



LEHIGH COUNTY AUTHORITY

LCA Main Office:
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Agendas & Minutes Posted:
www.lehighcountyauthority.org

Published: June 15, 2020 / Revised: June 17, 2020

BOARD MEETING AGENDA – June 22, 2020

1. Call to Order

- NOTICE OF MEETING RECORDINGS

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

- *Public Participation Sign-In Request*

2. Review of Agenda / Executive Sessions

3. Approval of Minutes

- *June 8, 2020 Board meeting minutes*

4. Public Comments

5. Action / Discussion Items:

FINANCE AND ADMINISTRATION

- *2019 Audit & Financial Statements*
- *Lease Bond Refinancing Evaluation – Authorization of Professional Service Providers*

WATER

- *Allentown Division – Emergency Declaration – Water Main Break at 17th & Sumner Sts. (Approval) (yellow)*
- *Suburban Division – Additional (Redundant) Water Supply – Small Satellite Divisions (Approval) (blue)*

WASTEWATER

- *Suburban Division – Heidelberg Heights Consent Order & Agreement (Resolution No. 6-2020-3) (Approval) (tan)*
- *Suburban Division – Asset Management Upgrade Project – Construction Phase (Approval) (green)*

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

7. Monthly Financial Review (2nd Board meeting per month) – **May report to be distributed at a later date**

8. Monthly System Operations Overview (2nd Board meeting per month) – **May 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.

July 13, 2020

July 27, 2020

August 10, 2020

PUBLIC PARTICIPATION POLICY

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

REGULAR MEETING MINUTES

June 8, 2020

The Regular Meeting of the Lehigh County Authority Board of Directors was called to order at 12:03 p.m. on Monday, June 8, 2020, Chairman Brian Nagle presiding. The meeting was held via video and audio advanced communication technology ("ACT"), using the ZOOM internet application, due to the national COVID-19 pandemic emergency. Each Board member and other attendees of the meeting were able to hear each other attendee and be heard by each other attendee. The public could also participate in the meeting via ACT, using the ZOOM internet application. A Roll Call of Board members present was taken. Chairman Brian Nagle, Jeff Morgan, Ted Lyons, Kevin Baker, Amir Famili, Richard Bohner, Norma Cusick and Linda Rosenfeld were present through ACT for the duration of the meeting. Board member Scott Beiber also attended via ACT, but at times had connection problems during the meeting. As a result, his participation in voting was unable to be recorded.

Solicitor Michael Gaul was also present via ACT. Authority Staff present via ACT were Liesel Gross, Chris Moughan, Ed Klein, Chuck Volk, John Parsons, Susan Sampson, Lisa Miller, Phil DePoe, Andrew Moore, Todd Marion, and Jason Peters.

Chairman Nagle announced the Board received the Board packet in advance of the meeting, however, the paperwork regarding the Suburban Division - Park Pump Station (PPS): Force Main Bypass project was emailed to the Board separately at a later date.

REVIEW OF AGENDA

Liesel Gross stated there are no changes to the agenda. There will be an Executive Session after the regular meeting to discuss two matters of potential litigation.

APPROVAL OF MINUTES

May 11, 2020 Meeting Minutes

On a motion by Richard Bohner, seconded by Linda Rosenfeld, the Board approved the minutes of the May 11, 2020 Board meeting (8-0).

May 18, 2020 Meeting Minutes

Richard Bohner noted a few grammatical errors. On a motion by Richard Bohner, seconded by Norma Cusick, the Board approved the minutes of the May 18, 2020 Board meeting as corrected (8-0).

PUBLIC COMMENTS

None.

ACTION AND DISCUSSION ITEMS

Resolution 6-2020-1 & 6-2020-2 LCA 457(b) Plan & OPEB Trust Administrators

Liesel Gross gave an overview of the background of the Authority's 457(b) supplemental retirement plan and other post-retirement employee benefits (OPEB) Trust account. The plans have been in existence for a long time. Following an evaluation of the services provided, the Authority is

requesting to establish a new custodian for the 457(b) plan with Great-West Trust Company and a new trust agreement with SEI Trust Company for the OPEB trust account. The recommended changes will be an enhancement in service to employees and potential improvement of fund performance.

Ed Klein explained in more detail why the Authority is proposing to make the changes to the 457(b) Plan and OPEB Trust account, and the benefits of doing so. Legacy Planning Partners, located in Allentown, would serve as an independent financial advisor to LCA and employees to allow for improved investment management, a service not currently provided by the current provider, ICMA-RC. In this capacity, Legacy has selected SEI Private Trust Company as Trustee to administer the Authority's OPEB trust account and Great-West Trust Company, LLC to serve as Custodian for the administration of the Authority's 457(b) plan. Ted Lyons asked about fees associated with the 457(b) plan through ICMA-RC versus Great-West. Ed Klein explained that the fees employees pay for their investments with ICMA-RC are built into the investments directly and therefore not transparent to employees. A listing of the fees employees will pay based on their investment selection under the new plan with Great-West was displayed on the screen for Board viewing. Mr. Klein also stated he could supply a copy of the fees to the Board. Ted Lyons also asked about the Authority's process to select these service providers. Mr. Klein explained that Legacy Planning Partners managed the selection process, including reviewing qualifications and reference checks for Great-West and SEI. There was some Board discussion.

On a motion by Linda Rosenfeld, seconded by Richard Bohner, the Board approved Resolution #6-2020-1 approving a custodial account agreement for the administration of the Lehigh County Authority 457(b) plan funds and appointing the Great-West Trust Company, LLC, to serve as custodian of the custodial account (8-0).

On a motion by Linda Rosenfeld, seconded by Richard Bohner, the Board approved Resolution #6-2020-2 approving a trust agreement with SEI Private Trust Company, and appointing SEI Private Trust Company as successor directed trustee to hold and administer the Lehigh County Authority Integral Part Trust (7-1). Ted Lyons opposed the motion because he would like to see the fee schedule and was not satisfied with the information provided.

Allentown Division – Kline's Island WWTP: Sodium Hypochlorite System Installation Project – Construction Phase

Chuck Volk gave an overview of the sodium hypochlorite system installation project which consists of the replacement of the chlorine gas that has been used for effluent disinfection and odor control. Chlorine gas has been used for many decades at the Kline's Island Wastewater Treatment Plant and the system has reached the end of its useful life. Mr. Volk described several engineering alternatives that were evaluated by Authority staff and the engineer consultant, D'Huy Engineering. The two primary alternatives include replacing the gas system in-kind with new equipment or bulk on-site sodium hypochlorite storage and utilization. Ed Klein performed a detailed financial analysis, and compared the upfront project costs provided by the engineering consultants and the anticipated operations and maintenance expense over the 20-year life expectancy of the assets. Mr. Klein's analysis shows there will be a \$32,000.00 net savings by implementing the bulk sodium hypochlorite system.

Mr. Volk recommended awarding the bid for the General Construction to Walabax Construction in the amount of \$998,500.00 which includes two alternates: 1) furnish and install two mixers in the chlorine contact tank and 2) demolition of the dry air scrubber intact in the chlorine building. Alternate 3 regarding the concrete containment coating can be priced out and installed more

economically. Mr. Volk recommended award of the Electrical contract to Diefenderfer Electrical in the amount of \$168,746.00, which includes one alternate to wire the mixers.

Amir Famili asked if the staff was aware of other facilities in Pennsylvania that had done this type of project, and whether the Authority visits other utilities to learn about their projects. He stated this practice would provide useful benchmarks and lessons learned to assist the Authority in enhancing system design and project management. Chuck Volk noted the Authority staff has not typically done this type of benchmarking. Jeff Morgan commented that Easton Sewer Authority and the Borough of Lansdale have done these conversions and are very happy with their new sodium hypochlorite systems. He stated that, if anyone would like to visit the plants, he can arrange it. Liesel Gross noted that as part of this project, and putting the paperwork together, there were several case studies available from the American Water Works Association regarding removal of gaseous chlorine systems that were reviewed. Mr. Famili asked if Walabax has experience with this type of conversion project. Mr. Volk said they are competent in working on large plant projects, but he did not know of their specific conversion experience. The engineering consultants have reviewed their references and are confident with Walabax's experience in handling the project. Mr. Famili also asked if the Authority has tried using a consortium to purchase chemical supplies to lower the cost. John Parsons stated that a purchasing consortium for sodium hypochlorite was formed many years ago but was not found to be financially beneficial at the time. The water plant in Allentown currently uses sodium hypochlorite. There may be a benefit to purchasing the chemical supplies jointly for both plants after this conversion project is complete.

On a motion by Norma Cusick, seconded by Richard Bohner, the Board approved the Capital Project Authorization for the construction phase in the amount of \$1,287,196.00, which includes the Professional Services Authorization to D'Huy Engineering in the amount of \$79,600.00, the General Contract award to Walabax Construction, Inc. in the amount of \$948,850.00, and the Electrical Contract award to Diefenderfer Electric, Inc. in the amount of \$168,746.00 (7-1). Amir Famili opposed because he would like to see the Authority conduct project benchmarking against similar projects at other municipalities, in order to ensure the most beneficial design and cost-effective project management approach.

Suburban Division – Park Pump Station (PPS): Force Main Bypass Trials and Initial Inspection – Arcadis Professional Services Agreement

Liesel Gross clarified that this paperwork was issued after the agenda was published but was sent to the Board and Staff and was also added to the website.

John Parsons gave an overview of the Park Pump Station Force Main inspection project. Due to its composition and intermittent usage which allows air pockets to develop inside the pipe, the force main may be subject to deterioration of its internal mortar coating and possibly the steel shell. This initial inspection project will focus on evaluating selected areas of the force main where deterioration is likely to have occurred, to determine if a full-scale inspection of the entire force main is warranted. The project will consist of shutdown trial runs to develop a plan for shutting the force main down long enough to do the inspection, a detailed health and safety plan, completion of the initial internal inspections, and a report that will provide the findings and recommendations for future phases.

Mr. Parsons is asking for approval of the Capital Project Authorization for the Condition Assessment in the amount of \$98,000.00, which includes the Professional Services Authorization to Arcadis, Inc. in the amount of \$63,000.00.

Liesel Gross commented that this initial assessment is very important because conducting a full pipeline inspection would be very costly and include bypass pumping around long sections of the force main. In addition, knowing the condition of this critical pipeline will be important for the planning of future projects in that area. For example, prior sewage facility plans have called for an upgraded pump station and force main in the same area as the Park Pump Station, and expansion or parallel of the existing force main may be necessary. She also noted that Arcadis is known nationally for their sewer collection system expertise and has conducted numerous internal inspection projects similar to this one. Therefore, having Arcadis develop the health and safety plan for this project is the best approach.

On a motion by Jeff Morgan, seconded by Norma Cusick, the Board approved the Capital Project Authorization for the Condition Assessment in the amount of \$98,000.00, which includes the Professional Services Authorization to Arcadis, Inc. in the amount of \$63,000.00 (8-0).

Suburban Division – Western Lehigh Manhole Rehabilitation Project

Chuck Volk presented the background of the project, stating it is consistent with the Regional Flow Management Strategy program to reduce infiltration and inflow into the Western Lehigh Interceptor system, and eliminate sanitary sewer overflows. Mr. Volk introduced Jason Peters, Capital Works Project Coordinator, who presented a PowerPoint presentation highlighting the deficiencies identified in the 2019 Western Lehigh Interceptor inspection and the rehabilitation work proposed in this project. There was some discussion regarding the effects of flooding and development that have impacted the manholes along the Route 100 and Spring Creek corridor.

On a motion by Norma Cusick, seconded by Linda Rosenfeld, the Board approved the Capital Authorization for the construction phase in the amount of \$130,150.00, which includes the Contract Award for general construction to Standard Pipe Services, LLC in the amount of \$104,550.00, and the Professional Services Authorization for construction inspection to Keystone Consulting Engineers in the amount \$8,150.00 (8-0).

Mr. Peters noted that there are 56 manholes in this scope of this work. More will need to be done over the next 2 to 3 years.

MONTHLY PROJECT UPDATES / INFORMATION ITEMS

Liesel Gross noted there are several projects ongoing for the month of June, and highlighted items on the June report for the next Board meeting. She noted the Auditors will be attending the June 22nd meeting to present and review the 2019 Audit and financial statements.

Richard Bohner asked about the cost of administering the certificates of deposit when the net interest rate is only 0.1 percent. Ed Klein responded that these are mainly rollover accounts and the cost is low.

STAFF COMMENTS

Liesel Gross provided a brief update regarding the COVID-19 pandemic emergency. Since Pennsylvania has moved into the “Yellow” phase of the pandemic, the Authority has made some minor adjustments to staffing schedules and safety protocols. Daily temperature screens are being conducted for all employees who are working on-site and all on-site contractors and employees who are able to work from home are continuing to do so. Board meetings will continue to be held via Zoom until further notice.

SOLICITOR'S COMMENTS

None.

PUBLIC COMMENTS / OTHER COMMENTS

None.

EXECUTIVE SESSION

Chairman Nagle announced that an Executive Session will be held after the regular meeting to discuss two matters of potential litigation.

ADJOURNMENT

There being no further business, the Chairman adjourned the meeting at 1:46 p.m.

Richard Bohner
Secretary

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

YEARS ENDED DECEMBER 31, 2019 AND 2018

**FINANCIAL STATEMENTS AND
INDEPENDENT AUDITORS' REPORT**

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

For the Years Ended December 31, 2019 AND 2018

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INDEPENDENT AUDITOR'S 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 Lehigh County Authority, Pennsylvania, as of and for the years ended December 31, 2019 and 2018, 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.



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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 Lehigh County Authority, Pennsylvania, as of December 31, 2019 and 2018, 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 2019 Lehigh County Authority adopted the provisions of GASB Statement No. 95 "*Postponement of the Effective Dates of Certain Authoritative Guidance*". Our opinion is not modified with respect to this matter.

Emphasis of Matter

As discussed in Note 19 to the financial statements, subsequent events may have a significant impact on the operations of Lehigh County Authority. Management has determined that it is not possible to predict the eventual outcome of the subsequent event. Our opinion is not modified with respect to this matter.

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 4 through 13 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 changes in total OPEB liability and related ratios – City Division, on pages 63 through 68 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 combining statement of revenues, expenses, and changes in net position suburban wastewater fund is presented for the purpose of additional analysis and is not a required part of the basic financial statements.



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The combining statement of revenues, expenses, and changes in net position suburban wastewater fund is the responsibility of management and was 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 combining statement of revenues, expenses, and changes in net position suburban wastewater fund is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Zelenkofske Axelrod LLC

ZELENKOFSCHE AXELROD LLC

Harrisburg, Pennsylvania
May 27, 2020



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INTRODUCTION

Lehigh County Authority is pleased to present its Annual Financial Report for the year ended December 31, 2019. 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.

The Authority adopted the provisions of GASB 75 on a prospective basis; therefore the effects of the adoption of GASB 75 are reflected only in the 2019 and 2018 amounts.

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

2019 marked the sixth 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 and deferred outflows of the Authority exceeded its liabilities and deferred inflows at the close of 2019 by \$145,111,516 (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 (\$24,719,524).

The Authority's net position decreased in 2019 by \$1,934,160, with a decrease in the City fund of \$4,130,921 and a decrease in the Suburban Wastewater fund of \$473,333 offset partly by an increase in the Suburban Water fund of \$2,670,094.

Operating revenues increased from \$59,507,754 in 2018 to \$61,088,459 in 2019 due to increased Suburban Water Revenues along with increased City Revenues while Suburban Wastewater Revenues were relatively flat compared to last year. Operating expenses increased from \$46,926,940 in 2018 to \$48,768,093 in 2019 due to inflationary effects on employee costs and purchased costs.

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, liabilities, and deferred inflows of resources, with the difference between the four 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>2019</u>	<u>2018</u>	<u>2017</u>
Current Assets, Unrestricted	\$ 22,585,294	\$ 9,452,534	\$ 17,134,573
Non-current Assets:			
Restricted	46,798,951	57,849,011	49,338,050
Capital Assets, Net	835,697	999,453	1,071,187
Other Assets, Net	<u>244,343,059</u>	<u>246,854,949</u>	<u>248,035,503</u>
Total Assets	314,563,001	315,155,947	315,579,313
Deferred Outflows of Resources	<u>3,185,591</u>	<u>1,891,432</u>	<u>2,382,072</u>
Total Assets & Deferred Outflows	\$ 317,748,592	\$ 317,047,379	\$ 317,961,385
Current Liabilities	\$ 4,466,618	\$ 5,143,326	\$ 22,369,076
Non-current Liabilities	<u>368,670,338</u>	<u>361,819,727</u>	<u>339,772,403</u>
Total Liabilities	373,136,956	366,963,053	362,141,479
Deferred Inflows of Resources	<u>-</u>	<u>1,341,769</u>	<u>-</u>
Total Liabilities & Deferred Inflows	\$ 373,136,956	\$ 368,304,822	\$ 362,141,479
Net Position:			
Net Investment in Capital Assets	\$ 835,697	\$ 999,453	\$ 936,731
Unrestricted	<u>(56,224,061)</u>	<u>(52,256,896)</u>	<u>(45,116,825)</u>
Total Net Position	<u>\$ (55,388,364)</u>	<u>\$ (51,257,443)</u>	<u>\$ (44,180,094)</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 (77.9%). 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 2019 increased \$2,082,700, or 3.1%. This increase was primarily due to an increase in the amount of unrestricted cash along with an increase in net receivable balances offset by a reduction in unrestricted balances.
- Capital assets, net and other assets, net in 2019 decreased by \$2,675,646, which was the net decrease after considering new acquisitions offset by depreciation and amortization of \$5,835,507.
- Current liabilities in 2019 decreased by \$676,708 from 2018. This decrease was primarily due to a reduction in trade payables with a partial offset from higher current portion of long-term debt.
- Noncurrent liabilities in 2019 increased by \$6,850,611 from 2018. The increase was primarily due to accretion on the series B bonds and the service concession payable along with an increase in the net pension liability.
- Current and noncurrent assets other than capital assets and other assets in 2018 increased \$828,922, or 1.2%. This increase was primarily due to an increase in the amount of restricted balances mostly offset by a reduction in net receivables.
- Capital assets, net and other assets, net in 2018 decreased by \$1,252,288, which was the net decrease after considering new acquisitions offset by depreciation and amortization of \$5,864,433.
- Current liabilities in 2018 decreased by \$17,225,750 from 2017. This decrease was primarily due to the debt payment on the Series C Bonds which occurred in 2018.
- Noncurrent liabilities in 2018 increased by \$22,047,324 from 2017. The increase was primarily due to the refunding of the Series C Bonds.

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>2019</u>	<u>2018</u>	<u>2017</u>
Current assets, unrestricted	\$ 33,850,702	\$ 39,231,844	\$ 34,869,626
Non-current Assets:			
Restricted	8,149,486	14,613,449	21,445,778
Capital assets, net	213,588,122	200,602,241	198,417,167
Other assets, net	<u>2,859,600</u>	<u>2,720,567</u>	<u>3,538,758</u>
Total Assets	258,447,910	257,168,101	258,271,329
Deferred Outflows	<u>1,102,806</u>	<u>1,258,552</u>	<u>1,177,302</u>
Total Assets & Deferred Outflows	<u>\$ 259,550,716</u>	<u>\$ 258,426,653</u>	<u>\$ 259,448,631</u>
Current liabilities	\$ 8,529,904	\$ 6,706,997	\$ 6,456,654
Non-current liabilities	<u>50,401,635</u>	<u>52,873,270</u>	<u>55,686,331</u>
Total Liabilities	58,931,539	59,580,267	62,142,985
Deferred Inflows	<u>119,297</u>	<u>543,267</u>	<u>-</u>
Total Liabilities & Deferred Inflows	<u>\$ 59,050,836</u>	<u>\$ 60,123,534</u>	<u>\$ 62,142,985</u>
Net position:			
Net Investment in Capital Assets	\$ 167,952,249	\$ 158,792,779	\$ 161,373,199
Restricted	1,043,094	1,380,654	1,365,470
Unrestricted	<u>31,504,537</u>	<u>38,129,686</u>	<u>34,566,977</u>
Total Net Position	<u>\$ 200,499,880</u>	<u>\$ 198,303,119</u>	<u>\$ 197,305,646</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 (83.4%). 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 2019 decreased \$11,845,105, or 22.0%. This decrease was primarily due to reduction in net receivable balances and reduced restricted balances partially offset by increased unrestricted cash balances.
- Capital assets, net and other assets, net in 2019 increased \$13,124,914 or 6.5%. This was due to capital spending on projects.
- Current liabilities in 2019 increased \$1,822,907 or 27.2% from 2018. This increase was primarily due to increases in trade and construction payables along with higher liabilities on developer projects and a higher current portion of long-term debt.
- Noncurrent liabilities in 2019 decreased \$2,471,635 or 4.7% from 2018, as a result of a reduction in debt related to 2019 principal repayments.
- Current, and noncurrent assets other than capital assets and other assets in 2018 decreased \$2,470,111, or 4.4%. This decrease was primarily due to capital spending during the year.
- Capital assets, net and other assets, net in 2018 increased \$1,366,883 or 0.7%. This was due to capital spending on projects.
- Current liabilities in 2018 increased \$250,343 or 3.9% from 2017. This increase was primarily due to increases in trade and construction payables.
- Noncurrent liabilities in 2018 decreased \$2,813,061 or 5.1% from 2017, as a result of a reduction in debt related to 2018 principal repayments.

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:

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Operating Revenues:			
User Charges	\$ 36,657,563	\$ 35,747,627	\$ 33,448,968
Other Income & Rent	<u>418,299</u>	<u>396,813</u>	<u>402,422</u>
Total Operating Revenues	<u>37,075,862</u>	<u>36,144,440</u>	<u>33,851,390</u>
Operating Expenses:			
Salaries, Benefits & Administrative	13,086,824	11,796,649	11,727,107
Utilities, Supplies & Services	5,059,809	5,404,116	5,135,071
Treatment & Transportation	9,547	9,827	10,096
Depreciation & Amortization	<u>5,835,507</u>	<u>5,864,433</u>	<u>5,887,307</u>
Total Operating Expenses	<u>23,991,687</u>	<u>23,075,025</u>	<u>22,759,581</u>
Operating Income	<u>13,084,175</u>	<u>13,069,415</u>	<u>11,091,809</u>
Non-Operating Revenues (Expenses):			
Tapping & Capital Recovery Fees	1,707,128	1,383,796	736,536
Meter Sales	22,466	8,397	17,187
Inspection, Plan Reviews & Project Reimbursements	448,402	912,225	1,132,206
Interest Earnings	1,193,618	1,047,630	341,431
Other Income	59,659	65,442	157,056
Interest Expense	(19,386,584)	(18,810,413)	(18,516,650)
Other Expense	<u>(1,259,785)</u>	<u>(3,810,644)</u>	<u>(3,312,624)</u>
Total Net Non-Operating Revenues (Expenses)	<u>(17,215,096)</u>	<u>(19,203,567)</u>	<u>(19,444,858)</u>
Increase (Decrease) in Net Position	<u>(4,130,921)</u>	<u>(6,134,152)</u>	<u>(8,353,049)</u>
Beginning Net Position, as restated	<u>(51,257,443)</u>	<u>(45,123,291)</u>	<u>(35,827,045)</u>
Ending Net Position	<u>\$ (55,388,364)</u>	<u>\$ (51,257,443)</u>	<u>\$ (44,180,094)</u>

Year over year changes are as follows:

- Operating Revenue for 2019 for the City Division was \$37,075,862, compared to \$36,144,440 in 2018 with most of the increase attributable to a rate increase, and higher Signatory Revenues.
- Operating expenses, net of depreciation and amortization were \$18,156,180 in 2019 compared to \$17,210,592 in 2018, an increase of \$945,588. The increase was due to inflationary effects on employee cost and purchased goods and services along with higher spending on outside services.
- Operating Income, net of depreciation and amortization was \$18,919,682 in 2019 compared to \$18,933,848 in 2018, a decrease of \$14,166 that was driven mostly by the increase in operating expenses.
- Operating Revenue for 2018 for the City Division was \$36,144,440, compared to \$33,851,390 in 2017 with most of the increase attributable to a rate increase, and higher Signatory Revenues.
- Operating expenses, net of depreciation and amortization were \$17,210,592 in 2018 compared to \$16,872,274 in 2017, an increase of \$338,318. The increase was due to inflationary effects on employee cost and purchased goods and services along with higher spending on outside services.
- Operating Income, net of depreciation and amortization was \$18,933,848 in 2018 compared to \$16,979,116, an increase of \$1,954,732 that was driven mostly by the increase in operating revenues.

It should be noted that interest expense of \$19,386,584 in 2019 is comprised of actual interest paid (\$13,416,748), accretion (\$3,392,576), amortization of the SCA Payable (\$2,283,221), change in accrued interest payable (\$-22,582) and amortization of bond discount (\$316,621).

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>2019</u>	<u>2018</u>	<u>2017</u>
Operating Revenues:			
User Charges	\$ 23,620,272	\$ 22,929,861	\$ 21,432,163
Other Income & Rent	<u>392,325</u>	<u>433,453</u>	<u>480,732</u>
Total Operating Revenues	<u>24,012,597</u>	<u>23,363,314</u>	<u>21,912,895</u>
Operating Expenses:			
Salaries, Benefits & Administrative	3,714,062	3,341,735	3,283,747
Utilities, Supplies & Services	10,503,525	9,707,897	9,864,615
Treatment & Transportation	3,385,568	3,543,753	3,516,548
Depreciation & Amortization	<u>7,173,251</u>	<u>7,258,530</u>	<u>7,294,644</u>
Total Operating Expenses	<u>24,776,406</u>	<u>23,851,915</u>	<u>23,959,554</u>
Operating Income/(Loss)	<u>(763,809)</u>	<u>(488,601)</u>	<u>(2,046,662)</u>
Non-Operating Revenues (Expenses):			
Tapping & Capital Recovery Fees	\$ 1,992,524	\$ 744,931	\$ 904,781
Meter Sales	94,763	85,259	112,468
Inspection, Plan Reviews & Project Reimbursements	435,705	220,921	166,877
Interest Earnings	512,038	477,745	289,520
Other Income	94,639	87,661	116,863
Interest Expense	(1,758,142)	(1,773,659)	(1,576,214)
Other Expense	<u>(142,376)</u>	<u>(113,018)</u>	<u>(458,095)</u>
Total Net Non-Operating Revenues (Expenses)	<u>\$ 1,229,151</u>	<u>\$ (270,160)</u>	<u>\$ (443,800)</u>
Increase (Decrease) in Net Position before Capital Contributions	<u>\$ 465,342</u>	<u>\$ (758,761)</u>	<u>\$ (2,490,459)</u>
Capital Contributions:			
Grants	-	212,688	211,892
Capital Assets Provided by Developers & Other	<u>1,731,419</u>	<u>1,616,004</u>	<u>8,168,259</u>
Total Capital contributions	<u>1,731,419</u>	<u>1,828,692</u>	<u>8,380,151</u>
Increase (Decrease) in Net Position	<u>2,196,761</u>	<u>1,069,931</u>	<u>5,889,692</u>
Beginning Net Position, as restated	<u>\$ 198,303,119</u>	<u>\$ 197,233,188</u>	<u>\$ 191,415,954</u>
Ending Net Position	<u>\$ 200,499,880</u>	<u>\$ 198,303,119</u>	<u>\$ 197,305,646</u>

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

- Operating Revenue in 2019 for the Suburban Division was \$24,012,597 compared to \$23,363,314 in 2018 and 21,912,895 in 2017. In 2019 the Suburban Division's Water Fund contributed \$9,930,541 in revenue compared to \$9,348,885 in 2018 and \$9,054,114 in 2017, while the Wastewater Fund added another \$14,082,056 in 2019 compared to \$14,014,429 in 2018, and \$12,858,781 in 2017. The primary driver for the increase in Wastewater Fund revenue was higher flows and loads.
- 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.

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Water System # of Units Connected:			
Single Family Detached	100	114	99
Single Family Attached (Townhouses)	97	71	119
Apartments and Mobile Homes	0	709	97
Commercial	<u>9</u>	<u>14</u>	<u>22</u>
Total Water System Connections	<u>206</u>	<u>908</u>	<u>337</u>
Wastewater Capacity Sales in Gallons:			
Residential	159,059	43,708	53,297
Commercial	<u>72,178</u>	<u>34,803</u>	<u>22,179</u>
Total Sales	<u>231,237</u>	<u>78,511</u>	<u>75,476</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 higher in 2019 primarily as a result of residential and commercial development in the Western Lehigh sewer area.

- The Suburban Water System purchased 7 million gallons a day from the interconnection with its City Division in 2019. The purchase obligation remains at 7 mgd in 2020.
- 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, 2019

	<u>Beginning Balance</u>	<u>Increased / (Decreased)</u>	<u>Ending Balance</u>
Net Investment in Capital			
Assets	\$ 158,792,779	\$ 9,159,470	\$ 167,952,249
Restricted Net Position	1,380,654	(337,560)	1,043,094
Unrestricted Net Position	<u>38,129,686</u>	<u>(6,625,149)</u>	<u>31,504,537</u>
Total Net Position	<u>\$ 198,303,119</u>	<u>\$ 2,196,761</u>	<u>\$ 200,499,880</u>

Other Selected Information:

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Equivalent Fulltime Employees at Year-End	162	160	155
Units Served:			
<u>Suburban Division:</u>			
Water – Residential	22,166	22,003	21,103
Water – Industrial & Commercial	<u>735</u>	<u>734</u>	<u>722</u>
Total Water Billable Units	22,901	22,737	21,825
Wastewater Collection – Residential	2,763	2,696	2,660
Wastewater Collection – Commercial	<u>127</u>	<u>127</u>	<u>126</u>
Total Wastewater Billable Units	2,890	2,823	2,786
<u>City Division:</u>			
Water:			
Water – Residential	41,377	41,198	41,620
Water – Industrial & Commercial	<u>5,146</u>	<u>5,139</u>	<u>5,150</u>
Total Water Billable Units	46,523	46,337	46,770
Wastewater:			
Wastewater – Residential	41,347	41,176	41,598
Wastewater – Commercial	<u>5,136</u>	<u>5,129</u>	<u>5,140</u>
Total Wastewater Billable Units	46,483	46,305	46,738
Customers:	<u>2019</u>	<u>2018</u>	<u>2017</u>
<u>Suburban Division:</u>			
Water – Residential	19,694	19,501	19,308
Water – Industrial & Commercial	<u>731</u>	<u>730</u>	<u>718</u>
Total Water Customers	20,425	20,231	20,026
Wastewater Collection – Residential	2,403	2,336	2,300
Wastewater Collection – Commercial	<u>123</u>	<u>123</u>	<u>122</u>
Total Wastewater Customers	2,526	2,459	2,422
<u>City Division:</u>			
Water – Residential	30,392	30,368	30,334
Water – Industrial & Commercial	<u>3,023</u>	<u>3,021</u>	<u>3,022</u>
Total Water Customers	33,415	33,389	33,356

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Wastewater Collection – Residential	30,347	30,346	30,312
Wastewater Collection – Commercial	<u>3,010</u>	<u>3,011</u>	<u>3,012</u>
Total Wastewater Customers	33,357	33,357	33,324
Ratios			
Suburban Division:			
Ratio of Operating Revenue to:			
Operating Expenses, Net of Depreciation & Amortization	1.36	1.41	1.31
Total Assets	.09	0.11	0.08
Total Net Position	.12	0.12	0.11
Debt Related Ratios:			
Net Position to Long-Term Debt	3.98	5.10	3.54
Current Ratio (Current Assets/Current Liabilities)	3.97	5.85	5.40
City Division:			
Ratio of Operating Revenue to:			
Operating Expenses, Net of Depreciation & Amortization	2.04	2.01	1.95
Total Assets (Annualized)	.12	0.114	0.10
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)	5.06	1.80	0.59

Capital Contributions

The Authority received no grants related to construction in 2019 compared to \$212,688 last year. Another major source of capital contributions is derived from developer installed Systems donated to the Authority \$1,731,419 was received in 2019 compared to \$1,616,004 in 2018.

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 \$244,952,520 in 2018 to \$241,126,076 in 2019, and the City Divisions net capital assets decreased from \$999,453 in 2018 to \$835,697 in 2019. 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 \$12,985,881. This increase can be attributed to increased accumulated depreciation which partially offset capital projects executed in 2019. 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 2018 consisted of issuance of the Series 2018 Bond and accreted interest on the 2013 Series B Capital Appreciation Revenue Bonds. The Series C Bonds were refinanced in 2018.

In 2018 the Authority issued City Division Water and Sewer Revenue Bond Series 2018 in the amount of \$18,735,000 to currently refund the 2013 Series C Bonds, fund a debt service reserve, and pay the costs and expenses of issuing the Bond.

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 2019 to cover 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.

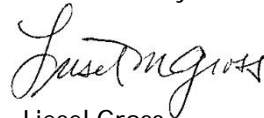
City Division:

City Division rates increased by 5.1% in January 2019 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, 2019 AND 2018

- ASSETS AND DEFERRED OUTFLOWS OF RESOURCES-

	Suburban Water Fund		Suburban Wastewater Fund		City Division Fund		Total	
	2019	2018	2019	2018	2019	2018	2019	2018
Current Assets:								
Cash and Cash Equivalents (Note 2)	\$ 9,242,611	\$ 2,486,081	\$ 7,057,187	\$ 8,743,052	\$ 12,660,402	\$ 8,616,780	\$ 28,960,200	\$ 19,845,913
Certificates of Deposit (Note 2)	3,136,930	4,356,991	7,757,276	6,455,704	-	-	10,894,206	10,812,695
Accounts Receivable:								
Customers	1,760,403	1,663,830	3,188,238	3,726,863	6,542,331	6,606,583	11,490,972	11,997,276
Financing Contracts (Note 4)	-	-	323,767	316,797	-	-	323,767	316,797
Others	280,007	203,148	675,091	509,247	2,941,090	4,147,552	3,896,188	4,859,947
Due from (to) Other Funds (Note 9)	1,599,692	7,576,231	(1,570,176)	2,817,997	(29,516)	(10,394,228)	-	-
Inventory	36,074	16,190	-	-	-	-	36,074	16,190
Accrued Interest Receivable	6,411	14,724	39,898	23,832	56,425	100,851	102,734	139,407
Prepaid Expenses	185,993	198,131	131,300	123,026	414,562	374,996	731,855	696,153
Total Current Assets	16,248,121	16,515,326	17,602,581	22,716,518	22,585,294	9,452,534	56,435,996	48,684,378
Noncurrent Assets:								
Restricted:								
Cash and Cash Equivalents (Note 2)	3,575,275	7,649,898	337,932	337,562	46,798,951	53,908,371	50,712,158	61,895,831
Certificates of Deposit (Note 2)	25,527	25,522	-	-	-	-	25,527	25,522
Investment U.S. Treasury Obligations (Note 2)	-	2,214,267	-	-	-	3,940,640	-	6,154,907
Developer Escrow Deposit (Note 3)	4,210,752	4,386,200	-	-	-	-	4,210,752	4,386,200
Total Restricted Assets	7,811,554	14,275,887	337,932	337,562	46,798,951	57,849,011	54,948,437	72,462,460
Capital Assets: (Notes 1 and 5)								
Land	2,114,884	2,043,265	1,888,430	1,837,891	-	-	4,003,314	3,881,156
Construction in progress	12,504,370	5,023,631	18,974,421	10,052,683	-	-	31,478,791	15,076,314
Wells & Reservoirs	9,709,252	9,554,770	3,494,643	3,494,643	-	-	13,203,895	13,049,413
Transmission & Distribution Mains	80,498,411	78,963,688	-	-	-	-	80,498,411	78,963,688
Services & Hydrants	17,571,410	17,144,642	-	-	-	-	17,571,410	17,144,642
Interceptor & Collector Systems	-	-	38,259,619	38,036,405	-	-	38,259,619	38,036,405
Building Structure & Appurtenances	23,797,378	23,632,286	55,828,047	54,910,406	-	-	79,625,425	78,542,692
Metering System	10,672,043	10,539,291	429,778	429,777	-	-	11,101,821	10,969,068
Equipment and Furnishings	7,769,506	7,283,092	23,175,902	22,551,923	3,268,879	3,192,900	34,214,287	33,027,915
Capacity	1,207,901	1,207,901	953,831	2,062,956	-	-	2,161,732	3,270,857
Less accumulated depreciation	(43,055,279)	(40,476,618)	(52,206,425)	(47,690,391)	(2,433,182)	(2,193,447)	(97,694,886)	(90,360,456)
Total Capital Assets	122,789,876	114,915,948	90,798,246	85,686,293	835,697	999,453	214,423,819	201,601,694
Other Assets:								
Long-Term Portion of Receivables -								
Financing Contracts (Note 4)	-	-	1,532,516	1,856,283	-	-	1,532,516	1,856,283
Intangible Service Concession								
Arrangement (Note 6)	-	-	-	-	241,126,076	244,952,520	241,126,076	244,952,520
OPEB Asset (Note 12)	1,244,053	736,708	-	-	-	-	1,244,053	736,708
Other Assets	-	-	-	-	3,216,983	1,902,429	3,216,983	1,902,429
Facilities Planning Costs								
(Net of Accumulated Amortization) (Note 7)	24,442	24,749	58,589	102,827	-	-	83,031	127,576
Total Other Assets	1,268,495	761,457	1,591,105	1,959,110	244,343,059	246,854,949	247,202,659	249,575,516
Total Noncurrent Assets	131,869,925	129,953,292	92,727,283	87,982,965	291,977,707	305,703,413	516,574,915	523,639,670
Total Assets	148,118,046	146,468,618	110,329,864	110,699,483	314,563,001	315,155,947	573,010,911	572,324,048
Deferred Outflows of Resources								
Pensions	679,620	509,394	342,115	256,424	2,523,498	1,891,432	3,545,233	2,657,250
OPEB	56,117	373,843	-	-	662,093	-	718,210	373,843
Refunding Loss on Bonds	24,954	118,891	-	-	-	-	24,954	118,891
Total Deferred Outflows	760,691	1,002,128	342,115	256,424	3,185,591	1,891,432	4,288,397	3,149,984
Total Assets and Deferred Outflows of Resources	\$ 148,878,737	\$ 147,470,746	\$ 110,671,979	\$ 110,955,907	\$ 317,748,592	\$ 317,047,379	\$ 577,299,308	\$ 575,474,032

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, 2019 AND 2018**

- LIABILITIES AND NET POSITION -

	Suburban Water Fund		Suburban Wastewater Fund		City Division Fund		Total	
	2019	2018	2019	2018	2019	2018	2019	2018
Current Liabilities:								
Accounts Payable - Trade	\$ 1,374,709	\$ 1,048,854	\$ 2,819,043	\$ 2,434,731	\$ 997,972	\$ 2,172,718	\$ 5,191,724	\$ 5,656,303
Accounts Payable - Capital	246,336	70,921	312,403	150,835	10,714	149,529	569,453	371,285
Accrued Interest Payable	233,600	237,699	3,346	3,346	1,105,780	1,128,362	1,342,726	1,369,407
Notes Payable (Note 8)	248,378	243,812	427,162	420,205	-	-	675,540	664,017
Revenue Bonds Payable (Note 8)	1,832,994	1,473,132	114,905	65,572	1,837,406	1,230,893	3,785,305	2,769,597
Developer Deposits and Other (Note 10)	554,977	195,273	2,950	6,019	19,805	26,016	577,732	227,308
Accrued Payroll & Other	226,234	220,498	132,867	136,100	494,941	435,808	854,042	792,406
Total Current Liabilities	4,717,228	3,490,189	3,812,676	3,216,808	4,466,618	5,143,326	12,996,522	11,850,323
Noncurrent Liabilities:								
Developer Deposits and Other (Note 10)	4,210,752	4,974,553	19,064	-	10,000	-	4,239,816	4,974,553
SCA Payable (Note 6)	-	-	-	-	47,694,490	45,936,129	47,694,490	45,936,129
Notes Payable (Note 8)	2,238,109	2,486,487	5,602,455	6,029,617	-	-	7,840,564	8,516,104
OPEB Liability	-	-	-	-	2,944,923	2,020,079	2,944,923	2,020,079
Net Pension Liability	956,221	336,866	481,353	169,575	3,550,538	1,250,814	4,988,112	1,757,255
Revenue Bonds Payable (Net of Premium/Discount) (Note 8)	35,526,589	37,380,843	1,367,092	1,495,329	314,470,387	312,612,705	351,364,068	351,488,877
Total Noncurrent Liabilities	42,931,671	45,178,749	7,469,964	7,694,521	368,670,338	361,819,727	419,071,973	414,692,997
Total Liabilities	47,648,899	48,668,938	11,282,640	10,911,329	373,136,956	366,963,053	432,068,495	426,543,320
Deferred Inflows of Resources								
Pensions	-	361,361	-	181,906	-	1,341,769	-	1,885,036
OPEB	119,297	-	-	-	-	-	119,297	-
Total Deferred Inflows	119,297	361,361	-	181,906	-	1,341,769	119,297	1,885,036
Net Position: (Notes 1 and 13)								
Net Investment in Capital Assets	84,665,617	81,117,209	83,286,632	77,675,570	835,697	999,453	168,787,946	159,792,232
Restricted for Debt Service	1,043,094	1,380,654	-	-	-	-	1,043,094	1,380,654
Unrestricted	15,401,830	15,942,584	16,102,707	22,187,102	(56,224,061)	(52,256,896)	(24,719,524)	(14,127,210)
Total Net Position	101,110,541	98,440,447	99,389,339	99,862,672	(55,388,364)	(51,257,443)	145,111,516	147,045,676
Total Liabilities, Deferred Inflows of Resources and Net Position	\$ 148,878,737	\$ 147,470,746	\$ 110,671,979	\$ 110,955,907	\$ 317,748,592	\$ 317,047,379	\$ 577,299,308	\$ 575,474,032

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

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

**STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
For the Years Ended December 31, 2019 and 2018**

	Suburban Water Fund		Suburban Wastewater Fund		City Division Fund		Total	
	2019	2018	2019	2018	2019	2018	2019	2018
OPERATING REVENUES:								
Charges for Services	\$ 9,780,116	\$ 9,209,531	\$ 13,840,156	\$ 13,720,330	\$ 36,657,563	\$ 35,747,627	\$ 60,277,835	\$ 58,677,488
Rent	125,253	98,405	-	-	-	-	125,253	98,405
Other Income	25,172	40,949	241,900	294,099	418,299	396,813	685,371	731,861
Total Operating Revenues	<u>9,930,541</u>	<u>9,348,885</u>	<u>14,082,056</u>	<u>14,014,429</u>	<u>37,075,862</u>	<u>36,144,440</u>	<u>61,088,459</u>	<u>59,507,754</u>
OPERATING EXPENSES								
Salaries and Wages	1,042,754	1,037,882	551,668	462,145	6,391,947	6,233,387	7,986,369	7,733,414
Employee Benefits	507,022	411,304	327,474	207,116	3,577,250	2,825,759	4,411,746	3,444,179
General and Administrative	898,002	849,937	387,142	373,351	3,117,627	2,737,503	4,402,771	3,960,791
Utilities	426,969	437,253	374,030	290,201	1,960,605	2,040,103	2,761,604	2,767,557
Materials and Supplies	371,371	294,937	335,419	264,744	1,315,169	1,267,835	2,021,959	1,827,516
Miscellaneous Services	2,665,139	2,703,594	6,330,597	5,717,168	1,784,035	2,096,178	10,779,771	10,516,940
Treatment and Transportation	-	-	3,385,568	3,543,753	9,547	9,827	3,395,115	3,553,580
Depreciation and Amortization	2,602,179	2,768,133	4,571,072	4,490,397	5,835,507	5,864,433	13,008,758	13,122,963
Total Operating Expenses	<u>8,513,436</u>	<u>8,503,040</u>	<u>16,262,970</u>	<u>15,348,875</u>	<u>23,991,687</u>	<u>23,075,025</u>	<u>48,768,093</u>	<u>46,926,940</u>
OPERATING INCOME (LOSS)	<u>1,417,105</u>	<u>845,845</u>	<u>(2,180,914)</u>	<u>(1,334,446)</u>	<u>13,084,175</u>	<u>13,069,415</u>	<u>12,320,366</u>	<u>12,580,814</u>
NONOPERATING REVENUES (EXPENSES):								
Tapping and Capital Recovery Fees	418,775	221,405	1,573,749	523,526	1,707,128	1,383,796	3,699,652	2,128,727
Meter Sales	94,763	85,259	-	-	22,466	8,397	117,229	93,656
Inspection, Plan Reviews, and Project Reimbursements	393,187	183,148	42,518	37,773	448,402	912,225	884,107	1,133,146
Investment Earnings	179,191	255,439	332,847	222,306	1,193,618	1,047,630	1,705,656	1,525,375
Interest Expense	(1,545,028)	(1,576,659)	(213,114)	(197,000)	(19,386,584)	(18,810,413)	(21,144,726)	(20,584,072)
Other Expense	(98,246)	(82,142)	(44,130)	(30,876)	(1,259,785)	(3,810,644)	(1,402,161)	(3,923,662)
Other Income	93,928	86,971	711	690	59,659	65,442	154,298	153,103
Total Nonoperating Revenues/(Expenses)	<u>(463,430)</u>	<u>(826,579)</u>	<u>1,692,581</u>	<u>556,419</u>	<u>(17,215,096)</u>	<u>(19,203,567)</u>	<u>(15,985,945)</u>	<u>(19,473,727)</u>
Increase (Decrease) in net position before capital contributions	<u>953,675</u>	<u>19,266</u>	<u>(488,333)</u>	<u>(778,027)</u>	<u>(4,130,921)</u>	<u>(6,134,152)</u>	<u>(3,665,579)</u>	<u>(6,892,913)</u>
Capital Contributions:								
Capital Grant	-	212,688	-	-	-	-	-	212,688
Capital Assets Provided by Developers and Others	1,716,419	1,581,110	15,000	34,894	-	-	1,731,419	1,616,004
Total Capital Contributions	<u>1,716,419</u>	<u>1,793,798</u>	<u>15,000</u>	<u>34,894</u>	<u>-</u>	<u>-</u>	<u>1,731,419</u>	<u>1,828,692</u>
Increase (Decrease) in Net Position	<u>2,670,094</u>	<u>1,813,064</u>	<u>(473,333)</u>	<u>(743,133)</u>	<u>(4,130,921)</u>	<u>(6,134,152)</u>	<u>(1,934,160)</u>	<u>(5,064,221)</u>
Net Position at Beginning of Year, before restatement	<u>98,440,447</u>	<u>96,699,841</u>	<u>99,862,672</u>	<u>100,605,805</u>	<u>(51,257,443)</u>	<u>(44,180,094)</u>	<u>147,045,676</u>	<u>153,125,552</u>
Cumulative Effect of Change in Accounting principle	<u>-</u>	<u>(72,458)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(943,197)</u>	<u>-</u>	<u>(1,015,655)</u>
Net Position at Beginning of Year, as restated (Note 18)	<u>98,440,447</u>	<u>96,627,383</u>	<u>99,862,672</u>	<u>100,605,805</u>	<u>(51,257,443)</u>	<u>(45,123,291)</u>	<u>147,045,676</u>	<u>152,109,897</u>
Net Position at End of Year	<u>\$ 101,110,541</u>	<u>\$ 98,440,447</u>	<u>\$ 99,389,339</u>	<u>\$ 99,862,672</u>	<u>\$ (55,388,364)</u>	<u>\$ (51,257,443)</u>	<u>\$ 145,111,516</u>	<u>\$ 147,045,676</u>

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

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

**STATEMENTS OF CASH FLOWS
Years Ended December 31, 2019 AND 2018**

	Suburban Water Fund		Suburban Wastewater Fund		City Division Fund		Total	
	2019	2018	2019	2018	2019	2018	2019	2018
CASH FLOWS FROM OPERATING ACTIVITIES								
Cash Received From Customers	\$ 9,683,543	\$ 9,139,731	\$ 14,529,734	\$ 12,872,395	\$ 37,928,277	\$ 34,102,933	\$ 62,141,554	\$ 56,115,059
Cash Payments To Suppliers For Goods And Services	(3,145,370)	(4,250,965)	(10,049,576)	(8,760,326)	(6,283,668)	(5,183,470)	(19,478,614)	(18,194,761)
Cash Payments To Employees For Services	(2,424,596)	(2,261,466)	(1,225,336)	(1,077,111)	(12,439,051)	(11,563,730)	(16,088,983)	(14,902,307)
Other Operating Cash Receipts	73,566	141,798	241,900	294,099	418,299	396,813	733,765	832,710
Net Cash Provided By Operating Activities	4,187,143	2,769,098	3,496,722	3,329,057	19,623,857	17,752,546	27,307,722	23,850,701
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES								
Interest Paid on Revenue Bonds and Notes	-	-	-	-	(13,416,749)	(13,047,722)	(13,416,749)	(13,047,722)
Facility Improvement Payments	-	-	-	-	(3,148,442)	(4,391,765)	(3,148,442)	(4,391,765)
Payments to the City of Allentown	-	-	-	-	(524,861)	(511,560)	(524,861)	(511,560)
Transfers From Other Funds	5,976,539	-	4,388,173	-	-	5,043,794	10,364,712	5,043,794
Transfers To Other Funds	-	(4,492,791)	-	(551,003)	(10,364,712)	-	(10,364,712)	(5,043,794)
Net Cash Provided By (Used in) Noncapital Financing Activities	5,976,539	(4,492,791)	4,388,173	(551,003)	(27,454,764)	(12,907,253)	(17,090,052)	(17,951,047)
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES								
Receipts/(Release) of Developer Deposits	476,525	171,926	15,995	-	3,789	11,560	496,309	183,486
Payments of Developer Deposits	(705,174)	(391,741)	-	-	-	-	(705,174)	(391,741)
Payments of Facilities Planning Costs	(23,211)	(26,909)	(10,800)	(3,792)	-	-	(34,011)	(30,701)
Acquisition and Construction of Property and Equipment	(8,560,755)	(5,350,054)	(9,612,987)	(2,383,534)	(128,624)	(289,860)	(18,302,366)	(8,023,448)
Cash Received from Tapping and Capital Recovery Fees	418,775	221,405	1,573,749	523,526	1,707,128	1,383,796	3,699,652	2,128,727
Cash Received from Meter Sales	94,763	85,259	-	-	22,466	8,397	117,229	93,656
Cash Received from Inspection, Plan Reviews, and Project Reimbursements	393,187	183,148	42,518	37,773	448,402	912,225	884,107	1,133,146
Other Capital Cash Receipts	93,928	299,659	118,149	(2,009)	59,659	65,442	271,736	363,092
Other Capital Cash Payments	(98,246)	(152,149)	-	-	(1,281,395)	(3,740,451)	(1,379,641)	(3,892,600)
Revenue Bond and Note Issuance Proceeds	-	-	-	-	-	18,735,000	-	18,735,000
Principal Paid On Revenue Bonds	(1,481,325)	(1,453,878)	(78,904)	(69,157)	(1,245,000)	(18,735,000)	(2,805,229)	(20,258,035)
Principal Paid On Revenue Notes	(243,812)	(239,330)	(420,205)	(415,682)	-	-	(664,017)	(655,012)
Interest Paid On Revenue Bonds and Notes	(1,468,257)	(1,499,805)	(213,114)	(197,000)	-	-	(1,681,371)	(1,696,805)
Net Cash Provided by (Used in) Capital and Related Financing Activities	(11,103,602)	(8,152,469)	(8,585,599)	(2,509,875)	(413,575)	(1,648,891)	(20,102,776)	(12,311,235)
CASH FLOWS FROM INVESTING ACTIVITIES								
Maturities of Certificates Of Deposit	3,808,000	4,956,312	14,866,203	5,206,318	-	-	18,674,203	10,162,630
Purchase of Certificates Of Deposit	(2,572,668)	(2,161,990)	(16,147,680)	(3,154,859)	-	-	(18,720,348)	(5,316,849)
Maturities of U.S. Treasury Obligations	2,230,000	6,545,175	-	-	4,000,000	3,999,840	6,230,000	10,545,015
Interest Received On Investments	156,495	248,769	296,686	214,326	1,178,684	982,896	1,631,865	1,445,991
Net Cash Provided by (Used in) Investing Activities	3,621,827	9,588,266	(984,791)	2,265,785	5,178,684	4,982,736	7,815,720	16,836,787
Net Increase (Decrease) in Cash	2,681,907	(287,896)	(1,685,495)	2,533,964	(3,065,798)	8,179,138	(2,069,386)	10,425,206
Cash:								
Beginning	10,135,979	10,423,875	9,080,614	6,546,650	62,525,151	54,346,013	81,741,744	71,316,538
Ending	<u>\$ 12,817,886</u>	<u>\$ 10,135,979</u>	<u>\$ 7,395,119</u>	<u>\$ 9,080,614</u>	<u>\$ 59,459,353</u>	<u>\$ 62,525,151</u>	<u>\$ 79,672,358</u>	<u>\$ 81,741,744</u>
Cash Consisted of the Following:								
Cash and Cash Equivalents	\$ 9,242,611	\$ 2,486,081	\$ 7,057,187	\$ 8,743,052	\$ 12,660,402	\$ 8,616,780	\$ 28,960,200	\$ 19,845,913
Restricted Cash and Cash Equivalents	3,575,275	7,649,898	337,932	337,562	46,798,951	53,908,371	50,712,158	61,895,831
Total Cash and Cash Equivalents	<u>\$ 12,817,886</u>	<u>\$ 10,135,979</u>	<u>\$ 7,395,119</u>	<u>\$ 9,080,614</u>	<u>\$ 59,459,353</u>	<u>\$ 62,525,151</u>	<u>\$ 79,672,358</u>	<u>\$ 81,741,744</u>

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, 2019 AND 2018

	Suburban Water Fund		Suburban Wastewater Fund		City Division Fund		Total	
	2019	2018	2019	2018	2019	2018	2019	2018
Reconciliation Of Operating Income (Loss) To Net Cash Provided By Operating Activities								
Operating Income (Loss)	\$ 1,417,105	\$ 845,845	\$ (2,180,914)	\$ (1,334,446)	\$ 13,084,175	\$ 13,069,415	\$ 12,320,366	\$ 12,580,814
Adjustments to Reconcile Operating Income (Loss) to Net Cash Provided by/(Used In) Operating Activities:								
Depreciation and Amortization	2,602,179	2,768,133	4,571,072	4,490,397	5,835,507	5,864,433	13,008,758	13,122,963
Change in Assets and Liabilities:								
(Increase)/Decrease in Accounts Receivable Customers	(96,573)	(69,800)	538,625	(748,313)	64,252	(521,760)	506,304	(1,339,873)
(Increase)/Decrease in Financing								
Contract Receivable	-	-	316,797	302,578	-	-	316,797	302,578
(Increase)/Decrease in Other Operating Receivable	(76,859)	2,444	(165,844)	(402,200)	1,206,462	(1,122,934)	963,759	(1,522,690)
(Increase)/Decrease in Inventory	(19,884)	17,980	-	-	-	-	(19,884)	17,980
(Increase)/Decrease in Prepaid Expense	12,138	(18,300)	(8,274)	(23,056)	(39,566)	16,010	(35,702)	(25,346)
Increase in OPEB Liability	-	-	-	-	924,844	1,135,098	924,844	1,135,098
Decrease in OPEB Asset	(507,345)	373,197	-	-	-	-	(507,345)	373,197
Increase/(Decrease) in Accounts Payable - Trade	325,855	(814,861)	384,312	1,078,596	(1,174,746)	214,463	(464,579)	478,198
Increase in Net Pension Liability	619,355	(485,299)	311,778	(244,295)	2,299,724	(2,745,157)	3,230,857	(3,474,751)
(Increase) in Pension Deferred Outflows	(170,226)	132,138	(85,691)	66,517	(632,066)	490,640	(887,983)	689,295
(Increase) in OPEB Deferred Outflows	317,726	(373,843)	-	-	(662,093)	-	(344,367)	(373,843)
Increase in OPEB Deferred Inflows	119,297	-	-	-	-	-	119,297	-
Increase in Pension Deferred Inflows	(361,361)	361,361	(181,906)	181,906	(1,341,769)	1,341,769	(1,885,036)	1,885,036
Increase/(Decrease) in Accrued Wages and Other	5,736	30,103	(3,233)	(38,627)	59,133	10,569	61,636	2,045
Net Cash Provided By Operating Activities	\$ 4,187,143	\$ 2,769,098	\$ 3,496,722	\$ 3,329,057	\$ 19,623,857	\$ 17,752,546	\$ 27,307,722	\$ 23,850,701
Noncash Investing, Capital, and Financing Activities								
Noncash Capital Activities, Contribution of Capital Assets From Developers and Others	\$ 1,716,419	\$ 1,581,110	\$ 15,000	\$ 34,894	\$ -	\$ -	\$ 1,731,419	\$ 1,616,004
Noncash Noncapital Activities, Accretion on Bonds Payable	-	-	-	-	3,392,575	3,206,323	3,392,575	3,206,323
Noncash Noncapital Activities, Change in Present Value of SCA Payable	-	-	-	-	2,283,222	2,198,696	2,283,222	2,198,696
Change in Fair Value of Investments	(31,009)	(8,016)	(20,095)	(1,044)	(59,360)	160	(110,464)	(8,900)

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, 2019 and 2018**

		Suburban Post Employment Health Fund	
		2019	2018
Assets			
	Investments:		
	Mutual Funds (Note 2)	\$ 3,385,901	\$ 2,828,188
	Total Assets	\$ 3,385,901	\$ 2,828,188
Net Position Restricted for			
Post Retirement Health Benefits		\$ 3,385,901	\$ 2,828,188

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, 2019 and 2018**

	Suburban Post Employment Health Fund	
	2019	2018
Additions:		
Contributions:		
Employer	\$ 22,928	\$ 13,376
Total Contributions	22,928	13,376
Investment Income:		
Net Increase/(Decrease) in Fair Value of Investments	648,168	(217,146)
Less Investment Expense	(3,047)	(3,102)
Net Investment Income/(Loss)	645,121	(220,248)
Total Additions	668,049	(206,872)
Deductions:		
Reimbursement of Benefits Expense	110,336	92,904
Total Deductions	110,336	92,904
Net Increase/(Decrease) in Net Position	557,713	(299,776)
Net Position Restricted for Post Retirement Health Benefits:		
Beginning of Year	2,828,188	3,127,964
End of Year	\$ 3,385,901	\$ 2,828,188

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 46,523 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 46,483 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 2,890 customers as of December 31, 2019. 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, 2019 the Water System serves 22,901 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 Concessed 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, 2019, 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 acquisition 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 2019 and 2018 are as follows:

	<u>Amortization Period (Years)</u>	<u>2019 Amortization</u>	<u>2018 Amortization</u>
Suburban Water Fund:			
Facilities Planning Costs	3-10	\$ 23,516	\$ 41,345
Suburban Wastewater Fund:			
Facilities Planning Costs	3-7	<u>55,033</u>	<u>52,668</u>
Total Amortization		<u>\$ 78,549</u>	<u>\$ 94,013</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>2019</u>	<u>2018</u>
Balance at Beginning of Year	\$ 283,062	\$ 268,361
Additions	307,524	283,062
Retirements	<u>(283,062)</u>	<u>(268,361)</u>
Balance at End of Year	<u>\$ 307,524</u>	<u>\$ 283,062</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 three items that qualify for reporting in this category: deferred outflows related to pensions, OPEB and refunding losses on bonds.

L. Reclassifications

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

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

M. Deferred Inflows of Resources

The statement of Net Position reports a separate section for deferred inflows of resources. This separate financial statement element represents acquisition of net position that applies to future period(s) and so will not be recognized as an inflow of resources (revenue) until that time. The Authority has two items that qualify for reporting in this category: deferred inflows related to pensions and OPEB.

N. Adoption of Governmental Accounting Standards Board Statements

The Authority adopted the provisions of GASB Statement No. 95 "*Postponement of the Effective Dates of Certain Authoritative Guidance*". The adoption of GASB Statement No. 95 resulted in the Authority postponing the adoption of several GASB Statements.

O. Pending Changes in Accounting Principles

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 2020 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 2020 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 2022 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 2020 statements.

In June 2018, the GASB issued Statement No. 89, "*Accounting for Interest Cost Incurred before the End of a Construction Period*". The Authority is required to adopt statement No. 89 for its calendar year 2021 statements.

In August 2018, the GASB issued Statement No. 90, "*Majority Equity Interest-an amendment of GASB Statements No. 14 and No. 61*". The Authority is required to adopt statement No. 90 for its calendar year 2020 statements.

In May 2019, the GASB issued Statement No. 91, "*Conduit Debt Obligations*". The Authority is required to adopt statement No. 91 for its calendar year 2022 statements.

In January 2020, the GASB issued Statement No. 92, "*Omnibus 2020*". The Authority is required to adopt statement No. 92 for its calendar year 2022 statements.

In March 2020, the GASB issued Statement No. 93, "*Replacement of Interbank Offered Rates*". The Authority is required to adopt statement No. 93 for its calendar year 2022 statements.

In March 2020, the GASB issued Statement No. 94, "*Public-Private and Public-Public Partnerships and Availability Payment Arrangements*". The Authority is required to adopt statement No. 94 for its calendar year 2023 statements.

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

**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:

	<u>2019</u>	<u>2018</u>
Demand deposit, money market, and savings accounts	\$ 68,548,201	\$ 76,828,652
Certificates of deposit, nonnegotiable	2,425,527	2,425,522
Overnight repurchase	8,545,022	2,434,615
Certificates of deposit, negotiable	8,494,206	8,412,695
U.S. Treasury Obligations	-	6,154,907
OPEB Mutual Funds	3,385,901	2,828,188
Pennsylvania School District Liquid Asset Fund	<u>2,579,135</u>	<u>2,478,477</u>
	<u>\$ 93,977,992</u>	<u>\$101,563,056</u>
Classification per statements of net position:		
Unrestricted current assets		
Cash and cash equivalents	\$ 28,960,200	\$ 19,845,913
Certificates of deposit	10,894,206	10,812,695
Restricted non-current assets		
Cash and cash equivalents	50,712,158	61,895,831
Certificates of deposit	25,527	25,522
Investment U.S. treasury obligations	-	6,154,907
OPEB Mutual Funds	<u>3,385,901</u>	<u>2,828,188</u>
	<u>\$ 93,977,992</u>	<u>\$101,563,056</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, 2019 and 2018, the carrying amounts of the Authority's bank deposits were \$17,293,108 and \$10,201,433 respectively, and the bank balance of \$18,269,919 and \$12,296,350, respectively. As of December 31, 2019 and 2018 \$15,094,393 and \$9,460,446 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, 2019 and 2018 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, 2019 and 2018, the Authority had the following investments and maturities:

<u>2019</u>						
<u>Investment Type</u>	<u>Cost</u>	<u>Fair Value</u>	<u>% of Total</u>	Investment Maturities (In Years)		Rating as of Year-End
				<u>Less than One Year</u>	<u>One-to-Five Years</u>	
Certificates of Deposit, negotiable	\$8,460,000	\$8,494,206	76.71%	\$2,559,542	\$5,934,664	N/A
Pennsylvania School District Liquid Asset Fund	<u>2,579,135</u>	<u>2,579,135</u>	<u>23.29%</u>	<u>2,579,135</u>	<u>-</u>	AAA Standard & Poors
Total	<u>\$11,039,135</u>	<u>\$11,073,341</u>	<u>100.00%</u>	<u>\$5,138,677</u>	<u>\$5,934,664</u>	

<u>2018</u>						
<u>Investment Type</u>	<u>Cost</u>	<u>Fair Value</u>	<u>% of Total</u>	Investment Maturities (In Years)		Rating as of Year-End
				<u>Less than One Year</u>	<u>One-to-Five Years</u>	
Certificates of Deposit, negotiable	\$8,442,000	\$8,412,695	49.35%	\$6,496,275	\$1,916,420	N/A
U.S. Treasury Obligation	6,123,857	6,154,907	36.11%	6,154,907	-	N/A
Pennsylvania School District Liquid Asset Fund	<u>2,478,477</u>	<u>2,478,477</u>	<u>14.54%</u>	<u>2,478,477</u>	<u>-</u>	AAA Standard & Poors
Total	<u>\$17,044,334</u>	<u>\$17,046,079</u>	<u>100.00%</u>	<u>\$15,129,659</u>	<u>\$1,916,420</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, 2019 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 (\$323,767) and long-term receivables (\$1,532,516). At year-end 2018, there were five agreements and the unpaid fees were recorded as current (\$316,797) and long-term receivables (\$1,856,283). 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 2019 and 2018 consist of the following:

	Balance at 12/31/18	Additions	Retirements	Balance at 12/31/19
Suburban Water Fund				
Non-depreciable Assets:				
Land	\$ 2,043,265	\$ 71,619	\$ -	\$ 2,114,884
Construction in progress	5,023,631	8,764,955	(1,284,216)	12,504,370
Total Capital Assets Not Being Depreciated	7,066,896	8,836,574	(1,284,216)	14,619,254
Depreciable Assets:				
Wells & Reservoirs	9,554,770	154,482	-	9,709,252
Transmission & Distribution Mains	78,963,688	1,534,723	-	80,498,411
Service & Hydrants	17,144,642	426,768	-	17,571,410
Building Structure & Appurtenances	23,632,286	165,092	-	23,797,378
Metering System	10,539,291	132,752	-	10,672,043
Equipment	7,283,092	486,414	-	7,769,506
Capacity	1,207,901	-	-	1,207,901
Total Capital Assets Being Depreciated	148,325,670	2,900,231	-	151,225,901
Less Accumulated Depreciation for:				
Wells & Reservoirs	(3,188,014)	(177,874)	-	(3,365,888)
Transmission & Distribution Mains	(12,927,020)	(795,726)	-	(13,722,746)
Service & Hydrants	(4,298,105)	(282,778)	-	(4,580,883)
Building Structure & Appurtenances	(8,677,088)	(617,354)	-	(9,294,442)
Metering System	(4,866,455)	(466,362)	-	(5,332,817)
Equipment	(5,800,726)	(206,734)	-	(6,007,460)
Capacity	(719,210)	(31,833)	-	(751,043)
Total Accumulated Depreciation	(40,476,618)	(2,578,661)	-	(43,055,279)
Total Net Capital Assets Being Depreciated	107,849,052	321,570	-	108,170,622
Total Capital Assets, Net	<u>\$ 114,915,948</u>	<u>\$ 9,158,144</u>	<u>\$ (1,284,216)</u>	<u>\$ 122,789,876</u>

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

NOTE 5 – CAPITAL ASSETS (Continued)

	<u>Balance at 12/31/18</u>	<u>Additions</u>	<u>Retirements</u>	<u>Balance at 12/31/19</u>
Suburban Wastewater Fund				
Non-depreciable Assets:				
Land	\$ 1,837,891	\$ 50,539	\$ -	\$ 1,888,430
Capacity	2,062,956	-	(1,109,125)	953,831
Construction in progress	10,052,683	10,671,538	(1,749,800)	18,974,421
Total Capital Assets Not Being Depreciated	13,953,530	10,722,077	(2,858,925)	21,816,682
Depreciable Assets:				
Interceptor & Collector Systems	38,036,405	223,214	-	38,259,619
Wells & Reservoirs	3,494,643	-	-	3,494,643
Building Structure & Appurtenances	54,910,406	917,641	-	55,828,047
Metering System	429,777	1	-	429,778
Equipment	22,551,923	623,979	-	23,175,902
Total Capital Assets Being Depreciated	119,423,154	1,764,835	-	121,187,989
Less Accumulated Depreciation for:				
Interceptor & Collector Systems	(10,694,920)	(441,673)	-	(11,136,593)
Wells & Reservoirs	(539,682)	(63,538)	-	(603,220)
Building Structure & Appurtenances	(18,332,952)	(1,793,211)	-	(20,126,163)
Metering System	(252,576)	(11,805)	-	(264,381)
Equipment	(17,870,261)	(2,205,807)	-	(20,076,068)
Total Accumulated Depreciation	(47,690,391)	(4,516,034)	-	(52,206,425)
Total Net Capital Assets Being Depreciated	71,732,763	(2,751,199)	-	68,981,564
Total Capital Assets, Net	<u>\$ 85,686,293</u>	<u>\$ 7,970,878</u>	<u>\$ (2,858,925)</u>	<u>\$ 90,798,246</u>

	<u>Balance at 12/31/18</u>	<u>Additions</u>	<u>Retirements</u>	<u>Balance at 12/31/19</u>
City Division Fund				
Non-depreciable Assets:				
Construction in progress	\$ -	\$ -	\$ -	\$ -
Total Capital Assets Not Being Depreciated	-	-	-	-
Depreciable Assets:				
Transportation Equipment	2,920,803	128,624	(52,645)	2,996,782
Miscellaneous Equipment & Computers	248,981	-	-	248,981
Office Furniture & Equipment	23,116	-	-	23,116
Total Capital Assets Being Depreciated	3,192,900	128,624	(52,645)	3,268,879
Less Accumulated Depreciation for:				
Transportation Equipment	(1,977,573)	(255,697)	52,645	(2,180,625)
Miscellaneous Equipment & Computers	(192,758)	(36,683)	-	(229,441)
Office Furniture & Equipment	(23,116)	-	-	(23,116)
Total Accumulated Depreciation	(2,193,447)	(292,380)	52,645	(2,433,182)
Total Net Capital Assets Being Depreciated	999,453	(163,756)	-	835,697
Total Capital Assets, Net	<u>\$ 999,453</u>	<u>\$ (163,756)</u>	<u>\$ -</u>	<u>\$ 835,697</u>

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

NOTE 5 – CAPITAL ASSETS (Continued)

	Balance at 12/31/18	Additions	Retirements	Balance at 12/31/19
Total Funds				
Total Capital Assets Not Being Depreciated	\$ 21,020,426	\$ 19,558,651	\$ (4,143,141)	\$ 36,435,936
Total Capital Assets Being Depreciated	270,941,724	4,793,690	(52,645)	275,682,769
Total Accumulated Depreciation	(90,360,456)	(7,387,075)	52,645	(97,694,886)
Total Net Capital Assets Being Depreciated	180,581,268	(2,593,385)	-	177,987,883
Total Capital Assets, Net	\$ 201,601,694	\$ 16,965,266	\$ (4,143,141)	\$ 214,423,819
	Balance at 12/31/17	Additions	Retirements	Balance at 12/31/18
Suburban Water Fund				
Non-depreciable Assets:				
Land	\$ 1,979,296	\$ 63,969	\$ -	\$ 2,043,265
Construction in progress	3,818,074	5,348,971	(4,143,414)	5,023,631
Total Capital Assets Not Being Depreciated	5,797,370	5,412,940	(4,143,414)	7,066,896
Depreciable Assets:				
Wells & Reservoirs	9,107,259	447,511	-	9,554,770
Transmission & Distribution Mains	77,398,129	1,565,559	-	78,963,688
Service & Hydrants	16,871,358	273,284	-	17,144,642
Building Structure & Appurtenances	22,847,846	784,440	-	23,632,286
Metering System	8,641,522	1,897,769	-	10,539,291
Equipment	6,620,625	693,075	(30,608)	7,283,092
Capacity	1,207,901	-	-	1,207,901
Total Capital Assets Being Depreciated	142,694,640	5,661,638	(30,608)	148,325,670
Less Accumulated Depreciation for:				
Wells & Reservoirs	(3,015,812)	(172,202)	-	(3,188,014)
Transmission & Distribution Mains	(12,146,796)	(780,224)	-	(12,927,020)
Service & Hydrants	(4,021,004)	(277,101)	-	(4,298,105)
Building Structure & Appurtenances	(8,074,735)	(602,353)	-	(8,677,088)
Metering System	(4,444,941)	(421,514)	-	(4,866,455)
Equipment	(5,389,774)	(441,560)	30,608	(5,800,726)
Capacity	(687,376)	(31,834)	-	(719,210)
Total Accumulated Depreciation	(37,780,438)	(2,726,788)	30,608	(40,476,618)
Total Net Capital Assets Being Depreciated	104,914,202	2,934,850	-	107,849,052
Total Capital Assets, Net	\$ 110,711,572	\$ 8,347,790	\$ (4,143,414)	\$ 114,915,948

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

NOTE 5 – CAPITAL ASSETS (Continued)

	Balance at 12/31/17	Additions	Retirements	Balance at 12/31/18
Suburban Wastewater Fund				
Non-depreciable Assets:				
Land	\$ 1,802,997	\$ 34,894	\$ -	\$ 1,837,891
Capacity	2,442,164	-	(379,208)	2,062,956
Construction in progress	9,012,605	2,740,223	(1,700,145)	10,052,683
Total Capital Assets Not Being Depreciated	13,257,766	2,775,117	(2,079,353)	13,953,530
Depreciable Assets:				
Interceptor & Collector Systems	38,035,012	1,393	-	38,036,405
Wells & Reservoirs	3,494,643	-	-	3,494,643
Building Structure & Appurtenances	53,561,605	1,348,801	-	54,910,406
Metering System	421,474	8,303	-	429,777
Equipment	22,187,756	364,167	-	22,551,923
Total Capital Assets Being Depreciated	117,700,490	1,722,664	-	119,423,154
Less Accumulated Depreciation for:				
Interceptor & Collector Systems	(10,254,369)	(440,551)	-	(10,694,920)
Wells & Reservoirs	(476,143)	(63,539)	-	(539,682)
Building Structure & Appurtenances	(16,561,892)	(1,771,060)	-	(18,332,952)
Metering System	(240,928)	(11,648)	-	(252,576)
Equipment	(15,719,329)	(2,150,932)	-	(17,870,261)
Total Accumulated Depreciation	(43,252,661)	(4,437,730)	-	(47,690,391)
Total Net Capital Assets Being Depreciated	74,447,829	(2,715,066)	-	71,732,763
Total Capital Assets, Net	<u>\$ 87,705,595</u>	<u>\$ 60,051</u>	<u>\$ (2,079,353)</u>	<u>\$ 85,686,293</u>
	Balance at 12/31/17	Additions	Retirements	Balance at 12/31/18
City Division Fund				
Non-depreciable Assets:				
Construction in progress	\$ -	\$ -	\$ -	\$ -
Total Capital Assets Not Being Depreciated	-	-	-	-
Depreciable Assets:				
Transportation Equipment	2,654,492	289,860	(23,549)	2,920,803
Miscellaneous Equipment & Computers	248,981	-	-	248,981
Office Furniture & Equipment	23,116	-	-	23,116
Total Capital Assets Being Depreciated	2,926,589	289,860	(23,549)	3,192,900
Less Accumulated Depreciation for:				
Transportation Equipment	(1,687,385)	(312,025)	21,837	(1,977,573)
Miscellaneous Equipment & Computers	(147,213)	(45,545)	-	(192,758)
Office Furniture & Equipment	(20,804)	(2,312)	-	(23,116)
Total Accumulated Depreciation	(1,855,402)	(359,882)	21,837	(2,193,447)
Total Net Capital Assets Being Depreciated	1,071,187	(70,022)	(1,712)	999,453
Total Capital Assets, Net	<u>\$ 1,071,187</u>	<u>\$ (70,022)</u>	<u>\$ (1,712)</u>	<u>\$ 999,453</u>

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

NOTE 5 – CAPITAL ASSETS (Continued)

	<u>Balance at</u> <u>12/31/17</u>	<u>Additions</u>	<u>Retirements</u>	<u>Balance at</u> <u>12/31/18</u>
Total Funds				
Total Capital Assets Not Being				
Depreciated	\$ 19,055,136	\$ 8,188,057	\$ (6,222,767)	\$ 21,020,426
Total Capital Assets Being				
Depreciated	263,321,719	7,674,162	(54,157)	270,941,724
Total Accumulated Depreciation	(82,888,501)	(7,524,400)	52,445	(90,360,456)
Total Net Capital Assets Being				
Depreciated	180,433,218	149,762	(1,712)	180,581,268
Total Capital Assets, Net	<u>\$ 199,488,354</u>	<u>\$ 8,337,819</u>	<u>\$ (6,224,479)</u>	<u>\$ 201,601,694</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 2019 and 2018 the total value of this capacity was \$953,831 and \$2,062,956 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 \$1,716,684 and \$3,996,348 were recorded as increases to the intangible asset in 2019 and 2018, respectively. Amortization expense in the amount of \$5,543,128 and \$5,504,551 was recognized in 2019 and 2018, respectively related to the intangible asset. The net book value of the asset was \$241,126,076 and \$244,952,520 at December 31, 2019 and 2018, 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 \$2,283,222 and \$2,198,697 was recognized in 2019 and 2018, respectively. The liability was \$47,694,490 and \$45,936,129 at December 31, 2019 and 2018, 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 2019 and 2018 consist of the following:

	<u>As of 12/31/18</u>	<u>Additions</u>	<u>Retirements</u>	<u>As of 12/31/19</u>
Suburban Water Fund				
Facilities Planning Costs	\$ 687,551	\$ 23,209	\$ (640,212)	\$ 70,548
Less Accumulated Amortization	<u>(662,802)</u>	<u>(23,516)</u>	<u>640,212</u>	<u>(46,106)</u>
Total Suburban Water Facilities Costs - Net	<u>24,749</u>	<u>(307)</u>	<u>-</u>	<u>24,442</u>
Suburban Wastewater Fund				
Facilities Planning Costs	508,900	10,795	(3,700)	515,995
Less Accumulated Amortization	<u>(406,073)</u>	<u>(55,033)</u>	<u>3,700</u>	<u>(457,406)</u>
Total Suburban Wastewater Facilities Planning Costs - Net	<u>102,827</u>	<u>(44,238)</u>	<u>-</u>	<u>58,589</u>
 Total Facilities Planning Costs - Net	 <u>\$ 127,576</u>	 <u>\$ (44,545)</u>	 <u>\$ -</u>	 <u>\$ 83,031</u>
	<u>As of 12/31/17</u>	<u>Additions</u>	<u>Retirements</u>	<u>As of 12/31/18</u>
Suburban Water Fund				
Facilities Planning Costs	\$ 802,857	\$ 26,909	\$ (142,215)	\$687,551
Less Accumulated Amortization	<u>(763,672)</u>	<u>(41,345)</u>	<u>142,215</u>	<u>(662,802)</u>
Total Suburban Water Facilities Planning Costs - Net	<u>39,185</u>	<u>(14,436)</u>	<u>-</u>	<u>24,749</u>
Suburban Wastewater Fund				
Facilities & Planning Costs	1,067,180	3,793	(562,073)	508,900
Less Accumulated Amortization	<u>(915,478)</u>	<u>(52,668)</u>	<u>562,073</u>	<u>(406,073)</u>
Total Suburban Wastewater Planning Facilities Costs - Net	<u>151,702</u>	<u>(48,875)</u>	<u>-</u>	<u>102,827</u>
 Total Planning Facilities Costs - Net	 <u>\$ 190,887</u>	 <u>\$ (63,311)</u>	 <u>\$ -</u>	 <u>\$ 127,576</u>

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

NOTE 8 – LONG-TERM DEBT

Long-term debt for 2019 and 2018 consists of the following:

	Balance Outstanding As of <u>12/31/18</u>	Additions / <u>Accretions</u>	<u>Retirements</u>	Balance Outstanding As of 12/31/19	Principal Due Within One Year
Suburban Water Fund					
Water Revenue Bonds Series of 2010 A	\$ 11,590,000	\$ -	\$ -	\$ 11,590,000	\$ -
Water Revenue Bonds Series of 2011	432,034	-	(118,745)	313,289	122,044
Water Revenue Bonds Series of 2015	3,212,735	-	(1,051,180)	2,161,555	1,072,850
Water Revenue Bonds Series of 2015 A	8,346,800	-	(311,400)	8,035,400	318,100
Water Revenue Bonds Series of 2017	14,900,000	-	-	14,900,000	320,000
2007 State Pennworks Note	1,651,787	-	(172,696)	1,479,091	176,181
2011 Pennsylvania Infrastructure Investment Authority Note	1,078,512	-	(71,116)	1,007,396	72,197
Subtotal	\$ 41,211,868	\$ -	\$ (1,725,137)	\$ 39,486,731	\$ 2,081,372
Add Bond Premium	372,406	-	(13,067)	359,339	
Total Suburban Water Fund Debt	\$ 41,584,274	\$ -	\$ (1,738,204)	\$ 39,846,070	
Less Current Maturities				(2,081,372)	
Net Suburban Water Fund Long-Term Debt				<u>\$ 37,764,698</u>	
Suburban Wastewater Fund					
2009 Pennsylvania Infrastructure Investment Authority Note	\$ 3,451,275	\$ -	\$ (247,095)	\$ 3,204,180	\$ 253,464
2011 Sewer Revenue Bonds Series A	1,560,901	-	(78,904)	1,481,997	114,905
2013 Pennsylvania Infrastructure Investment Authority Note	2,294,634	-	(135,730)	2,158,904	135,942
2015 Pennsylvania Infrastructure Investment Authority Note	703,913	-	(37,380)	666,533	37,756
Total Suburban Wastewater Fund Debt	\$ 8,010,723	\$ -	\$ (499,109)	\$ 7,511,614	\$ 542,067
Less Current Maturities				(542,067)	
Net Suburban Wastewater Fund Long-Term Debt				<u>\$ 6,969,547</u>	
City Division Fund					
2013 Water and Sewer Revenue Bonds, Series A	\$ 245,590,000	\$ -	\$ -	\$ 245,590,000	\$ -
2013 Water and Sewer Capital Appreciation Revenue Bonds, Series B	58,700,641	3,392,575	(450,000)	61,643,216	882,406
2018 Water and Sewer Revenue Bonds (Federally Taxable)	18,735,000	-	(795,000)	17,940,000	955,000
Subtotal	\$ 323,025,641	\$ 3,392,575	\$ (1,245,000)	\$ 325,173,216	\$ 1,837,406
Less Bond Discount	(9,182,043)	-	316,620	(8,865,423)	
Total City Division Fund Debt	\$ 313,843,598	\$ 3,392,575	\$ (928,380)	316,307,793	
Less Current Maturities				(1,837,406)	
Net City Division Fund Long-Term Debt				<u>\$ 314,470,387</u>	
Total Net Long-Term Debt				<u>\$ 359,204,632</u>	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

NOTE 8 – LONG-TERM DEBT (Continued)

	Balance Outstanding As of 12/31/17	Additions / Accretions	Retirements	Balance Outstanding As of 12/31/18	Principal Due Within One Year
Suburban Water Fund					
Water Revenue Bonds					
Series of 2010 A	\$ 11,590,000	\$ -	\$ -	\$ 11,590,000	\$ -
Water Revenue Bonds					
Series of 2011	547,552	-	(115,518)	432,034	110,552
Water Revenue Bonds					
Series of 2015	4,251,695	-	(1,038,960)	3,212,735	1,051,180
Water Revenue Bonds					
Series of 2015 A	8,646,200	-	(299,400)	8,346,800	311,400
Water Revenue Bonds					
Series of 2017	14,900,000	-	-	14,900,000	-
2007 State Pennworks					
Note	1,821,066	-	(169,279)	1,651,787	172,696
2011 Pennsylvania Infrastructure					
Investment Authority Note	1,148,563	-	(70,051)	1,078,512	71,116
Subtotal	\$ 42,905,076	\$ -	\$ (1,693,208)	\$ 41,211,868	\$ 1,716,944
Add Bond Premium	385,473	-	(13,067)	372,406	
Total Suburban Water Fund Debt	\$ 43,290,549	\$ -	\$ (1,706,275)	\$ 41,584,274	
Less Current Maturities				(1,716,944)	
Net Suburban Water Fund					
Long-Term Debt				\$ 39,867,330	
Suburban Wastewater Fund					
2009 Pennsylvania Infrastructure					
Investment Authority Note	\$ 3,692,167	\$ -	\$ (240,892)	\$ 3,451,275	\$ 247,095
2011 Sewer Revenue Bonds					
Series A	1,630,058	-	(69,157)	1,560,901	65,572
2013 Pennsylvania Infrastructure					
Investment Authority Note	2,432,419	-	(137,785)	2,294,634	135,730
2015 Pennsylvania Infrastructure					
Investment Authority Note	740,918	-	(37,005)	703,913	37,380
Total Suburban Wastewater Fund Debt	\$ 8,495,562	\$ -	\$ (484,839)	\$ 8,010,723	\$ 485,777
Less Current Maturities				(485,777)	
Net Suburban Wastewater Fund					
Long-Term Debt				\$ 7,524,946	
City Division Fund					
2013 Water and Sewer Revenue					
Bonds, Series A	\$ 245,590,000	\$ -	\$ -	\$ 245,590,000	\$ -
2013 Water and Sewer Capital					
Appreciation Revenue Bonds,					
Series B	55,494,318	3,206,323	-	58,700,641	435,893
2013 Water and Sewer Revenue					
Bonds, Series C	18,735,000	-	(18,735,000)	-	-
2018 Water and Sewer Revenue					
Bonds (Federally Taxable)	-	18,735,000	-	18,735,000	795,000
Subtotal	\$ 319,819,318	\$ 21,941,323	\$ (18,735,000)	\$ 323,025,641	\$ 1,230,893
Less Bond Discount	(9,498,663)	-	316,620	(9,182,043)	
Total City Division Fund Debt	\$ 310,320,655	\$ 21,941,323	\$ (18,418,380)	313,843,598	
Less Current Maturities				(1,230,893)	
Net City Division Fund Long-Term Debt				\$ 312,612,705	
Total Net Long-Term Debt				\$ 360,004,981	

**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, 2019 to calculate an applicable effective rate of 2.75%.

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, 2019 to calculate an applicable effective rate of 2.51%.

**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:

Year	Principal Amount	Total Interest	Total Debt Service
2020	\$ 2,081,372	\$ 1,436,287	\$ 3,517,659
2021	2,092,818	1,406,328	3,499,146
2022	2,147,539	1,351,168	3,498,707
2023	2,201,607	1,299,901	3,501,508
2024	2,194,031	1,250,434	3,444,465
2025-2029	12,705,397	5,050,138	17,755,535
2030-2034	7,433,967	2,095,431	9,529,398
2035-2039	2,885,000	1,262,683	4,147,683
2040-2044	3,410,000	747,224	4,157,224
2045-2047	<u>2,335,000</u>	<u>159,468</u>	<u>2,494,468</u>
	<u>\$ 39,486,731</u>	<u>\$ 16,059,062</u>	<u>\$ 55,545,793</u>

B. Suburban Wastewater Fund

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 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.

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.

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

NOTE 8 – LONG-TERM DEBT (Continued)

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:

Year	Principal Amount	Total Interest	Total Debt Service
2020	\$ 542,067	\$ 195,887	\$ 737,954
2021	549,034	184,072	733,106
2022	562,081	169,411	731,492
2023	575,980	153,143	729,123
2024	590,251	136,418	726,669
2025-2029	3,179,155	414,171	3,593,326
2030-2034	1,455,035	50,520	1,505,555
2035-2036	58,011	676	58,687
Total	<u>\$ 7,511,614</u>	<u>\$ 1,304,298</u>	<u>\$ 8,815,912</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.

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.

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

NOTE 8 – LONG TERM DEBT (Continued)

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.

In October 2018, the Authority issued Water and Sewer Revenue Bond, Series 2018 (Federally Taxable) in the amount of \$18,735,000. Proceeds of the bond together with other funds of the Authority were used to currently refund the 2013 Series C bonds, fund a debt service reserve, and pay the costs and expenses of issuing the Bond. The bond carries a fixed interest rate of 4.75% per annum, payable commencing on June 1, 2019 and semi-annually thereafter on the interest payment date until June 1, 2029, at which time the fixed rate shall be reset to a floating or variable interest rate of one month LIBOR plus 165 basis points. At no time and in no instance shall the variable interest rate exceed 6.5% during the variable rate period. The bond matures on December 1, 2033 and is secured by the Authority's interest in the Concessioned System. The refunding increased the Authority's total debt service payments by \$7,817,099 and resulted in an economic loss of \$2,503,652.

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

Year	Principal Amount	Total Interest	Total Debt Service
2020	\$ 1,837,406	\$ 13,287,981	\$ 15,125,387
2021	2,286,487	13,318,538	15,605,025
2022	2,711,079	13,396,447	16,107,526
2023	3,102,078	13,520,571	16,622,649
2024	3,456,247	13,699,152	17,155,399
2025-2029	21,436,377	72,814,581	94,250,958
2030-2034	24,821,000	84,451,678	109,272,678
2035-2039	34,197,542	98,520,395	132,717,937
2040-2044	132,335,000	51,833,188	184,168,188
2045-2047	<u>98,990,000</u>	<u>15,219,713</u>	<u>114,209,713</u>
Total	<u>\$ 325,173,216</u>	<u>\$ 390,062,244</u>	<u>\$ 715,235,460</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:

Fund	2019		2018	
	Interfund Receivables	Interfund Payables	Interfund Receivables	Interfund Payables
Enterprise Funds:				
City Division	\$ -	\$ 29,516	\$ -	\$ 10,394,228
Suburban Water	1,599,692	-	7,576,231	-
Suburban Wastewater	-	1,570,176	2,817,997	-
Total	<u>\$ 1,599,692</u>	<u>\$ 1,599,692</u>	<u>\$ 10,394,228</u>	<u>\$ 10,394,228</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 \$577,732 and \$227,308 as of December 31, 2019 and 2018, 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 \$4,239,816 and \$4,974,553 as of December 31, 2019 and 2018, 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, 2019, through contractual agreements, had construction commitments of \$13,128,891 for various capital projects as compared to \$9,158,021 at year-end 2018. 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:

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 January 1, 2019 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	<u>34</u>

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 years ended December 31, 2019, and 2018.

**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, 2019 and 2018:

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

The annual money-weighted rate of return on investments, net of investment expense, was 23.20% and (7.13%), for the years ended December 31, 2019 and 2018, respectively. 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, 2019, and 2018, were as follows:

	<u>2019</u>	<u>2018</u>
Total Plan OPEB Liability	\$ 2,141,848	\$ 2,091,480
Plan Fiduciary Net Position	3,385,901	2,828,188
Plan's Net OPEB Liability/(Asset)	<u>\$ (1,244,053)</u>	<u>\$ (736,708)</u>
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability/(Asset)	158.1%	135.2%

Actuarial Assumptions: The Suburban Plan's net OPEB liability was measured as of December 31, 2019 and 2018, and the plan's total OPEB liability used to calculate the net OPEB liability was determined by actuarial valuations as of January 1, 2019, and 2017, respectively. The actuary utilized update procedures to roll forward the Suburban Plan's total OPEB liability in the January 1, 2019 and 2017 actuarial valuations to the December 31, 2019 and 2018 measurement dates.

The Suburban Plan's total OPEB liability in the January 1, 2019 and 2017 actuarial valuations were 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 (1/1/2019)	20% during 2020 followed by 8.25% during 2021 reduced by .25% per year to an ultimate rate of 5% per year.
Healthcare Cost Trend Rates (1/1/2017)	0% during 2018 followed by 8.5% during 2019 reduced by .25% per year to an ultimate rate of 5.0% per year.
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)

It is assumed that 100% of eligible retirees and spouses will participate in the plan.

The actuarial assumptions used in the January 1, 2019 and 2017 valuations 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, 2019 and 2018 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% at December 31, 2019 and 2018. 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.

Changes in the net OPEB liability for the Suburban plan for the year ended December 31, 2019 were as follows:

	Increase (Decrease)		
	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(asset)
	(a)	(b)	(a) - (b)
Balances as of 12/31/18	\$ 2,091,480	\$ 2,828,188	\$ (736,708)
Service cost	7,065	-	7,065
Interest cost	162,742	-	162,742
Differences between expected and actual experience	90,059	-	90,059
Changes in Assumptions *	(99,162)		(99,162)
Contributions - employer	-	22,928	(22,928)
Contributions - members	-	-	-
Net investment income	-	645,121	(645,121)
Benefit payments	(110,336)	(110,336)	-
Plan administrative expenses	-	-	-
Other changes	-	-	-
Net Changes	50,368	557,713	(507,345)
Balances as of 12/31/19	<u>\$ 2,141,848</u>	<u>\$ 3,385,901</u>	<u>\$ (1,244,053)</u>

*- The December 31, 2019 measurement date reflects a change in assumptions related to the Healthcare Cost Trend Rate.

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

NOTE 12 – OTHER POSTEMPLOYMENT BENEFITS (Continued)

Changes in the net OPEB liability for the Suburban plan for the year ended December 31, 2018 were as follows:

	Increase (Decrease)		
	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability/(asset)
	(a)	(b)	(a) - (b)
Balances as of 12/31/17	\$ 2,018,059	\$ 3,127,964	\$ (1,109,905)
Service cost	7,960	-	7,960
Interest cost	158,365	-	158,365
Differences between expected and actual experience	-	-	-
Contributions - employer	-	13,376	(13,376)
Contributions - members	-	-	-
Net investment income	-	(220,248)	220,248
Benefit payments	(92,904)	(92,904)	-
Plan administrative expenses	-	-	-
Other changes	-	-	-
Net Changes	73,421	(299,776)	373,197
Balances as of 12/31/18	<u>\$ 2,091,480</u>	<u>\$ 2,828,188</u>	<u>\$ (736,708)</u>

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:

	1 % Decrease (7.0%)	Discount Rate (8.0%)	1% Increase (9.0%)
Net OPEB Liability (Asset) 12/31/19	\$ (1,015,854)	\$ (1,244,053)	\$ (1,439,709)
Net OPEB Liability (Asset) 12/31/18	\$ (499,988)	\$ (736,708)	\$ (938,118)

Sensitivity of the Suburban Plan Net OPEB Liability to Changes in the Healthcare Cost Trend Rates: The following presents the December 31, 2019 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 ((19.0%) decreasing to 4.0%) or 1-percentage-point higher ((21.0%) decreasing to 6.0%) than the current healthcare cost trend rates:

	1 % Decrease ((19%) decreasing to 4%)	Discount Rate ((20%) decreasing to 5%)	1% Increase ((21%) decreasing to 6%)
Net OPEB Liability (Asset) 12/31/19	\$ (1,462,807)	\$ (1,244,053)	\$ (988,313)

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

NOTE 12 – OTHER POSTEMPLOYMENT BENEFITS (Continued)

The following presents the December 31, 2018 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 ((7.5%) decreasing to 4.0%) or 1-percentage-point higher ((9.5%) decreasing to 6.0%) than the current healthcare cost trend rates:

	1 % Decrease ((7.5%) decreasing to 4.0%)	Discount Rate ((8.5%) decreasing to 5.0%)	1% Increase ((9.5%) decreasing to 6.0%)
Net OPEB Liability (Asset) 12/31/18	\$ (979,676)	\$ (736,708)	\$ (448,868)

OPEB Expense and Deferred Outflows and Inflows of Resources: For the year ended December 31, 2019 and 2018, the Authority recognized OPEB expense of \$47,394, and \$12,730, respectively for the plan. At December 31, 2019, and 2018, the Authority reported deferred outflows and inflows of resources related to the OPEB plan from the following sources:

	12/31/2019 Outflow/(Inflow)	12/31/2018 Outflow/(Inflow)
Differences between expected and actual experience	\$ 56,117	\$ -
Net difference between projected and actual earnings on OPEB plan investments	(57,508)	373,843
Changes of assumptions	(61,789)	-
Total	<u>\$ (63,180)</u>	<u>\$ 373,843</u>

Amounts reported as deferred outflows of resources related to OPEB will be recognized in OPEB expense as follows:

Year Ended December 31:	12/31/2019	12/31/2018
2019	\$ -	\$ 93,461
2020	5,558	93,461
2021	6,748	93,461
2022	8,988	96,460
2023	(84,474)	-
Total	<u>\$ (63,180)</u>	<u>\$ 376,843</u>

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

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. No assets are accumulated in a trust that meets the criteria in paragraph 4 of GASB Statement 75.

The authority to establish and amend the benefit terms and financing requirements to the Authority resides with the Authority's nine member Board of Directors, who are appointed by the Lehigh County Executive and approved by the Lehigh County Commissioners.

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

NOTE 12 – OTHER POSTEMPLOYMENT BENEFITS (Continued)

City Plan Membership: At January 1, 2019 Plan membership consisted of the following:

Inactive plan members or beneficiaries currently receiving benefit payments	-
Inactive plan members entitled to but not yet receiving benefit payments	-
Active plan members	70
Total	<u>70</u>

Benefits Provided: The benefits provided to Other Key Employees hired, were the same as those provided to Union Employees, with the exception of union employees hired after January 1, 2017, receive coverage for three years or until Medicare eligible, whichever occurs first. Any employee retiring with a minimum age of 55 and 20 years of service or retiring at the age of 60 with 15 years is eligible to receive medical and prescription drug coverage until they reach the age of 65, with the exception previously noted for union employees hired after January 1, 2017. 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 authority to establish and amend the benefit terms of the City Plan resides with the nine member Board of Directors.

Actuarial Assumptions & Total OPEB Liability: The City Plan's total OPEB liability was measured as of December 31, 2019 and 2018, and were determined by actuarial valuations as of January 1, 2019 and 2017, respectively. The actuary utilized update procedures to roll forward the total OPEB liability for the City Plan in the January 1, 2019, and 2017 actuarial valuations to the December 31, 2019, and 2018 measurement dates.

The City Plan's total OPEB liability in the January 1, 2019 and 2017 actuarial valuations were 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
Discount Rate	3.75%
Healthcare Cost Trend Rates (1/1/2019)	20% during 2020 followed by 8.5% during 2021 reduced by .25% per year to an ultimate rate of 5.0% per year.
Healthcare Cost Trend Rates (1/1/2017)	0% during 2018 followed by 8.5% during 2019 reduced by .25% per year to an ultimate rate of 5.0% per year.
Cost Sharing with Inactive Plan Members	Eligible retirees with a minimum of 15 years pay 25% of premiums, retirees with more than 10 years but less than 15 pay 50% of premiums.

The discount rate was based on the S&P 20 year AA municipal bond rate.

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

It is assumed that 100% of eligible retirees and spouses will participate in the plan.

The actuarial assumptions used in the January 1, 2019, and 2017 valuations were based on historical results as a recent experience study was not completed.

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

NOTE 12 – OTHER POSTEMPLOYMENT BENEFITS (Continued)

Changes in the total OPEB liability for the City Plan for the year ended December 31, 2019 were as follows:

	Increase (Decrease) Total OPEB Liability (a)
Balances as of 12/31/18	\$ 2,020,079
Service cost	184,957
Interest cost	106,760
Change in Benefit Terms *	(55,110)
Differences between expected and actual experience	383,657
Change in Assumptions *	322,110
Benefit payments	(17,530)
Other changes	-
Net Changes	924,844
Balances as of 12/31/19	\$ 2,944,923

*- The December 31, 2019 measurement date reflects a change in assumptions related to the Healthcare Cost Trend Rate, and a change in benefit coverage length for union employees hired after January 1, 2017.

Changes in the total OPEB liability for the City Plan for the year ended December 31, 2018 were as follows:

	Increase (Decrease) Total OPEB Liability (a)
Balances as of 12/31/17	\$ 1,828,178
Service cost	142,941
Interest cost	73,458
Differences between expected and actual experience	-
Benefit payments	(24,498)
Other changes	-
Net Changes	191,901
Balances as of 12/31/18	\$ 2,020,079

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

NOTE 12 – OTHER POSTEMPLOYMENT BENEFITS (Continued)

Sensitivity of the City Plan Total OPEB Liability to Changes in the Discount Rate: The following presents the total OPEB liability of the City Plan, as well as what the City Plan's total OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower (2.75%) or 1-percentage-point higher (4.75%) than the current discount rate:

	1 % Decrease (2.75%)	Discount Rate (3.75%)	1% Increase (4.75%)
Total OPEB Liability 12/31/19	\$ 3,255,902	\$ 2,944,923	\$ 2,659,345
Total OPEB Liability 12/31/18	2,239,339	2,020,079	1,819,543

Sensitivity of the City Plan Total OPEB Liability to Changes in the Healthcare Cost Trend Rates: The following presents the December 31, 2019 total OPEB liability of the City Plan, as well as what the City Plan's total OPEB liability would be if it were calculated using healthcare cost trend rates that are 1-percentage-point lower ((19%) decreasing to 4%) or 1-percentage-point higher ((21%) decreasing to 6%) than the current healthcare cost trend rates:

	1 % Decrease ((19%) decreasing to 4%)	Discount Rate ((20%) decreasing to 5%)	1% Increase ((21%) decreasing to 6%)
Net OPEB Liability (Asset) 12/31/19	\$ 2,523,839	\$ 2,944,923	\$ 3,457,031

The following presents the December 31, 2018 total OPEB liability of the City Plan, as well as what the City Plan's total OPEB liability would be if it were calculated using healthcare cost trend rates that are 1-percentage-point lower ((7.5%) decreasing to 4.0%) or 1-percentage-point higher ((9.5%) decreasing to 6.0%) than the current healthcare cost trend rates:

	1 % Decrease ((7.5%) decreasing to 4.0%)	Discount Rate ((8.5%) decreasing to 5.0%)	1% Increase ((9.5%) decreasing to 6.0%)
Net OPEB Liability (Asset) 12/31/18	\$ 1,707,380	\$ 2,020,079	\$ 2,404,462

OPEB Expense and Deferred Outflows of Resources: For the year ended December 31, 2019 and 2018, the Authority recognized OPEB expense of \$280,281 and \$216,399, respectively for the plan. The plan is funded on a "pay as you go" basis. At December 31, 2019 the Authority reported deferred outflows of resources related to the OPEB plan from the following sources:

	12/31/2019 Outflow/(Inflow)
Differences between expected and actual experience	\$ 359,916
Changes of assumptions	302,177
Total	<u>\$ 662,093</u>

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

NOTE 12 – OTHER POSTEMPLOYMENT BENEFITS (Continued)

Amounts reported as deferred outflows of resources related to OPEB will be recognized in OPEB expense as follows:

<u>Year Ended December 31:</u>	
2020	\$ 43,674
2021	43,674
2022	43,674
2023	43,674
2024	43,674
Thereafter	<u>443,723</u>
Total	<u>\$ 662,093</u>

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.

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

NOTE 14 – DEFINED BENEFIT PENSION PLAN (Continued)

A. General Information about the Pension Plan (Continued)

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.

Employees Covered by Benefit Terms. At December 31, 2018, the following employees were covered by the benefit terms:

	<u>12/31/2018</u>
Inactive plan members or beneficiaries currently receiving benefits	38
Inactive plan members entitled to but not yet receiving benefits	4
Active plan members	<u>159</u>
Total	201

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, 2019 and 2018, the average active employee contribution rate was 1.0% of annual pay, and the Authority's average contribution rate was 14.98% and 11.56%, respectively, of covered annual payroll.

B. Net Pension Liability

The Authority's net pension liability was measured as of December 31, 2018 and 2017, and the total pension liability used to calculate the net pension liabilities were determined by actuarial valuations as of December 31, 2018, and December 31, 2016, respectively. The actuary utilized update procedures to roll forward the total pension liability in the December 31, 2016 actuarial valuation to the December 31, 2017 measurement date.

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

NOTE 14 – DEFINED BENEFIT PENSION PLAN (Continued)

B. Net Pension Liability (Continued)

Actuarial assumptions. The total pension liability in the December 31, 2018 and December 31, 2016 actuarial valuation was determined using the following actuarial assumptions:

	December 31, 2018 Valuation	December 31, 2016 Valuation
Investment rate of return	5.25%, 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	2.2%	3.0%

Mortality rates Pre-Retirement for the December 31, 2018 and 2016 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, 2018 and 2016 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.

The actuarial assumptions used in the December 31, 2018 and 2016 valuations 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 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 (expected returns, net of pension plan investment expenses 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 pension plan's target asset allocation of December 31, 2018 and 2016 are summarized in the tables below labeled "System Nominal and Real Rates of Return by Asset Class." There are three steps to the method:

- 1.) Expected future real rates of return are based primarily on the 20 year 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.
- 2.) The nominal rates of return by asset class are adjusted by the System's investment expenses and an expected future annual inflation rate of 2.2% and 3.0% at December 31, 2018 and 2016 respectively.
- 3.) The long-term expected real rates of return are further adjusted by weighting each asset class using the PMRS portfolio target asset allocations.

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

NOTE 14 – DEFINED BENEFIT PENSION PLAN (Continued)

B. Net Pension Liability (Continued)

System Nominal and Real Rates of Return by Asset Class
12/31/2018 Valuation

Asset Class	Target Allocation	Nominal Rate of Return	Long-Term Expected Real Rate of Return
Domestic Equities (large capitalized firms)	25.0%	7.3%	4.6%
Domestic Equities (small capitalized firms)	15.0%	10.0%	7.3%
International Equities (international developed markets)	15.0%	6.2%	3.5%
International Equities (emerging markets)	10.0%	10.6%	8.3%
Real Estate	20.0%	8.5%	5.4%
Fixed income	15.0%	3.3%	1.1%

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%	8.6%	5.6%
Domestic Equities (small capitalized firms)	15.0%	10.2%	7.2%
International Equities (international developed markets)	15.0%	7.6%	4.6%
International Equities (emerging markets)	10.0%	11.7%	8.7%
Real Estate	20.0%	9.2%	6.2%
Fixed income	15.0%	5.1%	2.1%

Based on the three part analysis, the PMRS Board established the System's Long-Term Expected Rate of Return at 7.0%, and 7.3% for the December 31, 2018 and 2016 valuations, respectively.

In addition to determining the System's Long-Term Expected Rate of Return, the PMRS Board, under the laws of the Commonwealth of Pennsylvania (Act 15 of 1974), is obligated to develop and apply the Regular Interest Rate to each of the individual participating municipalities' actuarial asset accounts held by PMRS. 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." This rate was 5.25% for the December 31, 2018 and 2016 valuations.

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.

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

NOTE 14 – DEFINED BENEFIT PENSION PLAN (Continued)

B. Net Pension Liability (Continued)

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 (Regular Interest Rate / Discount Rate). The PMRS Board establishes the Regular Interest Rate / Discount 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. As a starting point, the Board considers the following five quantitative factors in reviewing the Regular Interest Rate / Discount 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 then adjust the Regular Interest Rate / Discount Rate by a variety of qualitative factors such as the desire to minimize Regular Interest Rate / Discount Rate volatility, varying levels of asset allocation and liquidity, 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 Regular Interest Rate / Discount Rates adopted by the Board and used to measure the individual participating municipalities' total pension liability was 5.25% for the December 31, 2018 and 2016 actuarial valuations.

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.

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.

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

NOTE 14 – DEFINED BENEFIT PENSION PLAN (Continued)

C. Changes in the Net Pension Liability

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at 12/31/2018 (based on 12/31/2017 measurement date)	\$ 27,730,765	\$ 25,973,510	\$ 1,757,255
Changes for the year:			
Service cost	1,688,127	-	1,688,127
Interest	1,503,378	-	1,503,378
Changes of benefits	-	-	-
Changes of assumptions	-	-	-
Differences between expected and actual experience	563,913	-	563,913
Contributions - employer	-	1,141,302	(1,141,302)
Contributions - member	-	602,779	(602,779)
Net investment income/(loss)	-	(1,157,514)	1,157,514
Benefit payments, including refunds of employee contributions	(1,073,743)	(1,073,743)	-
Administrative expense	-	(62,006)	62,006
Net changes	2,681,675	(549,182)	3,230,857
Balances at 12/31/19 (based on a 12/31/18 measurement date)	<u>\$ 30,412,440</u>	<u>\$ 25,424,328</u>	<u>\$ 4,988,112</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	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a) - (b)
Balances at 12/31/2017 (based on 12/31/2016 measurement date)	\$ 25,951,527	\$ 21,662,718	\$ 4,288,809
Changes for the year:			
Service cost	1,543,865	-	1,543,865
Interest	1,401,384	-	1,401,384
Changes of benefits	-	-	-
Changes of assumptions	-	-	-
Differences between expected and actual experience	-	-	-
Contributions - employer	-	1,106,875	(1,106,875)
Contributions - member	-	543,474	(543,474)
Net investment income/(loss)	-	3,886,626	(3,886,626)
Benefit payments, including refunds of employee contributions	(1,166,011)	(1,166,011)	-
Administrative expense	-	(60,172)	60,172
Net changes	1,779,238	4,310,792	(2,531,554)
Balances at 12/31/18 (based on a 12/31/17 measurement date)	\$ 27,730,765	\$ 25,973,510	\$ 1,757,255

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%, 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%) or 1-percentage-point higher (6.25%) than the discount rate utilized for the December 31, 2018 and 2016 actuarial valuations:

	1% Decrease (4.25%)	Discount Rate 12/31/16 & 12/31/18 Valuation (5.25%)	1% Increase (6.25%)
Authority's net pension liability 12/31/18	\$8,292,759	\$4,988,112	\$2,211,762
Authority's net pension liability 12/31/17	\$4,819,222	\$1,757,255	\$(814,523)

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

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

NOTE 14 – DEFINED BENEFIT PENSION PLAN (Continued)

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

For the year ended December 31, 2019, the Authority recognized pension expense of \$358,953, \$180,694, and \$1,332,826 in the Suburban Water Fund, Suburban Wastewater Fund, and City Fund, respectively.

For the year ended December 31, 2018, the Authority recognized pension expense of \$227,782, \$114,663, and \$845,775 in the Suburban Water Fund, Suburban Wastewater Fund, and City Fund, respectively.

At December 31, 2019 and 2018 the Authority reported deferred outflows and deferred inflows of resources related to pensions from the following sources:

	2019 Deferred Outflows/(Inflows) of Resources	2018 Deferred Outflows/(Inflows) of Resources
Differences between expected and actual experience	\$ 1,213,661	\$ 923,196
Changes in assumptions	471,179	588,972
Net difference between projected and actual earnings on pension plan investments	445,758	(1,885,036)
Contributions subsequent to the measurement date	<u>1,414,635</u>	<u>1,145,082</u>
Total	<u>\$ 3,545,233</u>	<u>\$ 772,214</u>

The \$1,414,635 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, 2020 financial statements. Other amounts reported as deferred outflows of resources related to pensions will be recognized in pension expense as follows:

Year ended December 31:	
2020	\$ 514,388
2021	260,769
2022	351,874
2023	842,447
2024	80,559
Thereafter	80,561

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. Fifty-six and fifty-three employees contributed into the plan during 2019 and 2018 respectively.

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

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 620 Pennsylvania municipal entities as of December 31, 2019. 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 Markel 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 2019 and 2018 the Authority paid \$290,809 and \$282,918 to PIRMA as its share of liability insurance premiums, respectively.

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 \$221,805 in 2018 and a gross premium \$210,054 in 2019. As of January 1, 2019, the Authority had accrued \$49,484 in Rate Stabilization Fund (RSF) credits which were available to reduce the Authority's 2019 premium. Any unused RSF credits will be rolled over to 2020, and the Trust will add investment income to the unused balance. The Authority also received dividends from the Trust of \$6,059 in 2018 and \$9,540 in 2019.

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 273 municipal entities as of October 1, 2019, 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 \$50,000 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, 2019 and December 31, 2018 totaled \$1,684,981 and \$1,404,862, respectively.

The Authority also purchases property coverage through CNA, brokered through Murray Securus. For 2019 and 2018, insurance costs amounted to \$204,000 and \$181,555, 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.

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

Notes to Financial Statements

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 2019 and 2018, 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.

NOTE 18 – RESTATEMENT

The Authority recorded the cumulative effect of applying the provisions of GASB Statement No. 75 as a restatement of beginning net position as of January 1, 2018. Net position as of January 1, 2018 was decreased by \$72,458, and \$943,197 in the Suburban Water Fund, and the City Division fund, respectively. The effect on beginning balances for calendar year 2018 is as follows:

Description	January 1, 2018 as Previously Reported	Restatement	January 1, 2018 as Restated
Net OPEB Liability/(Asset) (GASB 75)			
- Suburban Water Fund	\$ (1,182,363)	\$ 72,458	\$ (1,109,905)
- City Division Fund	884,981	943,197	1,828,178
Total	<u>(297,382)</u>	<u>1,015,655</u>	<u>718,273</u>
Net Position			
- Suburban Water Fund	96,699,841	(72,458)	96,627,383
- City Division Fund	<u>(44,180,094)</u>	<u>(943,197)</u>	<u>(45,123,291)</u>
Total	<u>\$ 52,519,747</u>	<u>\$ (1,015,655)</u>	<u>\$ 51,504,092</u>

NOTE 19 – SUBSEQUENT EVENTS

Subsequent to year end, a global pandemic due to the spread of the COVID-19 coronavirus caused the United States government to declare a national emergency. The pandemic has led to widespread voluntary and government-mandated closings of local stores and businesses, which has resulted in significant job losses. These job losses have the potential to have a significant impact on all aspects of the Authority's operations. In addition, due to the temporary closure of all businesses that are not deemed life sustaining, State and Federal tax revenues are also significantly decreased. This decrease could result in less grant money that is relied upon by local municipalities to fund specific projects. In addition, the Authority's own source revenue or derived revenues could be affected negatively. Overall, decreased funding could result in the Authority having to curtail or eliminate some services.

**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**

	*	*	*	*	*
	2019	2018	2017	2016	2015
Total Pension Liability					
Service Costs	\$ 1,688,127	\$ 1,543,865	\$ 1,452,861	\$ 1,488,350	\$ 677,165
Interest	1,503,378	1,401,384	1,276,753	1,163,405	1,038,585
Changes of Benefit Terms	-	-	-	-	-
Differences Between Expected and Actual Experience	563,913	-	1,061,505	-	329,959
Changes of Assumptions	-	-	641,095	209,677	-
Benefit Payments, Including Refunds of Member Contributions	(1,073,743)	(1,166,011)	(915,177)	(600,285)	(544,982)
Net Change in Total Pension Liability	2,681,675	1,779,238	3,517,037	2,261,147	1,500,727
Total Pension Liability - beginning	27,730,765	25,951,527	22,434,490	20,173,343	18,672,616
Total Pension Liability - ending (a)	<u>\$ 30,412,440</u>	<u>\$ 27,730,765</u>	<u>\$ 25,951,527</u>	<u>\$ 22,434,490</u>	<u>\$ 20,173,343</u>
Plan Fiduciary Net Position					
Contributions - Employer	\$ 1,141,302	\$ 1,106,875	\$ 972,122	\$ 978,336	\$ 365,907
Contributions - Member	602,779	543,474	526,823	507,893	473,935
Net Investment Income	(1,157,514)	3,886,626	1,670,359	(99,517)	947,378
Benefit Payments, Including Refunds of Member Contributions	(1,073,743)	(1,166,011)	(915,177)	(600,285)	(544,982)
Administrative Expense	(62,006)	(60,172)	(63,095)	(52,516)	(41,411)
Net Change in Plan Fiduciary Net Position	(549,182)	4,310,792	2,191,032	733,911	1,200,827
Plan Fiduciary Net Position - beginning	25,973,510	21,662,718	19,471,686	18,737,775	17,536,948
Plan Fiduciary Net Position - ending (b)	<u>\$ 25,424,328</u>	<u>\$ 25,973,510</u>	<u>\$ 21,662,718</u>	<u>\$ 19,471,686</u>	<u>\$ 18,737,775</u>
Authority's Net Pension Liability - ending (a) - (b)	<u>\$ 4,988,112</u>	<u>\$ 1,757,255</u>	<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	83.60%	93.66%	83.47%	86.79%	92.88%
Covered Payroll	\$ 9,905,129	\$ 9,135,580	\$ 8,807,193	\$ 8,763,140	\$ 2,314,192
Authority's Net Pension Liability as a Percentage of Covered Payroll	50.36%	19.24%	48.70%	33.81%	62.03%

* - Information only available for five 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**

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Actuarially Determined Contribution	\$ 1,414,635	\$ 1,145,082	\$ 1,110,595	\$ 972,122	\$ 978,336	\$ 361,607	\$ 190,996	\$ 136,779	\$ 134,456	\$ 99,891
Contribution in Relation to the Actuarially Determined Contribution	1,414,635	1,145,082	1,110,595	972,122	978,736	365,907	190,996	136,779	134,456	99,891
Contribution Deficiency/(Excess)	\$ -	\$ -	\$ -	\$ -	\$ (400)	\$ (4,300)	\$ -	\$ -	\$ -	\$ -
Covered Payroll	\$ 9,441,320	\$ 9,905,129	\$ 9,135,580	\$ 8,807,193	\$ 8,763,140	\$ 2,314,192	\$ 2,220,914	*	\$ 2,563,288	*
Contribution as a percentage of Covered Payroll	14.98%	11.56%	12.16%	11.04%	11.17%	15.81%	8.60%	*	5.25%	*

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	8 years
Asset Valuation Method	Based Upon Municipal Reserves in PMRS (Fair Value)
Inflation	3.0%
Salary Increases	Age/Merit Scale including inflation ranging from 3.0% to 8.3%.
Investment Rate of Return	5.25%, net of pension plan investment expense, including inflation.
Pre-Retirement Mortality	Males - RP 2000 with 1 year set back Females - RP 2000 with 5 year set back
Post-Retirement Mortality:	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**

	*	*	*
	2019	2018	2017
Total OPEB Liability Suburban Plan			
Service Cost	\$ 7,065	\$ 7,960	\$ 7,580
Interest	162,742	158,365	151,765
Changes of Benefit Terms	-	-	-
Differences Between Expected and Actual Experience	90,059	-	-
Changes of Assumptions	(99,162)	-	-
Benefit Payments	(110,336)	(92,904)	(61,525)
Net Change in Suburban Plan Total OPEB Liability	50,368	73,421	97,820
Suburban Plan Total OPEB Liability - Beginning	2,091,480	2,018,059	1,920,239
Suburban Plan Total OPEB Liability - Ending (a)	<u>\$ 2,141,848</u>	<u>\$ 2,091,480</u>	<u>\$ 2,018,059</u>
Suburban Plan Fiduciary Net Position			
Contributions - Employer	\$ 22,928	\$ 13,376	\$ -
Net Investment Income	645,121	(220,248)	485,937
Benefit Payments	(110,336)	(92,904)	(61,526)
Administrative Expense	-	-	-
Net Change in Suburban Plan Fiduciary Net Position	557,713	(299,776)	424,411
Suburban Plan Fiduciary Net Position - Beginning	2,828,188	3,127,964	2,703,553
Suburban Plan Fiduciary Net Position - Ending (b)	<u>\$ 3,385,901</u>	<u>\$ 2,828,188</u>	<u>\$ 3,127,964</u>
Suburban Plan Net OPEB Liability/(Asset) - Ending (a) - (b)	<u>\$ (1,244,053)</u>	<u>\$ (736,708)</u>	<u>\$ (1,109,905)</u>
Suburban Plan Fiduciary Net Position as a Percentage of the Total Suburban Plan OPEB Liability	158.08%	135.22%	155.00%
Covered Payroll Suburban Plan	\$ 1,152,146	\$ 1,098,115	\$ 1,045,824
Suburban Plan Net OPEB Liability/(Asset) as a Percentage of Covered Payroll	-107.98%	-67.09%	-106.13%

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

** - The 12/31/2019 measurement date had a change in assumptions related to Healthcare Cost Trend Rates, as compared to previous years.

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

**REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF CONTRIBUTIONS SUBURBAN OPEB PLAN**

LAST 10 FISCAL YEARS

	*	*	*
	2019	2018	2017
Actuarially Determined Contribution	\$ -	\$ -	\$ -
Contribution in Relation to the Actuarially Determined Contribution	<u>22,928</u>	<u>13,376</u>	<u>-</u>
Contribution Deficiency (Excess)	<u>\$ (22,928)</u>	<u>\$ (13,376)</u>	<u>\$ -</u>
Suburban Plan Covered Payroll	\$ 1,152,146	\$ 1,098,115	\$ 1,045,824
Contributions as a Percentage of Covered Payroll	1.99%	1.22%	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	20 years
Asset Valuation Method	5-year smoothed market
Inflation	2.25%
Healthcare Cost Trend Rates	20% during 2020 followed by 8.25% during 2021 reduced by .25% per year to an ultimate rate of 5.00% per year.
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 three years. 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

	[*] <u>2019</u>	[*] <u>2018</u>	[*] <u>2017</u>
Annual money-weighted rate of return, net of investment expense	23.20%	-7.13%	18.18%

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

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

**REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF CHANGES IN THE CITY DIVISION'S TOTAL OPEB LIABILITY
AND RELATED RATIOS
LAST 10 FISCAL YEARS**

	*	*
	2019	2018
Total OPEB Liability City Division Plan		
Service Cost	\$ 184,957	\$ 142,941
Interest	106,760	73,458
Changes of Benefit Terms	(55,110)	-
Differences Between Expected and Actual Experience	383,657	-
Changes of Assumptions	322,110	-
Benefit Payments	(17,530)	(24,498)
Net Change in City Division Plan Total OPEB Liability	924,844	191,901
City Division Plan Total OPEB Liability - Beginning	2,020,079	1,828,178
City Division Plan Total OPEB Liability - Ending (a)	<u>\$ 2,944,923</u>	<u>\$ 2,020,079</u>
Covered Payroll City Division Plan	\$ 4,322,635	\$ 3,279,472
City Division Plan Total OPEB Liability as a Percentage of Covered-Employee Payroll	68.13%	61.60%

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

** - The 12/31/2019 measurement date had a change in assumptions related to Healthcare Cost Trend Rates, as compared to previous years.

*** - The 12/31/2019 measurement date had a change in benefit terms related to the length of benefit coverage for union employees hired after January 1, 2017.

No assets are accumulated in a trust that meets the criteria in paragraph 4 of GASB Statement No. 75.

**OTHER
SUPPLEMENTARY
INFORMATION**

**LEHIGH COUNTY AUTHORITY
ALLENTOWN, PENNSYLVANIA**

**COMBINING STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
SUBURBAN WASTEWATER FUND
For the year ended December 31, 2019**

	Western Lehigh Interceptor System	West. Weisenberg Wastewater	Common Rate Wastewater Fund	Other Wastewater Funds	Total Wastewater Fund
Operating Revenues					
Charges for Services	\$ 5,132,674	\$ 358,451	\$ 725,612	\$ 7,623,419	\$ 13,840,156
Other Income	119,604	17	48,671	73,608	241,900
Total Operating Revenues	5,252,278	358,468	774,283	7,697,027	14,082,056
Operating Expenses					
Salaries and Wages	182,523	56,832	137,653	174,660	551,668
Employee Benefits	93,007	28,858	72,917	132,692	327,474
General and Administrative	173,308	12,035	39,470	162,329	387,142
Utilities	104,270	25,330	42,643	201,787	374,030
Materials and Supplies	188,087	21,313	42,288	83,731	335,419
Miscellaneous Services	390,331	38,448	99,416	5,802,402	6,330,597
Treatment and Transportation	3,367,315	-	18,253	-	3,385,568
Depreciation and Amortization	553,206	135,327	147,902	3,734,637	4,571,072
Total Operating Expenses	5,052,047	318,143	600,542	10,292,238	16,262,970
Operating Income (Loss)	200,231	40,325	173,741	(2,595,211)	(2,180,914)
Nonoperating Revenues (Expenses)					
Tapping and Capital Recovery Fees	1,256,059	-	48,546	269,144	1,573,749
Inspection and Plan Reviews	-	-	40,758	1,760	42,518
Interest Earnings	199,551	377	612	132,307	332,847
Interest Expense	(85,033)	(29,831)	(83,543)	(14,707)	(213,114)
Other Expense	(25,546)	-	(1,353)	(17,231)	(44,130)
Other Income	111	-	360	240	711
Total Nonoperating Revenues (Expenses)	1,345,142	(29,454)	5,380	371,513	1,692,581
Increase (Decrease) in net position before capital contributions	1,545,373	10,871	179,121	(2,223,698)	(488,333)
Capital Contributions					
Capital Assets Provided by Developers and Others	-	-	15,000	-	15,000
Total Capital Contributions	-	-	15,000	-	15,000
Increase (Decrease) in Net Position	1,545,373	10,871	194,121	(2,223,698)	(473,333)
Net Position at Beginning of Year	37,246,871	2,750,760	10,001,745	49,863,296	99,862,672
Net Position at End of Year	\$ 38,792,244	\$ 2,761,631	\$ 10,195,866	\$ 47,639,598	\$ 99,389,339



1053 SPRUCE ROAD * P.O. BOX 3348 * ALLENTOWN, PA 18106-0348
610-398-2503 * FAX 610-398-8413 * www.lehighcountyauthority.org
email: service@lehighcountyauthority.org

MEMORANDUM

TO: LCA Board of Directors
FROM: Liesel Gross
DATE: June 17, 2020
RE: Evaluation of Bond Refinancing

Approvals Requested:

1. Financial Advisor – Concord Public Finance – per engagement letter
2. Appraiser – AUS Consultants – \$70,000
3. Bond Counsel – McNees, Wallace & Nurick (MWN) – per engagement letter
4. Engineering Consultant – Arcadis – \$40,000
5. Underwriter – RBC Capital Markets & Janney Montgomery Scott – from bond proceeds

Description:

Due to current market conditions and near-historic low interest rates, Lehigh County Authority (LCA) staff are recommending an exploration of opportunities to refinance all or a portion of the existing “Series A” bonds associated with Allentown Water & Sewer Concession Lease Agreement (Lease). For reference, all Lease bonds are listed in the table below.

Bond Series	Existing Debt
2013 Series A – tax exempt, callable in 2023	\$245.6 M
2013 Series B – non-callable, zero coupon	\$64.3 M
2018 Fulton Loan – refinancing of 2013 Series C bonds – taxable	\$17.9 M
TOTAL	\$327.8 M

LCA staff and financial advisor, Concord Public Finance, believe it is beneficial to consider refinancing a portion of the Series A bonds for three primary reasons.

1. Current bond interest rates average to 5.45% and current bond rates are estimated to be 3.5% or lower, resulting in significant interest rate savings.
2. Refinancing may allow some limited restructuring of the annual debt service payments due, which may provide financial benefits to the Allentown Division financial performance.
3. While the Series A bonds are not callable on a tax-exempt basis until 2023, completing a partial advanced refunding three years early would allow LCA to take advantage of the current low taxable interest rates, while maximizing possible interest savings available in 2023 when the remaining Series A bonds can be refinanced on a tax-exempt basis.

Every drop matters. Every customer counts.

In order to fully explore the option to refinance all or a portion of the Series A bonds, several professional services will be required.

- A. **Financial Advisor** – Concord Financial has served as LCA’s financial advisor on many transactions, loans and bonds over many years, most recently the Series C Lease bond refinancing that was required in 2018. They serve an important role in coordinating with staff and other professional service providers to ensure a smooth process to evaluate financing options, communicate with the LCA Board of Directors, coordinate the bond rating and municipal bond insurance processes, and negotiate the terms of any financings that ultimately occur. LCA has retained Concord to assist in this process and no fees are due unless a refinancing occurs. However, Board support for the continued use of Concord Financial is requested. *(See attached engagement letter)*
- B. **Appraiser** – Because the Lease bonds are considered to be Leasehold Mortgage Debt under the terms of the Lease agreement, an appraisal of the system value is required to ensure that the value of the refinanced bonds does not exceed 80 percent of the value of the system.

For this service, several firms were considered, and LCA staff recommend authorizing AUS Consultants to complete the work. AUS has completed prior work for both LCA and the City of Allentown. Per the terms of the Lease, the City is required to accept LCA’s selection of an appraiser for this service, and the City has provided their acceptance of the selection of AUS. *(See attached proposal letter and acceptance letter from the City of Allentown)*

- C. **Engineering Consultant** – If bond refinancing is ultimately found to be favorable, an independent engineer’s report will need to be prepared to accompany the bond documents. The review will include a technical review of the Allentown water and sewer systems, LCA’s operating performance, and an independent review of LCA’s financial evaluation of the system. This is a key component of the bond offering and requires significant time to complete, and LCA recommends beginning the process at this time so that documents can be generated efficiently if a bond refinancing is pursued.

Arcadis served in this role in 2013 and 2018 to develop the independent engineer’s report that accompanied the bond documents. Arcadis has also provided annual independent reviews of LCA’s financial performance and operation of the system, for submission to the Lease bond trustee. Therefore, LCA recommends authorizing Arcadis to support the effort to review bond refinancing options. *(See attached proposal)*

- D. **Bond Counsel** – Due to the complex nature of the Lease and related Trust Indenture, it will be important to have bond counsel on board to evaluate all bond documents and refinancing options and provide guidance on necessary steps to ensure compliance with existing or future bondholder requirements.

For this service, LCA recommends approving an engagement letter with McNees, Wallace & Nurick (MWN), who currently serve as bond counsel for the Lease bonds. Their in-depth

knowledge of the Lease agreement and current bond documents will be invaluable as we complete this refinancing evaluation. *(See attached engagement letter)*

- E. **Underwriter** – If the bonds are refinanced, the underwriter plays a critical role in securing bondholders for the sale of the bonds. Due to the criticality of this role, it is important to bring the underwriter into the team as soon as possible to support all other processes noted above. In addition to selling the bonds, the underwriter will coordinate the preparation of the preliminary official statement (under supervision of Underwriter's Counsel) and assist in completing extensive research needed to secure an updated bond rating and attract investors to the eventual bond sale, if approved by LCA. Their work during this evaluation period will focus on preliminary document preparation and coordination with the team's efforts.

LCA staff and representatives from Concord Public Finance issued a request for proposals to three pre-qualified underwriters who have extensive Pennsylvania experience in underwriting municipal bonds. Due to the respective talents and market bases of the respondents, a joint engagement is recommended: RBC Capital Finance will serve as the primary underwriter due to their experience and access to large institutional investors, and lowest overall projected cost; Janney Montgomery Scott will serve as a secondary underwriter to provide access to additional investors in the regional market. While the range of fees associated with the underwriters' work will be paid from future bond proceeds, it is recommended to authorize them at this time in order to have the full team of professionals assembled to support this comprehensive evaluation. It is important to note that if the refinancing is ultimately not completed, LCA would be responsible for underwriters' counsel fees, not to exceed \$35,000. *(More details about this arrangement is described in the attached memo from Concord Public Finance attached)*

LCA staff have reviewed these proposals and believe the team listed above will be required to provide a complete review of the opportunity to refinance the Series A Lease bonds. At the June 22, 2020 meeting of the LCA Board of Directors, approval of these professional services will be requested so the refinancing opportunity can be fully explored.

We expect this evaluation to continue through the summer months and a firm recommendation provided in August. If a refinancing is ultimately determined to be beneficial for LCA and its customers, Board authorization to complete the bond refinancing will be requested at that time.



Concord Public Financial Advisors, Inc.
Independent Registered Municipal Advisors

READING OFFICE

2909 Windmill Road, Suite 6
Reading, PA 19608
(610) 376-4100

LANCASTER OFFICE

2938 Columbia Avenue, Suite 1002
Lancaster, PA 17603
(717) 295-2300

April 6, 2020

Liesel Gross, Chief Executive Officer
Edward C. Klein, Chief Financial Officer
Lehigh County Authority
1053 spruce Road
Allentown, PA 18106

Re: City of Allentown Bond Restructuring

Dear Liesel and Ed:

Thank you for the opportunity to have Concord Public Financial Advisors, Inc. ("Concord") serve as financial advisor to the Lehigh County Authority (the "Client") in connection with the Client's bond restructuring of the debt related to the City of Allentown (the "Project"). As required by the Rules of the Municipal Securities Rulemaking Board (MSRB), this letter will serve as both the delivery of certain required disclosures and an engagement letter setting forth the services Concord will provide and the form and basis of compensation Client will pay for those services.

Concord acknowledges it is your fiduciary representing only your interests in connection with financing of the Project and will not represent the interests of lenders, banks, broker dealers, investment providers or any other municipal market participant whose interests may be at odds with yours.

Concord will provide advice and may make recommendations with respect to the structure of the financing and the manner of sale that are suitable to your needs and circumstances. Because market conditions change from time to time and because Concord does not have direct control over other entities required to complete the financing transaction, Concord cannot guaranty any specific result. This is a best efforts undertaking.

Upon the successful completion of the Project, Client will pay Concord a fee in an amount to be negotiated with the Client prior to closing and agrees to reimburse Concord for its actual, reasonable out-of-pocket expenses.



Lehigh County Authority
April 6, 2020
Page 2

After undertaking a reasonable due diligence investigation, Concord advises you of the following conflict of interests:

- Concord will be compensated only if the financing is completed. Concord recognizes this inherent conflict of interest and will manage the same by being mindful of Concord's fiduciary duty to you.
- We do call to your attention in the past Concord has provided municipal financial advice to the County of Lehigh (the "County"). Concord recognizes working with the County and with you could present a conflict of interest in the future, if the interests of the County and the Authority do not align. If Concord becomes aware of any conflict of interest in the future, it will advise you of the same.

There are no other actual or potential conflicts of interest that Concord is aware of that might impair its ability to render unbiased and competent advice or to fulfill its fiduciary duty to the Client. If Concord becomes aware of any potential conflict of interest that arises after this disclosure, Concord will disclose the detailed information in writing to the Client in a timely manner.

Concord is not a law firm and does not provide legal advice. Please consult your general counsel, special counsel or bond counsel with respect to any legal matters.

Our engagement begins on the date hereof and may be terminated by either party upon five (5) business days' written notice. Otherwise, upon closing of the financing, this engagement shall terminate.

Concord is registered with the Securities and Exchange Commission (SEC) and the MSRB. Neither Concord nor any of its principals have been the subject of any legal proceedings or any disciplinary action brought by the SEC, the MSRB or any other regulatory body in connection with its services as a municipal advisor. To view Concord's registration as a Municipal Advisor with the SEC, including a January 9, 2020 change to Concord's Form MA/MA-I relating to a civil legal matter, please visit www.sec.gov and search for Concord's Form MA/MA-I under Company Filings. To view the MSRB's Municipal Advisory Client Brochure that describes the protections that may be provided by the MSRB rules and how to file a complaint with an appropriate regulatory authority, please visit www.msrb.org.



Lehigh County Authority
April 3, 2020
Page 3

If the terms set forth above conform to your understanding of Concord's engagement by the Client, please execute this letter and return it to me by scanned email or by mail.

Thank you for this opportunity. We look forward to working with you.

Very truly yours,
CONCORD PUBLIC FINANCE

A handwritten signature in black ink, appearing to read "Chris M. Gibbons".

Christopher M. Gibbons,
Principal

Client Acknowledgement:

I have read the above engagement letter and it correctly sets forth my understanding of the engagement Concord has undertaken, as well as the agreement with respect to Concord's compensation.

Lehigh County Authority

By: _____
Title:

Date: _____

Jerome C. Weinert, PE, ASA, CDP
Executive Vice President

AUS Consultants
Depreciation and Valuation Services
8555 West Forest Home Avenue
Suite 201
Greenfield, WI 53228
Telephone: 414-529-5755
Cell : 414-698-5750
E-Mail : weinertj@AUSWEST.net

Mr. Christopher M. Gibbons
Concord Public Financial Advisors, Inc.
2938 Columbia Avenue Suite 1002
Lancaster, PA 17603

RE: Lehigh County Authority ("LCA") Business Enterprise Valuation appraisal of the City of Allentown, Pennsylvania's – water and wastewater operations

Dear Mr. Gibbons:

AUS Consultants is pleased to respond to your request for a proposal for a business enterprise appraisal City of Allentown Pennsylvania's water and wastewater systems' property and operations (System). We understand the nature and purpose of the request is to determine the value of those property in support of Lehigh County, Pennsylvania Authority's (the Authority) mortgage bond financing as such the market value would be that amount that could be realized from the sale of the Systems in an open market transaction. The proposed appraisal is not intended to represent the appraisal requirements consistent with Section 1102(a) of the Pennsylvania Public Utility Code, 66 Pa C.S. § 1102(a), for approval of the transfer, by sale of a water/wastewater utility under Code 1329. AUS Consultants is currently under contract with Pennsylvania American Water Company to provide its Section 1329 appraisals and as such is precluded to provide such services to third parties wherein PAWC is the successful bidder in such acquisitions. Our response to your request will include the scope of our services, an initial listing of data required to perform the valuation and a broad range of project costs through the completion of the valuation study.

Before addressing the proposal requirements, it is important to understand the valuation concepts and parameters as they would apply to this project.

Valuation Study

AUS Consultants understands the purpose of the valuation study is to determine the market value of the Systems' water and wastewater assets in a fair and equitable market transaction. Market value is defined as the amount at which these assets would exchange between a willing buyer and seller, both having reasonable knowledge of all relevant facts, with neither compelled to affect a transaction, and with equity

to both. Our conclusion will be representative of operating business enterprise and not represent the amount that would be realized from a liquidation of those assets.

Valuation Methodologies

The valuation of the water and wastewater assets as part of a going concern, considers several methods so that the conclusion reached can be based upon a diligent analysis and transactions can be accomplished with confidence. There are three (3) generally accepted valuation methodologies: the cost, Income, and market approaches.

Cost Approach - This method considers the cost of the underlying assets of the system. Each asset category is restated at its market value, reflecting the cost to purchase, deliver, install, and begin efficient operations less all forms of depreciation. AUS Consultants will utilize a reproduction cost new or replacement cost less all forms of depreciation as being representative of current market value. The cost approach will be utilizing data from a vintage asset list of plant by account and/or function groups that will be provided by the Authority. This data should include the accrued depreciation by asset account.

Income Approach - The income approach provides an indication of value by discounting the expected or future cash flow to the appraisal date (present value). The projected cash flow levels must provide for additional cash investment and working capital additions, as well as reflect the specific growth potential of the system being valued. The discount rate used in the present value calculations will be developed from a market analysis and should reflect the risks associated with achieving the expected profit levels and growth.

Market Approach - The market approach will serve as one focal point of our investigation. Indications of value for the System's plant assets may be derived from a comparison with market transactions. Market sales of systems that are selected to be comparable for the analysis will be screened to find those which are most similar and, most importantly, to find the systems that are affected to similar extent by the same economic, interest rate, business cycle, industry, and regulatory risks. While no two systems are exactly alike, comparability is based upon similarity of fundamentals.

Appraisal Approaches Correlation – Each of the above described appraisal approaches will be considered in arriving at the final appraisal's market value conclusion.

Scope of Services

AUS Consultants will perform a valuation analysis of the sewer system based upon the three (3) approaches to determine a fair market value as outlined above. In addition, AUS Consultants is willing to participate in meetings with Authority's representatives, attend public disclosure meetings and work closely with the Authority's financial advisors during the course of this project. Some of the differences in the approaches for each methodology have been set forth in the narratives above. In an effort to streamline this proposal, the valuation approaches listed above will be inclusive in our scope of work; however, all detailed elements of our analyses will not be addressed in the scope of services.

AUS Consultants Professional Staff

AUS Consultants' professional staff has extensive nationwide experience in preparing business enterprise valuations for water and wastewater systems.

Jerome C. Weinert, Professional Engineer (PE), Accredited Senior Appraiser (ASA), Certified Depreciation Professional (CDP)

- 47 years in Appraisal and Depreciation Consulting
- BS in Mechanical Engineering — Milwaukee School of Engineering (1972)
- Master's in Business Administration — Marquette University (1988)
- Testimony Experience:
- Regulatory (Depreciation and Rate Base)
- Courtroom (Valuations — ad valorem taxation and eminent domain and rate of return)

Michael J. Diedrich, PE, ASA, CDP

- 36 years in Appraisal and Depreciation Consulting
- BS in Architectural Engineering Technology — Milwaukee School of Engineering (1981)
- Master's in Business Administration — Marquette University (1991)
- Testimony Experience:
- Courtroom (Valuations ad valorem taxation and eminent domain)

David G. Weiler

- 41 years in Valuations of Business Enterprises, Closely held common Stock, Cost of Capital Studies and Valuations of Intangible Property
- Bachelor of Science in Finance-Drexel University (1978)

David A. Sheffer

- 37 years in Regulatory Consulting (Depreciation, Rate Base, Cost of Service, Valuations and Original Cost Studies)

Elizabeth A Weinert

- 17 years in Appraisal and Depreciation Consulting
- BS in Mechanical Engineering — Milwaukee School of Engineering (2001)
- Master's in Aeronautical Engineering — University of Alabama (2015)

Data Requirements

In order to expedite the project upon the Authority's acceptance of our proposal, AUS Consultants has included in Attachment A to this response the "First Request for Data".

This data request is not intended to be all inclusive of the information required. There will be follow-up questions and additional requests for data.

AUS Consultants would like to perform a physical inspection of the Systems and schedule interviews, as appropriate, with plant operators and personnel.

Cost Estimate

AUS Consultants would offer a professional fee of \$35,000 to complete each (water and wastewater) valuation studies, not including out-of-pocket expenses, which will be billed at cost. The professional fee range is an estimate of work based upon anticipated available information and due diligence required during the course of the project. Our cost estimate also considers that the Systems' managers will provide assistance to AUS Consultants including an opinion with regard to the condition of the assets.

For the price of the professional fee listed above, the Authority will provide the vintage asset list and accrued depreciation that will be utilized in developing the cost approach.

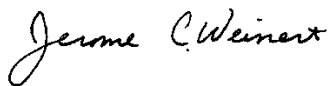
Out-of-pocket expenses for travel, living, production, delivery, communication and clerical are invoiced at cost in addition to the professional fee quote. Our invoices are generally rendered monthly and are due and payable upon request.

AUS Consultants appreciates the opportunity to respond to the Authority's request for our services. Should you have any questions regarding our response, please contact the undersigned.

Respectfully submitted,

AUS Consultants

BY: Jerome C. Weinert

A handwritten signature in cursive script that reads "Jerome C. Weinert".

JCW:eaw

Accepted by:

Lehigh County, PA Authority



Office of the City Solicitor

City Solicitor

Matthew J. Kloiber

Associate City Solicitor

Frances A. Fruhwirth

Assistant City Solicitor

Jorge M. Pereira

Adam S. Rosenthal

Via Email Only: lieselgross@lehighcountyauthority.org

June 17, 2020

Liesel M. Gross
Chief Executive Officer
Lehigh County Authority
P.O. Box 3348
Allentown, PA 18106

Re: Written Appraisal for Bond Refinancing

Dear Ms. Gross:

Kindly accept this correspondence as the City's consent for the Lehigh County Authority (LCA) to engage AUS Consultants as LCA's appraiser for the purposes of completing a Written Appraisal as such term is defined in Article 1, Section 1.1 of the Lease Concession Agreement between the City and LCA.

Thank you.

Very truly yours,


Frances A. Fruhwirth
Associate City Solicitor

Mr. Edward Klein
Chief Financial Officer
Lehigh County Authority
1053 Spruce Road
PO Box 3348
Allentown, PA 18106

Arcadis U.S., Inc.
1128 Walnut St,
Suite 400
Philadelphia
Pennsylvania 19107
Tel 215 625 0850
Fax 215 625 0172
www.arcadis.com

Subject.

Bond Feasibility Certificate for the Lehigh County Authority, Pennsylvania

Dear Mr. Klein:

Arcadis is pleased to provide Lehigh County Authority (LCA) this proposal for providing professional services associated with water utility financial planning. LCA and their financing team are evaluating refunding options in anticipation of a refunding in September of 2020. We understand that as part of the proposed refunding, LCA has requested Arcadis prepare a financial evaluation to support a Bond Feasibility Certificate ("Certificate") to meet the requirements of Section 3.02(f) of the Bond Indenture which requires the delivery to the Trustee:

"A Consulting Engineers' Certificate stating that the estimated Concession Revenues from the Concession System, together with money otherwise estimated to be available under the provisions of this Indenture, will be sufficient in each Fiscal Year to meet the requirements of Section 10.01(b) hereof."

It is our understanding that the evaluation will be completed in coordination with LCA's Financial Advisor and others relative to the bond sale as required and approved by LCA. Below we present our proposed scope of services, schedule and budget.

Date:

May 28, 2020

Contact:

Anthony Dill

Phone:

215.931.4372

Email:

Anthony.Dill@arcadis.com

Our ref:

30054378

SCOPE OF SERVICES

Task 1 — Project Initiation for Financial Feasibility Evaluation

Task 1.1: Project Initiation and Ongoing Project Management

Arcadis will establish the lines of communication, establish and monitor the project schedule, and ensure that the project objectives are clearly defined and understood.

Task 1.2: Data Collection

Arcadis will collect available data for development of a projection of revenue requirements, customer base, and other metrics needed to perform the evaluation. This task includes:

- a. Submit a request for information to LCA; and
- b. If necessary, follow-up data requests may be submitted for additional information and/or to clarify any data-related questions.

Task 1.3: Data Review

Arcadis will gain an understanding of the information provided by LCA and ensure that such information is sufficient and in the correct format to complete the project.

- a. Review available background documents related to utility operations; and
 - Operating and capital budgets, as well as audited financial statements;
 - Official Statements or other related documents for current outstanding debt obligations;
 - Projected capital outlay for ongoing or future projects;
 - Reserve Funds;
 - Current and historical customer information;
 - Operating statistics; and
 - If applicable, wholesale service contracts established by LCA.
- b. Review LCA's existing water utility rates and policies.

Task 2 —Capital Spending Overview

An overview of existing facility conditions, regulatory requirements, and capacity requirements will be completed. The details of the Capital Spending Overview will be incorporated into the review. Existing bond covenants and policies will be reviewed. Phone interviews with key LCA staff about such matters will be conducted as appropriate.

Task 3 —Financial Feasibility Evaluation

Task 3 encompasses a review of the utility's current and historical financial performance. This will provide the basis for projecting future revenue requirements, capital expenditures, billing requirements, revenues, and debt service coverage. These projections may be completed using eForecast, which is Arcadis' proprietary financial modeling tool. It is our understanding that the forecast period required for the Certificate is the term of the bonds being issued (15 years).

Task 3.1: Projection of Revenue Requirements

Arcadis will model LCA's current financial condition and develop a draft projection of future revenue requirements on an annual basis based on an analysis of historical, currently budgeted, and projected needs. The future revenue requirements will be projected on an annual basis, considering expected operational changes, changes in staffing or operating expenditures for new facilities, system growth by new development, anticipated extraordinary expenses, general economic climate, and allowances for inflation.

Task 3.2: Other Operating and Non-Operating Revenue Projections

Arcadis will review and project other annual operating revenue. We will also prepare a draft projection of annual non-operating revenue such as interest earnings.

Task 3.3: Develop Cash Flow Analyses

Arcadis will prepare a draft summary of projected revenues and revenue requirements during the forecast period to determine additional revenue needs on an annual basis. The current budget year and subsequent 14 fiscal years' cash flow analysis will be used to identify annual increases in revenues, if necessary. The revenues will be established to allow LCA to comply with utility services' bond covenant requirement, maintain self-sufficient operations, and retain debt credit ratings. The establishment of an operating reserve target will also be covered.

Task 3.4: Debt Service Coverage Test

Starting in the fiscal year in which bonds are anticipated to be issued, coverage tests will be performed. The projections will address the sufficiency of LCA's revenues available for bond debt service relative to coverage requirements.

Task 4 —Consulting Engineer's Certificate

Upon satisfactory completion of the above tasks, Arcadis will submit to LCA a Consulting Engineer's Certificate in support of the planned refinancing.

SCHEDULE AND BUDGET

We estimate that the cost of these services will not exceed \$40,000. We will complete this scope of work within 30 days of notice to proceed assuming timely receipt of information from LCA needed to complete the study. We propose to complete these services on a time and materials basis in accordance with the Agreement between LCA and Malcolm Pirnie, Inc. and the attached Rate Schedule. We will not exceed this budget without prior authorization from LCA. Payment for services will be based upon the actual labor and expenses incurred.

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

Sincerely,

Arcadis U.S., Inc.



Anthony Dill, PE, BCEE
Principal Consultant

Copies:

Robert Ryall, Arcadis
James Shelton, Arcadis

This document describes the basis for compensation and terms of payment. All rates presented apply to services rendered after January 1, 2020 and may be adjusted January 1 the following year.

In addition to these fees, Client will also be responsible for sales or value-added taxes that may apply to engineering services performed.

1. **Hourly Rates:** Charges for services provided will be in accordance with the following schedule:

Conventional Services

Grade	Classification	Hourly Rate (\$/hr)
Grade 1	Technician 1	45
Grade 2	Technician 2	55
Grade 3	Technician 3	65
Grade 4	Technician 4	80
Grade 5	Engineer/Scientist/Architect 1	100
	Engineer/Scientist/Architect 2	
	Technician 5	
Grade 6	Engineer/Scientist/Architect 3	120
	Technician 6	
Grade 7	Project Engineer/Scientist/Architect 4	140
	Technician 7	
Grade 8	Project Engineer/Scientist/Architect 5	165
	Technician 8	
Grade 9	Sr Project Engineer/Scientist/Architect 6	185
Grade 10	Associate/IMC	210
Grade 11	Senior Associate	230
Grade 12	Vice President	245

Overtime - No overtime premium is charged for project work outside of normal working hours.

2. **Other Direct Costs:** All expenses incurred for a project, except in-house services specified below, from outside vendors will be invoiced at cost plus 10 percent to cover administrative expenses. These items may include, but are not limited to: shipping charges; printing; supplies; equipment; traveling expenses; special insurance; licenses; permits; or subcontractors.

In-house services consist of:

- Transportation \$0.59/mile for automobiles; \$0.75/mile for trucks
- Equipment A schedule of usage rates for specialty equipment is available for field assignments



100 Pine Street • PO Box 1166 • Harrisburg, PA 17108-1166
Tel: 717.232.8000 • Fax: 717.237.5300

Timothy J. Horstmann
Direct Dial: 717.237.5462
Direct Fax: 717.260.1682
thorstmann@mcneeslaw.com

June 17, 2020

VIA E-MAIL

Ms. Liesel M. Gross
Chief Executive Officer
Lehigh County Authority
1053 Spruce Street
Allentown, PA 18106
lieselgross@lehighcountyauthority.org

RE: Engagement Letter

Dear Liesel:

Thank you for selecting McNees Wallace & Nurick LLC to provide legal services to Lehigh County Authority (LCA). We appreciate the confidence you have shown in our Firm.

This letter sets forth the scope and terms of our engagement as well as our expectations of you regarding billing, payment, cooperation and communication during our representation. These terms will also apply to additional legal services that we may agree to provide beyond those described in this letter.

You have asked our Firm to represent LCA and serve as bond counsel to LCA in connection with a potential refunding of all or a portion of LCA's outstanding 2013 Concession Lease Revenue Bonds. Our client in this engagement is LCA only and no one else. We will not be representing any of LCA's affiliated or associated entities or any of its individual owners, officers, directors, shareholders, investors, agents, partners, members, or employees. These non-represented affiliated or associated entities and individuals should consider whether they should engage counsel to represent their personal interests.

Our fees will be based primarily upon hourly rates the firm sets for each person who provides legal services in this matter. My current hourly rate is \$340. The rates of others who may work on the engagement are as follows:

Donna Kreiser - \$420
David Unkovic - \$400
Erica Wible - \$250

www.McNeesLaw.com

HARRISBURG, PA • LANCASTER, PA • SCRANTON, PA • STATE COLLEGE, PA • YORK, PA • COLUMBUS, OH • FREDERICK, MD • WASHINGTON, DC

Ms. Liesel M. Gross
Lehigh County Authority
June 17, 2020
Page 2

These rates are subject to periodic adjustment by the Firm, based on increased costs affecting our practice and enhanced experience of particular personnel working on the matter. Our billing rates normally are adjusted as of December 1 of each year.

Any estimate we furnish of the amount of fees and costs likely to be incurred in this matter will be based on our professional judgment, taking into account the variety of factors that affect the scope, complexity and duration of any matter. That estimate is not a maximum or fixed-fee quotation. The payment of our fee is not contingent on outcome or success.

The enclosed document titled "Financial Arrangements with Clients" describes the billing policies and procedures that will apply in this engagement. Please read it carefully, and retain it with this engagement letter. You agree to pay our statements for services and expenses within thirty (30) days. If our statements are not paid when due, you agree that we may withdraw as your counsel, consistent with our professional responsibilities, and you will be responsible for engaging other counsel in this matter, should you choose to do so.

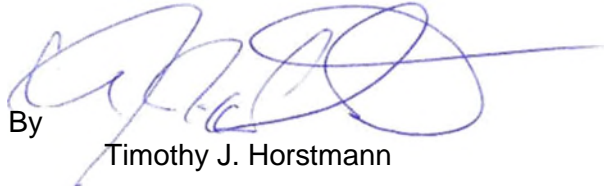
We need your cooperation and support during this engagement, which includes informing us of relevant facts and circumstances that may bear on this matter. Any and all privileged and confidential information you provide to us will be held as such. Please keep in mind that attorney-client privilege can be lost by disclosures of privileged or confidential information to third parties. For that reason, your communications to us or to any third parties involved in this matter should be made with appropriate care to ensure their confidentiality.

If the above terms do not reflect your understanding of our engagement, or if there are any questions, I encourage you to discuss these concerns with me or other counsel of your choosing promptly. **If we do not hear from LCA before the sooner of when we become substantially involved in this matter or within ten (10) days of the date of this letter, we will assume that the terms set forth in this letter and the accompanying document are acceptable.**

We look forward to this opportunity to be of service to you.

Sincerely,

McNEES WALLACE & NURICK LLC

By 
Timothy J. Horstmann

TJH/trc
Attachment

Financial Arrangements with Clients

1. **Fees.** Many factors are taken into account in billing for our services, including the hourly billing rates of the lawyers and paralegals who work on the matter, the novelty and complexity of the issues involved, the urgency with which the services must be performed, the extent to which an undertaking precludes us from representing other clients and the results achieved. In most instances, the number of hours spent by professional personnel is the principal basis for our fees.

2. **Hourly Billing Rates.** Currently, our hourly billing rates range from \$185 to \$335 for paralegals and specialists, and from \$235 to \$515 for attorneys. Generally, these rates vary from attorney to attorney depending on expertise, area of practice and experience. Hourly rates are reviewed annually and may increase during the course of our engagement on your behalf.

3. **Disbursements.** Most engagements require that certain advances be made on your behalf by the firm from time to time. Out-of-pocket expenses for travel, toll-calls, filing fees, postage, overnight delivery and similar items, and charges for certain administrative services such as photocopying, document scanning, computer-assisted research and secretarial overtime specifically related to this matter will be separately billed and identified on our invoices. As a result of delays in billings to our office, certain disbursements may not be billed by us on the invoices on which related services are billed.

4. **Periodic Billings.** Unless we have made other arrangements, it is our policy to render monthly invoices for professional services. Usually we prepare and mail invoices during the month following any month in which substantial services have been rendered and/or disbursements have been incurred. We expect that our invoices will be paid upon presentation, but, in any event, within 30 days after you receive the invoice.

5. **Administrative Charge.** In the event our invoices for fees and disbursements are not paid within thirty days after you receive them, we reserve the right to impose a charge at the rate of twelve percent (12%) per annum on the balance due to help defray the additional cost of carrying and administering delinquent accounts.

6. **Funds Held in Escrow.** During the course of our engagement, we may have occasion to hold funds in escrow on your behalf. If pursuant to the terms of the escrow we are permitted to return the escrowed funds to you, we reserve the right to apply funds held in escrow to pay outstanding invoices for services and disbursements before remitting the balance to you.

7. **Termination of Representation for Failure to Fulfill Financial Obligations.** If you fail substantially to fulfill your financial obligation to pay for services rendered, and such failure continues after reasonable warning, we have the right to withdraw from the representation.

Any questions you may have regarding the firm's billing procedures or the nature and extent of our undertaking on your behalf should be directed to the attorney who is your primary contact in the engagement.



Concord Public Financial Advisors, Inc.
Independent Registered Municipal Advisors

READING OFFICE

2909 Windmill Road, Suite 6
Reading, PA 19608
(610) 376-4100

LANCASTER OFFICE

2938 Columbia Avenue, Suite 1002
Lancaster, PA 17603
(717) 295-2300

June 17, 2020

Lehigh County Authority Board of Directors
1053 Spruce Road
P.O. Box 3348
Allentown, PA 18106

Re: Selection of underwriters for possible upcoming bond issuance

Dear Board of Directors:

The Lehigh County Authority ("LCA") solicited request for underwriting proposals ("RFP") from three underwriting firms: Boenning & Scattergood; Janney Montgomery Scott; and RBC Capital Markets. These firms were selected based on the experience and familiarity the LCA's financial advisor, Concord Public Finance ("Concord") had with each of the firms in the past.

The requested information in RFP included:

- Underwriter's cost;
- Proposed interest rates and the basis for how the interest rates were established (i.e. how many percentage points above the corresponding US Treasury market security the underwriter thought the LCA bonds could be sold)
- Underwriter's willingness to underwrite and purchase any unsold bonds.
- Identification of and cost of underwriter's counsel.
- Experience in similar transactions.

Each firm was interviewed via telephone.

It is recommended RBC Capital Markets be appointed the lead underwriter and underwrite 70% of the bonds sold, and based on the projected \$182 million size, Janney Montgomery Scott be included as a second underwriter and underwrite 30% of the bonds sold.

Basis for Recommendation

- Provided lowest all-in cost proposal (based on True Interest Cost).
- Provided lowest cost of underwriter's counsel.
- The significant capital strength of the organization and using this strength to underwrite bonds if necessary.
- The recent experience in underwriting financings of this size.
- Stated the majority of the bonds will be placed with institutional investors and being one of the top underwriters in the country provides contacts with these potential investors.

Lehigh County Authority Board of Directors

June 17, 2020

Page 2

- The recommendation of priority of orders to incent all underwriters to work cooperatively for the LCA.
- Case studies highlight quick market action and significant investor education.

Janney Montgomery Scott

- Provided second lowest all-in cost proposal (based on True Interest Cost).
- Large retail network in Pennsylvania, which might assist in the sale of the bonds, to both individuals and regional banks, who are current bond purchasers.
- Proposal was proactive - provided research on current bond holders and municipal bond insurance costs.
- Emphasized working with the underwriting team to complete the transaction in the most favorable light to LCA.
- Has the financial ability to underwrite \$600 million.

What follows is additional financial information regarding the RBC Capital Markets and Janney Montgomery Scott proposals.

<u>Firm</u>	<u>Underwriters Discount \$/1,000</u>	<u>True Interest Cost</u>	<u>Underwriters Counsel Fee</u>
RBC Capital Markets - Insured Scale	4.25	3.531	35,000
Janney Montgomery Scott LLC - Insured Scale	3.67	3.593	75,000

Range of RBC Underwriters Cost

Bond Issue Size	\$182,710,000
Range (per \$1,000 of bonds issued)	\$639,485
Range (per \$1,000 of bonds issued)	\$776,518

Sincerely,

Concord Public Financial Advisors, Inc.



Christopher M. Gibbons,
Principal

Proposal to Provide
Underwriting Services to

Lehigh County Authority

Strictly Private and Confidential

Submitted by RBC Capital Markets, LLC

2101 Oregon Pike | Lancaster | Pennsylvania | 17601

June 3, 2020

Scott Kramer

Managing Director

Phone: (717) 519-6003

scott.kramer@rbccm.com

Stephen Flaherty

Director

Phone: (717) 519-6052

stephen.flaherty@rbccm.com



RBC Capital Markets

Disclaimer

RBC Capital Markets, LLC ("RBCCM"), seeks to serve as an underwriter on a future transaction and not as a financial advisor or municipal advisor. The information provided is for discussion purposes only in anticipation of being engaged to serve as an underwriter. The primary role of an underwriter is to purchase securities with a view to distribution in an arm's-length commercial transaction with the issuer. The underwriter has financial and other interests that differ from those of the Issuer. RBCCM is not recommending an action to you as the municipal entity or obligated person. RBCCM is not acting as an advisor to you and does not owe a fiduciary duty pursuant to Section 15B of the Exchange Act to you with respect to the information and material contained in this communication. RBCCM is acting for its own interests. You should discuss any information and material contained in this communication with any and all internal or external advisors and experts that you deem appropriate before acting on this information or material.

RBC Capital Markets, LLC ("RBCCM") appreciates the opportunity to respond to the Lehigh County Authority (the "Authority" or "LCA") Request for Underwriter Proposals as enumerated below.

1) Underwriter's discount stated in \$1/thousand of Bonds issued.

An important consideration in the evaluation of any financing proposal is the fee charged by the investment banking firm. Our thought in developing an underwriting fee was to be aggressive in our fee proposal, but also to unquestionably focus on achieving a maximum distribution effort of the Authority's bonds by one of the largest sales teams in the nation.

While being fee efficient is important, stronger interest rates will provide a much greater benefit to the Authority given the size, term and long-end weighted structure of this transaction. Based on the preliminary amortization schedule and our proposed rate structure, a 1 basis point difference in interest rates equates to approximately \$615,000 in total debt service while a \$1 difference in underwriter's discount equates to approximately \$183,000. Simply put, the ability of the underwriting firm to market LCA's bonds successfully more than eliminates any savings in underwriter's discount for a transaction with this structure.

Based on the long dated structure, assumed underlying credit rating of S&P "A" (stable outlook) and the ability for LCA to secure bond insurance, we are proposing a not-to-exceed underwriter's discount range of **\$3.50 to \$4.25** per bond (\$1,000 par). We anticipate our discount would come in at the low end of the stated range if transaction economics to RBCCM would be at a minimum of 80%.

- 2) Indicative interest rate scales (both coupons and yields) including a presentation of spreads to the corresponding US Treasury maturity as of the close of business on June 2, 2020, assuming a ten year call. Please include an interest rate scale which assumes the “A” underlying LCA rating and a separate interest rate scale which assumes the “A” underlying LCA rating but with municipal bond insurance.

The insured and uninsured scales provided below are based on estimated market conditions as of the close of business on June 2, 2020. For purposes of this proposal, the scales assume a 10-year call feature, an early September pricing date and a closing in mid-to-late September.

INSURED SCALE

Maturity Date	Principal	Term Structure	Coupon	Yield	US Treasury Maturity	US Treasury Yield	Spread to 6/2/20 US Treasury (bps)
12/01/2039	\$ 255,000						
12/01/2040	-						
12/01/2041	-						
12/01/2042	-						
12/01/2043	-						
12/01/2044	2,430,000						
12/01/2045	2,860,000	5,545,000	3.230%	3.230%	30yr	1.480%	175
12/01/2046	2,610,000						
12/01/2047	2,695,000						
12/01/2048	11,820,000						
12/01/2049	12,225,000						
12/01/2050	12,650,000	42,000,000	3.330%	3.330%	30yr	1.480%	185
12/01/2051	13,085,000						
12/01/2052	13,535,000						
12/01/2053	14,000,000						
12/01/2054	14,485,000						
12/01/2055	14,985,000	70,090,000	3.480%	3.480%	30yr	1.480%	200
12/01/2056	15,500,000						
12/01/2057	16,035,000						
12/01/2058	16,590,000						
12/01/2059	17,160,000	65,285,000	3.580%	3.580%	30yr	1.480%	210
Total:	\$ 182,920,000	\$ 182,920,000					

UNINSURED SCALE

Maturity Date	Principal	Term Structure	Coupon	Yield	US Treasury Maturity	US Treasury Yield	Spread to 6/2/20 US Treasury (bps)
12/01/2039	\$ 255,000						
12/01/2040	-						
12/01/2041	-						
12/01/2042	-						
12/01/2043	-						
12/01/2044	2,430,000						
12/01/2045	2,860,000	5,545,000	3.380%	3.380%	30yr	1.480%	190
12/01/2046	2,610,000						
12/01/2047	2,695,000						
12/01/2048	11,820,000						
12/01/2049	12,225,000						
12/01/2050	12,650,000	42,000,000	3.480%	3.480%	30yr	1.480%	200
12/01/2051	13,085,000						
12/01/2052	13,535,000						
12/01/2053	14,000,000						
12/01/2054	14,485,000						
12/01/2055	14,985,000	70,090,000	3.630%	3.630%	30yr	1.480%	215
12/01/2056	15,500,000						
12/01/2057	16,035,000						
12/01/2058	16,590,000						
12/01/2059	17,160,000	65,285,000	3.730%	3.730%	30yr	1.480%	225
Total:	\$ 182,920,000	\$ 182,920,000					

For purposes of presenting these scales we have estimated the benefit of insurance in the current market is 15 basis points, however that spread could be as much as 20 basis points or more at the time of pricing. RBCCM believes insurance would benefit the Authority's transaction if it can be obtained at reasonable pricing.

3) The underwriter's willingness to underwrite and purchase any Bonds for which orders have not been received at the time of signing the Bond Purchase Contract.

Few if any firms active in the Pennsylvania market have comparable experience to RBCCM in pricing and trading large blocks on the long end of the yield curve, and RBCCM's market insights and knowledge of the buyer base often lead to superior execution. RBCCM has the capital strength to price issues aggressively for our municipal clients and we are willing to place our capital at risk through underwriting commitments. RBCCM's superior financial strength is a meaningful factor distinguishing our ability to support senior managed underwriting mandates. The tables below provide the capital structure for RBCCM, including total regulatory capital, total equity capital, net equity capital, and excess net equity capital for the most recent period (October 31, 2019) and for each of the last two years, calculated in accordance with SEC Rule 15c3-1. Also provided is the capital structure of RBC, for the last three fiscal years (as of FYE October 31).

Capital Position: RBC Capital Markets

	12/31/2017	10/31/2018	10/31/2019
Total Regulatory Capital	\$6,828,013	\$7,065,576	\$7,305,576
Total Equity Capital	5,428,013	5,665,576	5,905,576
Net Capital	1,789,741	1,785,186	1,841,077
Excess Net Capital	1,581,128	1,572,420	1,599,801

*Figures in US\$000's
Based on Basel II calculation*

Capital Position: Royal Bank of Canada

	10/31/2017	10/31/2018	10/31/2019
Total Regulatory Capital	\$51,664,117	\$55,099,187	\$59,144,962
Total Equity Capital	56,919,547	60,769,932	63,501,405
Tier 1 Capital	44,632,151	48,095,310	51,530,868

*Figures in US\$000's
Based on Basel II calculation*

Our lead underwriters determine RBCCM's ability to take bonds into inventory at the time of the offering. RBCCM routinely underwrites unsold balances in order to get transactions completed.

4) The underwriter's willingness to agree prior to the marketing of the Bonds of an Agreement Among Underwriters, and an explanation of the proposed priority of Orders the underwriter believes will provide the most benefit to the LCA.

Subject to the discussion below, RBCCM is willing to execute an Agreement Among Underwriters prior to the pricing of the bonds which would utilize the Priority of Orders show below:

1. Group Net (Except if an investor is affiliated with a syndicate member in which case the economics will be reallocated among the other managers)
2. Member

Recognizing that in the underwriting transaction for the bonds the senior underwriter will be responsible for 100% of the preparatory work (including drafting the POS and OS) and will traditionally sell 100% of the bonds, RBCCM's willingness to execute an Agreement Among Underwriters presumes that if RBCCM is selected as senior underwriter the economics of the transaction allocated to RBCCM as the senior underwriter will not be less than 60%.

5) The underwriter's willingness to assist in providing financing comparables during and after the pricing.

RBCCM will assist in providing comparable transactions within the market during and after pricing of the Authority's bonds. Our commitment to provide comparables is exhibited by our providing your municipal advisor RBCCM's full tracking spreadsheet of all taxable transactions priced nationwide this year showing pricing spreads to the relevant U.S. Treasury maturity.

RBCCM believes in a highly data driven and transparent process to get to a pricing that involves both the Authority and the Authority's municipal advisor. Our typical taxable process involves multiple steps with all of the participants and typically follows the schedule shown below and includes real-time discussion and analysis of comparable transactions in the market.

- Day 1:
 - Pricing discussions with co-managers (if any) and the Authority's municipal advisor
 - Circulate price thoughts for discussion and fine tuning
 - Begin premarketing at agreed upon price thoughts
- Day 2:
 - Premarketing involving our desk and sales people talking to accounts concerning potential interest and at what pricing levels
 - End of day update call with pricing participants, as needed by market conditions and comparables
- Day 3:
 - Update call in the morning with all pricing participants
 - Indication of interest period that would run throughout the day
- Day 4:
 - Morning call with pricing participants to finalize official price guidance
 - 2 hour order period
 - Afternoon call with pricing participants to confirm levels for verbal award
 - Set coupons in the afternoon.

Following pricing, RBCCM will provide LCA and the Authority's municipal advisor with a full pricing book showing all comparable transactions priced at or near the time of pricing of the Authority's bond issue.

6) The identification and proposed cost of underwriter's counsel, who shall be responsible for preparation of the Preliminary Official Statement and Official Statement.

We would propose to use Stevens & Lee as underwriter's counsel at an expected fee including expenses not-to-exceed a range of \$30,000 to \$35,000. If this firm presents a conflict of interest with the Authority we are happy to provide additional firm names to serve as underwriter's counsel.

Stevens & Lee
Peter Edelman
111 N. Sixth Street
Reading, PA 19601
Phone: (610) 478-2168
pte@stevenslee.com

7) The underwriter's experience in similar transactions over the last three years.

Below is a listing of RBCCM's taxable transactions completed for our Pennsylvania clients since January 1, 2018. Included as **Appendix A** is a full listing of RBCCM's taxable municipal issues completed nationally since January 1, 2018.

Pricing Date	Par Amount	Issuer	State
01/10/2018	\$ 412,520,000	PA Commonwealth Financing Auth	PA
09/11/2018	\$ 3,310,000	Dauphin Co (Central Dauphin) SD	PA
01/08/2019	\$ 1,555,000	Dauphin Co (Derry) TSD	PA
01/16/2019	\$ 645,000	Adams Co (Fairfield) ASD	PA
04/16/2019	\$ 1,270,000	Berks Co (Oley Valley) SD	PA
05/06/2019	\$ 3,165,000	Berks Co (Wilson) SD	PA
08/06/2019	\$ 28,225,000	Berks Co-Pennsylvania	PA
08/21/2019	\$ 2,365,000	Lancaster Co (Conestoga Vllly) SD	PA
09/05/2019	\$ 5,430,000	Schuylkill Co-Pennsylvania	PA
09/25/2019	\$ 10,405,000	Greene Twp Municipal Auth	PA
10/09/2019	\$ 10,185,000	Reading City-Pennsylvania	PA
10/10/2019	\$ 19,005,000	Lackawanna Co (Scranton City) SD	PA
12/18/2019	\$ 12,705,000	Bensalem Twp-Pennsylvania	PA
01/09/2020	\$ 225,380,000	PA Commonwealth Financing Auth	PA
02/19/2020	\$ 3,570,000	Dauphin Co-Pennsylvania	PA
05/06/2020	\$ 49,905,000	Chester Co (Phoenixville) ASD	PA
05/13/2020	\$ 26,315,000	Montgomery Co (Cheltenham) TSD	PA

8) Provide two (2) case studies from the transactions listed in 7 that are relevant to LCA and describe unique contributions your firm or principals made to the financings and how the issuer benefitted. Elaborate on any innovations developed by your firm or the principals, or any special marketing efforts undertaken by your firm for such financings.

Two transaction that RBCCM believes are relevant case studies for the Authority are:

	Commonwealth Financing Authority (PA), Series B and C of 2020	North Hudson Sewerage Authority (NJ), Gross Revenue Senior Lien Lease Certificates, Series 2019
Sale Date	January 9, 2020	November 8, 2019
Size	\$225,380,000	\$160,625,000
Rating	A1/A/A+, not insured	A+/NR/A, AGM insured
Security	Revenues – Pledge of Commonwealth of Pennsylvania appropriation and program revenues from repayment of water and sewer loans	Revenues – Undivided interest in the lease payments related to the operation of the Authority's sewerage system
Structure	Serial bonds through 2035 and single term bond in 2042, subject to par call in 2030	Serial bonds through 2032 with term bonds in 2034, 2039 and 2044, subject to a par call in 2030
Purpose	Taxable Advance Refunding	Taxable Advance Refunding
Overview	Pricing occurred in a very difficult and volatile market week, brought on predominately by geopolitical events in Iran. RBCCM was able to work closely with the issuer and its municipal advisor to truncate the pricing process to capture a small window in the turbulent market which resulted in strong pricing and a savings level of over 12% NPV. This transaction highlights RBCCM's ability to react quickly and efficiently to market data and conditions for the benefit of its issuers.	As a certificate of participation of sewer lease payments, this transaction represented a non-traditional structure in the taxable municipal market which is historically dominated by general obligation transactions. Working closely with the issuer and its professionals, RBCCM was able to provide significant education to the investor community resulting in a broad order book and a successfully priced transaction.

9) Include any other information you believe is relevant to the contemplated transaction.

RBCCM is uniquely positioned to serve the Authority due to its top five national taxable platform combined with a market leading PA taxable platform as shown on the ranking charts on the following page.

RBCCM is a significant daily participant in both the national and the PA taxable markets from both the issuer and investor standpoint and as such has a significant understanding of how to efficiently price transactions for an issuer's benefit. We capture and utilize this market knowledge by following a data-driven and transparent marketing and pricing process which involves both the issuer and their municipal advisor. RBCCM is fully commitment to transparency as enumerated by our response to Question #5. This is the type of cooperation and information RBCCM brings to the Authority as part of a transaction.

Additionally, RBCCM is very familiar with the Authority, its operations and finances. We previously worked with the Authority and its professionals on a proposed 2018 transaction for the public market issuance of subordinated debt. While the transaction was ultimately completed as a bank loan, the time and experience gained will be of benefit to the Authority in the issuance of its 2020 Bonds.

National

Prior Two Years (2018 & 2019)

Negotiated True Economics				
Top 25 - Overall Taxable Negotiated Rankings				
National Lead Manager League Table				
01/01/2018 - 12/31/2019				
Managing Underwriter	Par Amount (US\$ mil)	Rank	Mkt. Share	No. of Issues
BofA Securities Inc	11,114.7	1	14.9	110
Citi	9,310.3	2	12.4	83
J P Morgan Securities LLC	7,458.1	3	10.0	62
RBC Capital Markets	6,577.8	4	8.8	143
Morgan Stanley	5,809.7	5	7.8	60
Goldman Sachs & Co LLC	4,762.2	6	6.4	34
Raymond James	3,870.3	7	5.2	123
Barclays	3,420.6	8	4.6	54
Stifel Nicolaus & Co Inc	3,292.1	9	4.4	193
Piper Sandler & Co	3,235.5	10	4.3	102
Wells Fargo & Co	2,834.4	11	3.8	44
Jefferies LLC	2,104.3	12	2.8	15
Ramirez & Co Inc	1,203.6	13	1.6	20
Siebert Williams Shank & Co	1,123.9	14	1.5	13
Loop Capital Markets	972.6	15	1.3	9
Robert W Baird & Co Inc	841.0	16	1.1	91
KeyBanc Capital Markets	629.8	17	.8	16
PNC Financial Services Group Inc	570.9	18	.8	40
UBS Financial Services Inc	550.9	19	.7	15
Hilltop Securities	453.0	20	.6	35
D A Davidson & Co	451.7	21	.6	58
Crews & Associates Inc	374.9	22	.5	23
Oppenheimer & Co	305.0	23	.4	14
Stephens Inc	278.8	24	.4	16
Ziegler	264.0	25	.4	23
Industry Total	74,829.9	-	100.0	1,618

Source: Securities Data Company 01/01/2018 - 12/31/2019

YTD (2020)

Negotiated True Economics				
Top 25 - Overall Taxable Negotiated Rankings				
National Lead Manager League Table				
01/01/2020 - 6/01/2020				
Managing Underwriter	Par Amount (US\$ mil)	Rank	Mkt. Share	No. of Issues
Citi	4,024.2	1	13.5	23
BofA Securities Inc	3,995.2	2	13.4	24
J P Morgan Securities LLC	2,942.8	3	9.9	22
Barclays	2,799.6	4	9.4	9
RBC Capital Markets	2,124.6	5	7.1	44
Jefferies LLC	1,864.7	6	6.2	8
Goldman Sachs & Co LLC	1,842.9	7	6.2	11
Raymond James	1,723.5	8	5.8	30
Morgan Stanley	1,447.5	9	4.9	17
Wells Fargo & Co	1,427.2	10	4.8	13
Piper Sandler & Co	1,155.5	11	3.9	37
Stifel Nicolaus & Co Inc	986.1	12	3.3	53
Siebert Williams Shank & Co	658.0	13	2.2	3
Hilltop Securities	361.5	14	1.2	8
Robert W Baird & Co Inc	295.4	15	1.0	29
PNC Financial Services Group Inc	271.8	16	.9	9
The Frazer Lanier Company Inc	249.3	17	.8	7
Loop Capital Markets	204.8	18	.7	2
KeyBanc Capital Markets	176.2	19	.6	9
Cabrera Capital Markets Inc	153.4	20	.5	1
UBS Financial Services Inc	117.3	21	.4	1
Stephens Inc	114.6	22	.4	4
D A Davidson & Co	112.1	23	.4	21
Ramirez & Co Inc	103.3	24	.4	4
Truist Financial Corp	99.6	25	.3	6
Industry Total	29,874.6	-	100.0	434

Source: Securities Data Company 01/01/2020 - 6/01/2020

Pennsylvania

Prior Two Years (2018 & 2019)

Negotiated True Economics				
Top 10 - Overall Taxable Negotiated Rankings				
Pennsylvania Lead Manager League Table				
01/01/2018 - 12/31/2019				
Managing Underwriter	Par Amount (US\$ mil)	Rank	Mkt. Share	No. of Issues
RBC Capital Markets	510.8	1	18.6	13
Barclays	400.0	2	14.5	1
Citi	398.6	3	14.5	2
BofA Securities Inc	362.1	4	13.2	6
Piper Sandler & Co	282.4	5	10.3	8
PNC Financial Services Group Inc	215.9	6	7.9	24
Goldman Sachs & Co LLC	213.6	7	7.8	1
Loop Capital Markets	108.3	8	3.9	2
Boenning & Scattergood Inc	87.2	9	3.2	10
George K Baum & Company Inc	57.5	10	2.1	1
Industry Total	2,750.1	-	100.0	82

Source: Securities Data Company 01/01/2018 - 12/31/2019

YTD (2020)

Negotiated True Economics				
Top 10 - Overall Taxable Negotiated Rankings				
Pennsylvania Lead Manager League Table				
01/01/2020 - 6/01/2020				
Managing Underwriter	Par Amount (US\$ mil)	Rank	Mkt. Share	No. of Issues
Barclays	1,396.2	1	51.3	2
Piper Sandler & Co	328.8	2	12.1	8
RBC Capital Markets	305.2	3	11.2	4
Morgan Stanley	248.0	4	9.1	3
Wells Fargo & Co	118.0	5	4.3	1
PNC Financial Services Group Inc	109.2	6	4.0	6
Citi	92.5	7	3.4	1
Boenning & Scattergood Inc	62.5	8	2.3	5
Stifel Nicolaus & Co Inc	50.2	9	1.9	1
Janney Montgomery Scott LLC	7.6	10	.3	1
Industry Total	2,720.2	-	100.0	33

Source: Securities Data Company 01/01/2020 - 6/01/2020

RBCCM Lead Manager

Negotiated Taxable Municipal Bond Transactions

Completed Nationally since January 1, 2018

Pricing Date	Par Amount	Issuer	State
01/05/2018	\$ 19,075,000	New Jersey Economic Dev Auth	NJ
01/10/2018	\$ 412,520,000	PA Commonwealth Financing Auth	PA
01/18/2018	\$ 106,130,000	Denver City and Co SD #1	CO
01/19/2018	\$ 1,060,000	Albany Parking Authority	NY
02/06/2018	\$ 38,120,000	Brentwood Infrastructure Fin Au	CA
02/07/2018	\$ 1,095,000	New Hope Cultural Ed Facs Fin Corp	TX
02/12/2018	\$ 100,000,000	NYS Housing Fin-Mortgage Agcy	NY
02/13/2018	\$ 38,247,000	Minnesota Housing Fin Agency	MN
03/08/2018	\$ 1,105,000	New Hope Cultural Ed Facs Fin Corp	TX
03/13/2018	\$ 16,295,000	Arizona Industrial Dev Auth	AZ
03/28/2018	\$ 11,000,000	Pima Co-Arizona	AZ
04/04/2018	\$ 39,395,000	Pima Co-Arizona	AZ
04/04/2018	\$ 69,360,000	Santa Monica Comm College Dt	CA
04/12/2018	\$ 20,218,000	Minnesota Housing Fin Agency	MN
05/01/2018	\$ 435,000	Build NYC Resource Corp	NY
05/02/2018	\$ 525,000	Kent Co-Delaware	DE
05/08/2018	\$ 13,175,000	New Mexico Finance Auth (NMFA)	NM
05/10/2018	\$ 9,355,000	North Dakota Hsg Fin Agcy	ND
05/10/2018	\$ 15,645,000	North Dakota Hsg Fin Agcy	ND
05/17/2018	\$ 158,975,000	Massachusetts Educ Fin Au (MEFA)	MA
06/07/2018	\$ 25,000,000	Minnesota Housing Fin Agency	MN
07/12/2018	\$ 315,000	New Jersey Economic Dev Auth	NJ
08/09/2018	\$ 15,015,000	Warren Co (Mason) SD	OH
08/16/2018	\$ 52,573,000	Minnesota Housing Fin Agency	MN
08/21/2018	\$ 370,000	New Hope Cultural Ed Facs Fin Corp	TX
08/22/2018	\$ 8,340,000	Rhode Island Hsg & Mtg Fin Corp	RI
08/28/2018	\$ 360,000	New Jersey Economic Dev Auth	NJ
09/07/2018	\$ 13,185,000	Millers Landing Business Imp Dt	CO
09/11/2018	\$ 5,000,000	Iowa Finance Authority	IA
09/11/2018	\$ 3,310,000	Dauphin Co (Central Dauphin) SD	PA
09/13/2018	\$ 390,000	New Jersey Economic Dev Auth	NJ
09/14/2018	\$ 8,300,000	Massachusetts Housing Fin Agcy	MA
09/26/2018	\$ 140,000	Phoenix Industrial Dev Auth	AZ
10/17/2018	\$ 31,783,000	Minnesota Housing Fin Agency	MN
10/18/2018	\$ 42,739,000	Colorado Hsg & Fin Auth (CHFA)	CO
11/08/2018	\$ 25,000,000	NYS Housing Fin-Mortgage Agcy	NY
11/14/2018	\$ 35,000,000	Minnesota Housing Fin Agency	MN
11/20/2018	\$ 460,000	New Jersey Economic Dev Auth	NJ
12/12/2018	\$ 7,640,000	Park Creek Metropolitan Dt	CO
12/12/2018	\$ 1,710,000	Schenectady Metroplex Dev Auth	NY
12/12/2018	\$ 160,000	Wisconsin Public Finance Auth	WI
12/13/2018	\$ 37,500,000	Minnesota Housing Fin Agency	MN
01/08/2019	\$ 1,555,000	Dauphin Co (Derry) TSD	PA
01/16/2019	\$ 645,000	Adams Co (Fairfield) ASD	PA
01/17/2019	\$ 26,135,000	New Mexico Mortgage Fin Auth	NM
02/07/2019	\$ 30,351,000	Minnesota Housing Fin Agency	MN
02/07/2019	\$ 925,000	Wisconsin Public Finance Auth	WI
02/13/2019	\$ 42,015,000	Iowa Finance Authority	IA
02/20/2019	\$ 16,430,000	San Francisco City & Co Airport Comm	CA
03/07/2019	\$ 37,500,000	Minnesota Housing Fin Agency	MN
04/16/2019	\$ 1,270,000	Berks Co (Oley Valley) SD	PA
05/01/2019	\$ 18,000,000	Massachusetts Housing Fin Agcy	MA
05/02/2019	\$ 99,780,000	Massachusetts Educ Fin Au (MEFA)	MA
05/06/2019	\$ 3,165,000	Berks Co (Wilson) SD	PA
05/08/2019	\$ 5,000,000	Connecticut Hghr Ed Supp Loan Auth	CT
05/09/2019	\$ 6,965,000	Illinois Finance Authority	IL
05/14/2019	\$ 30,555,000	Minnesota Housing Fin Agency	MN
05/21/2019	\$ 12,265,000	North Dakota Hsg Fin Agcy	ND
05/21/2019	\$ 12,735,000	North Dakota Hsg Fin Agcy	ND
05/22/2019	\$ 10,000,000	Jersey City Redev Agcy	NJ
05/22/2019	\$ 56,735,000	Vineland City-New Jersey	NJ
06/05/2019	\$ 2,535,000	Arizona Industrial Dev Auth	AZ
06/12/2019	\$ 12,480,000	New Mexico Finance Auth (NMFA)	NM
06/13/2019	\$ 45,949,000	Minnesota Housing Fin Agency	MN

06/19/2019	\$	30,000,000	Colorado Hsg & Fin Auth (CHFA)	CO
06/27/2019	\$	40,260,000	Ramsey Co (St Paul) ISD #625	MN
07/09/2019	\$	147,980,000	Univ of Colorado Bd of Regents	CO
07/09/2019	\$	22,726,000	New Mexico Mortgage Fin Auth	NM
07/11/2019	\$	59,203,000	Colorado Hsg & Fin Auth (CHFA)	CO
07/16/2019	\$	59,851,000	Minnesota Housing Fin Agency	MN
07/17/2019	\$	15,000,000	Connecticut Housing & Fin Auth (CHFA)	CT
07/24/2019	\$	6,000,000	Lauderhill City-Florida	FL
07/25/2019	\$	4,225,000	San Mateo Co (Jefferson) UHSD	CA
08/06/2019	\$	28,225,000	Berks Co-Pennsylvania	PA
08/13/2019	\$	58,690,000	Los Angeles Co (Covina Valley) USD	CA
08/13/2019	\$	74,862,000	Colorado Hsg & Fin Auth (CHFA)	CO
08/20/2019	\$	43,985,000	Minnesota Housing Fin Agency	MN
08/20/2019	\$	46,015,000	Minnesota Housing Fin Agency	MN
08/21/2019	\$	7,085,000	Iowa Finance Authority	IA
08/21/2019	\$	2,365,000	Lancaster Co (Conestoga Villy) SD	PA
08/27/2019	\$	22,635,000	Los Angeles Co (Azusa) USD	CA
08/28/2019	\$	96,910,000	Los Angeles Co (Pasadena) USD	CA
09/04/2019	\$	65,425,000	Chaffey Community College Dt	CA
09/05/2019	\$	5,430,000	Schuylkill Co-Pennsylvania	PA
09/10/2019	\$	22,980,000	El Paso Co (Canutillo) ISD	TX
09/11/2019	\$	250,000	Louisiana Public Facs Auth (LPFA)	LA
09/11/2019	\$	20,000,000	NYS Housing Fin-Mortgage Agcy	NY
09/17/2019	\$	693,435,000	San Diego Community College Dt	CA
09/19/2019	\$	42,925,000	Marin Co (Tamalpais) UHSD	CA
09/20/2019	\$	148,240,000	NYS Dorm Authority	NY
09/25/2019	\$	10,405,000	Greene Twp Municipal Auth	PA
09/26/2019	\$	4,175,000	Adams Co (Mapleton) PSD #1	CO
10/02/2019	\$	115,180,000	Ventura Co Comm College Dt	CA
10/08/2019	\$	51,000,000	Iowa Student Loan Liquidity Corp	IA
10/08/2019	\$	38,657,000	Wisconsin Public Finance Auth	WI
10/09/2019	\$	1,000,000	San Diego Co (Santee) SD	CA
10/09/2019	\$	10,185,000	Reading City-Pennsylvania	PA
10/10/2019	\$	18,400,000	Los Angeles Co (Whittier City) SD	CA
10/10/2019	\$	19,005,000	Lackawanna Co (Scranton City) SD	PA
10/17/2019	\$	50,085,000	Butler Co (Fairfield City) SD	OH
10/17/2019	\$	305,000	Danbury Higher Ed Auth Inc	TX
10/23/2019	\$	265,000	New Jersey Economic Dev Auth	NJ
10/24/2019	\$	18,850,000	Brazos Higher Education Auth	TX
10/29/2019	\$	82,610,000	Lubbock ISD	TX
10/31/2019	\$	12,035,000	San Mateo Co (Millbrae) SD	CA
10/31/2019	\$	6,481,000	Escambia Co Housing Finance Auth	FL
11/01/2019	\$	625,000	Hamilton Co (Northwest) LSD BOE	OH
11/01/2019	\$	28,040,000	Hamilton Co (Northwest) LSD BOE	OH
11/05/2019	\$	122,730,000	San Bernardino Co (Chaffey) JUHSD	CA
11/07/2019	\$	30,000,000	Santa Clara Co (Campbell) UHSD	CA
11/07/2019	\$	1,745,000	Midland Co (Greenwood) ISD	TX
11/07/2019	\$	44,550,000	Midland Co (Greenwood) ISD	TX
11/08/2019	\$	160,625,000	North Hudson Sewerage Authority	NJ
11/13/2019	\$	90,295,000	Minnesota Housing Fin Agency	MN
11/13/2019	\$	705,550,000	Texas Transportation Commission	TX
11/15/2019	\$	82,740,000	Colorado Reg Transportation Dt	CO
11/19/2019	\$	865,000	Butler Co (Middletown City) SD	OH
11/19/2019	\$	41,325,000	Butler Co (Middletown City) SD	OH
11/20/2019	\$	2,875,000	Maricopa Co Industrial Dev Auth	AZ
11/20/2019	\$	150,965,000	Coast Community College Dt	CA
11/20/2019	\$	65,000,000	Colorado Hsg & Fin Auth (CHFA)	CO
11/21/2019	\$	925,000	Phoenix Industrial Dev Auth	AZ
11/21/2019	\$	11,655,000	Alameda-Contra Costa Transit Dt	CA
11/21/2019	\$	39,840,000	Niagara Area Development Corp	NY
11/21/2019	\$	3,320,000	Lubbock Co (Frenship) ISD	TX
11/21/2019	\$	47,190,000	Lubbock Co (Frenship) ISD	TX
11/21/2019	\$	44,640,000	Salt Lake City Redev Agency	UT
11/25/2019	\$	3,160,000	Hamilton Co (Princeton City) SD BOE	OH
11/25/2019	\$	45,410,000	Hamilton Co (Princeton City) SD BOE	OH

12/03/2019	\$	7,335,000	Medina Co (Brunswick) SD BOE	OH
12/03/2019	\$	32,000,000	Medina Co (Brunswick) SD BOE	OH
12/03/2019	\$	960,000	Tarrant Co (Crowley) ISD	TX
12/03/2019	\$	52,740,000	Tarrant Co (Crowley) ISD	TX
12/04/2019		946,335,000	New Jersey Trans Trust Fund Au	NJ
12/10/2019	\$	70,260,000	Matanuska-Susitna Boro-Alaska	AK
12/12/2019	\$	45,165,000	Park Creek Metropolitan Dt	CO
12/12/2019	\$	3,295,000	Montana Board of Housing	MT
12/12/2019	\$	14,790,000	Hamilton Co (Princeton City) SD BOE	OH
12/17/2019	\$	375,000	El Paso Co (Cheyenne Mtn) SD #12	CO
12/17/2019	\$	39,255,000	El Paso Co (Cheyenne Mtn) SD #12	CO
12/17/2019	\$	19,155,000	Willingboro Twp SD	NJ
12/17/2019	\$	250,000	Lake Co (Riverside) LSD	OH
12/17/2019	\$	13,470,000	Lake Co (Riverside) LSD	OH
12/18/2019	\$	24,150,000	Regents of University of New Mexico	NM
12/18/2019	\$	1,720,000	Schenectady Metroplex Dev Auth	NY
12/18/2019	\$	4,850,000	Schenectady Metroplex Dev Auth	NY
12/18/2019	\$	221,190,000	Hamilton Co-Ohio	OH
12/18/2019	\$	12,705,000	Bensalem Twp-Pennsylvania	PA
01/07/2020	\$	720,000	Warren Co (Kings) LSD BOE	OH
01/07/2020	\$	14,040,000	Warren Co (Kings) LSD BOE	OH
01/08/2020	\$	90,545,000	Mount San Antonio Comm College Dt	CA
01/09/2020	\$	225,380,000	PA Commonwealth Financing Auth	PA
01/14/2020	\$	86,765,000	San Diego Co (San Marcos) USD	CA
01/16/2020	\$	34,810,000	Colorado Hsg & Fin Auth (CHFA)	CO
01/16/2020	\$	37,690,000	Colorado Hsg & Fin Auth (CHFA)	CO
01/16/2020	\$	18,405,000	Manchester Twp-New Jersey	NJ
01/23/2020	\$	445,000	Maricopa Co Industrial Dev Auth	AZ
01/23/2020	\$	60,000,000	Minnesota Housing Fin Agency	MN
01/28/2020	\$	8,600,000	Camden Co-New Jersey	NJ
01/29/2020	\$	1,020,000	California Enterprise Dev Auth	CA
02/06/2020	\$	12,000,000	Arizona Industrial Dev Auth	AZ
02/06/2020	\$	85,785,000	Middlesex Co (Monroe) TBOE	NJ
02/06/2020	\$	605,000	Wisconsin Public Finance Auth	WI
02/10/2020	\$	115,000	Moore Co (Sunray) ISD	TX
02/10/2020	\$	1,345,000	Moore Co (Sunray) ISD	TX
02/11/2020	\$	13,690,000	Medina Co (Highland) LSD	OH
02/11/2020	\$	53,015,000	Medina Co (Highland) LSD	OH
02/12/2020	\$	1,875,000	California School Finance Auth	CA
02/12/2020	\$	29,750,000	Santa Clara (Mtn View-Whisman) SD	CA
02/13/2020	\$	125,685,000	Antelope Valley Community Coll Dt	CA
02/19/2020	\$	71,940,000	Successor Agy to the Manteca Redev Agy	CA
02/19/2020	\$	3,570,000	Dauphin Co-Pennsylvania	PA
02/26/2020	\$	37,025,000	Brazos Higher Education Auth	TX
02/27/2020	\$	40,110,000	Saginaw Hospital Finance Auth	MI
03/03/2020	\$	59,955,000	Chaffey Community College Dt	CA
03/10/2020	\$	43,964,000	Minnesota Housing Fin Agency	MN
03/11/2020	\$	55,000,000	Colorado Hsg & Fin Auth (CHFA)	CO
04/15/2020	\$	45,397,000	Colorado Hsg & Fin Auth (CHFA)	CO
04/24/2020	\$	145,285,000	San Diego Co (San Dieguito) UHSD	CA
04/28/2020	\$	146,705,000	San Mateo-Foster City SD	CA
04/30/2020	\$	38,400,000	Santa Clara (Mtn View-Whisman) SD	CA
04/30/2020	\$	114,195,000	San Diego Public Facs Fin Auth	CA
05/05/2020	\$	79,160,000	Riverside Co (Desert Sands) USD	CA
05/06/2020	\$	49,905,000	Chester Co (Phoenixville) ASD	PA
05/07/2020	\$	41,205,000	Compton Community College Dt	CA
05/12/2020	\$	58,580,000	Los Angeles Co (Glendale) USD	CA
05/13/2020	\$	37,979,000	Minnesota Housing Fin Agency	MN
05/13/2020	\$	26,315,000	Montgomery Co (Cheltenham) TSD	PA
05/14/2020	\$	52,625,000	San Joaquin Delta Comm Coll Dt	CA
05/19/2020	\$	14,905,000	Eugene City-Oregon	OR
05/20/2020	\$	10,000,000	Jersey City Redev Agcy	NJ
05/21/2020	\$	43,275,000	Rhode Island Student Loan Auth	RI
05/27/2020	\$	16,790,000	Eugene City-Oregon	OR



PROPOSAL TO SERVE AS UNDERWRITER



LEHIGH COUNTY AUTHORITY
LEHIGH COUNTY, PENNSYLVANIA

JUNE 3, 2020



Janney Montgomery Scott LLC
1717 Arch Street
Philadelphia, PA 19103
www.janney.com

June 3, 2020

Christopher M. Gibbons
Concord Public Financial Advisors, Inc.
2938 Columbia Avenue, Suite 1002
Lancaster, Pennsylvania 17603

Dear Mr. Gibbons,

On behalf of Janney Montgomery Scott LLC ("Janney" or the "Firm") I am pleased to present our qualifications to provide underwriting services to the Lehigh County Authority (the "LCA" or the "Authority") for its Water and Sewer Revenue Bonds, Taxable Series of 2020 (City of Allentown Concession). As one of the most active underwriters of Pennsylvania bond issues, we are well positioned to serve as senior managing underwriter, and we are committed to securing the lowest cost of borrowing for the LCA. In 2019, Janney was the #2 ranked underwriter of Pennsylvania bond issues, based on number of issues, strongly positioning the Firm to serve the Authority as senior managing underwriter on its upcoming issue.

An important benefit that Janney brings to the LCA to produce a cost-effective financing is the Firm's vast distribution network including 850 retail brokers who manage over 465,000 retail accounts with over \$93.1 billion in assets under management of which, approximately \$7.3 billion is in the form of directly held municipal bonds. ***In Pennsylvania, Janney maintains 34 retail offices that house over 285 financial advisors. These Pennsylvania based financial advisors manage over \$31.4 billion in assets under management, of which \$2.6 billion is directly-held municipal bonds.*** Janney's two Lehigh County offices located in Allentown and Bethlehem are staffed by 21 registered financial advisors who maintain over 9,500 retail accounts and manage over \$1.9 billion in assets, including over \$125 million in directly-held municipal bonds. For the LCA's bond issue, Janney's public finance department will be in close contact with our Allentown and Bethlehem based financial advisors as well as nearly 100 advisors located in nine other branches within a one-hour drive of the Authority to publicize the bond sale to over 50,000 Lehigh Valley-based retail investors. By actively promoting the bond sale throughout the region, Janney ensures that those individuals interested in purchasing the LCA's bonds will have ample opportunity to do so. **This retail focus has resulted in Janney retail accounts currently owning over \$10 million of bonds issued by the Authority.**

Janney also actively supports our clients' bond issues in the secondary market. Secondary market trading serves as another avenue for Janney's municipal sales professionals to maintain daily contact with all national institutional investors. **Since 2010, Janney has executed 277 primary and secondary market trades for the Authority's debt totaling over \$21 million in par.**

Janney's local presence, financial stability, distribution strength, willingness to commit capital, along with the Firm's extensive experience with Pennsylvania issues, will allow Janney to provide the LCA with the highest quality investment banking and underwriting services. Thank you for your time and attention to this matter. Please feel free to contact me at any time if you have questions or would like to receive additional information.

Sincerely,

A handwritten signature in dark ink, appearing to read "K. B. Elliott", written over a light blue horizontal line.

Kirwan Elliott, Managing Director
Office: 215-665-6382 / Mobile: 215-350-8313
Email: kelliott@janney.com

REQUEST FOR PROPOSALS FOR UNDERWRITING SERVICES



JUNE 3, 2020

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Exhibits

1. Bond Insurance Break-Even Analysis
2. Required SEC Municipal Advisor Disclosure

1. Underwriter's discount stated in \$1/thousand of Bonds issued.

Janney's proposed underwriter's discount for the LCA's proposed Series of 2020 Bonds is \$3.67/Bond. The Firm's proposed underwriter's discount is detailed below.

Spread Component	\$/Bond
Takedown	3.50
Management	0.00
Expenses*	0.17
Total	\$3.67

*Note, does not include proposed underwriter's counsel fee which is detailed in response to Question 6.

2. Indicative interest rate scales (both coupons and yields) including a presentation of spreads to the corresponding US Treasury maturity as of the close of business on June 2, 2020, assuming a ten year call. Please include an interest rate scale which assumes the "A" underlying LCA rating and a separate interest rate scale which assumes the "A" underlying LCA rating but with municipal bond insurance.

INDICATIVE PRICING SCALES. In the following tables for the proposed 2020 Bonds, Janney's underwriting desk provides uninsured and insured indicative pricing scales as of June 2, 2020, spread to US Treasury rates, assuming the 2020 Bonds are taxable, rated "A" underlying from S&P, and callable on December 1, 2030. The scales below are based on the estimated amortization provided in the RFP.

Indicative Pricing Scales									
Maturity (12/1)	Principal \$	Uninsured				Insured			
		Coupon %	Yield %	US Trsy	Spread to US Trsy	Coupon %	Yield %	US Trsy	Spread to US Trsy
2039	255,000	3.420	3.420	30yr	195	3.270	3.270	30yr	180
2044	2,430,000	3.520	3.520	30yr	205	3.370	3.370	30yr	190
2045	2,860,000			30yr				30yr	
2046	2,610,000	3.620	3.620	30yr	215	3.470	3.470	30yr	200
2047	2,695,000			30yr				30yr	
2048	11,820,000			30yr				30yr	
2049	12,225,000			30yr				30yr	
2050	12,650,000			30yr				30yr	
2051	13,085,000	3.670	3.670	30yr	220	3.520	3.520	30yr	205
2052	13,535,000			30yr				30yr	
2053	14,000,000			30yr				30yr	
2054	14,485,000			30yr				30yr	
2055	14,985,000			30yr				30yr	
2056	15,500,000	3.770	3.770	30yr	230	3.620	3.620	30yr	215
2057	16,035,000			30yr				30yr	
2058	16,590,000			30yr				30yr	
2059	17,160,000			30yr				30yr	
Total	\$ 182,920,000								

Denotes term bonds.

BOND INSURANCE. Given the Authority's current rating of "A" underlying from S&P for the proposed bonds, Janney expects the Authority will receive better spreads by utilizing bond insurance. Both, Assured Guaranty Municipal and Build America Mutual, expressed capacity for the LCA's bonds and provided estimated insurance premiums of 25-35 bps and 20 bps, respectively, subject to review at the time of pricing. Based on the indicative spreads and insurance premium, the Authority would save approximate \$4.5 million by utilizing bond insurance. A full break-even analysis is included in Exhibit 1.

3. The underwriter's willingness to underwrite and purchase any Bonds for which orders have not been received at the time of signing the Bond Purchase Contract.

CAPITAL POSITION. Based on the Firm's Excess Net Capital of \$122 million, as reported in the 2020 March FOCUS Report, Janney has the legal limit for underwriting new, long-term bonds of \$600 million. This is in addition to the \$250 million limit for the trading desk's use in secondary market and competitive bids which is already built into the Excess Net Capital number. Being a conservatively-managed firm, Janney sets lower internal limits, which vary depending upon the issue and issuer. As a guideline, 20% of excess net capital is allocated to public finance and allows the group to commit the Firm to underwritings between \$250 – 275 million. Considering that most municipal transactions of size have a syndicate with the book-runner having a 50% liability, *Janney has the ability within its internal limits to serve as book-runner on underwritings up to \$500 million in par.* Janney has consistently demonstrated a willingness to commit the use of its capital in pricing its clients' securities and to actively support its clients' municipal offerings in both the primary and secondary markets.

Period Ending	Total Firm Capital	Total Equity Capital	Uncommitted Excess Net Capital
1st Qtr 2020	\$556,506,659	\$146,506,659	\$122,055,559
2019	562,492,711	152,492,711	149,379,630

WILLINGNESS TO COMMIT CAPITAL. Janney believes that a firm's willingness to use its capital to support its municipal clients' financings is as important as its absolute amount of capital. Janney has an established history of committing its capital to achieve fair market rates for its issuer clients, and will continue to do so in the future. Janney strategically uses its capital to maintain aggressive pricing, for example on December 7, 2017 Janney underwrote a balance of approximately \$11 million for the South Central Connecticut Regional Water Authority in an effort to fill orders so that the maturities that were oversubscribed could be repriced at lower yields. The adjacent table displays select transactions that Janney has taken into inventory since January 1, 2015.

Select Negotiated Transactions Taken into Inventory (2015 - 2019)			
Issuer	Par (\$ mm)	Inventory (\$ mm)	% Inventory
Kiski Area SD (PA)	27.430	3.480	12.7%
Northwestern Lehigh SD (PA)	9.860	7.145	72.5%
Enfield (CT)	22.500	10.850	48.2%
South Central CT Reg Water Auth	83.430	2.645	3.2%
South Central CT Reg Water Auth	24.850	3.675	14.8%
Franklin County (PA)	54.255	18.765	35.0%
Chambersburg School District (PA)	22.345	13.590	61.0%
Jeannette School District (PA)	6.960	6.425	92.0%
Reading Area Water Auth. (PA)	25.130	15.290	61.0%
Harrisburg Area Comm Colle (PA)	31.620	13.595	43.0%
Washington Co. Ind. Dev. Auth. (PA)	14.765	11.270	76.0%

JANNEY'S COMMITMENT IN A DIFFICULT MARKET. The COVID-19 health crisis halted the municipal market in early March and has continued to plague the economy with uncertainty. Janney's dedication to the competitive market (recently named as a top 10 national competitive underwriter for Q1 2020) is a strong example of its willingness to commit capital. As listed in the following table, since March 15, 2020 Janney has won 25 competitive bond offerings for a total par of \$490.7 million.

Janney's Competitive Issues Won March – May 2020 (Sole)					
Sale Date	Par (\$ mm)	Issuer	Sale Date	Par (\$ mm)	Issuer
3/19/2020	17.73	Bloomfield Twp-New Jersey	4/21/2020	7.005	Lancaster Town-New York
3/19/2020	16.875	Elizabeth City-New Jersey	4/22/2020	5.725	Anderson Co-Tennessee
3/19/2020	56.925	Salem City-Oregon	4/22/2020	14.920	Tualatin Vlley Fire & Rescue Dt
4/1/2020	14.98	Buena Vista Co CSD	5/05/2020	18.480	Town of Wellesley-MA
4/2/2020	26.845	Beaverton City-Oregon	5/12/2020	31.300	Marlborough City-MA
4/2/2020	11.5	Newtown Town-Connecticut	5/13/2020	17.120	Longmeadow Town-MA
4/8/2020	25.975	Claiborne Co-Tennessee	5/14/2020	16.510	Colorado Wtr Res & Pwr Dev Au
4/8/2020	19.5	Middletown City-Connecticut	5/18/2020	40.700	Ozaukee Co SD-WI
4/13/2020	56.03	Linn Co (College) CSD	5/19/2020	16.580	Fitchburg City-MA
4/16/2020	22.375	Saratoga Co (Galway) CSD	5/19/2020	8.740	Haverford Twp-PA
4/20/2020	6.085	Council Bluffs City-Iowa	5/19/2020	5.00	Montgomery Co SD-PA
4/21/2020	9.94	Gainesville & Hall Co Dev Auth	5/21/2020	15.000	Newington Town-CT

Moniteau School District, PA – \$18,300,000 Janney/Sole Manager

General Obligation Bonds, Series of 2020

Though significantly smaller in par than the Authority's proposed would issue, this recent example of Janney's commitment to our clients, large or small, is representative of the Firm's support for our issuer clients. On Monday, March 30th, Janney successfully completed the first underwriting of municipal securities in Pennsylvania since the Coronavirus pandemic began. The Firm was sole manager on an \$18.3 million negotiated bond issue for Moniteau School District. The deal was put on hold in mid-March as Janney continued to monitor the market and provide daily updates to the issuer. Some stabilization of the market through the week of March 23rd and frequent communication between Janney and the borrower allowed for a quick strike sale as soon as the opportunity presented itself. Janney pre-marketed the deal on Friday, March 27th and sold on Monday, March 30th. By successfully completing the public sale, Janney allowed the District to avoid costly temporary / short-term financing such as bank loans or lines of credit, which would have been necessary to meet upcoming construction payments. In order to ensure that favorable interest rates were locked-in (2.97% all-in cost of funds for 33 years), and to provide the District with funds to begin paying its contractors on a timely basis, Janney utilized its capital to take into inventory approximately \$9.5 million in unsold bonds.

Since March 15th Janney has either served or been selected to serve as sole or co-managing underwriter on 16 negotiated bond issues totaling over \$2.4 billion in par.

Janney's Negotiated Underwriting Experience Since February 2020					
Sale Date	Issuer	State	Par (\$ mm)	Tax Status	Role of JANNEY
03/30/20	Butler Co (Moniteau) SD	PA	18.330	E	SOLE
04/22/20	Ohio Water Development Authority	OH	450.000	E	CO-MGR
04/28/20	Schuylkill Co (St Clair) ASD	PA	4.230	E	SOLE
05/07/20	Ontelaunee Township	PA	9.795	E	SOLE
05/14/20	NYC Transitional Finance Authority	NY	850.000	E	CO-MGR
05/15/20	NYS Dorm Authority	NY	6.625	E	CO-MGR
05/15/20	NYS Dorm Authority	NY	450.535	E	CO-MGR
05/29/20	Moon Township	PA	7.610	T	SOLE
05/29/20	Moon Township	PA	18.365	E	SOLE
06/02/20	Rhode Island Housing	RI	58.365	E	CO-MGR
06/02/20	Rhode Island HEBC	RI	55.900	E	CO-MGR
06/04/20*	Ohio GO Highway	OH	68.540	E	CO-MGR
06/10/20*	State of Connecticut	CT	400.000	E	CO-MGR

06/10/20*	Huntingdon Borough	PA	9.995	E	SOLE
06/11/20*	Central Delaware County Authority	PA	13.675	E	SOLE
06/17/20*	Pittsburgh SD	PA	16.110	E	SOLE
* Anticipated pricing date.					

4. The underwriter's willingness to agree prior to the marketing of the Bonds of an Agreement Among Underwriters, and an explanation of the proposed priority of Orders the underwriter believes will provide the most benefit to the LCA.

Janney is well suited to serve the LCA as senior manager based on the Firm's capital position and extensive underwriting experience in the Pennsylvania bond market. Janney is willing to serve as co-manager on the LCA's proposed 2020 Bonds. If selected as co-manager, Janney will leverage its retail sales force in conjunction with the Firm's bankers, research analysts, and institutional coverage to support the LCA's financings. In the role of co-manager, Janney strongly believes in its responsibility to actively participate in the successful marketing and sale of bonds – both to retail and institutional investors. Janney is willing to agree to an Agreement Among Underwriters prior to marketing the Bonds.

Janney recommends a priority structure providing first for retail and then group net, in order to have the underwriters working together on the LCA's behalf and to ensure that the co-manager(s) receives an appropriate share of the underwriting discount. Pennsylvania residents should be given priority, followed by national accounts in order to allow true retail access to the deal.

From a distribution perspective, the LCA may want to consider the following buyer segment factors when forming its syndicate:

- Pennsylvania retail;
- Major institutional accounts;
- Tier II and III Pennsylvania institutional accounts;
- National institutional accounts; and
- Cross-over buyers of municipal bonds

Janney maintains strong relationships within each of the investor classes listed above.

5. The underwriter's willingness to assist in providing financing comparables during and after the pricing.

When engaged in an underwriting, Janney remains in constant communication with its clients and their financial advisors, providing information that includes financing comparables as well as economic and municipal market news that could impact the financing. Janney is readily available to provide comparables and up to date cash flow analysis upon request.

6. The identification and proposed cost of underwriter's counsel, who shall be responsible for preparation of the Preliminary Official Statement and Official Statement.

Janney has contacted the following firm in reference to the Authority's upcoming transaction. Based on these discussions, Janney proposes a fee for underwriter's counsel, including the preparation of the Preliminary Official Statement and Official Statement of \$75,000. On the following page is a table with the contact info for Janney's proposed firm to serve as underwriter's counsel.

Saul Ewing Arnstein & Lehr

George T. Magnatta
 1500 Market Street, 38th Floor
 Philadelphia, PA 19102
 215.972.7126
 gerooge.magnatta@saul.com

Mr. Magnatta has significant relevant Pennsylvania experience including serving as Bond Counsel on the Allentown Neighborhood Improvement Zone Development Authority's bond issues and Underwriter's Counsel on the Scranton Parking Authority's Concession bond issue.

7. The underwriter's experience in similar transactions over the last three years.

In terms of number of issues year-to-date, Janney is ranked #4 in Pennsylvania, and #19 nationally for senior managed underwritings. In 2019, the Firm was ranked #3 in Pennsylvania, and #22 nationally for senior managed underwritings.

Janney's Senior Managed Rankings				
Year	Pennsylvania No. Issues / Rank	Pennsylvania Par (\$mm) / Rank	National No. Issues / Rank	National Par (\$mm) / Rank
YTD 2020	20 / 4 th	\$263.700 / 7 th	38 / 19 th	\$644.300 / 19 th
2019	73 / 3 rd	\$906.600 / 7 th	127 / 22 nd	\$1,952.800 / 27 th
2018	50 / 2 nd	\$636.600 / 7 th	146 / 20 th	\$2,101.300 / 25 th
2017	69 / 3 rd	\$780.900 / 11 th	181 / 16 th	\$2,612.000 / 21 st

Over the past three years, Janney served as sole, senior or co-manager on 239 bond issues totaling over \$4.7 billion in par amount for Pennsylvania local governments and counties.

Janney's Pennsylvania Local Government Underwriting Experience								
	Negotiated				Competitive			
	Senior Managed		Co-Managed		Senior Managed		Total	
	No. of Issues	Par (\$mm)	No. of Issues	Par (\$mm)	No. of Issues	Par (\$mm)	No. of Issues	Par (\$mm)
YTD 2020	9	139.085	-	-	15	152.135	24	291.220
2019	24	395.850	5	627.060	50	531.435	79	1,554.345
2018	26	368.470	8	642.270	24	251.800	58	1,262.540
2017	34	461.290	5	708.250	39	479.690	78	1,649.230
Total	93	\$1,364.695	18	\$1,977.580	128	\$1,415.060	239	\$4,757.335

LEHIGH VALLEY UNDERWRITING EXPERIENCE. Janney's deep commitment to understanding and supporting local Pennsylvania clients has led to tremendous institutional knowledge and a long track record of successful transactions. In 2019, Janney was the #2 ranked senior managing underwriter in Lehigh Valley based upon number of senior managed issues (7) and the #3 ranked senior managing underwriter in Lehigh Valley based upon total par amount (\$132.7 million). The Firm served as sole or lead manager on 18 Lehigh Valley transactions totaling over \$277 million in par amount since 2017, as detailed in the table below.

Janney's Lehigh Valley Underwriting Experience (Carbon, Lehigh, and Northampton Counties)						
Year	Senior Managed		Co-Managed		Total	
	No. Issues	Par (\$mm)	No. Issues	Par (\$mm)	No. Issues	Par (\$mm)
2020 YTD	1	\$5.165	-	-	1	\$5.165
2019	7	132.705	2	64.135	9	196.840
2018	2	14.975	-	-	2	14.975
2017	6	60.455	-	-	6	60.455
Total	16	\$213.300	2	\$64.135	18	\$277.435

8. Provide two (2) case studies from the transactions listed in 7 that are relevant to LCA and describe unique contributions your firm or principals made to the financings and how the issuer benefitted. Elaborate on any innovations developed by your firm or the principals, or any special marketing efforts undertaken by your firm for such financings.

CASE STUDIES.

Northampton County, PA – \$66,830,000 Janney/Sole Manager

General Obligation Bonds, Series C of 2019 (Federally Taxable)

On October 22, 2019, Janney sole managed a \$66.830 million taxable negotiated bond issue for Northampton County, PA. The 2019C Bonds were Janney's third sole managed bond issue for Northampton County in 2019, also serving as sole managing underwriter on the \$23.035 million General Obligation Bonds, Series A of 2019 in January and the \$4.870 million General Obligation Bonds, Series B of 2019 in July.

The 2019C Bonds were taxable bonds issued to advance refund the County's Series B of 2012 and structured with serial bonds maturing from 2020-2030, with principal amounts ranging from \$2.310 to \$7.410 million. During the order period, the transaction received 27 distinct orders totaling over \$88 million in orders. Of those orders, Janney placed \$1.25 million in retail orders. Given the strong order flow, the Firm was able to tighten spreads at various points across the amortization resulting in the Firm underwriting \$5.225 million in bonds. Ultimately, the Firm was able to provide the County with over \$3.5 million in net present value savings or 5.8% of refunded par on the 2012B bonds.

Chester County, PA – \$62,530,000 Janney/Senior Manager

\$36,160,000 General Obligation Bonds | Series of 2020

\$26,370,000 General Obligation Bonds | Series A of 2020

Janney served as the book-running senior manager, along with two co-managers, on the County's Series 2020 and Series 2020A Bonds. Both series of bonds sold on January 9, 2020 as fixed rate, tax-exempt bonds with different closing dates. Series 2020 closed on February 6, 2020 and the forward-delivery Series 2020A closed on April 16, 2020.

The Series 2020 bonds were structured with serial bonds maturing from 2021-2040 with an 8-year optional redemption provision at par. The Series 2020A bonds were structured with serial bonds maturing from 2021-2025 and not subject to optional redemption.

Given market conditions and the County's excellent credit ratings, Janney was able to achieve an aggregate bond yield between the two series of 1.56% for the County. Janney entered the market at credit spreads that were significantly tighter than those that the Firm had proposed in its RFP response, including up to 10 basis points tighter on the long end of the yield curve.

After a successful order period Janney was able to tighten the final credit spreads by an additional 1-7 basis points across the yield curve. The bonds received favorable yields throughout the amortization and did not exceed 2.00% until 2037 with a final maturity in 2040. The County chose to structure the bonds with 4.00% coupons beyond call date for which Janney was able to lock in attractive yields. Janney received orders from 38 different investors totaling over \$243 million in orders. Compared to the County's bond issuance earlier in the year Janney was able to achieve spreads 7-10 basis points tighter on a maturity by maturity basis.

9. Include any other information you believe is relevant to the contemplated transaction.

MARKETING AND DISTRIBUTION STRATEGY. The Firm has a long-established presence within the Commonwealth, with 34 offices that house 285 financial advisors over 183,000 accounts with \$31.4 billion in assets, including over \$2.6 billion of directly-held municipal. Janney's physical presence within the Commonwealth allows the Firm to leverage our many long-term relationships with local retail investors and business leaders in the area. **Janney's two Lehigh County offices located in Allentown and Bethlehem are staffed by 21 registered financial advisors who maintain over 9,500 retail accounts and manage over \$1.9 billion in assets, including over \$125 million in directly-held municipal bonds.** For the Authority's bond issue, Janney's public finance department will be in close contact with our Allentown and Bethlehem based financial advisors as well as nearly 100 advisors located in nine other branches within a one-hour drive of Lehigh County to publicize the bond sale to over 50,000 Lehigh Valley-based retail investors. By actively promoting the bond sale throughout the region, Janney ensures that those individuals interested in purchasing the LCA's bonds will have ample opportunity to do so. **This retail focus has resulted in the Janney's clients currently owning over \$10 million in par of the Authority's bonds across 277 accounts and the Firm executing 507 primary and secondary market trades of bonds issued by the Authority totaling over \$21 million in par since 2010.**



Janney believes a balanced distribution plan utilizing both institutional and retail investors will greatly benefit the Authority by maximizing the number of investors and creating additional demand (and better pricing) for the bond issue. In particular, adding a strong retail component to the Authority's marketing strategy will ensure the lowest cost of capital for two important reasons. First, retail investors will buy across the entire yield curve and will accept lower yields on their purchases. Including a significant number of retail investors on a transaction who are not as price sensitive will help ensure

institutional accounts will not dictate less favorable levels. Secondly, institutional investors will pay a premium for bonds in the primary market so long as there is sufficient liquidity in the secondary market. Having strong retail participation in the primary market demonstrates to institutional investors that there will also be a strong secondary market among retail investors, further supporting primary market pricing among institutional investors. Janney's strong presence in the middle market allows the Firm to access not only Tier I, but Tier II and Tier III investors which will help to increase demand and put bonds in the broadest spectrum of buyers possible.

TARGETING INSTITUTIONAL INVESTORS. Janney will utilize the analysis represented in the table below to target potential new investors for the LCAs bonds and identify existing investors that may seek to increase their holdings. Due to the extensive credit work needed by institutional investors when purchasing bonds, it is particularly important to stay on top of current holders of the LCA's bonds. If institutions are currently holding LCA bonds, the credit review process is largely already completed and analysts are tracking the credit, providing those investors the confidence and comfort to invest in smaller block sizes. Identifying top transportation bond investors that do not hold the LCA's debt presents an opportunity to bring new investors to the Authority's pool of bondholders.

IDENTIFICATION OF CURRENT INSTITUTIONAL INVESTORS. The table below represents the top 25 institutional investors in Pennsylvania water & sewer bonds, the amount they hold, whether or not these buyers currently hold the LCA's bonds, and the total percentage of the LCA's outstanding bonds they hold. **Five of the top 25 institutional bondholders below currently hold the LCA's bonds.** It is important to note that investors use many different criteria based on credit strength and credit type, to determine how much of an individual credit they are comfortable owning as a percentage of their portfolio. Further discussion with each institutional investor is required to understand their reasons for not investing or underinvesting in the LCA's bonds. As part of its marketing efforts, Janney's banking and sales teams will proactively reach out to these non-investing buyers and investors with low exposure to the LCA's debt.

Largest Water & Sewer Bondholders in Pennsylvania	Par Held in PA Water & Sewer Bonds (\$mm)	Invest in LCA Bonds	% Held of LCA Bonds Outstanding
The Vanguard Group, Inc.	657.965	YES	5.91%
Franklin Advisers, Inc.	170.810	YES	1.30%
Nuveen Asset Management, LLC	149.140	YES	17.47%
BlackRock Advisors, LLC	95.565	NO	
Victory Capital Management, Inc.	91.495	NO	
Wells Capital Management, Inc.	76.105	YES	0.50%
MFS Investment Management	71.120	YES	10.87%
Fidelity Investments Money Management, Inc.	69.285	NO	
Invesco Advisers, Inc.	64.575	NO	
Thornburg Investment Management, Inc.	63.750	NO	
AllianceBernstein, L.P. (U.S.)	56.427	NO	
Federated Investment Management Company	55.900	NO	
State Farm Investment Management Corporation	52.445	NO	
Goldman Sachs Asset Management, L.P. (U.S.)	34.715	NO	

Capital Research & Management Company (U.S.)	34.600	NO	
MacKay Shields, LLC	33.495	NO	
Western Asset Management Company	31.055	NO	
BlackRock Fund Advisors	29.135	NO	
J.P. Morgan Investment Management, Inc.	27.580	NO	
Cincinnati Financial Corp. (Asset Management)	26.400	NO	
New England Asset Management, Inc.	23.450	NO	
Nationwide Asset Management, LLC	22.660	NO	
BlackRock Advisor DWS Investment Mgmt. Americas J.P. Morgan Investment Mgmt. ...	20.855	NO	
Protective Life Corporation (Asset Management)	20.000	NO	
Eaton Vance Management	18.255	NO	

WATER AND WASTEWATER INDUSTRY EXPERTISE. Janney has extensive experience underwriting water and wastewater municipal bonds. Since 2016, Janney has served as sole, senior or co-manager on 49 negotiated water/wastewater issues totaling over \$5.3 billion in par amount and as sole manager on 30 competitive water/wastewater revenue issues for a total financed par amount exceeding \$480 million. During this time, the Firm has served as underwriter on multiple occasions for the Metropolitan District Commission, the City of Chicago (Water and Wastewater), Middlesex Water Company (NJ), North Jersey District Water Supply Commission, Narragansett Bay Commission, City of Philadelphia (Water and Wastewater), South Central Connecticut Regional Water Authority, and the Pittsburgh Water and Sewer Authority, where Janney was named to the underwriting pool and served as a co-manager for the first time in June 2019.

Janney's Top 10 Water and Wastewater Underwriting Relationships 2016 – 2020 (Sorted by Aggregate Par Amount)		
Issue	Number of Transactions	Aggregate Par (\$mm)
Illinois Finance Authority	2	1,010.030
Connecticut	6	784.970
NYS Environmental Facs Corp	2	605.370
Ohio Water Development Authority	2	616.405
Philadelphia City-Pennsylvania	2	472.545
So Central Conn Reg Water Authority	7	396.145
Metropolitan District	3	388.645
Allegheny Co Sanitary Authority	2	263.435
Pittsburgh Water & Sewer Authority	1	214.145
Chicago City-Illinois	1	199.355

The Firm also has substantial underwriting experience with state revolving fund ("SRF") financings nationally. Since 2016, Janney has had the privilege of serving as a senior manager for the SRFs of Connecticut, New Jersey, and Rhode Island. In 2017, the Firm served as joint book-running senior manager on the \$355 million Connecticut State Revolving Fund financing, and in June 2019, the Firm served as co-senior manager on its 4th consecutive financing for Connecticut's SRF for approximately \$285 million. The Firm also has served as a senior, co-senior and co-managing underwriter to the Rhode Island Infrastructure Bank (RIIB) for nearly a decade. In June 2019, Janney served as co-senior manager on its 10th RIIB transaction. Competitively, Janney's underwriters are active bidders on the NJ Infrastructure Bank's bonds, having senior managed five transactions since 2010. Since 2017, Janney has

also had the privilege of serving as a co-manager for the Illinois Finance Authority (IFA), two issues totaling over \$1 billion in par, and the Ohio Water Development Authority, for which Janney served this week on its 2nd co-managed issue.

Complementing the Firm's municipal water/wastewater practice is Janney's unmatched equity investment banking platform in the water/wastewater industry. Janney's corporate water/wastewater practice provides municipal water/wastewater bankers strategic information on technology, trends in distribution, and investor perspectives on the broader water/wastewater sector. Since 2002, no investment bank has participated in more equity offerings for companies in the water/wastewater industry than Janney.

EXHIBIT 1: BOND INSURANCE BREAK-EVEN ANALYSIS

Lancaster County Authority																	
Bond Insurance Break-Even Analysis																	
		UNINSURED RATES				INSURED RATES				Break-Even Insured Yields							
		Dated: 9/16/2020 Call Date: 12/1/2030				Dated: 9/16/2020 Call Date: 12/1/2030 Ins Premium: 0.200%				Yield to Maturity (YTM)				Nominal Yields			
Maturity Date	Principal	Coupon	Yield	YTM	Price	Coupon	Yield	YTM	Price	Insurance Premium	Break-Even Insured YTM	Break-Even Insured YTM Spread	Insure?	Break-Even Insured Yield	Break-Even Insured Yield Spread	Insure?	Insurance Incremental Savings
12/01/2039	255,000	3.420%	3.420%	3.420%	100.000	3.270%	3.270%	3.270%	100.000	830.34	3.397%	-2.32 BPs	yes	3.397%	-2.35 BPs	Yes	4,533.72
12/01/2044	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/01/2045	5,290,000	3.520%	3.520%	3.520%	100.000	3.370%	3.370%	3.370%	100.000	19,567.93	3.498%	-2.22 BPs	yes	3.498%	-2.24 BPs	Yes	112,632.10
12/01/2046	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/01/2047	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/01/2048	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/01/2049	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/01/2050	42,000,000	3.620%	3.620%	3.620%	100.000	3.470%	3.470%	3.470%	100.000	172,051.25	3.597%	-2.23 BPs	yes	3.597%	-2.26 BPs	Yes	982,665.25
12/01/2051	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/01/2052	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/01/2053	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/01/2054	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/01/2055	70,090,000	3.670%	3.670%	3.670%	100.000	3.520%	3.520%	3.520%	100.000	313,909.75	3.647%	-2.27 BPs	yes	3.647%	-2.29 BPs	Yes	1,761,154.76
12/01/2056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/01/2057	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/01/2058	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/01/2059	65,285,000	3.770%	3.770%	3.770%	100.000	3.620%	3.620%	3.620%	100.000	315,893.44	3.746%	-2.36 BPs	yes	3.746%	-2.39 BPs	Yes	1,688,084.28
\$182,920,000										\$822,252.71							\$4,544,536.39

EXHIBIT 2: SEC MUNICIPAL ADVISOR DISCLOSURE

Janney Montgomery Scott LLC has sent you this information based on your request. All information included herein is not intended to be advice under the Securities Exchange Commission's Municipal Advisor Rule, and should therefore not be construed as such. The information provided is for discussion purposes only in anticipation of being engaged to serve as underwriter. In accordance with financial regulations and requirements, including, but not limited to, the Securities Exchange Commission's Municipal Advisor Rule, it is important that you understand that Janney seeks to serve as an underwriter on a future transaction. Janney is not nor does Janney intend to act as your municipal advisor, swap advisor, financial advisor or in any other fiduciary or advisory capacity. Janney does not guarantee the accuracy or completeness of any such information, and therefore Janney assumes no liability for any loss resulting from reliance thereon. Any terms, prices, and structure in this material are subject to changing market conditions, are indicative only, and do not constitute an offer or commitment. All final prices are subject to market conditions at deal time and agreement on deal terms. Historical data, past trends, and past performance do not reflect or guarantee future trends or performance.

Member: NYSE, FINRA, SIPC



1053 SPRUCE STREET * P.O. BOX 3348 * ALLENTOWN, PA 18106-0348
610-398-2503 * FAX 610-398-8413 * www.lehighcountyauthority.org
email: service@lehighcountyauthority.org

MEMORANDUM

TO: LCA Board of Directors
FROM: John Parsons, Chief Operating Officer
DATE: June 12, 2020
RE: Emergency Water Main Repair – 17th and Sumner Avenue

On May 17, 2020, Lehigh County Authority Water Distribution System personnel were dispatched to North 17th Street between Sumner Avenue and Washington Street. A 12" cast iron water main had ruptured. The leak was isolated and repaired but not before significant street and curb damages had resulted.

Damages to the road were severe enough that would require the entire block to be replaced. During the process to expedite repairs, consideration was given to the fact that the existing 12" main that ran south of the main break towards Sumner Avenue was also in need of replacement. Instead of fixing the road, only to dig it up again later for inevitable replacement or repairs, it was decided to replace the entire 300' of 12" main between Washington and Sumner prior to the street repair.

Following are the contractor charges for this work:

Joao Bradley	12" Main Replacement	\$24,375.00
Great Western Inc	Road Base Course	\$57,132.00
	Mill and Overlay	\$24,012.00
	<u>Curb Repairs</u>	<u>\$4,800.00</u>
	Total	\$110,319.00

We are asking for a retroactive emergency declaration for this event in the amount of \$110,319.00. The road damages needed to be repaired ASAP so the street could be reopened as quickly as possible. The use of multiple contractors was required to make this work.

CC: Liesel Gross, Chief Executive Officer
Edward C. Kline, Chief Financial Officer
Patricia Walck, Purchasing Agent

MEMORANDUM

Date: June 22, 2020

To: Lehigh County Authority Board of Directors
From: Amy Kunkel, Chuck Volk
Subject: Suburban Division – Madison Park North
New Well Development – Pre-Design Phase

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization – Pre-Design Phase	\$76,580
2	Professional Services Authorization – ARRO Consulting, Inc. (1), (2)	\$42,400
3	Professional Services Authorization – Odenheimer Co. (1), (2)	\$19,180

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

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

PROJECT OVERVIEW:

The Madison Park North Water System is a small “developer built” system that was acquired by LCA in 2010 and serves approximately 116 residential connections in Lynn Township. Water for the system is provided by a single groundwater source (Well 1). This project addresses the development of an additional well as a secondary water source. DEP regulations for new public water systems now require a backup or redundant source of supply. This was a developer system that was built prior to these regulations. The proposed new source would provide the redundancy needed during an emergency if Well 1 was out of service.

The development of a permanent public water source is a many step process, with field exploration, testing, nearby well monitoring, and regulatory submissions prior to initiating new facility design phase. The proposed well site was selected during a site evaluation in 2018, and is located on private land adjacent to the eastern extent of Madison Park North subdivision. A temporary easement was secured from the property owner and a test well was drilled in January 2019. Step drawdown testing was performed during March 2019 to determine if the proposed well was capable of meeting the water demand. A Combined Pre-Drilling and Aquifer Test Plan was prepared and submitted to DEP for approval in September 2019. This plan describes the proposed reconstruction of the test well to meet PADEP construction standards for public water supply wells as well as the plan for the 72-hour aquifer test. We received preliminary conditional approval from DEP in September 2019 and reconstruction of the test well occurred in January 2020.

The development of this well is being performed in a phased approach since negative or deficient test results in any of the phases could eliminate this well site as a viable source of supply. Following completion of this testing phase, a future design authorization will be requested for design and permitting of the new facility.

FUNDING:

This Project will be funded by the LCA Suburban Division

BUDGET AMENDMENT

Not required for this approval

PROJECT STATUS:

Pending Board approval of the Pre-Design Phase.

THIS APPROVAL-PRE-DESIGN PHASE

Lehigh County Authority (LCA) intends to retain the services of an engineering consulting firm and a well drilling company to perform a 72-hour Aquifer Test. An amendment to this Capital Project Authorization will be requested for final facility design and permitting upon review and approval of the Hydrogeologic Report by DEP. Approval for construction related engineering services will be requested with the Construction Phase authorization. The following table summarizes the professional services to be performed:

Professional Services ⁽¹⁾
1. Perform 72-hour aquifer test.
2. Monitor operation of the test and well recovery..
3. Monitor and log levels in three nearby wells.
4. Monitor water chemistry in proposed well and coordinate sampling.
5. Prepare Hydrogeologic Report for DEP submission.

1. For Design Phase.

CONSULTANT SELECTION PROCESS:

ARRO Consulting, Inc. was selected to perform engineering and hydrogeologic services for this project. ARRO has performed numerous well development and new source facility design projects for LCA, including WL-8R, WL-12R, WL-20, WL-23, and WL-24. ARRO also designed and managed the Schantz Spring Booster Station and Reservoir No. 5 projects.

Odenheimer Co. was selected for well drilling services. LCA has a long history of using Odenheimer for well operation services. And they partnered with ARRO on prior LCA well development projects. They submitted the lowest proposal for the test well and well reconstruction phases and there is benefit to using the same well driller for this portion of the project.

PROJECT SCHEDULE:

The 72-hour aquifer test is scheduled for July of 2020, when groundwater levels are typically low, providing a worst case scenario.

FUTURE AUTHORIZATIONS- DESIGN AND CONSTRUCTION PHASE:

Once the testing phase is completed, Capital Project Authorization (CPA) Amendments will be presented to the Board for approval of design and construction phases, and will include construction contract award(s), professional services amendment for construction related services, staff costs and other related components.



Lehigh County Authority

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

PROFESSIONAL SERVICES AUTHORIZATION

Professional: ARRO Consulting, Inc.
108 West Airport Road
Lititz, PA 17543

Date: June 22, 2020

Requested By: Amy Kunkel

Approvals

Department Head:

Chief Executive

Officer:

Suburban Division- Madison Park North New Well Development

Previous Authorizations- None

This Authorization – Pre-Design Phase: \$42,400

ARRO Consulting, Inc will provide design engineering related services for the aforementioned project.

Professional Services
1. Direct performance of 72 hour aquifer test.
2. Coordinate with well contractor.
3. Monitor and log levels in three nearby wells.
4. Monitor water chemistry in proposed well and coordinate sampling.
5. Prepare Hydrogeologic Report for DEP submission.

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

\$ 42,400

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

(For Authority Use Only)

Authorization Completion:

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



Lehigh County Authority

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

PROFESSIONAL SERVICES AUTHORIZATION

Professional: Odenheimer Co.
2968 Betz Court
Orefield, PA 18069

Date: June 22, 2020

Requested By: Amy Kunkel

Approvals

Department Head: _____

Chief Executive

Officer: _____

Suburban Division- Madison Park North New Well Development

Previous Authorizations- None

This Authorization – Pre-Design Phase: \$19,180

Odenheimer Co. will provide design engineering related services for the aforementioned project.

Professional Services
1. Provide pump, power, equipment and labor to perform 72 hour aquifer test.
2. Install and maintain discharge line.
3. Monitor operation of the pump test and well recovery.

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

\$ 19,180

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

(For Authority Use Only)

Authorization Completion:

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



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email: service@lehighcountyauthority.org

MEMORANDUM

TO: LCA Board of Directors
FROM: Liesel Gross
DATE: June 14, 2020
RE: Heidelberg Heights Sewer System
LCA Resolution 6-2020-3 authorizing agreement on PA-DEP Consent Order

As discussed with the Lehigh County Authority (LCA) Board of Directors during several meetings over the past two years, the small sewer system known as Heidelberg Heights, located in Heidelberg Township, has been challenged by high groundwater levels and significant infiltration and inflow (I&I) of clear water into the sewer system during rain events. The frequent bypasses are reported as part of LCA's monthly operational report, and several projects have been planned to address the issues in this community.

On February 11, 2019, the Pa. Department of Environmental Protection (DEP) submitted a notice of violation to LCA regarding these bypasses and permit exceedances at the Heidelberg Heights wastewater treatment plant. Over the course of several meetings with DEP, and presentations to the LCA Board, a corrective action plan (CAP) was developed to address these ongoing challenges. The CAP was submitted to DEP in mid-2019.

The critical items included in the CAP are:

- Ongoing system inspections through CCTV work, smoke testing, nighttime weiring and other methods to identify sources of I&I.
- Annual projects, which began in 2018 and will conclude in 2024, to replace all vitrified clay pipe in the system, which has been shown to be leaking and a significant source of the I&I problem in this system. These projects include replacement of the public portion of the service laterals and installation of cleanouts to support private lateral inspection and repairs.
- Private sewer lateral inspections and basement inspections to identify and address leaking laterals and unauthorized connections such as sump pumps and roof leaders. This element of the CAP will be achieved through coordination with Heidelberg Township and the adoption of an updated sewer ordinance to support this activity.

In order to officially approve LCA's proposed CAP and ensure work proceeds according to schedule, DEP has prepared a Consent Order and Agreement, which outlines the commitments described in LCA's CAP along with stipulated penalties for failure to complete the work or for additional bypasses or permit violations that may occur. It is important to note that the project originally scheduled in LCA's CAP to be completed in 2020 has been delayed due to the COVID-19 pandemic emergency. Through discussion with DEP, the completion deadline for that project has been extended to June 2021.

It is worth noting that this system is very small, serving just 138 properties, and the expense of the projects outlined in the CAP will be significant. The 2021-2025 capital plan that was approved earlier this year shows an estimate of \$2.2 million being spent on system rehabilitation and upgrades to the wastewater treatment plant. The rate impact of this work has not been determined at this time but will be a critical item to review during the development of the 2021 budget. In addition, all avenues for grant funding should be pursued to minimize the impact of this work. At times, having a Consent Order in place has been shown to be helpful to illustrate the criticality of a system's needs in order to support qualification for grant funding.

Board approval of the Consent Order and Agreement by Resolution is required. Resolution 6-2020-3 is attached to this memo for Board consideration, along with a copy of the Consent Order and Agreement, for consideration at the June 22, 2020 Board meeting.

RESOLUTION No. 6-2020-3

(Duly adopted June 22, 2020)

A RESOLUTION OF LEHIGH COUNTY AUTHORITY APPROVING A CONSENT ORDER AND AGREEMENT WITH THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION; AUTHORIZING EXECUTION AND DELIVERY OF THE CONSENT ORDER AND AGREEMENT; AND PROVIDING FOR OTHER MISCELLANEOUS MATTERS.

WHEREAS, the Lehigh County Authority (the “Authority”) owns and operates the Heidelberg Heights Wastewater Treatment Plant (“WWTP”) and associated sewer collection system, located in the Township of Heidelberg, Lehigh County, Pennsylvania; and

WHEREAS, the Pennsylvania Department of Environmental Protection (the “Department”) delivered to the Authority, through correspondence dated May 18, 2020, a proposed Consent Order and Agreement (“Consent Order”) regarding the Authority’s operation of the Heidelberg Heights WWTP; and

WHEREAS, the Consent Order alleges, inter alia, the occurrence of violations of the Pennsylvania Clean Streams Law, and/or the Authority’s NPDES Permit, regarding the operation of the Heidelberg Heights WWTP; and

WHEREAS, the Authority’s Board of Directors (the “Board”), desires to signify its approval of the Consent Order, and to authorize its execution and delivery to the Department.

NOW THEREFORE, be it resolved by the Board of this Authority, as follows:

1. The Board approves the Consent Order in the form and substance attached hereto, with such additions or modifications as deemed necessary, or convenient, by the Authority officials executing the document, which approval shall be conclusively evidenced by the execution thereof.

2. Liesel Gross, Authority Chief Executive Officer, and Michael A. Gaul, Esquire, of the law firm of King, Spry, Herman, Freund & Faul, LLC, Authority Solicitor, are authorized to execute and deliver the Consent Order, and any amendments, to the Department on behalf of the Authority.

3. The appropriate Authority officials are authorized to take such further necessary or convenient action, including but not limited to, the payment of any expense or civil penalty, in order to effectuate the provisions of this Resolution, and the Consent Order.

4. All Resolutions, or parts of Resolutions, inconsistent with this Resolution are hereby repealed insofar, but only, insofar, as the same are inconsistent herewith.

5. If any section, subsection, sentence, clause or phrase of this Resolution is, for any reason, held to be illegal or unconstitutional, such decision shall not affect the validity of the remaining portions of this Resolution.

On motion of _____, seconded by _____,
this Resolution was adopted the 22nd day of June 2020.

Tally of Votes: Yeas _____ Nays _____

§ 6

I, Michael A. Gaul, Solicitor of Lehigh County Authority, do hereby certify that the foregoing is a true, correct and complete copy of a resolution which was duly adopted by the Authority at a public meeting of the Authority held on June 22, 2020, after notice thereof had been duly given as required by law, at which meeting a quorum was present and voting and which resolution No. 6-2020-3 is now in full force and effect on the date of this certification.

_____ Michael A. Gaul, Esquire Lehigh County Authority Solicitor	_____ Date
--	---------------

Attest:

_____ Lisa A. Miller Executive Administrative Support Specialist	_____ Date
--	---------------

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

In The Matter Of:

Lehigh County Authority	:	Violations of The Clean Streams Law
(Heidelberg Heights)	:	and
P.O. Box 3348	:	NPDES Permit No. PA0036102
Allentown, PA 18106-0348	:	Heidelberg Township, Lehigh County

CONSENT ORDER AND AGREEMENT

This Consent Order and Agreement is entered into this _____ day of _____ 2020, by and between the Commonwealth of Pennsylvania, Department of Environmental Protection ("Department") and Lehigh County Authority-Heidelberg Heights ("LCA").

The Department has found and determined the following:

A. The Department is the agency with the duty and authority to administer and enforce The Clean Streams Law, Act of June 22, 1937, P.L. 1987, as amended, 35 P.S. § 691.1 et seq. ("Clean Streams Law"); Section 1917-A of the Administrative Code of 1929, Act of April 9, 1929, P.L. 177, as amended, 71 P.S. § 510-17 ("Administrative Code") and the rules and regulations promulgated thereunder.

B. LCA is a municipality as defined in Section 1 of The Clean Streams Law, 35 P.S. § 691.1. LCA maintains a mailing address of P.O. Box 3348, Allentown, Pennsylvania 18106-0348.

C. LCA owns and operates The Heidelberg Heights Wastewater Treatment Plant ("WWTP") located in the Township of Heidelberg, Lehigh County, Pennsylvania.

D. On June 22, 2015, the Department renewed National Pollutant Discharge Elimination System Permit No. PA0036102 ("NPDES Permit") to LCA, which authorized a discharge of treated sewage to an Unnamed Tributary to Mill Creek in accordance with the effluent limitations, monitoring and reporting requirements, and other conditions set forth in the NPDES Permit. The effective date of the NPDES Permit was July 1, 2015.

E. LCA is required by the NPDES Permit and Sections 201 and 202 of The Clean Streams Law, 35 P.S. §§ 691.201 and 691.202, to fully comply with the effluent limits set forth in the NPDES Permit.

F. The NPDES Permit requires that effluent discharged from LCA meets identified concentration criteria for certain parameters on a routine basis. LCA exceeded the NPDES Permit's effluent limitations as reported by LCA's monthly Discharge Monitoring Reports ("DMRs"), as follows:

<u>Monitoring Period</u>	<u>Parameter</u>	<u>Permit Limit</u>	<u>Reported Value</u>
February 2016	CBOD5, Monthly Average	12.4 lbs/day	22.3 lbs/day
February 2016	CBOD5, Weekly Average	20.0 lbs/day	31.0 lbs/day
October 2016	TRC, Monthly Average	0.10 mg/L	0.31 mg/L
April 2017	CBOD5, Monthly Average	12.5 lbs/day	21.7 lbs/day
April 2017	CBOD5, Weekly Average	20.0 lbs/day	23.0 lbs/day
April 2017	TSS, Monthly Average	15.0 lbs/day	21.0 lbs/day
June 2017	Fecal Coliform, Inst. Max	1,000/100 mL	>12,098/100 mL
July 2017	CBOD5, Monthly Average	12.5 lbs/day	12.6 lbs/day
July 2017	TSS, Monthly Average	15.0 lbs/day	33.0 lbs/day
July 2017	TSS, Weekly Average	22.5 lbs/day	50.6 lbs/day
July 2017	Fecal Coliform, Inst. Max	1,000/100 mL	>12, 098/100 mL
August 2017	Fecal Coliform, Inst. Max	1,000/100 mL	>48,392/100 mL
September 2017	Ammonia-Nitrogen, Monthly Average	1.25 lbs/day	<2.43 lbs/day
September 2017	Ammonia-Nitrogen Monthly Average	2.5 mg/L	<13.2 mg/L
September 2017	Fecal Coliform, Inst. Max	1,000/100 mL	>2,420/100 mL
October 2017	CBOD5, Weekly Average	40.0 mg/L	50.0 mg/L
October 2017	Nitrate-Nitrite, Monthly Average	12.0 mg/L	14.1 mg/L
January 2018	TRC, Inst. Max	0.24 mg/L	0.54 mg/L
February 2018	Fecal Coliform, Inst. Max	10,000/100 mL	24,200/100 mL
March 2018	Fecal Coliform, Inst. Max	10,000/100 mL	>48,392/100 mL
April 2018	Fecal Coliform, Inst. Max	10,000/100 mL	24, 196/100 mL
April 2018	TRC, Inst. Max	0.24 mg/L	0.25 mg/L
May 2018	Fecal Coliform, Inst. Max	1,000/100mL	1,034/100 mL
May 2018	TRC, Inst. Max	0.24 mg/L	0.28 mg/L

June 2018	Fecal Coliform, Inst. Max	1,000/100 mL	>2,420/100 mL
August 2018	Fecal Coliform, Inst. Max	1,000/100 mL	>24,196/100 mL
November 2018	CBOD5, Monthly Average	12.5 lbs/day	<13.5 lbs/day
November 2018	CBOD5, Weekly Average	20.0 lbs/day	<21.0 lbs/day
November 2018	TRC, Inst. Max	0.24 mg/L	0.38 mg/L
December 2018	CBOD5, Monthly Average	12.5 lbs/day	14.9 lbs/day
January 2019	CBOD5, Monthly Average	12.5 lbs/day	14.8 lbs/day
January 2019	CBOD5, Weekly Average	20.0 lbs/day	21.0 lbs/day
January 2019	TSS, Weekly Average	22.5 lbs/day	25.0 lbs/day
April 2019	CBOD5, Monthly Average	12.5 lbs/day	12.7 lbs/day
May 2019	CBOD5, Monthly Average	12.5 lbs/day	15.8 lbs/day
May 2019	CBOD5, Weekly Average	20.0 lbs/day	23.9 lbs/day
May 2019	TSS, Monthly Average	15.0 lbs/day	21.2 lbs/day
May 2019	TSS, Weekly Average	22.5 lbs/day	32.8 lbs/day
May 2019	Fecal Coliform, Inst. Max	1,000/100 mL	24,196/100 mL
July 2019	CBOD5, Monthly Average	12.5 lbs/day	18.7 lbs/day
July 2019	CBOD5, Weekly Average	20.0 lbs/day	34.6 lbs/day
July 2019	Fecal Coliform, Inst. Max	1,000/100 mL	>24,196/100 mL
November 2019	Fecal Coliform, Inst. Max	10,000/100 mL	>48,392/100 mL

G. Section 92a.47(c) of the Department's Regulations, 25 Pa. Code § 92a.47(c), prohibits discharges from a Sanitary Sewer Overflow ("SSO"). Failure to prevent the occurrence of an SSO constitutes unlawful conduct under Section 611 of The Clean Streams Law, 35 P.S. § 691.611.

H. LCA failed to prevent the occurrences of SSOs as reported by LCA's SSO reporting forms submitted to the Department, as follows:

<u>Date of Incident</u>	<u>Location</u>	<u>Volume (gallons)</u>	<u>Suspected Cause</u>
August 26, 2015	WWTP: Waste Holding Tank	100	Over pumping into waste holding tank
September 7, 2015	WWTP: Comminutor Inlet	50	Comminutor Blockage
September 10, 2015	WWTP: EQ Tank	200	Excessive Rainfall
June 18, 2018	WWTP: Sludge Holding Tank	50	Error in pump control
August 13, 2018	WWTP: Waste Holding Tank	30	Valve Failure
October 27, 2019	WWTP: EQ Tank	1,000 – 1,500	Excessive Rainfall

I. Part B.I.G. of the NPDES Permit prohibits unauthorized bypasses from occurring within the treatment facility. Failure to comply with Part B.I.G of the NPDES Permit constitutes unlawful conduct under Section 611 of The Clean Streams Law, 35 P.S. § 691.611.

J. LCA reported bypasses of the WWTP's secondary treatment works to the Department, as follows:

<u>Start Date of Incident</u>	<u>Start Time</u>	<u>End Date of Incident</u>	<u>End Time</u>	<u>Volume (MG)</u>
September 10, 2015	Unknown	September 10, 2015	Unknown	Unknown
September 12, 2015	Unknown	September 12, 2015	Unknown	Unknown
January 10, 2016	Unknown	January 10, 2016	Unknown	0.0636
February 3, 2016	Unknown	February 3, 2016	Unknown	0.09
February 16, 2016	Unknown	February 16, 2016	Unknown	0.075
March 31, 2017	1530	April 3, 2017	1100	0.340
April 7, 2017	0900	April 8, 2017	0800	0.100
June 24, 2017	0740	June 25, 2017	1530	0.190
July 7, 2017	0830	July 7, 2017	1950	0.060
July 24, 2017	0640	July 27, 2017	0640	0.370
August 12, 2017	0545	August 13, 2017	0545	0.110
October 30, 2017	0745	October 31, 2017	0745	0.071
January 13, 2018	0200	January 15, 2018	0200	0.200
January 23, 2018	1545	January 25, 2018	0900	0.080
February 11, 2018	1430	February 14, 2018	1430	0.180
February 16, 2018	0853	February 20, 2018	0853	0.120
February 22, 2018	2055	March 1, 2018	0755	0.240
March 2, 2018	0430	March 5, 2018	0515	0.200
April 16, 2018	1215	April 20, 2018	1215	0.155
May 19, 2018	1345	May 25, 2018	1345	0.298
June 1, 2018	1934	June 2, 2018	0834	0.020

July 24, 2018	0500	July 26, 2018	0500	0.313
August 3, 2018	2311	August 6, 2018	2311	0.362
August 13, 2018	1420	August 16, 2018	1420	0.404
August 21, 2018	1635	August 23, 2018	1635	0.058
September 10, 2018	1845	September 12, 2018	1845	0.100
September 26, 2018	1140	October 1, 2018	1140	0.161
October 12, 2018	0745	October 14, 2018	0745	0.050
November 3, 2018	0010	November 9, 2018	0730	0.449
November 25, 2018	0438	November 29, 2018	0438	0.524
December 21, 2018	0950	December 25, 2018	0950	0.249
December 28, 2018	1900	December 31, 2018	0700	0.060
January 1, 2019	0130	January 4, 2019	0730	0.104
January 20, 2019	1200	January 21, 2019	1200	0.066
January 24, 2019	0940	January 28, 2019	0940	0.279
February 21, 2019	1700	February 27, 2019	0800	0.127
March 22, 2019	0545	March 25, 2019	0545	0.143
April 13, 2019	1330	April 21, 2019	1330	0.205
May 12, 2019	1330	May 18, 2019	0700	0.350
June 20, 2019	2035	June 22, 2019	2035	0.059
July 12, 2019	1335	July 14, 2019	1235	0.045
July 22, 2019	0232	July 26, 2019	1032	0.372
October 27, 2019	1400	October 28, 2019	1300	0.06
November 1, 2019	0036	November 3, 2019	0836	0.318
January 25, 2020	1430	January 29, 2020	1430	0.193
April 13, 2020	1225	April 18, 2020	1225	0.489

K. On December 22, 2015, the Department sent a Notice of Violation (“NOV”) to LCA. The NOV documented SSOs which had occurred on August 26, September 7 and September 10, 2015 along with bypasses which took place September 10 and September 12, 2015. The NOV requested a written response to the cause of the incidents.

L. On January 13, 2016, the Department received a written response from LCA to the Department’s December 22, 2015 NOV. The response attributed the SSOs to excessive pumping to the sludge holding tank, a blocked line and excessive influent flow. LCA claimed that due to increased influent flows, bypassing was necessary to prevent an SSO from occurring.

M. On September 28, 2017, a representative of the Department performed a Routine Partial Inspection of the WWTP. During the inspection a sample of the effluent was collected to determine compliance with effluent limitations established in the NPDES Permit. Sample results indicated a concentration of 26.9 mg/L of ammonia-nitrogen in excess of the instantaneous maximum limitation of 5.0 mg/L and a concentration of 1,800 colonies/100 mL of fecal coliform in excess of the instantaneous maximum limitation of 1,000 colonies/100 mL established in the NPDES Permit.

N. On February 11, 2019, the Department sent a NOV to LCA. The NOV referenced effluent violations noted in Paragraph F, SSO events noted in Paragraph H and bypasses noted in Paragraph J. The Department requested LCA attend an enforcement conference in the Department’s Northeast Regional Office to discuss the violations.

O. On February 25, 2019, a representative of the Department performed a Compliance Evaluation Inspection of the WWTP. During the inspection a sample of the effluent was collected to determine compliance with effluent limitations established in the NPDES Permit. Sample results indicated a concentration of 0.50 mg/L of Total Chlorine Residual in excess of the instantaneous maximum limitation of 0.24 mg/L established in the NPDES Permit.

P. On March 6, 2019, the Department held an enforcement conference with LCA regarding the violations referenced in Paragraphs F, H and J. LCA indicated they would submit a Corrective Action Plan (“CAP”) within 60 days proposing how LCA would eliminate the excessive Inflow and Infiltration (“I&I”) within the collection system.

Q. On April 15, 2019, a representative of the Department performed a Follow-Up Inspection (“FUI”) of the WWTP. During the inspection a sample of the effluent was collected to determine compliance with effluent limitations established in the NPDES Permit. Sample results indicated a concentration of 1.40 mg/L of Total Chlorine Residual in excess of the instantaneous maximum limitation of 0.24 mg/L established in the NPDES Permit.

R. On April 30, 2019, the Department received LCA’s CAP, which included an I&I Remediation Project to address the SSOs and permit violations.

S. On May 15, 2019, a representative of the Department performed an FUI of the WWTP due to an instantaneous maximum exceedance for Total Chlorine Residual during the April 15, 2019 FUI, noted in Paragraph Q. During the inspection a field test was performed specifically for Total Chlorine Residual. Sample results indicated a concentration of 0.01 mg/L, which is below the instantaneous maximum limitation of 0.24 mg/L established in the NPDES Permit.

T. The violations described in Paragraphs F, H, J, M, O, and Q constitute unlawful conduct under Section 611 of The Clean Streams Law, 35 P.S. § 691.611; a statutory nuisance under Section 601 of The Clean Streams Law, 35 P.S. § 691.601; and subject LCA to civil penalty liability under Section 605 of The Clean Streams Law, 35 P.S. § 691.605.

After full and complete negotiation of all matters set forth in this Consent Order and Agreement and upon mutual exchange of covenants contained herein, the parties desiring to avoid litigation and intending to be legally bound, it is hereby ORDERED by the Department and AGREED to by LCA as follows:

1. Authority. This Consent Order and Agreement is an Order of the Department authorized and issued pursuant to Section 5 of The Clean Streams Law, 35 P.S. § 691.5, and Section 1917-A of the Administrative Code, 71 P.S. § 510-17.

2. Findings.

a. LCA agrees that the findings in Paragraph A through T are true and correct and, in any matter or proceeding involving LCA and the Department, LCA shall not challenge the accuracy or validity of these findings.

b. The parties do not authorize any other persons to use the findings in this Consent Order and Agreement in any matter or proceeding.

3. Corrective Action.

- a. Within 30 days of the date of this Consent Order and Agreement, LCA shall submit to the Department a fully adopted Public Sewer Ordinance for Heidelberg Township, Lehigh County.
- b. On, or before, October 31, 2020, LCA shall install, and render operational, an influent flow meter capable of adequately measuring and recording the expected influent flow range for the WWTP.
- c. On, or before, June 30, 2021, LCA shall complete all aspects of the 2020 I&I remediation project as described in Section 3.2.2. of the Lehigh County Authority Heidelberg Heights Sewer System Corrective Action Plan to address the Sanitary Sewer Overflows and permit violations.
- d. On, or before, December 31, 2021, LCA shall complete all aspects of the 2021 I&I remediation project as described in Section 3.2.3. of the Lehigh County Authority Heidelberg Heights Sewer System Corrective Action Plan to address the Sanitary Sewer Overflows and permit violations.
- e. On, or before, December 31, 2022, LCA shall complete all aspects of the 2022 I&I remediation project as described in Section 3.2.4. of the Lehigh County Authority Heidelberg Heights Sewer System Corrective Action Plan to address the Sanitary Sewer Overflows and permit violations.
- f. On, or before, December 31, 2023, LCA shall complete all aspects of the 2023 I&I remediation project as described in Section 3.2.5. of the Lehigh County Authority Heidelberg Heights Sewer System Corrective Action Plan to address the Sanitary Sewer Overflows and permit violations.
- g. On, or before, December 31, 2024, LCA shall complete all aspects of the 2024 I&I remediation project as described in Section 3.2.6. of the Lehigh County Authority Heidelberg Heights Sewer System Corrective Action Plan to address the Sanitary Sewer Overflows and permit violations.
- h. LCA shall submit appropriate Water Quality Management Part II construction permit applications for any proposed work in Paragraphs 3b, 3c, 3d, 3e, 3f, and 3g herein and described in the associated Lehigh County Authority Heidelberg Heights Sewer System Corrective Action Plan, and receive issuance of the associated permits, prior to commencing construction of the appropriate upgrades.
- i. LCA shall submit written progress reports to the Department on an annual basis. These reports are due by March 31 of the succeeding year for the progress attained per the corrective actions above for the previous calendar year. The first annual Consent Order and Agreement progress report is due by March 31, 2021. These annual Consent Order and Agreement progress reports are separate and distinct from the Annual Wasteload Management Report required by the Chapter 94 Regulations. This annual Consent Order and Agreement progress report shall be submitted in accordance with Paragraph 10 herein and shall include, at a minimum, the post-construction certification (attached as Appendix A to this agreement) signed and sealed by the Pennsylvania Professional Engineer overseeing the appropriate annual remediation project; a listing of daily flow data entering the WWTP, organized per month, including daily precipitation data; any public outreach messaging delivered over the past calendar year; an annual accounting of the inspection of the one hundred thirty eight (138) homes serviced by the WWTP and associated collection system, as well as any enforcements taken, and all progress attained per the corrective actions in Paragraph 3 herein.

4. Civil Penalty Settlement. Upon signing this Consent Order and Agreement, LCA shall pay a civil penalty of nineteen thousand-two hundred and fifty dollars (\$19,250.00). This payment is

in settlement of the Department's claim for civil penalties for the violations and dates set forth in Paragraphs F, H, J, M, O, and Q, above. The payment shall be made by corporate check or the like made payable to the "Commonwealth of Pennsylvania -Clean Water Fund" and sent to Patrick Musinski, Environmental Group Manager, Pennsylvania Department of Environmental Protection, Clean Water Program, 2 Public Square, Wilkes-Barre, PA 18701-1915.

5. Stipulated Civil Penalties.

a. In the event LCA fails to comply in a timely manner with any term or provisions of this Consent Order and Agreement, LCA shall be in violation of this Consent Order and Agreement and, in addition to other applicable remedies, shall pay a civil penalty in the amount of two hundred fifty (\$250.00) dollars per day for each violation.

b. In the event LCA violates any monitoring requirement or permit limit established in NPDES Permit, either instantaneous or DMR related, during the term of this Consent Order and Agreement, LCA shall be in violation of this Consent Order and Agreement and shall pay a civil penalty in the amount of two hundred fifty (\$250.00) dollars for each violation.

c. In the event LCA experiences an SSO from any portion of its treatment and conveyance systems during the term of this Consent Order and Agreement, LCA shall be in violation of this Consent Order and Agreement and shall pay a civil penalty in the amount of five hundred (\$500.00) dollars for each violation.

d. In the event LCA experiences any bypasses occurring within the treatment facility during the term of this Consent Order and Agreement, LCA shall be in violation of this Consent Order and Agreement and shall pay a civil penalty in the amount of five hundred (\$500.00) dollars for each violation.

e. Stipulated civil penalty payments shall be payable monthly on or before the fifteenth day of each succeeding month, and shall be forwarded as described in Paragraph 4 (Civil Penalty Settlement) above.

f. Any payment under this paragraph shall neither waive LCA's duty to meet its obligations under this Consent Order and Agreement nor preclude the Department from commencing an action to compel LCA's compliance with the terms and conditions of this Consent Order and Agreement. The payment resolves only LCA's liability for civil penalties arising from the violations of this Consent Order and Agreement for which the payment is made.

g. Stipulated civil penalties shall be due automatically and without notice.

6. Additional Remedies.

a. In the event LCA fails to comply with any provision of this Consent Order and Agreement, the Department may, in addition to the remedies prescribed herein, pursue any remedy available for a violation of an order of the Department, including an action to enforce this Consent Order and Agreement.

b. The remedies provided by this paragraph and Paragraph 5 (Stipulated Civil Penalties) are cumulative and the exercise of one does not preclude the exercise of any other. The failure of the Department to pursue any remedy shall not be deemed to be a waiver of that remedy.

The payment of a stipulated civil penalty, however, shall preclude any further assessment of civil penalties for the violation for which the stipulated penalty is paid.

7. Reservation of Rights. The Department reserves the right to require additional measures to achieve compliance with applicable law. LCA reserves the right to challenge any action which the Department may take to require those measures.

8. Liability of Operator. LCA shall be liable for any violations of the Consent Order and Agreement, including those caused by, contributed to, or allowed by its officers, agents, employees, or contractors. LCA also shall be liable for any violation of this Consent Order and Agreement caused by, contributed to, or allowed by its successors and assigns.

9. Transfer of Site.

a. The duties and obligations under this Consent Order and Agreement shall not be modified, diminished, terminated or otherwise altered by the transfer of any legal or equitable interest in the Site or any part thereof.

b. If LCA intends to transfer any legal or equitable interest in the Site which is affected by this Consent Order and Agreement, LCA shall serve a copy of this Consent Order and Agreement upon the prospective transferee of the legal and equitable interest at least thirty (30) days prior to the contemplated transfer and shall simultaneously inform the Northeast Regional Office of the Department of such intent.

10. Correspondence with Department. All correspondence with the Department concerning this Consent Order and Agreement shall be addressed to:

Clean Water Program Manager
Clean Water Program
Department of Environmental Protection
2 Public Square
Wilkes-Barre, PA 18701-1915
Phone (570) 826-2511
Fax (570) 830-3016

11. Correspondence with LCA. All correspondence with LCA concerning this Consent Order and Agreement shall be addressed to:

Compliance Manager
Lehigh County Authority
1053 Spruce Road
Allentown, PA 18106
Phone 610-398-2503

LCA shall notify the Department whenever there is a change in the contact person's name, title, or address. Service of any notice or any legal process for any purpose under this Consent Order and Agreement, including its enforcement, may be made by mailing a copy by first class mail to the above address.

12. Severability. The paragraphs of this Consent Order and Agreement shall be severable and should any part hereof be declared invalid or unenforceable, the remainder shall continue in full force and effect between the parties.

13. Entire Agreement. This Consent Order and Agreement shall constitute the entire integrated agreement of the parties. No prior or contemporaneous communications or prior drafts shall be relevant or admissible for purposes of determining the meaning or extent of any provisions herein in any litigation or any other proceeding.

14. Attorney Fees. The parties shall bear their respective attorney fees, expenses and other costs in the prosecution or defense of this matter or any related matters, arising prior to execution of this Consent Order and Agreement.

15. Modifications. No changes, additions, modifications, or amendments of this Consent Order and Agreement shall be effective unless they are set out in writing and signed by the parties hereto.

16. Titles. A title used at the beginning of any paragraph of this Consent Order and Agreement may be used to aid in the construction of that paragraph, but shall not be treated as controlling.

17. Termination. Paragraphs 3 and 5 of this Consent Order and Agreement shall terminate when the Department determines that LCA has complied with the requirements of all obligations of this Consent Order and Agreement including the requirement that LCA's discharge demonstrates six (6) months of continuous compliance with LCA's National Pollutant Discharge Elimination System Permit, in force at the time of request for termination, as issued by the Department and the WWTP coincidentally does not experience any SSOs or bypasses of its secondary treatment works.

18. Resolution. Attached hereto as Appendix B is a resolution of the Lehigh County Authority authorizing its signatories below to enter into this Consent Order and Agreement on its behalf.

19. Execution of Agreement. This Consent Order and Agreement may be signed in counterparts, each of which shall be deemed to be an original and all of which together shall constitute one and the same instrument. Facsimile signatures shall be valid and effective.

IN WITNESS WHEREOF, the parties hereto have caused this Consent Order and Agreement to be executed by their duly authorized representatives. The undersigned representatives of LCA certify under penalty of law, as provided by 18 Pa. C.S. § 4904, that they are authorized to execute this Consent Order and Agreement on behalf of LCA; that LCA consents to the entry of this Consent Order and Agreement as a final ORDER of the Department; and that LCA hereby knowingly waives its right to appeal this Consent Order and Agreement and to challenge its content or validity, which rights may be available under Section 4 of the Environmental Hearing Board Act, Act of July 13, 1988, P.L. 530, 35 P.S. § 7514; the Administrative Agency Law, 2 Pa. C.S. § 103(a) and Chapters 5A and 7A; or any other provisions of law. [Signature by LCA's attorney certifies only that the agreement has been signed after consulting with counsel.]

FOR LEHIGH COUNTY AUTHORITY:

FOR THE COMMONWEALTH OF
PENNSYLVANIA, DEPARTMENT OF
ENVIRONMENTAL PROTECTION:

Liesel M. Gross

Chief Executive Officer

Bharat Patel

Clean Water Program Manager

Michael A. Gaul, Esquire

Solicitor for Lehigh County Authority

Ann Conserette

Assistant Counsel

APPENDIX A

LEHIGH COUNTY AUTHORITY CONSENT ORDER & AGREEMENT POST-CONSTRUCTION CERTIFICATION

HEIDELBERG HEIGHTS SEWER SYSTEM	
DESCRIPTION OF CAPITAL IMPROVEMENT PROJECT	
YEAR	20_____
WQM Permit No.	(If Applicable)
ANNUAL AVG DAILY FLOW FOR PAST YR	_____ MGD
CERTIFICATION	
<p>This certification must be completed, certified and submitted in accordance with Paragraph 10 of the referenced Consent Order & Agreement on, or before, March 31 of the succeeding year from the year listed above. If requested, as-built drawings, photographs (if available) and a discussion of any DEP-approved deviations from the design plans during construction may need to be submitted.</p>	
<p>I, being a Registered Professional Engineer in the state of Pennsylvania, do hereby certify to the best of my knowledge and belief, based upon personal observation and interviews, that the above Capital Improvement Project has been completed in accordance with the Heidelberg Heights Sewer System Corrective Action Plan to Address Sanitary Sewer Overflows & Permit Violations.</p>	
<p>Construction Completion Date (MM/DD/YYYY): _____</p>	
<div>Engineer's Seal</div>	<div>Professional Engineer</div>
	Name _____ (Please Print or Type)
	Signature
	Date
	License Expiration Date
	Firm or Agency
	Telephone
	<div>Permittee or Authorized Representative</div>
	Name _____ (Please Print or Type)
	Signature
	Title
	Telephone

MEMORANDUM

Date: June 22, 2020

To: Lehigh County Authority Board of Directors
From: Charles Volk, Chief Capital Works Officer
Subject: Suburban Division – Spring Creek Pump Station Roof Replacement Project – Construction Phase

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization – Construction Phase	\$93,950
2	Construction Contract – Munn Roofing Corporation	\$71,450
3	Professional Services – Construction Phase Engineering DHuy Engineering (*)	\$7,500

(*) Included in Capital Project Authorization

PROJECT BACKGROUND AND OVERVIEW

This project is part of LCA's Infrastructure Stability goal and reflects the continued effort to implement proactive Asset Management improvements in the Suburban Division water and wastewater facilities and address vertical components with a high risk rating. This year's project is the replacement of the roof at the Spring Creek Pump Station main control building. This facility was built in 1996 to relieve excess gravity flows in the section of LCA Western Lehigh Interceptor (WLI) from the SCPS (along Spring Creek Rd) to just past Meter Station No 5 (near Keck's Bridge). The original roof on the main control building is in a deteriorated condition and has developed leaks that threaten to damage expensive electrical control panels housed in the building. In 2019 Capital Works directed a condition assessment be performed by our engineer, D'Huy Engineering, which resulted in a recommendation for a complete replacement of the roof down to the decking.

PROJECT SCOPE

This project includes the following major items of work:

- 1) Existing built up roof demolition: Removal of existing ballasted membrane roof, removal of existing insulation down to roof deck, removal of base flashings and other components between the deck and roofing membrane.
- 2) Install thermal insulation: Installation of rigid polyisocyanurate and high density wood fiberboard insulation system on concrete roof deck substrate. Includes priming roof deck with hot asphalt bitumen adhesive.
- 3) Install modified bituminous membrane roofing system: Installation of hot applied, gravel surfaced, modified bituminous membrane roof system including installation of flashings, coping caps, roof drains, vents, pipes and curbs.

FUNDING

The Project will be funded by the LCA Suburban Division

BUDGET AMENDMENT

Not required

PROJECT STATUS

Board approval is requested for the Construction Phase.

BIDDING SUMMARY – CONSTRUCTION PHASE

This project consists of one contract. The project was advertised for bid on 5/18/20, a virtual pre-bid meeting was conducted on 5/28/20, and bids were opened on 6/12/20, the results of which are summarized below:

General Construction	
Bidder	Bid Amount
Munn Roofing Corp.	\$71,450
Jottan, Inc.	\$87,383
Pro Com Roofing Corp.	\$88,900
Mike Kobithen Roofing & Insulation	\$143,724
Alan Kunsman Roofing & Siding, Inc.	\$284,375*

**cost reflects error bidder made filling out electronic bid form*

The engineer's estimate of construction cost is \$85,000. The low bidder is Munn Roofing Corporation (Munn) from Hatfield, PA. The firm has completed numerous institutional (mostly schools) and commercial roofing projects in eastern PA, and appears well qualified to perform the work. The bid documents are complete and Capital Works recommends authorization to award the construction contract to Munn.

PROFESSIONAL SERVICES

D'Huy Engineering has been our design consultant on this project and will provide construction engineering services for this phase of the project. Their work will include:

1. Attend the pre-construction meeting
2. Review, approve, and distributed executed shop drawings
3. Review and respond to contractor RFIs
4. Process payment applications
5. Process any necessary change orders
6. Provide part-time construction inspection services
7. Perform substantial completion inspection and issue punch list to contractor
8. Administer final project close-out

PROJECT SCHEDULE

Based on contract award following the June 22, 2020 Board meeting, it is anticipated that the project will be completed by early fall 2020.

FUTURE AUTHORIZATIONS

None

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	<u>SD-S-A</u>	BUDGET FUND:	<u>Suburban Div\Wastewater\Capital</u>
PROJECT TITLE:	<u>Suburban Division – Spring Creek Pump Station Roof Replacement Project</u>	PROJECT TYPE:	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input type="checkbox"/> Amendment
THIS AUTHORIZATION:	<u>\$93,950</u>		
TO DATE (W/ ABOVE)	<u>\$103,450</u>		

DESCRIPTION AND BENEFITS:

SCPS Roof Replacement Project:

This project involves the replacement of the roof at the Spring Creek Pump Station, which has developed leaks that threatened damage to interior electrical components. The project is part of LCA's asset management program to proactively address high risk water and wastewater system components.

Previous Authorizations	
Design and Bid Phase – D’Huy Engineering	\$9,500

REQUESTED THIS AUTHORIZATION	
Construction Phase	
Construction Contract - Munn Roofing Corp.	\$71,450
Construction Engineering and Inspection Services – D’Huy Engineers	\$7,500
Staff	\$5,000
Contingency	\$10,000
Total This Authorization	\$93,950

Future Authorization	
None anticipated	

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>



Lehigh County Authority

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

PROFESSIONAL SERVICES AUTHORIZATION

Professional: D;HUY ENGINEERING, INC.
One East Broad St., Suite 310
Bethlehem, PA 18018

Date: June 22, 2020

Requested By: Charles Volk, P.E.

Approvals

Department Head: _____

Chief Executive

Officer: _____

Suburban Division – Spring Creek Roof Replacement Construction Phase

D'Huy Engineering, Inc. will perform construction administration and engineering support the SCPS roof replacement project. Professional services will include the following:

Professional Services ⁽¹⁾
1. Pre-construction meeting coordination, attendance and follow-up
2. Review and approve contractor submittals
3. Respond to Requests for Information (RFI) from contractor
4. Process payment applications
5. Process change orders as required
6. Provide part-time construction observation
7. Substantial completion inspection & punchlist preparation
8. Contract closeout administration

(1) Reference the cover Memo for additional information.

Cost Estimate (not to be exceeded without further authorization): \$7,500

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

(For Authority Use Only)

Authorization Completion:

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

<p>Lehigh County Authority</p> <p>System Operations Review - May 2020</p> <p>Presented: June 22, 2020</p>

System Operations Review - May 2020

Presented: June 22, 2020

Critical Activities	System	Description	May-20	2020 Totals	2019 Totals	Permit
			Daily Avg (MGD)	Daily Avg (MGD)	Daily Avg (MGD)	Daily Max (MGD)
Water Production	Allentown	Total	20.83	20.93	21.51	39.0
		Schantz Spring	7.77	7.61	7.77	9.0
		Crystal Spring	3.91	3.90	3.88	4.0
		Little Lehigh Creek	9.08	9.33	9.85	30.0
		Lehigh River	0.07	0.08	0.01	28.0
	Central Lehigh	Total	10.20	9.49	9.75	19.04 MGD Avg
		Feed from Allentown	7.12	6.81	6.93	7.0 MGD Avg 10.5 MGD Max
		Well Production (CLD)	3.08	2.68	2.80	8.54 MGD Avg
		Sum of all (12) other Suburban Water Systems	0.16	0.14	0.17	1.71 Sum of all wells
Wastewater Treatment		Kline's Island	32.35	32.48	37.63	40.0
		Pretreatment Plant	5.06	4.88	5.88	5.75 (design capacity)
		Sum of all (5) other Suburban WW Systems	0.20	0.21	0.19	0.36
			May-20	2020 Totals	2019 Totals	2018 Totals
Precipitation Totals (inches)			2.68	15.64	60.66	66.96
Compliance Reports Submitted to Allentown			18	134	278	285
Notices of Violation (NOVs)		(Allentown + Suburban)	0	0	1	1
Sanitary Sewer Overflows (SSOs)/Bypasses		(Allentown + Suburban)	0	7	37	78
Main Breaks Repaired		Allentown	3	7	20	33
		Suburban	0	5	12	23
Customer Service Phone Inquiries		(Allentown + Suburban)	1,129	7,284	22,992	26,440
Water Shutoffs for Non-Payment		(Allentown + Suburban)	0	280	1,956	1,838
Injury Accidents		(Allentown + Suburban)	1	4	10	14
Emergency Declarations		Allentown	(1)@ \$110,319	(2)@\$229,491	(2)@ \$152,053	(5) @ \$76,469
		Suburban	0	\$0	(1) @ \$19,335	(1) @ \$21,197

<p><u>Significant Repairs/Upgrades:</u> Operations continues to seek answers pertaining to the recent breaks of the 36" DI water main on 17th Street. Pieces of both pipe failures were sent to US Pipe for analyses, and significant levels of exterior corrosion were reported. No definite reason has come to light so far but the consensus points to highly corrosive soils. In cooperation with Gannett Fleming, a condition assessment of all of the Class 50 pipe that was installed in 1983 is being developed. A "Smartball" or similar will be run through the pipelines and see if the high corrosion levels are localized or systematic. Future projects, if needed, will be determined based on those results.</p>
<p><u>Description of NOV's and/or SSO's:</u> There were zero (0) SSO's, bypasses and NOV's for any LCA water or wastewater system during May, 2020.</p>
<p><u>Other Highlights:</u> Lehigh County went to Yellow Phase on June 5, 2020. In advance of that, Operations assembled a plan that would start allowing contractor-based projects to resume in June. Many maintenance projects were postponed to a point where they couldn't be pushed back further. Other Capital Projects are being restarted as well.</p>