Complete
Indian Creek Industrial Park	26	Design/Review
Iron Run Industrial Park	533	Infrastructure Complete
JDN Retail Development	39	Infrastructure Complete
Lehigh 100 Corporate Center	87	Infrastructure Complete
Lehigh Valley South Industrial Park	116	Infrastructure Complete
Lehigh Valley West	337	Infrastructure Complete
Lehigh Valley West II	517	Infrastructure Complete
Liberty at Mill Creek	289	Infrastructure Complete
Macungie Crossing	27	Infrastructure Complete
Meadows Business Center	59	Infrastructure Complete
Mill Run Corporate Center	157	Infrastructure Complete
North Whitehall Commercial Center	41	Design/Review
North Whitehall Industrial Park	77	Infrastructure Complete
Spring Creek Properties Settlement Subd	620	Infrastructure Complete
Springside Industrial Acres	28	Infrastructure Complete
Tek Park	137	Infrastructure Complete
The Crossings	201	Infrastructure Complete
The Waterfront, Phase 1	26	Infrastructure Complete
West Hills Business Center, Lots A-F	313	Infrastructure Complete
West Park Business Center	35	Infrastructure Complete
West Park II	92	Infrastructure Complete
Western Lehigh Valley Corp.	18	Infrastructure Complete
William Penn Business Center	135	Infrastructure Complete

Source: Plans submitted to Lehigh County Authority.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
WATER & WASTEWATER SERVICE AREAS  
HOUSING GROWTH TRENDS**

Municipality	Single Family										Mobile Homes									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Alburtis	-	3	-	-	-	27	37	20	23	1	-	-	-	-	-	-	-	-	-	-
Allentown City	1	6	2	1	-	1	8	2	12	12	-	-	-	-	-	-	-	-	-	-
Emmaus	-	-	-	-	-	-	2	3	3	5	-	-	-	-	-	-	1	-	-	-
Heidelberg	113	6	39	1	-	3	1	5	2	4	-	-	-	-	-	-	1	-	-	2
Lower Macungie	4	6	-	1	3	3	8	4	4	15	8	-	-	29	-	-	6	5	2	2
Lowhill	-	-	-	-	-	4	13	6	6	9	-	-	-	-	-	-	1	-	-	-
Lynn	1	-	1	-	-	-	4	2	5	3	-	-	-	-	-	-	-	-	-	-
Macungie	18	1	16	2	-	1	13	27	29	11	22	-	-	-	-	-	2	1	4	9
North Whitehall	9	18	1	-	1	-	5	3	10	2	-	-	-	-	-	-	-	-	-	-
Salisbury	53	3	-	7	-	2	17	20	10	23	-	-	-	-	-	-	-	6	-	-
South Whitehall	231	86	251	236	-	-	160	123	149	163	6	-	-	-	-	-	4	-	6	7
Upper Macungie	19	1	1	1	13	-	14	7	11	73	-	-	-	-	-	-	-	1	-	-
Upper Milford	9	8	2	-	1	-	2	3	4	2	5	-	-	-	-	-	3	-	2	-
Washington	31	18	2	1	3	7	11	13	9	17	1	-	-	-	-	-	2	-	-	1
Weisenberg																				
Total	489	156	315	250	21	48	326	255	286	366	42	-	-	29	-	-	20	13	14	21
Municipality	Multi-Family (1)										Total									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Alburtis	-	-	4	-	-	56	-	-	-	-	3	4	-	-	83	37	37	20	23	1
Allentown City	4	-	-	-	-	-	20	170	-	128	-	-	-	-	1	28	28	172	12	140
Emmaus											5	6	2	1	-	-	3	3	3	5
Heidelberg															-	3	2	5	2	6
Lower Macungie	44	-	-	-	-	-	-	-	-	110	165	6	39	30	-	-	37	22	11	138
Lowhill	-	-	-	-	-	-	-	-	-	-	4	6	-	1	3	3	8	4	4	15
Lynn											-	-	-	-	-	4	14	6	6	9
Macungie	-	-	-	-	1	-	-	-	-	-	1	-	1	-	1	-	4	2	5	3
North Whitehall	-	-	-	-	-	-	-	-	-	-	40	1	16	2	-	1	15	28	33	20
Salisbury	-	-	-	-	10	-	-	40	-	-	9	18	1	-	11	-	5	43	10	2
South Whitehall	20	-	-	-	-	14	-	5	-	-	73	3	-	7	-	16	17	31	10	23
Upper Macungie	51	-	202	376	196	-	-	3	240	168	288	86	453	612	196	-	164	126	395	338
Upper Milford	-	-	-	-	-	-	-	-	-	-	19	1	1	1	13	-	14	8	11	73
Washington	-	-	-	-	18	-	-	-	-	-	14	8	2	-	19	-	5	3	6	2
Weisenberg	-	-	-	-	-	-	-	-	-	-	32	18	2	1	3	7	13	13	9	18
Total	119	-	206	376	225	70	20	218	240	406	653	157	517	655	330	99	366	486	540	793

(1) Includes Condominiums and Apartments.  
Note: The schedule represents approved lots.  
Source: Lehigh County Assessment Office

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
AVERAGE ANNUAL UNEMPLOYMENT RATES**

<u>Year</u>	<u>Lehigh County</u>	<u>Pennsylvania</u>	<u>United States</u>
2008	6.9%	6.4%	7.2%
2009	8.8%	8.1%	9.3%
2010	9.4%	8.7%	9.6%
2011	8.7%	7.9%	9.0%
2012	8.4%	7.9%	7.8%
2013	6.5%	6.0%	6.7%
2014	6.9%	5.8%	6.2%
2015	5.0%	5.1%	5.0%
2016	4.7%	4.8%	4.7%
2017	4.4%	4.9%	4.4%

Source: US Bureau of Labor Statistics

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
PERSONAL INCOME**

	2007	2008	2009	2010	2011
<b>Lehigh County</b>					
Total Personal Income (\$000)	\$ 12,901,135	\$ 13,493,450	\$ 13,586,500	\$ 13,756,104	\$ 14,431,990
Population (000)	337	341	343	349	353
Per Capita Personal Income	\$ 38,305	\$ 39,549	\$ 39,551	\$ 39,279	\$ 40,890
<b>Pennsylvania</b>					
Total Personal Income (\$000)	\$ 481,806,170	\$ 499,669,401	\$ 506,397,440	\$ 516,390,019	\$ 538,908,724
Population (000)	12,415	12,566	12,605	12,702	12,743
Per Capita Personal Income	\$ 38,793	\$ 39,762	\$ 40,157	\$ 40,604	\$ 42,291
<b>United States</b>					
Total Personal Income (\$000)	\$ 11,634,322,000	\$ 12,225,589,000	\$ 12,168,161,000	\$ 12,353,577,000	\$ 12,949,905,000
Population (000)	301,290	304,374	307,006	308,745	311,600
Per Capita Personal Income	\$ 38,615	\$ 40,166	\$ 39,635	\$ 39,635	\$ 41,560
	2012	2013	2014	2015	2016
<b>Lehigh County</b>					
Total Personal Income (\$000)	\$ 15,404,995	\$ 15,587,384	\$ 16,177,642	\$ 17,145,783	\$ 17,734,075
Population (000)	355	355	358	360	366
Per Capita Personal Income	\$ 43,364	\$ 43,897	\$ 45,211	\$ 47,537	\$ 48,834
<b>Pennsylvania</b>					
Total Personal Income (\$000)	\$ 575,424,657	\$ 594,915,004	\$ 618,858,628	\$ 64,909,812	\$ 676,880,269
Population (000)	12,763	12,781	12,792	12,802	12,805
Per Capita Personal Income	\$ 45,083	\$ 46,202	\$ 48,378	\$ 49,786	\$ 52,096
<b>United States</b>					
Total Personal Income (\$000)	\$ 13,404,868,963	\$ 14,166,900,000	\$ 14,955,700,000	\$ 15,737,700,000	\$ 15,928,700,000
Population (000)	315,091	316,497	320,222	325,200	325,719
Per Capita Personal Income	\$ 43,735	\$ 44,543	\$ 40,962	\$ 48,112	\$ 50,398

Note: 2017 information is not available

Source: U.S. Department of Commerce, Economics and Statistical Administration, Bureau of Economic Analysis.

Office of Financial Management

FRED - Federal Reserve Economic Data

The Statistical Portal

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
CIVILIAN LABOR FORCE 2001 - 2040**

	Age Group	2001	2010	Estimate		
				2020	2030	2040
<b>Lehigh Valley</b>	16 - 19	17,626	15,006	12,837	14,199	16,476
	20 - 24	27,409	34,858	31,941	34,313	40,776
	25 - 34	60,332	63,229	88,450	84,598	92,329
	35 - 44	81,995	71,451	70,163	94,126	92,172
	45-54	73,679	83,551	74,497	74,911	99,258
	55-64	34,398	52,236	67,344	60,838	62,106
	65+	11,172	15,280	26,173	33,884	33,775
	<b>Total</b>	<b>306,611</b>	<b>335,611</b>	<b>371,405</b>	<b>396,869</b>	<b>436,892</b>
<b>Pennsylvania</b>		9,363,040	7,137,155		NA	NA
<b>United States</b>		212,577,000	233,658,000		NA	NA

**Note: NA means not available.**

Source: Table 29, Lehigh Valley Profile and Trends, 2013 Edition, Lehigh Valley Planning Commission.

## **OPERATING INFORMATION**

This section provides trends of sales, customer growth, systems capacity, number of employees and other significant operating and capital indicators.



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**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
WATER SALES AND CUSTOMER GROWTH**

Customer Class	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>SUBURBAN DIVISION</b>										
<b>Western Lehigh Service Area (1):</b>										
<b>Sales:</b>										
Large Industrial	277,013	344,726	382,652	406,184	448,848	575,145	699,377	726,196	732,464	647,574
Other Industrial	251,944	215,278	712,796	667,916	793,177	920,043	1,067,360	1,181,947	1,158,204	1,127,906
Commercial/Sm. Industrial/Institutional/Other	714,315	694,431	307,772	311,708	324,146	336,593	350,800	383,238	452,939	442,098
Residential	929,579	898,161	995,643	973,927	960,988	940,112	945,500	954,476	1,072,729	960,662
Total Sales	2,172,851	2,152,596	2,398,863	2,359,735	2,527,159	2,771,893	3,063,037	3,245,857	3,416,336	3,178,240
<b>Customers:</b>										
Large Industrial	1	1	1	1	1	1	1	1	1	1
Other Industrial	5	5	7	7	7	8	8	8	8	8
Commercial/Sm. Industrial/Institutional	561	581	594	601	606	571	575	591	622	642
Residential	16,161	16,670	17,173	17,539	17,718	17,977	18,160	18,338	18,828	19,143
Total Customers	16,728	17,257	17,775	18,148	18,332	18,557	18,744	18,938	19,459	19,794
<b>Northern Lehigh Service Area (2):</b>										
<b>Sales:</b>										
Commercial/Sm. Industrial/Institutional	15,002	15,881	15,283	16,363	19,649	15,597	13,295	12,119	13,021	12,009
Residential	91,101	89,183	92,143	92,716	91,110	87,898	86,939	86,239	88,078	83,774
Total Sales	106,103	105,064	107,426	109,079	110,759	103,495	100,234	98,358	101,099	95,783
<b>Customers:</b>										
Commercial/Sm. Industrial/Institutional	67	68	68	68	69	69	69	69	69	70
Residential	1,743	1,749	1,870	1,882	1,882	1,873	1,878	1,886	1,893	1,894
Total Customers	1,810	1,817	1,938	1,950	1,951	1,942	1,947	1,955	1,962	1,964
<b>Northampton County Service Area (3):</b>										
<b>Sales:</b>										
Residential	3,739	3,427	3,744	3,575	3,478	3,352	3,438	3,286	3,627	3,459
<b>Customers:</b>										
Residential	67	67	67	67	67	67	67	67	67	67
<b>CITY DIVISION (4)</b>										
<b>Sales:</b>										
Other Industrial						46,193	106,851	113,671	113,470	107,331
Commercial/Sm. Industrial/Institutional/Other						326,015	769,692	816,700	785,917	769,492
Residential						1,026,687	2,121,604	2,147,484	2,160,603	2,158,560
Total Sales						1,398,895	2,998,147	3,077,855	3,059,990	3,035,383
<b>Customers:</b>										
Other Industrial						547	419	417	419	419
Commercial/Sm. Industrial/Institutional						4,637	4,747	4,743	4,728	4,731
Residential						41,464	41,615	41,588	41,615	41,620
Total Customers						46,648	46,781	46,748	46,762	46,770
<b>ALL SERVICE AREAS:</b>										
<b>Sales:</b>										
Large Industrial	277,013	344,726	382,652	406,184	448,848	575,145	699,377	726,196	732,464	647,574
Other Industrial	251,944	215,278	712,796	667,916	793,177	966,236	1,174,211	1,295,618	1,271,674	1,235,237
Commercial/Sm. Industrial/Institutional	729,317	710,312	323,055	328,071	343,795	678,205	1,133,787	1,212,057	1,251,877	1,223,599
Residential	1,024,419	990,771	1,091,530	1,070,218	1,055,576	2,058,049	3,157,481	3,191,485	3,325,037	3,206,455
Total Sales	2,282,693	2,261,087	2,510,033	2,472,389	2,641,396	4,277,635	6,164,866	6,425,356	6,581,052	6,312,865
<b>Customers:</b>										
Large Industrial	1	1	1	1	1	1	1	1	1	1
Other Industrial	5	6	6	7	7	555	427	425	427	427
Commercial/Sm. Industrial/Institutional	628	649	661	669	675	5,277	5,391	5,403	5,419	5,443
Residential	17,971	18,486	19,110	19,488	19,667	61,381	61,720	61,879	62,403	62,724
Total Customers	18,605	19,142	19,778	20,165	20,350	67,214	67,539	67,708	68,250	68,595

(1) Includes the Central Lehigh, Upper Milford, Arcadia West, Beverly Hills and Emmaus Consecutive divisions. Includes sales to Municipalities within Commercial/Sm Industrial/Institutional/Other.

(2) Includes the North Whitehall, Washington Township, Mill Creek, Heidelberg Heights and Pine Lakes of Lynn divisions.

(3) The Clearview Farm Estates system was acquired in May 2006.

(4) The City Division was acquired through a Lease Concession agreement on 8/8/13.

**Note: Total Sales is shown in thousands of gallons. Total Customers represent units served at year-end, not customer connections.**

**In 2010, two accounts were reclassified from Commercial to Other Industrial.**

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
WATER SUPPLY SOURCES, DEMAND AND CAPACITY INFORMATION**

Customer Class	ACTUAL										PROJECTED	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2020	2030
<b>SUBURBAN DIVISION</b>												
<b>Central Lehigh Division:</b>												
Average Daily Demand (Gallons)	6,198,000	6,281,000	6,748,000	6,749,000	7,108,000	8,000,000	8,760,000	9,085,000	9,329,000	9,284,500	9,650,000	12,100,000
Maximum Daily Demand (Gallons)	9,473,000	8,238,000	10,958,000	11,502,000	10,368,000	11,129,000	10,935,000	10,819,000	12,273,000	11,830,000	14,920,000	18,790,000
Estimated Safe Yield of Supplies (GPD)	10,870,000	12,760,000 (1)	12,760,000 (1)	15,760,000	15,760,000	15,760,000	15,760,000	15,760,000	15,760,000	15,760,000	23,260,000 (1)*	23,260,000 (1)*
Surplus/(Deficit) (GPD)	1,397,000	4,522,000	1,802,000	4,258,000	5,392,000	4,631,000	4,825,000	4,941,000	3,487,000	3,930,000	8,340,000	4,470,000
(1) Includes WL-3 (-1.29 mgd) which is used intermittently												
* Includes 2010 Max day purchase from City of Allentown @ 3mgd and @ 10.5 mgd for 2020 and beyond												
<b>Washington Township Division:</b>												
Average Daily Demand (Gallons)	54,000	54,000	55,000	53,000	59,000	71,000	63,000	44,000	48,000	48,000	60,158	62,938
Maximum Daily Demand (Gallons)	81,000	110,000	80,000	70,000	241,000	98,000	89,000	92,000	88,000	64,000	88,737	94,407
Estimated Safe Yield of Supplies (GPD)	214,000 *	214,000 *	214,000 *	214,000 *	214,000 *	214,000 *	214,000 *	214,000 *	214,000 *	214,000 *	214,000 *	214,000 *
Surplus/(Deficit) (GPD)	133,000	104,000	134,000	144,000	(27,000)	116,000	125,000	122,000	125,000	150,000	125,263	119,593
* Maximum day purchase from Slatington (1,500,000 gal. over 7 days), by agreement												
<b>North Whitehall Township Division:</b>												
Average Daily Demand (Gallons)	297,000	244,000	183,000	241,000	256,000	253,000	259,000	346,000	469,000	356,000	285,752	321,272
Maximum Daily Demand (Gallons)	420,000	418,000	420,000	374,000	439,000	413,000	364,000	520,000	835,000	454,000	442,916	497,972
Estimated Safe Yield of Supplies (GPD)	703,000 *	703,000 *	703,000 *	703,000 *	703,000 *	703,000 *	703,000 *	703,000 *	703,000 *	703,000 *	703,000 *	703,000 *
Surplus/(Deficit) (GPD)	283,000	285,000	283,000	329,000	264,000	290,000	339,000	183,000	(132,000)	249,000	260,084	205,028
* Includes 390,000 gpd maximum purchase from NBMA over 30 days by agreement												
<b>Mill Creek Estates Division:</b>												
Average Daily Demand (Gallons)	6,000	6,000	6,000	5,000	5,000	5,000	6,000	5,000	5,200	5,200	9,000	10,000
Maximum Daily Demand (Gallons)	12,000	13,000	12,000	10,000	18,000	15,000	26,000	12,000	10,000	10,000	15,000	15,000
Estimated Safe Yield of Supplies (GPD)	51,800	51,800	51,800	51,800	51,800	51,800	51,800	51,800	51,800	51,800	51,800	51,800
Surplus/(Deficit) (GPD)	39,800	38,800	39,800	41,800	33,800	36,800	25,800	39,800	41,800	41,800	36,800	36,800
<b>Heidelberg Heights Division:</b>												
Average Daily Demand (Gallons)	34,000	37,000	39,000	38,000	40,000	25,000	35,000	42,000	33,000	29,800	37,000	37,000
Maximum Daily Demand (Gallons)	94,000	64,000	105,000	68,000	59,000	68,000	84,600	70,000	73,000	43,000	64,000	64,000
Estimated Safe Yield of Supplies (GPD)	129,000	129,000	129,000	129,000	129,000	129,000	129,000	129,000	129,000	129,000	129,000	129,000
Surplus/(Deficit) (GPD)	35,000	65,000	24,000	61,000	70,000	61,000	44,400	59,000	56,000	86,000	65,000	65,000
<b>Pine Lakes of Lynn Division:</b>												
Average Daily Demand (Gallons)	10,000	11,000	9,000	9,000	11,000	8,000	7,000	9,000	7,300	7,200	11,000	11,000
Maximum Daily Demand (Gallons)	15,000	19,000	18,000	24,000	21,000	24,000	11,000	15,000	12,000	1,300	19,000	19,000
Estimated Safe Yield of Supplies (GPD)	72,000	72,000	72,000	72,000	72,000	72,000	72,000	72,000	72,000	72,000	72,000	72,000
Surplus/(Deficit) (GPD)	57,000	53,000	54,000	48,000	51,000	48,000	61,000	57,000	60,000	70,700	53,000	53,000
<b>Arcadia West Division:</b>												
Average Daily Demand (Gallons)	7,000	10,000	12,000	13,000	14,000	17,000	18,000	22,000	22,000	23,000	48,500	48,500
Maximum Daily Demand (Gallons)	24,000	20,000	25,000	28,000	33,000	38,000	73,000	54,000	85,000	49,000	194,000	194,000
Estimated Safe Yield of Supplies (GPD)	264,000	264,000	264,000	264,000	264,000	264,000	264,000	264,000	264,000	264,000	264,000	264,000
Surplus/(Deficit) (GPD)	240,000	244,000	239,000	236,000	231,000	226,000	191,000	210,000	179,000	215,000	70,000	70,000
<b>Beverly Hills Division:</b>												
Average Daily Demand (Gallons)	12,000	12,000	13,000	10,000	11,000	8,000	6,000	6,000	6,800	6,000	12,000	12,000
Maximum Daily Demand (Gallons)	21,000	18,000	21,000	22,000	21,000	17,000	11,000	14,000	14,000	13,000	18,000	18,000
Estimated Safe Yield of Supplies (GPD)	33,000	33,000	33,000	33,000	33,000	33,000	33,000	33,000	33,000	33,000	33,000	33,000
Surplus/(Deficit) (GPD)	12,000	15,000	12,000	11,000	12,000	16,000	22,000	19,000	19,000	20,000	15,000	15,000

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
WATER SUPPLY SOURCES, DEMAND AND CAPACITY INFORMATION (Continued)**

Customer Class	ACTUAL										PROJECTED	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2020	2030
<b>Clearview Farm Estates Division:</b>												
Average Daily Demand (Gallons)	11,000	13,000	12,000	10,000	10,000	10,000	10,000	10,000	10,000	8,800	13,000	13,000
Maximum Daily Demand (Gallons)	29,000	25,000	26,000	23,000	21,000	20,000	11,000	19,000	29,000	15,000	25,000	25,000
Estimated Safe Yield of Supplies (GPD)	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000
Surplus/(Deficit) (GPD)	6,000	10,000	9,000	12,000	14,000	15,000	24,000	16,000	6,000	20,000	10,000	10,000
<b>Emmaus Consecutive Division:</b>												
Average Daily Demand (Gallons)	70,000	64,000	69,000	67,000	65,000	65,000	63,000	63,000	63,000	64,000	64,000	64,000
Maximum Daily Demand (Gallons)	84,000	67,000	83,000	82,000	75,000	72,000	67,000	67,000	71,000	68,000	67,000	67,000
Estimated Safe Yield of Supplies (GPD)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Surplus/(Deficit) (GPD)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
** Estimated												
<b>Buss Acres Division:</b>												
Average Daily Demand (Gallons)	21,000	21,000	23,000	20,000	19,000	18,000	17,000	23,000	28,000	24,000	21,000	21,000
Maximum Daily Demand (Gallons)	32,000	30,000	42,000	38,000	27,000	31,000	27,000	53,000	51,000	16,000	30,000	30,000
Estimated Safe Yield of Supplies (GPD)	118,000	118,000	118,000	118,000	118,000	118,000	118,000	118,000	118,000	118,000	118,000	118,000
Surplus/(Deficit) (GPD)	86,000	88,000	76,000	80,000	91,000	87,000	91,000	65,000	67,000	102,000	88,000	88,000
. ** Estimated												
<b>Madison Park Division:</b>												
Average Daily Demand (Gallons)			16,000 *	15,000	14,000	14,000	13,000	13,000	13,000	12,500	27,000	27,000
Maximum Daily Demand (Gallons)			39,000 **	27,000	21,000	24,000	25,000	30,000	24,000	25,000	41,000	41,000
Estimated Safe Yield of Supplies (GPD)			137,000	137,000	137,000	137,000	137,000	137,000	137,000	137,000	137,000	137,000
Surplus/(Deficit) (GPD)			98,000	110,000	116,000	113,000	112,000	107,000	113,000	112,000	96,000	96,000
* Based on partial year. The Authority acquired this system in 2010.												
** Estimated												
<b>CITY DIVISION</b>												
Average Daily Demand (Gallons)						18,373,000	18,389,059	19,989,940	20,408,474	21,156,763	23,000,000	26,000,000
Maximum Daily Demand (Gallons)						29,457,000	25,288,600	26,120,900	25,296,100	27,135,900	32,000,000	36,000,000
Estimated Safe Yield of Supplies (GPD)						71,000,000	71,000,000	71,000,000	71,000,000	71,000,000	71,000,000	71,000,000
Surplus/(Deficit) (GPD)						41,543,000	45,711,400	44,879,100	45,703,900	43,864,100	39,000,000	35,000,000

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
WASTEWATER COLLECTOR SYSTEM GROWTH AND BILLABLE FLOW**

System	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Upper Milford:</b>										
Residential Customers	437	457	465	501	739	762	773	781	790	819
Commercial/Industrial Customers	31	31	31	31	42	42	42	49	49	49
Total Customers	468	488	496	532	781	804	815	830	839	868
Billable Flow (1)	40,434	36,844	39,890	37,608	47,804	51,626	56,443	58,976	52,959	57,509
<b>Weisenberg Township: (4)</b>										
Residential Customers	145	146	146	146	146	146	146	149	149	149
Commercial/Industrial Customers	11	12	14	14	14	14	15	3	3	3
Total Customers	156	158	160	160	160	160	161	152	152	152
Billable Flow (1)	13,644	13,245	13,537	12,507	11,227	13,939	14,818	12,196	12,285	10,833
<b>Heidelberg Heights: (2)</b>										
Residential Customers	145	145	145	145	145	145	145	145	145	145
Billable Flow	-	-	8,338	7,592	7,203	7,663	6,872	6,112	6,752	6,544
<b>Wynnewood Terrace: (2)</b>										
Residential Customers	217	217	217	217	217	217	217	219	219	222
Commercial/Industrial Customers	2	2	2	2	2	2	2	2	2	2
Total Customers	219	219	219	219	219	219	219	221	221	224
Billable Flow (1)	-	-	14,640	14,331	13,795	13,854	13,211	13,249	13,386	13,087
<b>Sand Spring: (3)</b>										
Residential Customers	248	248	248	248	248	248	248	248	248	248
Commercial/Industrial Customers	9	9	9	9	9	9	9	9	9	9
Total Customers	257	257	257	257	257	257	257	257	257	257
Billable Flow (1)	9,901	9,662	8,784	8,463	8,463	8,277	8,019	8,080	8,143	8,954
<b>Washington Township: (5)</b>										
Residential Customers	-	590	590	596	597	599	601	601	602	602
Commercial/Industrial Customers	-	24	24	22	22	22	23	23	23	23
Total Customers	-	614	614	618	619	621	623	624	625	625
Billable Flow (1)	-	21,125	26,787	26,394	27,450	26,397	25,940	25,963	25,327	24,587
<b>Lynn Township: (6)</b>										
Residential Customers	-	-	-	-	403	403	406	406	410	411
Commercial/Industrial Customers	-	-	-	-	21	21	21	21	21	21
Total Customers	-	-	-	-	424	424	427	427	431	432
Billable Flow (1)	-	-	-	-	786	1,444	1,746	1,406	1,150	1,223
<b>Lowhill Township: (7)</b>										
Residential Customers	-	-	-	-	-	-	-	-	43	43
Billable Flow	-	-	-	-	-	-	-	-	1,789	2,114
<b>Total Collector Systems:</b>										
Residential Customers	1,192	1,803	1,811	1,853	2,495	2,520	2,536	2,549	2,606	2,639
Commercial/Industrial Customers	53	78	80	78	110	110	111	107	107	107
Total Customers	1,245	1,881	1,891	1,931	2,605	2,630	2,647	2,656	2,713	2,746
Billable Flow (1)	63,979	80,876	111,976	106,895	116,728	123,200	127,049	125,982	121,791	124,851

- (1) Flow is shown in thousands of gallons.
- (2) The Authority acquired these systems in the initial year where a customer total is indicated. Customers within these service areas were billed based on a flat rate through 2009. In 2010, metered water usage was used to bill those customers with meters and an assumed usage of 180 gallons per day was used to bill unmetered customers.
- (3) The Authority acquired this system on 12/30/04, but since there was very little billable flow the customer additions are shown in 2005. During 2006 individual water meters were installed to record billable flow at 26 residential apartment buildings and each commercial facility.
- (4) Includes Pointe West and Arcadia West systems.
- (5) The Authority took over operations and billing responsibilities for this system on April 1, 2009.
- (6) The Authority took over operations and billing responsibilities for this system on February 29, 2012.
- (7) The Authority took over operations and billing responsibilities for this system on June 8, 2016.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
WESTERN LEHIGH INTERCEPTOR  
AVERAGE DAILY WASTEWATER FLOW  
ACTUAL AND PROJECTED**

	Year	System Flow (1)	Billable Flow (2)	(3) % of Flow Unbilled
Actual	2008	7.27	5.72	21.3%
	2009	7.31	5.80	20.7%
	2010	7.62	5.90	22.6%
	2011	9.37	6.07	35.2%
	2012	7.48	5.33	28.7%
	2013	7.87	5.43	31.0%
	2014	9.48	5.91	37.6%
	2015	8.27	7.38	10.8%
	2016	7.76	7.21	7.1%
	2017	9.25	6.83	26.2%
Projected (A)	2020	10.4		
	2025	10.4		
	2030	10.4		

(1) System flow to City of Allentown recorded at Keck's Bridge Meter Station and Spring Creek Road Pump Station.

(2) Flow billed to municipalities.

(3) Represents assumed infiltration and inflow into the interceptor system. Higher percentage levels for 2011 are a direct result of significant precipitation events.

**Note: Flow is reported in millions of gallons per day.**

(A) Source: LCA Planning Records.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
LITTLE LEHIGH RELIEF INTERCEPTOR BILLABLE FLOWS**

Municipality	Billable System Flow										
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Alburtis	44,690	46,419	47,150	45,202	47,928	41,777	51,354	51,158	54,195	52,490	
Lowhill	2,902	2,734	3,156	2,440	3,167	2,776	2,644	2,677	2,544	2,144	
Lower Macungie	654,744	622,854	644,316	650,770	620,044	516,771	533,139	527,857	494,538	518,599	
Macungie	68,029	74,630	69,496	80,218	73,540	73,737	76,675	68,271	70,642	61,212	
Salisbury	133,945	138,649	155,067	158,848	136,429	150,181	136,491	144,735	143,806	140,072	
South Whitehall	395,742	381,408	459,031	554,389	621,811	607,613	491,939	407,528	384,152	292,224	
Upper Macungie	1,136,492	1,166,395	1,211,541	1,222,438	1,235,346	1,098,889	1,125,723	1,136,997	1,182,468	1,114,969	
Upper Milford	40,852	38,232	41,332	39,534	54,251	54,840	60,363	61,345	55,120	60,916	
Weisenberg	10,943	11,113	11,545	10,015	11,277	15,741	11,624	11,869	12,396	10,649	
Total	2,488,339	2,482,434	2,642,634	2,763,854	2,803,793	2,562,325	2,489,952	2,412,437	2,399,861	2,253,275	

**Note: Flow is shown in thousands of gallons per year.**

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
OPERATING AND CAPITAL INDICATORS**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Suburban Division Water System:</b>										
Water Sales (MGD)	6.23	6.25	6.88	6.76	7.23	7.89	8.68	9.17	9.62	8.98
Average Daily Demand (MGD)	6.73	6.80	7.26	7.23	7.62	8.50	9.27	9.68	10.04	9.88
Peak Day Demand (MGD)	10.28	9.03	11.83	12.30	11.38	11.97	11.75	11.75	13.60	12.65
Safe Supply Capacity (MGD) (4)	12.66	14.55	14.69	16.69	16.69	17.70	17.70	17.70	17.70	17.70
System Storage Capacity (MG)	11.01	11.01	11.09	11.09	11.15	11.15	11.15	11.15	11.15	11.17
Miles of Water Mains	297.49	306.00	311.27	312.08	316.60	318.35	319.92	322.52	329.67	341.78
<b>Suburban Division Wastewater System:</b>										
Average Daily flow to Kline's Island (1)	6.73	6.76	7.11	8.73	7.40	7.77	8.92	7.88	7.98	8.80
Treatment Capacity (2)	10.18	10.68	10.68	10.68	10.68	10.78	10.78	10.78	10.78	10.78
Wastewater Allocation Sold (gallons per day)	153,572	135,269	113,244	49,879	104,569	165,903	47,609	273,392	124,800	75,476
Treatment Plant Design Capacity in Collector Systems (GPD) (3)	155,000	155,000	155,000	155,000	315,000	315,000	355,000	355,000	355,000	355,000
Miles of Pipe:										
Western Lehigh Interceptor	25.51	25.51	25.51	25.51	25.51	25.51	25.51	25.51	25.51	25.51
Little Lehigh Relief Interceptor	5.66	5.66	5.66	5.66	5.66	5.66	5.66	5.66	5.66	5.66
Collector System	22.80	22.80	23.06	23.06	35.86	36.62	35.86	35.97	40.16	40.51
Total Miles of Wastewater System Pipe	53.97	53.97	54.23	54.23	67.03	67.79	67.03	67.14	71.33	71.68
<b>City Division Water System: *</b>										
Water Sales (MGD)						9.65	8.21	8.43	8.36	8.32
Average Daily Demand (MGD)						18.37	18.39	19.99	20.41	21.16
Peak Day Demand (MGD)						29.46	25.29	26.12	25.30	27.14
Safe Supply Capacity (MGD)						71.00	71.00	71.00	71.00	71.00
System Storage Capacity (MG)						50.00	50.00	50.00	50.00	50.00
Miles of Water Mains						320.00	320.00	320.00	320.00	320.00
<b>City Division Wastewater System: *</b>										
Average Daily flow received at Klines Island (1)						30.71	32.39	30.44	29.67	30.78
Wastewater Allocation Used (MGD)						40.00	40.00	40.00	40.00	40.00
Treatment Plant Design Capacity						40.00	40.00	40.00	40.00	40.00
Miles of Pipe						285.00	285.00	285.00	285.00	285.00

(1) Represents the annual flow in millions of gallons per day billed by the Kline Island WW Treatment Plant to the Divisions for treatment services.

(2) Represents Divisional Capacity in millions of gallons per day in the Kline Island WW Treatment Plant's 40 million gallons per day (mgd) treatment plant at year end.

(3) The following collector systems with package treatment plants were acquired by the Suburban Division:

- a. Heidelberg Heights in 1998. A new treatment plant was completed in 2000 to replace a nonfunctioning plant.
- b. The Wynnewood Terrace (51,900 gallons per day) and Arcadia Industrial Park (12,000 gallons per day) systems were purchased in 2003. The Wynnewood Plant was upgraded to 60,000 gallons per day in December 2005. The Arcadia plant was permanently removed from service in August 2006 because of operating problems. Flow through the station resumed in January 2014.
- c. The Sand Spring System (35,000 gallons per day) was purchased in 2004.

(4) Some figures have been changed to correct for past reporting errors.  
Note: MGD equates to millions of gallons per day. GPD equates to millions of gallons.

\* The City Fund was new to the Authority in 2013, and as such information prior to 2013 is not applicable.

**Note: MGD equates to millions of gallons per day, GPD equates to gallons per day and MG equates to millions of gallons.**



**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
NUMBER OF EMPLOYEES BY FUND**

		Total Fulltime Equivalent Employees									
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>SUBURBAN DIVISION</b>											
Administration, Customer Service & Clerical		13.5	12.8	12.4	12.1	11.4	10.6	9.8	9.3	10.1	10.0
Water Operations		11.6	12.5	14.0	14.0	13.4	15.2	14.8	14.2	15.3	18.2
Water Capital (1)		5.8	6.1	6.6	4.9	4.7	5.7	1.9	3.5	3.2	2.8
Wastewater Operations		5.8	5.2	4.7	5.3	5.8	5.5	5.8	6.5	7.1	6.9
Wastewater Capital (1)		1.9	1.8	2.0	3.3	2.9	1.3	1.0	1.0	1.0	1.3
<b>CITY DIVISION (2) *</b>											
Administration, Customer Service & Clerical							8.8	15.6	17.1	17.0	18.3
Water Operations							17.5	48.3	43.5	34.7	37.5
Water Capital (1)							1.6	2.0	4.4	6.9	5.8
Wastewater Operations							17.9	46.8	46.6	47.9	48.5
Wastewater Capital (1)							0.3	1.7	1.7	2.3	1.4
Total		38.6	38.4	39.7	39.6	38.2	84.4	147.7	147.8	145.5	150.7
# of Employees at year-end:											
Fulltime		39	40	40	40	37	141	150	148	148	155
Parttime		1	1	-	-	-	1	-	-	-	-

(1) Includes inspectors and employees working on Capital Projects.

(2) For 2013, count includes City employees from 8/8/13 to end of year. Calculation for 2013 was corrected in 2014.

\* The City Fund was new to the Authority in 2013, and as such information prior to 2013 is not applicable.

Note: A fulltime employee is equivalent to 2,080 hours per year (including vacation and other offtime). Fulltime equivalent employment is calculated by dividing total hours allocated to a fund by total organization hours. Total FTE's may exceed employees at year-end because of seasonal help and fulltime employees leaving employment before year-end without being replaced.

**OTHER INFORMATION**

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**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
PROFILE OF AUTHORITY MANAGEMENT STAFF  
December 31, 2017**

**Liesel M. Gross, Chief Executive Officer**

Ms. Gross holds a Master's in Public Administration Degree from Kutztown University and has been employed by the Authority since 1998. She began her service to the Authority in a public relations role and became the Authority's Customer & Communications Manager in 2006. In her role as Chief Executive Officer, which she began in 2016, Ms. Gross focuses attention on providing broad organizational leadership both internally and externally, with a focus on developing collaboration and synergies among operational groups and engaging employees and the public in future decision-making of the Authority.

In 2016, she began a term on the Board of Directors of the American Water Works Association (AWWA). She has served as Chair of the American Water Works Association, Pennsylvania Section, Trustee of the Northeast District AWWA, and has served on numerous committees of the Association. In 2003, Mrs. Gross was awarded the Rising Tide Award from the Young Professionals committee of the Section. She is a current member of the Board of Directors for the East Penn Chamber of Commerce, and the Greater Lehigh Valley Chamber of Commerce's Energy & Environment Committee. She served as Vice Chair of the Emmaus and Upper Milford Joint Environmental Advisory Council from 2006 to 2015. She also serves as the Secretary for the Lehigh Valley Water Suppliers, Inc., and on various committees of the Pennsylvania Municipal Authorities Association.

**Bradford E. Landon, Solicitor**

Bradford E. Landon is the in-house solicitor for the Lehigh County Authority, and has served in that capacity since 1982. As Solicitor, he is the advisor on legal considerations affecting the Authority and pursues protection and enforcement of its legal rights.

Mr. Landon holds a Juris Doctorate degree from the T. C. Williams School of Law of the University of Richmond and a Bachelor of Arts degree from Dickinson College. He has been admitted to practice before the Supreme Court of Pennsylvania, the U.S. District Court - Middle District of Pennsylvania, and the U.S. District Court - Eastern District of Pennsylvania and is a member of the Lehigh County (PA) Bar Association, Pennsylvania Bar Association and American Bar Association.

A life-long resident of the Lehigh Valley, Mr. Landon has been involved with the Board of Directors of the Jim Thorpe Area School District, Lehigh Valley Legal Services and Penkernewek – The Pennsylvania Cornwall Association.

**Edward C. Klein, Chief Financial Officer**

Prior to joining the Authority in 2015, Mr. Klein worked for almost fifteen years with Weir Hazleton, Inc. as Vice President of Finance. His primary area of responsibility was for all financial activities of the business and had responsibility for Human Resources, Information Technology, Safety, and Administration. He also served in the operations area of the business for a short period of time as Interim Vice President of Operations.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
PROFILE OF AUTHORITY MANAGEMENT STAFF  
December 31, 2017  
(Continued)**

Mr. Klein has a Master's Degree in Business Administration from Pennsylvania State University and a Bachelor's Degree in Accounting from King's College. He has provided financial leadership which had a positive impact on the performance of the businesses that he has served by implementing solid financial structure, being a business partner to the executive team through analysis and advice, eliminating waste, managing risks of the business, and being a champion of change.

In his role as Chief Financial Officer, Mr. Klein will focus on the financial infrastructure and controls to support the strategic objections of the Authority and will provide the financial leadership to allow the Authority to improve its overall performance in a highly dynamic economic environment.

**John W. Parsons, Chief Operations Officer**

Prior to joining the Authority in 2013, Mr. Parsons worked for the City of Allentown for 18 years in roles of increasing leadership in the water resources arena. He holds Master's Degree in Engineering from Penn State University, and a Bachelor's Degree in Chemistry from Lebanon Valley College. He also holds water and wastewater treatment certifications through the Pennsylvania Department of Environmental Protection and is a certified sewage enforcement officer. During his tenure with the City of Allentown, Mr. Parsons managed many different aspects of the City's water and wastewater systems including serving as Laboratories Manager and Program Manager for all plant maintenance, capital upgrades and more. Since joining the Authority after the lease of the City systems, he has served as Capital Works Manager for the Authority's City Division, managing major capital improvement projects and collaborating broadly with the City's Compliance Department to develop financial and project reporting protocols. As he moves into the role of Chief Operations Officer, Mr. Parsons will draw on his knowledge of the existing system operations and strong management skills to develop plans and programs for increased cost-effectiveness, collaboration and system sustainability, driving the Authority's asset management culture into the future.

**Patricia L. Mandes, Chief Compliance Officer**

Ms. Mandes holds a B.S. Degree in Environmental Science from the University of Pittsburgh. She joined the Authority in 2007 as a Projects Manager after nearly 20 years in municipal utility field. Positions previously held included Authority Manager of another authority and Industrial Pretreatment Coordinator. She holds a Class A-E, 1-4 Wastewater Certification, and is a past President of the Eastern Pennsylvania Water Pollution Control Operators Association and has previously served as a Director of the Pennsylvania Water Environment Association as well as serves on numerous committees. Currently she is the Chairperson for the PA AWWA Water Utility Council. Ms. Mandes also serves as a Board Member on a local municipal authority. She has received numerous awards relating to the wastewater field. In April 2010, Ms. Mandes began serving as the Authority's Wastewater Services Director. Her responsibilities included management of the most significant wastewater operating and capital activities including oversight of the LCA Wastewater Treatment Plant, management of the Wastewater Capacity Development Plan, and management of the Authority's infiltration and inflow program. Ms. Mandes assumed the position of Compliance director in August 2013 and Chief Compliance Officer in 2016. She oversees compliance of the organization, manages the industrial Pretreatment Program and laboratories. In addition, she continues to manage the Wastewater Infiltration and Inflow Programs and the Wastewater Capacity Program.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
PROFILE OF AUTHORITY MANAGEMENT STAFF  
December 31, 2017  
(Continued)**

**Charles Volk, Chief Capital Works Officer**

Charles Volk holds a BS Degree in Civil Engineering from the Pennsylvania State University. He joined the Authority in 2015 after acquiring 30 years of engineering experience, the majority of which was spent engineering water and wastewater system projects as a consultant. Mr. Volk has designed and managed numerous water and wastewater treatment and conveyance projects, and has extensive experience with regulatory and funding agencies. He also served as engineer for Lehigh Northampton Airport Authority. Mr. Volk is a registered professional engineer in Pennsylvania, and is a member of various professional organizations and also serves as a Township Supervisor.

In his role as Chief Capital Works Officer, Mr. Volk is also responsible for the development and implementation of a system-wide asset management program for Authority's suburban operations, which will be used to manage and maintain the Authority's water and sewer assets in a proactive manner. This program is used to help prioritize facility improvements projects in the capital planning process, with a focus on reducing long term life-cycle costs and sustained level of service. Mr. Volk also oversees operations and management of the Authority's industrial wastewater pre-treatment plant, and provides in-house engineering support across departments.

**Robert J. Kerchusky, Wastewater Services Director**

Mr. Kerchusky came on board with Lehigh County Authority in August of 2013 through the concession and lease agreement with the City of Allentown and currently serves as the Authority's Manager of Wastewater Services with responsibility for the operation of the Kline's Island Wastewater Treatment Plant located in the City of Allentown. Additional responsibilities include technical assistance and operational oversight of LCA's Suburban Division wastewater treatment plants including the contract operation of the LCA Industrial Waste Treatment Plant located in Fogelsville, PA. Bob's background encompasses over 39 years of experience in the water and wastewater industries including 37 years at the City of Allentown WFP and Kline's Island Wastewater Treatment Plant. Bob began his career with Allentown in June 1979 and advanced through various levels of increasing responsibility, culminating with his appointment to the position of Manager of Operations in October of 2003. Mr. Kerchusky received a degree in Pollution Abatement Technology in 1977 and is certified by the PA DEP State Board of Certification of Water and Wastewater Systems Operators with Class: A-E, 1-4 Wastewater and Class: CE, Subclass: 1,2,3,4,5,6,7,8,9,10,11,12,13,14 Water certificates. Furthermore, in 2011 he obtained certification through the PACP, MACP, and LACP programs from the National Association of Sewer Service Companies (NASSCO Inc.). Bob has been recognized with numerous awards relating to the wastewater industry from various trade organizations.

**Susan Sampson, Customer Care & Communications Manager**

Susan Sampson holds a BS Degree in Rehabilitation Counseling from the Pennsylvania State University. She joined the Authority in 2017 after 23 years of corporate public relations, communications and management experience. She attended the Carroll School of Management at Boston College, earning a certificate in Corporate Community Involvement. She has extensive community, media and legislative relations experience and has managed corporate partnerships with national organizations, driving results with customer and public education campaigns.

In her role as Customer Care and Communications Manager, Ms. Sampson is responsible for the development and implementation of a strategic communications plan, including internal and

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
PROFILE OF AUTHORITY MANAGEMENT STAFF  
December 31, 2017  
(Continued)**

external communications, managing the company website and social media. She oversees the Customer Care Department, supervising a staff of managers, supervisors and employees who are responsible for the day-to-day customer service functions, including billing, metering, collections, and field service coordination. In this role, she is also responsible for managing emergency notifications, mailings and resolution of complex customer matters, while keeping accurate customer data and information. In addition, she coordinates community relations on behalf of Lehigh County Authority, including youth outreach, volunteer events, site visits, speaking engagements, community partnerships and more.

**Christopher W. Moughan, Chief Information Officer**

Christopher Moughan holds a Master's of Business Administration from DeSales University and undergraduate degrees from Muhlenberg College and Penn State. He is also MCSE Certified, and has certificates of training for several business reporting software suites. He joined the Authority in 2017 after spending many years in the information technology field focusing on security and innovative ways for organizations to gain efficiencies.

He is responsible for leading, planning and organizing all activities of the Information Technology (IT) department and to ensure the effective, efficient and secure operation of information technology processes and systems. He also governs the Authority's IT strategic plan and direction of the department, including providing oversight on IT governance, developing user groups, and assessing development training needs. Mr. Moughan provide the vision and leadership to drive the adoption of technology, innovation and automation for the organization. Through this work, he supports the Authority's goals for process improvement, knowledge retention and capture, and efficiency.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
PROFILE OF AUTHORITY BOARD MEMBERS  
December 31, 2017**

**Brian C. Nagle, Chairman – Term Expires December 31, 2019**

Mr. Nagle holds a Bachelor of Science degree in Mechanical Engineering from Rutgers University. Mr. Nagle is a life-long resident of the Lehigh Valley and is now retired from PPL Corporation after 38 years of service in engineering, project management, environmental management and regulatory affairs. He was a founding Board member of the Sustainable Energy Fund and served on the Board of the Wildlands Conservancy for 8 years until 2015. He currently sits on the Board of Macungie Memorial Park Association. Mr. Nagle has also been involved in the Lehigh Valley's initiatives to preserve open space and revitalize abandoned industrial sites. Mr. Nagle has been an Authority Board member since 2009.

**Scott C. Bieber, Vice Chairman – Term Expires December 31, 2022**

Mr. Bieber lives in Upper Milford Township and holds a Bachelor of Arts Degree in Political Science from Kutztown University. He is the owner of Lehigh Soils and Wetlands, a small environmental consulting firm that offers on-site sewage treatment testing and design, storm water infiltration and wetland services. He is also a certified Pennsylvania Sewage Enforcement Officer providing regulatory contract services to several municipalities in Lehigh and Carbon Counties. Prior to that, he was a reporter for *The Morning Call* for ten years covering local government, the environment and water and sewer issues. He is vice chair of the Lehigh County Agricultural Land Preservation Board, a member of the Upper Milford Open Space Committee and a former member of the Upper Milford Planning Commission. Mr. Bieber became an Authority Board member in March 2010.

**Richard H. Bohner, Secretary – Term Expires December 31, 2022**

Mr. Bohner holds a Master of Business Administration degree from Lehigh University and a Bachelor of Science degree in Finance from Pennsylvania State University. He is retired from Pennsylvania Power & Light Company where he was Manager of Customer Support Systems. During his career, he was active in the Edison Electric Institute. Mr. Bohner has served as an Authority director since 1972 and has received the Sahli Award and the Extended Service Award from the Pennsylvania Municipal Authorities Association.

**Norma A. Cusick, Assistant Secretary – Term Expires December 31, 2019**

Ms. Cusick holds a Bachelor of Arts degree from De Sales University and a Master of Arts degree from Kutztown University, and is a certified paralegal. She has been a resident of Lehigh County for 44 years and is a small business owner and business manager. Ms. Cusick has served as the Division Director for the American Heart Association, Allentown Downtown Improvement District, the Salisbury Township School Board, Salisbury Township Commissioner, Salisbury Township Planning



**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
PROFILE OF AUTHORITY BOARD MEMBERS  
December 31, 2017  
(Continued)**

Commission and is currently on the Salisbury Township Education Foundation. Ms. Cusick has served on the Board of Directors of the Pennsylvania Shakespeare Festival, Child Advocacy Center and the Lehigh Valley Hospital Board of Associates and was past President of the Lehigh County Sports Fields. She currently serves on the Board of Directors of the Allentown Public Library. She has also participated with and served on several additional community organizations, including the Greater Lehigh Valley Girl Scouts. Throughout the period of her residence she continues to be active in many other local, regional, and statewide endeavors. Ms. Cusick became an Authority Board member in March 2010.

**Ted Lyons Jr., Treasurer – Term Expires December 31, 2018**

Mr. Lyons holds a Bachelor of Science degree in Civil Engineering from Duke and an MBA from the Wharton School University of Pennsylvania. He is retired from HT Lyons, Inc., a mechanical contracting and engineering firm which he founded in 1973 and was acquired by PPL in 1998. He serves on the boards of the Allentown Boys and Girls Club and the Allentown Art Museum. He is also a past board member of the Allentown Symphony and the DaVinci Science Center.

**Linda A. Rosenfeld, Member – Term Expires December 31, 2021**

Ms. Rosenfeld attended Penn State University. A lifelong resident of Lehigh County, she is a retired office manager and has served as President of Allentown City Council, Vice-president of Lehigh County Board of Commissioners, Chair of the Allentown Commercial and Industrial Development Authority, Vice-chair of the Lehigh Northampton Airport Authority, Member of the Bridgeworks Advisory Board, Chair of the Allentown Parking Authority, President of Big Brothers and Big Sisters of Lehigh County, President of Haven House (Partial Hospitalization Program for the Mentally Ill). She is presently on the Executive Committee of the Board of Associates of Cedar Crest College, Secretary of Repertory Dance Theatre, and member of the Haven House Advisory Board. She is currently a Court Appointed Special Advocate (CASA) a volunteer representing and advocating for children going through the Court System, many of whom are neglected or abused. (CASA volunteers follow their case until there is completion, whether it is returning children to their parents or going through an adoption or other appropriate solution.) Ms. Rosenfeld became an Authority Board member in January 2015.

**Deana M. Zosky, Member – Term Expires December 31, 2018**

Ms. Zosky holds a Bachelor of Science Degree in Accounting from Long Island University and attended International Management School at the INSEAD Campus in France. She is a Certified Public Accountant and is the President of FourScore LLC, a business consulting company. She has served on a variety of boards and commissions in the Lehigh Valley including the Lower Macungie Township Board of Commissioners, the Lehigh Valley Planning Commission, Renew Lehigh Valley, and the Seed Farm. Ms. Zosky became an Authority Board member in April of 2015.

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
PROFILE OF AUTHORITY BOARD MEMBERS  
December 31, 2017  
(Continued)**

**Kevin I. Baker, Assistant Treasurer – Term Expires December 31, 2020**

Mr. Baker holds a Bachelor of Science degree in Chemical Engineering from University College, London and an MBA from Manchester Business School, University of Manchester in the UK. He is a Fellow of the Institution of Chemical Engineers and a Chartered European Engineer. He is Vice President of Universal Industrial Gases, a supplier of industrial gases and related equipment and services. He is a long-time resident of Lehigh County and previously served as President of the East Penn Chamber of Commerce and on the Board of Governors for the Lehigh Valley Chamber. Mr. Baker became an Authority Board member in April of 2016.

**Jeffrey J. Morgan, Member – Term Expires December 31, 2021**

Mr. Morgan grew up in Allentown and graduated from William Allen High School. He earned a Bachelor of Science degree in Physics from Muhlenberg College and a Master of Science degree in Environmental Engineering and Water Resources from Villanova University. He is a professional engineer licensed in PA, NJ and DE. He has over 25 years of diverse engineering and client management experience in the water and wastewater industry. Mr. Morgan works for a small engineering firm, is familiar with all aspects of the National Pollution Discharge Elimination System (NPDES) Program and otherwise assures that municipalities/authorities comply with all of their water, wastewater and stormwater related regulatory requirements. He oversees and manages wastewater design and construction projects, attends public meetings, provides reports and makes presentations. Mr. Morgan also completes reports for projects related to Combined Sewer Systems/Combined Sewer Overflows, Toxics Reduction Evaluations, MS4 Stormwater Management Programs, PPC and Emergency Planning and Inflow/Infiltration. He assists municipalities/authorities with implementation of Industrial Pretreatment Programs (IPP) including preparation of detailed local limits analyses. Mr. Morgan has volunteered his time with various youth sports organizations over the years and is currently in his eleventh year of volunteering with the South Parkland Youth Association's Football Program. Mr. Morgan currently resides in South Whitehall Township with his wife and two high school age children.

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## **Strategic Plan**

## LCA Vision

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*To be an industry-leading provider of world-class water services, today and tomorrow.*

## LCA Mission

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*We will deliver exceptional value to our customers through our high-quality, affordable and reliable water and wastewater services. We will meet the needs and expectations of existing and future customers by:*

- *Operating in a fiscally responsible manner.*
- *Providing a rewarding, respectful, empowering and safe work environment for our employees with opportunities for professional fulfillment.*
- *Practicing and advancing environmental stewardship that protects and preserves water resources for current and future generations.*
- *Serving as a strategic and respected partner, investing in solutions for our community's evolving service needs.*

## **LCA Values**

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*Our actions are rooted in the following core values:*

*We act with integrity.*

*We are accountable.*

*We are respectful of others.*

*We are dependable.*

*We foster teamwork.*

*We improve continually.*

## LCA's Critical Goal Categories (CGCs)

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### *CGC # 1 – Organizational Synergy*

**Develop a dynamic and unified organizational culture in which employees at all levels seek ways to utilize our complementary strengths to improve performance and teamwork while achieving LCA's mission.**

#### How we focus on this Critical Goal Category:

- Develop a unified organizational culture
- Create clear expectations for employees and managers
- Create opportunities for employees to work together on organizational goals
- Create an empowered workforce
- Develop a consistent management approach & support managers with resources and training
- Develop a consistent approach to managing and retaining critical data, documents and employee knowledge

#### How we measure success:

- Employee survey results
- Reduced employee turnover

## *CGC # 2 – Capital Asset Management*

***Achieve system sustainability through properly managing, maintaining and optimizing the use of existing assets, proactively planning to meet the needs of future generations of customers, and evaluating new technology to enhance performance and quality.***

### How we focus on this Critical Goal Category:

- Develop plans to meet projected 10-year growth needs (facilities, supplies, infrastructure, IT, etc.)
- Enhance automation and use technology to increase integration / data management / accessibility / data integrity
- Create customer growth
  - Attract water intensive/high-strength users
  - Acquisitions/consolidation – realize economies of scale/scope
- Optimize utilization of existing infrastructure/investments

### How we measure success:

- Customer growth (e.g. X% growth per year, 5-year average)
- Capital investment per customer
- Planned vs. unplanned maintenance



## *CGC # 3 – Operations & Financial Management*

***Provide high-quality, affordable, reliable services to our community through expert system operations and professional financial management.***

### How we focus on this Critical Goal Category:

- Optimize water resources & supply
- Enhance automation and maximize use of existing technology
- Comply with concession operating requirements
- Standardize and integrate operations
- Actively develop enhanced risk management / security / emergency response plans
- Evaluate alternatives for operation of the Authority's Wastewater Pretreatment Plant
- Improve cost effectiveness & productivity

### How we measure success:

- Increased efficiency (e.g. increase by X% per year, 5-year average)
- Rate affordability (e.g. rates are < X% of median household income)
- Cost per 1000 gallons
- Maintain 99.95% service reliability
- Employee safety

## *CGC # 4 – Workforce Sustainability*

***Create a supportive and empowering work environment where employees actively seek to contribute toward LCA's mission, with resources and programs established to ensure organizational sustainability through a stable and engaged workforce.***

### How we focus on this Critical Goal Category:

- Develop staffing plans, including succession plans as applicable, to meet current and future organizational needs
- Recruit, retain and develop a highly qualified, engaged workforce
- Develop, implement and enforce an employee safety program
- Develop flexibility and opportunity for operational employees to work interchangeably across divisions

### How we measure success:

- Non-retirement turnover rate
- Vacancy rate
- Employee satisfaction
- Employee safety
- Bench strength

## *CGC # 5 – Environmental & Regulatory Compliance*

***Serve as a steward of our water resources and protect the public's health through compliance with regulatory requirements and establishing programs to promote resource conservation and protection.***

### How we focus on this Critical Goal Category:

- Comply with all applicable laws
- Monitor and respond to upcoming legislative and regulatory changes, and industry trends, that impact LCA operations
- Compliance with the EPA Administrative Order
- Promote water conservation / watershed protection / water resource management through stakeholder outreach
- Protect our water supply from potential sources of contamination
- Develop electronic permit management system
- Monitor source water quality and respond to changes to maintain or improve public health protection and/or reduce future treatment costs

### How we measure success:

- Number of violations / NOVs
- Incident rate / severity of SSOs

## *CGC # 6 – Community & Customer Relations*

***Actively engage the community and our customers in our plans and programs to ensure LCA is positioned to meet the needs of existing and future customers.***

### How we focus on this Critical Goal Category:

- Seek & respond to customer/public input as a tool for planning and continuous improvement
- Provide a satisfying customer and public input experience
- Foster a work environment where employees consider customer service and public mission as part of our everyday operation
- Track formal support and opposition LCA receives for our plans, permit applications and other high-profile projects

### How we measure success:

- Customer satisfaction
- Reduction in “controllable” customer contacts

**LEHIGH COUNTY AUTHORITY  
ALLENTOWN, PENNSYLVANIA  
ACQUISITIONS/LEASES/OPERATING CONTRACTS**

Acquisition Date	Development	Municipality	Purchase Price	Original Customers	Current Customers
<b>Water Systems:</b>					
April 14, 1976	Fairways at Brookside	Lower Macungie Twp.	\$ 180,000	92	596
June 1, 1976	Millbrook Farms	Lower Macungie Twp.	92,339	2	319
July 1, 1976	Pine Grove Park	Lower Macungie Twp.	25,000	166	187
January 1, 1979	Shepherd Hills	Lower Macungie Twp.	325,000	453	674
June 28, 1979	Mark Terrace	Upper Macungie Twp.	8,250	25	27
January 1, 1980	Ancient Oak	Lower Macungie Twp.	1,350,000	1,055	1,143
May 20, 1980	Upper Macungie	Upper Macungie Twp.	200,000	(5)	6,715
October 1, 1981	Country Downs	Lower Macungie Twp.	12,000	36	130
March 14, 1984	Clearview Manor	Lower Macungie Twp.	150,000	(1)	590
May 31, 1989	Penn Hills	North Whitehall Twp.	78,500	94	111
August 16, 1991	Slatedale/Emerald	Washington Twp.	-	360	402
September 30, 1991	Schnecksville North	North Whitehall Twp.	210,000	(2)	346
October 1, 1991	Crestwood	North Whitehall Twp.	105,000	(3)	262
January 24, 1992	Green Hills	Upper Macungie Twp.	357,700	(4)	725
December 14, 1993	Country Home Acres	Lower Macungie & Salisbury Twps.	32,000	56	59
February 2, 1998	Mink Estates/Farview Farms	Upper Milford Twp.	-	41	71
February 22, 2002	Pine Lakes of Lynn	Lynn Township	-	59	60
June 26, 2002	Heidelberg Heights	Heidelberg Twp.	267,481	189	190
June 12, 2003	Arcadia West IP	Weisenberg Twp.	400,000	5	16
December 30, 2004	Sand Spring	North Whitehall Twp.	35,350	257	258
February 22, 2005	Mill Creek	Washington Twp.	-	35	35
March 30, 2005	Beverly Hills	Lower Milford Twp	29,800	43	44
May 31, 2006	Clearview Farms Estates	Moore Twp, Northampton Co.	-	66	67
March 16, 2007	Emmaus Out-of-Borough	Lower Macungie & Upper Milford Twps.	131,000	415	419
April 4, 2007	Buss Acres	Upper Milford Twp.	205,450	100	100
July 8, 2010	Lynn Water Company	Lynn Township	233,637	116	116
<b>Wastewater Systems:</b>					
September 23, 1998	Heidelberg Heights	Heidelberg Twp.	-	145	145
June 12, 2003	Arcadia West IP	Weisenberg Twp.	-	5	19
July 11, 2003	Wynnewood Terrace	North Whitehall Twp.	547,184	216	219
December 30, 2004	Sand Spring	North Whitehall Twp.	126,000	257	257
May 16, 2006	Lehigh County Wastewater Treatment Plant	Upper Macungie Twp.	-	Not Applicable	
April 1, 2009	Washington Township Sewer System	Washington Twp.	-	613	624
February 29, 2012	Lynn Township Sewer System	Lynn Township	-	424	431
June 8, 2016	Lowhill Township Sewer System	Lowhill Township	-	43	43
<b>City Division System:</b>					
August 7, 2013	City of Allentown	City of Allentown	246,205,824	(6)	46,643

- (1) Purchase price represents the initial upfront payment. Additional payments of \$680 per connection are made as new homes are served. A total of \$396,160 has been paid through 12/31/12.
- (2) Purchase price represents the initial upfront payment. Additional payments of \$375 per apartment and \$750 per single family or twin connection are made as new units are served. The Authority has an additional exposure of \$17,550 for new commercial connections to the system. A total of \$251,250 has been paid through 12/31/12.
- (3) Purchase price represents an initial upfront payment. Additional payments of \$500 per connection are made as new homes are served. A total of \$118,500 has been paid through 12/31/12.
- (4) Purchase price represents an initial upfront payment. Additional payments of \$1,100 or \$1,250 per connection, dependent upon location, are made as new homes are served. A total of \$817,750 has been paid through 12/31/12.
- (5) Excludes Mark Terrace and Green Hills customers which are listed separately.
- (6) Purchase price represents the I) upfront payment, less fair value of conveyed capital assets, II) the discounted future annual payments, and III) the discounted future Capex Fund funding requirements.

**Note: Current customers represents residential and commercial units served as of 12/31/17, not customer connections, for those systems acquired before 12/31/17.**



**Lehigh County Authority**

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**MEMORANDUM**

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**Date:** July 23, 2018

**To:** Lehigh County Authority Board

**From:** Jason Peters, Capital Project Coordinator

**Subject:** Suburban Division- Water Main Replacement Program  
Construction Phase for Cycle 4

**MOTIONS /APPROVALS REQUESTED:**

No.	Item	Amount
2	<u>Capital Project Authorization:</u> Construction Phase, Cycle 4	\$2,013,635
3	<u>Professional Services Authorization Cycle 4:</u>	
*	<ul style="list-style-type: none"><li>Construction Engineering and Managements Services, Amendment No. 1 - <i>Gannett Fleming Inc.</i></li><li>Construction Inspection Services - <i>Keystone Consulting Engineers</i></li></ul>	\$47,400  \$75,000
4	<u>Contract Award Cycle 4:</u>	
*	<ul style="list-style-type: none"><li>General Construction – JOAO &amp; Bradley Construction Co., Inc</li></ul>	\$1,635,235

(\*) *Included in the Capital Project Authorization*

**PROJECT OVERVIEW:**

The Suburban Division water systems serve multiple townships, municipalities, boroughs, and communities in Lehigh and Northampton Counties. This Project covers Cycles 4-6 which addresses the main replacement requirements for years 2018 through 2020 and includes approximately 3 miles of pipe. Cycle 4 will replace approximately 1mile of pipe and appurtenances in 2018 providing for a more reliable system to our community and customers.

The driver for the project is to replace aging and failing infrastructure to prevent excessive leakage or disruptive water main breaks that can impact our customers. Given the complex nature and magnitude of the project, it will require a significant amount of coordination and public relations efforts.

**FUNDING:**

The Project will be funded by the LCA Suburban Division.

**PROJECT STATUS:**

Previously, in October 2017, the Board approved the Design Phase for Cycles 4-6 of the Project.

Working closely with all necessary Municipalities and other outside agencies when applicable, LCA was able to obtain all approvals and permits required to bid Cycle 4 Construction Phase.

**THIS APPROVAL: CONSTRUCTION PHASE CYCLE 4**

Cycle 4 includes 1.37 miles of water main replacement in two municipalities one within Lower Macungie Township and the other in Heidelberg Township.

**BIDDING SUMMARY: CONSTRUCTION CONTRACTS CYCLE 4**

The project was advertised for bid on June 25, 2018. A mandatory pre-bid meeting was held on July 10, 2018, and bids were opened on July 18, 2018. The bidding results are as shown in Table 1 below.

<b>Table 1</b>	
<b>General Construction</b>	
<b>Bidder</b>	<b>Amount</b>
<b><i>JOAO &amp; Bradley Construction Co., Inc.</i></b>	<b><i>\$1,635,235</i></b>
MECO Constructors Inc	\$1,765,550
SJM Construction Company, Inc.	\$2,231,152
Michels Corporation	\$2,433,913
DOLI Construction Corporation	\$3,435,579

JOAO & Bradley Construction Co., Inc. (Contractor) successfully performed the Suburban Division Cycle 3 water main replacement Project as well as the Allentown Division Cycles 2 & 3 water main replacement Projects for LCA; prior to the Lease, the Contractor performed many water main replacements for the COA; and is currently utilized by LCA's Distribution and Collection Department for emergency repairs. Therefore, we recommend awarding the General Construction contract to JOAO Bradley Construction Co., Inc.; subject to the receipt of the necessary Performance Bonds, Insurance and other required documentation.

**PROFESSIONAL SERVICES: CONSTRUCTION PHASE CYCLE 4***1. Construction Engineering & Management*

Gannett Fleming Inc. our design consultant, will provide construction engineering and management related services for the construction phase of the project. The work will generally include:

- Conduct pre construction conference.
- Review contractor's construction schedule and updates for compliance with project.
- Arrange and conduct monthly progress meetings and provide meeting minutes.
- Review all contractor submittals to ensure that design objectives and requirements of the Contract Documents are met.

- Prepare Change Orders.
- Respond to contractor Requests-for-Information.
- Review certified payrolls.
- Conduct walkover of the project site with contractors and LCA representatives.
- Provide LCA with recommendation on completeness of work, final acceptance and release of final payment.

## 2. *Construction Inspection*

Keystone Consulting Engineers (KCE) will provide daily construction inspection related services for the construction phase of the project. The work will generally include:

- Act as the daily field contact person for the project.
- Attend pre-construction & monthly progress meetings
- On-site contract management and coordination
- Collect field GPS data
- Maintain daily record of project activities, quantities of work performed, site conditions, etc.
- Review documentation for change order requests
- Review monthly pay estimates
- Perform substantial and final completion inspections

Keystone Consulting Engineers (KCE) was previously approved in Cycles 1 thru 3 of the Suburban Division water main replacement project where they represented both the best technical and overall value.

As anticipated KCE performance has met and exceeded many of the key components in their original proposal. In addition to providing a high level of Technical skill in the construction inspection process they have also provided a critical key partnership not only with LCA but with our design consultant Gannett Fleming Inc. This key partnership in turn has expedited many critical tasks during the construction phase of the project that has provided an excellent value not only in cost but also in flexibility for LCA.

A Professional Services Authorization is attached for both firms for Board approval.

### **SCHEDULE:**

Assuming approval of the Construction Phase at the July 23, 2018 Board meeting, all work is anticipated to be operational by November 1, 2018 (i.e. the substantial completion date).

### **FUTURE AUTHORIZATIONS:**

No future authorizations are anticipated at this time.



# CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	<u>SD-W-18-1</u>	BUDGET FUND:	<u>Suburban Div\Water\Capital</u>
PROJECT TITLE:	<u>Suburban Division -Water Main Replacement Program Cycles 4-6</u>	PROJECT TYPE:	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase
THIS AUTHORIZATION	<u>\$ 2,013,635</u>		
TO DATE (W/ABOVE)	<u>\$ 2,668,635</u>		<input checked="" type="checkbox"/> Amendment No. 1

## DESCRIPTION AND BENEFITS:

The Suburban Division water systems serve multiple townships, municipalities, boroughs, and communities in Lehigh and Northampton Counties. This Project covers Cycles 4-6 which addresses the main replacement requirements for years 2018 through 2020 with the intent to replace 3 miles of water main over the 3-year period due to aging infrastructure that has reached the end of its useful life to prevent excessive leakage or disruptive water main breaks that can impact our customers.

Please reference the cover Memo for additional information.

## THIS AMENDMENT –Construction Phase, Cycle 4

Please reference the cover Memo for additional information.

Previous Authorizations	
Design Phase Cycles 4-6	\$655,000

REQUESTED THIS AUTHORIZATION	
Construction Phase Cycle 4	
Staff	\$80,000
Professional Services	
Construction Engineering / Management	\$47,400
Construction Inspection	\$75,000
General Construction Contract	\$1,635,235
Miscellaneous	\$16,000
Contingency	\$160,000
Total This Authorization	\$2,013,635

Future Authorizations	
Construction Phase Cycle 4	\$2,500,000

Total Estimated Project	\$5,168,635
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## REVIEW AND APPROVALS:

<u>Project Manager</u>	<u>Date</u>	<u>Chief Executive Officer</u>	<u>Date</u>
<u>Chief Capital Works Officer</u>	<u>Date</u>	<u>Chairman</u>	<u>Date</u>



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**PROFESSIONAL SERVICES AUTHORIZATION**  
**Amendment No. 1**

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

**Date:** July 23, 2018

**Requested By:** Jason Peters

**Approvals**

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

**Chief Executive Officer:** \_\_\_\_\_

**Suburban Division – Water Main Replacement Program Cycles 4-6**

*Previous Authorizations- Design Phase, Cycles 4-6: \$405,000*

**This Authorization- Construction Phase, Cycle 4: \$47,400**

Gannett Fleming, Inc. will provide construction related services including but not limited to conducting pre-construction, progress and close out meetings, catalog cut / shop drawing review and approval, change orders, RFI response, and technical assistance within the following Professional Services.

Professional Services
1. Construction Engineering & Management Services

Please reference the cover Memo for additional information.

**Cost Estimate (not to be exceeded without further authorization): \$452,400**

**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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<b>PROFESSIONAL SERVICES AUTHORIZATION</b>
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**Professional:** KEYSTONE CONSULTING  
ENGINEERS  
6235 Hamilton Boulevard,  
Suite 100  
Wescosville, PA 18106

**Date:** July 23, 2018

**Requested By:** Jason Peters

**Approvals**

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

**Chief Executive Officer:** \_\_\_\_\_

**Suburban Division – Water Main Replacement Program Cycles 4-6**

**This Authorization- Construction Phase, Cycle 4: \$75,000**

Keystone Consulting Engineers will provide construction inspection related services including but not limited to attending pre-construction, progress and close out meetings, and technical assistance for the following Professional Service.

Professional Service
1. Construction Inspection Services

Please reference the cover Memo for additional information.

**Cost Estimate (not to be exceeded without further authorization): \$75,000**

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



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## MEMORANDUM

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**Date:** July 12, 2018

**To:** Lehigh County Authority Board  
**From:** Edward Hoyle, Jr.  
**Subject:** CLD Auxiliary Pumping Station and Water Main Extension Project -  
Construction Phase

**MOTIONS /APPROVALS REQUESTED:**

No.	Item	Amount
1	<u>Capital Project Authorization, Amendment No. 2</u> Construction Phase	\$1,635,780
2	<u>Professional Services Authorizations:</u> Construction Phase	
*	• Construction Engineering Services, Amendment No. 1: <i>JMT</i>	\$35,220
	• Construction Inspection Services: <i>Cowan Associates</i>	\$16,427
	• SCADA, Amendment No. 1: <i>Aptus Control Systems</i>	\$61,568
3	<u>Contract Awards:</u> Construction Phase	
*	• General Construction: <i>Blooming Glen Contractors WW</i>	\$1,020,190
	• Electrical Construction: <i>Albarell Electric</i>	\$212,000

(\*) Included in the Capital Project Authorization

**PROJECT OVERVIEW**

The Central Lehigh Division (CLD) is the largest system in the Suburban Division and is located principally in Upper and Lower Macungie Townships and the surrounding townships. The system is divided into two primary service elevations: the Upper System which is generally north of I-78 and the Lower System generally south of I-78. The water supply source is various wells and a permanent interconnection with the Allentown Division.

The project will provide the capability to pump water from the Lower to Upper System; thereby enhancing system reliability and fire flows in the Upper System and, if necessary, providing the flexibility to utilize water purchased from the Allentown Division in the Upper System.

The project will include the installation of a new water booster pumping station along Werley Road in Upper Macungie Township, with (3) 500 GPM pumps, (1) 2,500 GPM high service pump, approximately 1,750 linear-feet of 12-inch diameter interconnecting main, an emergency generator, SCADA system, instrumentation and controls. Acquisition of easements and/or other property rights will be required.

**PROJECT STATUS**

Previously the Board approved the Design Phase for the Project in May 2015 and SCADA services in August of the same year.

Public Water Supply Construction Permit No. 3917512 was issued by the Department of Environmental Protection (DEP) on February 5, 2018.

The project was advertised through the PennBid system, an electronic document and bid management program, on May 25, 2018. A mandatory pre-bid meeting was held on June 7, 2018. Bids were opened on June 29, 2018.

#### **THIS APPROVAL: CONSTRUCTION PHASE**

##### **A. BIDDING SUMMARY - CONSTRUCTION CONTRACTS**

This project requires General Construction and Electrical Construction contracts. The bidding results are as follows:

<b>General Construction</b>	
<b>Bidder</b>	<b>Amount</b>
<b><i>Blooming Glen Contractors WW</i></b>	<b><i>\$1,020,190</i></b>
DOLI Construction Corporation	\$1,077,039
Eastern Environmental Contractors, Inc.	\$1,250,375
LB Industries Inc.	\$1,260,957

<b>Electrical Construction</b>	
<b>Bidder</b>	<b>Amount</b>
<b><i>Albarell Electric</i></b>	<b><i>\$212,000</i></b>
Blooming Glen Contractors WW	\$216,138
Eastern Environmental Contractors, Inc.	\$224,400
Shannon A. Smith, Inc.	\$227,175
Billitier Electric	\$243,196
Philips Brothers Electrical Contractors, Inc.	\$249,999
A. N. Lynch Co., Inc.	\$265,000
BSI	\$278,000
PSI Pumping Solutions, Inc.	\$348,600

The Engineer's estimates were \$1,300,000 for the General Construction contract and \$400,000 for the Electrical Construction contract.

Both contractors are well qualified based on LCA's past experience in working with the two low bidders. Also, there were no issues identified in the submitted bid packages. Therefore, we recommend awarding the General Construction contract to Blooming Glen Contractors WW and the Electrical Construction contract to Albarell Electric, subject to the receipt of the executed Agreements, bonds, insurance and other required documentation.

In addition to the General and Electrical Construction contracts, Monks Security Systems, the Authority's security consultant, will provide a new control panel and sensors in the pumping station for an estimated cost of \$5,000.

##### **B. PROFESSIONAL SERVICES**

1. JMT, our design consultant, will provide construction engineering services for the construction phase of the project. The work will generally include:

- Coordinate receipt of contract forms from successful bidders.
- Prepare Notices to Proceed.
- Conduct a pre-construction meeting and distribute meeting minutes.
- Participate in progress meetings.
- Review Contractor submittals.
- Provide interpretations and clarifications of the Contract Documents.
- Participate in a substantial completion inspection.
- Sign off as the engineer on the DEP Certificate of Construction Completion form.
- Provide construction stake out.
- Prepare record drawings.

2. Cowan Associates will provide construction inspection services for construction of the pump station. The work will generally include:

- Participate in a pre-construction meeting.
- Coordinate distribution of all contract submittals and maintain a log of submittal status.
- Provide field inspections to ensure compliance with the Contract Documents.
- Monitor construction progress.
- Assist in negotiations regarding claims for time and/or cost adjustments.
- Prepare work directives for issuance to Contractors.
- Review and recommend Contractor payments.
- Review certified payrolls.
- Conduct progress meetings and distribute meeting minutes.
- Issue monthly progress reports.
- Participate in a substantial completion inspection and issue punch lists that identify work remaining or to be corrected.
- Attend inspections by PA-DEP and Upper Macungie Township and resolve deficiencies.
- Participate in final completion inspection and provide recommendation on final acceptance and release of final payment. Prepare contract close-out documents.
- Review record drawings and O&M Manuals prepared by Contractors.
- Maintain project files and documents and deliver them to LCA at completion of project.

Cowan has provided acceptable construction phase services on past projects, such as the Pine Lakes and Crestwood pump station projects, at a reasonable price.

LCA will provide construction inspection for the proposed waterline in Werley Road that will connect to the existing waterline in Cetronia Road.

3. Aptus Control Systems was awarded the SCADA contract for the project in August 2015. Because more than three years have elapsed since Aptus had provided their first proposal in May 2015, another proposal was requested to account for increases in labor and equipment costs. In its revised proposal Aptus has accounted for time related cost variations. Nevertheless, they have been able to keep the escalation of their base pricing below average, and with some changes to additional technical services the overall price has actually decreased. Aptus has provided the Authority with satisfactory SCADA services on prior projects and their involvement in the current project ensures on-going SCADA continuity.

A Professional Services Authorization is attached for the three firms for Board approval.

### **C. 3-PHASE POWER**

An item was included in the project authorization for PPL to bring 3-phase power to the site from the intersection of Cetronia Road and Werley Road. PPL has estimated this cost at \$65,375.

**SCHEDULE**

We anticipate construction starting in September 2018, with 300 days to reach Substantial Completion.

**FUTURE AUTHORIZATIONS**

None Anticipated.

**CAPITAL PROJECT AUTHORIZATION**

Amendment No. 2

PROJECT NO.:	SD-W-15-2	BUDGET FUND:	Suburban Div\Water\Capital
PROJECT TITLE:	CLD Auxiliary Pumping Station and Water Main Extension Project	PROJECT TYPE:	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input checked="" type="checkbox"/> Amendment
THIS AUTHORIZATION	<u>\$1,635,780</u>		
TO DATE (W/ ABOVE)	<u>\$1,908,814</u>		

**DESCRIPTION AND BENEFITS:**

The project consists of installation of a new water booster pumping station and 12" water main extension along Werley Road in Upper Macungie Township, with three booster pumps, one high service pump, emergency generator, SCADA system, fencing and paving.

The project will provide the capability to pump water from the CLD Lower System to the Upper System; thereby enhancing system reliability and fire flows in the Upper System and, if necessary, providing the flexibility to utilize water purchased from the Allentown Division in the Upper System.

**THIS AMENDMENT –Construction Phase**

The Amendment includes staff time, professional services including SCADA, construction contracts for general and electrical, provision of 3-phase power to the site, security, miscellaneous costs and contingencies for the construction of the aforementioned facilities.

Please reference the cover Memo for additional information.

**Authorization Status:**

Phase / Item	Authorizations		
	Prior	This	Total
<b>Planning</b>	\$6,340		\$6,340
<b>Design/Bid</b>			
Staff	\$69,100		\$69,100
Property Acquisition	\$35,000		\$35,000
Engineering Consultants	\$115,694		\$115,694
Miscellaneous	\$15,000		\$15,000
Contingencies	\$31,900		\$31,900
Subtotal	\$266,694		\$266,694
<b>Construction</b>			
Staff		\$60,000	\$60,000
Engineering Service		\$35,220	\$35,220
Inspection Service		\$16,427	\$16,427
General Contract		\$1,020,190	\$1,020,190
Electrical Contract		\$212,000	\$212,000
SCADA		\$61,568	\$61,568
Security		\$5,000	\$5,000
3-Phase Power		\$65,375	\$65,375
Miscellaneous		\$10,000	\$10,000
Contingency		\$150,000	\$150,000
Subtotal		\$1,635,780	\$1,635,780
<b>TOTALS</b>	\$273,034	\$1,635,780	\$1,908,814

**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

(To be signed by Professional and returned to the Authority)

### Amendment No. 1

**Professional:** Johnson, Mirmiran & Thompson (JMT)  
7535 Windsor Drive, Suite 204B  
Allentown, PA 18195

**Date:** July 11, 2018

**Requested By:** Edward Hoyle, Jr.

#### Approvals

**Department Head:**

**CEO:**

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

JMT will provide construction engineering services for the "CLD Auxiliary Pumping Station and Water Main Extension" in Upper Macungie Township, Lehigh County, PA, as identified in its Proposal dated July 10, 2018. As part of its services, JMT will review shop drawings, review applications for payment, attend progress meetings, respond to design related RFI's, provide construction stakeout, etc. The Agreement for Professional Technical Consultant Services signed with JMT on June 17, 2015 sets forth the Terms and Conditions under which these professional services will be performed.

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

The tasks outlined in the above-mentioned Proposal will be performed under this PSA for the total not-to-exceed fee of \$35,220.00. Services will be paid for based on the estimated number of hours and hourly rates in the Total Cost Summary sheet attached to the Proposal that reflects the Professional's current Rate Schedule.

#### Timetable and Completion Deadline (either party may terminate upon thirty days written notice):

The General and Electrical Contracts shall be substantially completed within 300 days following issuance of the Notice to Proceed, and completed and ready for final payment within 360 days from the date of the Notice to Proceed.

I am or represent the Professional indicated above, and as such I am authorized to:

- Accept the terms of the professional authorization set forth above; and
- Agree to indemnify, hold harmless and defend the Authority, its employees, agents, officials, successors and assigns (hereinafter all jointly referred to as "Authority"), from any and all loss and liability for claims, demands, suits or causes of action at law or in equity for damages and injuries (including death of every kind and nature) to persons (including employees of the Professional) and property arising out of error, omission or negligent act of Professional, or any person under contract to it, in rendering professional services under this authorization. The indemnification shall include, but not be limited to, payment of reasonable attorney fees and reasonable incidental litigation expenses of the Authority. Professional shall not, however, be liable for any portion of a judgment nor associated litigation expenses, including attorney's fees, ultimately determined to be the result of the negligence of the Authority.

\_\_\_\_\_  
Name (Signature)

\_\_\_\_\_  
Name (printed):

Title: \_\_\_\_\_

#### (For Authority Use Only)

#### Authorization Completion:

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



Lehigh County Authority

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

## PROFESSIONAL SERVICES AUTHORIZATION

(To be signed by Professional and returned to the Authority)

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

**Date:** July 10, 2018

**Requested By:** Edward Hoyle, Jr.

**Approvals**

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

**CEO:** \_\_\_\_\_

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

Cowan Associates, Inc. will provide construction inspection services for the "CLD Auxiliary Pumping Station Project" in Upper Macungie Township, Lehigh County, PA, as identified in its Proposal dated June 29, 2018. As part of its services, Cowan Associates will inspect construction, review applications for payment, attend progress meetings, issue punch lists, review as-builts and O&M manuals, etc. A Standard Agreement for Professional Services will be signed with Cowan Associates, Inc. pending this authorization and will set forth the Terms and Conditions under which these professional services will be performed.

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

The tasks outlined in the above-mentioned Proposal will be performed under this PSA for the total not-to-exceed fee of \$16,427.00. Services will be paid for based on the "Consultant Proposal Manhour/Cost Allocation Work Sheet" attached to the Proposal.

**Timetable and Completion Deadline** *(either party may terminate upon thirty days written notice):*

The General and Electrical Contracts shall be substantially completed within 300 days following issuance of the Notice to Proceed, and completed and ready for final payment within 360 days from the date of the Notice to Proceed.

I am or represent the Professional indicated above, and as such I am authorized to:

- Accept the terms of the professional authorization set forth above; and
- Agree to indemnify, hold harmless and defend the Authority, its employees, agents, officials, successors and assigns (hereinafter all jointly referred to as "Authority"), from any and all loss and liability for claims, demands, suits or causes of action at law or in equity for damages and injuries (including death of every kind and nature) to persons (including employees of the Professional) and property arising out of error, omission or negligent act of Professional, or any person under contract to it, in rendering professional services under this authorization. The indemnification shall include, but not be limited to, payment of reasonable attorney fees and reasonable incidental litigation expenses of the Authority. Professional shall not, however, be liable for any portion of a judgment nor associated litigation expenses, including attorney's fees, ultimately determined to be the result of the negligence of the Authority.

\_\_\_\_\_  
Name (Signature)

\_\_\_\_\_  
Name (printed):

Title: \_\_\_\_\_

(For Authority Use Only)

**Authorization Completion:**

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



**Lehigh County Authority**

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

## PROFESSIONAL SERVICES AUTHORIZATION

(To be signed by Professional and returned to the Authority)

Amendment No. 1

**Professional:** Aptus Control Systems, Inc.  
332 East Oak Street  
Palmyra, PA 17078

**Date:** July 11, 2018

**Requested By:** Edward Hoyle, Jr.

### Approvals

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

**Chief Executive Officer:** \_\_\_\_\_

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

Aptus Control Systems, Inc. will perform the SCADA-related services for the "CLD Auxiliary Pumping Station" in Upper Macungie Township, Lehigh County, PA, as identified in its revised Proposal dated June 20, 2018. Their services will include wiring drawings, a new control panel, programming, integration, startup and training. The Aptus proposal dated May 14, 2015 is hereby replaced by the current proposal and shall be considered null and void. The Standard Agreement for Professional Services signed with Aptus on October 15, 2015 sets forth the Terms and Conditions under which these professional services will be performed.

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

The tasks outlined in the above-mentioned Proposal will be performed under this PSA for the total not-to-exceed fee of \$61,568.00.

### Timetable and Completion Deadline (either party may terminate upon thirty days written notice):

The General and Electrical Contracts shall be substantially completed within 300 days following issuance of the Notice to Proceed, and completed and ready for final payment within 360 days from the date of the Notice to Proceed. Aptus Control Systems, Inc. agrees to conduct its work in a manner that will not cause delays in the schedules of the other project participants, including the contractors to be hired by the Authority, whose schedules shall be provided to Aptus Control Systems, Inc. upon request.

I am or represent the Professional indicated above, and as such I am authorized to:

- Accept the terms of the professional services authorization set forth above; and
- Agree to indemnify and hold harmless LCA, their employees, agents, officials, representatives, attorneys, and assigns from any and all liability, arising out of all activities conducted by the Consultant in connection with this contract and/or the Consultant's performance hereof, including but not limited to payment of all fees for its/their attorneys and all incidental litigation expenses in the event LCA or any of its employees, agents, officials, representatives, attorneys, and assigns are sued upon a claim emanating from the Consultant's performance thereof. Professional shall not, however, be liable for any portion of a judgment nor associated litigation expenses, including attorney's fees, ultimately determined to be the result of the negligence of the Authority.

\_\_\_\_\_  
Name (Signature)

\_\_\_\_\_  
Name (printed):

Title: \_\_\_\_\_

(For Authority Use Only)

### Authorization Completion:

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



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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**Date:** July 20, 2018

**To:** LCA Board of Directors

**From:** Liesel Gross, Chief Executive Office  
Charles Volk, Chief Capital Works Officer

**Re:** Allentown Division – Water Main Replacement Project, Cycle 4

### Action Requested

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Lehigh County Authority (LCA) staff requests the Board of Directors take action at the July 23, 2018 meeting to reject all bids for construction of the Allentown Division Water Main Replacement Project, Cycle 4, due to bid prices coming in significantly higher than anticipated and beyond the scope of LCA's 2018 budget for this work.

### Project Overview

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Under the terms of the Lease Agreement for the operation of the Allentown water and sewer systems, LCA is required to replace two (2) miles of water mains each year. Based on average per-mile pricing for prior projects, LCA included \$3.2 million in the 2018 budget for this work.

The Cycle 4 project to be completed in 2018 included replacement of 2.2 miles of water main, and the construction contract was placed out for bid in late June 2018. Bids were opened on July 10, 2018 with the following results:

Contractor Name	Contract Bid Amount
Joao Bradley Construction, Inc.	\$5,385,785.50
Michels Corporation	\$5,770,287.15
DOLI Construction Corporation	\$7,410,097.00

Based on the price provided by the lowest apparent bidder, and adding in additional professional services for construction management and LCA staff expenses, the total project cost would be approximately \$6.1 million – nearly double the budgeted amount.

Based on the 2018 budget limitations for this work, LCA requests the bids be rejected. The project scope will be adjusted and a revised authorization will be presented to the Board in August 2018.

**LEHIGH COUNTY AUTHORITY  
FINANCIAL STATEMENTS  
JUNE 2018**

**LEHIGH COUNTY AUTHORITY**  
**FINANCIAL STATEMENTS - SUMMARY**  
**JUNE 2018**

MONTH				YEAR-TO-DATE			FULL YEAR		
Actual	Forecast	FC Var		Actual	Forecast	FC Var	Forecast	Budget	Variance
			<b>JUNE 2018</b>						
			<b>Income Statement</b>						
(28,558)	48,845	(77,403)	Suburban Water	30,079	3,701	26,377	(303,499)	(305,584)	2,085
76,014	124,472	(48,458)	Suburban Wastewater	77,548	35,243	42,305	890,202	883,715	6,487
(441,995)	(257,979)	(184,016)	City Division	(2,175,124)	(2,045,421)	(129,703)	(8,374,568)	(7,267,990)	(1,106,578)
(394,539)	(84,663)	(309,876)	Total LCA	(2,067,497)	(2,006,476)	(61,021)	(7,787,864)	(6,689,859)	(1,098,005)
			<b>Cash Flow Statement</b>						
908,563	374,557	534,006	Suburban Water	2,146,214	608,460	1,537,754	881,946	(4,392,584)	5,274,530
(9,097)	(243,452)	234,355	Suburban Wastewater	1,992,552	1,256,770	735,782	5,295,164	(2,751,285)	8,046,449
(5,347,671)	(6,015,583)	667,912	City Division	72,771	(1,873,230)	1,946,001	(3,032,716)	(5,085,490)	2,052,774
(4,448,205)	(5,884,479)	1,436,273	Total LCA	4,211,537	(8,001)	4,219,537	3,144,394	(12,229,359)	15,373,753
			<b>Debt Service Coverage Ratio</b>						
1.04	1.60	(0.56)	Suburban Water	1.40	1.43	(0.04)	1.35	1.24	0.11
8.95	9.40	(0.45)	Suburban Wastewater	7.84	7.52	0.32	9.07	8.95	0.12
1.32	1.53	(0.21)	City Division	1.44	1.46	(0.01)	1.27	1.25	0.02

LEHIGH COUNTY AUTHORITY  
MONTHLY FINANCIAL STATEMENTS - CONSOLIDATED  
JUNE 2018

MONTH					YEAR-TO-DATE				FULL YEAR FORECAST			
Suburban Water	Suburban Wastewater	City Division	LCA TOTAL		Suburban Water	Suburban Wastewater	City Division	LCA TOTAL	Suburban Water	Suburban Wastewater	City Division	LCA TOTAL
				JUNE 2018 INCOME STATEMENT								
				<b>Operating Revenues</b>								
723,676	1,524,315	2,837,856	5,085,847	Charges For Services	4,392,874	8,877,530	16,823,532	30,093,936	9,545,502	19,169,817	33,228,608	61,943,927
7,144	-	-	7,144	Rent	42,382	-	-	42,382	89,606	-	-	89,606
4,715	-	33,412	38,127	Other Income	68,913	-	304,422	373,335	104,020	-	622,780	726,800
735,535	1,524,315	2,871,268	5,131,118	Total Operating Revenues	4,504,169	8,877,530	17,127,954	30,509,653	9,739,128	19,169,817	33,851,388	62,760,332
				<b>Operating Expenses</b>								
94,830	32,925	422,370	550,125	Salaries and Wages	553,114	198,344	2,692,938	3,444,396	1,077,576	474,431	5,531,220	7,083,227
142,704	45,585	612,461	800,751	General and Administrative	628,096	200,720	3,206,114	4,034,931	1,343,450	463,468	6,045,658	7,852,575
61,846	52,402	264,682	378,930	Utilities	262,741	155,377	1,097,775	1,515,893	489,916	280,930	1,988,895	2,759,741
24,294	14,932	103,384	142,609	Materials and Supplies	114,264	70,155	505,147	689,565	280,529	300,367	1,399,472	1,980,367
234,633	599,248	158,590	992,472	Miscellaneous Services	1,053,460	3,833,277	595,073	5,481,811	3,161,314	8,597,171	1,819,696	13,578,180
-	411,825	-	411,825	Treatment & Transportation	-	2,364,710	-	2,364,710	-	3,963,420	9,000	3,972,420
245,832	397,865	466,667	1,110,364	Depreciation and Amortization	1,474,992	2,387,190	2,800,002	6,662,184	2,949,997	4,775,595	5,600,000	13,325,592
804,140	1,554,782	2,028,153	4,387,075	Total Operating Expenses	4,086,668	9,209,773	10,897,048	24,193,489	9,302,780	18,855,381	22,393,941	50,552,102
(68,604)	(30,467)	843,114	744,043	<b>Operating Income</b>	417,502	(332,243)	6,230,905	6,316,164	436,348	314,436	11,457,447	12,208,230
				<b>Non-Operating Revenues (Expenses)</b>								
12,165	108,586	90,678	211,429	Tapping and Capital Recovery fees	108,950	413,788	243,751	766,489	484,165	1,084,155	166,952	1,735,272
6,750	-	544	7,294	Meter Sales	33,459	-	5,132	38,591	109,164	-	13,316	122,480
7,243	(0)	4,500	11,742	Inspection and Plan Reviews	45,913	311	20,695	66,918	146,381	500	252,521	399,402
(27,779)	-	-	(27,779)	Project Reimbursements	(0)	-	-	(0)	23,000	-	2,480,000	2,503,000
68,481	12,343	70,153	150,977	Interest Income	113,750	96,659	329,393	539,802	126,557	5,123	404,567	536,247
2,855	75	3,390	6,320	Other Income	12,065	935	21,980	34,980	14,385	165	10,470	25,020
(29,115)	(13,366)	(1,402,734)	(1,445,215)	Interest Expense	(699,752)	(98,346)	(8,416,404)	(9,214,502)	(1,643,065)	(213,176)	(18,521,202)	(20,377,443)
(554)	(1,156)	(51,640)	(53,350)	Other Expense	(1,808)	(3,555)	(610,576)	(615,939)	(434)	(301,000)	(4,638,638)	(4,940,072)
40,046	106,482	(1,285,109)	(1,138,582)	Total Non-Operating Revenues (Expenses)	(387,423)	409,792	(8,406,029)	(8,383,661)	(739,846)	575,767	(19,832,014)	(19,996,094)
(28,558)	76,014	(441,995)	(394,539)	<b>Net Income Before Capital Contributions</b>	30,079	77,548	(2,175,124)	(2,067,497)	(303,499)	890,202	(8,374,568)	(7,787,864)
-	-	-	-	<b>Capital Contributions</b>	-	-	-	-	-	-	-	-
(28,558)	76,014	(441,995)	(394,539)	<b>NET INCOME</b>	30,079	77,548	(2,175,124)	(2,067,497)	(303,499)	890,202	(8,374,568)	(7,787,864)

LEHIGH COUNTY AUTHORITY  
MONTHLY FINANCIAL STATEMENTS - CONSOLIDATED  
JUNE 2018

MONTH				YEAR-TO-DATE				FULL YEAR FORECAST				
Suburban Water	Suburban Wastewater	City Division	LCA TOTAL	JUNE 2018	Suburban Water	Suburban Wastewater	City Division	LCA TOTAL	Suburban Water	Suburban Wastewater	City Division	LCA TOTAL
				CASH FLOW STATEMENT								
				Cash Flows From Operating Activities								
735,535	1,524,315	2,871,268	5,131,118	Operating Revenues	4,504,169	8,877,530	17,127,954	30,509,653	9,739,128	19,169,817	33,851,388	62,760,332
(558,308)	(1,156,917)	(1,561,486)	(3,276,711)	Operating Expenses (ex D&A)	(2,611,676)	(6,822,583)	(8,097,046)	(17,531,305)	(6,352,783)	(14,079,786)	(16,793,941)	(37,226,510)
727,659	(285,624)	(52,074)	389,961	Non-Cash Working Capital Changes	581,126	(697,135)	(1,229,077)	(1,345,086)	-	-	-	-
904,887	81,774	1,257,707	2,244,368	Net Cash Provided by (Used in) Operating Activities	2,473,620	1,357,812	7,801,830	11,633,262	3,386,345	5,090,031	17,057,447	25,533,822
				Cash Flows From Financing Activities								
-	-	-	-	Lease Payments to City	-	-	(255,780)	(255,780)	-	-	(515,560)	(515,560)
-	-	-	-	Capital Contributions	-	-	-	-	-	-	-	-
-	-	-	-	Proceeds New Borrowing	-	-	-	-	-	-	1,100,000	1,100,000
(82,967)	(14,214)	(6,523,861)	(6,621,042)	Interest Payments	(753,604)	(86,435)	(6,523,861)	(7,363,900)	(1,643,065)	(205,459)	(13,748,000)	(15,596,524)
528,107	(40,366)	-	487,741	Principal Payments	(176,473)	(241,130)	-	(417,603)	(1,518,820)	(475,745)	-	(1,994,565)
445,141	(54,581)	(6,523,861)	(6,133,301)	Net Cash Provided by (Used in) Financing Activities	(930,077)	(327,566)	(6,779,641)	(8,037,283)	(3,161,885)	(681,205)	(13,163,560)	(17,006,650)
				Cash Flows from Capital and Related Activities								
29,013	108,661	99,112	236,785	Non-Operating Revenues	200,387	415,034	291,558	906,978	754,095	1,084,820	443,259	2,282,174
(27,779)	-	-	(27,779)	Project Reimbursement	(0)	-	-	(0)	23,000	-	2,480,000	2,503,000
-	0	-	0	Non-Operating Expenses	-	0	-	0	-	-	-	-
(511,179)	(157,294)	(250,782)	(919,255)	Capital Expenditures	(1,733,476)	(529,387)	(1,570,369)	(3,833,232)	(6,246,167)	(3,683,605)	(10,254,428)	(20,184,200)
(509,945)	(48,633)	(151,670)	(710,249)	Net Cash Provided By (Used In) Capital and Related Activities	(1,533,089)	(114,353)	(1,278,811)	(2,926,254)	(5,469,071)	(2,598,785)	(7,331,169)	(15,399,026)
				Cash Flows From Investing Activities								
-	-	-	-	Investments Converting To Cash	2,022,010	980,000	-	3,002,010	6,000,000	3,480,000	-	9,480,000
-	-	-	-	Purchased Invesments	-	-	-	-	-	-	-	-
68,481	12,343	70,153	150,977	Interest Income	113,750	96,659	329,393	539,802	126,557	5,123	404,567	536,247
68,481	12,343	70,153	150,977	Net Cash Provided By (Used In) Investing Activities	2,135,760	1,076,659	329,393	3,541,812	6,126,557	3,485,123	404,567	10,016,247
908,563	(9,097)	(5,347,672)	(4,448,206)	FUND NET CASH FLOWS	2,146,214	1,992,552	72,770	4,211,536	881,946	5,295,164	(3,032,716)	3,144,394
				DEBT SERVICE RATIO								
274,721	488,402	1,436,729	2,199,852	Total Cash Available For Debt Service	2,206,630	2,566,640	9,424,940	14,198,210	4,266,997	6,179,974	17,464,592	27,911,563
263,500	54,581	1,087,311	1,405,392	Debt Service	1,581,000	327,566	6,523,861	8,432,427	3,161,885	681,205	13,748,000	17,591,090
1.04	8.95	1.32	1.57	DSCR	1.40	7.84	1.44	1.68	1.35	9.07	1.27	1.59



LEHIGH COUNTY AUTHORITY  
FINANCIAL STATEMENTS - SUBURBAN WATER  
JUNE 2018

MONTH					JUNE 2018					YEAR-TO-DATE					FULL YEAR				
Actual	Forecast	Prior Yr	FC Var	PY Var	INCOME STATEMENT					Actual	Forecast	Prior Yr	FC Var	PY Var	Forecast	Budget	Prior Yr	FC vs Bud	FC vs PY
					<b>Operating Revenues</b>														
723,676	815,775	780,647	(92,099)	(56,971)	Charges For Services					4,392,874	4,468,970	4,204,112	(76,096)	188,762	9,545,502	9,591,000	8,863,788	(45,498)	681,714
7,144	7,514	7,190	(370)	(46)	Rent					42,382	44,128	45,479	(1,746)	(3,097)	89,606	91,000	91,019	(1,394)	(1,413)
4,715	14,580	13,952	(9,865)	(9,237)	Other Income					68,913	43,775	24,467	25,138	44,446	104,020	51,000	99,307	53,020	4,713
735,535	837,869	801,790	(102,334)	(66,254)	Total Operating Revenues					4,504,169	4,556,873	4,274,058	(52,704)	230,111	9,739,128	9,733,000	9,054,114	6,128	685,014
					<b>Operating Expenses</b>														
94,830	84,000	82,605	(10,830)	(12,225)	Salaries and Wages					553,114	548,576	488,750	(4,538)	(64,364)	1,077,576	1,064,358	1,042,565	(13,218)	(35,011)
142,704	117,000	95,110	(25,704)	(47,594)	General and Administrative					628,096	641,450	598,775	13,353	(29,322)	1,343,450	1,251,856	1,257,063	(91,594)	(86,387)
61,846	40,826	36,583	(21,020)	(25,263)	Utilities					262,741	244,958	224,974	(17,783)	(37,767)	489,916	584,346	420,812	94,430	(69,104)
24,294	22,000	25,669	(2,294)	1,375	Materials and Supplies					114,264	114,529	121,422	265	7,159	280,529	320,654	422,730	40,125	142,201
234,633	178,000	229,814	(56,633)	(4,819)	Miscellaneous Services					1,053,460	984,009	983,363	(69,452)	(70,098)	3,161,314	2,758,370	2,270,359	(402,944)	(890,955)
-	-	-	-	-	Treatment & Transportation					-	-	-	-	-	-	-	-	-	-
245,832	245,833	245,832	1	-	Depreciation and Amortization					1,474,992	1,474,995	1,474,992	3	-	2,949,997	2,950,000	2,695,548	3	(254,449)
804,140	687,659	715,613	(116,480)	(88,526)	Total Operating Expenses					4,086,668	4,008,515	3,892,276	(78,152)	(194,391)	9,302,780	8,929,584	8,109,077	(373,196)	(1,193,703)
(68,604)	150,210	86,176	(218,814)	(154,781)	<b>Operating Income</b>					417,502	548,358	381,782	(130,856)	35,720	436,348	803,416	945,037	(367,068)	(508,689)
					<b>Non-Operating Revenues (Expenses)</b>														
12,165	9,000	77,615	3,165	(65,450)	Tapping and Capital Recovery fees					108,950	100,165	236,230	8,785	(127,280)	484,165	485,000	455,405	(835)	28,760
6,750	4,000	8,103	2,750	(1,353)	Meter Sales					33,459	25,164	50,787	8,295	(17,328)	109,164	105,000	112,468	4,164	(3,304)
7,243	2,000	5,964	5,243	1,279	Inspection and Plan Reviews					45,913	39,381	28,316	6,531	17,597	146,381	156,000	154,433	(9,619)	(8,052)
(27,779)	-	-	(27,779)	(27,779)	Project Reimbursements					(0)	-	25,397	(0)	(25,397)	23,000	23,000	-	-	23,000
68,481	10,000	7,700	58,481	60,781	Interest Income					113,750	71,557	39,857	42,193	73,893	126,557	125,000	127,486	1,557	(929)
2,855	1,000	2,070	1,855	785	Other Income					12,065	8,385	11,595	3,680	470	14,385	-	109,343	14,385	(94,958)
(29,115)	(127,365)	(376,019)	98,250	346,905	Interest Expense					(699,752)	(788,875)	(884,870)	89,123	185,118	(1,643,065)	(2,003,000)	(1,371,796)	359,935	(271,269)
(554)	-	(31,602)	(554)	31,048	Other Expense					(1,808)	(434)	(151,881)	(1,374)	150,073	(434)	-	(427,991)	(434)	427,557
40,046	(101,365)	(306,170)	141,411	346,216	Total Non-Operating Revenues (Expenses)					(387,423)	(544,656)	(644,569)	157,233	257,146	(739,846)	(1,109,000)	(840,652)	369,154	100,806
(28,558)	48,845	(219,993)	(77,403)	191,435	<b>Net Income Before Capital Contributions</b>					30,079	3,701	(262,787)	26,377	292,866	(303,499)	(305,584)	104,385	2,085	(407,884)
-	-	-	-	-	<b>Capital Contributions</b>					-	-	-	-	-	-	-	6,324,208	-	(6,324,208)
(28,558)	48,845	(219,993)	(77,403)	191,435	<b>NET INCOME</b>					30,079	3,701	(262,787)	26,377	292,866	(303,499)	(305,584)	6,428,593	2,085	(6,732,092)

LEHIGH COUNTY AUTHORITY  
FINANCIAL STATEMENTS - SUBURBAN WATER  
JUNE 2018

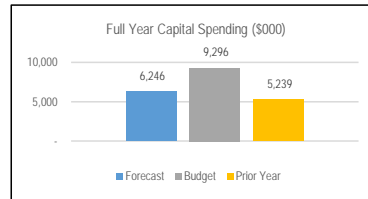
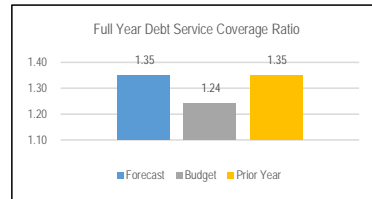
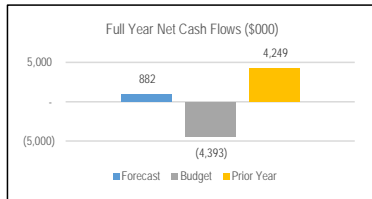
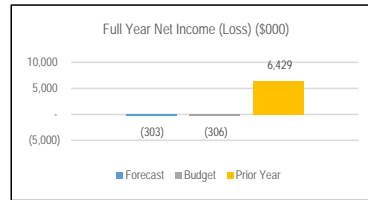
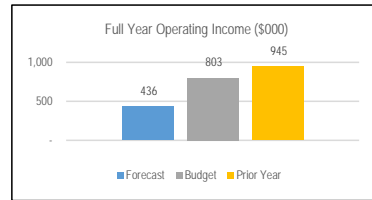
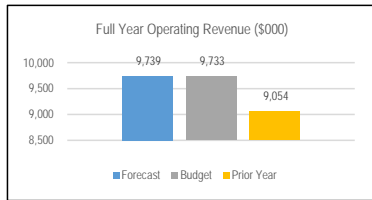
MONTH					JUNE 2018					YEAR-TO-DATE					FULL YEAR				
Actual	Forecast	Prior Yr	FC Var	PY Var	CASH FLOW STATEMENT					Actual	Forecast	Prior Yr	FC Var	PY Var	Forecast	Budget	Prior Yr	FC vs Bud	FC vs PY
					<b>Cash Flows From Operating Activities</b>														
735,535	837,869	801,790	(102,334)	(66,254)	Operating Revenues					4,504,169	4,556,873	4,274,058	(52,704)	230,111	9,739,128	9,733,000	9,054,114	6,128	685,014
(558,308)	(441,826)	(469,781)	(116,481)	(88,526)	Operating Expenses (ex D&A)					(2,611,676)	(2,533,520)	(2,417,284)	(78,155)	(194,391)	(6,352,783)	(5,979,584)	(5,413,529)	(373,199)	(939,254)
727,659	727,659	-	-	727,659	Non-Cash Working Capital Changes					581,126	581,126	-	-	581,126	-	-	(174,761)	-	174,761
904,887	1,123,702	332,008	(218,815)	572,878	Net Cash Provided by (Used in) Operating Activities					2,473,620	2,604,479	1,856,774	(130,859)	616,846	3,386,345	3,753,416	3,465,824	(367,071)	(79,479)
					<b>Cash Flows From Financing Activities</b>														
-	-	-	-	-	Capital Contributions					-	-	-	-	-	-	-	-	-	-
-	-	15,292,006	-	(15,292,006)	Proceeds New Borrowing					-	-	15,292,006	-	(15,292,006)	-	-	15,292,006	-	(15,292,006)
(82,967)	(127,365)	(376,019)	44,398	293,053	Interest Payments					(753,604)	(788,875)	(884,870)	35,271	131,266	(1,643,065)	(2,003,000)	(1,202,612)	359,935	(440,453)
528,107	(111,530)	(139,015)	639,637	667,123	Principal Payments					(176,473)	(844,640)	(802,596)	668,167	626,123	(1,518,820)	(1,741,000)	(1,667,818)	222,180	148,998
445,141	(238,895)	14,776,971	684,036	(14,331,831)	Net Cash Provided by (Used in) Financing Activities					(930,077)	(1,633,515)	13,604,541	703,438	(14,534,617)	(3,161,885)	(3,744,000)	12,421,576	582,115	(15,583,461)
					<b>Cash Flows from Capital and Related Activities</b>														
29,013	16,000	93,752	13,013	(64,739)	Non-Operating Revenues					200,387	173,095	326,928	27,291	(126,541)	754,095	746,000	722,306	8,095	31,789
(27,779)	-	-	(27,779)	(27,779)	Project Reimbursement					(0)	-	25,397	(0)	(25,397)	23,000	23,000	-	-	23,000
-	-	-	-	-	Non-Operating Expenses					-	-	-	-	-	-	-	-	-	-
(511,179)	(536,250)	(98,505)	25,071	(412,674)	Capital Expenditures					(1,733,476)	(2,629,167)	(1,358,796)	895,691	(374,680)	(6,246,167)	(9,296,000)	(5,698,875)	3,049,833	(547,292)
(509,945)	(520,250)	(4,753)	10,305	(505,192)	Net Cash Provided By (Used In) Capital and Related Activities					(1,533,089)	(2,456,071)	(1,006,471)	922,982	(526,618)	(5,469,071)	(8,527,000)	(4,976,569)	3,057,929	(492,502)
					<b>Cash Flows From Investing Activities</b>														
-	-	-	-	-	Investments Converting To Cash					2,022,010	2,022,010	-	-	2,022,010	6,000,000	4,000,000	5,520,144	2,000,000	479,856
-	-	-	-	-	Purchased Investments					-	-	-	-	-	-	-	(12,309,800)	-	12,309,800
68,481	10,000	7,700	58,481	60,781	Interest Income					113,750	71,557	39,857	42,193	73,893	126,557	125,000	127,486	1,557	(929)
68,481	10,000	7,700	58,481	60,781	Net Cash Provided By (Used In) Investing Activities					2,135,760	2,093,567	39,857	42,193	2,095,903	6,126,557	4,125,000	(6,662,170)	2,001,557	12,788,727
<b>908,563</b>	<b>374,557</b>	<b>15,111,926</b>	<b>534,006</b>	<b>(14,203,364)</b>	<b>FUND NET CASH FLOWS</b>					<b>2,146,214</b>	<b>608,460</b>	<b>14,494,700</b>	<b>1,537,754</b>	<b>(12,348,487)</b>	<b>881,946</b>	<b>(4,392,584)</b>	<b>4,248,661</b>	<b>5,274,530</b>	<b>(3,366,715)</b>
					<b>DEBT SERVICE RATIO</b>														
274,721	422,043	433,460	(147,322)	(158,739)	Total Cash Available For Debt Service					2,206,630	2,268,005	2,223,559	(61,375)	(16,929)	4,266,997	4,624,416	4,490,377	(357,419)	(223,380)
263,500	263,500	515,035	-	(251,535)	Debt Service					1,581,000	1,581,000	1,687,465	-	(106,465)	3,161,885	3,744,000	2,870,430	(582,115)	291,455
<b>1.04</b>	<b>1.60</b>	<b>0.84</b>	<b>(0.56)</b>	<b>0.20</b>	<b>DSCR</b>					<b>1.40</b>	<b>1.43</b>	<b>1.32</b>	<b>(0.04)</b>	<b>0.08</b>	<b>1.35</b>	<b>1.24</b>	<b>1.56</b>	<b>0.11</b>	<b>(0.21)</b>

LEHIGH COUNTY AUTHORITY				
FINANCIAL STATEMENTS - SUBURBAN WATER				
JUNE 2018				
FORECAST VARIANCES - MONTH				
INCOME STATEMENT	Actual	Forecast	Variance	Comments
<b>Operating Revenues</b>				
				Lower industrial/commercial and public fire revenues. On the fire revenues, the forecast was way too aggressive when you compare to three month and six month run rates. Lower industrial charges from Central Lehigh area
Charges For Services	723,676	815,775	(92,099)	
Rent	7,144	7,514	(370)	No major variance
Other Income	4,715	14,580	(9,865)	Lower revenues related to site visits and turn on charges
Total Operating Revenues	735,535	837,869	(102,334)	Lower due to lower industrial and public fire revenues
<b>Operating Expenses</b>				
Salaries and Wages	94,830	84,000	(10,830)	Slightly higher direct charges from internal services
General and Administrative	142,704	117,000	(25,704)	Higher internal service charges from higher purchased services
Utilities	61,846	40,826	(21,020)	Higher electric usage
Materials and Supplies	24,294	22,000	(2,294)	No major variance
Miscellaneous Services	234,633	178,000	(56,633)	Higher water sample testing costs and higher purchased water costs along with higher costs for valve exercising from ValveTek as that project is moving faster than forecasted
Treatment & Transportation	-	-	-	No variance
Depreciation and Amortization	245,832	245,833	1	No major variance
Total Operating Expenses	804,140	687,659	(116,480)	Higher expenses across all categories driven by significant unfavorable variances on maintenance services and purchased water
<b>Operating Income</b>	(68,604)	150,210	(218,814)	Combination of lower revenues and higher operating expenses
<b>Non-Operating Revenues (Expenses)</b>				
Tapping and Capital Recovery fees	12,165	9,000	3,165	No major variance
Meter Sales	6,750	4,000	2,750	No major variance
Inspection and Plan Reviews	7,243	2,000	5,243	No major variance
Project Reimbursements	(27,779)	-	(27,779)	Adjustment of an accounting error that was not forecasted
Interest Income	68,481	10,000	58,481	Higher invested balances on borrowed funds from last year
Other Income	2,855	1,000	1,855	No major variance
Interest Expense	(29,115)	(127,365)	98,250	Favorable accounting adjustment to true-up that was not forecasted
Other Expense	(554)	-	(554)	No major variance
Total Non-Operating Revenues (Expenses)	40,046	(101,365)	141,411	Higher interest income and lower interest expense
<b>Net Income Before Capital Contributions</b>	(28,558)	48,845	(77,403)	Lower operating income with a partial offset from higher non-operating revenues
<b>Capital Contributions</b>	-	-	-	No capital contributions for the month
<b>NET INCOME</b>	(28,558)	48,845	(77,403)	Lower operating income with a partial offset from higher non-operating revenues
FORECAST VARIANCES - MONTH				
CASH FLOW STATEMENT	Actual	Forecast	Variance	Comments
<b>Cash Flows From Operating Activities</b>				
Operating Revenues	735,535	837,869	(102,334)	
Operating Expenses (ex D&A)	(558,308)	(441,826)	(116,481)	
Non-Cash Working Capital Changes	727,659	727,659	-	
Net Cash Provided by (Used in) Operating Activities	904,887	1,123,702	(218,815)	Lower operating revenues and higher operating expenses
<b>Cash Flows From Financing Activities</b>				
Capital Contributions	-	-	-	
Proceeds New Borrowing	-	-	-	No borrowing anticipated for the year
Interest Payments	(82,967)	(127,365)	44,398	Timing difference related to quarterly payments
Principal Payments	528,107	(111,530)	639,637	Timing difference related to quarterly payments
Net Cash Provided by (Used in) Financing Activities	445,141	(238,895)	684,036	Favorable debt service
<b>Cash Flows from Capital and Related Activities</b>				
Non-Operating Revenues	29,013	16,000	13,013	
Project Reimbursement	(27,779)	-	(27,779)	
Non-Operating Expenses	-	-	-	
Capital Expenditures	(511,179)	(536,250)	25,071	Lower capital works project spending due, mainly, to timing
Net Cash Provided By (Used In) Capital and Related Activities	(509,945)	(520,250)	10,305	Lower capex
<b>Cash Flows From Investing Activities</b>				
Investments Converting To Cash	-	-	-	
Purchased Investments	-	-	-	
Interest Income	68,481	10,000	58,481	Higher invested balances
Net Cash Provided By (Used In) Investing Activities	68,481	10,000	58,481	
<b>FUND NET CASH FLOWS</b>	908,563	374,557	534,006	Favorable timing differences on debt service payments and lower capex

LEHIGH COUNTY AUTHORITY				
FINANCIAL STATEMENTS - SUBURBAN WATER				
JUNE 2018				
FORECAST VARIANCES - YTD				
INCOME STATEMENT	Actual	Forecast	Variance	Comments
<b>Operating Revenues</b>				
Charges For Services	4,392,874	4,468,970	(76,096)	Lower industrial/commercial and public fire revenues. The public fire variances was due to a forecast issue in June that pushed this from favorable to unfavorable YTD
Rent	42,382	44,128	(1,746)	No major variance
Other Income	68,913	43,775	25,138	Higher miscellaneous revenues
Total Operating Revenues	4,504,169	4,556,873	(52,704)	Lower industrial/commercial revenues and lower public fire revenues that occurred in June. Prior to that operating revenues were favorable to forecast. Miscellaneous revenues partially offset the unfavorable variance in charges for service
<b>Operating Expenses</b>				
Salaries and Wages	553,114	548,576	(4,538)	Higher direct charges from internal services
General and Administrative	628,096	641,450	13,353	Lower purchased service from internal services
Utilities	262,741	244,958	(17,783)	Higher electric usage
Materials and Supplies	114,264	114,529	265	No major variance
Miscellaneous Services	1,053,460	984,009	(69,452)	Higher water sample testing costs and higher purchased water costs along with higher costs for valve exercising from Valvetek as that project is moving faster than forecasted
Treatment & Transportation	-	-	-	No variance
Depreciation and Amortization	1,474,992	1,474,995	3	No major variance
Total Operating Expenses	4,086,668	4,008,515	(78,152)	Expenses are higher across almost all of the categories driven by higher electric, water sampling, purchased water, and maintenance services
Operating Income	417,502	548,358	(130,856)	Combination of lower revenues and higher operating expenses
<b>Non-Operating Revenues (Expenses)</b>				
Tapping and Capital Recovery fees	108,950	100,165	8,785	No major variance
Meter Sales	33,459	25,164	8,295	No major variance
Inspection and Plan Reviews	45,913	39,381	6,531	No major variance
Project Reimbursements	(0)	-	(0)	Unfavorable accounting adjustment
Interest Income	113,750	71,557	42,193	Higher invested balances
Other Income	12,065	8,385	3,680	No major variance
Interest Expense	(699,752)	(788,875)	89,123	Favorable accounting adjustment
Other Expense	(1,808)	(434)	(1,374)	No major variance
Total Non-Operating Revenues (Expenses)	(387,423)	(544,656)	157,233	Higher interest income and lower interest expense
Net Income Before Capital Contributions	30,079	3,701	26,377	Lower operating income with a partial offset from higher non-operating revenues
Capital Contributions	-	-	-	No variance
NET INCOME	30,079	3,701	26,377	Lower operating income with a partial offset from higher non-operating revenues
FORECAST VARIANCES - YTD				
CASH FLOW STATEMENT	Actual	Forecast	Variance	Comments
<b>Cash Flows From Operating Activities</b>				
Operating Revenues	4,504,169	4,556,873	(52,704)	
Operating Expenses (ex D&A)	(2,611,676)	(2,533,520)	(78,155)	
Non-Cash Working Capital Changes	581,126	581,126	-	
Net Cash Provided by (Used in) Operating Activities	2,473,620	2,604,479	(130,859)	Lower operating revenues and higher operating expenses
<b>Cash Flows From Financing Activities</b>				
Capital Contributions	-	-	-	
Proceeds New Borrowing	-	-	-	No borrowing for the month
Interest Payments	(753,604)	(788,875)	35,271	Timing difference
Principal Payments	(176,473)	(844,640)	668,167	Timing difference
Net Cash Provided by (Used in) Financing Activities	(930,077)	(1,633,515)	703,438	Favorable debt service
<b>Cash Flows from Capital and Related Activities</b>				
Non-Operating Revenues	200,387	173,095	27,291	
Project Reimbursement	(0)	-	(0)	
Non-Operating Expenses	-	-	-	
Capital Expenditures	(1,733,476)	(2,629,167)	895,691	Lower project spending due, mainly, to timing
Net Cash Provided By (Used In) Capital and Related Activities	(1,533,089)	(2,456,071)	922,982	Lower capex
<b>Cash Flows From Investing Activities</b>				
Investments Converting To Cash	2,022,010	2,022,010	-	
Purchased Investments	-	-	-	
Interest Income	113,750	71,557	42,193	Higher invested balances
Net Cash Provided By (Used In) Investing Activities	2,135,760	2,093,567	42,193	
FUND NET CASH FLOWS	2,146,214	608,460	1,537,754	Favorable timing differences on debt service payments and lower capex

## DASHBOARD - SUBURBAN WATER

### JUNE 2018



FULL YEAR COMPARATIVE (\$'000)

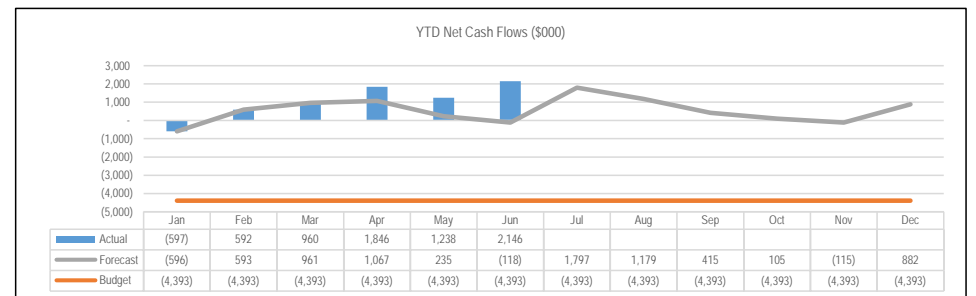
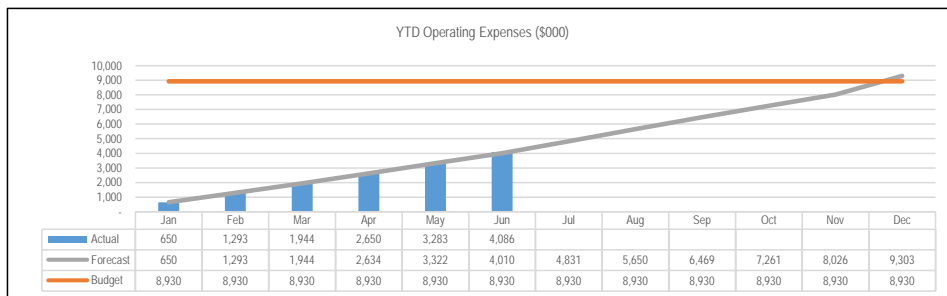
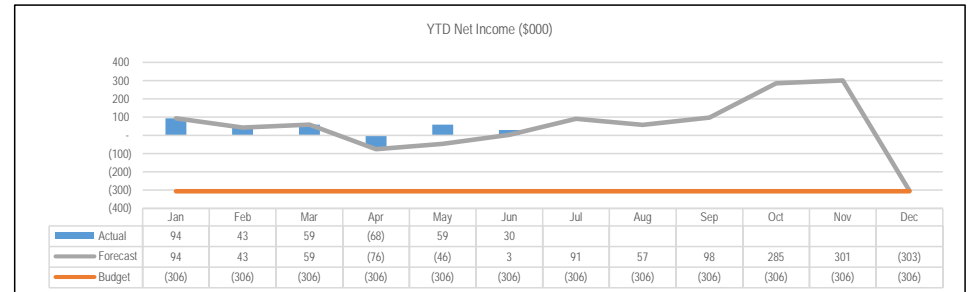
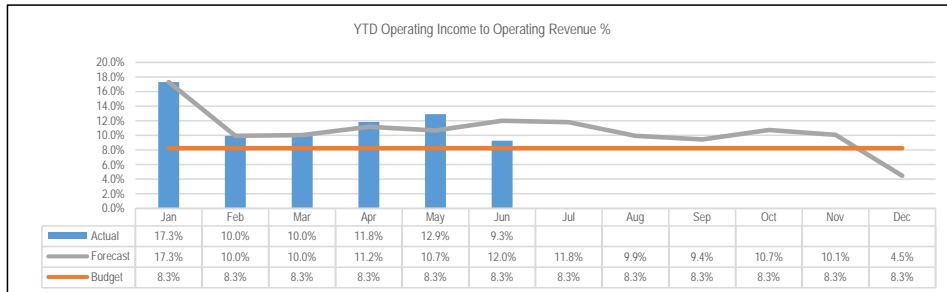
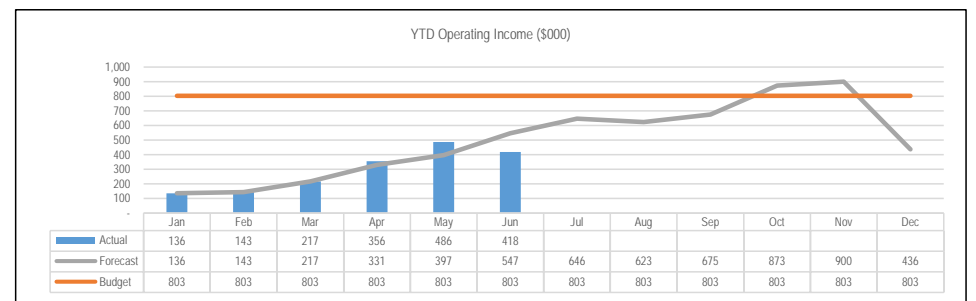
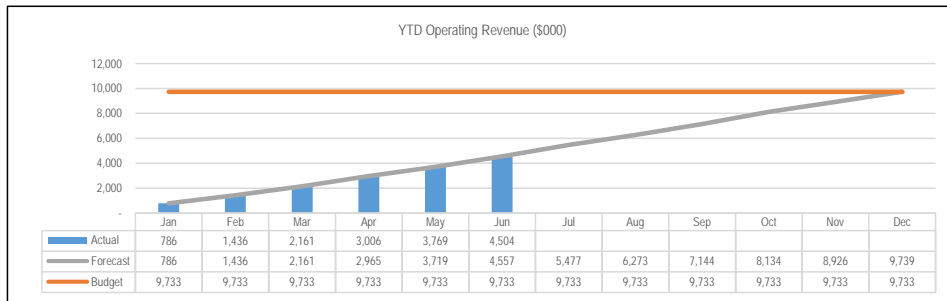
Operating Revenues  
Less: Operating Expenses

Operating Income  
Other income (expenses)

Net IncomeDebt Service Coverage Ratio

## Net Cash Flows

Forecast	Budget	Prior Yr
9,739	9,733	9,054
9,303	8,930	8,109
436	803	945
(739)	(1,109)	5,484
(303)	(306)	6,429
1.35	1.24	1.35
882	(4,393)	4,249



LEHIGH COUNTY AUTHORITY  
FINANCIAL STATEMENTS - SUBURBAN WASTEWATER  
JUNE 2018

MONTH					JUNE 2018					YEAR-TO-DATE					FULL YEAR				
Actual	Forecast	Prior Yr	FC Var	PY Var	INCOME STATEMENT					Actual	Forecast	Prior Yr	FC Var	PY Var	Forecast	Budget	Prior Yr	Bud Var	PY Var
					<b>Operating Revenues</b>														
1,524,315	1,525,558	1,201,036	(1,243)	323,279	Charges For Services					8,877,530	8,889,908	8,316,849	(12,378)	560,681	19,169,817	19,197,000	12,568,375	(27,183)	6,601,442
-	-	-	-	-	Rent					-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	Other Income					-	-	-	-	-	-	-	290,406	-	(290,406)
1,524,315	1,525,558	1,201,036	(1,243)	323,279	Total Operating Revenues					8,877,530	8,889,908	8,316,849	(12,378)	560,681	19,169,817	19,197,000	12,858,781	(27,183)	6,311,036
					<b>Operating Expenses</b>														
32,925	44,243	31,768	11,318	(1,157)	Salaries and Wages					198,344	210,215	199,027	11,871	683	474,431	461,482	424,208	(12,949)	(50,223)
45,585	23,922	30,716	(21,663)	(14,869)	General and Administrative					200,720	183,734	205,709	(16,987)	4,989	463,468	464,057	559,911	589	96,443
52,402	18,248	23,546	(34,154)	(28,857)	Utilities					155,377	122,465	108,399	(32,912)	(46,979)	280,930	285,486	226,197	4,556	(54,733)
14,932	12,055	7,340	(2,877)	(7,592)	Materials and Supplies					70,155	44,876	54,122	(25,279)	(16,032)	300,367	372,250	155,503	71,883	(144,864)
599,248	621,533	606,228	22,285	6,980	Miscellaneous Services					3,833,277	3,865,447	3,532,082	32,169	(301,195)	8,597,171	8,579,017	6,369,014	(18,154)	(2,228,157)
411,825	310,285	374,204	(101,540)	(37,620)	Treatment & Transportation					2,364,710	2,264,300	2,165,117	(100,410)	(199,593)	3,963,420	3,969,993	3,516,548	6,573	(446,872)
397,865	398,000	364,694	135	(33,171)	Depreciation and Amortization					2,387,190	2,387,595	2,188,164	405	(199,026)	4,775,595	4,776,000	4,599,096	405	(176,499)
1,554,782	1,428,285	1,438,495	(126,497)	(116,287)	Total Operating Expenses					9,209,773	9,078,632	8,452,620	(131,142)	(757,153)	18,855,381	18,908,285	15,850,477	52,904	(3,004,904)
(30,467)	97,272	(237,459)	(127,739)	206,992	<b>Operating Income</b>					(332,243)	(188,723)	(135,770)	(143,520)	(196,473)	314,436	288,715	(2,991,696)	25,721	3,306,132
					<b>Non-Operating Revenues (Expenses)</b>														
108,586	45,000	206,585	63,586	(97,999)	Tapping and Capital Recovery fees					413,788	247,155	732,261	166,634	(318,472)	1,084,155	1,015,000	449,376	69,155	634,779
-	-	-	-	-	Meter Sales					-	-	-	-	-	-	-	-	-	-
(0)	-	5,901	(0)	(5,901)	Inspection and Plan Reviews					311	500	5,901	(189)	(5,590)	500	92,000	12,444	(91,500)	(11,944)
-	-	-	-	-	Project Reimbursements					-	-	-	-	-	-	-	-	-	-
12,343	200	68	12,143	12,275	Interest Income					96,659	81,323	2,335	15,336	94,324	5,123	5,000	162,034	123	(156,911)
75	-	75	75	-	Other Income					935	165	420	770	515	165	-	7,520	165	(7,355)
(13,366)	(18,000)	(17,907)	4,634	4,541	Interest Expense					(98,346)	(105,176)	(108,187)	6,830	9,841	(213,176)	(216,000)	(204,418)	2,824	(8,758)
(1,156)	-	(385)	(1,156)	(771)	Other Expense					(3,555)	-	(518)	(3,555)	(3,038)	(301,000)	(301,000)	(30,104)	-	(270,896)
106,482	27,200	194,337	79,282	(87,856)	Total Non-Operating Revenues (Expenses)					409,792	223,967	632,212	185,825	(222,421)	575,767	595,000	396,852	(19,233)	178,915
76,014	124,472	(43,122)	(48,458)	119,137	<b>Net Income Before Capital Contributions</b>					77,548	35,243	496,442	42,305	(418,893)	890,202	883,715	(2,594,844)	6,487	3,485,046
-	-	-	-	-	<b>Capital Contributions</b>					-	-	-	-	-	-	-	2,055,943	-	(2,055,943)
76,014	124,472	(43,122)	(48,458)	119,137	<b>NET INCOME</b>					77,548	35,243	496,442	42,305	(418,893)	890,202	883,715	(538,901)	6,487	1,429,103

LEHIGH COUNTY AUTHORITY  
FINANCIAL STATEMENTS - SUBURBAN WASTEWATER  
JUNE 2018

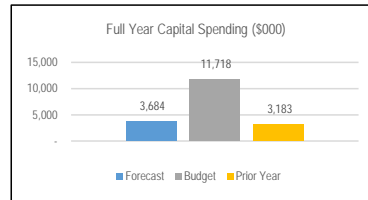
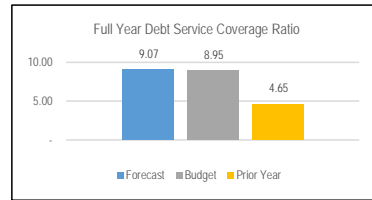
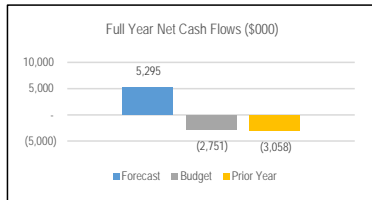
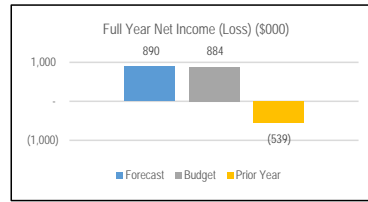
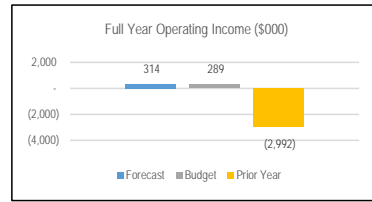
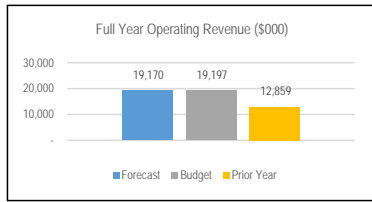
MONTH					JUNE 2018	YEAR-TO-DATE					FULL YEAR				
Actual	Forecast	Prior Yr	FC Var	PY Var	CASH FLOW STATEMENT	Actual	Forecast	Prior Yr	FC Var	PY Var	Forecast	Budget	Prior Yr	Bud Var	PY Var
					<b>Cash Flows From Operating Activities</b>										
1,524,315	1,525,558	1,201,036	(1,243)	323,279	Operating Revenues	8,877,530	8,889,908	8,316,849	(12,378)	560,681	19,169,817	19,197,000	12,858,781	(27,183)	6,311,036
(1,156,917)	(1,030,285)	(1,073,801)	(126,632)	(83,116)	Operating Expenses (ex D&A)	(6,822,583)	(6,691,037)	(6,264,456)	(131,547)	(558,127)	(14,079,786)	(14,132,285)	(11,251,381)	52,499	(2,828,405)
(285,624)	(285,624)	-	-	(285,624)	Non-Cash Working Capital Changes	(697,135)	(697,135)	-	-	(697,135)	-	-	(1,605,524)	-	1,605,524
81,774	209,648	127,235	(127,874)	(45,461)	Net Cash Provided by (Used in) Operating Activities	1,357,812	1,501,737	2,052,394	(143,925)	(694,582)	5,090,031	5,064,715	1,876	25,316	5,088,155
					<b>Cash Flows From Financing Activities</b>										
-	-	-	-	-	Capital Contributions	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	Proceeds New Borrowing	-	-	-	-	-	-	-	-	-	-
(14,214)	(18,000)	(15,186)	3,786	972	Interest Payments	(86,435)	(97,459)	(91,105)	11,024	4,670	(205,459)	(216,000)	(204,418)	10,541	(1,041)
(40,366)	(39,500)	(39,364)	(866)	(1,002)	Principal Payments	(241,130)	(238,745)	(236,999)	(2,385)	(4,132)	(475,745)	(474,000)	(475,585)	(1,745)	(160)
(54,581)	(57,500)	(54,550)	2,919	(30)	Net Cash Provided by (Used in) Financing Activities	(327,566)	(336,205)	(328,104)	8,639	538	(681,205)	(690,000)	(680,003)	8,795	(1,202)
					<b>Cash Flows from Capital and Related Activities</b>										
108,661	45,000	212,561	63,661	(103,900)	Non-Operating Revenues	415,034	247,820	738,582	167,214	(323,548)	1,084,820	1,107,000	503,658	(22,180)	581,162
-	-	-	-	-	Project Reimbursement	-	-	-	-	-	-	-	-	-	-
0	-	-	0	0	Non-Operating Expenses	0	-	-	0	0	-	-	(130)	-	130
(157,294)	(440,800)	(295,064)	283,506	137,770	Capital Expenditures	(529,387)	(1,217,905)	(1,182,886)	688,518	653,499	(3,683,605)	(11,718,000)	(2,865,337)	8,034,395	(818,268)
(48,633)	(395,800)	(82,503)	347,167	33,870	Net Cash Provided By (Used In) Capital and Related Activities	(114,353)	(970,085)	(444,305)	855,732	329,952	(2,598,785)	(10,611,000)	(2,361,809)	8,012,215	(236,976)
					<b>Cash Flows From Investing Activities</b>										
-	-	-	-	-	Investments Converting To Cash	980,000	980,000	-	-	980,000	3,480,000	3,480,000	5,445,346	-	(1,965,346)
-	-	-	-	-	Purchased Investments	-	-	-	-	-	-	-	(5,618,502)	-	5,618,502
12,343	200	68	12,143	12,275	Interest Income	96,659	81,323	2,335	15,336	94,324	5,123	5,000	154,918	123	(149,795)
12,343	200	68	12,143	12,275	Net Cash Provided By (Used In) Investing Activities	1,076,659	1,061,323	2,335	15,336	1,074,324	3,485,123	3,485,000	(18,238)	123	3,503,361
<b>(9,097)</b>	<b>(243,452)</b>	<b>(9,751)</b>	<b>234,355</b>	<b>654</b>	<b>FUND NET CASH FLOWS</b>	<b>1,992,552</b>	<b>1,256,770</b>	<b>1,282,321</b>	<b>735,782</b>	<b>710,232</b>	<b>5,295,164</b>	<b>(2,751,285)</b>	<b>(3,058,174)</b>	<b>8,046,449</b>	<b>8,353,338</b>
					<b>DEBT SERVICE RATIO</b>										
488,402	540,472	339,864	(52,070)	148,538	Total Cash Available For Debt Service	2,566,640	2,528,015	2,793,310	38,625	(226,671)	6,179,974	6,176,715	2,265,976	3,259	3,913,998
54,581	57,500	54,550	(2,919)	30	Debt Service	327,566	336,205	328,104	(8,639)	(538)	681,205	690,000	680,003	(8,795)	1,202
<b>8.95</b>	<b>9.40</b>	<b>6.23</b>	<b>(0.45)</b>	<b>2.72</b>	<b>DSCR</b>	<b>7.84</b>	<b>7.52</b>	<b>8.51</b>	<b>0.32</b>	<b>(0.68)</b>	<b>9.07</b>	<b>8.95</b>	<b>3.33</b>	<b>0.12</b>	<b>5.74</b>

LEHIGH COUNTY AUTHORITY				
FINANCIAL STATEMENTS - SUBURBAN WASTEWATER				
JUNE 2018				
FORECAST VARIANCES - MONTH				
INCOME STATEMENT	Actual	Forecast	Variance	Comments
<b>Operating Revenues</b>				
Charges For Services	1,524,315	1,525,558	(1,243)	WLI up by \$21k, WWTP down by \$22k
Rent	-	-	-	No variance
Other Income	-	-	-	No variance
Total Operating Revenues	1,524,315	1,525,558	(1,243)	No major variance
<b>Operating Expenses</b>				
Salaries and Wages	32,925	44,243	11,318	Lower direct charges from internal services
General and Administrative	45,585	23,922	(21,663)	Higher purchased services from internal services
Utilities	52,402	18,248	(34,154)	Higher electric usage
Materials and Supplies	14,932	12,055	(2,877)	No major variance
Miscellaneous Services	599,248	621,533	22,285	Lower costs from contract operator and lower maintenance services
Treatment & Transportation	411,825	310,285	(101,540)	Higher wastewater volumes
Depreciation and Amortization	397,865	398,000	135	No major variance
Total Operating Expenses	1,554,782	1,428,285	(126,497)	Higher treatment & transportation costs and higher electric and internal service costs with a partial offset from lower maintenance spending
<b>Operating Income</b>	(30,467)	97,272	(127,739)	Higher total operating expenses
<b>Non-Operating Revenues (Expenses)</b>				
Tapping and Capital Recovery fees	108,586	45,000	63,586	Higher capacity and capital recovery fees from WLI
Meter Sales	-	-	-	No variance
Inspection and Plan Reviews	(0)	-	(0)	No variance
Project Reimbursements	-	-	-	No variance
Interest Income	12,343	200	12,143	Higher invested balances
Other Income	75	-	75	No major variance
Interest Expense	(13,366)	(18,000)	4,634	No major variance
Other Expense	(1,156)	-	(1,156)	No major variance
Total Non-Operating Revenues (Expenses)	106,482	27,200	79,282	Higher tapping fees and higher interest income
<b>Net Income Before Capital Contributions</b>	76,014	124,472	(48,458)	Higher non-operating revenues partially offset higher operating expenses
<b>Capital Contributions</b>	-	-	-	
<b>NET INCOME</b>	76,014	124,472	(48,458)	Lower operating income from slightly lower operating revenues and higher total operating expenses partially offset by higher non-operating revenues
FORECAST VARIANCES - MONTH				
CASH FLOW STATEMENT	Actual	Forecast	Variance	Comments
<b>Cash Flows From Operating Activities</b>				
Operating Revenues	1,524,315	1,525,558	(1,243)	
Operating Expenses (ex D&A)	(1,156,917)	(1,030,285)	(126,632)	
Non-Cash Working Capital Changes	(285,624)	(285,624)	-	
Net Cash Provided by (Used In) Operating Activities	81,774	209,648	(127,874)	
<b>Cash Flows From Financing Activities</b>				
Capital Contributions	-	-	-	
Proceeds New Borrowing	-	-	-	
Interest Payments	(14,214)	(18,000)	3,786	No major variance
Principal Payments	(40,366)	(39,500)	(866)	No major variance
Net Cash Provided by (Used In) Financing Activities	(54,581)	(57,500)	2,919	
<b>Cash Flows from Capital and Related Activities</b>				
Non-Operating Revenues	108,661	45,000	63,661	Higher tapping fees and interest income
Project Reimbursement	-	-	-	
Non-Operating Expenses	0	-	0	
Capital Expenditures	(157,294)	(440,800)	283,506	Lower capex spending due to timing
Net Cash Provided By (Used In) Capital and Related Activities	(48,633)	(395,800)	347,167	
<b>Cash Flows From Investing Activities</b>				
Investments Converting To Cash	-	-	-	
Purchased Investments	-	-	-	
Interest Income	12,343	200	12,143	Higher invested balances
Net Cash Provided By (Used In) Investing Activities	12,343	200	12,143	
<b>FUND NET CASH FLOWS</b>	(9,097)	(243,452)	234,355	Higher non-operating revenues and lower capex to offset lower cash generated by operations



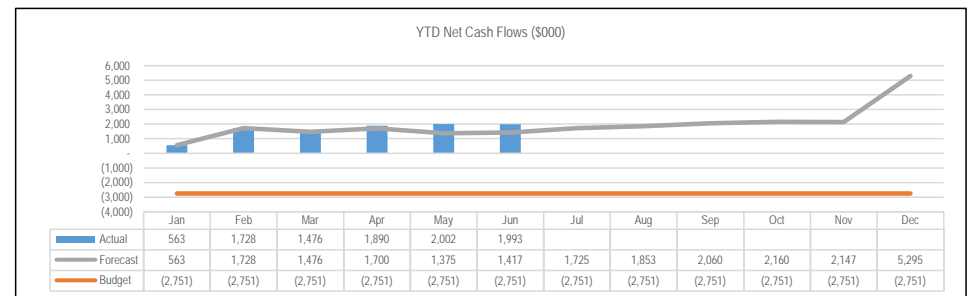
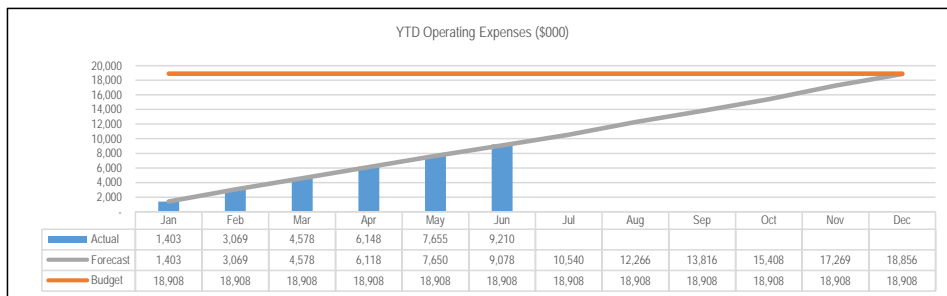
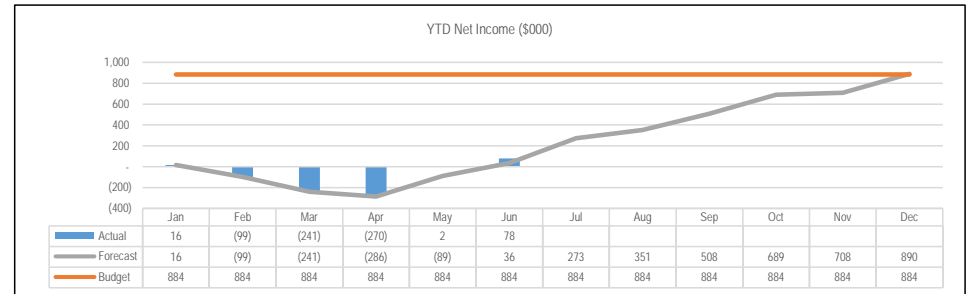
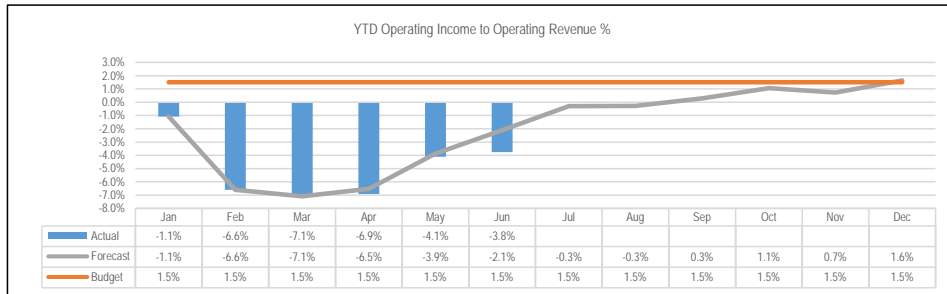
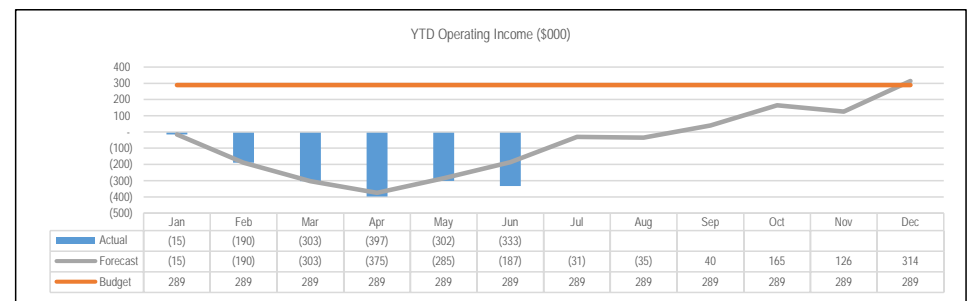
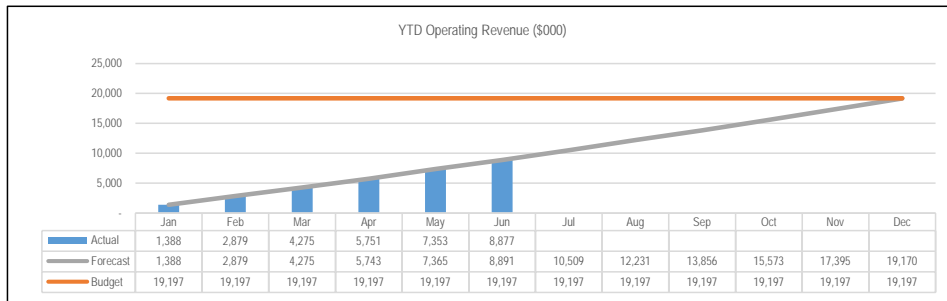
LEHIGH COUNTY AUTHORITY				
FINANCIAL STATEMENTS - SUBURBAN WASTEWATER				
JUNE 2018				
FORECAST VARIANCES - YTD				
INCOME STATEMENT	Actual	Forecast	Variance	Comments
<b>Operating Revenues</b>				
Charges For Services	8,877,530	8,889,908	(12,378)	No major variance
Rent	-	-	-	No variance
Other Income	-	-	-	No variance
Total Operating Revenues	8,877,530	8,889,908	(12,378)	No major variance
<b>Operating Expenses</b>				
Salaries and Wages	198,344	210,215	11,871	No major variance
General and Administrative	200,720	183,734	(16,987)	No major variance
Utilities	155,377	122,465	(32,912)	Higher electric usage
Materials and Supplies	70,155	44,876	(25,279)	Lower fleet related expenses and lower equipment purchases
Miscellaneous Services	3,833,277	3,865,447	32,169	Lower costs from contract operator and lower maintenance services
Treatment & Transportation	2,364,710	2,264,300	(100,410)	Higher wastewater volumes
Depreciation and Amortization	2,387,190	2,387,595	405	No major variance
Total Operating Expenses	9,209,773	9,078,632	(131,142)	Higher treatment & transportation costs and higher electric and internal service costs with a partial offset from lower maintenance spending
<b>Operating Income</b>	(332,243)	(188,723)	(143,520)	Higher total operating expenses
<b>Non-Operating Revenues (Expenses)</b>				
Tapping and Capital Recovery fees	413,788	247,155	166,634	Higher capacity and capital recovery fees from WLI
Meter Sales	-	-	-	No variance
Inspection and Plan Reviews	311	500	(189)	No variance
Project Reimbursements	-	-	-	No variance
Interest Income	96,659	81,323	15,336	Higher invested balances
Other Income	935	165	770	No major variance
Interest Expense	(98,346)	(105,176)	6,830	No major variance
Other Expense	(3,555)	-	(3,555)	No major variance
Total Non-Operating Revenues (Expenses)	409,792	223,967	185,825	Higher tapping fees and higher interest income
<b>Net Income Before Capital Contributions</b>	77,548	35,243	42,305	Higher non-operating revenues partially offset higher operating expenses
<b>Capital Contributions</b>	-	-	-	No contributed capital
<b>NET INCOME</b>	77,548	35,243	42,305	Lower operating income from slightly lower operating revenues and higher total operating expenses partially offset by higher non-operating revenues
FORECAST VARIANCES - YTD				
CASH FLOW STATEMENT	Actual	Forecast	Variance	Comments
<b>Cash Flows From Operating Activities</b>				
Operating Revenues	8,877,530	8,889,908	(12,378)	
Operating Expenses (ex D&A)	(6,822,583)	(6,691,037)	(131,547)	
Non-Cash Working Capital Changes	(697,135)	(697,135)	-	
Net Cash Provided by (Used In) Operating Activities	1,357,812	1,501,737	(143,925)	
<b>Cash Flows From Financing Activities</b>				
Capital Contributions	-	-	-	
Proceeds New Borrowing	-	-	-	
Interest Payments	(86,435)	(97,459)	11,024	No major variance
Principal Payments	(241,130)	(238,745)	(2,385)	No major variance
Net Cash Provided by (Used In) Financing Activities	(327,566)	(336,205)	8,639	
<b>Cash Flows from Capital and Related Activities</b>				
Non-Operating Revenues	415,034	247,820	167,214	Higher tapping fees and interest income
Project Reimbursement	-	-	-	
Non-Operating Expenses	0	-	0	
Capital Expenditures	(529,387)	(1,217,905)	688,518	Lower capex spending due to timing
Net Cash Provided By (Used In) Capital and Related Activities	(114,353)	(970,085)	855,732	
<b>Cash Flows From Investing Activities</b>				
Investments Converting To Cash	980,000	980,000	-	
Purchased Investments	-	-	-	
Interest Income	96,659	81,323	15,336	Higher invested balances
Net Cash Provided By (Used In) Investing Activities	1,076,659	1,061,323	15,336	
<b>FUND NET CASH FLOWS</b>	1,992,552	1,256,770	735,782	Higher non-operating revenues and lower capex to offset lower cash generated by operations

## DASHBOARD - SUBURBAN WASTEWATER JUNE 2018



### FULL YEAR COMPARATIVE (\$000)

	Forecast	Budget	Prior Yr
Operating Revenues	19,170	19,197	12,859
Less: Operating Expenses	18,856	18,908	15,851
Operating Income	314	289	(2,992)
Other income (expenses)	576	595	2,453
Net Income	890	884	(539)
Debt Service Coverage Ratio	9.07	8.95	4.65
Net Cash Flows	5,295	(2,751)	(3,058)



LEHIGH COUNTY AUTHORITY  
FINANCIAL STATEMENTS - CITY DIVISION  
JUNE 2018

MONTH					JUNE 2018					YEAR-TO-DATE					FULL YEAR				
Actual	Forecast	Prior Yr	FC Var	PY Var	INCOME STATEMENT					Actual	Forecast	Prior Yr	FC Var	PY Var	Forecast	Budget	Prior Yr	Bud Var	PY Var
					<b>Operating Revenues</b>														
2,837,856	2,865,688	4,000,118	(27,832)	(1,162,262)	Charges For Services					16,823,532	16,822,756	17,150,565	775	(327,034)	33,228,608	33,039,000	32,802,663	189,608	425,945
-	-	-	-	-	Rent					-	-	-	-	-	-	-	-	-	-
33,412	50,000	44,336	(16,588)	(10,923)	Other Income					304,422	322,780	227,683	(18,358)	76,739	622,780	530,000	93,262	92,780	529,518
<u>2,871,268</u>	<u>2,915,688</u>	<u>4,044,453</u>	<u>(44,420)</u>	<u>(1,173,186)</u>	Total Operating Revenues					<u>17,127,954</u>	<u>17,145,536</u>	<u>17,378,248</u>	<u>(17,583)</u>	<u>(250,295)</u>	<u>33,851,388</u>	<u>33,569,000</u>	<u>32,895,925</u>	<u>282,388</u>	<u>955,463</u>
					<b>Operating Expenses</b>														
422,370	426,000	397,675	3,630	(24,695)	Salaries and Wages					2,692,938	2,725,220	2,406,039	32,282	(286,899)	5,531,220	5,483,083	5,756,508	(48,137)	225,288
612,461	421,000	536,558	(191,461)	(75,903)	General and Administrative					3,206,114	3,034,658	3,192,648	(171,456)	(13,466)	6,045,658	5,988,429	5,268,909	(57,229)	(776,749)
264,682	165,000	153,735	(99,682)	(110,946)	Utilities					1,097,775	998,895	869,273	(98,880)	(228,502)	1,988,895	1,983,202	1,903,666	(5,693)	(85,229)
103,384	96,000	95,641	(7,384)	(7,743)	Materials and Supplies					505,147	469,472	528,904	(35,675)	23,757	1,399,472	1,489,546	1,312,551	90,074	(86,921)
158,590	144,000	179,364	(14,590)	20,774	Miscellaneous Services					595,073	640,696	909,823	45,623	314,750	1,819,696	1,845,730	2,620,544	26,034	800,848
-	1,000	-	1,000	-	Treatment & Transportation					-	3,000	4,935	3,000	4,935	9,000	12,000	10,096	3,000	1,096
466,667	466,667	450,000	-	(16,667)	Depreciation and Amortization					2,800,002	2,800,002	2,700,000	-	(100,002)	5,600,000	5,600,000	5,887,307	-	287,307
<u>2,028,153</u>	<u>1,719,667</u>	<u>1,812,973</u>	<u>(308,486)</u>	<u>(215,181)</u>	Total Operating Expenses					<u>10,897,048</u>	<u>10,671,943</u>	<u>10,611,622</u>	<u>(225,106)</u>	<u>(285,427)</u>	<u>22,393,941</u>	<u>22,401,990</u>	<u>22,759,581</u>	<u>8,049</u>	<u>365,640</u>
<u>843,114</u>	<u>1,196,021</u>	<u>2,231,481</u>	<u>(352,906)</u>	<u>(1,388,366)</u>	<b>Operating Income</b>					<u>6,230,905</u>	<u>6,473,594</u>	<u>6,766,626</u>	<u>(242,688)</u>	<u>(535,721)</u>	<u>11,457,447</u>	<u>11,167,010</u>	<u>10,136,344</u>	<u>290,437</u>	<u>1,321,103</u>
					<b>Non-Operating Revenues (Expenses)</b>														
90,678	13,000	(11,015)	77,678	101,693	Tapping and Capital Recovery fees					243,751	88,952	71,842	154,799	171,909	166,952	144,000	725,230	22,952	(558,278)
544	1,000	3,704	(456)	(3,160)	Meter Sales					5,132	7,316	7,348	(2,184)	(2,216)	13,316	15,000	17,187	(1,684)	(3,871)
4,500	2,000	1,000	2,500	3,500	Inspection and Plan Reviews					20,695	66,521	6,500	(45,826)	14,195	252,521	293,000	1,132,206	(40,479)	(879,685)
-	-	-	-	-	Project Reimbursements					-	-	123,598	-	(123,598)	2,480,000	2,480,000	-	-	2,480,000
70,153	30,000	38,785	40,153	31,367	Interest Income					329,393	254,567	224,011	74,826	105,382	404,567	348,000	341,431	56,567	63,136
3,390	-	3,900	3,390	(510)	Other Income					21,980	10,470	20,760	11,510	1,220	10,470	-	1,123,827	10,470	(1,113,357)
(1,402,734)	(1,400,000)	(1,262,941)	(2,734)	(139,793)	Interest Expense					(8,416,404)	(8,408,202)	(7,577,646)	(8,202)	(838,758)	(18,521,202)	(16,735,000)	(18,516,650)	(1,786,202)	(4,552)
(51,640)	(100,000)	(216,142)	48,360	164,502	Other Expense					(610,576)	(538,638)	(679,943)	(71,938)	69,367	(4,638,638)	(4,980,000)	(3,312,624)	341,362	(1,326,014)
<u>(1,285,109)</u>	<u>(1,454,000)</u>	<u>(1,442,709)</u>	<u>168,891</u>	<u>157,600</u>	Total Non-Operating Revenues (Expenses)					<u>(8,406,029)</u>	<u>(8,519,014)</u>	<u>(7,803,531)</u>	<u>112,985</u>	<u>(602,499)</u>	<u>(19,832,014)</u>	<u>(18,435,000)</u>	<u>(18,489,393)</u>	<u>(1,397,014)</u>	<u>(1,342,621)</u>
(441,995)	(257,979)	788,772	(184,016)	(1,230,767)	<b>Net Income Before Capital Contributions</b>					(2,175,124)	(2,045,421)	(1,036,904)	(129,703)	(1,138,220)	(8,374,568)	(7,267,990)	(8,353,049)	(1,106,578)	(21,519)
-	-	-	-	-	<b>Capital Contributions</b>					-	-	-	-	-	-	-	-	-	-
<u>(441,995)</u>	<u>(257,979)</u>	<u>788,772</u>	<u>(184,016)</u>	<u>(1,230,767)</u>	<b>NET INCOME</b>					<u>(2,175,124)</u>	<u>(2,045,421)</u>	<u>(1,036,904)</u>	<u>(129,703)</u>	<u>(1,138,220)</u>	<u>(8,374,568)</u>	<u>(7,267,990)</u>	<u>(8,353,049)</u>	<u>(1,106,578)</u>	<u>(21,519)</u>

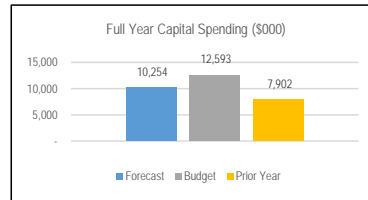
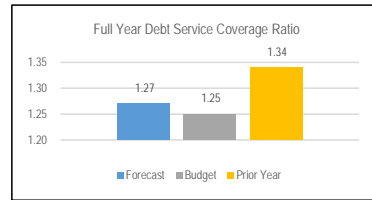
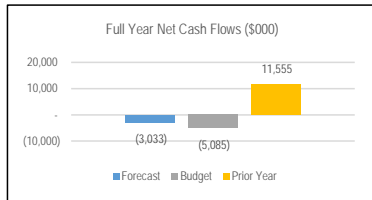
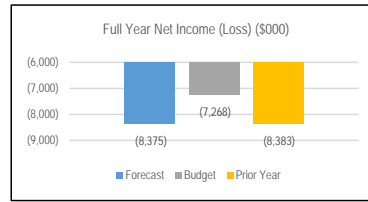
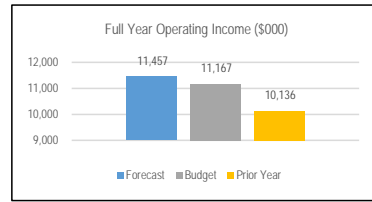
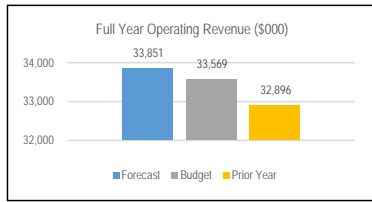
LEHIGH COUNTY AUTHORITY  
FINANCIAL STATEMENTS - CITY DIVISION  
JUNE 2018

MONTH					JUNE 2018	YEAR-TO-DATE					FULL YEAR				
Actual	Forecast	Prior Yr	FC Var	PY Var	CASH FLOW STATEMENT	Actual	Forecast	Prior Yr	FC Var	PY Var	Forecast	Budget	Prior Yr	Bud Var	PY Var
					<b>Cash Flows From Operating Activities</b>										
2,871,268	2,915,688	4,044,453	(44,420)	(1,173,186)	Operating Revenues	17,127,954	17,145,536	17,378,248	(17,583)	(250,295)	33,851,388	33,569,000	32,895,925	282,388	955,463
(1,561,486)	(1,253,000)	(1,362,973)	(308,486)	(198,514)	Operating Expenses (ex D&A)	(8,097,046)	(7,871,941)	(7,911,622)	(225,106)	(185,425)	(16,793,941)	(16,801,990)	(16,872,274)	8,049	78,333
(52,074)	(52,074)	-	-	(52,074)	Non-Cash Working Capital Changes	(1,229,077)	(1,229,077)	-	-	(1,229,077)	-	-	3,458,783	-	(3,458,783)
1,257,707	1,610,614	2,681,481	(352,906)	(1,423,773)	Net Cash Provided by (Used in) Operating Activities	7,801,830	8,044,519	9,466,626	(242,688)	(1,664,796)	17,057,447	16,767,010	19,482,434	290,437	(2,424,987)
					<b>Cash Flows From Financing Activities</b>										
-	-	-	-	-	Lease Payments to City	(255,780)	(255,780)	(256,000)	-	220	(515,560)	(512,000)	(504,000)	(3,560)	(11,560)
-	-	-	-	-	Capital Contributions	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	Proceeds New Borrowing	-	-	-	-	-	1,100,000	1,720,000	-	(620,000)	1,100,000
(6,523,861)	(6,874,000)	(6,523,861)	350,139	-	Interest Payments	(6,523,861)	(6,874,000)	(6,523,861)	350,139	-	(13,748,000)	(13,748,000)	(13,047,721)	-	(700,279)
-	-	-	-	-	Principal Payments	-	-	-	-	-	-	-	-	-	-
(6,523,861)	(6,874,000)	(6,523,861)	350,139	-	Net Cash Provided by (Used in) Financing Activities	(6,779,641)	(7,129,780)	(6,779,861)	350,139	220	(13,163,560)	(12,540,000)	(13,551,721)	(623,560)	388,161
					<b>Cash Flows from Capital and Related Activities</b>										
99,112	16,000	(2,411)	83,112	101,523	Non-Operating Revenues	291,558	173,259	106,450	118,299	185,108	443,259	452,000	2,998,450	(8,741)	(2,555,191)
-	-	-	-	-	Project Reimbursement	-	-	123,598	-	(123,598)	2,480,000	2,480,000	-	-	2,480,000
-	-	-	-	-	Non-Operating Expenses	-	-	-	-	-	-	-	-	-	-
(250,782)	(1,011,500)	(962,788)	760,718	712,006	Capital Expenditures	(1,570,369)	(3,267,868)	(2,323,142)	1,697,499	752,773	(10,254,428)	(12,592,500)	(7,881,008)	2,338,072	(2,373,420)
(151,670)	(995,500)	(965,199)	843,830	813,529	Net Cash Provided By (Used In) Capital and Related Activities	(1,278,811)	(3,094,609)	(2,093,094)	1,815,798	814,283	(7,331,169)	(9,660,500)	(4,882,558)	2,329,331	(2,448,611)
					<b>Cash Flows From Investing Activities</b>										
-	-	-	-	-	Investments Converting To Cash	-	-	-	-	-	-	-	10,136,160	-	(10,136,160)
-	-	-	-	-	Purchased Investments	-	-	-	-	-	-	-	-	-	-
70,153	30,000	38,785	40,153	31,367	Interest Income	329,393	254,567	224,011	74,826	105,382	404,567	348,000	370,712	56,567	33,855
70,153	30,000	38,785	40,153	31,367	Net Cash Provided By (Used In) Investing Activities	329,393	254,567	224,011	74,826	105,382	404,567	348,000	10,506,872	56,567	(10,102,305)
(5,347,672)	(6,228,886)	(4,768,794)	881,215	(578,877)	<b>FUND NET CASH FLOWS</b>	<b>72,770</b>	<b>(1,925,304)</b>	<b>817,682</b>	<b>1,998,074</b>	<b>(744,911)</b>	<b>(3,032,716)</b>	<b>(5,085,490)</b>	<b>11,555,027</b>	<b>2,052,774</b>	<b>(14,587,743)</b>
					<b>DEBT SERVICE RATIO</b>										
1,436,729	1,666,058	2,680,485	(229,328)	(1,243,756)	Total Cash Available For Debt Service	9,424,940	9,495,151	9,618,269	(70,210)	(193,329)	17,464,592	17,129,856	18,325,297	334,736	(860,705)
1,087,311	1,087,310	1,087,310	1	1	Debt Service (Pro-Rated)	6,523,861	6,523,861	6,523,860	0	1	13,748,000	13,748,000	13,047,722	-	700,278
1.32	1.53	2.47	(0.21)	(1.14)	<b>DSCR</b>	<b>1.44</b>	<b>1.46</b>	<b>1.47</b>	<b>(0.01)</b>	<b>(0.03)</b>	<b>1.27</b>	<b>1.25</b>	<b>1.40</b>	<b>0.02</b>	<b>(0.13)</b>

LEHIGH COUNTY AUTHORITY				
FINANCIAL STATEMENTS - CITY DIVISION				
JUNE 2018				
FORECAST VARIANCES - MONTH				
INCOME STATEMENT	Actual	Forecast	Variance	Comments
<b>Operating Revenues</b>				
Charges For Services	2,837,856	2,865,688	(27,832)	Water was up by \$125k but wastewater was down by \$152k
Rent	-	-	-	No variance
Other Income	33,412	50,000	(16,588)	Lower revenues from miscellaneous charges
Total Operating Revenues	2,871,268	2,915,688	(44,420)	Higher water revenues more than offset by lower wastewater revenues
<b>Operating Expenses</b>				
Salaries and Wages	422,370	426,000	3,630	No major variance
General and Administrative	612,461	421,000	(191,461)	Higher purchases services from internal services
Utilities	264,682	165,000	(99,682)	Higher electric usage
Materials and Supplies	103,384	96,000	(7,384)	Higher fuel & chemicals offset partly by lower misc supplies
Miscellaneous Services	158,590	144,000	(14,590)	Higher residuals, maintenance services, and fleet management services
Treatment & Transportation	-	1,000	1,000	No major variance
Depreciation and Amortization	466,667	466,667	-	No variance
Total Operating Expenses	2,028,153	1,719,667	(308,486)	Higher G&A and higher utilities spending
<b>Operating Income</b>	843,114	1,196,021	(352,906)	Lower operating revenues along with higher operating expenses
<b>Non-Operating Revenues (Expenses)</b>				
Tapping and Capital Recovery fees	90,678	13,000	77,678	Higher tapping fees and higher allocation fees aided by a \$41k wastewater capacity fee
Meter Sales	544	1,000	(456)	No major variance
Inspection and Plan Reviews	4,500	2,000	2,500	No major variance
Project Reimbursements	-	-	-	No variance
Interest Income	70,153	30,000	40,153	Higher invested balances
Other Income	3,390	-	3,390	No major variance
Interest Expense	(1,402,734)	(1,400,000)	(2,734)	No major variance
Other Expense	(51,640)	(100,000)	48,360	Lower capex
Total Non-Operating Revenues (Expenses)	(1,285,109)	(1,454,000)	168,891	Higher tapping fees and higher interest income
<b>Net Income Before Capital Contributions</b>	(441,995)	(257,979)	(184,016)	Lower operating income offset partly by higher non-operating revenues
<b>Capital Contributions</b>	-	-	-	
<b>NET INCOME</b>	(441,995)	(257,979)	(184,016)	Lower operating revenues and higher total operating expenses partially offset by higher non-operating revenues
FORECAST VARIANCES - MONTH				
CASH FLOW STATEMENT	Actual	Forecast	Variance	Comments
<b>Cash Flows From Operating Activities</b>				
Operating Revenues	2,871,268	2,915,688	(44,420)	
Operating Expenses (ex D&A)	(1,561,486)	(1,253,000)	(308,486)	
Non-Cash Working Capital Changes	(52,074)	(52,074)	-	
Net Cash Provided by (Used in) Operating Activities	1,257,707	1,610,614	(352,906)	
<b>Cash Flows From Financing Activities</b>				
Lease Payments to City	-	-	-	
Capital Contributions	-	-	-	
Proceeds New Borrowing	-	-	-	
Interest Payments	(6,523,861)	(6,874,000)	350,139	Forecast had assumed new borrowing which has not yet taken place as we are still working on the refinance of the Series C Bonds
Principal Payments	-	-	-	
Net Cash Provided by (Used in) Financing Activities	(6,523,861)	(6,874,000)	350,139	
<b>Cash Flows from Capital and Related Activities</b>				
Non-Operating Revenues	99,112	16,000	83,112	Higher tapping fees and interest income
Project Reimbursement	-	-	-	
Non-Operating Expenses	-	-	-	
Capital Expenditures	(250,782)	(1,011,500)	760,718	Lower capital spending due to timing
Net Cash Provided By (Used In) Capital and Related Activities	(151,670)	(995,500)	843,830	Combination of higher non-operating revenues and lower capex
<b>Cash Flows From Investing Activities</b>				
Investments Converting To Cash	-	-	-	
Purchased Investments	-	-	-	
Interest Income	70,153	30,000	40,153	Higher invested balances
Net Cash Provided By (Used In) Investing Activities	70,153	30,000	40,153	
<b>FUND NET CASH FLOWS</b>	(5,347,672)	(6,228,886)	881,215	Higher cash from lower interest, higher non-operating revenues, and lower capex

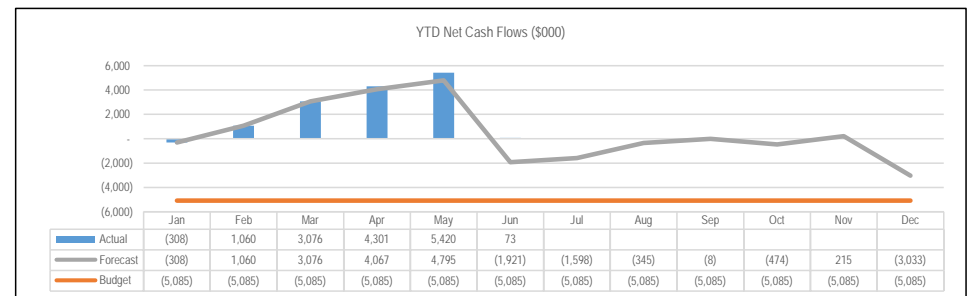
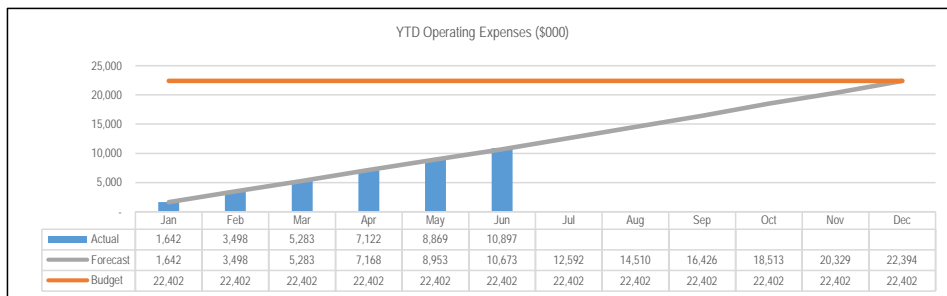
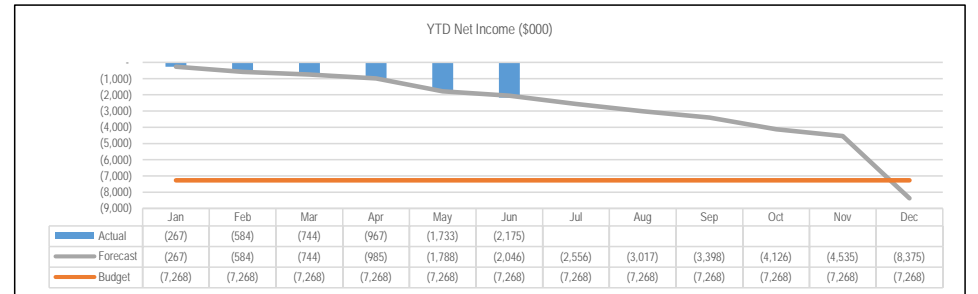
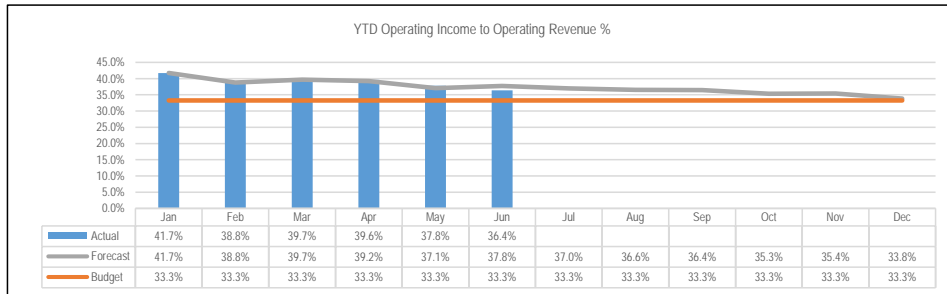
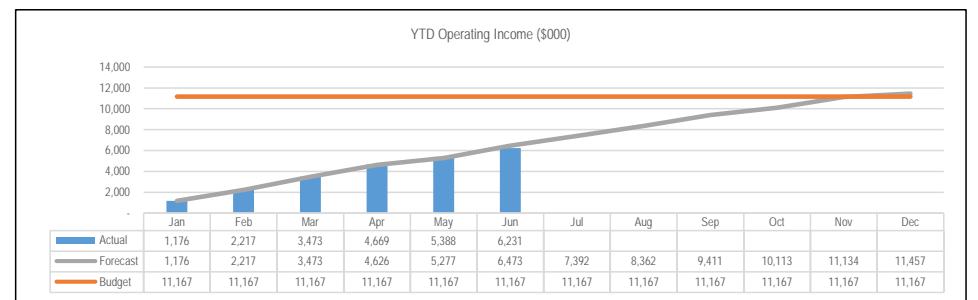
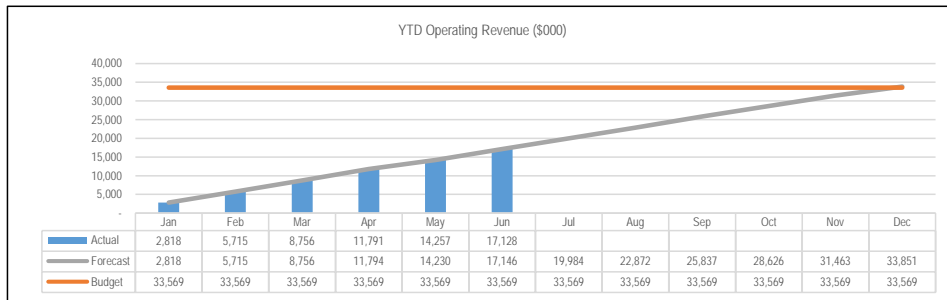
LEHIGH COUNTY AUTHORITY				
FINANCIAL STATEMENTS - CITY DIVISION				
JUNE 2018				
FORECAST VARIANCES - YTD				
INCOME STATEMENT	Actual	Forecast	Variance	Comments
<b>Operating Revenues</b>				
Charges For Services	16,823,532	16,822,756	775	No major variance
Rent	-	-	-	No variance
Other Income	304,422	322,780	(18,358)	No major variance
Total Operating Revenues	17,127,954	17,145,536	(17,583)	No major variance
<b>Operating Expenses</b>				
Salaries and Wages	2,692,938	2,725,220	32,282	No major variance
General and Administrative	3,206,114	3,034,658	(171,456)	Higher purchased services in internal services
Utilities	1,097,775	998,895	(98,880)	Higher electric usage
Materials and Supplies	505,147	469,472	(35,675)	Higher fuel & chemicals offset partly by lower misc supplies
Miscellaneous Services	595,073	640,696	45,623	Lower maintenance services
Treatment & Transportation	-	3,000	3,000	No major variance
Depreciation and Amortization	2,800,002	2,800,002	-	No variance
Total Operating Expenses	10,897,048	10,671,943	(225,106)	Higher G&A, utilities and chemicals spending offset partly by lower service purchases
<b>Operating Income</b>	6,230,905	6,473,594	(242,688)	Slightly lower operating revenues along with higher operating expenses
<b>Non-Operating Revenues (Expenses)</b>				
Tapping and Capital Recovery fees	243,751	88,952	154,799	Higher tapping fees and higher allocation fees aided by \$105k wastewater capacity fee
Meter Sales	5,132	7,316	(2,184)	No major variance
Inspection and Plan Reviews	20,695	66,521	(45,826)	No major variance
Project Reimbursements	-	-	-	No variance
Interest Income	329,393	254,567	74,826	Higher invested balances
Other Income	21,980	10,470	11,510	No major variance
Interest Expense	(8,416,404)	(8,408,202)	(8,202)	No major variance
Other Expense	(610,576)	(538,638)	(71,938)	Lower capex
Total Non-Operating Revenues (Expenses)	(8,406,029)	(8,519,014)	112,985	Higher tapping fees and higher interest income
<b>Net Income Before Capital Contributions</b>	(2,175,124)	(2,045,421)	(129,703)	Lower operating income offset partly by higher non-operating revenues
<b>Capital Contributions</b>	-	-	-	No capital contributions
<b>NET INCOME</b>	(2,175,124)	(2,045,421)	(129,703)	Lower operating revenues and higher operating expenses offset partly by higher non-operating revenues
FORECAST VARIANCES - YTD				
CASH FLOW STATEMENT	Actual	Forecast	Variance	Comments
<b>Cash Flows From Operating Activities</b>				
Operating Revenues	17,127,954	17,145,536	(17,583)	
Operating Expenses (ex D&A)	(8,097,046)	(7,871,941)	(225,106)	
Non-Cash Working Capital Changes	(1,229,077)	(1,229,077)	-	
Net Cash Provided by (Used in) Operating Activities	7,801,830	8,044,519	(242,688)	
<b>Cash Flows From Financing Activities</b>				
Lease Payments to City	(255,780)	(255,780)	-	
Capital Contributions	-	-	-	
Proceeds New Borrowing	-	-	-	
Interest Payments	(6,523,861)	(6,874,000)	350,139	Forecast had assumed new borrowing which has not yet taken place as we are still working on the refinance of the Series C Bonds
Principal Payments	-	-	-	
Net Cash Provided by (Used in) Financing Activities	(6,779,641)	(7,129,780)	350,139	
<b>Cash Flows from Capital and Related Activities</b>				
Non-Operating Revenues	291,558	173,259	118,299	Higher tapping fees and interest income
Project Reimbursement	-	-	-	
Non-Operating Expenses	-	-	-	
Capital Expenditures	(1,570,369)	(3,267,868)	1,697,499	Lower capital spending due to timing
Net Cash Provided By (Used In) Capital and Related Activities	(1,278,811)	(3,094,609)	1,815,798	Combination of higher non-operating revenues and lower capex
<b>Cash Flows From Investing Activities</b>				
Investments Converting To Cash	-	-	-	
Purchased Investments	-	-	-	
Interest Income	329,393	254,567	74,826	Higher invested balances
Net Cash Provided By (Used In) Investing Activities	329,393	254,567	74,826	
<b>FUND NET CASH FLOWS</b>	72,770	(1,925,304)	1,998,074	Higher cash from lower interest, higher non-operating revenues, and lower capex

## DASHBOARD - CITY DIVISION JUNE 2018



### FULL YEAR COMPARATIVE (\$000)

	Forecast	Budget	Prior Yr
Operating Revenues	33,851	33,569	32,896
Less: Operating Expenses	22,394	22,402	22,760
Operating Income	11,457	11,167	10,136
Other income (expenses)	(19,832)	(18,435)	(18,519)
Net Income	(8,375)	(7,268)	(8,383)
Debt Service Coverage Ratio	1.27	1.25	1.34
Net Cash Flows	(3,033)	(5,085)	11,555



Lehigh County Authority
System Operations Review - June 2018
Presented: July 23, 2018

System Operations Review - June 2018

Presented: July 23, 2018

Critical Activities	System	Description	Jun-18	2018-to-Date	2017 Totals	Permit
			Daily Avg (MGD)	Daily Avg (MGD)	Daily Avg (MGD)	Daily Max (MGD)
Water Production	Allentown	Total	22.84	21.06	21.16	39.0
		Schantz Spring	7.26	6.02	6.39	9.0
		Crystal Spring	3.87	3.89	3.89	4.0
		Little Lehigh Creek	11.71	11.10	10.84	30.0
		Lehigh River	0.00	0.04	0.03	28.0
	Central Lehigh	Total	10.52	9.48	9.29	19.04 MGD Avg
		Feed from Allentown	7.17	6.42	6.94	7.0 MGD Avg 10.5 MGD Max
		Well Production (CLD)	3.35	3.06	2.35	8.54 MGD Avg
		Sum of all (12) other Suburban Water Systems	0.17	0.19	0.18	1.71 Sum of all wells
Wastewater Treatment		Kline's Island	30.90	33.39	30.78	40.0
		Pretreatment Plant	4.66	4.68	4.35	5.75 (design capacity)
		Sum of all (5) other Suburban WW Systems	0.13	0.18	0.16	0.36
			Jun-18	2018-to-Date	2017 Totals	2016 Totals
Precipitation Totals (inches)			2.6	23.08	50.18	36.82
Compliance Reports Submitted to Allentown			19	156	291	269
Notices of Violation (NOVs)		(Allentown + Suburban)	0	0	3	3
Sanitary Sewer Overflows (SSOs)/Bypasses		(Allentown + Suburban)	2	13	22	16
Main Breaks Repaired		Allentown	1	20	19	19
		Suburban	1	13	12	11
Customer Service Phone Inquiries		(Allentown + Suburban)	2,097	14,159	27,313	28,099
Water Shutoffs for Non-Payment		(Allentown + Suburban)	202	1,002	1,577	1,685
Injury Accidents		(Allentown + Suburban)	1	7	8	10
Emergency Declarations		Allentown	0	(4) @ \$52,719	(2) @ \$51,235	(2) @ \$87,079
		Suburban	0	(1) @ \$21,197	(1) @ \$72,554	(1) @ \$33,495

**Significant Repairs:** Park Pump Station Pump #3 is down and a new suction ring arrived in early July. A temporary pump has been installed to act as the third pump until all of the repairs are completed. The entire station is to be rehabilitated by the end of 2019, and upgrades will include three (3) new pumps in addition to an assortment of electrical and structural improvements.

<p><b>Description of NOV's and/or SSO's:</b> There was one (1) bypass at Heidelberg Heights that occurred on 6/1/2018 - 6/2/2018. There was one (1) SSO that occurred at the Heidelberg Heights WWTP on 6/18/2018. The SSO occurred when the sludge holding tank overflowed. There were (0) NOV's received during June, 2018.</p>
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**Other Highlights:** Primary Digester #2 at Kline's Island WWTP is undergoing a cleaning and mechanical upgrade. The project is expected to be completed by the end of September. Ten (10) roofs are being replaced in the Allentown Water System and WWTP. A project to replace the drive and rake mechanism on #5 Final Settling Tank at KIWWTP has been completed. The same replacements have now begun on #6 Final Settling Tank.