



LEHIGH COUNTY AUTHORITY

LCA Main Office:
1053 Spruce Road
Wescosville, PA 18106
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Agendas & Minutes Posted:
www.lehighcountyauthority.org

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BOARD MEETING AGENDA – August 24, 2020 – 12:00 p.m.

Notice of COVID-19 Pandemic Meeting Format: Effective March 23, 2020 and until further notice, meetings of the LCA Board of Directors will be held virtually using the Zoom Meetings application, to avoid risk of infection during the national COVID-19 pandemic emergency. Public participation is welcomed via Zoom, and instructions for joining the meeting online or by phone are posted on the LCA website in the morning on the day of the meeting, prior to the start of each meeting. You may also issue comment to LCA via email to LCABoard@lehighcountyauthority.org in advance of any meeting, or view the meeting at a later time by visiting the LCA website. Please visit <https://www.lehighcountyauthority.org/about/lca-board-meeting-videos/> for specific instructions to join the meeting.

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

• *August 10, 2020 Board meeting minutes*

4. Public Comments

5. Action / Discussion Items:

FINANCE AND ADMINISTRATION

- *Authorization of Lease Bond Refinancing (Approval) (ivory)*
 - *Resolution No. 8-2020-1 – Authorizing Refinancing of Series 2013A Lease Bonds Based on Established Parameters*
 - *Resolution No. 8-2020-2 – Authorizing Refinancing of Series 2018 Lease Bonds with Fulton Bank*

WATER

WASTEWATER

- *Resolution No. 8-2020-3 Adopting the Interim Act 537 Plan Prepared for the Kline's Island Sewer System (Approval) (goldenrod)*
- *Regional Act 537 Plan Alternatives Analysis: Pretreatment Plant Upgrade Option (Approval) (gray)*

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

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

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

9. Staff Comments

10. Solicitor's Comments

11. Public Comments / Other Comments
12. Executive Sessions
13. Adjournment

UPCOMING BOARD MEETINGS		
September 14, 2020	September 28, 2020	October 12, 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

August 10, 2020

The Regular Meeting of the Lehigh County Authority Board of Directors was called to order at 12:02 p.m. on Monday, August 10, 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, Scott Bieber, Kevin Baker, Ted Lyons, Richard Bohner, Norma Cusick, Amir Famili, Jeff Morgan, and Linda Rosenfeld were present through ACT for the duration of the meeting.

Solicitor Michael Gaul of KingSpry, Chris Gibbons from Concord Public Finance, Inc., Stephen Flaherty from RBC Capital Markets, and Tim Horstmann from McNees Wallace and Nurick, were also present via ACT. Authority Staff present via ACT were Liesel Gross, Ed Klein, John Parsons, Lisa Miller, Andrew Moore, Phil DePoe, Chris Moughan, and Todd Marion.

REVIEW OF AGENDA

Liesel Gross suggested a change to the agenda to add the preliminary review of the impact of Tropical Storm Isaias after the Lease Bond refinancing. Chairman Nagle stated there will be an Executive Session after the regular meeting to discuss matters of potential litigation.

Chairman Nagle announced the Board received the Board packet in advance of the meeting and all presentations for today's meeting were distributed and will be posted to the Authority's website.

APPROVAL OF MINUTES

July 20, 2020 Special Meeting Minutes

On a motion by Richard Bohner, seconded by Norma Cusick, the Board approved the minutes of the July 20, 2020 Board meeting as written (8-0). Scott Bieber abstained.

July 27, 2020 Meeting Minutes

On a motion by Richard Bohner, seconded by Norma Cusick, the Board approved the minutes of the July 27, 2020 Board meeting as written (8-0). Scott Bieber abstained.

PUBLIC COMMENTS

None.

ACTION AND DISCUSSION ITEMS

Lease Bond Financing

Liesel Gross introduced the presentation and special guests Chris Gibbons from Concord Public Finance, Stephen Flaherty from RBC Capital Management, and Tim Horstmann from McNees, Wallace and Nurick. Ed Klein reviewed the Authority's bonds issued to finance or re-finance Authority expenses in conjunction with the 2013 Concession Lease Agreement between the Authority and the City of Allentown, known as the "Lease Bonds". He then detailed the proposed

refinancing of a portion of the Authority's 2013A and 2018 Lease Bonds. He explained that there were three reasons for the refinancing of the Bonds: (1) implementation of the settlement of all outstanding disputes between the Authority and the City of Allentown, through bondholder consent, (2) extension of the maturity of the Authority's lease debt to a more manageable level, and (3) realization of interest rate savings. By refinancing at least 51 percent of the Lease Bonds, the changes to the Lease Agreement that were approved on July 27, 2020 would be able to be implemented. Mr. Klein explained that the final maturity date of the bonds would be extended to 2059, and the refinancing would produce interest rate savings. The overall total debt service impact is valued at about \$13 million in net present value savings. He reviewed the financial analysis of the proposed bond refinancing and explained that the target date for settlement on the new bonds would be September 17, 2020, if approved by the Board at the next meeting.

Chris Gibbons from Concord Public Finance reviewed the parameters resolution that would be presented at the next Board meeting for approval, explaining that the parameters would establish the maximum borrowing amount of \$225 million and maximum overall interest rate at 3.75 percent. Stephen Flaherty of RBC Capital Markets explained the process of the sale of the bonds.

There was some Board discussion.

Tropical Storm Isaias Update

Liesel Gross gave a presentation and provided a preliminary report on the impact from Tropical Storm Isaias. The storm produced four to six inches of rain in the Lehigh Valley area, with certain locations receiving more than an inch of rain during a 20-minute interval. The storm caused the Little Lehigh Creek to crest at a historic 12.76 feet. Manhole damage is the most significant challenge that the Authority is facing, and inspections of manholes are ongoing. John Parsons reported that all manholes were inspected in low-lying areas, which showed four manholes with extensive damage in the City of Allentown. Only half of the manholes have been inspected in the Suburban Division, and it will be many weeks until the full impact of the storm will be realized.

Liesel Gross pointed out that there are protocols enacted to address extreme wet-weather events such as this storm, and commended John Parsons and the Operations teams for their efforts. John Parsons added that his teams are equipped and trained to handle these types of situations and is very proud of their efforts. Damage to the collection systems is still being evaluated. The next steps are to compile a report with a list of damages and expenses, file with insurance for applicable expense reimbursement, perform an after-action review, and potentially have a retroactive emergency declaration.

Richard Bohner commented that he was happy to see the flood wall at Fountain Park was beneficial during Tropical Storm Isaias.

The Board commended and acknowledged the work and efforts by the employees of the Authority. Liesel Gross stated that this will be acknowledged in the weekly newsletter that is distributed to the employees. The Board concurred.

Suburban Division – Western Lehigh Service Area – 2020 Sewer Modeling Presentation

Phil DePoe introduced the topic, stating that the Western Lehigh Sewer Partnership hydraulic model was calibrated in 2019 to support the long-term Act 537 planning effort for the Western Lehigh sewer service area. Jim Shelton from Arcadis presented information on sewer modeling concepts, an

overview of the 2019 Western Lehigh modeling work and examples, and a review of current and future modeling work to be completed.

Jim Shelton explained that a sewer model is essentially a “digital twin” of the sewer system that uses physical attributes of the pipe and data on sewage flows during a defined time period to develop the hydraulic model. The hydraulic model is an engineering tool that will assist with predicting the future performance of the system and analyzing future infrastructure needs. The tool can be used evaluate the options to improve the level of protection and the level of service.

Amir Famili asked what the level of confidence is regarding modeling results. Mr. Shelton explained the process of developing quality control checks on the monitoring data that is collected, which increases the degree of accuracy of the model. The model’s strengths and weaknesses were reviewed. Mr. Shelton explained the current and future analyses that will be conducted using the model, including an evaluation of the alternatives to address conveyance system bottlenecks in the Trexlertown area.

Amir Famili asked as the system is upgraded, are the inputs to the models also upgraded. Jim Shelton explained that upgrading of the model is not ongoing but done in increments or if significant changes occur, typically every few years as new alternatives are being analyzed on a regional basis.

Solicitor Mike Gaul asked if the model assumptions are accepted by the Pa. Department of Environmental Protection (DEP). Jim Shelton explained that DEP generally accepts the engineering work completed by municipalities and he expects DEP to accept the Western Lehigh sewer model as well.

MONTHLY PROJECT UPDATES / INFORMATION ITEMS

Liesel Gross highlighted some action items for the August 24, 2020 meeting as noted in the report.

STAFF COMMENTS

None.

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 a matter of potential litigation.

ADJOURNMENT

There being no further business, the Chairman adjourned the meeting at 1:47 p.m.

Richard Bohner
Secretary



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MEMORANDUM

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

Approvals Requested:

1. Resolution 8-2020-1 – Authorizing refinancing of a portion of the 2013A Lease Bonds based on established parameters
2. Resolution 8-2020-2 – Authorizing refinancing of the 2018 Lease Bonds and accepting the financing proposal from Fulton Bank

Attached to this memo are several documents that make up the refinancing of a portion of the Lehigh County Authority bonds issued in 2013 to implement the Concession Lease Agreement between LCA and the City of Allentown, collectively called the “Lease Bonds.”

Over the past several months, the LCA staff, Board of Directors, and financial advisors have discussed the opportunity to refinance a portion of the Lease Bonds to achieve three primary goals:

- Settle all outstanding disputes between LCA and Allentown, which requires an update to the Concession Lease Agreement and bondholder consent (achieved via refinancing)
- Extend the maturity of the LCA debt to a more manageable level
- Realize interest rate savings

The financial analysis was presented in detail over the course of several meetings including at the August 10, 2020 LCA Board meeting. The resolutions presented for Board consideration on August 24, 2020 represent LCA’s authorization to complete the transaction as presented.

The refinancing is broken down in to two sections, as represented by the two resolutions attached:

2013A Lease Bonds – A portion of the 2013A Lease Bonds will be refinanced utilizing the parameters outlined in Resolution 8-2020-1. The bonds, which are estimated to total \$161,185,000, will be underwritten by RBC Capital Markets and Janney Montgomery Scott. The parameters included in this resolution indicate the bonds will not total more than \$180,000,000, with the final amount of the bonds determined based on achieving refinancing of 51 percent of the Lease Bonds. Due to recent interest rate fluctuations, the resolution does not specify a maximum interest rate for the bonds, but establishes a maximum loss of \$5 million over the life of the bonds, as calculated on a net present value basis. This

approach was determined to provide the most flexibility for the underwriters to sell the bonds while limiting the risk to LCA. The Preliminary Official Statement and draft Bond Purchase Agreement are attached to Resolution 8-2020-1 for the Board's review. Other documents noted in the resolution are available upon request.

2018 Lease Bonds – LCA took action in 2018 to refinance \$18,500,000 in taxable bonds through a bank loan with Fulton Bank. Over the past several weeks, LCA's team requested a proposal to refinance directly with Fulton to achieve a lower interest rate, decrease bond transaction costs, and minimize the conversion of additional bonds to taxable status. Fulton Bank's loan proposal is attached to Resolution 8-2020-2 for the Board's review.

Taken together, these actions will result in refinancing of approximately \$179,685,000 of the Lease Bonds, which will achieve the 51 percent bondholder consent required to implement the updated Concession Lease Agreement with the City of Allentown.

Representatives from Concord Public Finance (financial advisors) and McNees, Wallace & Nurick (bond counsel) will be available at the August 24, 2020 Board meeting to answer questions about the transaction.

RESOLUTION No. 8-2020-1

(Duly adopted 24 August, 2020)

AUTHORIZING AND DIRECTING THE ISSUANCE OF THE AUTHORITY'S WATER AND SEWER REVENUE BONDS (CITY OF ALLENTOWN CONCESSION) SERIES 2020 (FEDERALLY TAXABLE) (THE "2020 BONDS") IN THE MAXIMUM AGGREGATE PRINCIPAL AMOUNT OF \$180,000,000; AUTHORIZING AND DIRECTING THE USE OF THE BOND PROCEEDS TO FINANCE (1) THE ADVANCE REFUNDING OF A PORTION OF THE LEHIGH COUNTY AUTHORITY WATER AND SEWER REVENUE BONDS (CITY OF ALLENTOWN CONCESSION), SERIES 2013A (THE "REFUNDED 2013A BONDS"), (2) THE FUNDING OF A DEBT SERVICE RESERVE FUND WITH RESPECT TO THE 2020 BONDS, AND (3) THE PAYMENT OF TRANSACTION COSTS AND EXPENSES IN CONNECTION WITH THE ISSUANCE OF THE 2020 BONDS; SETTING FORTH THE SECURITY FOR THE 2020 BONDS; APPROVING THE TERMS OF, AND AUTHORIZING AND DIRECTING THE EXECUTION, AUTHENTICATION AND DELIVERY OF, THE 2020 BONDS SECURED BY THE TRUST INDENTURE DESCRIBED HEREIN; APPROVING THE FORM OF AND AUTHORIZING AND DIRECTING THE EXECUTION AND DELIVERY OF A 2020-1 SUPPLEMENTAL TRUST INDENTURE, AN AMENDED AND RESTATED TRUST INDENTURE, AN AMENDED AND RESTATED CONCESSION AGREEMENT AND AN AMENDED AND RESTATED CONSENT AGREEMENT; AUTHORIZING THE PREPARATION OF A BOND PURCHASE AGREEMENT TO BE SUBMITTED BY THE UNDERWRITERS NAMED HEREIN OF THE 2020 BONDS AND AUTHORIZING AND DIRECTING UPON CERTAIN CONDITIONS THE EXECUTION AND DELIVERY OF SUCH BOND PURCHASE AGREEMENT AND THE AWARD OF THE 2020 BONDS TO THE UNDERWRITERS; APPROVING THE FORM OF AND AUTHORIZING THE USE AND DISTRIBUTION OF A PRELIMINARY OFFICIAL STATEMENT AND THE PREPARATION AND EXECUTION OF A FINAL OFFICIAL STATEMENT; AUTHORIZING THE EXECUTION AND DELIVERY OF A CONTINUING DISCLOSURE AGREEMENT BY THE AUTHORITY IN CONNECTION WITH THE FOREGOING; AUTHORIZING THE EXECUTION AND DELIVERY OF AN ESCROW DEPOSIT AGREEMENT IN CONNECTION WITH THE ADVANCE REFUNDING OF THE REFUNDED 2013A BONDS; AUTHORIZING THE DISPOSITION OF THE BOND PROCEEDS; AUTHORIZING AND DIRECTING THE PAYMENT OF FEES AND EXPENSES; AUTHORIZING AND DIRECTING THE PROPER OFFICERS OF THE AUTHORITY TO DO ALL THINGS NECESSARY TO CARRY OUT THIS RESOLUTION; AND RESCINDING ALL INCONSISTENT RESOLUTIONS.

WHEREAS, the Lehigh County Authority (the “Authority”) is a body corporate and politic organized by the Board of County Commissioners of the County of Lehigh, Pennsylvania under the provisions of the Pennsylvania Municipality Authorities Act, 53 Pa. C.S. §5601 *et seq.*, as amended (the “Act”); and

WHEREAS, the City of Allentown, Pennsylvania (the “City”) owns the Allentown Sewer Utility System and the Allentown Water Utility System (the “System”); and

WHEREAS, pursuant to the terms and conditions of the Allentown Water and Sewer Utility System Concession and Lease Agreement dated as of May 1, 2013, as amended and supplemented from time to time (collectively, the “Existing Concession Agreement”), by and between the City and the Authority, the City leased to the Authority, and the Authority leased from the City, the System, upon the terms and conditions set forth therein; and

WHEREAS, the Authority, in connection with the lease and operation of the System pursuant to the Existing Concession Agreement, has from time to time issued bonds under and pursuant to a Trust Indenture dated as of August 1, 2013 (the “Original Indenture”), from the Authority to Manufacturers and Traders Trust Company, as trustee (the “Trustee”), as amended and supplemented by a First Supplemental Trust Indenture dated as of August 1, 2015 (the “First Supplemental Indenture”), and a Second Supplemental Trust Indenture dated as of October 1, 2018 (the “Second Supplemental Indenture,” and together with the Original Indenture and the First Supplemental Indenture, the “Existing Indenture”); and

WHEREAS, the Authority has issued its Water and Sewer Revenue Bonds (City of Allentown Concession), Series 2013A (the “2013A Bonds”), pursuant to the Original Indenture; and

WHEREAS, the Board of this Authority, in the interest of resolving certain disputes with the City arising from the Existing Concession Agreement, adopted a resolution on July 27, 2020, providing for the execution and delivery of certain agreements, including, but not limited to, an Amendment to the Allentown Water and Sewer Utility System Concession and Lease Agreement (the “Concession Amendment”, and together with the Existing Concession Agreement, the “Concession Agreement”); and

WHEREAS, the Original Indenture provides that the Authority, with the consent of the holders of a majority in aggregate principal amount of the Bonds (or the compound accreted value with respect to any capital appreciation bond) then outstanding, may from time to time and at any time enter into an amendment to the Existing Concession Agreement for the purpose of adding any provisions or changing in any manner or eliminating any of the provisions of the Existing Concession Agreement; and

WHEREAS, the Original Indenture provides that the Authority and the Trustee, with the consent of the holders of a majority in aggregate principal amount of the Bonds (or the compound accreted value with respect to any capital appreciation bond) then Outstanding, may from time to time and at any time enter into a Supplemental Indenture for the purpose of adding any provisions or changing in any manner or eliminating any of the provisions of the Original Indenture; and

WHEREAS, the Authority desires to undertake as a project (the "Project") under and in accordance with the Act the: (i) advance refunding of a portion of the Authority's outstanding 2013A Bonds (the "Refunded 2013A Bonds"); (ii) funding of a Debt Service Reserve Fund with respect to the 2020 Bonds (as hereinafter defined); and (iii) payment of transaction costs and expenses in connection with the issuance of the 2020 Bonds; and

WHEREAS, in order to finance the Project, the Authority desires to duly authorize the issuance and sale, as a series of Additional Bonds under the Original Indenture, of its \$180,000,000 maximum aggregate principal amount Lehigh County Authority Water and Sewer Revenue Bonds (City of Allentown Concession), Series 2020 (Federally Taxable) (the "2020 Bonds"); and

WHEREAS, RBC Capital Markets, LLC, on its own behalf and on behalf of Janney Montgomery Scott, LLC (collectively, the "Underwriter") is expected to present to the Board of this Authority a form of Bond Purchase Agreement (the "Purchase Contract") for the purchase of the 2020 Bonds; and

WHEREAS, the Board of this Authority, after due deliberation and investigation, desires to accept the Purchase Contract and to award the 2020 Bonds to the Underwriter at the price and pursuant to the terms set forth therein; and

WHEREAS, the Original Indenture provides that the Authority, under certain conditions, may issue, from time to time, one of more Series of Additional Bonds for the purposes set forth in Article III thereof, which purposes encompass the financing of the Project; and

WHEREAS, the Original Indenture provides that the Authority, prior to issuance of Additional Bonds for such purposes, shall enter into a supplement to the Original Indenture, which supplement shall comply with certain requirements set forth in the Original Indenture; and

WHEREAS, the 2020 Bonds will be issued under and secured by the Existing Indenture, as amended and supplemented by a 2020-1 Supplemental Trust Indenture, dated as of September 1, 2020 (the "2020-1 Supplemental Indenture," and together with the Existing Indenture, the "Indenture") from the Authority to the Trustee; and

WHEREAS, in connection with the issuance and sale of the 2020 Bonds, the Authority will execute and deliver to the Trustee an Amended and Restated Trust Indenture, dated as of September 1, 2020, but effective as of the date of delivery of the 2020 Bonds (the "Amended and Restated Indenture"), amending and restating in its entirety the Indenture; and

WHEREAS, in connection with the issuance and sale of the 2020 Bonds, the Authority and the City will enter into an Allentown Water and Sewer Utility System Amended and Restated Concession and Lease Agreement, to be dated and effective as of the date of delivery of the 2020 Bonds (the "Amended and Restated Concession Agreement"), amending and restating in its entirety the Concession Agreement; and

WHEREAS, in connection with the issuance and sale of the 2020 Bonds, the Authority, the Trustee and the City will enter into an Amended and Restated Consent Agreement to be dated and effective as of the date of delivery of the 2020 Bonds (the "Amended and Restated Consent

Agreement”), amending and restating in its entirety the Amended and Restated Consent Agreement, dated as of September 14, 2018, whereby, *inter alia*, the City shall consent to the Authority’s grant of a first lien on and security interest in the Concessionaire Interest to the Trustee; and

WHEREAS, the Authority, in connection with the advance refunding of the Refunded 2013A Bonds, will enter into an Escrow Deposit Agreement (the “Escrow Agreement”) with Manufacturers and Traders Trust Company, as escrow agent (the “Escrow Agent”); and

WHEREAS, there has also been presented to this Board a Preliminary Official Statement (the “Preliminary Official Statement”) in connection with the public offering and sale of the 2020 Bonds; and

WHEREAS, the Authority desires to approve the content and form of the Preliminary Official Statement and to authorize the use and distribution thereof in connection with the public offering and sale of the 2020 Bonds; and

WHEREAS, certain action is required to be taken by the Authority as a prerequisite to the public offering of the 2020 Bonds, the execution and delivery of the Purchase Contract in connection therewith and the issuance of the 2020 Bonds.

NOW, THEREFORE, the Board of the Lehigh County Authority resolves as follows:

Section 1. Authorizing the Project. The Project as heretofore described is hereby authorized and directed to be undertaken.

Section 2. Authorizing Issuance of 2020 Bonds; Terms of 2020 Bonds; Execution, Authentication and Delivery Thereof. For the purpose of providing funds to finance the Project, the Authority hereby authorizes and directs (i) the issuance of the 2020 Bonds; (ii) the execution of the 2020-1 Supplemental Indenture; and (iii) the execution of the Amended and Restated Consent Agreement, all pursuant to the provisions of the Act and subject to the conditions hereinafter set forth.

The 2020 Bonds initially shall be dated as of such date, shall bear interest, mature and be subject to redemption, all as set forth in the Purchase Contract and the Indenture, subject to the conditions herein set forth. The 2020 Bonds may be in the form of a single, fully registered bond for each maturity of the 2020 Bonds, in denominations equal to the principal amount of the 2020 Bonds maturing on each maturity date (unless and until replacement certificates are issued in accordance with the terms of the Indenture), and shall be registered in the name of The Depository Trust Company, or its nominee, Cede & Co. Payment of the principal or redemption price of, and interest on, the 2020 Bonds shall be made to the registered owner of each Bond in the manner and at the times set forth in the 2020 Bonds and in the Indenture.

The 2020 Bonds shall be executed by the manual or facsimile signature of the Chair, Vice Chair of the Board, or the Chief Executive Officer or Chief Financial Officer of the Authority (collectively and individually, the “Authority Officials”) and shall have the corporate seal or a facsimile thereof impressed thereon, duly attested by the manual or facsimile signature of the Secretary or Assistant Secretary, Solicitor of the Authority, or Human Resources Manager of the

Authority (collectively and individually, the “Attesting Officials”) and such officers are hereby authorized and directed to execute, or cause to be executed, the 2020 Bonds in such manner.

The Authority Officials are further authorized and directed to deliver the 2020 Bonds to the Trustee for authentication and delivery, and the Trustee is hereby requested, authorized and directed to authenticate and deliver the same to, or upon the order of, the Authority Officials in accordance with the provisions of the Indenture.

Payment of the principal of the 2020 Bonds shall be made to the registered owner thereof, when due, in lawful money of the United States of America at the designated office of the Trustee. Interest on the 2020 Bonds is to be paid by check mailed to the registered owner of each Bond as his or her name appears on the registration books of the Authority kept for that purpose by the Trustee.

Section 3. Security for 2020 Bonds; Limited Obligations; Confirmation of Trustee. The 2020 Bonds shall be secured under the Indenture by the Trust Estate defined therein from the Authority to the Trustee, whose appointment as Trustee under the Indenture is hereby ratified and confirmed. Under the terms of the Indenture the Concessionaire Interest (as therein defined) is assigned, transferred and pledged to the Trustee for, *inter alia*, the payment of the principal or redemption price of and interest on the 2020 Bonds and such assignment, transfer and pledge is hereby confirmed.

The 2020 Bonds shall not in any manner pledge the credit or taxing power of the Commonwealth of Pennsylvania, County of Lehigh, or of any political subdivision thereof; nor shall they be deemed to be obligations of the Commonwealth of Pennsylvania, the County of Lehigh, or any political subdivision thereof; nor shall the Commonwealth of Pennsylvania, the County of Lehigh, or any political subdivision thereof be liable for the payment of the principal of, and interest on, such obligations but they shall be secured upon and be payable from the sources referred to above and from such other moneys as may be available for such purpose.

Section 4. Approval of 2020-1 Supplemental Indenture. The 2020-1 Supplemental Indenture, in such form and subject to such terms and conditions as shall be acceptable to the Authority Officials, with the advice of counsel to the Authority and McNees Wallace & Nurick LLC, bond counsel for the Authority (“Bond Counsel”), as well as the form, terms and conditions of the 2020 Bonds secured thereby, are hereby approved. The Authority Officials are hereby authorized and directed to execute the 2020-1 Supplemental Indenture in such form on behalf of the Authority, with the advice of counsel to the Authority and Bond Counsel, subject to such changes and modifications, if any, as may be approved by such Authority Officials, the execution of the 2020-1 Supplemental Indenture to be conclusive evidence of such approval, and the Attesting Officials of the Authority are hereby authorized and directed to cause the corporate seal of the Authority to be affixed thereto and to attest the same. The Authority Officials are further authorized and directed to acknowledge the same on behalf of the Authority and to deliver the 2020-1 Supplemental Indenture to the Trustee.

Section 5. Approval of Amended and Restated Concession Agreement. The Amended and Restated Concession Agreement, in such form and subject to such terms and conditions as shall be acceptable to the Authority Officials, with the advice of counsel to the Authority and Bond Counsel, is hereby approved. The Authority Officials are hereby authorized and directed to

execute the Amended and Restated Concession Agreement in such form on behalf of the Authority, with the advice of counsel to the Authority and Bond Counsel, subject to such changes and modifications, if any, as may be approved by such Authority Officials, the execution of the Amended and Restated Concession Agreement to be conclusive evidence of such approval, and the Attesting Officials are hereby authorized and directed to cause the corporate seal of the Authority to be affixed thereto and to attest the same.

Section 6. Approval of Amended and Restated Indenture. The Amended and Restated Indenture, in such form and subject to such terms and conditions as shall be acceptable to the Authority Officials, with the advice of counsel to the Authority and Bond Counsel, is hereby approved. The Authority Officials are hereby authorized and directed to execute the Amended and Restated Indenture in such form on behalf of the Authority, with the advice of counsel to the Authority and Bond Counsel, subject to such changes and modifications, if any, as may be approved by such Authority Officials, the execution of the Amended and Restated Indenture to be conclusive evidence of such approval, and the Attesting Officials are hereby authorized and directed to cause the corporate seal of the Authority to be affixed thereto and to attest the same.

Section 7. Approval of Amended and Restated Consent Agreement. The Amended and Restated Consent Agreement, in such form and subject to such terms and conditions as shall be acceptable to the Authority Officials, with the advice of counsel to the Authority and Bond Counsel, is hereby approved. The Authority Officials are hereby authorized and directed to execute the Amended and Restated Consent Agreement in such form on behalf of the Authority, with the advice of counsel to the Authority and Bond Counsel, subject to such changes and modifications, if any, as may be approved by such Authority Officials, the execution of the Amended and Restated Consent Agreement to be conclusive evidence of such approval, and the Attesting Officials are hereby authorized and directed to cause the corporate seal of the Authority to be affixed thereto and to attest the same.

Section 8. Approval, Acceptance and Execution of Purchase Contract. The Authority Officials, upon receipt of favorable advice from counsel to the Authority and Bond Counsel with respect thereto, are hereby authorized and directed to accept, approve, execute and deliver the Purchase Contract for the 2020 Bonds as presented to the Authority by the Underwriter; provided, however, that the maximum aggregate principal amount of the 2020 Bonds shall not exceed the amount necessary to result in the 2020 Bonds constituting 51% of the bonds (plus a maximum of \$300,000 for contingency) outstanding under the Indenture upon the issuance of the 2020 Bonds; the latest maturity date of the 2020 Bonds shall not be later than 40 years from the date of issuance of the 2020 Bonds; and the maximum net present value loss shall be \$5,000,000. The Authority further authorizes and directs that (i) the 2020 Bonds be awarded to the Underwriter upon the terms and conditions set forth in the Purchase Contract subject to the execution thereof in accordance with the provisions of this Section 8, and (ii) the 2020 Bonds shall be delivered to the Underwriter after execution and authentication thereof, upon receipt of the full purchase price plus accrued interest and the performance of all other conditions of the Purchase Contract as fully executed.

The Authority Officials are hereby authorized and directed to execute the Purchase Contract (subject, however, to compliance with the aforementioned limitations) in such form as counsel to the Authority and Bond Counsel may advise and the officer executing the Purchase

Contract may approve, such approval to be conclusively evidenced by the execution thereof, and to deliver a signed copy thereof to the Underwriter.

Section 9. Approval of Preliminary Official Statement, Official Statement and Use and Distribution Thereof. The Preliminary Official Statement presented at this meeting (a copy of which shall be filed with the records of the Authority), is hereby approved and is hereby found to be an official statement relating to the 2020 Bonds that the Authority “deems final” as of its date for purposes of paragraph (b)(1) of Rule 15c2-12 promulgated by the Securities and Exchange Commission under the Securities Exchange Act of 1934 (the “Rule”). The Authority Officials are hereby authorized to execute one or more copies of the Preliminary Official Statement. The use and distribution by the Underwriter of the Preliminary Official Statement prior to the date hereof in connection with the public offering of the 2020 Bonds in the form presented to this meeting is hereby ratified and confirmed and the distribution thereof on and after the date hereof is hereby approved. An Official Statement in substantially the same form as the Preliminary Official Statement, with such changes, if any, as may be advised by counsel to the Authority and Bond Counsel and as may be approved by the Authority’s officer executing the same, such approval to be conclusively evidenced by the execution thereof, is hereby authorized and directed to be prepared and upon its preparation, to be executed by the Authority Officials. The Authority hereby further approves the distribution and use of the Official Statement as so prepared and executed in connection with the public offering and sale of the 2020 Bonds.

Section 10. Disposition of Bond Proceeds. The Authority, upon receipt of the proceeds of the 2020 Bonds, shall deposit the same with the Trustee to be held and disbursed all as provided in the 2020-1 Supplemental Indenture.

Section 11. Refunding Project; Approval of Escrow Agreement. Subject to completion of delivery of, and settlement for, the 2020 Bonds, the Authority authorizes and directs the irrevocable deposit in trust with the Escrow Agent of the proceeds of the 2020 Bonds in the amount which will be sufficient, together with the interest earned thereon and any other available moneys, to effect the advance refunding of the 2013A Refunded Bonds pursuant to the terms and provisions of the Escrow Agreement. The Escrow Agent is irrevocably authorized and directed to apply the moneys so to be made available to it in accordance with the Escrow Agreement. The Escrow Agent, in the name, place and stead of the Authority, shall mail as required by the Escrow Agreement, a notice of refunding of the Refunded 2013A Bonds. Such notice in the form as acceptable to the proper officers of this Authority with the advice of counsel to the Authority and Bond Counsel is hereby approved.

The Escrow Agreement, in such form and subject to such terms and conditions as shall be acceptable to the Authority Officials, with the advice of counsel to the Authority and Bond Counsel, is hereby approved. The Authority Officials are hereby authorized and directed to execute the Escrow Agreement in such form on behalf of the Authority, with the advice of counsel to the Authority and Bond Counsel, subject to such changes and modifications, if any, as may be approved by such Authority Officials, the execution of the Escrow Agreement to be conclusive evidence of such approval, and the Attesting Officials are hereby authorized and directed to cause the corporate seal of the Authority to be affixed thereto and to attest the same.

Section 12. Payment of Fees and Expenses. The proper officers of the Authority are hereby authorized and directed to pay or cause to be paid all fees and expenses to the extent required in

the Purchase Contract in connection with the issuance and sale of the 2020 Bonds at the time of delivery of the 2020 Bonds to the Underwriter.

Section 13. Liability of the Authority. No covenant, stipulation, obligation or agreement contained in this Resolution, the 2020-1 Supplemental Indenture, the Amended and Restated Indenture, the Amended and Restated Consent Agreement, the Concession Amendment, the Amended and Restated Concession Agreement, the Escrow Agreement, the 2020 Bonds or other related and appropriate documents shall be deemed to be a covenant, stipulation, obligation or agreement of any past, present or future member, officer, agent or employee of the Authority in his or her individual capacity and neither the members of the Authority nor any officer executing the 2020 Bonds shall be liable personally on the 2020 Bonds, or be subject to any personal liability or accountability by reason of the issuance of the 2020 Bonds.

Section 14. Authorizing Incidental Actions; Municipal Bond Insurance. The proper officers of the Authority are hereby authorized, directed and empowered on behalf of the Authority to execute any and all papers and documents, including the Authority's Continuing Disclosure Agreement described in the Official Statement under the caption "Continuing Disclosure Undertaking", enabling the Underwriter to meet the requirements imposed upon it by SEC Rule 15c2-12(b)(5), and the related certificate described in the Purchase Contract; and to do or cause to be done any and all acts and things necessary or proper for the carrying out of the provisions of this Resolution, the 2020-1 Supplemental Indenture, the Amended and Restated Indenture, the Amended and Restated Consent Agreement, the Concession Amendment, the Amended and Restated Concession Agreement, the Escrow Agreement, and in the issuance, sale and delivery to the Underwriter of the 2020 Bonds, including if applicable the purchase of municipal bond insurance and the payment of the premiums therefor from the proceeds of the 2020 Bonds. Further, the proper officers are hereby authorized, directed and empowered on behalf of the Authority to execute any and all agreements, papers and documents necessary or proper in connection with the application for, and issuance of, municipal bond insurance.

Section 15. Rescinding Inconsistent Resolutions. All resolutions or parts of resolutions inconsistent herewith be and the same hereby are rescinded, canceled and annulled.

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Section 16. Effective Date. This Resolution shall take effect immediately.

NOW THEREFORE, BE IT RESOLVED that the Lehigh County Authority Board hereby approves Resolution No. 8-2020-1.

On motion of _____, seconded by _____, this resolution was adopted the 24th day of August 2020.

Tally of Votes: Yeas _____ Nays _____

☞ ☞

I, Michael A. Gaul, of the law firm of King, Spry, Herman, Freund & Faul, LLC, Solicitor to the 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 Board at a public meeting of the Authority Board held on 24 August 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. 8-2020-1 is now in full force and effect on the date of this certification.

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

Attest:

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

NEW ISSUE – BOOK-ENTRY ONLY

RATINGS: S&P Global Ratings: “AA” (Stable Outlook) (Insured)
S&P Global Ratings: “A” (Stable Outlook) (Underlying)
(SEE “RATINGS” HEREIN)

Interest on the Bonds is not excludable from gross income for federal income tax purposes. In the opinion of McNees Wallace & Nurick LLC, Bond Counsel, under the laws of the Commonwealth of Pennsylvania as presently enacted and construed, the interest on the Bonds is exempt from Pennsylvania personal income tax and Pennsylvania corporate net income tax.

See “TAX MATTERS” herein.

\$161,185,000*
LEHIGH COUNTY AUTHORITY
Water and Sewer Revenue Bonds,
(City of Allentown Concession)
Series 2020 (Federally Taxable)

Dated: Date of Delivery

Due: December 1, in the years as shown on the inside front cover

The Water and Sewer Revenue Bonds (City of Allentown Concession), Series 2020 (Federally Taxable) (the “Bonds” or the “2020 Bonds”), in the aggregate principal amount of \$161,185,000* will be issued by the Lehigh County Authority (the “Authority” or “LCA”) as fully registered bonds, and, when issued, will be registered in the name of Cede & Co. as nominee of The Depository Trust Company, New York, New York (“DTC”), to which payments of the principal of, premium, if any, and interest on the 2020 Bonds will be made. Purchasers will acquire beneficial interests in the 2020 Bonds, in the principal amounts shown on the inside front cover of this Official Statement, in book-entry only form. DTC will remit such payments to its participants who will be responsible for remittance to beneficial owners of the 2020 Bonds. See “THE 2020 BONDS – Book-Entry Only System.”

The 2020 Bonds mature in the years and in the principal amounts, and bear interest at the rates as shown on the inside front cover of this Official Statement. Interest on the 2020 Bonds will accrue on the date of initial delivery thereof and will be payable semiannually on June 1 and December 1, commencing on December 1, 2020. **The 2020 Bonds are subject to redemption prior to maturity as described herein.** See “THE 2020 BONDS – Redemption.”

The 2020 Bonds are being issued to provide funding for: (i) the advance refunding of a portion of the Lehigh County Authority, Water and Sewer Revenue Bonds (City of Allentown Concession), Series 2013A (the “Refunded 2013A Bonds”); (ii) the funding of a debt service reserve fund with respect to the 2020 Bonds; and (iii) the payment of transaction costs and expenses in connection with the issuance of the 2020 Bonds.

The 2020 Bonds are being issued under and secured by a Trust Indenture, dated as of August 1, 2013 (the “Original Indenture”), as amended and supplemented, including by a 2020-1 Supplemental Trust Indenture dated as of September 1, 2020 (the “2020-1 Supplemental Indenture” and together with all other amendments and supplements to the Original Indenture, the “Existing Indenture”), each by and between the Authority and Manufacturers and Traders Trust Company, as trustee (the “Trustee”). In connection with the issuance of the 2020 Bonds, the Authority is amending and restating in its entirety the Indenture, by the execution and delivery of an Amended and Restated Trust Indenture dated as of September 1, 2020 (the “Indenture”). The 2020 Bonds are payable from and secured by a pledge and assignment by the Authority of all of the Concessionaire Interest in and to the Concessioned System (as defined herein) created by the Concession Agreement (each as defined herein), including revenues derived from operating the Concessioned System, certain service charges imposed by the Authority for the use of the Concessioned System, certain payments received from municipal customers of the Concessioned System pursuant to municipal service agreements and other payments by the City to the Authority in specific circumstances set forth in the Concession Agreement and in the Major System Documents. The 2020 Bonds also are secured by a Debt Service Reserve Fund and other funds established under the Indenture and available to pay shortfalls in the scheduled debt service on the 2020 Bonds. See “CONCESSION AGREEMENT” and “SECURITY AND SOURCES OF PAYMENT FOR THE 2020 BONDS.” The amounts pledged as security for the 2020 Bonds do not include service charges collected, and payments received, in respect of debt service on obligations to be issued by the City to fund certain capital repairs intended to resolve certain U.S. Environmental Protection Agency Administrative Orders currently applicable to the sewer and wastewater component of the Concessioned System. Those City obligations are not secured by or payable from property pledged as security for the 2020 Bonds. See “THE CONCESSIONED SYSTEM – City Retained Responsibility for Certain Projects.”

BY PURCHASING THE 2020 BONDS, BONDHOLDERS ARE CONSENTING TO THE AMENDMENT AND RESTATEMENT OF THE EXISTING CONCESSION AGREEMENT AND THE EXISTING INDENTURE, IN THE MANNER DESCRIBED HEREIN.

The scheduled payment of principal of and interest on the 2020 Bonds when due will be guaranteed under a municipal bond insurance policy to be issued concurrently with the delivery of the 2020 Bonds by **Build America Mutual Assurance Company (“BAM”).**

[BAM LOGO]

MATURITY SCHEDULE ON INSIDE FRONT COVER

The 2020 Bonds are special limited obligations of the Authority. Neither the County of Lehigh, the City of Allentown nor the Commonwealth of Pennsylvania, nor any political subdivision thereof, is obligated to pay the principal, redemption premium, if any, or interest on the 2020 Bonds, and neither the full faith, credit nor taxing power of the County of Lehigh, the City of Allentown nor the Commonwealth of Pennsylvania, or any other political subdivision thereof, is pledged to such payment. The Authority has no taxing power.

This cover page contains information for quick reference only. Investors must read the entire Official Statement to obtain information essential to making an informed investment decision, paying particular attention to the matters discussed under "CERTAIN INVESTMENT RISKS."

The 2020 Bonds are offered when, as and if issued by the Authority and received by the Underwriters, subject to the approval of their legality by McNees Wallace & Nurick LLC, Harrisburg, Pennsylvania, Bond Counsel and certain other conditions. Certain legal matters will be passed upon for the Authority by its Solicitor, King, Spry, Herman, Freund & Faul LLC, Bethlehem, Pennsylvania, and by its transaction counsel, McNees Wallace & Nurick LLC, Harrisburg, Pennsylvania and for the Underwriters by Stevens & Lee, P.C., Reading, Pennsylvania. Concord Public Financial Advisors, Inc., Lancaster, Pennsylvania is acting as financial advisor on this transaction. It is expected that the 2020 Bonds in book-entry only form will be available for delivery to DTC in New York, New York on or about September __, 2020.



RBC Capital Markets®



Dated: _____

*Preliminary, subject to change

\$161,185,000*
LEHIGH COUNTY AUTHORITY
Water and Sewer Revenue Bonds,
(City of Allentown Concession)
Series 2020 (Federally Taxable)

Maturity Schedule*

\$1,010,000*	_____ %	Term Bonds due December 1, 2045, priced at _____ % to yield _____ %, CUSIP _____
\$35,215,000*	_____ %	Term Bonds due December 1, 2050, priced at _____ % to yield _____ %, CUSIP _____
\$64,780,000*	_____ %	Term Bonds due December 1, 2055, priced at _____ % to yield _____ %, CUSIP _____
\$60,180,000*	_____ %	Term Bonds due December 1, 2059, priced at _____ % to yield _____ %, CUSIP _____

⁽¹⁾The CUSIP (Committee on Uniform Securities Identification Procedures) numbers have been assigned by an organization not affiliated with the Authority or the Underwriters, and such parties are not responsible for the selection or use of the CUSIP numbers. The CUSIP numbers are included solely for the convenience of bondholders and no representation is made as to the correctness of such CUSIP numbers. CUSIP numbers assigned to securities may be changed during the term of such securities based on a number of factors including, but not limited to, the refunding or defeasance of such issue or the use of secondary market financial products. Neither the Authority nor the Underwriters has agreed to, and there is no duty or obligation to, update this Official Statement to reflect any change or correction in the CUSIP numbers set forth above.

*Preliminary, subject to change

LEHIGH COUNTY AUTHORITY

BOARD OF DIRECTORS

Brian C. Nagle	Chairman
Scott C. Bieber	Vice Chairman
Richard H. Bohner	Secretary
Ted Lyons	Treasurer
Kevin Baker	Assistant Treasurer
Norma A. Cusick	Assistant Secretary
Linda Rosenfeld	Member
Amir Famili	Member
Jeff Morgan	Member

SENIOR MANAGEMENT

Liesel M. Gross	Chief Executive Officer
Edward C. Klein	Chief Financial Officer
John W. Parsons	Chief Operating Officer
Charles E. Volk	Chief Capital Works Officer
Christopher W. Moughan	Chief Information Officer
Susan L. Sampson	Customer Care & Communications Manager
Kathy Martin	Human Resources Manager
Andrew Moore	Compliance Manager
Philip DePoe	Senior Planning Engineer (interim)

Bond Counsel

McNees Wallace & Nurick LLC
Harrisburg, Pennsylvania

Authority Counsel

King, Spry, Herman, Freund & Faul LLC
Bethlehem, Pennsylvania

Authority Transaction Counsel

McNees Wallace & Nurick LLC
Harrisburg, Pennsylvania

Trustee

Manufacturers and Traders Trust Company
Harrisburg, Pennsylvania

Financial Advisor

Concord Public Financial Advisors, Inc.
Lancaster, Pennsylvania

Underwriters

RBC Capital Markets, LLC
Lancaster, Pennsylvania

Janney Montgomery Scott LLC
Philadelphia, Pennsylvania

Underwriters' Counsel

Stevens & Lee, P.C.
Reading, Pennsylvania

Independent Engineer

ARCADIS U.S. Inc.
Philadelphia, Pennsylvania

Appraiser

AUS Consultants
Greenfield, Wisconsin

IN CONNECTION WITH THIS OFFERING, THE UNDERWRITERS MAY OVER ALLOT OR EFFECT TRANSACTIONS THAT STABILIZE OR MAINTAIN THE MARKET PRICES OF THE 2020 BONDS AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME WITHOUT PRIOR NOTICE.

No dealer, broker, salesperson or other person has been authorized by the Authority or RBC Capital Markets, LLC, and Janney Montgomery Scott LLC, as underwriters for the 2020 Bonds offered to the public as indicated on the inside cover (collectively, the “Underwriters”), to give any information or to make any representations with respect to the 2020 Bonds, other than those in this Official Statement, and if given or made, such other information or representations must not be relied upon as having been authorized by any of the foregoing. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, and there shall not be a sale of the 2020 Bonds by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale. The Underwriters have provided the following sentence for inclusion in this Official Statement. The Underwriters have reviewed the information in this Official Statement in accordance with, and as part of, their responsibilities to investors under federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriters do not guarantee the accuracy or completeness of such information, and such information is not to be construed as the promise or guarantee of the Underwriters.

The information and expressions of opinion herein are subject to change without notice, and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the Authority or in any other matter described herein since the date hereof or the dates of the information contained herein.

This Official Statement contains statements relating to future results and events that are “forward looking statements” as defined in the Private Securities Litigation Reform Act of 1995. When used in this Official Statement, the words “estimate,” “anticipate,” “intend,” “expect” and similar expressions identify forward looking statements. Such statements are subject to risks and uncertainties that could cause actual results to differ materially from those contemplated in such statements. See “CERTAIN INVESTMENT RISKS” for a description of some of the risks associated with an investment in the 2020 Bonds. Historical operating statistics and financial results presented in this Official Statement may not be indicative of future performance.

The order and placement of materials in this Official Statement, including the Appendices, are not to be deemed a determination of relevance, materiality or importance, and this Official Statement, including the Appendices, must be considered in its entirety. The captions and headings in this Official Statement are for convenience only and in no way define, limit or describe the scope or intent, or affect the meaning or construction, of any provisions or sections in this Official Statement. The offering of the 2020 Bonds is made only by means of this entire Official Statement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved the 2020 Bonds or passed upon the adequacy or accuracy of this Official Statement. Any representation to the contrary is a criminal offense.

This Official Statement, including any supplement or amendment hereto, is intended to be deposited with the Municipal Securities Rulemaking Board through the Electronic Municipal Market Access (EMMA) web site. The Authority also maintains a website which may describe it. However, the information presented therein is not part of this Official Statement and must not be relied upon in making an investment decision with respect to the 2020 Bonds.

References to web site addresses presented herein are for informational purposes only and may be in the form of a hyperlink solely for the reader’s convenience. Unless specified otherwise, such web sites and the information or links contained therein are not incorporated into, and are not part of, this Official Statement for purposes of, and as that term is defined in, SEC Rule 15c2-12.

Build America Mutual Assurance Company (“BAM”) makes no representation regarding the 2020 Bonds or the advisability of investing in the 2020 Bonds. In addition, BAM has not independently verified, makes no representation regarding, and does not accept any responsibility for the accuracy or completeness of this Official Statement or any information or disclosure contained herein, or omitted herefrom, other than with respect to the accuracy of the information regarding BAM, supplied by BAM and presented under the heading “Bond Insurance” and Appendix I - Specimen Municipal Bond Insurance Policy.

THE 2020 BONDS HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933 NOR HAS THE INDENTURE BEEN QUALIFIED UNDER THE TRUST INDENTURE ACT OF 1939, IN RELIANCE UPON EXEMPTIONS CONTAINED IN SUCH ACTS. THE REGISTRATION OR QUALIFICATION OF THE 2020 BONDS IN ACCORDANCE WITH APPLICABLE PROVISIONS OF SECURITIES LAWS OF THE STATES IN WHICH THE 2020 BONDS HAVE BEEN REGISTERED OR QUALIFIED AND THE EXEMPTION FROM REGISTRATION OR QUALIFICATION IN THE OTHER STATES CANNOT BE REGARDED AS A RECOMMENDATION THEREOF. NEITHER THE SEC NOR THESE STATES OR ANY OF THEIR AGENCIES HAVE PASSED UPON THE MERITS OF THE 2020 BONDS OR THE ACCURACY OR COMPLETENESS OF THIS OFFICIAL STATEMENT.

TABLE OF CONTENTS

SUMMARY.....	I	Limited Obligations.....	61
INTRODUCTION	1	Not Supported by City of Allentown.....	61
THE AUTHORITY	4	Not Supported by Existing LCA System.....	61
General.....	4	Pledge of Revenues	62
Board.....	5	Pledge of Concession Agreement.....	62
Management and Administration of the Existing		Debt Service Reserve Fund	62
LCA System.....	8	Rate Covenant	62
THE CITY OF ALLENTOWN	12	Additional Bonds and Other Indebtedness	62
General.....	12	Consent Agreement	64
City Not Liable on 2020 Bonds.....	12	Combining the Concessioned System with the	
THE CONCESSIONED SYSTEM.....	12	Existing LCA System	64
General.....	12	BOND INSURANCE.....	66
The Water Plant and Distribution System.....	15	BOND INSURANCE RISK FACTORS	68
The Sewer Utility System	19	FLOW OF FUNDS	69
City Retained Responsibility for Certain Projects.....	20	General	69
System Operations	21	System Revenues and Other Deposits	69
Capital Improvements	24	Application of System Revenues.....	70
Rates	25	Description of Project Funds	72
Historical Financial Performance.....	31	CERTAIN INVESTMENT RISKS	79
INFECTIOUS DISEASE OUTBREAK – COVID-19.....	32	Limited Recourse	79
GOVERNMENTAL REGULATION OF THE		The City of Allentown.....	79
CONCESSIONED SYSTEM	33	Governmental Actions; Environmental Matters	81
Environmental Regulations	33	Operating Risks	82
Permits and Approvals.....	34	Financial Risks	83
CONCESSION AGREEMENT.....	35	Force Majeure and Adequacy of Insurance	84
General.....	35	Risks Related to Collateral	84
Capital Improvements	38	Limitations on Enforceability.....	85
Delay Events	41	Bankruptcy-Related Risks	85
Force Majeure	41	Risks Relating to Market Liquidity for the	
Adverse Actions.....	42	2020 Bonds.....	86
City Directive.....	42	TAX MATTERS	86
Compensation Events; Concession Compensation.....	43	Federal Income Tax Treatment.....	86
Annual City Payment; City Payment Reserve Fund;		State Tax Exemption	87
Annual City Lease Administration Payment.....	43	Other.....	87
Insurance.....	44	LITIGATION AND CLAIMS	87
Restoration	44	Authority	87
Limits on Assignment or Transfer of Concession		City	87
Agreement.....	45	UNDERWRITING.....	88
Defaults and Remedies.....	45	FINANCIAL ADVISOR.....	88
Termination.....	46	RATINGS	88
Extension of Concession Agreement	48	INDEPENDENT CERTIFIED PUBLIC	
City Representations and Warranties;		ACCOUNTANTS	89
Indemnification	48	LEGAL MATTERS	89
Lender’s Rights and Remedies.....	49	INDEPENDENT ENGINEER	89
OTHER SYSTEM DOCUMENTS.....	51	APPRAISER	90
Municipal Service Agreements	51	VERIFICATION OF MATHEMATICAL	
INDEPENDENT ENGINEER’S CERTIFICATE	52	COMPUTATIONS	90
APPRAISAL	52	CONTINUING DISCLOSURE	90
PLAN OF FINANCE.....	53	CERTAIN RELATIONSHIPS.....	91
ESTIMATED SOURCES AND USES OF FUNDS.....	53	MISCELLANEOUS	91
THE 2020 BONDS	53		
General.....	53		
Redemption	54		
Events of Default; Remedies.....	55		
Mandatory Purchase in Lieu of Acceleration.....	56		
Debt Service Requirements.....	57		
Book-Entry Only System	58		
CONCURRENT FINANCING PLAN	60		
SECURITY AND SOURCES OF PAYMENT FOR		APPENDIX A	APPRAISAL
THE 2020 BONDS	61		

APPENDIX B	AUDITED FINANCIAL STATEMENTS OF THE AUTHORITY AS OF DECEMBER 31, 2019
APPENDIX C	CERTAIN INFORMATION REGARDING THE CITY
APPENDIX D	SUMMARY OF SETTLEMENT TERMS AFFECTING THE CONCESSION AGREEMENT
APPENDIX E	SUBSTANTIAL FORM OF THE INDENTURE
APPENDIX F	SUBSTANTIAL FORM OF THE CONCESSION AGREEMENT
APPENDIX G	FORM OF BOND COUNSEL OPINION
APPENDIX H	FORM OF CONTINUING DISCLOSURE AGREEMENT
APPENDIX I	SPECIMEN MUNICIPAL BOND INSURANCE POLICY

SUMMARY

This Summary is not complete and does not contain all of the information that investors should consider before making any investment decision with respect to the 2020 Bonds. Investors should read the more detailed information appearing in this Official Statement and the documents summarized or described herein in their entirety for a more complete understanding of the Concessioned System, the offering and the 2020 Bonds. Capitalized terms used and not otherwise defined herein shall have the respective meanings assigned thereto in Appendix E – Substantial Form of the Indenture and Appendix F – Substantial Form of the Concession Agreement.

THE CONCESSIONED SYSTEM

History of

The Concessioned System..... On August 7, 2013, the Lehigh County Authority (the “Authority” or “LCA”) issued its Water and Sewer Revenue Bonds (City of Allentown Concession) in the aggregate principal amount of \$307,683,598.90, consisting of \$245,590,000 Water and Sewer Revenue Bonds, (City of Allentown Concession) Series 2013A (the “2013A Bonds”), \$43,358,598.90 Water and Sewer Capital Appreciation Revenue Bonds, (City of Allentown Concession) Series 2013B (the “2013B Bonds”), and \$18,735,000 Water and Sewer Revenue Bonds, (City of Allentown Concession) Series 2013C (Federally Taxable) (the “2013C Bonds” and, together with the 2013A Bonds and the 2013B Bonds, the “2013 Bonds”).

The 2013 Bonds were issued pursuant to the provisions of a Trust Indenture, dated as of August 1, 2013 (the “Original Indenture”), by and between the Authority and Manufacturers and Traders Trust Company, as trustee (the “Trustee”), to provide funding for a project consisting generally of: (i) a single, up-front concession and lease payment to the City of Allentown (the “City”) pursuant to the Allentown Water and Sewer Utility System Concession and Lease Agreement dated as of May 1, 2013, as amended, between the City and the Authority (the “Existing Concession Agreement”) to acquire the Concessionaire Interest in the Concessioned System, (ii) certain anticipated capital improvements to the Concessioned System, (iii) deposits to certain reserve and other funds and (iv) transaction costs and expenses in connection with the acquisition of the Concessioned System and the issuance of the 2013 Bonds. The date the Authority made the up-front concession and lease payment to the City to acquire the Concessionaire Interest in the Concessioned System is sometimes referred to herein as the “Acquisition Date”.

Under the Existing Concession Agreement, the City has retained water supply existing before or ahead of the four water delivery points from which the City provides Raw Water to the Authority for the production of finished water (the “Retained Water Supply System”). See “THE CONCESSIONED SYSTEM – Retained Water Supply System.”

Under the Existing Concession Agreement, the Authority has agreed to operate the Sewer Utility System, which provides sewer service to

99% of the City’s population, as well as to certain surrounding municipalities and municipal authorities, including the Existing LCA System. The wastewater treatment facility is a 40 mgd, two-stage trickling filter plant, providing secondary and tertiary nitrification of municipal and industrial waste to customers within the City as well as seven other municipalities or municipal authorities, each of which owns and operates its own collector system, which connects to the wastewater treatment facility. See “THE CONCESSIONED SYSTEM – Sewer Utility System.”

The Dispute and the Settlement

Numerous disputes regarding the interpretation of and performance by the parties under the Existing Concession Agreement arose following the execution of the Existing Concession Agreement. The parties, following settlement negotiations, reached a global settlement to resolve all of their disputes (the “Settlement”), and in connection with the Settlement have agreed to, among other things, make certain changes to the terms of the Existing Concession Agreement. See Appendix D - “SUMMARY OF SETTLEMENT TERMS AFFECTING THE CONCESSION AGREEMENT”.

Amended and Restated

Concession Agreement.....

To implement the terms of the Settlement, and concurrently with the issuance of the 2020 Bonds (as defined herein), the Authority and the City will enter into an Amended and Restated Allentown Water and Sewer Utility System Concession and Lease Agreement (the “Concession Agreement”) pursuant to which the Existing Concession Agreement will be amended and restated in its entirety. See Appendix F – “SUBSTANTIAL FORM OF THE CONCESSION AGREEMENT”.

The initial purchasers of the 2020 Bonds, by their purchase and acceptance of the 2020 Bonds, shall be deemed to have approved and consented to the execution and delivery of the Concession Agreement and the amendment and restatement of the Existing Concession Agreement, which consent shall be binding upon all present and future holders of the 2020 Bonds.

Municipal Service

Agreements.....

The Water Plant and Distribution System currently supplies water to six municipalities and municipal authorities pursuant to separate Municipal Water Service Agreements, and the Sewer Utility System currently provides sewage services to seven different municipalities and municipal authorities pursuant to Municipal Sewer Service Agreements. The Existing LCA System is currently the largest municipal customer. Under a Municipal Water Service Agreement, the City currently provides water to the Existing LCA System and under a Municipal Sewer Service Agreement, the City currently provides sewage service to the Existing LCA System. The City has not assigned its rights under the Municipal Service Agreements. It has agreed to enforce its rights under them, including its right to impose and collect service charges for utility services provided to the Municipal Customers by means of the Concessioned System. The

Authority will collect amounts due and owing under the Municipal Service Agreements pursuant to a Services Agreement with the City.

The Authority The Authority is a body corporate and politic organized by the Board of County Commissioners of Lehigh County, Pennsylvania under the Municipality Authorities Act (53 Pa. C.S.A. Ch. 56) (the “Act”) of the Commonwealth of Pennsylvania (the “Commonwealth”). Under the Act, the Authority has power and authority, among other things, to acquire, hold, construct, improve, maintain and operate, own and lease (either in the capacity of lessor or lessee) facilities to provide water and sewer service. The Authority’s Charter currently expires on September 9, 2062, but all of the 2020 Bonds mature prior to that date.

Existing LCA System The Authority owns and operates a separate water supply system (the “Existing LCA Water System”) and a separate wastewater system (the “Existing LCA Wastewater System” and, together with the Existing LCA Water System, the “Existing LCA System”) that provides water and wastewater service to 16 municipalities in the County and in Northampton County, Pennsylvania. See “THE AUTHORITY – General.” However, none of the assets and revenues of the Existing LCA System are pledged to secure the Authority’s obligations with respect to the 2020 Bonds described herein.

The City The City is a third-class city of the Commonwealth governed by a Home Rule Charter and a Mayor/Council form of government. The City is not related to the Authority, nor is it obligated to pay the principal, redemption premium, if any, or interest on the 2020 Bonds.

THE 2020 BONDS AND THE 2020 PROJECT

The 2020 Bonds Lehigh County Authority Water and Sewer Revenue Bonds (City of Allentown Concession) Series 2020 (Federally Taxable) in the aggregate principal amount of \$161,185,000*, (the “2020 Bonds”). See “THE 2020 BONDS.”

The 2020 Project The 2020 Bonds are being issued to provide funding for: (i) the advance refunding of a portion of the 2013A Bonds (the “Refunded 2013A Bonds”); (ii) the funding of a debt service reserve fund with respect to the 2020 Bonds; and (iii) the payment of transaction costs and expenses in connection with the issuance and insuring of the 2020 Bonds (the “2020 Project”). The advance refunding of the Refunded 2013A Bonds is being undertaken to secure the necessary bondholder consents for (i) the execution and delivery of the Concession Agreement and the amendment and restatement of the Existing Concession Agreement, and (ii) the execution and delivery of the Indenture (as defined herein) and the amendment and restatement of the Existing Indenture.

Indenture The 2020 Bonds will be issued pursuant to a 2020-1 Supplemental

* Preliminary, subject to change

Trust Indenture dated as of September 1, 2020 (the “2020-1 Supplemental Indenture” and together with all other amendments and supplements to the Original Indenture, the “Existing Indenture”), between the Authority and the Trustee.

Consent to Proposed Amendment

and Restatement of Indenture

In order to conform the Existing Indenture to the Concession Agreement following the implementation of the Settlement, and in connection with the issuance of the 2020 Bonds, the Existing Indenture will be amended and restated in its entirety by the terms and provisions of an Amended and Restated Trust Indenture, dated as of September 1, 2020 (the “Indenture”). **The initial purchasers of the 2020 Bonds, by their purchase and acceptance of the 2020 Bonds, shall be deemed to have approved and consented to the execution and delivery of the Indenture and the amendment and restatement of the Existing Indenture, which consent shall be binding upon all present and future holders of the 2020 Bonds.** See Appendix E – “SUBSTANTIAL FORM OF THE INDENTURE”.

Limited Obligations

The 2020 Bonds are special, limited obligations of the Authority payable solely from, and secured solely by a lien on and pledge of the Trust Estate which is comprised almost exclusively of the Concessionaire Interest under the Concession Agreement. Except for certain System Assets, consisting primarily of rolling stock, the Authority has not mortgaged, assigned or pledged any interest in any real or personal property or improvements comprising the Concessioned System as security for payment of the 2020 Bonds. See “SECURITY AND SOURCES OF PAYMENT FOR THE 2020 BONDS – Limited Obligations”.

The 2020 Bonds are special limited obligations of the Authority. None of the County of Lehigh, the City of Allentown, the Commonwealth of Pennsylvania, or any political subdivision thereof is obligated to pay the principal, redemption premium, if any, or interest on the 2020 Bonds, and neither the full faith, credit nor taxing power of the County of Lehigh, the City of Allentown nor the Commonwealth of Pennsylvania or any other political subdivision thereof is pledged to such payment. The Authority has no taxing power.

Bond Insurance

The scheduled payment of principal of and interest on the 2020 Bonds when due will be guaranteed under an insurance policy (the “Policy”) to be issued concurrently with the delivery of the 2020 Bonds by Build America Mutual Assurance Company (“BAM”) See “BOND INSURANCE” herein.

Maturity Dates

The maturity dates for the 2020 Bonds are set forth on the inside front cover page of this Official Statement.

Interest Payment Dates

Interest on the 2020 Bonds will be payable semi-annually on June 1 and December 1 of each year, commencing on December 1, 2020.

Optional Redemption

The Bonds stated to mature on or after December 1, ____ shall be

subject to redemption prior to maturity at the option of the Authority, as a whole, or in part (in any order of maturity as selected by the Authority), at any time on or after _____ at a price equal to 100% of the principal amount of the Bonds redeemed, together with accrued interest thereon to the date fixed for such optional redemption. In the event that less than all Bonds of a particular maturity are to be redeemed, the Bonds of such maturity to be redeemed shall be drawn by lot by the Trustee.

Extraordinary Redemption The 2020 Bonds are subject to extraordinary redemption in whole or in part by the Authority, at a redemption price equal to 100% of the principal amount thereof plus interest accrued to the redemption date if (i) the Authority elects to terminate the Concession Agreement in connection with an Adverse Action; (ii) if the Authority elects to terminate the Concession Agreement upon the occurrence of a City Default; or (iii) if the City elects to terminate the Concession Agreement other than pursuant to a Concessionaire Default or the City cancels, rescinds or voids the Concession Agreement during the Term for any reason over the objection and without action by the Authority, the Trustee and their respective Affiliates. See “CONCESSION AGREEMENT – Termination”.

Mandatory Sinking Fund

Redemption..... The 2020 Bonds maturing on December 1, ____, ____, and ____, are subject to mandatory sinking fund redemption prior to maturity at a redemption price equal to 100% of the principal amount of the 2020 Bonds being redeemed, without premium, together with accrued interest to the date fixed for redemption.

Mandatory Purchase in

Lieu of Acceleration..... Under the Concession Agreement, if an Event of Default occurs under the Indenture or the Trustee declares all or part of the 2020 Bonds to be immediately due and payable, then the City has the option to purchase the 2020 Bonds from the Trustee (the “City Option”) at a purchase price equal to 100% of the principal amount thereof, together with accrued interest to the date fixed for the purchase of the 2020 Bonds. If the City Option is exercised, the City is required to purchase the 2020 Bonds on the date that is 90 days after the City exercises the City Option. See “THE 2020 BONDS—Redemption—Mandatory Purchase in Lieu of Acceleration.”

Book-Entry Only System..... The Depository Trust Company (“DTC”) will act as the securities depository for the 2020 Bonds. The 2020 Bonds will be issued as fully-registered bonds in the name of Cede & Co. (DTC’s partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered 2020 Bond certificate will be issued for the 2020 Bonds of each maturity, in the aggregate principal amount of such maturity. See “THE BONDS – Book-Entry Only System.”

Ratings..... S&P Global Ratings has assigned a rating of “AA” (stable outlook)

to the 2020 Bonds with the understanding that upon delivery of the 2020 Bonds, the Policy will be issued by BAM. S&P Global Ratings has also assigned the 2020 Bonds an underlying rating of “A” (stable outlook). This rating is not a recommendation to buy, sell or hold the 2020 Bonds and is subject to revision or withdrawal at any time by S&P Global Ratings. See “RATINGS” herein.

THE CONCESSION AGREEMENT

General Under the Concession Agreement, the City agreed to: (1) lease the Concessioned System to the Authority for a term (the “Term”) ending on August 7, 2063 (the “End Date”), subject to extension or earlier termination as provided in the Concession Agreement; see “CONCESSION AGREEMENT – Termination – Termination Relating to Authority’s Life;” (2) grant the Authority the right to operate the Concessioned System and provide Utility Services relating to the Concessioned System and in that connection (A) to use, possess, operate, manage, maintain, rehabilitate, expand and improve the Concessioned System and (B) to charge rates, charges and similar fees (“Service Charges”) and collect Revenues in connection with the operation of the Concessioned System; and (3) assign, transfer and otherwise convey to the Authority by bill of sale each of the System Assets, consisting primarily of rolling stock, free and clear of any Encumbrances.

In exchange for the City’s agreement to lease the Concessioned System and to grant the Authority the rights with respect to the Concessioned System as generally described in the preceding paragraph, the Authority made an up-front lease payment in the amount of \$211,332,217.56, makes the Annual City Payment (as defined herein) to the City of \$500,000, adjusted annually for inflation, and will make the Annual City Lease Administration Payment (as defined herein) to the City of \$400,000, adjusted annually for inflation. A reserve was established pursuant to the Concession Agreement to secure payment of the Annual City Payment. A reserve will not be established for the Annual City Lease Administration Payment. See “THE CONCESSIONED SYSTEM”, “CONCESSION AGREEMENT – Annual City Payment” and “CONCESSION AGREEMENT – Annual City Lease Administration Payment”.

Concession Interest The Authority’s interest in the Concessioned System created by the Concession Agreement and the rights and obligations of the Authority under the Concession Agreement are referred to as the “Concessionaire Interest.”

General Operations Under the Concession Agreement, the City granted the Authority the right to operate the Concessioned System and provide Utility Services relating to the Concessioned System and in that connection (i) to use, possess, operate, manage, maintain, rehabilitate, expand and improve the Concessioned System and (ii) to impose rates, charges and similar fees in accordance with the Concession Agreement and to collect Revenues in connection with the operation of the Concessioned System.

The Authority is responsible for all aspects of System Operations and is required to maintain and operate the Concessioned System and cause System Operations to be performed in accordance with the provisions of the Concession Agreement, the Operating Standards, Applicable Law and Prudent Industry Practices. Generally, the Authority is required at all times during the term, to cause the Concessioned System to be continuously open and operational to provide services to System Users in accordance with the Concession Agreement and to provide Utility Services, twenty-four hours a day, every day.

Capital Improvements Under the Concession Agreement, the Authority agreed to furnish the design for and construct the Major Capital Improvements, which must be approved by the City and may impose Capital Cost Recovery Charges to recover its costs, which also must be approved by the City. The Authority also may, in the alternative, charge a Capital Recovery Fee with respect to the capital cost of a Major Capital Improvement to the Concessioned System in certain circumstances. The Authority may undertake at its sole cost and subject to the approval of the City, the expansion of the sewerage treatment capacity of the Sewer Utility System. See “THE CONCESSIONED SYSTEM – Capital Improvements” and “– Rates.”

Rates Rates, fees and charges for the provision of water and the provision of water services by a municipal authority like the Authority are not subject to approval by the Pennsylvania Public Utility Commission (“PUC”), and the City and the Authority have agreed in the Concession Agreement not to seek PUC jurisdiction over the matters covered in the Concession Agreement.

The Concession Agreement contains provisions governing the ability of the Authority to charge and increase Service Charges. The Authority may make annual rate adjustments in amounts not to exceed the “Permitted Annual Rate Adjustment” for that calendar year, which contains two components: the change in a consumer price index for the preceding calendar year and a margin change equal to 2 1/2% for each calendar year from 2016 through 2032 and 2% for each year after 2032.

As part of the Settlement, the City and the Authority have agreed to implement over a four-year period additional increases in certain of the Service Charges imposed under the Concession Agreement. The

City and the Authority have also agreed to provide for the possibility of reductions in the Service Charges imposed under the Concession Agreement if certain financial benchmarks are met by the Authority. See “THE CONCESSIONED SYSTEM –Rates” and Appendix D – “SUMMARY OF SETTLEMENT TERMS AFFECTING THE CONCESSION AGREEMENT”.

In addition to the Capital Cost Recovery Charges and Capital Recovery Fees mentioned above, the Authority may make other Service Charges not subject to the Permitted Annual Rate Adjustment limitation described above which are designed to enable Authority to recover specified costs, including: a charge to recover the annual costs of any Major Force Majeure Event; an adjustment to reflect any changed costs related to a Change of Law; an adjustment to reimburse the Authority if it is required to secure a replacement source of Raw Water; and in connection with an Adverse Action. The Authority also may make a special Service Charge to recover the costs of major capital improvements. See “THE CONCESSIONED SYSTEM – Rates.”

The Concession Agreement calls for an additional Service Charge to be charged by the Authority but paid over to the City to fund the debt service requirements on the Administrative Order Bonds used by the City to pay its obligations under the EPA Administrative Orders. See “Administrative Order Project” below.

Delay Events..... The Concession Agreement sets forth certain specific Delay Events (e.g., a Force Majeure Event), which events will excuse the Authority from whatever performance is prevented by the Delay Event for such appropriate number of days as the City and the Authority determine. See “CONCESSION AGREEMENT – Delay Events.”

Adverse Actions Under the Concession Agreement, if an Adverse Action occurs, the Authority may be paid Concession Compensation with respect thereto (the “AA-Compensation”). An Adverse Action occurs if the City, the Commonwealth (or any of its agencies) or Lehigh County takes any action (including enacting, amending or repealing any Law), the effect of which action is reasonably expected to be borne primarily by the Authority and to have a material adverse effect on the fair market value of the Concessionaire interest greater than \$250,000 adjusted for inflation. The Authority may be entitled to impose a special Service Charge, as described above in “Rates.” If the value of the Concession Compensation exceeds 25% of the Concessioned System Concession Value, the Authority may elect to terminate the Concession Agreement and be paid by the Termination Compensation, the proceeds of which the Authority will use to redeem the 2020 Bonds. See “CONCESSION AGREEMENT – Adverse Actions.”

**Compensation Events;
Concession Compensation;
City Directive**

A “Compensation Event” is an event that requires the City to pay Concession Compensation to the Authority. Compensation Events include, among other things the Authority’s compliance with or the implementation of any City Directive or any modified or changed Operating Standard, the failure of the City to maintain the Administrative Order Fund in an amount sufficient for the punctual payment of Project Costs of an Administrative Order Project, the occurrence of an Adverse Action or the occurrence of any other event that requires the payment of Concession Compensation including Concession Compensation payable in certain circumstances upon City Default. See “Administrative Order Project” below. Upon the occurrence of a Compensation Event, the Authority is required to notify the City within 60 days following the date on which the Authority first became aware of the Compensation Event. See “CONCESSION AGREEMENT – Compensation Event; Concession Compensation.”

During the Term, the City may issue a written order or directive directing the Authority to add or perform work regarding the Concessioned System or change the dimensions, character, quantity, quality, description, location or position of any part of the Concessioned System or the System Operations or make other changes to the Concessioned System or the System Operations (each, a “Directive”). A Directive is a Compensation Event that requires the City to pay Concessionaire Compensation to the Authority. The Authority is required to perform the work required to implement the Directive, including obtaining all required authorizations and approvals, and the City is required to pay the Concession Compensation with respect thereto. See “CONCESSION AGREEMENT – City Directive.”

Insurance; Restoration

Under the Concession Agreement and the Indenture, the Authority is required to provide and maintain or caused to be maintained at the Authority’s expense, certain insurance coverages and requirements. Under the Concession Agreement the City is to be named as an additional insured with respect to commercial general liability insurance. The City and the Trustee are loss payees for all of the insurance policies specified in the Concession Agreement and the Trustee will be the “Depositary” for such proceeds. See “CONCESSION AGREEMENT – Insurance.”

If the Concessioned System is destroyed or damaged in whole or in part by casualty of any kind, the Authority, at its sole cost and expense, is required to repair, restore or rebuild the Concessioned System to the condition existing prior to the casualty (a “Restoration”). See “CONCESSION AGREEMENT – Restoration.”

Defaults

The Concession Agreement provides for a number of defaults by the Authority, subject, in certain cases, to cure periods and limitations

specified therein. Upon the occurrence of a Concessionaire Default, the City, subject to certain rights of the Trustee, as a Leasehold Mortgagee under the Concession Agreement, may declare the Authority in default and may take certain actions, including terminating the Concession Agreement, terminating the Concessionaire's right of possession of the Concessioned System and re-entering the Concessioned System, exercising any other rights and remedies provided for thereunder or available at law or equity and taking possession of the Concessioned System. See "CONCESSION AGREEMENT – Defaults and Remedies – Concessionaire Default" and "– Remedies of the City Upon Concessionaire Default."

The Concession Agreement provides for a number of defaults by the City, subject, in certain cases, to cure periods and limitations specified therein. Upon the occurrence of a City Default, the Authority may, subject to certain rights of the Trustee under the Concession Agreement, declare the City to be in default and may take any of the following actions, including terminating the Concession Agreement, seeking specific performance, injunction or other equitable remedies, seeking to recover its losses caused by the City Default, and exercising any other rights and remedies provided for thereunder or available at law or equity. See "CONCESSION AGREEMENT – Defaults and Remedies – City Default" and "– Remedies of Authority Upon City Default."

Lender's Rights and

Remedies.....

Under the Concession Agreement, the Authority has the right to grant one or more "Leasehold Mortgages" to be secured by the Concessionaire Interest and Revenues as long as no Concessionaire Default exists. In a consent agreement to be executed by the City, the Authority and the Trustee, concurrently with the issuance of the 2020 Bonds, the parties acknowledge and agree that the 2020 Bonds are "Leasehold Mortgage Debt" under the Concession Agreement, the Indenture is a "Leasehold Mortgage" under the Concession Agreement and the Trustee, in its capacity as fiduciary for the Bondholders is a "Leasehold Mortgagee" under the Concession Agreement. See "SECURITY AND SOURCES OF PAYMENT FOR THE 2020 BONDS – Consent Agreement."

Upon a Concessionaire Default, the Trustee, as Leasehold Mortgagee, has 60 days beyond any cure period expressly provided to the Authority to cure or cause to be cured such Concession Default. The City may not terminate the Concession Agreement for a Concessionaire Default as long as the Trustee's right to cure has not expired and the Trustee is curing such Concessionaire Default. The Trustee also may exercise its rights to foreclose on the Concessionaire Interest and operate the Concessioned System in its stead and thereafter, with the consent of City Council, to transfer the Concessionaire Interest to another party. In certain circumstances, following a Concessionaire Default, a new concession agreement may be entered into replacing the Concession Agreement, with a

proposed transferee concessionaire who must meet certain qualifications and be approved by the City, acting reasonably.

See “SECURITY AND SOURCES OF PAYMENT FOR THE 2020 BONDS – Consent Agreement.”

Termination..... The Authority has the right to terminate the Concession Agreement in connection with an Adverse Action if it first obtains the written consent of the Trustee and if the Concession Compensation related to such Adverse Action exceeds 25% of the System Concession Value. If the Authority elects to terminate, the City is required to pay an amount equal to: (i) the Termination Compensation, plus (ii) the Authority's reasonable, out-of-pocket costs and expenses, less (iii) (A) any insurance or condemnation proceeds received by the Authority as a result of such Adverse Action and (B) in the case of a condemnation by the Commonwealth (or any agency thereof) or the County the present value of any net insurance or condemnation proceeds that the Authority is reasonably likely to receive in the future in respect of all or any portion of the Concessioned System as a result of such Adverse Action.

“Termination Compensation” is equal to the greater of (i) the System Concession Value and (ii) the lesser of (A) the amount required to retire all Leasehold Mortgage Debt and (B) the sum of all Remaining Amortized Rent. If the Authority issues Parity Indebtedness, there may be instances in which the amount required to retire all Leasehold Mortgage Debt is greater than the Remaining Amortized Rent. See “CONCESSION AGREEMENT – Termination – Limits on Termination Payments” and “CERTAIN INVESTMENT RISKS – Limits on Termination Compensation.”

The City may terminate the Concession Agreement upon the occurrence of (A) a Concessionaire Default consisting of a failure to comply with, perform or observe any Operating Standard if such Concessionaire Default creates a material danger to the safety of System Operations or a material impairment to the Concessioned System or to the continuing use of the Concessioned System for Utility Purposes and the public purpose requirements of the Concession Agreement or (B) any other Concessionaire Default after the related cure periods as set forth in the Concession Agreement.

The Authority may terminate the Concession Agreement upon the occurrence of a City Default after the related cure period's lapse, as set forth in the Concession Agreement. Upon such termination, the City is required to pay to the Authority the Termination Compensation plus, the Authority's reasonable out-of-pocket costs and expenses incurred by as a result of such termination. See “CONCESSION AGREEMENT – Termination.”

Extension

As part of the Settlement, the Authority and the City have agreed to provide a mechanism for a negotiated extension of the Concession Agreement. Prior to any such negotiated extension, the Authority is required to obtain a favorable opinion of counsel confirming that such a negotiated extension is permissible under applicable law. Upon receipt of such an opinion, the Authority shall submit not less than three years before the August 7, 2063 end date of the Concession Agreement a written request to the City for an extension of the term of the lease. The renewal term requested shall be at least 30 years and not more than 50 years. The City has the right to deny the request for an extension if the City reasonably concludes that the Authority has not performed satisfactorily in meeting the requirements of the Concession Agreement. See Appendix D – “SUMMARY OF SETTLEMENT TERMS AFFECTING THE CONCESSION AGREEMENT” and Appendix F- “SUBSTANTIAL FORM OF THE CONCESSION AGREEMENT – Section 16.4(n)”.

GOVERNMENTAL REGULATION OF THE CONCESSIONED SYSTEM

Environmental Regulations Under the Concession Agreement, the Authority must observe and comply in all material respects with all applicable Environmental Laws during the Term of the Concession Agreement.

Administrative Order

Project..... In 2007 and 2009, the United States Environmental Protection Agency (“EPA”) issued two separate administrative orders (“EPA Administrative Orders”) related to by-passed flow at the City’s Wastewater Treatment Facility and sanitary sewer overflows in the collection systems owned by the City and Municipal Customers whose sewage flows to the Wastewater Treatment Facility pursuant to their Sewer Municipal Service Agreements with the City.

From 2013 to 2018, the Authority and the City worked collaboratively with the EPA to develop a strategy to satisfy the EPA Administrative Orders. As a result of this work, a Regional Flow Management Strategy (“RFMS”) was developed and submitted to EPA in August 2018. Included in the RFMS was a commitment from the City to complete certain sewer system rehabilitation projects and complete certain studies to further identify sources of leakage into the sewer system that was the subject of the EPA Administrative Orders. Based on the submission, in March 2019 EPA accepted that the requirements of the EPA Administrative Orders had been met. Collectively, the works outlined in the RFMS make up the City’s “Administrative Order Project”. Under the Concession Agreement, the City is responsible for paying the Project Costs of the Administrative Order Project. To fund the costs of the Administrative Order Project, the City issued bonds in 2016 and 2020, and will continue to issue such bonds until the Administrative Order Project is complete.

The Concession Agreement calls for an additional Service Charge to be imposed on all System Users (other than Municipal Customers obligated under their Municipal Service Agreements to pay a portion of the Project Costs of the Administrative Order Project) to fund the Debt Service Requirements coming due in each year on any bonds or other indebtedness issued for the purpose of financing or re-financing the Project Costs of the Administrative Order Project. The amounts collected in respect of this additional Service Charge, together with any similar payments made by a Municipal Customer under a Municipal Service Agreement, are to be retained by the City, are not part of the Revenues of the Concessioned System, and do not secure the 2020 Bonds. See “THE CONCESSIONED SYSTEM – Rates – Administrative Order Debt Service Costs.”

City Retained Liabilities Under the Concession Agreement the City retained responsibility for (A) Hazardous Substances that existed at the Acquisition Date and have a Material Adverse Effect on the Concession during the Term; (B) Environmental Law violations with respect to the City’s pre-Acquisition Date ownership or operation of the Concessioned System and (C) pre-Acquisition Date releases of Hazardous Substances. The City also retains responsibility for environmental issues relating to (i) the two EPA Administrative Orders described above, (ii) a specified set of findings and orders that were filed prior to March 29, 2013, the date on which the Authority and other bidders filed bids to become the concessionaire for the Concessioned System and (iii) and any other administrative or judicial order entered subsequent to the Bid Date relating to the subject matter of the listed EPA Administrative Orders (collectively, the “EPA Administrative Orders”). See “GOVERNMENTAL REGULATION OF THE CONCESSIONED SYSTEM – Environmental Regulations – *City Assumption of Responsibility for Certain Environmental Issues.*”

Current Status/Permit Transfers The Concession Agreement sets forth a list of all Permits and Approvals required for System operation. The City and the Authority anticipate that the City will remain the sole permittee for the Permits and Approvals required to operate the Concessioned System, although the Authority currently has been added or expects to be added as an additional permittee at a future date on one or more of the permits.

SECURITY AND SOURCES OF PAYMENT FOR THE 2020 BONDS

Security The 2020 Bonds are payable from and secured by a security interest in and liens on (i) the Concessionaire Interest, including the rights (but not the obligations) of the Authority under the Concession Agreement; and (ii) the funds and accounts established with the Indenture, including a Debt Service Reserve Fund (collectively, the “Trust Estate”) on a *pari pasu* basis with the Existing Authority Bonds defined below, any Additional Bonds, any Parity Swap Obligations, any Parity Indebtedness and any Parity Reimbursement Obligations.

Existing Authority Bonds..... In addition to the 2013A Bonds, the 2013B Bonds, and the 2013C Bonds, the Authority previously issued its \$17,940,000 original principal amount of Water and Sewer Revenue Bond (City of Allentown Concession) Series 2018 (Federally Taxable) (the “2018 Bond”) to finance, among other things, (i) the refunding of the 2013C Bonds and (ii) transaction costs and expenses in connection with the issuance of the 2018 Bond. Immediately prior to the issuance of the 2020 Bonds, the Authority intends to issue its \$18,500,000¹ original principal amount Water and Sewer Revenue Bond (City of Allentown Concession) Series 2020A (Federally Taxable) (the “2020A Bond”) to finance (i) the refunding of the 2018 Bond and (ii) transaction costs and expenses in connection with the issuance of the 2020A Bond. The 2020A Bond will be issued and sold through a private placement with Fulton Bank, N.A.

The 2013A Bonds in the principal amount of \$107,545,000¹ that are not being refunded with the 2020 Bonds (the “Unrefunded 2013A Bonds”), the 2013B Bonds and the 2020A Bond are collectively referred to herein as the “Existing Authority Bonds”.

Pursuant to the terms of the Indenture, the holders of the 2020 Bonds, the Existing Authority Bonds, any Additional Bonds, any Parity Swap Obligations, any Parity Indebtedness and any Parity Reimbursement Obligations (collectively referred to herein as the “Senior Obligations”) are secured by a first lien on the Trust Estate. See “SECURITY AND SOURCES OF PAYMENT FOR THE 2020 BONDS” herein.

¹ Preliminary, subject to change

***Additional Bonds and
Parity Indebtedness***

Subject to certain limitations and conditions of the Concession Agreement, the Authority may, from time to time, issue additional bonds, notes or other obligations that constitute Leasehold Mortgage Debt under the Concession Agreement (“Additional Bonds”) and may incur any indebtedness or other obligation of the Authority other than Additional Bonds that constitute Leasehold Mortgage Debt under the Concession Agreement (“Parity Indebtedness”). The Indenture sets out conditions that must be satisfied in connection with the issuance of Additional Bonds or Parity Indebtedness, including the delivery of a Consulting Engineer’s certificate demonstrating that a debt service coverage test is met and certification of the Authority to the effect that the Additional Bonds or Parity Indebtedness will constitute “Leasehold Mortgage Debt” under the Concession Agreement. The Additional Bonds and Parity Indebtedness will be secured by the Trust Estate and will be on a parity with the Existing Authority Bonds and the 2020 Bonds. The Authority may also incur Subordinated Indebtedness, but Subordinated Indebtedness will not be Leasehold Mortgage Debt under the Concession Agreement and will be subordinate in priority of payment to the Senior Obligations. See “SECURITY AND SOURCES OF PAYMENT FOR THE 2020 BONDS – Additional Bonds or Other Indebtedness.” See “SECURITY AND SOURCES OF PAYMENT FOR THE 2020 BONDS – Rate Covenant” for a description of the debt service coverage test that must be satisfied to incur Parity Indebtedness.

Pledge of Revenues

The 2020 Bonds, the Existing Authority Bonds, Additional Bonds and Parity Indebtedness are secured by a first lien pledge of Revenues under the Concession Agreement. “Revenues” is defined in the Concession Agreement to mean all revenues derived from the operation of the Concessioned System and the provision of Utility Services by means of the Concessioned System including Service Charges collected from users of the Concessioned System including Municipal Customer payments pursuant to Municipal Service Agreements exclusive of (i) any payments from a Municipal Customer allocated to the Municipal Customer Share of Annual Debt Service for Administrative Order Bonds and (ii) any moneys collected by the Authority by virtue of the imposition of Service Charges to fund Net Debt Service Charges pursuant to the Concession Agreement. Under the Concession Agreement, Administrative Order Bonds issued by the City may not be secured by a pledge of or lien on Revenues or any other elements of the Trust Estate under the Indenture. See “SECURITY AND SOURCES OF PAYMENT FOR THE 2020 BONDS – Additional Bonds and Other Indebtedness.”

Debt Service Reserve Fund..... A portion of the 2020 Bond proceeds will be applied to fund a debt service reserve fund (the “Debt Service Reserve Fund”) to be pledged as security for the benefit of the Trustee on behalf of the Holders of the 2020 Bonds. The Debt Service Reserve Fund will be funded in an amount equal to the Debt Service Reserve Fund Requirement. The Debt Service Reserve Fund may be drawn upon if the amounts in the Debt Service Fund are insufficient to pay in full any principal or interest then due on the 2020 Bonds. See “SECURITY AND SOURCES OF PAYMENT FOR THE 2020 BONDS – Debt Service Reserve Fund.”

Rate Covenant The Authority has covenanted to maintain, charge and collect Service Charges which, together with other Cash Available for Debt Service, are at all times at least sufficient to provide annually: (i) funds to pay all of the Operation and Maintenance Expenditures of the Authority; and (ii) an amount equal to 120% of the Debt Service Requirements with respect to the 2020 Bonds and the Existing Authority Bonds during the then current Fiscal Year of the Authority (collectively, the “Rate Covenant”). “Cash Available for Debt Service” means, for any period, the excess (if any) of: (a) all Revenues for such period less (b) Operation and Maintenance Expenditures and deposits into the City Payment Reserve Fund for such period.

Consent Agreement..... The Trustee, as a Leasehold Mortgagee, the City and the Authority are entering into an amended and restated consent agreement (the “Consent Agreement”) that sets forth certain assurances from the City of the Trustee’s rights (acting on behalf of the Bondholders) as a Leasehold Mortgagee in the Concession Agreement in the event of a default thereunder by the Authority, including step-in and cure rights, forbearance obligations of the City with respect to its exercise of remedies under the Concession Agreement (including termination remedies) and rights of substitution. Nothing in the Consent Agreement amends or modifies any of the Authority’s obligations to the City under the Concession Agreement or any of the City’s rights in the Concession Agreement.

MISCELLANEOUS

Independent Engineer’s Certificate The Independent Engineer is delivering its certificate, stating that the estimated revenues from the Concessioned System, together with money otherwise estimated to be available under the Indenture, will be sufficient in each Fiscal Year to (i) pay all of the Operation and Maintenance Expenditures of the Authority and (ii) provide an amount equal to 120% of the Debt Service Requirements with respect to the 2020 Bonds and the Existing Authority Bonds. See “INDEPENDENT ENGINEER’S CERTIFICATE.”

<i>Appraisal</i>	As required by the terms of the Existing Indenture, in connection with the issuance of the 2020 Bonds, AUS Consultants will be providing to the Trustee a written appraisal of the fair market value of the Concessionaire Interest at the time of the issuance of the 2020 Bonds, confirming the aggregate amount of Leasehold Mortgage Debt after giving effect to the issuance of the 2020 Bonds is not in excess of 80% of the fair market value of the Concessionaire Interest set forth in such written appraisal at the time of issuance of the 2020 Bonds. See Appendix A – “APPRAISAL”.
<i>Certain Investment Risks</i>	A number of risks that could affect the payments to be made with respect to the 2020 Bonds and/or the market value or liquidity of the 2020 Bonds are described in this Official Statement. Risks include but are not limited to: appropriation risk; environmental risks; operating risks; water quality risks; financial risks including limits on borrowing and inability to raise capital when needed; the risk of changes of law; the risk of not receiving necessary City approvals; lack of direct contractual relationship with each Municipal Customer; risks related to collateral; limits on the amount the City is required to pay upon a termination of the Concession Agreement; limitations on enforceability; bankruptcy-related risks; tax matter-related risks; political, litigation and community risks; and absence of a market for the 2020 Bonds. See “CERTAIN INVESTMENT RISKS” for a discussion of some of the risks that could affect the security or market value or liquidity of the 2020 Bonds.

OFFICIAL STATEMENT

Relating to

\$161,185,000*

**LEHIGH COUNTY AUTHORITY
Water and Sewer Revenue Bonds,
(City of Allentown Concession)
Series 2020 (Federally Taxable)**

INTRODUCTION

General. This Official Statement, which includes the cover page, inside front cover page, and appendices hereto, provides certain information about the Lehigh County Authority (the “Authority” or “LCA”) and is furnished in connection with the offering by the Authority of its \$161,185,000* aggregate principal amount of Water and Sewer Revenue Bonds, (City of Allentown Concession) Series 2020 (Federally Taxable) (the “Bonds” or the “2020 Bonds”), pursuant to a Trust Indenture, dated as of August 1, 2013 (the “Original Indenture”), as amended and supplemented, including by a 2020-1 Supplemental Indenture, dated as of September 1, 2020 (the “2020-1 Supplemental Indenture” and together with all other amendments and supplements to the Original Indenture, the “Existing Indenture”), each between the Authority and Manufacturers and Traders Trust Company, as trustee (the “Trustee”). For a discussion of the terms of the 2020 Bonds, see “THE 2020 BONDS.”

All capitalized terms used and not otherwise defined in this Official Statement have the meanings given to them in Appendix E – Substantial Form of the Indenture and Appendix F – Substantial Form of the Concession Agreement.

The Existing Concession Agreement, the Dispute, and the Settlement. Effective May 1, 2013, the Authority and the City entered into the Existing Concession Agreement to (i) lease the Concessioned System to the Authority, (ii) grant the Authority the right to operate the Concessioned System and provide Utility Services relating to the Concessioned System and in that connection (A) to use, possess, operate, manage, maintain, rehabilitate, expand and improve the Concessioned System and (B) to charge Service Charges and collect Revenues in connection with the operation of the Concessioned System; and (iii) assign, transfer and otherwise convey to the Authority by bill of sale each of the System Assets, free and clear of any Encumbrances.

Numerous disputes regarding the interpretation of and performance by the parties under the Existing Concession Agreement arose following the execution of the Existing Concession Agreement. The parties, following settlement negotiations, have reached a global settlement to resolve all of their disputes (the “Settlement”), and in connection with the Settlement have agreed to, among other things, make certain changes to the terms of the Existing Concession Agreement. For a summary of the terms of the Settlement as they relate to the Existing Concession Agreement, see Appendix D - “SUMMARY OF SETTLEMENT TERMS AFFECTING THE CONCESSION AGREEMENT”.

The Authority has determined that in order to implement the changes to the Existing Concession Agreement, the consent of the holders of a majority in aggregate principal amount of all bonds issued and outstanding under the Existing Indenture is required.

* Preliminary, subject to change

The 2020 Project. The 2020 Bonds are being issued to provide funding for: (i) the advance refunding of a portion of the Lehigh County Authority, Water and Sewer Revenue Bonds (City of Allentown Concession), Series 2013C Bonds (Federally Taxable) (the “Refunded 2013A Bonds”), (ii) the funding of a debt service reserve fund with respect to the 2020 Bonds, and (iii) the payment of the transaction costs and expenses in connection with the issuance and insuring of the 2020 Bonds. The advance refunding of the Refunded 2013A Bonds is being undertaken to secure the necessary bondholder consents for (i) the execution and delivery of the Concession Agreement and the amendment and restatement of the Existing Concession Agreement, and (ii) the execution and delivery of the Indenture (as defined herein) and the amendment and restatement of the Existing Indenture.

A portion of the proceeds of the 2020 Bonds will be applied to advance refund the Refunded 2013A Bonds. Such portion of the proceeds of the 2020 Bonds will be irrevocably deposited with Manufacturers and Traders Trust Company (the “Escrow Agent”) for deposit in an escrow fund (the “Escrow Fund”) to be held under the terms of an Escrow Agreement dated as of September 1, 2020 (the “Escrow Agreement”) between the Escrow Agent and the Authority. The proceeds of the 2020 Bonds deposited in the Escrow Fund are expected to be sufficient to pay principal and interest on the Refunded 2013A Bonds when due and the redemption price of the Refunded 2013A Bonds on December 1, 2023 (the “Redemption Date”). The accuracy of arithmetic computations supporting the conclusion that the 2020 Bond proceeds to be deposited in the Escrow Fund will be sufficient to pay principal and interest on the Refunded 2013A Bonds when due and the redemption price of the Refunded 2013A Bonds on the Redemption Date will be independently verified by Zelenkofske Axelrod LLC, certified public accountants. See “VERIFICATION OF MATHEMATICAL CALCULATIONS” herein.

The Concessioned System. Under the Concession Agreement, the Authority operates the Allentown Water Utility System, which consists of the Water Plant and Distribution System and the Retained Water Supply System. See “THE CONCESSIONED SYSTEM – The Water Plant and Distribution System.” The Water Plant and Distribution System supplies water to the City and certain surrounding municipalities pursuant to municipal water service agreements. See “OTHER SYSTEM DOCUMENTS – Municipal Service Agreements.” Under the Concession Agreement, the City has retained and continues to maintain and operate the Retained Water Supply System, and the City has agreed to provide Raw Water (as defined herein) to the Authority from the Retained Water Supply System at no cost. See “THE CONCESSIONED SYSTEM – The Water Plant and Distribution System.”

Under the Concession Agreement, the Authority also operates the Sewer Utility System. See “THE CONCESSIONED SYSTEM – The Sewer Utility System.” The Sewer Utility System provides sewer service to the City, as well as to certain surrounding municipalities pursuant to municipal sewer service agreements. See “THE CONCESSIONED SYSTEM – Sewer Utility System.”

The Authority. The Authority is a body corporate and politic organized by the Board of County Commissioners of Lehigh County, Pennsylvania (the “County”) under the Municipality Authorities Act (53 Pa. C.S.A. Ch. 56) (the “Act”) of the Commonwealth of Pennsylvania (the “Commonwealth”). Under the Act, the Authority has power and authority, among other things, to acquire, hold, construct, improve, maintain and operate, own and lease (either in the capacity of lessor or lessee) facilities to provide water and sewer service through September 9, 2062, the current expiration date of its charter. The 2020 Bonds all mature prior to September 9, 2062. The Authority owns and operates a water supply system (the “Existing LCA Water System”) and a wastewater system (the “Existing LCA Wastewater System” and, together with the Existing LCA Water System, the “Existing LCA System”) that provides water and wastewater service to 16 municipalities in the County and in Northampton County, Pennsylvania. See “THE AUTHORITY – General.”

THE 2020 BONDS ARE SPECIAL LIMITED OBLIGATIONS OF THE AUTHORITY. NEITHER THE COUNTY OF LEHIGH, THE CITY OF ALLENTOWN NOR THE COMMONWEALTH OF PENNSYLVANIA, NOR ANY POLITICAL SUBDIVISION THEREOF IS OBLIGATED TO PAY THE PRINCIPAL, REDEMPTION PREMIUM, IF ANY, OR INTEREST ON THE 2020 BONDS, AND NEITHER THE FULL FAITH, CREDIT NOR TAXING POWER OF THE COUNTY OF LEHIGH, THE CITY OF ALLENTOWN NOR THE COMMONWEALTH OF PENNSYLVANIA OR ANY OTHER POLITICAL SUBDIVISION THEREOF IS PLEDGED TO SUCH PAYMENT. THE AUTHORITY HAS NO TAXING POWER.

Independent Engineer. ARCADIS U.S. Inc. (the “Independent Engineer”) is serving as the independent engineer for the Authority. The Independent Engineer is delivering its certificate, stating that the estimated revenues from the Concessioned System, together with money otherwise estimated to be available under the Indenture, will be sufficient in each Fiscal Year to (i) pay all of the Operation and Maintenance Expenditures of the Authority and (ii) provide an amount equal to 120% of the Debt Service Requirements with respect to the 2020 Bonds and the Existing Authority Bonds.

The Independent Engineer’s fees and out-of-pocket costs are being paid by the Authority. However, the payment of the Independent Engineer’s fees and disbursements is not contingent on the 2020 Bonds being issued or sold.

Appraisal. AUS Consultants (the “Appraiser”) will be providing to the Trustee concurrently with the issuance of the 2020 Bonds, a written appraisal of the fair market value of the Concessionaire Interest at the time of the issuance of the 2020 Bonds, confirming the aggregate amount of Leasehold Mortgage Debt after giving effect to the issuance of the 2020 Bonds is not in excess of 80% of the fair market value of the Concessionaire Interest set forth in such written appraisal at the time of issuance of the 2020 Bonds. See Appendix A – “APPRAISAL”.

Certain Investment Risks. The 2020 Bonds involve investment risk and may not be suitable for all investors. Prospective purchasers of the 2020 Bonds should read this entire Official Statement including the information in “CERTAIN INVESTMENT RISKS.”

Amendment and Restatement of Indenture and Concession Agreement. In connection with the implementation of the Settlement, and concurrently with the issuance of the 2020 Bonds, the Existing Indenture and the Existing Concession Agreement will be amended and restated in their entirety. **The initial purchasers of the 2020 Bonds, by their purchase and acceptance of the 2020 Bonds, shall be deemed to have approved and consented to the execution and delivery of the Indenture and the amendment and restatement of the Existing Indenture, which consent shall be binding upon all present and future holders of the 2020 Bonds. See Appendix E – “SUBSTANTIAL FORM OF THE INDENTURE”. The initial purchasers of the 2020 Bonds, by their purchase and acceptance of the 2020 Bonds, shall be deemed to have approved and consented to the execution and delivery of the Concession Agreement and the amendment and restatement of the Existing Concession Agreement, which consent shall be binding upon all present and future holders of the 2020 Bonds. See Appendix F – “SUBSTANTIAL FORM OF THE CONCESSION AGREEMENT”. The Authority expects to have sufficient consents to implement both the Indenture and the Concession Agreement upon the original issuance of the 2020 Bonds. See “CONCURRENT FINANCING PLANS” herein.**

Additional Information. This Official Statement contains brief descriptions of, among other things, the 2020 Bonds, the Indenture, the Authority, the Concessioned System and the 2020 Project. Such descriptions do not purport to be comprehensive or definitive. All references in this Official Statement to documents are qualified in their entirety by reference to such documents, and references to

the 2020 Bonds are qualified in their entirety by reference to the form of the 2020 Bonds included in the 2020-1 Supplemental Indenture.

The substantial forms of the Indenture and the Concession Agreement are attached hereto as Appendices E and F, respectively. Certain other agreements relating to the 2020 Project and the 2020 Bonds are available during the offering period from RBC Capital Markets, LLC, 2101 Oregon Pike, Lancaster, Pennsylvania 17601, telephone: 717 519 6000 and Janney Montgomery Scott LLC, 1717 Arch Street, Philadelphia, PA 19103, telephone: 215 665-6000.

THE AUTHORITY

General

The Authority was incorporated on September 21, 1966 by the Lehigh County Commissioners under the provisions of the Act. The Authority is a body corporate and politic and is empowered by its Articles of Incorporation to perform all functions allowed by the Act, and the Act allows the Authority to execute, deliver and perform its obligations as contemplated in the Concession Agreement. The Act provides that a municipal authority has all rights and functions granted to it under the Act unless a resolution or ordinance of its governing body specifies that only specific projects may be undertaken by that municipal authority. Among its rights and functions under the Act, the Authority is empowered to acquire, hold, construct, improve, maintain, operate, own and lease (either in the capacity as lessor or lessee), sewers, sewer systems, or parts thereof, sewage treatment works, including works for treating or the disposal of industrial waste, as well as water works, water supply works and water distribution systems. The Authority's life currently expires on September 9, 2062.

The Authority currently owns and operates the Existing LCA System that provides water and wastewater service in and to 16 municipalities, which are primarily located in suburban areas north, south and west of the City. The Authority was transformed into an operating authority in 1969. Since then, the Authority has transformed the provision of water and wastewater services in Western Lehigh County from multiple, developer-driven systems into a single, regional system. The Authority currently operates regional water and sewer systems serving most of the communities adjacent to the City and it meets rural community needs by operating smaller satellite systems in the outlying areas of Lehigh County and Northampton County.

The Existing LCA System consists of a water system and a wastewater system that provides direct retail service to approximately 22,500 residential, commercial, industrial and institutional customers, the Western Lehigh Interceptor System, which provides wastewater treatment and transportation services to eight municipalities, the Little Lehigh Relief Interceptor System, which provides wastewater treatment and transportation services to eight municipalities, a wastewater treatment plant and wastewater collector and/or treatment systems in five municipalities. The Authority's 2020 budget totals for the Existing LCA System are set forth in the table below. As discussed above, the 2020 Bonds, the Existing Authority Bonds and any Additional Bonds, Parity Indebtedness or other debt relating to the Concessioned System issued by the Authority are not secured by revenues from the Existing LCA System; those revenues will be segregated from the moneys generated by the Concessioned System and deposited into separate accounts.

Existing LCA System 2020 Budget

	Suburban Water	Suburban Wastewater	City Divisions	TOTAL LCA
Operating Revenues	10,582,010	16,446,154	38,712,488	65,740,652
Non-Operating Revenues	936,500	1,046,282	3,859,800	5,842,582
Operating Expenses (Ex. D&A)	(7,334,728)	(12,355,646)	(19,193,168)	(38,883,542)
Net Available for Debt Service	4,183,782	5,136,790	23,379,120	32,699,692
Debt Service	(3,341,564)	(1,616,435)	(15,421,170)	(20,379,169)
Non-Cash Working Capital Changes	-	-	-	-
Net Available for Capex	842,218	3,520,355	7,957,950	12,320,523
Investing Activities	-	-	-	-
New Borrowing	5,119,500	22,635,000	-	27,754,500
Capex	(8,010,000)	(8,670,500)	(4,815,000)	(21,495,500)
NET CASH FLOWS	(2,048,282)	17,484,855	3,142,950	18,579,523

Source: Lehigh County Authority

The Existing LCA System has grown by extension of service to both new and existing developments previously served by on-lot water and wastewater systems and through the acquisition of 26 water systems and six wastewater systems owned by public and private entities. The Authority also leases and operates one municipally owned wastewater collection system.

The Authority currently is party to a Water Service Agreement dated January 7, 2009, as amended by that First Amendment to Water Supply Agreement (the “Existing LCA Water Service Agreement”) with the City pursuant to which the City provides water for use in the Existing LCA System. The Existing LCA System continues to purchase water under the Existing LCA Water Service Agreement and those water purchase payments for the Existing LCA System are Revenues of the Concessioned System. Similarly, pursuant to a series of sewer service agreements with the Authority (collectively, the “Existing LCA Sewer Service Agreement”), the City currently provides sewage treatment services to the Existing LCA System. The payments for sewer services for the Existing LCA System provided under the Existing LCA Sewer Service Agreement (net of the Existing LCA Wastewater System’s share of payments for debt incurred by the City to finance the Administrative Order Project described below) have been turned over to the Authority, as concessionaire, and are Revenues of the Concessioned System.

Board

The Authority is governed by a nine-member board, with its members being appointed by the Lehigh County Executive and confirmed by the County Commissioners. Authority members serve five-year terms with appointments being staggered. The Authority Board establishes operating and service policies, approves the annual budget, capital plan and contracts, hires the Chief Executive Officer, and performs other responsibilities typically resting with a board of directors. All members serve without compensation other than reimbursement of expenses incurred in the course of Authority business.

The City does not have the authority to appoint or remove any members of the Board. A brief biography of each Board member follows:

Brian C. Nagle, Chairman - Term Expires December 31, 2024

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

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

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

Richard H. Bohner, Secretary - Term Expires December 31, 2022

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

Norma Cusick, Assistant Secretary - Term Expires December 31, 2024

Ms. Cusick holds a Bachelor of Arts degree from DeSales University and a Master of Arts degree from Kutztown University and is a certified paralegal. She has been a resident of Lehigh County for forty-four years and is a small business owner and business manager. Ms. Cusick has served as the Division Director for the American Heart Association, Allentown Downtown Improvement District, the Salisbury Township School Board, Salisbury Township Commissioner, Salisbury Township Planning Commission and is currently on the Salisbury Township Education Foundation. Ms. Cusick has served on the Board of Directors of the Pennsylvania Shakespeare Festival, Child Advocacy Center and the Lehigh Valley Hospital Board of Associates and was past President of the Lehigh County Sports Fields. She currently serves on the Board of Directors of the Allentown Public Library. She has also participated with and served on several additional community organizations, including the Greater Lehigh Valley Girl Scouts. Throughout the period of her residence, she continues to be active in many other local, regional and statewide endeavors. Ms. Cusick became an Authority Board member in March 2010.

Ted Lyons Jr., Treasurer - Term Expires December 31, 2023

Mr. Lyons holds a Bachelor of Science degree in Civil Engineering from Duke University and MBA from the Wharton School University of Pennsylvania. He is retired from HT Lyons, Inc., a

mechanical contracting and engineering firm which he founded in 1973 and was acquired by PPL in 1998. He serves on the boards of the Allentown Boys and Girls Club and the Allentown Art Museum. He is also a past board member of the Allentown Symphony and the DaVinci Science Center. Mr. Lyons became an Authority Board member in August 2014.

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

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

Linda A. Rosenfeld, Member - Term Expires December 31, 2021

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

Jeffrey J. Morgan, Member - Term Expires December 31, 2021

Mr. Morgan grew up in Allentown and graduated from William Allen High School. He earned a Bachelor of Science degree in Physics from Muhlenberg College and a Master of Science degree in Environmental Engineering and Water Resources from Villanova University. He is a professional engineer licensed in PA, NJ and DE. He has over twenty-five years of diverse engineering and client management experience in the water and wastewater industry. Mr. Morgan works for a small engineering firm, is familiar with all aspects of the National Pollution Discharge Elimination System (NPDES) Program and otherwise assures that municipalities/authorities comply with all of their water, wastewater and stormwater related regulatory requirements. He oversees and manages wastewater design and construction projects, attends public meetings, provides reports and makes presentations. Mr. Morgan also completes reports for projects related to Combined Sewer Systems/Combined Sewer Overflows, Toxics Reduction Evaluations, MS4 Stormwater Management Programs, PPC and Emergency Planning and Inflow/Infiltration. He assists municipalities/authorities with implementation of Industrial Pretreatment Programs (IPP), including preparation of detailed local limits analyses. Mr. Morgan has volunteered his time with various youth sports organizations over the years and is currently in his eleventh year of volunteering with the South Parkland Youth Association's Football Program. Mr. Morgan currently resides in South Whitehall Township with his wife and two high school age children. Mr. Morgan became an Authority Board member in March 2017.

Amir Famili, Member - Term Expires December 31, 2023

Mr. Famili holds a Ph.D. degree in Chemistry from University of Akron. He worked at Air Products and Chemicals for thirty-four years before retirement in 2018. While in Air Products, Mr. Famili was Global Technology Director and Chief Technology Officer of the Performance Material business responsible for new products, application development and new process development. He is a long time resident of the Lehigh Valley. Mr. Famili is member of Allentown West Rotary Club and a core volunteer of Lehigh Valley Habitat for Humanity. Mr. Famili became an Authority Board member in July 2019.

Management and Administration of the Existing LCA System

The Authority's operations are conducted by a staff of 162 full-time employees who are divided into eight groups:

Administration. This group provides general administrative and executive level services including serving as liaison to the Board of Directors, human resources, risk management, legislative affairs, strategic planning, external stakeholder relations, legal and administrative functions. This group is managed directly by the Chief Executive Officer.

Capital Works. This group provides professional and technical services required to undertake various capital improvements and additions to the Authority's water and wastewater systems. This work includes completing engineering studies, designing projects and preparing contract documents, construction oversight and inspection, and plan review. This group is managed directly by the Chief Capital Works Officer.

Compliance. This group is responsible for ensuring compliance with regulatory permits and laws, including operation of laboratories, sampling programs, and regulatory monitoring services. This group is managed directly by the Compliance Manager.

Customer Care & Communications. This group is responsible for customer service, metering billing and collections functions. In addition, this group develops and implements the communications program aimed at enhancing community relationships and meeting regulatory requirements for public notification. This group is managed directly by the Customer Care & Communications Manager.

Finance & Accounting. This group provides centralized accounting, purchasing, cash management, personnel, risk management, legal, clerical, and data processing services. This group is managed directly by the Chief Financial Officer.

Information Technology. This group is responsible for providing technology support across the organization, and leads efforts to advance innovation and automation throughout the Authority's operation. This group is managed directly by the Chief Information Officer.

Operations. This group operates and maintains the water and wastewater systems and makes up the largest segment of the Authority's employee base. The group also makes minor capital improvements and additions to the system and manages all emergency repairs and responses. This group is managed directly by the Chief Operations Officer.

Planning. This group is responsible for planning efforts to ensure long-term water and sewer capacity is available for the future needs of LCA's service area. Included in this work is the

administration of intermunicipal agreements and other critical contracts. This group is managed directly by the Senior Planning Engineer.

The following is a brief description of key Authority staff members:

Liesel M. Gross, Chief Executive Officer

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

Over her years of service to the Authority, she has served in numerous positions in local, state and national professional associations. She served on the Board of Directors of the American Water Works Association (AWWA) from 2016 to 2019. She also has served as Chair of the American Water Works Association, Pennsylvania Section, Trustee of the Northeast District AWWA, and has served on numerous committees of the Association at the state and national level, including the Workforce Strategies, Knowledge Management, and Diversity & Member Inclusion committees of the AWWA. She is a current member of the Board of Directors for the East Penn Chamber of Commerce, and the Greater Lehigh Valley Chamber of Commerce's Energy & Environment Committee, and serves as the secretary of the Lehigh Valley Water Suppliers, Inc., a position she has held for 20 years. She also served as Vice Chair of the Emmaus and Upper Milford Joint Environmental Advisory Council from 2006 to 2015, and on various committees of the Pennsylvania Municipal Authorities Association.

Edward C. Klein, Chief Financial Officer

Prior to joining the Authority in 2015, Mr. Klein worked for almost fifteen years with Weir Hazleton, Inc. as Vice President of Finance. His primary area of responsibility was for all financial activities of the business and had responsibility for Human Resources, Information Technology, Safety, and Administration. He also served in the operations area of the business for a short period of time as Interim Vice President of Operations. Mr. Klein has a Master's Degree in Business Administration from Pennsylvania State University and a Bachelor's Degree in Accounting from King's College. He has provided financial leadership which had a positive impact on the performance of the businesses that he has served by implementing solid financial structures, being a business partner to the executive team through analysis and advice, eliminating waste, managing risks of the business, and being a champion of change.

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

John W. Parsons, Chief Operations Officer

Prior to joining the Authority in 2013, Mr. Parsons worked for the City of Allentown for 18 years in roles of increasing leadership in the water resources arena. He holds Master's Degree in Engineering from Penn State University, and a Bachelor's Degree in Chemistry from Lebanon Valley College. He also holds water and wastewater treatment certifications through the Pennsylvania Department of

Environmental Protection and is a certified sewage enforcement officer. During his tenure with the City of Allentown, Mr. Parsons managed many different aspects of the City's water and wastewater systems including serving as Laboratories Manager and Program Manager for all plant maintenance, capital upgrades and more. Since joining the Authority after the Acquisition Date, he has served as Capital Works Manager for the Authority's City Division, managing major capital improvement projects and collaborating broadly with the City's Office of Compliance to develop financial and project reporting protocols. In his role as Chief Operations Officer, Mr. Parsons draws on his knowledge of the existing system operations and strong management skills to develop plans and programs for increased cost-effectiveness, collaboration and system sustainability, driving the Authority's asset management culture into the future.

Charles Volk, P.E., Chief Capital Works Officer

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

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

Susan Sampson, Customer Care & Communications Manager

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

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

Christopher W. Moughan, Chief Information Officer

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

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

Philip M. DePoe, P.E., Senior Planning Engineer (interim)

Mr. DePoe holds a Bachelor's Degree in Civil Engineering from the Pennsylvania State University. He joined the Authority in 2014 as a Capital Works Engineer after eight years of service in the engineering consulting business. He worked as a project engineer prior to joining the Authority, where he obtained his professional engineering license for Pennsylvania. In addition, Mr. DePoe is a Board member of the Water Works Operators' Association of Pennsylvania, where he has served as Editor since 2010.

Prior to his new role as the Interim Senior Planning Engineer at the Authority, Mr. DePoe was the Capital Works Program Manager where he developed the annual capital plan for both the Suburban and City Division. His role included significant management of capital activities for the Allentown Filtration Plant and the Kline's Island Wastewater Treatment Plant. Mr. DePoe assumed his new role as Interim Senior Planning Engineer in late 2019 and is now responsible for strategic long-term water and wastewater facility planning, resource development, and support for the Authority's overall regional service approach. In this role, he works closely with all municipalities within the Authority's service area to ensure long-term water and sewer needs are met, and coordinates activities among various Authority departments, regulators and consultants to develop plans to meet the region's needs.

Andrew D. Moore, Compliance Manager

Mr. Moore holds a Bachelor's Degree in Forensic Chemistry from York College of Pennsylvania. He joined the Authority in 2017 after seven years of laboratory management and wastewater plant operation. He holds a PA DEP State Board Wastewater Operators A-E 2-5 certification and is involved with multiple wastewater and drinking water organizations, including sitting on the Board of Directors for the Pretreatment Information Exchange, Inc. In his role as Compliance Manager, Mr. Moore is responsible for overseeing compliance of the Authority's water and wastewater facilities. He ensures the organization is held to the highest ethical standards in managing the Industrial Pretreatment Program, overseeing laboratory operation and regulatory monitoring. In addition, he examines and advises on new environmental regulations in order to identify risks to the Authority's compliance.

THE CITY OF ALLENTOWN

General

The City is a third-class city of the Commonwealth, which formerly derived its powers from the Third Class City Code. Effective April 23, 1996, the City changed its form of government to a Home Rule Charter. The change was adopted by a vote of the electorate pursuant to the Home Rule Law of the Commonwealth. Under the Home Rule Charter, the City is governed by a Mayor/Council form of government. The electorate of the City has elected a Mayor who serves as the City's chief executive, and a seven-member council that acts as the legislative branch of the City government. See Appendix C for more information regarding the City.

City Not Liable on 2020 Bonds

Other than certain contractual obligations, including the Concession Agreement, the Existing LCA Water Service Agreement and the Existing LCA Sewer Service Agreement, the City does not have any relation to the Authority. See "OTHER SYSTEM DOCUMENTS – Municipal Service Agreements" for a description of the Existing LCA Water Service Agreement, the Existing LCA Sewer Service Agreement and certain of the Municipal Service Agreements with Municipal Customers other than the Authority. **The City is not obligated to pay the principal, redemption premium, if any, or interest on the 2020 Bonds.**

THE CONCESSIONED SYSTEM

General

The Authority, as concessionaire under the Concession Agreement, generally is responsible for all aspects of System Operations and is required to maintain and operate the Concessioned System. See "- System Operations" below for a description of the general operational responsibilities of the Authority with respect to the Concessioned System. The "Concessioned System" consists of the Water Plant and Distribution System and the Sewer Utility System.

The "Water Plant and Distribution System" means the water treatment, water storage and water distribution system of the City including the treatment plant, water storage and distribution facilities described in the Concession Agreement, and all improvements and fixtures of any kind whatsoever forming a part of or used in connection with the treatment plant, water storage and water distribution facilities from time to time and all associated rights of way, easements and covenants. The "Water Plant and Distribution System" excludes the Retained Water Supply System described below and all oil, gas and mineral, water, air rights, development rights and other rights which are retained by the City as the owner of the real property constituting the sites of the Water Plant and Distribution System.

The "Sewer Utility System" means the sewage collection, treatment and disposal system of the City including the Wastewater Treatment Facility (described below in "- The Sewer Utility System"), collection facilities and disposal facilities described in the Concession Agreement, together with all improvements and fixtures of any kind forming a part of, or used in connection, with such facilities from time to time and all associated rights of way. However, it excludes all oil, gas and mineral, water rights, air rights and other similar rights retained by the City as the owner of the real property constituting the sites of the Sewer Utility System.

Retained Water Supply System. The City retained water supplies existing before or ahead of the four water delivery points (described below in "- The Water Plant and Distribution System – Water

Supply”) from which the City will provide Raw Water to the Authority for the production of finished water (the “Retained Water Supply System”). The City currently uses water in the Retained Water Supply System as a source for providing water to the City, its residents, and its commercial and industrial users located within the City and each Municipal Customer to which it is required to supply water under a Municipal Service Agreement. See “– The Water Plant and Distribution System – Retained Water Supply System.”

“Surplus Water” is water from the City’s Retained Water Supply System that is not required in connection with the performance by the Authority of its obligations under the Concession Agreement, including its obligations to provide services thereunder. The City has retained the right to sell Surplus Water from its Retained Water Supply System. However, whenever the City sells Surplus Water pursuant to a surplus water sales agreement and that Surplus Water is treated by means of the Water Treatment Facility (as defined herein) or transmitted by means of the water distribution facilities of the Water Plant and Distribution System, the Authority is entitled to charge reasonable fees for such treatment and transmission.

Municipal Service Agreements. The City currently is party to six Municipal Service Agreements under which it supplies water to six municipalities and municipal authorities (the “Municipal Water Service Agreements”), including the Existing LCA Water Service Agreement. The City also currently is party to Municipal Service Agreements under which it provides sewage services to seven different municipalities and municipal authorities (the “Municipal Sewer Service Agreements”), including the Existing LCA Sewer Service Agreement. The Authority agreed to take all reasonable measures to coordinate the Utility Services (i.e., the services the Authority provides under the Concession Agreement) provided by the Concessioned System to meet the needs of the City and the Municipal Customers, and agreed to act as the agent of the City in fulfilling the City’s obligations under each of the Municipal Service Agreements.

The water distributed pursuant to the Municipal Water Service Agreements represented approximately 41.0% of the total water distribution of the Water Plant and Distribution System in the City’s Fiscal Year (“FY”) ended December 31, 2019. The Existing LCA Water Service Agreement providing water to the Existing LCA System is the largest Municipal Water Service Agreement, representing approximately 32.0% of the total water distribution of the Water Plant and Distribution System in FY 2019. Moneys received by the Concessioned System for rates and services provided to the Existing LCA System under the Existing LCA Water Service Agreement are Revenues of the Concessioned System.

**Historic Water Municipal Service
Agreements Water Use (gallons per day)**

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
Salisbury Township	778,202	885,253	793,962	749,640	777,658	819,547
South Whitehall Township	850,952	835,889	784,443	776,205	789,525	788,296
Hanover Township	199,734	153,422	154,634	172,211	183,830	173,638
Whitehall Township	3,706	4,463	4,801	4,448	4,052	4,073
Lehigh County Authority	3,981,689	4,952,038	5,986,240	6,936,032	6,728,764	6,974,360
TOTAL	5,814,283	6,831,065	7,724,080	8,638,537	8,483,829	8,759,914

The sewage treated pursuant to the Municipal Sewer Service Agreements represents approximately 48.0% of the total sewage treatment of the Sewer Utility System in FY 2019. The Existing LCA Sewer Service Agreement providing sewerage service to the Existing LCA System is the largest

Municipal Sewer Service Agreement, representing approximately 29.0% of the total sewage treatment of the Sewer Utility System in FY 2019. Moneys received by the Concessioned System for services provided to the Existing LCA System under the Existing LCA Sewer Service Agreement are Revenues of the Concessioned System, excluding the Municipal Customer Share of Annual Debt Service of the Existing LCA Wastewater System.

**Historic Sewer Municipal Service
Agreements Billable Sewer Flows (gallons per day)**

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
South Whitehall	1,791,315	1,564,164	1,505,671	1,479,315	1,817,808	1,777,397
Salisbury	1,618,247	1,307,863	1,353,808	1,309,288	1,625,890	1,615,808
Coplay-Whitehall	1,886,849	1,817,562	1,842,137	1,921,151	2,270,000	2,215,781
Emmaus	1,093,918	981,616	919,205	917,781	1,328,055	1,405,233
Lower Macungie	126,055	122,630	119,452	105,836	103,288	92,548
Lehigh County Authority	9,047,096	7,856,356	8,073,945	8,975,123	11,366,110	11,078,712
TOTAL	15,563,479	13,650,192	13,814,219	14,708,493	18,511,151	18,185,479

WATER SUPPLY SOURCES, DEMAND AND CAPACITY INFORMATION

CITY DIVISION	2015	2016	2017	2018	2019
Average Daily Demand (Gallons)	19,989,940	20,408,474	21,156,763	21,492,755	21,512,142
Maximum Daily Demand (Gallons)	26,120,900	25,296,100	27,135,900	29,756,200	29,504,800
Estimated Safe Yield of Supplies (GPD)	71,000,000	71,000,000	71,000,000	71,000,000	71,000,000
Surplus/(Deficit) (GPD)	44,879,100	45,703,900	43,864,100	41,243,800	41,495,200

Source: Lehigh County Authority Audit.

The City did not assign its rights and responsibilities under the Municipal Service Agreements to the Authority, but agreed in the Concession Agreement that it will enforce its rights under each Municipal Service Agreement, including the Existing LCA Water Service Agreement and the Existing LCA Sewer Service Agreement, including its right to impose and collect Service Charges for utility services provided to the Municipal Customers by means of the Concessioned System. The City also agreed: not to waive any material right or claim it holds under the Municipal Service Agreements; to affirmatively enforce its rights under the Municipal Service Agreements; and not to amend, modify, renew or otherwise change the terms of any Municipal Service Agreement in any manner which affects the Concessionaire Interest without the prior written consent of the Authority. The Concession Agreement provides that the Authority is entitled to participate at all meetings between the City and a Municipal Customer relating to its Municipal Service Agreement.

A Services Agreement (the “Services Agreement”) between the City and the Authority allows for the Authority’s billing and collection of Revenues from Municipal Customers, as agent of the City, pursuant to the Municipal Service Agreements and the remitting to the City of the “Municipal Customer Share,” which is related to paying Annual Debt Service on debt incurred by the City in respect of the Administrative Order Project; see “– City Retained Responsibility for Certain Projects – Administrative Order Projects” below. The City and the Authority also agree to cooperate to limit the risk that payments from Municipal Customers may become subject to liens or attachments by creditors of the City. See “– Rates – Other Adjustments to Service Charges.”

A Municipal Customer may elect to terminate its Municipal Service Agreement or not to renew or replace it or otherwise withdraw as a Municipal Customer in accordance with the terms of its Municipal Service Agreement. New Municipal Customers and existing Municipal Customers also may enter into new agreements with the City or the Authority for the provision of Utility Services by means of the Concessed System.

However, in any calendar year, when the aggregate effect of changes in Municipal Service Agreements and/or Municipal Service Customers results in a reduction of Revenues by more than five percent, the Authority is entitled to recover for that year its reduced revenues attributable to the withdrawals, additions or changes. That recovery, if from the City, may be provided by a direct reimbursement from City funds or by an increase in Service Charges, and such recovery must be fully funded by the end of the following calendar year.

The Water Plant and Distribution System

Facilities. The Allentown Water Filtration and Pumping Plant (the “Water Treatment Facility” or “WTP”) located along the Little Lehigh Creek has a surface water treatment capacity of 30 million gallons per day (“mgd”). Originally called the Allentown Water Works, the Water Treatment Facility commenced operating a 10 mgd conventional surface water treatment plant in 1929; in 1953, the City expanded the Water Treatment Facility with the addition of a 20 mgd water treatment plant; between 1993 and 1997, the City invested approximately \$25 million to renovate the Water Treatment Facility by adding new mechanical equipment and electrical systems, new roofing systems, new technologies including a plant control system, a computerized maintenance management system, lamella plate settler technology, particle counters and a modern laboratory for both regulatory and process control analysis.

The Water Treatment Facility currently has a maximum capacity of 30 mgd and currently produces an average of 21.8 mgd. The structures and equipment of the Water Treatment Facility are sound and well maintained although some components are showing signs of wear. The Authority believes that the Water Treatment Facility will require improvements in the future to address aging components. The Authority’s financial model includes a budget for addressing certain short-term needs of the Water Treatment Facility as well as projections that include allowances for long-term and ongoing needs of the Water Treatment Facility.

The City currently maintains approximately 320 miles of underground water mains, over 8,000 valves, 1,800 fire hydrants, approximately 33,000 service connections, five pumping stations and elevated storage tanks for high service areas and three potable water storage reservoirs with a total capacity of 50 million gallons.

<u>Year</u>	<u>Daily Average Gallons Produced</u>	<u>Total Gallons Produced</u>
2014	18,555,100	6,772,601,200
2015	20,062,400	7,322,786,800
2016	20,354,000	7,449,578,400
2017	21,156,763	7,722,218,500
2018	21,780,100	7,949,744,100
2019	21,832,500	7,968,853,400

Source: Pennsylvania Department of Environmental Protection Bureau of Watershed Management Primary Facility Report for ALLENTOWN MUNI WATERWORKS

Service. The Water Plant and Distribution System serves a population of approximately 200,000 with an average daily consumption of 17.6 mgd of finished water. The Water Plant and Distribution System serves residential, commercial, governmental, institutional and industrial customers within the City and also provides water to the municipalities of South Whitehall Township, Salisbury Township, Hanover Township, the Whitehall Township Authority, the City of Bethlehem and the Existing LCA System.

Historic Retail Water Consumption by Customer Class (gallons per day)

<u>Customer Class</u>	<u>FY2015</u>	<u>FY2016</u>	<u>FY2017</u>	<u>FY2018</u>	<u>FY2019</u>
Residential	5,883,518	5,903,286	5,913,864	5,898,183	5,857,238
Commercial	2,237,533	2,147,315	2,108,198	2,150,494	2,162,394
Industrial	311,426	310,028	294,059	347,221	350,994
<u>Total</u>	8,432,447	8,360,629	8,316,121	8,395,898	8,270,626
% Change	0.027%	(0.009)%	(0.532)%	0.959%	(0.301)%

Source: Lehigh County Authority.

Water Standards. Since 1997, the City Water Filtration Plant has met standards for filtered drinking water that were more stringent than the standards set by the U.S. Environmental Protection Agency (the “EPA”) or the Pennsylvania Department of Environmental Protection (“PADEP”). The City enrolled in the Partnership for Safe Drinking Water in 2005, which codified these high standards for water quality, and the City Water Filtration Plant has received multiple awards from the Partnership for Safe Drinking Water since joining. The Authority has continued to participate in the Partnership for Safe Drinking Water as the Concessionaire of the Concessioned System, and has continued to achieve these standards in addition to all state and federal regulatory standards established under the Safe Drinking Water Act.

Water Supply. The Water Plant and Distribution System has a finished water reservoir capacity of 50 million gallons, which currently affords more than three days of water reserves in the event of a complete failure of the Water Treatment Facility. This capacity is appropriate given that the Water Treatment Facility lacks on-site backup power generation capability. In addition there are four sources of available Raw Water (as defined herein): (i) up to 30 mgd from the Little Lehigh Creek; (ii) up to 5 mgd from the Crystal Spring; (iii) up to 9 mgd from the Schantz Spring; and (iv) up to 28 mgd from the Lehigh River. The total maximum daily water withdrawal from these sources is 39 mgd. The Lehigh River is not a primary source of Raw Water and is only used in case of emergencies. The water delivery intake points are as follows: (i) for the Little Lehigh Creek, on the south side of the Water Treatment Facility; (ii) for the Crystal Spring, adjacent to the Water Treatment Facility along Martin Luther King, Jr. Drive in the City; (iii) for the Schantz Spring, along Schantz Road in Upper Macungie Township, approximately five miles from the Water Treatment Facility; and (iv) for the Lehigh River, approximately 1,400 feet north of the Hamilton Street Dam in the City.

In the Concession Agreement, the City retained and continues to own, maintain and operate the Retained Water Supply System. The City agreed to supply to the Authority for treatment, at no cost to the Authority, water from the Retained Water Supply System and other sources (“Raw Water”) that meets the Raw Water quality specifications set forth in the Concession Agreement (the “Raw Water Specifications”) in the quantity and at the rate of delivery as is necessary to enable the Authority to meet the Operating Standards and to provide services: (i) to the City, its residents, and its commercial and industrial users of the Water Plant and Distribution System that are located in the City and all other users in the City; (ii) to each Municipal Customer pursuant to the Municipal Service Agreements for water; and

(iii) in accordance with any agreement for the bulk sale of Surplus Water when such Surplus Water is to be treated by means of the water treatment plant and facilities of the Water Plant and Distribution System or transmitted by means of the water distribution facilities of the Water Plant and Distribution System. See “– The Water Plant and Distribution System – Water Supply” for a description of the sources of available Raw Water.

Water Quality. In the Concession Agreement, the City agreed to provide Raw Water to the Authority that meets the Raw Water Specifications. The Raw Water may be supplied from the Retained Water Supply System in the quantity and at the rate of delivery as is necessary to enable the Authority to meet the Operating Standards and to provide Utility Services by means of the Water Plant and Distribution System. The maximum withdrawal of Raw Water from all sources permitted by PADEP is 39 mgd with a combined safe yield reported to be 157 mgd. The Raw Water Specifications set limits on pH, turbidity from springs, turbidity from surface water, and acknowledged, identifiable and regulated contaminants present in sufficient concentrations that, despite full processing at the treatment plant, would be distributed into the public water supply at concentrations in excess of regulatory limits for those contaminants. In the Concession Agreement, while the City disclaimed making specific representations or warranties regarding Raw Water, including its treatability by the Water System, its chemical and physical characteristics, temperature, and the presence of pollutants or Hazardous Substances, it represented that the Concessioned System, when operated and maintained in accordance with Prudent Industry Practices and as then configured, is capable of being operated in compliance with the Operating Standards and without an Operational Breach. See “– System Operations – General” below.

If one or more of the sources of the City’s Raw Water delivered to the Authority does not meet the Raw Water Specifications and, as a result (after taking into account stored water in reservoirs) there is an insufficient supply of Raw Water from the Retained Water Supply System’s sources to meet the needs of the Authority under the Concession Agreement, an event of Force Majeure occurs and the Authority is entitled to relief from compliance with the Operating Standards and from the imposition of liquidated damages resulting from water quality and all other matters related to the Force Majeure event, to the extent and in the manner set forth in the Concession Agreement.

Whenever Raw Water does not meet the Raw Water Specifications, the Authority is required to take all appropriate mitigation and treatment actions in accordance with Prudent Industry Practices and the Operating Standards previously used by the City, submit necessary notices and advise the City of its plans, and use reasonable efforts consistent with Prudent Industry Practices, to comply with the Operating Standards.

If the Authority is required to secure a replacement source of water when Raw Water from the Retained Water Supply System does not meet the Raw Water Specifications, the Authority also is entitled to recovery of its additional costs incurred to purchase replacement sources of water and to treat Raw Water that does not meet the Raw Water Specifications. The City may elect to reimburse the Authority for the additional costs described above directly from City funds or by an increase in the Schedule of Service Charges. In any event, the reimbursement to the Authority of its costs, together with interest at the Bank Rate, must be paid within one year of the date that a documented claim for such reimbursement is submitted to the City. “Bank Rate” means the Three-Month London Interbank Offered Rate or any successor rate thereto as reported in The Wall Street Journal.

Surplus Water. Any water available from the Retained Water Supply System that is not required to be provided in connection with the Authority’s provision of Utility Services under the Concession Agreement is deemed Surplus Water. In the Concession Agreement, the City retained its rights with respect to Surplus Water and the City may enter into agreements for the bulk sale of Surplus Water (each a “Bulk Sale Agreement”). If Surplus Water is sold by the City pursuant to a Bulk Sale

Agreement and treated and/or transmitted by the Water Plant and Distribution System, the Authority may charge reasonable fees for such treatment and transmission of Surplus Water.

Water Shortage. A “Water Shortage” is any shortage in the quantity of available water provided by means of the Retained Water Supply System and caused by drought, pollution (which cannot or is not permitted to be treated by the Water Plant and Distribution System in its then current configuration and method of operation), a Force Majeure incident affecting water shortage, a loss or change of permit, or any other cause or condition beyond the control of the City. In the event of a Water Shortage, the amount of Raw Water to be provided by the City to the Authority by means of the Retained Water Supply System may be reduced, but the Authority’s proportionate share may not be reduced by more than the degree to which the total amount of available water is reduced (i.e., the City may not discriminate against the Authority to the benefit of any other purchaser of water from the City). Similarly, in the event of a Water Shortage relating to any individual source within the Retained Water Supply System, the amount of Raw Water being provided by the City to the Authority from that individual source may be reduced, but by no more than the degree to which the total amount of available water from that particular source is reduced.

To the extent possible, the City is required to provide additional water from the other sources within the Retained Water Supply System to compensate for the reduction in water available from the affected source. However, if the City is unable to provide additional water from other sources to compensate for a reduction, the Authority is not excused from its general obligation to provide water. However, when and to the extent that the Authority is required to secure a replacement source of water for Raw Water as a result of a Water Shortage or as a result of maintenance activities related to the Retained Water Supply System, then the Authority is entitled to recovery of its additional costs to purchase replacement sources of water. In that event, the City may elect to reimburse the Authority directly from City funds or by an increase in Service Charges. In any event, the reimbursement to the Authority of its costs, together with interest at the Bank Rate, must be paid within one year of the date that a documented claim for such reimbursement is submitted to the City.

Based on current and projected water demands, the diversity of water sources and the significant quantities of surplus water, the Authority does not believe that Water Shortage events are likely to occur over the life of the 2020 Bonds except in the case of regulatory declaration of area wide drought-related limitations. In the event of a drought, the Authority has prepared a Drought Management Plan, which calls for certain actions to be taken in the event that drought-related water shortages are anticipated based on a watershed-based drought monitoring program established by the Authority in 2016.

Water Sales Shortfalls. The Authority is required to provide the City with monthly reports setting forth (separately for the Retail Water Customers and the Municipal Bulk Customers) the actual average daily volume of metered water sales: (i) for that month; (ii) for that calendar year to date (a “Reporting Year”); and (iii) for the three consecutive preceding Reporting Years. By February 10th of each year, the Authority is required to file a report with the City covering the three immediately preceding Reporting Years. If that report shows that a Water Sales Shortfall has occurred with respect to the three immediately preceding Reporting Years (each such three year period is referred to as a “Water Sales Test Period”), then the Annual Report also must set forth the Annual Shortfall Recovery Amounts that will be payable by the City to the Authority for the then current and the two ensuing Reporting Years as a result of the Water Sales Shortfall in question.

- A “Water Sales Shortfall” means, for each Water Sales Test Period, the amount (expressed in gallons per day) by which the sum of (i) the actual average daily volume of metered water sales to all Retail Water Customers and (ii) the Bulk Sales Surplus over the entire Water Sales Test Period, was less than 7.269 million gallons per day.

- “Bulk Sales Surplus” for any Water Sales Test Period is the excess (expressed in gallons per day) by which the actual average daily volume of metered water sales to all Municipal Bulk Customers over the entire Water Sales Test Period was more than 1.785 million gallons per day.
- “Municipal Bulk Customer” means a Municipal Customer that purchases water pursuant to a Municipal Service Agreement, other than the Authority in its capacity as purchaser of water from the City for the Existing LCA System.
- The “Shortfall Recovery Amount” with respect to each Water Sales Test Period, is the amount of money that would have been collected from Retail Water Customers through Service Charges during that period, had the Water Sales Shortfall amount been sold to them.
- “Retail Water Customers” means all users of the Water Plant and Distribution System, exclusive of governmental users that are party to a Municipal Service Agreement.

In any year in which a Water Sales Shortfall occurs with respect to a Water Sales Test Period, the Authority is entitled to impose an additional Service Charge upon all Retail Water Customers to recover that Shortfall Recovery Amount. The amount that may be recovered through increased Service Charges in any year is equal to one-third of the Shortfall Recovery Amount for the corresponding Water Sales Test Period. See “THE CONCESSIONED SYSTEM – Rates – Other Adjustments to Service Charges.” Given the magnitude of current and projected retail water sales and municipal bulk water sales, the Authority currently believes that a water sales shortfall is unlikely to occur.

Based on current and projected water demands, the Authority does not believe that a Water Sales Shortfall is likely to occur.

Capital Costs of Remediating System Water Loss. Unaccounted for water in the Existing LCA System comprises less than 10% of the total water production, whereas the Concessioned System currently loses between 19-21% of its water through leakage and unaccounted for meter reading losses. The Concessioned System contains more than 300 miles of pipe, approximately half of which were installed prior to 1945. To address water loss through leakage, the Authority has implemented a robust pipeline prioritization program to identify and prioritize water mains that require replacement due to age, material or break history. The information developed through this program is used to design annual water main replacement projects, which are also required by the Concession Agreement. In addition to the water main replacement work, the Authority also has met or exceeded its annual leak detection requirement established in the Concession Agreement. Additional efforts undertaken, which will be expanded upon in future years, includes installation of leak sensors inside customer facilities to create a grid network of automated leak detection sensors, which will improve timely detection and repair of water leaks in the system.

The Sewer Utility System

Facilities. The City’s wastewater treatment facility, known as Kline’s Island Wastewater Treatment Plant (the “Wastewater Treatment Facility” or the “KIWWTP”), is a 40 mgd, two-stage trickling filter plant, providing secondary and tertiary nitrification of municipal and industrial waste to customers within the City as well as seven other municipalities or municipal authorities. Each of the seven municipalities or municipal authorities owns and operates its own collector systems, which connects to the Wastewater Treatment Facility. The Wastewater Treatment Facility was constructed in 1929 and increased its capacity in 1968. In 1979 the Wastewater Treatment Facility was upgraded to its current 40 mgd capacity. The Sewer Utility System also includes flood control structures consisting of

dikes, levees and floodwalls along the Lehigh River in the general vicinity of the Wastewater Treatment Facility. The structures and equipment of the Wastewater Treatment Facility appear to be sound, in good physical condition and well maintained although some components are showing signs of wear and, based on its review of available documents over the time period from 2014 to 2019, with the exception of bypass events due to high flows during severe wet weather, the Wastewater Treatment Facility consistently treats wastewater in compliance with its National Pollutant Discharge Elimination System (“NPDES”) permit limits.

<u>Year</u>	<u>Daily Average Gallons Treated</u>	<u>Total Gallons Treated</u>
2014	32,381,667	11,819,308,333
2015	30,420,833	11,103,604,167
2016	29,671,667	10,859,830,000
2017	30,782,500	11,235,612,500
2018	36,072,500	13,166,462,500
2019	37,627,500	13,734,037,500

Source: Lehigh County Authority operating results

Service. The City serves 99% of the City’s current population. The Sewer Utility System also provides sewer service to seven municipalities or municipal authorities: the Borough of Emmaus, Hanover Township, Salisbury Township, South Whitehall Township, the Coplay-Whitehall Authority, the Existing LCA System and Lower Macungie Township. The Existing LCA System currently provides sewer service through the Sewer Utility System to eight additional municipalities or municipal authorities: the Borough of Alburtis, the Borough of Emmaus, the Borough of Macungie, Lower Macungie Township, Lowhill Township, Upper Macungie Township, Upper Milford Township and Weisenberg Township. The sewer service to these other municipalities and municipal authorities accounts for approximately half of the City’s sewer revenues. The Sewer Utility System currently serves a population of over 200,000, owns and operates roughly 285 miles of sewer pipes, and treats sewage for a majority of Lehigh County, collecting sewage from various communities pursuant to Municipal Sewer Service Agreements. The Wastewater Treatment Facility discharges treated effluent into the Lehigh River.

City Retained Responsibility for Certain Projects

General. The City agreed to pay the costs (which include all capital costs, financing costs and design, engineering, legal and similar costs to the Concessioned System) of Capital Improvements to the Concessioned System that were uncompleted as of the Bid Date, including certain Wastewater Treatment Plant Projects, Water Filtration Plant Projects, and Water Distribution System Projects. These projects, with the exception of the Meter Replacement Project, were completed by 2018, at an estimated total cost of \$3 million. The Meter Replacement Project remains uncompleted as a small number of older meters still exist in vacant homes and need to be replaced. The Authority is completing these meter replacements as properties are sold, with direct reimbursement by the City. The remaining total cost of this uncompleted work is less than \$100,000.

Administrative Order Project. The City also is responsible for paying the Project Costs of the Administrative Order Project as set forth below. To fund these Project Costs, the City issued bonds in 2016 and 2020, and will continue to issue such bonds until the Project is complete.

The collection systems that discharge flow to the Wastewater Treatment Facility allow rain-derived inflow and infiltration (“I&I”) into the sewers. During certain wet-weather events, the

amount of I&I that enters sewers can exceed the hydraulic capacity of the Sewer Utility System and result in sewage overflows into the environment. This condition resulted in the EPA issuing to the City two separate administrative orders (the “EPA Administrative Orders”) dated September 28, 2007, and September 28, 2009. Both EPA Administrative Orders related to by-passed flow at the Wastewater Treatment Facility, and sanitary sewer overflows in the collection systems owned by the City and by the Municipal Customers whose sewage flows to the Wastewater Treatment Facility pursuant to their Municipal Sewer Service Agreements with the City, including the Existing LCA System. The PADEP has also required that all planning modules, for new connections draining to the Wastewater Treatment Facility, be reviewed and approved prior to the authorization of new connections. The Municipal Customers were named as respondents to the Administrative Order issued in 2009 because they were in the Wastewater Treatment Facility’s drainage area.

The Authority organized and manages a coalition of several municipalities and municipal authorities, known as the Western Lehigh Sewer Partnership (the “WLSP”), established for the purpose of jointly addressing the second Administrative Order for excessive wet-weather flows in the Existing LCA System’s service area only. The Authority, on behalf of the Existing LCA System, is a member of the WLSP.

From 2013 to 2018, the Authority and the City worked collaboratively with the EPA to develop a strategy to satisfy the EPA Administrative Orders. As a result of this work, a Regional Flow Management Strategy (“RFMS”) was developed and submitted to EPA in August 2018. Included in the RFMS was a commitment from the City to complete certain sewer system rehabilitation projects and complete certain studies to further identify sources of leakage into the sewer system that was the subject of the EPA Administrative Orders. Based on the submission, in March 2019 EPA accepted that the requirements of the EPA Administrative Orders had been met. Collectively, the works outlined in the RFMS make up the City’s Administrative Order Project.

All capital improvements related to the remediation of violations set forth in the EPA Administrative Orders (the “Administrative Order Project”) are to be undertaken by the Authority, as concessionaire for the Concessions System, at the sole cost and expense of the City and are Excluded Liabilities under the Concession Agreement. “EPA Administrative Orders” are defined to include: (i) the two EPA Administrative Orders described above, (ii) a specified set of findings and orders that were filed prior to March 29, 2013, the date on which the Authority and other bidders filed bids to become the concessionaire for the Concessions System, and (iii) any other administrative or judicial order entered subsequent to the Bid Date relating to the subject matter of the listed EPA Administrative Orders. While the City retains responsibility for fines, penalties and remediation of the issues addressed in the EPA Administrative Orders, including any deficiency in any Administrative Order Project, as specified by the City, to remediate the adverse condition, the Authority is responsible for any environmental issues, including a remediation failure, associated with faulty design or implementation of an Administrative Order Project. See “- Rates – Administrative Order Debt Service Costs” for a discussion of the Authority’s right to raise rates to reimburse the City for the City’s costs of the Project Costs of the Administrative Order Project.

System Operations

General. Generally, the Authority, at all times during the Term: (i) is responsible for all aspects of System Operations and (ii) is required to maintain and operate the Concessions System and cause System Operations to be performed in accordance with the provisions of the Concession Agreement, the Operating Standards, Applicable Law and Prudent Industry Practices. In particular, the capacity of the Concessions System, the Water Treatment Plant, the Wastewater Treatment Facility, the water distribution facilities and sewerage collection facilities at all times must be sufficient to meet the needs of

the City, its residents and the commercial and industrial users of the Concessioned System located in the City, and to meet the service obligations to Municipal Customers under the Municipal Service Agreements.

The Authority is required at all times during the term, to cause the Concessioned System to be continuously open and operational to provide services to System Users in accordance with the Concession Agreement and to provide Utility Services, twenty-four hours a day, every day. However, the Authority may close the Concessioned System or portions thereof in circumstances as may be required by applicable Law in order to comply with other requirements of the Concession Agreement (including closures for capital improvements or maintenance or repair activities as required by the Operating Standards), or as necessary for temporary closures required to address emergencies, public safety, or temporary events or in other circumstances permitted in the Concession Agreement. Except as otherwise provided in the Concession Agreement, the Authority is required to pay all costs and expenses relating to System Operations, as the same are due and payable. See “CONCESSION AGREEMENT” for a description of other provisions governing operations of the Concessioned System.

In the Concession Agreement, the City represented that the Concessioned System, when operated and maintained in accordance with Prudent Industry Practices and as then configured, is capable of being operated in compliance with the Operating Standards and without an Operational Breach. It also represented that except as disclosed to the Authority and except as described above in “– City Retained Responsibility for Certain Projects – Administrative Order Project,” there were no facts, circumstances, conditions or occurrences regarding the Concessioned System that could reasonably be expected to give rise to any environmental claims or governmental enforcement actions that could reasonably be expected to have a Material Adverse Effect and further that there were no past, pending or threatened environmental claims or governmental enforcement actions against the City that individually or in the aggregate could be reasonably expected to have a Material Adverse Effect. Prior to the Acquisition Date, the Independent Engineer conducted Phase I Environmental Site Assessments for the major sites associated with the Concessioned System to be leased by the Authority and did not identify any recognized environmental conditions that would prevent the continued operation of the Concessioned System.

Authority Operational Plans. Since the Acquisition Date, the Authority has operated, managed, maintained, repaired or rehabilitated and improved the Concessioned System itself, and intends to continue doing so during the term of the 2020 Bonds. The Concession Agreement permits the Authority to appoint an Operator to perform those functions in its place. An “Operator” must be an active operator of water systems and sewer systems with the expertise, qualifications, experience, competence, skills and know-how to perform the System Operations in accordance with the Concession Agreement.

Operating Standards. In the Concession Agreement, the Authority agreed to operate the Concessioned System in compliance in all material respects with the operating standards attached as a schedule to the Concession Agreement (the “Operating Standards”). The Operating Standards are designed to ensure the quality of water delivered to Retail Water Customers and Municipal Customers, the protection of water bodies receiving treated Sewer Utility System effluent, and the long-term protection of the water and sewer infrastructure of the Concessioned System during the Term of the Concession Agreement. It also sets forth the Authority’s obligations with respect to the operation and maintenance of the Concessioned System, and requires the Authority to submit regular reports to the City regarding system performance, operation and maintenance activities, capital improvements, customer service practices, and other activities.

Since the Acquisition Date, the Authority has implemented procedures to achieve compliance with the Operating Standards. The Concession Agreement provides that the Operating Standards will not

be deemed to be violated by occasional immaterial acts or omissions other than those which endanger the public health and safety but the City in all cases may assess operational liquidated damages (described below). If the Authority wishes to implement and use operating standards other than the Operating Standards, the Authority must provide its proposed Operating Standards to the City for approval, along with an explanation of the Authority's rationale for making such proposal. If the City refuses to approve any proposed operating standards, the Authority may submit the matter for dispute resolution under the provisions of the Concession Agreement.

The City may modify or change the Operating Standards upon notice to the Authority to: (i) comply with any new Law or Change of Law (other than a new Law or Change of Law enacted by the City that is not required by any new Law or Change of Law enacted by another Governmental Authority applicable to the Concessions System) or (ii) conform the Operating Standards to standards or practices generally adopted with respect to sewage collection, treatment and disposal systems and water treatment plants and water distribution systems. The Authority has the right to challenge any modified Operating Standard pursuant to the Concession Agreement. If the City modifies or changes the Operating Standards in the circumstances described in clause (i) above, the City and the Authority will adjust the Schedule of Service Charges to account for that change; if the modification or change to the Operating Standards is to be made under the circumstances described in clause (ii) above, then the City and the Authority must negotiate in good faith to reduce the impact on the Authority of any increased costs or expenses associated with such modification or change.

In certain instances, the Authority may be required to provide capital to pay the costs of compliance with or implementation of: (i) a modified or additional Operating Standard to comply with any new Law or Change of Law (other than a City-enacted new Law or Change of Law) prior to recouping the costs of compliance through adjustments to Service Charges to retail customers and Municipal Customers, (ii) a modified or additional Operating Standard to conform with prudent industry practices prior to negotiating with the City to reduce the impact of any increased costs and expenses to the Authority associated with such modified or additional Operating Standard and (iii) a modified or additional Operating Standard other than as described in clauses (i) and (ii) above prior to recouping the costs of compliance through Concession Compensation. See "CERTAIN INVESTMENT RISKS – Financial Risks – Authority's Responsibility to Raise Capital and Limits on Borrowing for Future Capital Expenditures" for a description of certain risks relating to the Authority's ability to raise such capital.

The City also may modify or change the Operating Standards for any other reason upon reasonable written notice to the Authority. In that case, however, the City is required to pay Concession Compensation to the Authority with respect to the change or modification at the time it is implemented. See "CONCESSION AGREEMENT – Compensation Event – Concession Compensation" for a description of Concession Compensation.

The Concession Agreement permits the City to assess operational liquidated damages ("Operational Liquidated Damages") for each breach (an "Operational Breach") of the Operating Standards. Operational Liquidated Damages ranging from \$3,000 to \$8,000 annually and \$1,000 to \$2,000 quarterly are specified in the Operating Standards and are adjusted for inflation from the Acquisition Date. The Operational Liquidated Damages may include additional amounts if they are assessed for multiple operational breaches. The Authority is required to pay Operational Liquidated Damages within 30 days following the filing of the written notice by the City. The City may assess Operational Liquidated Damages for an Operational Breach of the water quality standards at any time. With respect to all other Operational Breaches, the Authority has a transition period ending on the 183rd day next following the Acquisition Date to bring its operations into compliance with the Operating Standards without assessment of any liquidated damages.

The Operating Standards are not violated by occasional immaterial acts or omissions other than those that endanger public health and safety.

Capital Improvements

General. Under the Concession Agreement, the Authority is responsible for all capital improvements with respect to the Concessioned System required to be completed during the Term, which include the Required Capital Improvements and Major Capital Improvements. However, the City is responsible for the funding of the Administrative Order Projects to be undertaken by the Authority. See “CONCESSION AGREEMENT – Capital Improvements.

Uncompleted Work. The City has retained completion and payment for the Uncompleted Work. The “Uncompleted Work” consists of certain capital improvements to the Concessioned System including: supervisory control and data acquisition and security system upgrades at the Wastewater Treatment Facility; a chlorine booster station and a new roof over the chemical storage area at the Water Treatment Facility; certain repairs at a water storage tank; and the Meter Replacement Project. These projects, with the exception of the Meter Replacement Project, were completed by 2018, at an estimated total cost of \$3 million. The Meter Replacement Project remains uncompleted as a small number of older meters still exist in vacant homes and need to be replaced. The Authority is completing these meter replacements as properties are sold, with direct reimbursement by the City. The remaining total cost of this uncompleted work is less than \$100,000.

Capex Plan. Pursuant to the Concession Agreement, the Authority is required to prepare and deliver to the City annually a five-year asset management plan for the Concessioned System that includes the Required Capital Improvements, the Major Capital Improvements and any other capital improvements that are necessary for the operation of the Concessioned System (the “Capex Plan”). The Authority is required to update the Capex Plan and submit the updated plan to the City for review and comment (i) no later than 60 days prior to the end of each full year ending after the Acquisition Date, and (ii) at any other time at which the Authority reasonably believes that the Capex Plan should be updated.

The Capex Plan is required to: (i) be developed on the basis of regulatory and industry standards pursuant to which assets are evaluated and catalogued based on condition, criticality, cost, risk of failure and consequence of failure; (ii) prioritize maintenance and capital expenditures so as to extend the useful life of the Concessioned System and the components thereof; and (iii) include an outline of the work anticipated to be carried out and an estimate of the costs associated with such works. Each Capex Plan will be reviewed by the City within 30 days of its submission and will be subject to the approval of the City, which approval will not be unreasonably conditioned, delayed or withheld.

The most recent Capex Plan completed on April 13, 2020 shows the following anticipated capital improvements:

FUND	2021	2022	2023	2024	2025	TOTAL
Suburban Water	\$3,535,000	\$4,772,000	\$4,215,000	\$3,868,000	\$5,910,000	\$22,300,000
Suburban Wastewater	4,003,500	4,675,500	8,494,500	10,157,500	2,007,500	29,338,500
City Water	1,090,000	1,440,000	1,940,000	2,690,000	2,840,000	10,000,000
City Wastewater	2,245,000	1,675,000	2,050,000	2,885,000	1,960,000	10,815,000
Administration	500,000	450,000	425,000	375,000	275,000	2,025,000
TOTAL	<u>\$11,373,500</u>	<u>\$13,012,500</u>	<u>\$17,124,500</u>	<u>\$19,975,500</u>	<u>\$12,992,500</u>	<u>\$74,478,500</u>

With the Settlement Agreement in place which amends the Existing Concession Agreement and related documents, additional revenue is expected to be generated, which will support increased

investment in capital improvement in the City Systems. The chart below shows the pre- and post-settlement funding levels of capital improvements in the 2021-2025 time horizon.

City Division Capital Plan Pre-Settlement & Post-Settlement:

	2021	2022	2023	2024	2025	TOTAL
City Pre-Settlement	\$3,335,000	\$3,115,000	\$3,990,000	\$5,575,000	\$4,800,000	\$20,815,000
City Post-Settlement	7,539,000	10,312,760	12,042,295	15,924,242	16,878,507	62,696,804
Additional Capex	4,204,000	7,197,760	8,052,295	10,349,242	12,078,507	41,881,804

Event Driven Capital Improvements. Beginning January 1, 2021, the Authority is required to annually deposit at least \$250,000 but no more than \$500,000 to the Event Driven Capex Reserve Fund held under the Indenture to pay certain preliminary costs of capital improvement not currently required by law, but which is determined by the Authority and the City to be necessary to address a future regulatory mandate or mandates, and for which capital expenditures estimated to be equal to or greater than \$10,000,000, adjusted for inflation, are required (an “Event Driven Capital Improvement”). The Authority is required to continue to make annual contributions to the Event Driven Capex Reserve Fund until the balance therein reaches \$2,000,000.

The Authority is required to deliver to the City an estimate of the project scope for any capital improvement for which “Event Driven Capital Improvement” status is sought. Preliminary costs eligible for payment from the Event Driven Capex Reserve Fund include, but are not limited to, feasibility analyses, engineering evaluations, financial assessments, environmental reviews, and legal reviews prior to designing and implementing the Event Driven Capital Improvement.

The maximum amount of preliminary costs that may be paid from the Event Driven Capex Reserve Fund for a particular Event Driven Capital Improvement is \$750,000.

Sewer Collection System Capital Improvements. Beginning on the later of (i) January 1, 2024, or (ii) January 1 of the Reporting Year following completion of the Flow Characterization Study and all Administrative Order Projects by the City, the Authority is required to annually deposit \$650,000 to the Sewer Collection System Improvement Fund established under the Indenture to pay for costs of Sewer Collection System Capital Improvements as further described below.

The Authority and the City have agreed to complete by December 31, 2024 a Flow Characterization Study using flow metering and hydraulic modeling tools to better define the sewer rehabilitation and capacity expansion needs of the Sewer Utility System, including the City and all municipalities whose sewage flows thereto (the “Flow Characterization Study”). As described above in “– City Retained Responsibility for Certain Projects – Administrative Order Project,” the Flow Characterization Study forms a portion of the Administrative Order Project to be completed at the sole cost and expense of the City. See “– Rates – Administrative Order Debt Service Costs” below. The City and the Authority will jointly review the results of the Flow Characterization Study to determine the projects and prioritization of work to be completed (such projects, the “Sewer Collection System Capital Improvements”). The City will make a final determination of the project scope and prioritization in the event of disagreement.

Rates

General. Rates, fees and charges for the provision of water and the provision of water services by a municipal authority like the Authority are not subject to approval by the Pennsylvania Public Utility

Commission (“PUC”), and the City and the Authority have agreed in the Concession Agreement not to seek PUC jurisdiction over the matters covered in the Concession Agreement.

However, the Concession Agreement contains provisions governing the ability of the Authority to impose and increase Service Charges.

The initial schedule of Service Charges is set forth in the Concession Agreement itself and those initial rates set forth in the schedule of Service Charges are equal to the rates charged by the City for such services prior to the Acquisition Date. Generally, the Authority is entitled to receive and retain the Service Charges collected from users of the Concessioned System (with an exception described below under “– Administrative Order Debt Service Charges”), as well as all Municipal Service Charge payments made pursuant to the Municipal Service Agreements. The Service Charges must be reasonable and comply with the requirements of the Act.

WATER PLANT AND DISTRIBUTION SYSTEM HISTORICAL USER RATES										
Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cost per 1,000 Gal.	2.95	3.10	3.10	3.10	3.10	3.18	3.28	3.42	3.59	3.74

Source: City of Allentown (2011-2012), Lehigh County Authority Comprehensive Annual Financial Reports (2013-2020)

SEWER UTILITY SYSTEM HISTORICAL USER RATES										
Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cost per 1,000 Gal.	2.13	2.24	2.24	2.24	2.24	2.29	2.37	2.46	2.59	2.70

Source: City of Allentown (2011-2012), Lehigh County Authority Comprehensive Annual Financial Reports (2013-2020)

Limits on Annual Rate Adjustments. The Authority may establish a revised schedule of Service Charges for each class or type of utility service (other than Service Charges determined pursuant to a Municipal Service Agreement). This annual rate adjustment of each type or class of Service Charge may not exceed the Permitted Annual Rate Adjustment for that calendar year. The “Permitted Annual Rate Adjustment” contains two components: an Index Change based on the Consumer Price Index for all Urban Customers (CPI-U) Northeast Region (the “Index”); and a Margin Change, which is equal to 2-1/2% for each calendar year through 2032 and 2% for each year after 2032. If the sum of the Index Change and the Margin Change (both as described above) in any calendar year is zero or a negative percentage, then there will be no annual percentage change for that calendar year. The Permitted Annual Rate Adjustment limitation is not applicable to the Charges described below under “– Other Adjustments to Service Charges” and “– Administrative Order Debt Service Charges.”

Other Adjustments to Service Charges. The Authority also may charge other Service Charges which are not subject to the Permitted Annual Rate Adjustment limitation described above; these special Service Charges are designed to enable the Authority to recover specified costs. These special Service Charges include: a charge to recover the costs of the Major Capital Improvements; a charge to recover any leasehold taxes imposed on the Authority; a charge to recover the annual costs of any Major Force Majeure Event Unfunded Loss; a charge to recover any fee or charge imposed on the Authority with respect to the Concessioned System by the Delaware River Basin Commission (the “DRBC”); a charge to recover any leasehold taxes imposed on the Authority by any state, county or local governmental unit; and an annual charge resulting from a Water Sales Shortfall, when applicable. See “– The Water Plant and Distribution System – Water Sales Shortfall.”

In addition, the Schedule of Service Charges is subject to annual adjustment, upward or downward, on account of any Change of Law in order to reflect any changed cost or expense related to the Concessioned System and incurred by the Authority as a result thereof, as may be reasonably agreed to by the City and the Authority. “Change of Law” is fully defined in Appendix F and includes the enactment, adoption, modification or repeal, after March 29, 2013, of any federal, state or local law, judgment, statute, rule or regulation of any government agency including the EPA or the PADEP, or the imposition after, March 29, 2013, of any material condition and the issuance, modification, renewal of any authorization or approval necessary for the operation and maintenance of the Concessioned System.

An additional Service Charge also may be imposed to fund amounts due to the Authority:

- In any reporting year in which the aggregate effect of the withdrawal or addition of Municipal Customers and of changes to the terms of the Municipal Service Agreements results in a reduction of Revenues by more than five percent from what would have been collected otherwise in that reporting year. See “– General” above.
- As a reimbursement to the Authority if it is required to secure a replacement source for Raw Water as a result of a Water Shortage or as a result of maintenance activities related to the Retained Water Supply System or to the extent that Raw Water provided by the Retained Water Supply System does not meet the Raw Water Specifications. See “– The Water Plant and Distribution System – Water Shortage” above.
- In connection with the occurrence of an Adverse Action by the City, the Commonwealth (or any agency thereof) or the County that is reasonably expected to be principally borne by the Authority and will have a material impact on the interests of the Authority in the Concessioned System greater than \$250,000, adjusted for inflation. In this instance, an “Adverse Action” occurs if the City, the Commonwealth (or any agency thereof) or the County takes any action or actions at any time (including enacting, amending or repealing any Law) and the effect of doing so, individually or in the aggregate, is reasonably expected to be principally borne by the Authority and to have a material adverse effect on the fair market value of the Authority’s interest in the Concessioned System of more than \$250,000, adjusted for inflation. See “CONCESSION AGREEMENT – Adverse Actions.”
- To mitigate the occurrence of a Compensation Event by using an increase in the Service Charges as a source for funding Concession Compensation payable to the Authority. See “CONCESSION AGREEMENT – Compensation Event; Concession Compensation.”

In order to impose an additional Service Charge in any of the four instances described immediately above, the City approval must take place pursuant to action taken by the City Council. However, in each of the four instances described immediately above, the City may elect to fund the amounts due to the Authority directly from City Funds (or in the case of a Compensation Event or an Adverse Action) or to mitigate the events itself. In any event, the repayment to the Authority, together with interest, must be made within one year of the date notice of a claim for repayment is submitted to the City. Since the Acquisition Date, the Authority has not sought to enact any of the above-listed additional Service Charges.

Capital Cost Recovery Charge. As described above, the Authority also may impose a special Service Charge to recover the capital costs of Major Capital Improvements, which is a defined term of the Concession Agreement relating to projects with a cost of \$1 million or greater, as adjusted for inflation, which, in the written opinion of an Engineering Firm, constitutes an expansion to or renewal, replacement or betterment of the Concessioned System and has a useful life of at least five years. To enact a Capital

Cost Recovery Charge for a particular project, the Authority must submit a written report to the City detailing the capital cost of the Major Capital Improvement, and follow other submission and approval requirements of the Concession Agreement including Substantially Complete Design phase and final project cost reporting. The submissions must be considered by the City within 30 days of its submission and the City's approval of the report may not be unreasonably conditioned, delayed or withheld.

Any Capital Cost Recovery Charge approved by the City may be imposed over the useful life of the Major Capital Improvement in question, or, if earlier, 30 years following the effective date of the Capital Cost Recovery Charge.

Capital Recovery Fee. The Authority is allowed to charge a Capital Recovery Fee in lieu of imposing a Capital Cost Recovery Charge. A "Capital Recovery Fee" is a one-time fee charged at the time of connection to the Concessioned System, an increase in commercial or industrial usage or in connection with a capital improvement to the Concessioned System. A Capital Recovery Fee may be in the form of a connection fee, tapping fee or assessment or a combination thereof. The amount of Capital Recovery Fees charged with respect to the capital cost of a Major Capital Improvement, net of a reasonable reserve for delinquent assessments, will be applied to reduce the Capital Cost Recovery Charge for that Major Capital Improvement.

Administrative Order Debt Service Costs. In addition, as described above in "– City Retained Responsibility for Certain Projects – Administrative Order Project," the City has agreed to pay the Project Costs of the Administrative Order Project. The City has agreed to deposit amounts in a special Administrative Order Fund to pay the Project Costs of the Administrative Order Project. The failure of the City to maintain amounts sufficient to punctually pay the Project Costs is a Compensation Event for which the Authority is entitled to Concession Compensation.

The Concession Agreement calls for an additional Service Charge to be imposed on all System Users (other than Municipal Customers obligated under Municipal Service Agreements to pay a portion of the Project Costs of the Administrative Order Project) to fund the Debt Service Requirements coming due in each year on any bonds or other indebtedness issued for the purpose of financing or re-financing the Project Costs of the Administrative Order Project. The amounts collected in respect of this additional Service Charge, are not part of the Revenues of the Concessioned System, and do not secure the 2020 Bonds. See "– Rates" above and below for a more detailed description of the provisions in the Concession Agreement governing the imposition of rates and Service Charges.

Municipal Service Agreements. The Service Charge adjustment provisions described above are not applicable to Municipal Customers under a Municipal Service Agreement; the terms of each Municipal Service Agreement will control adjustments to the rates charged to Municipal Customers thereunder. As described above in "THE CONCESSIONED SYSTEM – Municipal Service Agreements," the City has not assigned its right, title and interest in the Municipal Service Agreements to the Authority and has entered into the Services Agreement with the Authority pursuant to which the Authority bills and collects Revenues from Municipal Customers pursuant to the Municipal Service Agreements, remits that customer's Municipal Customer Share of Annual Debt Service (i.e., its share of debt service on any Administrative Order Bonds) portion to the City and remits the balance to the Trustee for deposit in accordance with the Indenture.

The City and the Authority are parties to the Existing LCA Sewer Service Agreement under which the City provides sewer services for the Existing LCA System. Any amounts collected by the City from the Existing LCA System (other than certain amounts related to debt service requirements on the Administrative Order Bonds, which are retained by the City) are Revenues that are required to be paid to

the Trustee for deposit into the Project Fund established under the Indenture and may not be commingled with any other moneys of the Authority related to the Existing LCA System.

Likewise, the City and the Authority are parties to the Existing LCA Water Service Agreement under which the City provides water supply services to the Existing LCA System and any amounts collected by the City from the Existing LCA System pursuant to the Existing LCA Water Service Agreement are Revenues that are required to be paid to the Trustee for deposit to the Project Fund established under the Indenture. Payments received by the Trustee under the Existing LCA Sewer Service Agreement and the Existing LCA Water Service Agreement may not be commingled with any moneys of the Authority related to the Existing LCA System. See “OTHER SYSTEM DOCUMENTS – Municipal Service Agreements” for a description of certain Municipal Service Agreements including the Existing LCA Water Service Agreement and the Existing LCA Sewer Service Agreement.

Special Discounts. The City has established or plans to establish a program of Service Charge rebates for all City residents who are 65 years of age or older or who are permanently disabled and who meet established low-income thresholds. The thresholds for qualification for the rebate program and the percentage of rebate to be provided are included in the Concession Agreement. The Authority has agreed to fund that program during the term of the Concession Agreement by paying annual amounts to the City equal to the amount of the rebates and the City’s administration costs related thereto. Since the Acquisition Date, the City has not implemented the planned rebate program.

In addition, no Service Charges may be imposed on the City for the provision of water for purposes of the City’s Fire Department, street cleaning, city hall and other buildings used primarily for public purposes, for comfort stations, for the municipal golf course and for swimming pools owned or operated by the City. However, except for water supply used for purposes of the City’s Fire Department, the aggregate amount of free water to be supplied as described in the preceding sentence in any calendar year may not exceed 91.5 million gallons, which the Authority estimates would be equivalent currently to approximately \$342,000 in lost Revenues if fully utilized by the City. Since the Acquisition Date, the City’s water usage has averaged 51.3 million gallons per year, as shown below:

	Water Provided at No Charge to City of Allentown (gallons per year)
2014	44,126,054
2015	62,276,858
2016	54,519,190
2017	42,033,678
2018	55,605,310
2019	49,475,369

Limits. Except as described above, the Authority may not revise the Service Charges from the initial Schedule of Service Charges in effect on the Acquisition Date without the prior approval of the City in the City’s sole discretion.

City Ordinance. On April 25, 2013, the City Council enacted an ordinance providing that the rates, service charges and fees for the supply of water and for the collection of sewage are to be those provided in the Concession Agreement for so long as the Concession Agreement is in effect. The Ordinance also repealed inconsistent provisions of the Codified Ordinances of the City of Allentown.

Phased Adjustment to Rates. In connection with the amendment and restatement of the Existing Concession Agreement, the City and the Authority have agreed to implement, over a four year period beginning October 1, 2020, a series of increases in the Service Charges imposed under the Concession Agreement. The net impact of these increases will be as follows: (i) an 11.7% increase in revenue collected from Service Charges in calendar year 2021, (ii) an 8.2% increase in revenue collected from Service Charges in calendar year 2022, (iii) a 3.0% increase in revenue collected from Service Charges in calendar year 2023, and (iv) a 7.9% increase in revenue collected from Service Charges in calendar year 2024, See Appendix D - “SUMMARY OF SETTLEMENT TERMS AFFECTING THE CONCESSION AGREEMENT” and Appendix F – “SUBSTANTIAL FORM OF CONCESSION AGREEMENT – Section 7.1(n)”.

The estimated rate impact of the phased adjustment to rates on City of Allentown water and sewer customers is shown below:

<u>Effective Date</u>	<u>Estimated Rate Increase</u>
October 1, 2020	15%
January 1, 2021	4%
January 1, 2022	10%
January 1, 2023	3%
January 1, 2024	10%
January 1 - 2025-2032	2.5% plus CPI
January 1 - 2033-2063	2.0% plus CPI

Rate Relief. In connection with the amendment and restatement of the Existing Concession Agreement, the City and the Authority have agreed to provide for the possibility of reductions in the Service Charges imposed under the Concession Agreement if certain financial benchmarks are met by the Authority. The Authority shall provide for rate relief if (i) the Authority’s Cumulative Cash Balance as calculated under the Indenture is at least two (2) times the average annual capital improvements cost as shown in the then-current Five-Year Capex Plan under the Concession Agreement (the “Cash Balance Metric”), and (ii) certain requirements with respect to the Authority’s outstanding indebtedness (the “Financial Metrics”) also have been satisfied, including, but not limited to, the Authority’s debt service coverage ratio being at least 1.70. The Authority has the right to recoup the Rate Relief provided in a given year through an adjustment of rates, if the Financial Metrics are not met in the immediate subsequent year. See Appendix D - “SUMMARY OF SETTLEMENT TERMS AFFECTING THE CONCESSION AGREEMENT” and Appendix F – “SUBSTANTIAL FORM OF CONCESSION AGREEMENT – Section 7.5”.

Historical Financial Performance

Water Plant and Distribution System Financial Performance

	2015	2016	2017	2018	2019
Operating Revenues					
Charges for Services:					
Metered Charges	16,501,863	16,912,922	14,068,914	16,989,775	15,311,333
Other Charges			3,587,685	4,248,157	3,975,174
Miscellaneous	11,444	52,197	41,093	36,390	382,946
Total Operating Revenues	16,513,307	16,965,119	17,697,692	21,274,322	19,669,453
Operating Expenses					
Personal Services	4,191,091	4,199,138	1,504,005	1,697,495	4,549,562
Utility Services	867,688	854,074	3,251,181	934,390	889,713
Contracted Services	953,583	854,364	898,862	1,104,450	731,539
Materials and Supplies	662,629	548,444	579,644	513,084	538,379
Miscellaneous			970,536	3,177,587	1,225,923
Total Operating Expenses	6,674,990	6,456,019	7,204,228	7,427,006	7,935,116
Operating Income	9,838,317	10,509,100	10,493,464	13,847,316	11,734,337
Depreciation/Amortization	2,765,039	2,917,143	2,943,654	2,932,216	2,917,753

Sewer Utility System Financial Performance

	2015	2016	2017	2018	2019
Operating Revenues					
Charges for Services:					
Metered Charges	10,376,636	14,686,290	14,888,098	15,189,069	15,829,937
Other Charges			161,086	260,609	1,541,119
Miscellaneous	74,086	22,048	149,049	83,610	35,353
Total Operating Revenues	10,450,722	14,708,338	15,198,233	15,533,288	17,406,409
Operating Expenses					
Personal Services	5,299,650	5,827,398	2,252,503	2,377,937	5,419,636
Utility Services	1,071,873	1,009,765	4,017,728	1,105,714	1,070,893
Contracted Services	1,404,954	1,742,502	1,004,804	1,677,676	1,052,496
Materials and Supplies	737,577	784,781	732,907	754,751	776,790
Miscellaneous	11,043	11,011	1,660,104	3,846,180	1,901,251
Total Operating Expenses	8,525,097	9,375,457	9,668,046	9,762,258	10,221,066
Operating Income	1,925,625	5,332,881	5,530,187	5,771,030	7,185,343
Depreciation/Amortization	2,765,039	2,917,143	2,943,653	2,932,216	2,917,754

Source: Lehigh County Authority Audit

INFECTIOUS DISEASE OUTBREAK – COVID-19

The outbreak of COVID-19, a respiratory disease caused by a new strain of coronavirus, has been characterized as a pandemic (the “Pandemic”) by the World Health Organization and is currently affecting many parts of the world, including the United States and the Commonwealth of Pennsylvania. On January 31, 2020, the Secretary of the United States Health and Human Services Department declared a public health emergency for the United States and on March 13, 2020, the President of the United States declared the outbreak of COVID-19 in the United States a national emergency. Subsequently, the President’s Coronavirus Guidelines for America and the United States Centers for Disease Control and Prevention called upon Americans to take actions to slow the spread of COVID-19 in the United States.

On March 19, 2020, Pennsylvania Governor Tom Wolf (the “Governor”) ordered all non-life-sustaining businesses in Pennsylvania to close their physical locations as of 8:00 p.m. March 19, 2020 to slow the spread of COVID-19. On April 1, 2020, the Governor issued a “Stay at Home” order effective for all Pennsylvania counties, including Lehigh County. Effective June 26, 2020, Lehigh County was moved to the “green” phase of the Governor’s reopening plan, meaning that the Stay at Home order was lifted and many types of businesses may reopen with restrictions.

Because of the evolving nature of the outbreak and federal, state and local responses thereto, the Authority cannot predict how the outbreak will impact the financial condition or operations of the Authority, or if there will be any impact on the ability of rate payers in the Concessed System to make required rental payments to the Authority.

The financial and operating data contained herein are the latest available, but are as of the dates and for periods prior to the economic impact of the Pandemic and measures instituted to slow it. Accordingly, they may not be indicative of the current financial condition or future prospects of the Authority. While the potential impact of the Pandemic on the Authority cannot be quantified at this time, the continued outbreak of COVID-19 could have an adverse effect on the Authority’s operations and financial condition, and the effect could be material.

Since March 16, 2020, the Authority has suspended all collections activity including the application of late fees and service termination for non-payment. During the period of April to June 2020, 79% of the Authority’s water and sewer customers paid their utility bill to the Authority on time, which compares favorably to the average of 79% also paying on time throughout FY2019. However, during this same time period, unpaid receivables have increased by approximately \$400,000 or 38% from 2019 averages. This suggests that while most customers continue to pay their water and sewer bill on time and in full, those customers who had difficulty paying their bill prior to the Pandemic continue to have increasing difficulty paying, or are diverting funds typically used to pay utility bills to pay other essential bills. In addition to these changes in collections performance, the Authority has experienced an approximately 26% reduction in water sales from commercial establishments in the City of Allentown, which is partially offset by a slight increase (approximately 2%) in residential sales. This shifting water usage pattern is likely a result of many businesses being closed, and residents staying home, during the Pandemic. These revenue challenges are largely offset by short-term reductions in operating expenses through the implementation of a hiring freeze, elimination of travel and training budgets, and deferment of certain maintenance contracts and equipment purchases that have deemed to be non-critical from a schedule standpoint.

Additional information with respect to events surrounding the outbreak of COVID-19 and responses thereto can be found on Commonwealth websites, including but not limited to the Commonwealth’s website (<http://www.pa.gov>), the Governor’s offices website (<https://www.governor.pa.gov>), the Pennsylvania Department of Health’s website

(<http://www.health.pa.gov>). The Authority has not incorporated by reference the information on such websites and the Authority does not assume any responsibility for the accuracy of the information on such websites.

GOVERNMENTAL REGULATION OF THE CONCESSIONED SYSTEM

Environmental Regulations

General Responsibility. Under the Concession Agreement, the Authority must observe and comply, in all material respects, with all applicable Environmental Laws now existing or later in effect that are applicable to it. The Authority must immediately notify the City of any violation of Environmental Law, malfunction of the Concessioned System or failure to operate the Concessioned System which has the potential to present a danger to public health and safety. The Authority is required to deliver to the City within 45 days after the end of each year, a certification that the Concessioned System is in compliance with Environmental Laws.

Administrative Order Project. The collection systems that discharge flow to the Wastewater Treatment Facility allow rain derived inflow and infiltration (“I&I”) into the sewers. During certain wet weather events, the amount of I&I that enters sewers can exceed the hydraulic capacity of the Sewer Utility System and result in sewage overflows into the environment. This condition resulted in the EPA issuing to the City two separate administrative orders (the “EPA Administrative Orders”) dated September 28, 2007, and September 28, 2009. Both EPA Administrative Orders related to by-passed flow at the Wastewater Treatment Facility, and sanitary sewer overflows in the collection systems owned by the City and by the Municipal Customers whose sewage flows to the Wastewater Treatment Facility pursuant to their Municipal Sewer Service Agreements with the City, including the Existing LCA System. The PADEP has also required that all planning modules, for new connections draining to the Wastewater Treatment Facility, be reviewed and approved prior to the authorization of new connections. The Municipal Customers were named as respondents to the Administrative Order issued in 2009 because they were in the Wastewater Treatment Facility’s drainage area.

The Authority organized and manages a coalition of several municipalities and municipal authorities, known as the Western Lehigh Sewer Partnership (the “WLSP”), established for the purpose of jointly addressing the second Administrative Order for excessive wet weather flows in the Existing LCA System’s service area only. The Authority, on behalf of the Existing LCA System, is a member of the WLSP.

From 2013 to 2018, the Authority and the City worked collaboratively with the EPA to develop a strategy to satisfy the EPA Administrative Orders. As a result of this work, a Regional Flow Management Strategy (“RFMS”) was developed and submitted to EPA in August 2018. Included in the RFMS was a commitment from the City to complete certain sewer system rehabilitation projects and complete certain studies to further identify sources of leakage into the sewer system that was the subject of the EPA Administrative Orders. Collectively, the works outlined in the RFMS make up the City’s Administrative Order Project. Key components of the RFMS include:

- *Sewage Billing Meter Upgrades* – This program includes the evaluation and upgrade of all flow meters used for purposes of calculating each municipality’s flow contributions to the System. The primary purpose of this program is to ensure metering and billing accuracy in accordance with the Municipal Service Agreements, and to establish wet-weather and peak flow contributions from each municipality as a basis for characterizing how much inflow and infiltration (“I&I”) is derived from each municipal sewer collection system. This work is expected to be completed in 2020.

- *Flow Characterization* – Using a combination of the Sewage Billing Meters and other temporary meters, a flow characterization study will be completed in 2021 and 2022 to create a full system hydraulic model and more accurately depict each municipality’s contribution of I&I to the system flows.
- *I&I Source Removal Programs* – Each of the 15 municipalities that use the System are obligated to develop a program to remove excess I&I from the system, which causes the sanitary sewer overflows and plant bypasses that are the subject of the EPA Administrative Orders. For the City system, the RFMS outlined approximately \$2.5 million in system rehabilitation that will be completed between 2020 and 2025.
- *Act 537 Plan* – As a result of completing the Flow Characterization study and other engineering analyses regarding the future projects needed to address wet-weather challenges and provide long-term sewer capacity for the region, a regional Act 537 Sewage Facilities Plan will be developed and submitted to DEP by 2025.

Based on the submission, in March 2019 EPA accepted that the requirements of the EPA Administrative Orders had been met, subject to all municipalities ongoing completion of the work noted above. In August 2019, the PADEP began formal oversight of the region’s work in compliance with the obligations set forth in the RFMS.

All capital improvements related to the remediation of violations set forth in the EPA Administrative Orders (the “Administrative Order Project”) are to be undertaken by the Authority, as concessionaire for the Concessed System, at the sole cost and expense of the City and are Excluded Liabilities under the Concession Agreement. “EPA Administrative Orders” are defined to include: (i) the two EPA Administrative Orders described above, (ii) a specified set of findings and orders that were filed prior to March 29, 2013, the date on which the Authority and other bidders filed bids to become the concessionaire for the Concessed System, and (iii) and any other administrative or judicial order entered subsequent to the Bid Date relating to the subject matter of the listed EPA Administrative Orders. While the City retains responsibility for fines, penalties and remediation of the issues addressed in the EPA Administrative Orders, including any deficiency in any Administrative Order Project, as specified by the City, to remediate the adverse condition, the Authority is responsible for any environmental issues, including a remediation failure, associated with faulty design or implementation of an Administrative Order Project. See “Rates – Administrative Order Debt Service Costs” for a discussion of the Authority’s right to raise rates to reimburse the City for the City’s costs of the Project Costs of the Administrative Order Project.

City Assumption of Responsibility for Certain Environmental Issues. Under the Concession Agreement, the City has retained responsibility for (A) Hazardous Substances that existed at the Acquisition Date and have a Material Adverse Effect on the Concession during the Term; (B) Environmental Law violations with respect to the City’s pre-Acquisition Date ownership or operation of the Concessed System and (C) pre-Acquisition Date releases of Hazardous Substances. The City also has retained responsibility for environmental issues relating to the EPA Administrative Orders. See “THE CONCESSIONED SYSTEM – City Retained Responsibility for Certain Projects – Administrative Order Project.”

Permits and Approvals

The Concession Agreement set forth a list of all Permits and approvals required for System Operations. The City has the requisite Permits for operating the Concessed System and remains the

sole permittee of the Concessioned System for all but one of the applicable operating Permits. As part of the Permit re-issuance process, a possibility exists that Permit requirements may change.

The Authority, as the operator of the Concessioned System, is fully responsible for complying with the terms and conditions of the Permits throughout the Term and will act as the City's agent to obtain and/or renew applicable Permits and Authorizations as periodically required.

The "Permits" required to operate the Concessioned System include: (i) the State-Only Air Permit required by the PADEP for the emission of air pollutants from sources associated with the Wastewater Treatment Facility, (ii) the Water Supply Operation Permit required by the PADEP for the operation of a public water system, (iii) the Water Allocation Permit required by the PADEP to withdraw water from sources in the Commonwealth, (iv) the Biosolids Land Application Permit required by the PADEP for the land application of biosolids (the Authority is listed as co-permittee), (v) the NPDES Permit required to discharge pollutants into the waters of the Commonwealth, (vi) the WQM Permit required for the construction and operation of wastewater treatment facilities that will discharge into waters of the Commonwealth, (vii) the Water Obstruction and Encroachment Permits required for the maintenance and construction of the diversion berm and (viii) approval from the DRBC of the City's application to withdraw surface water from the Lehigh River.

The Authority has received confirmation from PADEP and the DRBC, the agencies that have jurisdiction over the Permits, that it is either appropriate to keep the City as the sole permittee on all of the Permits or to complete a process to add the Authority as co-permittee on some of the Permits. The Authority has been operating under the City's permits and meeting all permit requirements since the Acquisition Date.

PADEP has indicated that in addition to the Biosolids Land Application Permit, the Authority should be added as a co permittee to the NPDES Permit but that the existing permit will remain in effect until the Authority is added as co permittee. It is expected that an updated NPDES permit will be issued following PADEP review and approval of all actions related to the EPA Administrative Orders and associated Act 537 Sewage Facilities Plan.

CONCESSION AGREEMENT

General

Effective May 1, 2013, the Authority and the City entered into the Existing Concession Agreement to (i) lease the Concessioned System to the Authority, (ii) grant the Authority the right to operate the Concessioned System and provide Utility Services relating to the Concessioned System and in that connection (A) to use, possess, operate, manage, maintain, rehabilitate, expand and improve the Concessioned System and (B) to charge Service Charges and collect Revenues in connection with the operation of the Concessioned System; and (iii) assign, transfer and otherwise convey to the Authority by bill of sale each of the System Assets, free and clear of any Encumbrances.

Numerous disputes regarding the interpretation of and performance by the parties under the Existing Concession Agreement arose following the execution of the Existing Concession Agreement. The parties, following settlement negotiations, have reached a global settlement to resolve all of their disputes (the "Settlement"), and in connection with the Settlement have agreed to, among other things, make certain changes to the terms of the Existing Concession Agreement. For a summary of the terms of the Settlement as they relate to the Existing Concession Agreement, see Appendix D - "SUMMARY OF SETTLEMENT TERMS AFFECTING THE CONCESSION AGREEMENT".

To implement the terms of the Settlement, and concurrently with the issuance of the 2020 Bonds, the Authority and the City will enter into an Amended and Restated Allentown Water and Sewer Utility System Concession and Lease Agreement dated as of September 1, 2020 (the “Concession Agreement”) pursuant to which the Existing Concession Agreement will be amended and restated in its entirety.

The initial purchasers of the 2020 Bonds, by their purchase and acceptance of the 2020 Bonds, shall be deemed to have approved and consented to the execution and delivery of the Concession Agreement and the amendment and restatement of the Existing Concession Agreement, which consent shall be binding upon all present and future holders of the 2020 Bonds. See Appendix F – “SUBSTANTIAL FORM OF THE CONCESSION AGREEMENT”. The Concession Agreement will go into effect immediately upon the issuance and delivery of the 2020 Bonds.

City Access. In the Concession Agreement, the City reserved the right to enter the Concessioned System generally for various purposes including: to inspect the Concessioned System and determine whether the Authority is in compliance with its obligations under the Concession Agreement and applicable Law; to maintain, repair or replace property owned or controlled by the City located within the boundaries of the Concessioned System; to install, maintain, repair and rehabilitate existing or future safety measures in, on, under, across or over, or through the Concessioned System; and to do any other act that the City may be obligated or have the right to do under the Concession Agreement.

Generally, the City’s right to enter the Concessioned System is at its sole cost and expense. However, the City does not have to pay its costs and expenses of entering the Concessioned System (i) if a Concessionaire Default under the Concession Agreement exists to make necessary repairs, (ii) in the event of an emergency or (iii) danger threatens to cause injury to individuals or damage to property or to impair the continuous operation of the Concessioned System and the Authority is not taking all reasonably necessary steps to deal with the matter in question. To the extent that the City undertakes work or repairs in the Concessioned System, such work or repairs must be commenced and diligently completed in a good and workmanlike manner, in accordance with any applicable Operating Standards and in such a manner as not to unreasonably interfere with the Authority’s conduct of business in or use of such space and the performance of its obligations under the Concession Agreement. See “THE CONCESSIONED SYSTEM – System Operations – Operating Standards.”

City Retained Revenues. The City retained the exclusive naming rights with respect to the Concessioned System as the “Allentown Water and Sewer System” as well as the right (with the prior consent of the Authority, not to be unreasonably withheld) to sell, or lease or grant any naming rights for the Concessioned System to a third party. The City has also retained the right to solicit for, and retain any amounts received from, advertisements at System properties, and generally to retain any amounts derived from physical properties making up the Concessioned System that are not derived from its Operation or the provision of Utility Services, including rental income and other revenues from the use of the Concessioned System for communications equipment and other similar attachments to Concessioned System properties.

Excluded Liabilities. The Authority agreed to assume and discharge or perform all liabilities and other obligations whatsoever relating to the Concessioned System or System Operations that occur during, arise out of or relate to facts or actions occurring during the Term, but only to the extent that those assumed liabilities do not arise from or relate to any breach by the City of any of its representations or covenants set forth in the Concession Agreement. However, the Authority has not assumed any of the “Excluded Liabilities,” which include, among other things: (i) the City’s obligations prior to the Acquisition Date, including obligations arising out of any Municipal Service Agreements and System Contracts, which the City has agreed to discharge; (ii) the City’s obligations relating to any bonds, or other debt or similar obligations related to the Concessioned System, which the City has agreed to

discharge; (iii) any Hazardous Substance existing on the Acquisition Date that have a Material Adverse Effect on System Operations or the System Concession Value; (iv) violations arising under any Environmental Law related to the ownership, operation or condition of the Concessioned System at any time prior to the Acquisition Date or any Hazardous Substance contaminant released at, on or under the Concessioned System at any time prior to the Acquisition Date; or (v) the Uncompleted Work, including the Administrative Order Project, which the City agreed to complete in a timely manner at its own cost. See “THE CONCESSIONED SYSTEM – City Retained Responsibility for Certain Projects – Administrative Order Project” for a description of the Administrative Order Project and “THE CONCESSIONED SYSTEM – Capital Improvements – Uncompleted Work” for a description of the Uncompleted Work.

Coordination. The Authority is responsible for coordinating with utilities that have service lines, pipelines, transmission lines and other equipment, cables, systems and other apparatus in, on, under, over or adjacent to the Concessioned System, including if necessary, the removal or temporary or permanent relocation and restoration of utilities and other services and any lines, equipment, cables, systems and other apparatus that intersect, interfere with, interface with or otherwise affect the operation of the Concessioned System. The Authority is also responsible for coordinating the operation of the Concessioned System with Affected Property. The Authority will arrange for temporary rights of entry and access to utilities and the property of all relevant Governmental Authorities as necessary in connection with the operation of the Concessioned System and the City will cooperate with the Authority’s obligations to coordinate.

Cooperation in Authority Financings. The City agreed to cooperate with the Authority, at the Authority’s expense, with respect to documentation reasonably necessary to obtain, maintain or place financing for the performance of the obligations of the Authority. These obligations include prompt execution of any Leasehold Mortgage and standard consents and estoppel certificates with respect to the Concession Agreement. However, the obligations described above to cooperate with the Authority do not require the City to incur any additional obligations or liabilities or to take any action, give any consent or enter into any document inconsistent with the provisions of the Concession Agreement.

Reserved Powers. The City reserved the right to exercise its police and regulatory powers with respect to the Concessioned System and the regulation of the Concessioned System (the “Reserved Powers”). During the Term, the City has retained the Reserved Powers to enforce the Concession Agreement and the Operating Standards such that the Concessioned System will be dedicated and used at all times for public purposes intended to promote the public health, safety and welfare.

Employees; Union Contract; Benefits. Under the Concession Agreement, the Authority adopted the existing collective bargaining agreement between the City and SEIU dated January 1, 2006, as extended to December 31, 2016, by the Memorandum of Agreement dated December 30, 2010 (the “CBA”) as it relates to union employees working in the Concessioned System and made offers of employment to each union employee, and each non-union employee that the City designated as a “key employee,” in good standing as of the Acquisition Date. The Authority made offers of employment to all such existing employees and a total of 84 City employees accepted offers of employment with the Authority. Prior to the Acquisition Date, the Authority employed 37 union and non-union employees. As part of the Concession Agreement transition period, an additional 25 positions were created to fill vacancies left through the transition process, bringing the Authority’s employee base to 146. Since that time, additional positions have been created so that the Authority currently employs 162.

For those employees that transferred to the Authority through the Concession Agreement transition, the Authority offered future service credit within Pennsylvania Municipal Retirement System, the Commonwealth’s municipal retirement system, and provided former City employees past service

credit for participation, vesting, retirement (including eligibility for early retirement subsidies) and benefit accrual for years of service with the City, subject to an offset for the City's past service liability which was assumed by the City's plan or, if the employee so elected, transferred (along with assets equivalent to the liability) to the Authority's plan.

The Authority is responsible for health and welfare benefits for transferred union and non-union employees (under the terms specified in the Authority's employee policies and current CBA) and has assumed liability for post-retirement health and welfare benefits for the transferred employees who did not previously retire from the City, currently estimated at between \$2.9 million according to the Authority's audited financial statements for the fiscal year ended December 31, 2019.

Capital Improvements

Requirements Related to Major Capital Improvements. Under the Concession Agreement, the Authority agreed to furnish the design for and construct the Major Capital Improvements. A "Major Capital Improvement" includes (a) any Required Capital Improvement, (b) any capital improvement required to increase the treatment capacity of the Sewer Utility System, (c) any amount required to fund a Casualty Cost in excess of net insurance proceeds and (d) any other capital improvement to the Concessioned System: (1) having an estimated cost in excess of \$1,000,000, adjusted for inflation from the Acquisition Date to the date the estimate is made; and (2) which, in the written opinion of an engineering firm appointed by the Authority and approved by the City, constitutes an expansion to or renewal, replacement or betterment of the Concessioned System and has a useful life of at least five years; these capital improvements may be aggregated and treated as a single capital improvement when they are undertaken to replace water mains or sewer lines and construction of such capital improvements commence in the same calendar year ("Other Capital Improvements"). However, the cost of capital projects that fall below the threshold of Major Capital Improvements cannot be recovered through the rate base, but may be subject to Capital Recovery Fees. As part of the amendment and restatement of the Concession Agreement, additional language was added to clarify the scope of projects that will fall under the definition of a Major Capital Improvement and therefore are not considered an "aggregation" of multiple projects. Additionally, borrowing, including for capital projects, is limited by the Indenture and the Concession Agreement as described in "SECURITY AND SOURCES OF PAYMENT FOR THE 2020 BONDS – Additional Bonds and Other Indebtedness."

The Authority is required to prepare, for review and approval by the City, a basic description of each Major Capital Improvement, which, after approval by the City, will be followed up with detailed, substantially complete engineering drawings, plans, schedules, specifications and other documents (the "Major Capital Improvement Conceptual Design"). Following the approval of the Major Capital Improvement Conceptual Design, the City and the Authority will negotiate and complete the requirements for the imposition of a Capital Cost Recovery Charge. A "Capital Cost Recovery Charge" means the annual amount that the Authority may charge with respect to the cost of a Major Capital Improvement consisting of (i) the amounts required to pay the principal of and interest on any debt issued or incurred to finance the Major Capital Improvement, plus (ii) a "return on equity" in the amount of 5.445107% on funds contributed by the Authority to pay the capital costs of such Major Capital Improvement.

Commencing January 1, 2033, the Authority is required to make semi-annual contributions to the Capex Fund in amounts sufficient to fund the projects whose useful lives straddle the End Date and therefore cannot be fully funded through Capital Recovery Charges. At the End Date, the balance in the Capex Fund will revert to the City.

Concessioned System Expansion. The Authority may undertake, at its sole cost and subject to the approval of the City, the expansion of the sewerage treatment capacity of the Sewer Utility System.

During the Term, if the City and the Authority project that the expected utilization of the Sewer Utility System in any future year within a 20-year projection period is expected to exceed the then current sewerage treatment capacity of the Sewer Utility System, then the City and the Authority, acting jointly, must prepare a capital improvement expansion plan and will seek permit approvals for the expansion of the treatment capacity of the Sewer Utility System. Subject to the approval of the City, the Authority is required to design and construct the capital improvements to the Concessioned System that are needed to increase the treatment capacity of the Sewer Utility System to meet the expected utilization of the Sewer Utility System. If the capital improvements are designed and constructed to meet an increased utilization for an initial year commencing during or prior to 2043, then the cost and expense of the design and construction of such capital improvements will be at the sole cost and expense of the Authority. If the capital improvements are designed and constructed to meet an increased utilization for any initial year commencing after 2043, then the cost and expense will be allocated between the City and the Authority so that the share of such costs allocated to the Authority will be the total of such costs multiplied by a fraction, the numerator of which is the number of months from the month the capital improvement is expected to be placed in service to the month of the End Date, minus one, and the denominator of which is 240.

Alternatively, the City may at any time issue a Directive (described below) directing the Authority to (i) add or perform work in respect of the Concessioned System in addition to that provided for in the Concession Agreement, or (ii) change the dimensions, character, quantity, quality, description, location or position of any part of the Concessioned System or the System Operations or make other changes to the Concessioned System or the System Operations. A Directive is a Compensation Event, which entitles the Authority to Concession Compensation. See “– City Directive.” The Authority will be required to arrange for the implementation of the Directive and performance of the required work, subject to the City making available to the Authority sufficient funds to perform the work required to implement the Directive at or before the time payment for such work is required to be made.

Design Standards. The Major Capital Improvements will be designed to comply with certain design standards including a minimum design life of 15 years for pumps and mechanical equipment, 30 years for above-ground buildings and structures, and 50 years for underground pipes and lines, and design and performance standards listed by the EPA, the PADEP, the Water Environment Federation and the American Society of Civil Engineers. The Authority is required to submit to the City for the City’s review and approval the plans and specifications for the Major Capital Improvements. If the City disapproves the plans and specifications, the Authority will revise such plans and specifications and resubmit the plans and specifications to the City for its review and approval. During the course of design or construction, the Authority may make such changes in the plans and specifications, without the City’s review and approval, as the Authority may determine to be necessary or desirable to reflect and adjust to actual site conditions, to comply with City codes and ordinances and applicable Laws, or to carry out the Authority’s obligations under the Concession Agreement.

Construction Requirements. The Authority is solely responsible for the storage, treatment and disposal of all construction wastes generated by the Authority during the construction of a Major Capital Improvement. The Authority is required to maintain and make available for review by the City, a set of “as-built” plans and specifications for each Major Capital Improvement, all manuals required for operation and maintenance of the Major Capital Improvement, and copies of warranties issued by the manufacturer of the equipment and materials installed as part of the Major Capital Improvements.

Governmental Authorizations. The Authority is required to prepare all applications and supporting information necessary to prosecute and obtain all authorizations required under applicable Laws for the design, construction, testing, operation and maintenance of the Major Capital Improvements. Except for those authorizations which must be held by the Authority pursuant to applicable Law, the City

is required to execute and submit all such authorizations applications prepared by the Authority, and will prosecute and obtain, with the assistance and support of the Authority, all such authorizations to be held in the name of the City.

Capex Fund. Prior to January 1, 2033, the Authority is required to establish a fund (the “Capex Fund”) to pay the cost of Major Capital Improvements that cannot be recovered during the Term as a Capital Cost Recovery Charge because the last day of the Cost Recovery Period of the Major Capital Improvement to be funded by such Capital Cost Recovery Charge is later than the End Date. Moneys and investments in the Capex Fund will not be held by the Trustee under the Indenture and do not secure the Authority’s obligations with respect to the 2020 Bonds.

Commencing January 1, 2033, the Authority is required to make a deposit in the Capex Fund equal to the Capex Fund Deposit Requirement in two equal installments. The “Capex Fund Deposit Requirement” is equal to (i) \$1,000,000 for the Reporting Years 2033 through 2042; (ii) \$2,000,000 for the Reporting Years 2043 through 2052; and (iii) \$3,000,000 for the Reporting Years 2053 through 2062, in each case adjusted for inflation from the August 7, 2013 to December 31 of the calendar year immediately prior to the Reporting Year. On the Reversion Date, any moneys or securities held in the Capex Fund will be applied first to pay any unpaid Termination Compensation, AA-Compensation and Concession Compensation and any amount remaining will be paid over to the City.

Event Driven Capital Improvements. Beginning January 1, 2021, the Authority is required to annually deposit at least \$250,000 but no more than \$500,000 to the Event Driven Capex Reserve Fund held under the Indenture to pay certain preliminary costs of capital improvement not currently required by law, but which is determined by the Authority and the City to be necessary to address a future regulatory mandate or mandates, and for which capital expenditures estimated to be equal to or greater than \$10,000,000, adjusted for inflation, are required (an “Event Driven Capital Improvement”). The Authority is required to continue to make annual contributions to the Event Driven Capex Reserve Fund until the balance therein reaches \$2,000,000.

The Authority is required to deliver to the City an estimate of the project scope for any capital improvement for which “Event Driven Capital Improvement” status is sought. Preliminary costs eligible for payment from the Event Driven Capex Reserve Fund include, but are not limited to, feasibility analyses, engineering evaluations, financial assessments, environmental reviews, and legal reviews prior to designing and implementing the Event Driven Capital Improvement.

The maximum amount of preliminary costs that may be paid from the Event Driven Capex Reserve Fund for a particular Event Driven Capital Improvement is \$750,000.

Sewer Collection System Capital Improvements. Beginning on the later of (i) January 1, 2024, or (ii) January 1 of the Reporting Year following completion of the Flow Characterization Study and all Administrative Order Projects by the City, the Authority is required to annually deposit \$650,000 to the Sewer Collection System Improvement Fund established under the Indenture to pay for costs of Sewer Collection System Capital Improvements as further described below.

The Authority and the City have agreed to complete by December 31, 2024 a Flow Characterization Study using flow metering and hydraulic modeling tools to better define the sewer rehabilitation and capacity expansion needs of the Sewer Utility System, including the City and all municipalities whose sewage flows thereto (the “Flow Characterization Study”). As described above in “– City Retained Responsibility for Certain Projects – Administrative Order Project,” the Flow Characterization Study forms a portion of the Administrative Order Project to be completed at the sole cost and expense of the City. See “– Rates – Administrative Order Debt Service Costs” below. The City

and the Authority will jointly review the results of the Flow Characterization Study to determine the projects and prioritization of work to be completed (such projects, the “Sewer Collection System Capital Improvements”). The City will make a final determination of the project scope and prioritization in the event of disagreement.

Delay Events

General. The Concession Agreement sets forth certain specific Delay Events, the occurrence of which will excuse the Authority from whatever performance is prevented by the Delay Event for such appropriate number of days as the City and the Authority determine. A “Delay Event” includes (i) an event of Force Majeure, (ii) a delay caused by the performance of works carried out by a Governmental Authority or any utility or railway operator or Person not acting under the authority or direction of, or pursuant to an agreement with the Authority, (iii) a delay caused by a failure by the City to perform or observe any of its covenants or obligations under the Concession Agreement or (iv) a delay caused by the presence in, on, under or around the Concessioned System of Hazardous Substances. Each Delay Event must result in a delay or interruption in the performance by the Authority of any obligation under the Concession Agreement but may not be caused by (A) the negligence or intentional misconduct of the Authority, (B) any act or omission by the Authority in breach of the provisions of the Concession Agreement or (C) lack or insufficiency of funds or failure to make payment of monies or to provide required security on the part of the Authority.

Upon the occurrence of a Delay Event, the Authority is required to notify the City within 10 business days following the date on which the Authority first became aware of such Delay Event. Upon giving such notice, the Authority will be excused from whatever performance is prevented by such Delay Event for an appropriate number of days as the City and the Authority determine. Notwithstanding the occurrence of a Delay Event, the Authority is required to continue to perform and observe all of its obligations and covenants under the Concession Agreement to the extent that it is reasonably able to do so and will use its reasonable efforts to minimize the effect and duration of the Delay Event.

Delay Event Remedy. Upon the occurrence of a Delay Event that causes physical damage or destruction to the Concessioned System that results in the Concessioned System being unavailable for a period in excess of 120 days, has a material adverse effect on the fair market value of the Authority’s interest in the Concessioned System and where insurance policies payable or condemnation or other similar proceeds are insufficient to restore the Authority to the same economic position as it would have been in the absence of such Delay Event, then the Authority may extend the Term for a period that would be sufficient so to compensate the Authority and to restore it to the same economic position as it would have been in had such Delay Event not occurred (a “Delay Event Remedy”).

Force Majeure

“Force Majeure” is any event beyond the reasonable control of the Authority that delays, interferes with, interrupts or limits the performance of the Authority’s obligations under the Concession Agreement or the Authority’s use and occupancy of the Concessioned System. Force Majeure events include: an intervening act of God or public enemy, water shortage, flooding, earthquake, hurricane, tropical storm or other natural disaster, war, invasion, armed conflict, act of foreign enemy, blockade, revolution, act of terror, sabotage, civil commotions, interference by civil or military authorities, condemnation or confiscation of property or equipment by any Governmental Authority, nuclear or other explosion, radioactive or chemical contamination, fire, tornado, subsurface condition, riot or other public disorder, epidemic, quarantine restriction, strike, labor dispute or other labor protest, stop-work order or injunction issued by a Governmental Authority or governmental embargo.

Force Majeure events that are not Major Force Majeure Events will be treated as a Delay Event. A “Major Force Majeure Event” is an individual Force Majeure event that causes a net loss to the Authority, after taking into account insurance proceeds and other recoveries, of not less than \$500,000, Adjusted for Inflation from the Acquisition Date to the date of the Force Majeure event. The Authority may impose a charge on the users of the Concessioned System to recover the annual costs of any Major Force Majeure Event Unfunded Loss.

Adverse Actions

Under the Concession Agreement, an “Adverse Action” occurs if the City, Commonwealth (or any agency thereof) or the County takes any action (including enacting, amending or repealing any Law), and the effect of such action is reasonably expected: (i) to be principally borne by the Authority; and (ii) to have a material adverse effect on the fair market value of the Authority’s interest in the Concessioned System of more than \$250,000, adjusted for inflation. An Adverse Action does not include (A) any action in response to any act or omission on the part of the Authority that is illegal, (B) the exercise by the City of its Reserved Powers where the City has reasonable cause to exercise such Reserved Powers for the protection of the public health or safety, (C) the exercise of law enforcement, subpoena or investigating powers by the City or any Governmental Authority and (D) the imposition of a Tax of General Application or an increase in any Tax of General Application.

If an Adverse Action occurs, the Authority may be paid Concession Compensation with respect thereto (the “AA-Compensation”). If the value of the Concession Compensation exceeds 25% of the System Concession Value, the Authority may elect to terminate the Concession Agreement and be paid by the Termination Compensation, the proceeds of which the Authority will use to redeem the 2020 Bonds. See “THE 2020 Bonds – Redemption.”

The City may elect to remedy the occurrence of such Adverse Action within 30 days following the receipt of notice of such Adverse Action. If the Commonwealth (or any agency thereof) or the County causes an Adverse Action to occur, the City may elect to mitigate the occurrence of such Adverse Action within 30 days following the receipt of notice of such Adverse Action. If the City elects to mitigate, it must increase Service Charges to users of the Concessioned System within 60 days following the receipt of notice of such Adverse Action.

City Directive

During the Term, the City may issue a written order or directive directing the Authority to add or perform work regarding the Concessioned System or change the dimensions, character, quantity, quality, description, location or position of any part of the Concessioned System or the System Operations or make other changes to the Concessioned System or the System Operations (each, a “Directive”). However, a Directive may not cause the Authority to take any action that would reasonably be expected to violate any applicable Law, Permit or Authorization; cause the Authority not to be in compliance with the Concession Agreement or materially interfere with the Authority’s performance of its obligations under the Concession Agreement. A Directive is a Compensation Event that requires the City to pay Concessionaire Compensation to the Authority. See “– Compensation Event; Concessionaire Compensation” below. The Authority is required to perform the work required to implement the Directive, including obtaining all required authorizations and approvals, and the City is required to pay the Concession Compensation with respect thereto.

Compensation Events; Concession Compensation

A “Compensation Event” is an event that requires the City to pay Concession Compensation to the Authority. Compensation Events include: the Authority’s compliance with or the implementation of any Directive or any modified or changed Operating Standard; the failure of the City to maintain the Administrative Order Fund in an amount sufficient for the punctual payment of Project Costs of an Administrative Order Project; the occurrence of an Adverse Action; or the occurrence of any other event that requires the payment of Concession Compensation. Upon the occurrence of a Compensation Event, the Authority is required to notify the City within 60 days following the date on which the Authority first became aware of the Compensation Event. The Authority is also required to provide another notice to the City within 30 days after the initial notice (the “CE-Notice”) setting forth details of the Compensation Event and the amount and calculation of any Concession Compensation. If the City wishes to mitigate the occurrence of a Compensation Event, the City will give notice thereof to the Authority and must increase Service Charges to the users of the Concessioned System. If the City fails to pay Concession Compensation, the Authority may declare a City Default and terminate the Concession Agreement. See “– Defaults and Remedies – City Default” and “– Termination – Termination Relating to Default.”

“Concession Compensation” is compensation payable by the City to the Authority to restore the Authority to the same economic position the Authority would have enjoyed if such Compensation Event had not occurred, which compensation will be equal to all losses that are reasonably attributable to such Compensation Event, net of any increase in Revenues attributable to such Compensation Event. Any claim for Concession Compensation must be made within 90 days of the date that the Authority first became aware of such Compensation Event and the City is required to pay all Concession Compensation within 60 days of the CE-Notice.

In certain instances, the Authority may be required to provide capital to pay the costs of compliance with or implementation of: (i) a modified or additional Operating Standard to comply with any new Law or Change of Law (other than a City-enacted new Law or Change of Law) prior to recouping the costs of compliance through adjustments to Service Charges to retail customers and Municipal Customers, (ii) a modified or additional Operating Standard to conform with generally adopted standards or practices prior to negotiating with the City to reduce the impact of any increased costs and expenses to the Authority associated with such modified or additional Operating Standard and (iii) a Directive, a Compensation Event or a modified or additional Operating Standard other than as described in clauses (i) and (ii) above prior to recouping the costs of compliance through Concession Compensation. See “CERTAIN INVESTMENT RISKS – Financial Risks – Authority’s Responsibility to Raise Capital and Limits on Borrowing for Future Capital Expenditures” for a description of certain risks relating to the Authority’s ability to raise such capital.

Annual City Payment; City Payment Reserve Fund; Annual City Lease Administration Payment

Annual City Payment. The Authority is required to make an annual payment, in two equal installments, to the City (the “Annual City Payment”) equal to: (i) \$500,000 for the 2016 Reporting Year; (ii) \$500,000, adjusted for inflation, for each Reporting Year after the 2016 Reporting Year (excluding the final Reporting Year); and (iii) \$500,000, adjusted for inflation, for the final Reporting Year, which number will be adjusted for the number of days in the final Reporting Year.

City Payment Reserve Fund. The Authority is also required to establish and maintain a reserve fund (the “City Payment Reserve Fund”) in an amount equal to an amount equal to the Annual City Payment for the then current Reporting Year (the “City Payment Reserve Requirement”). The City is allowed to withdraw funds from the City Payment Reserve Fund to pay any portion of the Annual City Payment that is past due and not paid. The City has reserved the right to stop the Authority from

operating the Concessioned System unless the City Payment Reserve Fund is funded to the City Payment Reserve Requirement.

Annual City Lease Administration Payment. As part of the Settlement, the Authority has agreed to make an annual payment, in two equal installments, to the City (the “Annual City Lease Administration Payment”) equal to: (i) \$400,000 for the 2021 Reporting Year; (ii) \$400,000, adjusted for inflation, for each Reporting Year after the 2021 Reporting Year (excluding the final Reporting Year); and (iii) \$400,000, adjusted for inflation, for the final Reporting Year, which number will be adjusted for the number of days in the final Reporting Year. The Annual City Lease Administration Payment is not subject to pre-funding via the City Payment Reserve Fund noted above.

The Authority is not required to establish a reserve fund in connection with the payment of the Annual City Lease Administration Payment.

Insurance

Under the Concession Agreement, the Authority is required to provide and maintain or caused to be maintained at the Authority’s expense, the following insurance coverages and requirements: (i) worker’s compensation insurance covering all employees who provide a service under the Concession Agreement; (ii) employer’s liability insurance with limits of not less than \$500,000 each accident or illness or disease; (iii) commercial general liability insurance limits of not less than \$25,000,000 per occurrence; (iv) automobile liability insurance with limits of not less than \$10,000,000 per occurrence; (v) builder’s risk insurance when the Authority undertakes any construction, maintenance or repairs to the Concessioned System; (vi) professional liability insurance when the Authority engages any architects, engineers, construction managers or other professional consultants to perform work of a material nature in connection with the Concession Agreement; (vii) property insurance at full replacement cost, covering all loss, damage or destruction to the Concessioned System; and (viii) railroad protective liability insurance when any work is to be done adjacent to or on railroad or transit property.

Under the Concession Agreement, the City is to be named as an additional insured on a primary, non-contributory basis with respect to commercial general liability insurance for any liability arising under or in connection with the Concession Agreement and automobile liability insurance. The City is also to be a named insured for property insurance and builder’s risk insurance, subject to the claims of the Trustee. The City and the Trustee will be loss payees for all of the insurance listed above and the Trustee will be the Depositary under the Concession Agreement. The Trustee acknowledges in the Indenture that the City may be named as an insured or as an additional insured to the extent referenced above. Under the Concession Agreement, the City has the right to modify, delete, alter or change the insurance coverage requirements to reflect known and established material changes in insurance coverages for water and sewer utility systems or operations comparable to the System Operations or known and established material changes in insurance exposures associated with the Concessioned System.

The Indenture has separate insurance coverage requirements that were based on the insurance coverage requirements in the Concession Agreement.

Restoration

If the Concessioned System is destroyed or damaged in whole or in part by casualty of any kind, the Authority, at its sole cost and expense, is required to repair, restore or rebuild the Concessioned System to the condition existing prior to the casualty (a “Restoration”). The Authority will provide the City with the estimated cost of repairs, alterations, restorations, replacement and rebuilding (the “Casualty Cost”). For casualty events with a Casualty Cost of over \$2,000,000 (adjusted for inflation from the

Acquisition Date to the date the casualty event occurred), except during an initial period of time needed to restore Utility Services, the Authority is required to deposit all insurance proceeds received in connection with any Restoration with the Trustee, as depositary and held outside the lien of the Indenture. If the Casualty Cost exceeds the insurance proceeds received in connection with a Restoration, the Authority is required to deposit with the Trustee, as depositary, cash sufficient to cover such difference.

Limits on Assignment or Transfer of Concession Agreement

Without the prior written approval of the City, the Concession may not be assigned by the Authority to any person, except to the Trustee in connection with the exercise of remedies upon a Concessionaire Default under the Concession Agreement; provided, however, that the City may not withhold approval of a transfer to another qualified operator without a written report from a qualified engineering firm that the decision to withhold approval is warranted from a technical perspective.

Alternatively, a transfer by the City is permissible at any time and without Authority consent as long as the City remains jointly and severally liable post-transfer and the transfer does not impair the encumbrances of the Leasehold Mortgagee.

Defaults and Remedies

Concessionaire Default. The Concession Agreement provides for a number of defaults by the Authority, subject, in certain cases, to cure periods and limitations specified therein. Such defaults include, without limitation: (i) the Authority's failure to comply with, perform or observe any material obligation, covenant, agreement, term or condition in the Concession Agreement and such failure continues unremedied for a period of 90 days; (ii) transfer of the Concession Agreement or any portion of the Concessionaire Interest in violation of the Concession Agreement and such failure continues unremedied for a period of ten business days; (iii) the Authority's failure to comply with the requirements or directives of a final award in a matter submitted to dispute resolution under the Concession Agreement and such failure continues unremedied for a period of 30 days; (iv) if the Authority (A) admits, in writing, that it is unable to pay its debts as such become due, (B) makes an assignment for the benefit of creditors, or (C) files a voluntary petition under Title 9 or Title 11 of the United States Bankruptcy Code, or if such petition is filed against it and an order for relief is entered; (v) if within 90 days after the commencement of any bankruptcy proceeding against the Authority, such proceeding has not been dismissed, or if, within 90 days after the appointment of any trustee, receiver, custodian, assignee, sequestrator, liquidator or other similar official of the Authority or any interest therein, such appointment has not been vacated or stayed on appeal or otherwise; (vi) if a levy under execution or attachment has been made against all or any part of the Concession System or any interest therein, as a result of any Encumbrance created, incurred, assumed or suffered to exist by the Authority, and such execution or attachment has not been vacated, removed or stayed by court order, bonding or otherwise within 60 days after the Authority becomes aware of such levy; (vii) the Authority fails to pay when due all taxes, fees or other monetary obligations payable to the City with respect to the Concession System or Utility Services, which failure continues for 30 days; (viii) the Authority fails to pay any Operational Liquidated Damages Amount; (ix) the Authority repudiates any of its material obligations under the Concession Agreement; or (x) a Health and Safety Default has occurred and is continuing.

Remedies of the City Upon Concessionaire Default. Upon the occurrence of a Concessionaire Default, the City may, subject to the rights of the Trustee under the Concession Agreement, declare the Authority to be in default and may do any of the following: (i) terminate the Concession Agreement after the Authority has had a chance to cure such Concessionaire Default; (ii) make payment on behalf of the Authority if the reason for the Concessionaire Default is failure to pay monies; (iii) cure the Concessionaire Default; (iv) seek specific performance, injunction or other equitable remedies; (v) seek to

recover its losses arising from such Concessionaire Default and any amounts due and payable under the Concession Agreement and, in connection therewith, exercise any recourse available to any Person who is owed damages or a debt; (vi) terminate the Authority's right to possess the Concessioned System; (vii) distrain any of the Authority's goods located on the Concessioned System; (viii) close any portions of the Concessioned System; and (ix) immediately upon a Health and Safety Default, take immediate possession of the Concessioned System or any part thereof for so long as may be necessary to cure the Health and Safety Default and take any subsequent actions to cure the Health and Safety Default and protect the public health, safety and welfare.

City Default. The Concession Agreement provides for a number of defaults by the City, subject, in certain cases, to cure periods and limitations specified therein. Such defaults include, without limitation: (i) the City's failure to comply with or observe any material obligation, covenant, agreement, term or condition in the Concession Agreement (other than an Adverse Action) and such failure continues unremedied for a period of 90 days; (ii) the City's failure to comply with the requirements or directives of a final award in a matter submitted to dispute resolution under the Concession Agreement and such failure continues unremedied for a period of 30 days; (iii) if a levy under execution or attachment has been made against all or any part of the Concessioned System or the Concessionaire Interest as a result of any Encumbrance created, incurred, assumed or suffered to exist by the City and such execution or attachment has not been vacated, removed or stayed by court order, bonding or otherwise within a period of 60 days; (iv) if the City (A) admits, in writing, that it is unable to pay its debts as such become due, (B) makes an assignment for the benefit of creditors, or (C) files a voluntary petition under Title 9 of the United States Bankruptcy Code; (v) if the City repudiates in writing any of its material obligations under the Concession Agreement; or (vi) if (A) a court of competent jurisdiction enters a final and unappealable judgment order against the City in any action, suit or proceeding brought against the City, and (B) as a result of such final and unappealable judgment order (1) it becomes unlawful for the City to comply with or observe any material obligation, covenant, agreement, term or condition in the Concession Agreement or (2) any material obligation, covenant, agreement, term or condition of the City under the Concession Agreement becomes unenforceable against the City, and (C) the City and the Authority are unable to re-form the Concession Agreement to conform to the requirements of such judgment order; provided that the entry of such judgment order shall not constitute a City Default if, within 270 days following the entry of such judgment order, (i) a Law is enacted that validates or confirms the lawful authority of the City, or grants to the City the lawful authority, to perform its contractual obligations under the Concession Agreement notwithstanding such judgment order or otherwise remedies the City Default and (ii) the City reimburses the Authority for any unreimbursed Losses attributable to such judgment order and accrued during the period from the date of entry of such judgment order to the date of enactment of such Law.

Remedies of Authority Upon City Default. Upon the occurrence of a City Default, the Authority may, subject to the rights of the Trustee under the Concession Agreement, declare the City to be in default and may do any of the following: (i) terminate the Concession Agreement after the City has had a chance to cure such City Default; (ii) seek specific performance, injunction or other equitable remedies; (iii) seek to recover its losses caused by the City Default and any amounts due and payable under the Concession Agreement; and (iv) exercise any other rights and remedies provided for hereunder or available at law or equity. See "SECURITY AND SOURCES OF PAYMENT FOR THE 2020 BONDS – Consent Agreement" for a description of the Trustee's rights and remedies provided in the Consent Agreement.

Termination

Termination Relating to Authority's Life. The Authority's life currently expires on September 9, 2062. The Authority has agreed in the Concession Agreement to take such actions as are needed to extend its term of existence to a date later than the 50th Anniversary of the Acquisition Date.

If, as of January 1, 2062, the term of existence of the Authority has not been extended to a date later than the End Date, then the Concession Agreement will terminate on August 9, 2062 and the Reversion Date will be August 10, 2062.

Termination Relating to Adverse Action. The Authority has the right to terminate the Concession Agreement in connection with an Adverse Action if it first obtains the written consent of the Trustee. If the Authority elects to terminate, the City will pay an amount equal to the aggregate of (i) the Termination Compensation, plus (ii) without duplication, the reasonable, documented out-of-pocket costs and expenses incurred by the Authority as a result of such termination, less (iii) (A) any insurance or condemnation proceeds received by the Authority as a result of such Adverse Action and (B) in the case of a condemnation by the Commonwealth (or any agency thereof) or the County the present value of any net insurance or condemnation proceeds that the Authority is reasonably likely to receive in the future in respect of all or any portion of the Concessions System as a result of such Adverse Action (collectively, the “Termination Damages”). “Termination Compensation” is equal to the greater of (i) the System Concession Value (generally, the fair market value of the Concessionaire Interest at the time of the relevant action triggering the termination payment obligation) and (ii) the lesser of (A) the amount required to retire all Leasehold Mortgage Debt and (B) the sum of all Remaining Amortized Rent.

Termination Relating to Default. The City may terminate the Concession Agreement upon the occurrence of (A) a Concessionaire Default that consists of a failure to comply with, perform or observe any Operating Standard if such Concessionaire Default creates a material danger to the safety of System Operations or a material impairment to the Concessions System or to the continuing use of the Concessions System for Utility Purposes and the public purpose requirements of the Concession Agreement or (B) any other Concessionaire Default after the related cure periods as set forth in the Concession Agreement. The Authority may terminate the Concession Agreement upon the occurrence of a City Default after the related cure periods as set forth in the Concession Agreement. Upon such termination, the City will pay to the Authority the Termination Compensation plus, without duplication, the reasonable, documented out-of-pocket costs and expenses incurred by the Authority as a result of such termination.

Other Termination. If the Concession Agreement is terminated by the City other than pursuant to a Concessionaire Default or is canceled, rescinded or voided during the Term for any reason over the objection and without action by the Authority, the Trustee and their respective Affiliates, the City is required to pay to the Termination Compensation plus, without duplication, the reasonable, documented out-of-pocket costs and expenses incurred by the Authority as a direct result of such termination, cancellation, rescinding or voiding. The City has agreed that it may only terminate the Concession Agreement in accordance with the express terms of the Concession Agreement. The City has also agreed that it does not have the right to terminate the Concession Agreement for convenience.

Limits on Termination Payments. On and after January 1, 2039, the obligation of the City to make termination payments (in the event of City default, etc.) will be limited to the greater of (A) the appraised System Concession Value and (B) the lesser of (i) the amount required to retire all Leasehold Mortgage Debt and pay Breakage Costs related to the retirement of all Leasehold Mortgage Debt and (ii) the sum of Remaining Amortized Rent and the Breakage Costs related to the retirement of all Leasehold Mortgage Debt. “Remaining Amortized Rent” is based on a declining-value analysis of the value of future concession revenues through the remaining term of the Concession Agreement which calculation is set forth in the Concession Agreement. In certain circumstances, the appraised System Concession Value may be less than (1) the amount required to retire all Leasehold Mortgage Debt (including the 2020 Bonds) and the Breakage Costs related to the retirement of all Leasehold Mortgage Debt and (2) the sum of Remaining Amortized Rent and the Breakage Costs related to the retirement of all Leasehold Mortgage Debt. In those circumstances the City’s termination payment obligation would be

less than the amount needed to retire fully the outstanding Leasehold Mortgage Debt (including the 2020 Bonds). See “CERTAIN INVESTMENT RISKS – Termination Risks Under the Concession Agreement.”

Extension of Concession Agreement

As part of the Settlement, the Authority and the City have agreed to provide a mechanism for a negotiated extension of the Concession Agreement. Prior to any such negotiated extension, the Authority is required to obtain a favorable opinion of counsel confirming that such a negotiated extension is permissible under applicable law. Upon receipt of such an opinion, the Authority shall submit not less than three years before the August 7, 2063 end date of the Concession Agreement a written request to the City for an extension of the term of the lease. The renewal term requested shall be at least 30 years and not more than 50 years. The City has the right to deny the request for an extension if the City reasonably concludes that the Authority has not performed satisfactorily in meeting the requirements of the Concession Agreement. See Appendix F- “SUBSTANTIAL FORM OF THE CONCESSION AGREEMENT – Section 16.4(n)”.

In the alternative, City and the Authority upon mutual agreement may enter into good faith discussions at least three years before the August 7, 2063 end date of the Concession Agreement to evaluate and consider regional or consolidated service delivery options to benefit the customers and municipalities served by the System. Such discussions would include an evaluation of regional approaches to providing water and sewer services to the City, portions of the Authority’s non-City service area that receive water and/or sewer service from the System, and other municipalities that receive water and/or sewer service from the System that may wish to enter these discussions.

City Representations and Warranties; Indemnification

The City made certain representations and warranties in the Concession Agreement. While some of the City’s representations continue in full force and effect without any time limit, certain other representations expired after August 1, 2015 unless a bona fide notice of claim was filed prior to the expiration of the two year period, in which case the representation in question will survive until the final determination or settlement of the related claim. No such claims had been filed on or before August 1, 2015.

No indemnification for breach of a City representation or warranty can be claimed until aggregate Losses exceed \$2,000,000 (the “deductible”) and then only for the excess. Each instance of indemnifiable Loss in excess of the “deductible” is subject to a “basket” of \$10,000. City indemnities are generally subject to an aggregate cap of \$110,000,000.

However, the indemnification cap described in the preceding paragraph does not apply to City representations and warranties to the effect, among other things, that: the City (acting through City Council) has duly adopted a resolution and enacted an ordinance authorizing the concession transaction and that the resolution and the ordinance remain in full force and effect; the City has authorized and approved the execution and delivery of the Concession Agreement and the performance by the City of its obligations thereunder; the City has power and authority to enter into the Concession Agreement; the Concession Agreement has been duly authorized, executed and delivered by the City and constitutes a valid legally binding obligation of the City, enforceable against the City; and there is no action, suit or proceeding pending against the City prior to or as of August 7, 2013 which would have a material adverse effect on the operations of the Concessioned System.

The City could take actions to cure any breach of one of its representations and warranties; if the meeting approving the Concession Agreement were to be declared invalid by a court, the City could hold another meeting to approve it. The City and the Authority could make other arrangements for the operation of the Concession System pending reinstatement of the Concession Agreement were it declared invalid. The Concession Agreement also provides that, if a court of competent jurisdiction enters a final judgment against the City which results in any material obligation, covenant or agreement of the City under the Concession Agreement becoming unenforceable against the City, then the City and the Authority (acting in good faith and within a reasonable time), must attempt to re-form the Concession Agreement to conform to the requirements of the judgment. The entry of such a judgment order will constitute a City Default under the Concession Agreement unless, within 270 days following the entry of the judgment order (i) a Law is enacted that validates or confirms the lawful authority of the City or grants the City the lawful authority to perform its contractual obligations under the Concession Agreement notwithstanding the judgment order and (ii) the City reimburses the Authority for any unreimbursed losses attributable to such judgment order and accrued during the period from the date of entry of such judgment order to the date of enactment of such new Law. See “– Compensation Event; Concession Compensation”; “– Defaults and Remedies”; and “– Termination” for a discussion on the Concession Compensation payable upon a City Default.

Under the Concession Agreement, the City indemnifies and holds the Authority harmless against “Losses,” which includes any loss, liability, damage, penalty, or charge or out-of-pocket or and documented costs or expense but excluding punitive, indirect and consequential damages. Were (for example) the actions at the meeting of the City Council approving the Concession Agreement declared invalid by a court because of a Sunshine Law violation and the City failed otherwise to remedy the breach of its Concession Agreement representations, the Authority is of the view that a Loss for which the City must indemnify the Authority under the Concession Agreement may include amounts due under the Indenture were the Trustee to elect to accelerate the maturity of the 2020 Bonds because a court determines that the City Council meeting at which the Concession Agreement was adopted was held in violation of the Sunshine Law and further determines that the Concession Agreement therefore is invalid.

The Concession Agreement provides that if one of its provisions were declared to be or determined to be invalid, the remainder of the Concession Agreement will not be held invalid. However, the City could argue that this savings clause provision is inapplicable in a circumstance where the entire Concession Agreement itself was declared invalid. Were the City to refuse to indemnify the Authority for its Losses in the circumstances described above (or not otherwise cure the breach of representation) by asserting that the Concession Agreement was invalid, the Authority could argue that a finding of invalidity requires the City to return the upfront payment under the Concession Agreement; it also could pursue other legal and equitable remedies, including unjust enrichment and rescission of the Concession Agreement. See “THE 2020 BONDS – Events of Default and Remedies”, which describes certain Events of Default under the Indenture (including where the Concession Agreement is declared null and void) and the remedies available to the Trustee upon the occurrence of an Event of Default under the Indenture. See also “LITIGATION AND CLAIMS – The City.”

Lender’s Rights and Remedies

General. Under the Concession Agreement, the Authority has the right to grant one or more “Leasehold Mortgages” to be secured by the Concessionaire Interest and Revenues as long as no Concessionaire Default exists unless any such Concessionaire Default will be cured. In the Consent Agreement, the City acknowledges that the Indenture is a Leasehold Mortgage, the 2020 Bonds are Leasehold Mortgage Debt and the Trustee is a Leasehold Mortgagee, for purposes of the Concession Agreement. See “SECURITY AND SOURCES OF PAYMENT FOR THE 2020 BONDS – Consent Agreement.”

The City has no liability for any payments due under a Leasehold Mortgage and, except for violation by the City of an express obligation under the Concession Agreement, the Leasehold Mortgagee is not entitled to seek any damages or other amounts against the City. The City has no obligation to any Leasehold Mortgagee in the enforcement of the rights and remedies of the City under the Concession Agreement or by Law, except as expressly set forth in the Concession Agreement. While any Leasehold Mortgage is outstanding, the City will not agree to any amendment or modification of the Concession Agreement that could reasonably be expected to have a material adverse effect on the rights or interests of the Leasehold Mortgagee or agree to a voluntary surrender or termination of the Concession Agreement by the Authority without the consent of the Leasehold Mortgagee.

Trustee's Right to Cure. Upon a Concessionaire Default, the Trustee has 60 days beyond any cure period expressly provided to the Authority in the Concession Agreement to cure or cause to be cured such Concessionaire Default. Such 60-day period will be extended if the Concessionaire Default may be cured but cannot reasonably be cured within such period of 60 days, and the Trustee begins to cure such default within such 60-day period and proceeds to cure such Concessionaire Default within a reasonable time period. The City may not terminate the Concession Agreement for a Concessionaire Default as long as the Trustee's right to cure has not expired and the Trustee is curing such Concessionaire Default.

Trustee's Rights and Responsibilities. Under the Concession Agreement, the Trustee may (i) enforce the Indenture in any lawful way, (ii) acquire the Concessionaire Interest in any lawful way or (iii) take possession of in any lawful way and manage the Concessioned System. Subject to the transfer restrictions in the Concession Agreement, the Trustee may transfer the Concessionaire Interest and the Authority's obligations under the Concession Agreement to a substitute concessionaire.

New Concession Agreement. If the Concession Agreement is terminated due to a Concessionaire Default or if the Concession Agreement is rejected or disaffirmed pursuant to any bankruptcy Law or proceeding, the Concession Agreement provides that the City shall enter into a new concession and lease agreement of the Concessioned System (the "New Agreement") with the Trustee or its designee or nominee (as long as the designee or nominee is controlled by or acting at the direction of the Trustee or is approved by the City) for the remainder of the Term upon the satisfaction of all of the following requirements and conditions: (i) the Trustee (or its designee or nominee) commits in writing to enter into the New Agreement, (ii) the Trustee (or its designee or nominee) pays or causes to be paid to the City all amounts that would have been past-due or due and payable by the Authority in accordance with the provisions of the Concession Agreement but for such termination, and (iii) the Trustee (or its designee or nominee) cures all Concessionaire Defaults.

Assignment and Assumption Agreement. If the City (i) determines that terminating the Concession Agreement and entering into the New Agreement could violate the Commonwealth's procurement laws or (ii) receives the prior consent of the Trustee, in lieu of entering into a New Agreement, the Concession Agreement may be assumed by the Trustee or its designee or nominee (as long as the designee or nominee is controlled by or acting at the direction of the Trustee or is approved by the City) for the remainder of the Term and as evidence of such assignment and assumption the City will execute an amended and restated concession and lease agreement (the "Assignment and Assumption Agreement"). The City will enter into the Assignment and Assumption Agreement upon the satisfaction of all of the following requirements and conditions: (i) the Trustee (or its designee or nominee) commits in writing to assume the Concession Agreement and enter into the Assignment and Assumption Agreement, (ii) the Trustee (or its designee or nominee) pays or causes to be paid to the City all amounts that would have been past-due or due and payable by the Authority in accordance with the provisions of the Concession Agreement and (iii) the Trustee (or its designee or nominee) cures all Concessionaire Defaults.

Consent Agreement. Concurrently with the issuance of the 2020 Bonds, the Trustee, as Leasehold Mortgagee of the 2020 Bonds, the City and the Authority entered into an amended and restated consent agreement that sets forth certain assurances from the City of the Bondholders' rights with respect to the Concession Agreement in the event of a default thereunder by the Authority. See "SECURITY AND SOURCES OF PAYMENT FOR THE 2020 BONDS – Consent Agreement."

OTHER SYSTEM DOCUMENTS

Municipal Service Agreements

The City has entered into various water and sewer municipal service agreements with its surrounding municipalities. Under the terms of these agreements, the City has agreed to provide water and sewer services to the party municipalities as further described below.

General – Municipal Water Service Agreements. The City is party to Municipal Water Service Agreements with Hanover Township, Salisbury Township, South Whitehall Township, the Whitehall Township Authority, and the Existing LCA System. Under these Municipal Water Service Agreements, the City has agreed to sell to the municipalities and municipal authorities varying amounts of water at varying rates. Certain of these Municipal Water Service Agreements require the municipalities and municipal authorities to purchase a minimum number of gallons of water each year, while others limit the maximum number of gallons which may be purchased each year. Most of the Municipal Water Service Agreements provide for the review of water usage and rates every five years. All of the Municipal Water Service Agreements call for automatic five-year renewals at the end of their respective terms.

The City is also party to emergency interconnection agreements with the City of Bethlehem, the Borough of Emmaus, the Northampton Borough Municipal Authority and the Whitehall Township Authority, under which both the City and the municipality have agreed to the mutual use of certain water interconnection lines in the event of an emergency. Each of the emergency interconnection agreements varies with respect to cost sharing, usage, rate charges for use of water during emergencies and assignment rights.

General – Municipal Sewer Service Agreements. The City is party to Municipal Sewer Service Agreements under which the Sewer Utility System provides sewer services to seven municipalities or municipal authorities: the Borough of Emmaus, Hanover Township, Salisbury Township, South Whitehall Township, the Coplay-Whitehall Authority, the Existing LCA System and Lower Macungie Township. The Existing LCA System currently provides sewer service to eight municipalities or municipal authorities: the Borough of Alburtis, the Borough of Emmaus, the Borough of Macungie, Lower Macungie Township, Lowhill Township, Upper Macungie Township, Upper Milford Township and Weisenberg Township.

Under the Municipal Sewer Service Agreements, the municipalities and municipal authorities have purchased certain rights to discharge stated levels of sewage from their treatment lines for acceptance and treatment by the City at the City's facilities. The Municipal Sewer Service Agreements establish rates to be charged by the City for treatment services and outline certain prior construction and improvement schedules to be undertaken to ensure sufficient treatment capacity. In most of the Municipal Sewer Service Agreements, the term of service is silent or provide for the ability to have a perpetual term. In the remaining Municipal Sewer Service Agreements, the terms of service are conditioned on certain rent per gallon restrictions and adjustments, while some of the multiple-municipality agreements exist for as long as the individual Municipal Service Agreements are in place.

Authority as Agent of the City. The City has not assigned its interests in the Municipal Service Agreements to the Authority. However, in the Concession Agreement, the City has agreed to enforce the City's rights under each Municipal Service Agreement including its right to impose and collect Service Charges for Utility Services provided to the Municipal Customers by means of the Concessioned System. Additionally, the City has agreed (i) not to waive any material right or claim granted or held by the City under the Municipal Service Agreements, (ii) to enforce its rights under the Municipal Service Agreements, (iii) not to amend, modify, renew, extend or otherwise change the terms and conditions of any Municipal Service Agreement in any manner that affects the Concessionaire Interest without the prior written consent of the Authority and (iv) allow the Authority to participate in all meetings between the City and a Municipal Customer relating to a Municipal Service Agreement.

In addition, pursuant to the Services Agreement, the Authority will act as the agent of the City and has agreed to perform all of the contractual obligations of the City under each of the Municipal Service Agreements, including the billing and collection of Revenues from the Municipal Customers pursuant to the Municipal Service Agreements, remitting to the City of the Municipal Customer Share of Annual Debt Service portion of those payments and remitting the balance to the Trustee for deposit in accordance with the Indenture.

INDEPENDENT ENGINEER'S CERTIFICATE

The Independent Engineer is delivering its certificate, stating that the estimated revenues from the Concessioned System, together with money otherwise estimated to be available under the Indenture, will be sufficient in each Fiscal Year to (i) pay all of the Operation and Maintenance Expenditures of the Authority and (ii) provide an amount equal to 120% of the Debt Service Requirements with respect to the 2020 Bonds and the Existing Authority Bonds.

APPRAISAL

AUS Consultants (the "Appraiser") will be providing to the Trustee concurrently with the issuance of the 2020 Bonds, a written appraisal of the fair market value of the Concessionaire Interest at the time of the issuance of the 2020 Bonds, confirming the aggregate amount of Leasehold Mortgage Debt after giving effect to the issuance of the 2020 Bonds is not in excess of 80% of the fair market value of the Concessionaire Interest set forth in such written appraisal at the time of issuance of the 2020 Bonds. See Appendix A – APPRAISAL attached hereto.

PLAN OF FINANCE

The 2020 Bonds are being issued to provide funding for: (i) the advance refunding of a portion of the Lehigh County Authority, Water and Sewer Revenue Bonds (City of Allentown Concession), Series 2013A Bonds, (ii) the funding of a debt service reserve fund with respect to the 2020 Bonds; and (iii) the payment of transaction costs and expenses in connection with the issuance and insuring of the 2020 Bonds.

ESTIMATED SOURCES AND USES OF FUNDS

	<u>2020 Bonds</u>
SOURCES:	
Par Amount of the Bonds	\$
Available Funds Under Existing Indenture	
Net Original Issue Premium/(Discount)	
TOTAL	<u>\$</u>
USES:	
Deposit to 2013A Refunding Escrow	\$
Deposit to Debt Service Reserve Fund	
Costs of Issuance ¹	
TOTAL	<u>\$</u>

¹ Includes Underwriters' discount, municipal bond insurance premium, Consulting Engineer's fees, legal fees, accountant's fees, Trustee's fees, rating agency fees, financial advisor fees, printing costs and miscellaneous costs of issuance of the 2020 Bonds.

THE 2020 BONDS

General

The 2020 Bonds are being issued by the Authority pursuant to the laws of the Commonwealth, including the Act and the Indenture. The 2020 Bonds will be issued as fully registered bonds and in denominations of \$5,000 or any integral multiple thereof.

2020 Bonds. The 2020 Bonds mature on the dates and in the principal amounts and will bear interest at the per annum rates shown on the inside front cover hereof. Interest on the 2020 Bonds will be calculated on the basis of a 360-day year of twelve 30-day months and will be payable to the Holders thereof on each June 1 and December 1, commencing December 1, 2020.

Method and Place of Payment. The Trustee will act as the initial Paying Agent for the 2020 Bonds. The principal amount of the 2020 Bonds will be payable upon the presentation and surrender thereof, as the same respectively become due and payable, at the Designated Payment/Transfer Office of the Trustee, initially in Harrisburg, Pennsylvania, or such other office designated by the Trustee. Interest on the 2020 Bonds will be payable by check dated as of the Interest Payment Date and mailed to the Person in whose name such 2020 Bond is registered on the 15th day of the month immediately preceding the applicable Interest Payment Date, at the address of such Person as shown on the registration books kept by the Trustee. Notwithstanding the foregoing, for so long as the 2020 Bonds are registered in the name of Cede & Co., as nominee for The Depository Trust Company ("DTC"), payment of debt

service on the 2020 Bonds will be made by the Trustee to DTC in accordance with the operational procedures of DTC. See “THE 2020 BONDS – Book-Entry Only System.”

Redemption

Optional Redemption for 2020 Bonds. The 2020 Bonds maturing on or after December 1, 20__ are subject to redemption prior to maturity, at the option of the Authority, in whole or, from time to time, in part, on _____, 20__, or on any date thereafter, upon payment of 100% of the principal amount thereof, together with accrued interest to the date fixed for redemption.

Extraordinary Redemption. The 2020 Bonds are subject to extraordinary redemption in whole or in part by the Authority, at a redemption price equal to 100% of the principal amount thereof plus interest accrued to the redemption date if (i) the Authority elects to terminate the Concession Agreement in connection with an Adverse Action; (ii) if the Authority elects to terminate the Concession Agreement upon the occurrence of a City Default; or (iii) if the City elects to terminate the Concession Agreement other than pursuant to a Concessionaire Default or the City cancels, rescinds or voids the Concession Agreement during the Term for any reason over the objection and without action by the Authority, the Trustee and their respective Affiliates. See “CONCESSION AGREEMENT – Termination.”

Mandatory Sinking Fund Redemption. The 2020 Bonds maturing on December 1, 20__, 20__ and 20__, are subject to mandatory sinking fund redemption prior to maturity at a redemption price equal to 100% of the principal amount of the 2020 Bonds being redeemed, without premium, together with accrued interest to the date fixed for redemption on December 1 of the following years and in the following principal amounts.

<u>Year</u>	<u>Amount</u>	<u>Year</u>	<u>Amount</u>
<hr/>		<hr/>	
* Maturity		* Maturity	
	<u>Year</u>		<u>Amount</u>
<hr/>			
* Maturity			

In the event any 2020 Bonds are in a denomination greater than \$5,000, a portion of such 2020 Bonds may be redeemed, but portions of 2020 Bonds will be redeemed only in the principal amount of \$5,000 or any whole multiple thereof.

On or before the 45th day prior to any mandatory sinking fund redemption date, the Trustee is required to proceed to select for redemption (by lot in such manner as the Trustee may determine), from all applicable 2020 Bonds subject to such redemption, an aggregate principal amount of such 2020 Bonds equal to the amount for such year as set forth in the appropriate table above and will call such 2020 Bonds or portions thereof (in Authorized Denominations) for redemption and give notice of such call.

Selection of 2020 Bonds to be Redeemed. If less than all 2020 Bonds are to be redeemed at any time, such 2020 Bonds are required to be redeemed in such order of maturity as the Authority selects. If less than all 2020 Bonds of a maturity are to be redeemed, such 2020 Bonds will be drawn by lot by the Trustee. In the event any 2020 Bonds are in a denomination greater than \$5,000 a portion of such 2020 Bonds may be redeemed, but portions of 2020 Bonds may only be redeemed in the principal amount of \$5,000 or any whole multiple thereof.

Notice of Redemption. The Trustee is required to give notice of redemption, in the name of the Authority, to the related Bondholders affected by such redemption at least 20 days before each redemption, send such notice of redemption by first-class mail (or with respect to 2020 Bonds held by DTC by an express delivery service for delivery on the next business day) to each owner of a 2020 Bond to be redeemed. Each such notice will be sent to the owner's registered address. No defect affecting any 2020 Bond, whether in the notice of redemption or mailing thereof (including any failure to mail such notice), shall affect the validity of the redemption proceedings for any other 2020 Bonds.

Each notice of redemption will: (i) identify the 2020 Bonds to be redeemed (specifying the CUSIP numbers, if any, assigned to the 2020 Bonds), (ii) specify the redemption date, the redemption price and, if less than all of any particular 2020 Bond is to be redeemed, the principal amount so to be redeemed, (iii) state that on the redemption date the 2020 Bonds called for redemption will be payable at the designated corporate trust office or corporate trust agency of the Trustee, that from that date interest will cease to accrue, that no representation is made as to the accuracy or correctness of the CUSIP numbers (if any) printed therein or on the 2020 Bonds, and (iv) provide any other descriptive information which may be necessary in order to identify the 2020 Bonds to be redeemed, including without limitation the original issuance date, series, maturity date and interest rate applicable to such 2020 Bonds.

The Authority may provide that, if at the time of mailing of notice of an optional redemption, there shall not have been deposited with the Trustee moneys sufficient to redeem all the 2020 Bonds called for redemption, such notice may state that the redemption is conditional, that is, subject to the deposit of the redemption moneys with the Trustee not later than the scheduled redemption date, and such notice will be of no effect unless such moneys are so deposited. In the event sufficient moneys are not on deposit on the required date, then the redemption will be canceled and the previous notice of redemption will be of no effect.

Events of Default; Remedies

Events of Default. The Indenture sets forth several Events of Default, including: failure to pay debt service on the 2020 Bonds when due; certain covenant violations, after the lapse of a cure period; certain bankruptcy related events; and if any material provision of the Concession Agreement at any time ceases to be valid and binding on the Authority or shall be declared to be null and void. See Appendix E for a description of the Events of Default in the Indenture.

Remedies. Were an Event of Default to occur under the Indenture and such Event of Default was not cured, the Trustee may exercise a variety of legal and equitable remedies, including bringing suit on the 2020 Bonds and seeking to enjoin acts which may be held unlawful or in violation of the rights of the Bondholders. One remedy available to the Trustee provides that it may (or shall, upon written request of a majority in principal amount of the Bondholders) declare the principal of all 2020 Bonds then outstanding to be due and payable immediately. The Indenture provides that indemnification payments made to the Authority pursuant to the Concession Agreement are "Concession Revenues" and must be deposited with the Trustee, and further provides that, if the Concession Agreement is declared null and void, the Authority will pursue its remedies under the Concession Agreement, one of which is seeking indemnification from the City thereunder. See "CONCESSION AGREEMENT; City Representations

and Warranties” for a description of other remedies available to the Authority upon a breach by the City of its representation under the Concession Agreement.

Limitation of Remedies for Subordinated Bonds. Pursuant to the provisions of the Indenture, (i) the maturity of the Subordinated Indebtedness may not be accelerated unless the maturity of the Senior has been accelerated; (ii) if an acceleration of the Senior Obligations has been rescinded or annulled, then any acceleration of the Subordinated Indebtedness automatically shall be rescinded or annulled; and (iii) upon the occurrence of any event of default with respect to any Subordinated Indebtedness, the holders of any Subordinated Indebtedness (or the Trustee on their behalf) may not exercise any remedies under the Indenture except with the consent of the holders of a majority in aggregate Outstanding principal amount of the Senior Obligations (or the Compound Accreted Value as applicable) and any Additional Parity Indebtedness.

Mandatory Purchase in Lieu of Acceleration

The Concession Agreement provides that if an Event of Default occurs under the Indenture or any act, condition or event has occurred which would permit the Trustee to declare all or part of the 2020 Bonds to be immediately due and payable, then the City has the option to purchase the 2020 Bonds from the Trustee (the “City Option”) at a purchase price equal to 100% of the principal amount thereof, together with accrued interest to the date fixed for the purchase of the 2020 Bonds. The City can exercise the City Option by serving notice to the Trustee within 30 days after receiving notice from the Trustee that the Trustee intends to declare all or part of the 2020 Bonds to be immediately due and payable (the “Acceleration Notice”). If the City Option is exercised, the City is required to purchase the 2020 Bonds on the date that is 90 days after the Acceleration Notice is delivered to the City.

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Debt Service Requirements

The following table sets forth, for each of the periods indicated, the estimated amount required in such period to be made available for debt service after the issuance of the 2020 Bonds.

Fiscal Year	Other Outstanding Series Debt	2020 Bonds	
		Principal	Interest
2020			
2021			
2022			
2023			
2024			
2025			
2026			
2027			
2028			
2029			
2030			
2031			
2032			
2033			
2034			
2035			
2036			
2037			
2038			
2039			
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2041			
2042			
2043			
2044			
2045			
2046			
2047			
2048			
2049			
2050			
2051			
2052			
2053			
2054			
2055			
2056			
2057			
2058			
2059			
TOTAL			

(1) Numbers may not total exactly due to rounding.

Book-Entry Only System

The 2020 Bonds initially will be available in book-entry form only. Purchasers of the 2020 Bonds will not receive certificates representing their interests in the 2020 Bonds purchased. The information in this section concerning DTC and DTC's book entry system has been obtained from sources that the Authority believes to be reliable, but the Authority takes no responsibility for the accuracy thereof. The 2020 Bonds will be issued as fully-registered securities registered in the name of Cede & Co. (DTC's partnership nominee). One fully-registered 2020 Bond certificate will be issued for each maturity within each series of the 2020 Bonds, each in the aggregate principal amount of such maturity within such series, and will be deposited with DTC.

Initially, DTC will act as Securities Depository for the 2020 Bonds. The 2020 Bonds initially will be issued solely in book-entry form to be held under DTC's book-entry only system, registered in the name of Cede & Co. (DTC's Partnership nominee) or such other name as may be requested by an authorized representative of DTC.

DTC, the world's largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants"). DTC has a Standard & Poor's rating of AA+. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com. So long as the 2020 Bonds are maintained in book-entry form with DTC, the following procedures will be applicable with respect to the 2020 Bonds.

Purchases of 2020 Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the 2020 Bonds on DTC's records. The ownership interest of each actual purchaser of each 2020 Bond ("Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the 2020 Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in 2020 Bonds, except in the event that use of the book entry system for the 2020 Bonds is discontinued.

To facilitate subsequent transfers, all 2020 Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of 2020 Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the 2020 Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such 2020 Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time.

As long as the book-entry system is used for the 2020 Bonds, redemption notices will be sent to Cede & Co. If less than all of the 2020 Bonds within a series are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such series to be redeemed.

As long as the book-entry system is used for the 2020 Bonds, principal or redemption price of, and interest payments on, the 2020 Bonds will be made to DTC. DTC's practice is to credit Direct Participants' accounts on the payable date in accordance with their respective holdings shown on DTC's records unless DTC has reason to believe that it will not receive payment on the payable date. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Trustee or the Authority, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal or redemption price and interest to DTC is the responsibility of the Authority or the Trustee, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants. Beneficial Owners of the 2020 Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the 2020 Bonds, such as redemptions, tenders, defaults, and proposed amendments to the financing documents. For example, Beneficial Owners of the 2020 Bonds may wish to ascertain that the nominee holding the 2020 Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the registrar and request that copies of notices be provided directly to them.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the 2020 Bonds, unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Trustee as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the 2020 Bonds are credited on the record date (identified in listing attached to the Omnibus Proxy).

Redemption proceeds, distributions, and interest payments on the 2020 Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the Authority or the Trustee, on the payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant

and not of DTC (nor its nominee), the Trustee, or the Authority, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds, distributions, and interest payments to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Authority or the Trustee, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the 2020 Bonds at any time by giving reasonable notice to the Authority and the Trustee. In addition, the Authority may decide to discontinue use of the system of book entry transfers through DTC (or a successor Securities Depository). Under either of such circumstances, in the event that a successor Securities Depository is not obtained, Bond certificates are required to be printed and delivered.

The Authority and the Underwriters cannot and do not give any assurances that the Direct Participants or the Indirect Participants will distribute to the Beneficial Owners of the 2020 Bonds: (i) certificates representing an ownership interest or other confirmation of beneficial ownership interests in the 2020 Bonds, or (ii) redemption or other notices sent to DTC or Cede & Co., its nominee, as the registered owners of the 2020 Bonds, or that they will do so on a timely basis or that DTC, Direct Participants or Indirect Participants will serve and act in the manner described in this Official Statement. The current rules applicable to DTC are on file with the Securities and Exchange Commission and the current procedures of DTC to be followed in dealing with DTC Participants are on file with DTC.

The Authority and the Trustee will have no responsibility or obligation to any Securities Depository, any Participants in the book-entry system, or the Beneficial Owners with respect to (i) the accuracy of any records maintained by the Securities Depository or any Participant; (ii) the payment by the Securities Depository or by any Participant of any amount due to any Participant or Beneficial Owner, respectively, in respect of the principal amount or redemption price of, or interest on, any Bonds; (iii) the delivery of any notice by the Securities Depository or any Participant; (iv) the selection of the Beneficial Owners to receive payment in the event of any partial redemption of the 2020 Bonds; or (v) any other action taken by the Securities Depository or any Participant.

In the event of the discontinuance of the book-entry system for the 2020 Bonds, Bond certificates will be printed and delivered and the following provisions of the Indenture will apply: (i) principal or redemption price of the 2020 Bonds will be payable upon surrender of the 2020 Bonds at the designated corporate trust office of the Trustee located in Harrisburg, Pennsylvania as provided in the Indenture; (ii) 2020 Bonds may be transferred or exchanged for other Bonds of Authorized Denominations at the designated office of the Registrar of the 2020 Bonds, without cost to the owner thereof except for any tax or other governmental charge; and (iii) 2020 Bonds will be issued in denominations as described above under “THE 2020 BONDS.”

CONCURRENT FINANCING PLAN

Immediately prior to the issuance of the 2020 Bonds, the Authority intends to issue its Water and Sewer Revenue Bond (City of Allentown Concession), Series 2020A (Federally Taxable) (the “2020A Bond”), as an Additional Bond under and pursuant to the Indenture, for the purpose of refunding the Authority’s outstanding Water and Sewer Revenue Bond (City of Allentown Concession), Series 2018 (Federally Taxable). The 2020A Bond will be issued and sold by the Authority pursuant to a private placement with Fulton Bank, N.A. (the “Bank”). The Bank as initial purchaser of the 2020A Bond will consent to the amendment and restatement of the existing Concession Agreement and the Existing

Indenture. Upon the issuance of the 2020A Bond and the 2020 Bonds, the Authority expects the Concession Agreement and the Indenture to become effective.

SECURITY AND SOURCES OF PAYMENT FOR THE 2020 BONDS

The following are summaries of certain provisions of the Indenture. These summaries do not purport to be comprehensive or definitive. See Appendix E – SUBSTANTIAL FORM OF THE INDENTURE.

Limited Obligations

The 2020 Bonds are special, limited obligations of the Authority payable from and secured by a first priority, perfected security interest in and liens on (i) the Concessionaire Interest, including the rights (but not the obligations) of the Authority under the Concession Agreement, including the right to charge Service Charges and collect Revenues[†] derived from operating the Concessioned System, Service Charges imposed by the Authority for the use of the Concessioned System, including payments from Municipal Customers made pursuant to Municipal Service Contracts in which the City currently provides water services or sewage services to municipalities and municipal authorities, payments by the City to the Authority due to a Compensation Event, any Termination Compensation or any other payment from the City to the Authority under the Concession Agreement; and (ii) the funds and accounts established with the Indenture (collectively, the “Trust Estate”). See “CONCESSION AGREEMENT.” However, “Revenues” do not include payments made by a Municipal Customer or moneys collected from Retail Customers by virtue of special Service Charges paying debt service in connection with the financing by the City of certain mandated remediation improvements to the City’s existing sewer utility system; such moneys will be paid over to, or to the direction of, the City and are not part of the Trust Estate. See “THE CONCESSIONED SYSTEM – City Retained Responsibility for Certain Projects – Administrative Order Project” for a description of these mandated remediation improvements.

THE 2020 BONDS ARE SPECIAL LIMITED OBLIGATIONS OF THE AUTHORITY. NEITHER THE COUNTY OF LEHIGH, THE CITY OF ALLENTOWN NOR THE COMMONWEALTH OF PENNSYLVANIA, NOR ANY POLITICAL SUBDIVISION THEREOF IS OBLIGATED TO PAY THE PRINCIPAL, REDEMPTION PREMIUM, IF ANY, OR INTEREST ON THE 2020 BONDS, AND NEITHER THE FULL FAITH, CREDIT NOR TAXING POWER OF THE COUNTY OF LEHIGH, THE CITY OF ALLENTOWN NOR THE COMMONWEALTH OF PENNSYLVANIA OR ANY OTHER POLITICAL SUBDIVISION THEREOF IS PLEDGED TO SUCH PAYMENT. THE AUTHORITY HAS NO TAXING POWER.

Not Supported by City of Allentown

The City of Allentown is not obligated to pay the principal, redemption premium, if any, or interest on the 2020 Bonds.

Not Supported by Existing LCA System

The Authority currently has outstanding bonds and other indebtedness (the “Existing LCA System Debt”) that are secured by revenues from the Existing LCA System. The 2020 Bonds and any Additional Bonds or other Parity Indebtedness issued by the Authority that will be secured by the Trust Estate are not secured by any revenues from the Existing LCA System. Those assets and revenues are

[†] Certain payments made under the Municipal Service Agreements allocable to debt service or bonds or other obligations issued by the City to pay these costs have been retained by the City, and certain additional Service Charges imposed to pay debt service or such bonds or other obligations have been transferred directly to the City.

pledged as security for the Existing LCA System Debt, and the Bondholders do not and will not have any right to those assets and revenues. Conversely, the Existing LCA System Debt is not secured by the Trust Estate and holders of the Existing LCA System Debt do not and will not have any rights to the Trust Estate.

Pledge of Revenues

The 2020 Bonds are secured by a pledge of Revenues under the Concession Agreement. “Revenues” is defined in the Concession Agreement to mean all revenues derived from the operation of the Concession System and the provision of Utility Services by means of the Concession System including Service Charges collected from users of the Concession System including Municipal Customer payments pursuant to Municipal Service Agreements exclusive of (i) any payments from a Municipal Customer allocated to the Municipal Customer Share of Annual Debt Service for Administrative Order Bonds and (ii) any moneys collected by the Authority by virtue of the imposition of Service Charges to fund Net Debt Service Charges pursuant to the Concession Agreement. The Authority may, from time to time, issue Additional Bonds that will be secured by the Trust Estate. The 2020 Bonds will be on a parity with such Additional Bonds. Under the Concession Agreement, Administrative Order Bonds may not be secured by a pledge of or lien on Revenues. See “– Additional Bonds and Other Indebtedness.”

Pledge of Concession Agreement

The 2020 Bonds are secured by a pledge of the Authority’s interest in the Concession Agreement by the Authority to the Trustee on a parity with the Existing Authority Bonds.

Debt Service Reserve Fund

The Indenture establishes a Debt Service Reserve Fund that will be funded initially by a portion of the proceeds of the 2020 Bonds, on a proportionate basis for each Series of 2020 Bonds. As of the delivery of the 2020 Bonds, the balance in the Debt Service Reserve Fund will be \$_____, which will be an amount equal to the Debt Service Reserve Fund Requirement for the 2020 Bonds. The Debt Service Reserve Fund may be drawn upon if the amounts in the Debt Service Fund are insufficient to pay in full any principal or interest then due on the 2020 Bonds. See “PROJECT FLOW OF FUNDS – Description of Project Funds – Debt Service Reserve Fund.”

Rate Covenant

The Authority has covenanted to maintain, charge and collect Service Charges which, together with other Cash Available for Debt Service, are at all times at least sufficient to provide annually: (i) funds to pay all of the Operation and Maintenance Expenditures of the Authority; and (ii) an amount equal to 120% of the Debt Service Requirements with respect to the Senior Obligations during the then current Fiscal Year of the Authority (collectively, the “Rate Covenant”). “Cash Available for Debt Service” means, for any period, the excess (if any) of: (a) all Revenues for such period less (b) Operation and Maintenance Expenditures and (without duplication) deposits into the City Payment Reserve Fund for such period.

Additional Bonds and Other Indebtedness

Additional Bonds. Subject to any restrictions, limitations, terms and conditions of the Concession Agreement, the Authority may, from time to time, issue additional bonds, notes or other obligations that constitute Leasehold Mortgage Debt under the Concession Agreement (“Additional

Bonds”). Such Additional Bonds will be secured by the Trust Estate and will be on a parity with the 2020 Bonds. The Authority may issue Additional Bonds for providing all or part of the funds necessary (i) to refinance or refund all or any portion of any indebtedness of the Authority relating to the Concessions System, including accrued and unpaid interest and redemption premium, if any, and all costs and expenses incidental to redemption; (ii) to provide additional funds for undertaking the obligations of the Authority, as concessionaire, under the Concession Agreement (including the responsibilities for Capital Improvements); (iii) to provide for funds for Major Capital Improvements; (iv) to provide the costs and expenses of a financing; (v) to implement a Consolidation but only in accordance with the provisions of the Indenture described below in “– Combining the Concessions System with the Existing LCA System;” or (vi) to deposit any additional amounts in funds or accounts as required under the Indenture.

Prior to the issuance and delivery of Additional Bonds, the Authority must meet certain conditions, including:

(1) An opinion of Bond Counsel to the effect that (a) all conditions precedent to the issuance of the Additional Bonds pursuant to the Act, the Concession Agreement and the Indenture have been satisfied; (b) the Additional Bonds, when issued, will be valid and binding obligations of the Authority in accordance with their terms; (c) the issuance of the Additional Bonds is permitted under and pursuant to the Concession Agreement; and (d) an opinion as to the tax status of the interest on the Additional Bonds under the Code.

(2) A Consulting Engineer’s Certificate stating that the estimated Concession Revenues from the Concessions System, together with money otherwise estimated to be available under the provisions of the Indenture, will be sufficient in each Fiscal Year to meet the Rate Covenant described above; provided, however that if the Additional Bonds are being issued to finance the refunding of Bonds, Parity Indebtedness or Reimbursement Obligations, the Authority may provide a certificate stating that for the then current and each future Fiscal Year, the Debt Service Requirements for the refunding bonds is projected to be equal to or less than the Debt Service Requirements that would have existed for that Fiscal Year with respect to the portion of the Bonds, Parity Indebtedness or Reimbursement Obligations being refunded.

(3) A certificate of the Authority, certifying that (a) the Additional Bonds will constitute Leasehold Mortgage Debt under the Concession Agreement and accompanied by a copy of the Written Appraisal required under the Concession Agreement, of the fair market value of the Concessionaire Interest at the time of the incurrence or commitment of the Additional Bonds, confirming the aggregate amount of Leasehold Mortgage Debt after giving effect to the incurrence or commitment of such new debt evidenced by the issuance of the Additional Bonds is not in excess of 80% of the fair market value of the Concessionaire Interest set forth in such Written Appraisal at the time of incurrence or commitment of such new debt and (b) the last maturity date of the Additional Bonds does not extend beyond the existence of the Authority. See “CERTAIN INVESTMENT RISKS – Financial Risks – Authority’s Responsibility to Raise Capital and Limits on Borrowing for Future Capital Expenditures” for a description of certain risks relating to the Authority’s ability to raise such capital.

Parity Indebtedness. Subject to any restrictions in the Concession Agreement, the Indenture permits the Authority to incur indebtedness or other obligation other than Additional Bonds (“Parity Indebtedness”) that constitutes Leasehold Mortgage Debt under the Concession Agreement. Prior to the incurrence of Parity Indebtedness, the Authority must meet certain conditions, including (i) an opinion of Bond Counsel as described in (1) above, (ii) the Consulting Engineer’s Certificate as described in (2) above, and (iii) a certificate of the Authority described in (3) above. Parity Indebtedness will be

secured by the Revenues and will be on a parity with the 2020 Bonds but will not be secured by the proceeds of the 2020 Bonds or Additional Bonds or by moneys and investments held in any fund established for the 2020 Bonds, Additional Bonds, other Parity Indebtedness, Subordinated Indebtedness, Swap Termination Payments, or Reimbursement Obligations. Any Parity Indebtedness will provide: (a) a grant to the Trustee of each lien, encumbrance and security interest granted to the holders of such Parity Indebtedness to share on an equal and proportionate basis therewith; (b) that any Event of Default under the Indenture will be an event of default thereunder; and (c) that, if any event of default occurs, that any remedies with respect to Concession Revenues are to be exercised solely by the Trustee for the equal and ratable benefit of all holders of 2020 Bonds and Parity Indebtedness having a security interest in Concession Revenues of equal rank and priority.

Subordinated Indebtedness. The Authority may also incur additional bonds, notes or other obligations that by its terms are expressly subordinate to the 2020 Bonds, the Existing Authority Bonds, the Additional Bonds and the Parity Indebtedness to the lien of the Indenture and the Concession Revenues (“Subordinated Indebtedness”). Subordinated Indebtedness will not be Leasehold Mortgage Debt under the Concession Agreement. Under the Concession Agreement, generally any indebtedness other than Leasehold Mortgage Debt may not be secured by liens and encumbrances on the Concession Interest and System Revenues. Prior to the incurrence of Subordinated Indebtedness, the Authority must meet certain conditions, including (i) an opinion of Bond Counsel as described in (1) above and (ii) a certificate of the Authority, certifying that the last maturity date of the Subordinated Indebtedness does not extend beyond the existence of the Authority.

Consent Agreement

Concurrently with the issuance of the 2020 Bonds, the Trustee, as Leasehold Mortgagee of the 2020 Bonds, the City and the Authority entered into an Amended and Restated Consent Agreement (the “Consent Agreement”) that will set forth certain assurances from the City of the Bondholders’ rights with respect to the Concession Agreement in the event of a default thereunder by the Authority, including cure rights, forbearance obligations of the City with respect to its exercise of remedies under the Concession Agreement, notice requirements of the City, the City’s right to transfer any of its interest in the Concession System and the Concession Agreement, step-in rights of the Trustee, the requirements and process regarding a proposed substitute concessionaire, the termination or assignment and assumption of the Concession Agreement, rights of substitution and other rights of the Bondholders. Nothing in the Consent Agreement amends or modifies any of the Authority’s obligations to the City under the Concession Agreement. See “CONCESSION AGREEMENT – Lender’s Rights and Remedies” for a description of the rights of the Trustee and lenders in the Concession Agreement.

Combining the Concessioned System with the Existing LCA System

The Indenture provides that, in the event that (i) the Concession Agreement is terminated in advance of the Reversion Date by mutual agreement of the Authority and the City (and not pursuant to any section of the Concession Agreement that permits any early termination thereof); and (ii) in connection with such early termination, the City conveys to the Authority fee simple ownership of the Concessioned System, the Authority may, but is not be obligated to, cause a Consolidation to occur in accordance with the provisions of the Indenture. A “Consolidation” occurs when: (i) the assets and other property of the Existing LCA System are added to the Concessioned System and the revenues derived therefrom to the Revenues so as to secure the Authority’s obligations under the Indenture, and (ii) the Concessioned System is added to the Existing LCA System and the Revenues are pledged to secure the obligations of the Authority under the trust indentures and other agreements (the “Existing LCA Indentures”), entered into in connection with the Existing LCA System Debt. For the avoidance of doubt, the purpose of a Consolidation is to enable the Authority obligations under the Indenture and under the

Existing LCA Indentures to be secured equally and ratably by the revenues of both the Concessioned System and the Existing LCA System to be considered a single water and sewer system, and for the assets, revenues and expenses of the Existing LCA System and the Concessioned System to be combined for purposes of measuring financial and operational covenants hereunder and under the Existing LCA Indentures.

The Consolidation is not currently permitted under the Existing LCA Indentures. The City has not reviewed the Consolidation-related provisions in the Indenture and the Consolidation has no impact on the City's current intent to keep the Concession Agreement in effect for the Term.

Under the Indenture, a Consolidation may not be consummated unless, prior to or concurrently therewith, the Trustee receives the following:

(i) a certified copy of a resolution of the governing board of the Authority authorizing the early termination of the Concession Agreement and the Consolidation;

(ii) an opinion of Counsel to the effect that: (A) all conditions precedent to the Consolidation pursuant to the Act, the Indenture and the Existing LCA Indentures have been satisfied; (B) the Consolidation is permitted under and pursuant to the Indenture and the Existing LCA Indentures; and (C) after giving effect to the Consolidation, the Indenture and the Existing LCA Indentures are legal, valid and binding obligations of the Authority, enforceable in accordance with their respective terms;

(iii) an opinion of Bond Counsel to the effect that the Consolidation, in and of itself, will not adversely affect any exclusion from income of interest for federal income tax purposes for any Series of Bonds issued as tax-exempt bonds under the Indenture or the Existing LCA Indentures;

(iv) a Consulting Engineers' Certificate to the effect that, upon giving effect to the Consolidation, the Authority is in compliance with the Rate Covenant for the Fiscal Year preceding the Fiscal Year in which the Consolidation occurs, and is projected to be in compliance with the Rate Covenant for each of the two Fiscal Years following the Fiscal Year in which the Consolidation occurs;

(v) evidence that, upon giving effect to the Consolidation, the conditions precedent to the incurrence of one dollar of Parity Indebtedness hereunder are satisfied, and that any similar tests for the incurrence of parity indebtedness under the Existing LCA Indentures are satisfied;

(vi) a certificate of the Authority, certifying that (A) no Event of Default exists and is continuing under the Indenture and no event of default exists and is continuing under the Existing LCA Indentures, (B) upon giving effect to the Consolidation, no Event of Default exists and is continuing under the Indenture and no event of default exists and is continuing under the Existing LCA Indenture, and (C) all funds and accounts held under the Indenture are fully funded in accordance with the provisions hereof and all funds and accounts held under the Existing LCA Indentures are fully funded in accordance with the Existing LCA Indentures;

(vii) evidence from each Rating Agency that the Consolidation will not result in a downgrade, withdrawal or suspension of each then outstanding Rating with respect to the 2020 Bonds;

(viii) the agreements needed to effectuate the Consolidation, including such security agreements needed to cause the obligations of the Authority under the Existing LCA Indentures to be secured by the Trust Estate and for the obligations of the Authority under the Indenture to be secured by the trust estate securing the Authority's obligations under the Existing LCA Indentures; and

(ix) an Opinion of Counsel setting forth any other actions that should be taken to cause the assets and revenues of the Existing LCA System to be included in the Trust Estate and to cause the Trust Estate to secure the Existing LCA System Debt.

BOND INSURANCE

Bond Insurance Policy

Concurrently with the issuance of the 2020 Bonds, Build America Mutual Assurance Company (“BAM”) will issue its Municipal Bond Insurance Policy for the 2020 Bonds (the “Policy”). The Policy guarantees the scheduled payment of principal of and interest on the 2020 Bonds when due as set forth in the form of the Policy included as an exhibit to this Official Statement.

The Policy is not covered by any insurance security or guaranty fund established under New York, California, Connecticut or Florida insurance law.

Build America Mutual Assurance Company

BAM is a New York domiciled mutual insurance corporation and is licensed to conduct financial guaranty insurance business in all fifty states of the United States and the District of Columbia. BAM provides credit enhancement products solely to issuers in the U.S. public finance markets. BAM will only insure obligations of states, political subdivisions, integral parts of states or political subdivisions or entities otherwise eligible for the exclusion of income under section 115 of the U.S. Internal Revenue Code of 1986, as amended. No member of BAM is liable for the obligations of BAM.

The address of the principal executive offices of BAM is: 200 Liberty Street, 27th Floor, New York, New York 10281, its telephone number is: 212-235-2500, and its website is located at: www.buildamerica.com.

BAM is licensed and subject to regulation as a financial guaranty insurance corporation under the laws of the State of New York and in particular Articles 41 and 69 of the New York Insurance Law.

BAM’s financial strength is rated “AA/Stable” by S&P Global Ratings, a business unit of Standard & Poor’s Financial Services LLC (“S&P”). An explanation of the significance of the rating and current reports may be obtained from S&P at www.standardandpoors.com. The rating of BAM should be evaluated independently. The rating reflects the S&P’s current assessment of the creditworthiness of BAM and its ability to pay claims on its policies of insurance. The above rating is not a recommendation to buy, sell or hold the 2020 Bonds, and such rating is subject to revision or withdrawal at any time by S&P, including withdrawal initiated at the request of BAM in its sole discretion. Any downward revision or withdrawal of the above rating may have an adverse effect on the market price of the 2020 Bonds. BAM only guarantees scheduled principal and scheduled interest payments payable by the issuer of the 2020 Bonds on the date(s) when such amounts were initially scheduled to become due and payable (subject to and in accordance with the terms of the Policy), and BAM does not guarantee the market price or liquidity of the 2020 Bonds, nor does it guarantee that the rating on the 2020 Bonds will not be revised or withdrawn.

Capitalization of BAM

BAM’s total admitted assets, total liabilities, and total capital and surplus, as of March 31, 2020 and as prepared in accordance with statutory accounting practices prescribed or permitted by the New

York State Department of Financial Services were \$459.6 million, \$126.1 million and \$333.5 million, respectively.

BAM is party to a first loss reinsurance treaty that provides first loss protection up to a maximum of 15% of the par amount outstanding for each policy issued by BAM, subject to certain limitations and restrictions.

BAM's most recent Statutory Annual Statement, which has been filed with the New York State Insurance Department and posted on BAM's website at www.buildamerica.com, is incorporated herein by reference and may be obtained, without charge, upon request to BAM at its address provided above (Attention: Finance Department). Future financial statements will similarly be made available when published.

BAM makes no representation regarding the 2020 Bonds or the advisability of investing in the 2020 Bonds. In addition, BAM has not independently verified, makes no representation regarding, and does not accept any responsibility for the accuracy or completeness of this Official Statement or any information or disclosure contained herein, or omitted herefrom, other than with respect to the accuracy of the information regarding BAM, supplied by BAM and presented under the heading "BOND INSURANCE".

Additional Information Available from BAM

Credit Insights Videos. For certain BAM-insured issues, BAM produces and posts a brief Credit Insights video that provides a discussion of the obligor and some of the key factors BAM's analysts and credit committee considered when approving the credit for insurance. The Credit Insights videos are easily accessible on BAM's website at www.buildamerica.com/videos. (The preceding website address is provided for convenience of reference only. Information available at such address is not incorporated herein by reference.)

Credit Profiles. Prior to the pricing of bonds that BAM has been selected to insure, BAM may prepare a pre-sale Credit Profile for those bonds. These pre-sale Credit Profiles provide information about the sector designation (e.g. general obligation, sales tax); a preliminary summary of financial information and key ratios; and demographic and economic data relevant to the obligor, if available. Subsequent to closing, for any offering that includes bonds insured by BAM, any pre-sale Credit Profile will be updated and superseded by a final Credit Profile to include information about the gross par insured by CUSIP, maturity and coupon. BAM pre-sale and final Credit Profiles are easily accessible on BAM's website at www.buildamerica.com/credit-profiles. BAM will produce a Credit Profile for all bonds insured by BAM, whether or not a pre-sale Credit Profile has been prepared for such bonds. (The preceding website address is provided for convenience of reference only. Information available at such address is not incorporated herein by reference.)

Disclaimers. The Credit Profiles and the Credit Insights videos and the information contained therein are not recommendations to purchase, hold or sell securities or to make any investment decisions. Credit-related and other analyses and statements in the Credit Profiles and the Credit Insights videos are statements of opinion as of the date expressed, and BAM assumes no responsibility to update the content of such material. The Credit Profiles and Credit Insight videos are prepared by BAM; they have not been reviewed or approved by the issuer of or the underwriter for the 2020 Bonds, and the issuer and underwriter assume no responsibility for their content.

BAM receives compensation (an insurance premium) for the insurance that it is providing with respect to the 2020 Bonds. Neither BAM nor any affiliate of BAM has purchased, or committed to purchase, any of the 2020 Bonds, whether at the initial offering or otherwise.

BOND INSURANCE RISK FACTORS

The Authority has obtained a bond insurance policy to guarantee the scheduled payment of principal and interest on the 2020 Bonds. The following are risk factors relating to bond insurance.

In the event of default of the payment of principal or interest with respect to the 2020 Bonds when all or some becomes due, any owner of the 2020 Bonds shall have a claim under the applicable bond insurance policy (the “Policy”) for such payments. However, in the event of any acceleration of the due date of such principal by reason of mandatory or optional redemption or acceleration resulting from default or otherwise, other than any advancement of maturity pursuant to a mandatory sinking fund payment, the payments are to be made in such amounts and at such times as such payments would have been due had there not been any such acceleration. The Policy does not insure against redemption premium, if any. The payment of principal and interest in connection with mandatory or optional prepayment of the 2020 Bonds by the Authority which is recovered by the Authority from the bond owner as a voidable preference under applicable bankruptcy law is covered by the Policy, however, such payments will be made by the bond insurer at such time and in such amounts as would have been due absence such prepayment by the Authority unless the bond insurer chooses to pay such amounts at an earlier date.

Under most circumstances, default of payment of principal and interest does not obligate acceleration of the obligations of the bond insurer without appropriate consent. The bond insurer may direct and must consent to any remedies that the Trustee exercises and the bond insurer’s consent may be required in connection with amendments to the Indenture and Concession Agreement.

In the event the bond insurer is unable to make payment of principal and interest as such payments become due under the Policy, the 2020 Bonds are payable solely from the moneys received by the Trustee pursuant to the Indenture. In the event the bond insurer becomes obligated to make payments with respect to the 2020 Bonds, no assurance is given that such event will not adversely affect the market price of the 2020 Bonds or the marketability (liquidity) for the 2020 Bonds.

The long-term ratings on the 2020 Bonds are dependent in part on the financial strength of the bond insurer and its claim paying ability. The bond insurer’s financial strength and claims paying ability are predicated upon a number of factors which could change over time. No assurance is given that the long-term ratings of the bond insurer and of the ratings on the 2020 Bonds insured by the bond insurer will not be subject to downgrade and such event could adversely affect the market price of the 2020 Bonds or the marketability (liquidity) for the 2020 Bonds. See description of “RATINGS” herein.

The obligations of the bond insurer are general obligations of the bond insurer and in an event of default by the bond insurer, the remedies available to the Trustee may be limited by applicable bankruptcy law or other similar laws related to insolvency.

Neither the Authority or Underwriters have made independent investigation into the claims paying ability of the bond insurer and no assurance or representation regarding the financial strength or projected financial strength of the bond insurer is given.

FLOW OF FUNDS

General

The following funds and accounts are to be established and created under the Indenture and will be maintained by the Trustee in accounts segregated from all other moneys of the Trustee:

- (a) Revenue Fund;
 - (i) Operation and Maintenance Expense Account;
- (b) Debt Service Fund;
 - (i) 2020 Bonds Debt Service Fund Account;
- (c) Debt Service Reserve Fund;
- (d) Operation and Maintenance Reserve Fund;
- (e) Major Maintenance Reserve Fund;
- (f) Event Driven Capex Reserve Fund;
- (g) Sewer Collection System Improvement Fund;
- (h) Subordinated Indebtedness Fund;
- (i) Project Fund;
- (j) Rebate Fund;
- (k) Distribution Fund;
- (l) Loss Proceeds Fund; and
- (m) Redemption Fund.

In addition to the above-described funds and accounts, the Capex Fund and the City Payment Reserve Fund are to be created and held by the Trustee under the terms and provisions of the Concession Agreement.

System Revenues and Other Deposits

Under the Indenture, the Trustee will deposit amounts it receives as follows:

- (a) to the Revenue Fund, (i) all moneys deposited directly with the Authority relating to the Utility Services, exclusive of any moneys collected by the Authority by virtue of the imposition of Service Charges to fund Net Debt Service Charges; (ii) any Revenues collected by the Authority from Municipal Customers pursuant to the Municipal Service Agreements, exclusive of the Municipal Customer Share of Annual Debt Service; and (iii) all other Concession Revenues;

(b) to a fund or account of the Indenture as directed by a Consulting Engineer's Certificate, all AA-Compensation and Concession Compensation;

(c) to the Loss Proceeds Fund, any (i) proceeds of insurance payable to or received by the Authority and (ii) proceeds received by the Authority in connection with an Event of Eminent Domain (together, "Loss Proceeds");

(d) to the Revenue Fund, all other Concession Revenues and Swap Termination Payments;

(e) to the Debt Service Fund, amounts paid under a Credit Facility and Swap Receipts;

(f) to the Redemption Fund, Termination Compensation; and

(g) to the Net Debt Service Charge Account, any moneys collected by the Authority by virtue of the imposition of Service Charges to fund Net Debt Service Charges and any moneys constituting the Municipal Customer Share of Annual Debt Service, which funds shall be transferred upon the direction of the Authority to the City pursuant to the Concession Agreement.

"Concession Revenues" means all payments received by the Authority under and pursuant to the Concession Agreement, including but not limited to (1) the Revenues, (2) AA-Compensation, (3) Termination Compensation, (4) Loss Proceeds, (5) payments received by the Authority as a result of a Compensation Event, (6) other amounts received by the Authority in respect of the operation of the Concession System or otherwise under the Concession Agreement, including indemnification payments under the Concession Agreement (to the extent not otherwise excluded pursuant to the definition of Revenues), and (7) investment income with respect to any moneys held by the Trustee in the funds and accounts established under the Indenture (except the Capex Fund, the City Payment Reserve Fund and the Rebate Fund). The Authority has assigned all of its right, title and interest in and to the Concession Revenues to the Trustee and will cause the Concession Revenues to be deposited to the Revenue Fund as soon as practical upon receipt of the same, and in any event within one week of receipt of such funds by the Authority. If the Authority receives any Concession Revenues, the Authority will pay over the same to the Trustee.

Application of System Revenues

The Trustee is required to make the following withdrawals, transfers and payments from the Revenue Fund in the amounts, at the times and only for the purposes specified below and in the following order of priority:

(a) On the first business day of each month (each, a "Monthly Funding Date"), and after the application for such purposes of funds on deposit in the Operation and Maintenance Reserve Fund, to the Operation and Maintenance Expense Account of the Revenue Fund an amount equal to the Operation and Maintenance Expenditures then due and payable or reasonably expected to be due and payable prior to the next succeeding Monthly Funding Date, and as budgeted, for such month, in the Authority's Annual Budget;

(b) On each Monthly Funding Date, to the appropriate account of the Debt Service Fund an amount which, together with other monies available therefor, is sufficient to accumulate 30 days before the corresponding dates for payment with respect to the following obligations, pro rata:

- (i) the amount which is necessary to accumulate in equal monthly installments the principal or mandatory sinking fund redemption price coming due on the 2020 Bonds on the immediately succeeding December 1;
 - (ii) the amount which is necessary to accumulate in equal monthly installments the amount required to provide for the payment of interest coming due on the 2020 Bonds on the immediately succeeding Interest Payment Date;
 - (iii) the principal, interest and fees coming due (or estimated to be coming due) on each Parity Reimbursement Obligation on or prior to the next succeeding Monthly Funding Date;
 - (iv) the principal, interest and fees coming due (or estimated to be coming due) on all Parity Indebtedness on or prior to the next succeeding Monthly Funding Date; and
 - (v) any Parity Swap Payments coming due (or estimated to be coming due) on any Swap on or prior to the next succeeding Monthly Funding Date;
- (c) On each Monthly Funding Date, to the City Payment Reserve Fund held by the Trustee, as escrow agent, in escrow outside the lien and security interest of the Indenture under a City Payment Reserve Fund Escrow Agreement by and among the City, the Authority and Manufacturers and Traders Trust Company, as escrow agent, the amount needed so that the amount held in the City Payment Reserve Fund will equal the then current City Payment Reserve Requirement. Monies in the City Payment Reserve Fund are available to pay the Annual City Payment to the extent that the Authority does not pay the same as Operation and Maintenance Expenditures from the Operation and Maintenance Expense Account;
- (d) On each Monthly Funding Date, to the Operation and Maintenance Reserve Fund to the extent necessary to fund such fund so that the balance therein (taking into account amounts then on deposit therein) equals the Operation and Maintenance Reserve Fund Requirement;
- (e) On the first Business Day of each calendar quarter (each, a “Quarterly Funding Date”), to the Debt Service Reserve Fund, the amount necessary, together with any other moneys available therefor, first, *pro rata*, to restore the amount of any withdrawal from the Debt Service Reserve Fund to cure any deficiency in the Debt Service Fund allocable to 2020 Bonds secured by the Debt Service Reserve Fund in four substantially equal quarterly installments; and second, upon the issuance of Additional Bonds that are secured by a Debt Service Reserve Fund, the amount required to cause the balance in the Debt Service Reserve Fund to be equal to the Debt Service Reserve Requirement for such Additional Bonds;
- (f) On each Quarterly Funding Date, to the Major Maintenance Reserve Fund to the extent necessary to fund such fund so that the balance therein (taking into account amounts then on deposit therein) equals the Major Maintenance Reserve Fund Requirement;
- (g) On each Monthly Funding Date, commencing on January 1, 2032, to the Capex Fund held by the Trustee, as escrow agent, in escrow outside the lien and security interest of the Indenture under the Capex Fund Escrow Agreement that the City, the Authority and Manufacturers and Traders Trust Company, as escrow agent, will enter into prior to January 1, 2032 (the “Capex Fund Escrow Agreement”), one-twelfth of the Capex Fund Deposit Requirement due and payable for the immediately succeeding Reporting Year as reflected in a

requisition or certificate of the Authority stating the amount to be disbursed to the Capex Fund for such month in accordance with the requirements of the Capex Fund Escrow Agreement;

(h) On each Quarterly Funding Date, commencing on January 1, 2021, to the Event Driven Capex Reserve Fund, one-fourth of such amount equal to the Event Driven Capex Reserve Fund Requirement, as required to be paid pursuant to Section 4.17 of the Concession Agreement;

(i) On each Quarterly Funding Date, commencing on the later of (1) January 1, 2024, or (2) January 1 of the Reporting Year following completion of the Flow Characterization Study and all Administrative Order Projects by the City, to the Sewer Collection System Improvement Fund, one-fourth of such amount equal to the Sewer Collection System Improvement Fund Requirement, as required to be paid pursuant to Section 4.18 of the Concession Agreement;

(j) On each Quarterly Funding Date, to the Subordinated Indebtedness Fund, the amount which, together with other monies available therefor, is sufficient to pay, pro rata, the principal, interest and fees coming due on any Subordinated Indebtedness and any Reimbursement Obligation (other than a Parity Reimbursement Obligation) and any Subordinated Swap Payments and Swap Termination Payments coming due on any Swap, in each case prior to the next succeeding Quarterly Funding Date;

(k) On each Quarterly Funding Date, to the Rebate Fund, any amounts required to be deposited therein for the purposes of paying to the United States Treasury the amount required to be rebated pursuant to Section 148(f) of the Code; and

(l) On each Semi-Annual Funding Date on which (i) all transfers and distributions described above have been satisfied in full, (ii) no Event of Default under the Indenture or a Concessionaire Default under the Concession Agreement has occurred and is continuing and (iii) the Debt Service Reserve Fund, the Operation and Maintenance Reserve Fund and the Major Maintenance Reserve Fund have been funded in amounts equal to the Debt Service Reserve Fund Requirement, Operation and Maintenance Reserve Fund Requirement and the Major Maintenance Reserve Fund Requirement, respectively, to the Distribution Account, all remaining amounts.

To the extent that on any funding date amounts on deposit in the Debt Service Reserve Fund are in excess of the Debt Service Reserve Fund Requirement, or amounts in the Operation and Maintenance Reserve Fund are in excess of the Operation and Maintenance Reserve Fund Requirement or amounts in the Major Maintenance Reserve Fund are in excess of the Major Maintenance Reserve Fund Requirement, as applicable, such amounts will be transferred into the Revenue Fund.

Description of Project Funds

Revenue Fund. The Indenture creates and establishes a Revenue Fund pursuant to which the Trustee will deposit funds as described under “– System Revenues and Other Deposits” and make withdrawals, transfers and payments in the amounts, at the times and only for the purposes specified under “– Application of System Revenues.” The Indenture also creates within the Revenue Fund, a separate, segregated Operation and Maintenance Expense Account.

Operations and Maintenance Expense Account. The Authority is required to apply amounts in the Operation and Maintenance Expense Account on a monthly basis to the payment of Operation and Maintenance Expenditures. The Authority will review and approve all

third-party invoices for payment of such invoices during such month as a proper charge against the Operation and Maintenance Expense Account. The Trustee is required to disburse moneys in the Operation and Maintenance Expense Account each month upon delivery to the Trustee of a requisition or certificate of the Authority: (a) stating the amount of estimated Operation and Maintenance Expenditures for such month, as set forth in the Authority's Annual Budget, (b) certifying that such monthly amount will be applied by the Authority for payment of third-party invoices as approved by the Authority for such month, or to pay the Authority for Operation and Maintenance Expenditures incurred by the Authority during such month, each as a proper charge against the Operation and Maintenance Expense Account, and (c) certifying that the amount was reflected in the Authority's Annual Budget. The Indenture provides that "Operation and Maintenance Expenditures" include amounts necessary to make the Annual City Payment to the City under the Concession Agreement.

Debt Service Fund. The Indenture creates within the Debt Service Fund, the 2020 Bonds Debt Service Fund Account.

Debt Service Fund Accounts. Under the Indenture, the Trustee will transfer to the Paying Agent (i) funds on deposit in the 2020 Bonds Debt Service Fund Account at such times and in such amounts as necessary to pay the interest on the 2020 Bonds, respectively, and as due on each Interest Payment Date commencing on December 1, 2020 and each other date on which interest is due and payable and (ii) funds on deposit in the 2020 Bonds Debt Service Fund Account at such times and in such amounts as necessary to pay the principal or mandatory Redemption Price of the 2020 Bonds as the same become due and payable.

Debt Service Reserve Fund. The Debt Service Reserve Fund is required to be funded in such amount which equals the Debt Service Reserve Fund Requirement for the 2020 Bonds and the Existing Authority Bonds. A portion of the proceeds of the 2020 Bonds will be deposited to the Debt Service Reserve Fund to satisfy the Debt Service Reserve Fund Requirement for the 2020 Bonds. "Debt Service Reserve Fund Requirement", as it relates to the 2020 Bonds, means the least of (1) the maximum annual Debt Service Requirements of the 2020 Bonds, (2) 10% of the sale proceeds of the 2020 Bonds, and (3) 125% of the average annual Debt Service Requirements of the 2020 Bonds. See "SECURITY AND SOURCES OF PAYMENT FOR THE 2020 BONDS – Debt Service Reserve Fund."

The Debt Service Reserve Fund may be drawn upon if the amounts in the Debt Service Fund are insufficient to pay in full any principal or interest then due on the 2020 Bonds following any transfer to the Debt Service Fund first from the Distribution Fund, second from the Subordinated Indebtedness Fund and third from the Major Maintenance Reserve Fund. Any amount in the Debt Service Reserve Fund in excess of the Debt Service Reserve Fund Requirement by virtue of a decrease in the Debt Service Reserve Fund Requirement, calculated on a proportionate basis, shall, on the date of such decrease, be transferred to the appropriate account of the Debt Service Fund and credited against the payment of principal or Redemption Price of or interest on the 2020 Bonds secured thereby.

Operation and Maintenance Reserve Fund. On each Monthly Funding Date, the Trustee will deposit funds from the Revenue Fund to the Operation and Maintenance Reserve Fund so that the balance therein equals the Operation and Maintenance Reserve Fund Requirement. "Operation and Maintenance Reserve Fund Requirement" means an amount equal to six months of the actual Operation and Maintenance Expenditures expended during the immediately preceding Fiscal Year, as set forth in the Annual Budget for such Fiscal Year. The Authority is required to provide to the Trustee a Chief Financial Officer's Certificate, to be filed with the Trustee on or before October 31 of each Fiscal Year, beginning on or before October 31, 2020, stating the amount of the Operation and Maintenance Reserve Fund Requirement for such succeeding Fiscal Year.

Major Maintenance Reserve Fund. On each Quarterly Funding Date, the Trustee will deposit funds from the Revenue Fund to the Major Maintenance Reserve Fund so that the balance therein equals the Major Maintenance Reserve Fund Requirement. “Major Maintenance Reserve Fund Requirement” means \$7,500,000.

On each Monthly Funding Date (or any other date) on which costs and expenses relating to Capital Expenditures (specifically including Required Capital Improvements and Major Capital Improvements) are due and payable or reasonably expected to become due and payable prior to the next succeeding Monthly Funding Date, the Trustee will transfer monies on deposit in the Major Maintenance Reserve Fund to the Operation and Maintenance Expense Account to be used by the Authority to pay for such Capital Expenditures (specifically including Required Capital Improvements and Major Capital Improvements), but only to the extent such Capital Expenditures are not payable from the Project Fund.

The Trustee is required to apply amounts deposited in the Major Maintenance Reserve Fund from time to time in the following order of priority:

(i) to the extent that there is any deficiency in the Debt Service Fund on any Interest Payment Date in the amounts necessary to pay all interest due on the 2020 Bonds, the Existing Authority Bonds, any Parity Indebtedness, any Parity Reimbursement Obligation and any Parity Swap Payment on such date, and after any transfers to fund such deficiency have been made from the Distribution Fund and the Subordinated Indebtedness Fund, the amount of such deficiency will be transferred from the Major Maintenance Reserve Fund to the Debt Service Fund;

(ii) to the extent that there is any deficiency in the Debt Service Reserve Fund, and after any transfers to fund such deficiency have been made from the Distribution Fund and the Subordinated Indebtedness Fund, the amount of such deficiency will be transferred from the Major Maintenance Reserve Fund to the Debt Service Reserve Fund;

(iii) upon notification by the Authority that there is a deficiency in the funding of any required deposit to the Capex Fund to satisfy the Capex Fund Deposit Requirement and the amount of such deficiency, and after any transfers to fund such deficiency have been made from the Subordinated Indebtedness Fund and the Distribution Fund, the amount of such deficiency will be transferred from the Major Maintenance Reserve Fund to the Capex Fund; and

(iv) to the extent that there is any deficiency in the Debt Service Fund on any date in the amounts necessary to pay all principal or mandatory Redemption Price due on the 2020 Bonds, any Parity Indebtedness and any Parity Reimbursement Obligation or any fees on any Parity Indebtedness or Parity Reimbursement Obligation payable from the Debt Service Fund on such date, and after any transfers to fund such deficiency have been made from the Distribution Fund and the Subordinated Indebtedness Fund, the amount of such deficiency will be transferred from the Major Maintenance Reserve Fund to the Debt Service Fund.

Event Driven Capex Reserve Fund. On each Monthly Funding Date (or any other date) on which costs and expenses relating to an Event Driven Capital Improvement are due and payable or reasonably expected to become due and payable prior to the next succeeding Monthly Funding Date, monies on deposit in the Event Drive Capex Reserve Fund shall be transferred to the Operation and Maintenance Expense Account and used by the Authority to pay for such Event Driven Capital

Improvement in accordance with the Concession Agreement, but only to a maximum of \$750,000 for each such Event Drive Capital Improvement. Such transfer shall be accomplished by the Trustee upon receipt by the Authority of a requisition or certificate of the Authority: (i) stating the amount to be transferred, and (ii) certifying that the amount to be transferred is to pay costs and expenses relating to an Event Driven Capital Improvement.

The Trustee is required to apply amounts deposited in the Event Driven Capex Reserve Fund from time to time in the following order of priority:

(i) to the extent that there is any deficiency in the Debt Service Fund on any Interest Payment Date in the amounts necessary to pay all interest due on the 2020 Bonds, the Existing Authority Bonds,, any Additional Parity Indebtedness, any Parity Reimbursement Obligation and any Parity Swap Payment on such date, and after any transfers to fund such deficiency have been made from the Distribution Fund and the Subordinated Indebtedness Fund, the amount of such deficiency shall be transferred from the Event Driven Capex Reserve Fund to the Debt Service Fund;

(ii) to the extent that there is any deficiency in the Debt Service Reserve Fund, and after any transfers to fund such deficiency have been made from the Distribution Fund and the Subordinated Indebtedness Fund, the amount of such deficiency shall be transferred from the Event Driven Capex Reserve Fund to the Debt Service Reserve Fund;

(iii) upon notification by the Authority that there is a deficiency in the funding of any required deposit to the Capex Fund to satisfy the Capex Fund Deposit Requirement and the amount of such deficiency, and after any transfers to fund such deficiency have been made from the Subordinated Indebtedness Fund and the Distribution Fund, the amount of such deficiency shall be transferred from the Event Driven Capex Reserve Fund to the Capex Fund; and

(iv) to the extent that there is any deficiency on any date in the amounts necessary to pay all principal or mandatory Redemption Price due on the Bonds, any Additional Parity Indebtedness and any Parity Reimbursement Obligation or any fees on any Additional Parity Indebtedness or Parity Reimbursement Obligation payable from the Debt Service Fund on such date, and after any transfers to fund such deficiency have been made from the Distribution Fund and the Subordinated Indebtedness Fund, the amount of such deficiency shall be transferred from the Event Driven Capex Reserve Fund to the Debt Service Fund.

Sewer Collection System Improvement Fund. On each Monthly Funding Date (or any other date) on which costs and expenses relating to a Sewer Collection System Capital Improvement are due and payable or reasonably expected to become due and payable prior to the next succeeding Monthly Funding Date, monies on deposit in the Sewer Collection System Improvement Fund shall be transferred to the Operation and Maintenance Expense Account and used by the Authority to pay for such Sewer Collection System Capital Improvement in accordance with the Concession Agreement. Such transfer shall be accomplished by the Trustee upon receipt by the Authority of a requisition or certificate of the Authority: (i) stating the amount to be transferred, and (ii) certifying that the amount to be transferred is to pay costs and expenses relating to a Sewer Collection System Capital Improvement.

The Trustee is required to apply amounts deposited in the Sewer Collection System Improvement Fund from time to time in the following order of priority:

(i) to the extent that there is any deficiency in the Debt Service Fund on any Interest Payment Date in the amounts necessary to pay all interest due on the Bonds, the Existing Authority Bonds, any Additional Parity Indebtedness, any Parity Reimbursement Obligation and any Parity Swap Payment on such date, and after any transfers to fund such deficiency have been made from the Distribution Fund and the Subordinated Indebtedness Fund, the amount of such deficiency shall be transferred from the Sewer Collection System Improvement Fund to the Debt Service Fund;

(ii) to the extent that there is any deficiency in the Debt Service Reserve Fund, and after any transfers to fund such deficiency have been made from the Distribution Fund and the Subordinated Indebtedness Fund, the amount of such deficiency shall be transferred from the Sewer Collection System Improvement Fund to the Debt Service Reserve Fund;

(iii) upon notification by the Authority that there is a deficiency in the funding of any required deposit to the Capex Fund to satisfy the Capex Fund Deposit Requirement and the amount of such deficiency, and after any transfers to fund such deficiency have been made from the Subordinated Indebtedness Fund and the Distribution Fund, the amount of such deficiency shall be transferred from the Sewer Collection System Improvement Fund to the Capex Fund; and

(iv) to the extent that there is any deficiency on any date in the amounts necessary to pay all principal or mandatory Redemption Price due on the Bonds, any Additional Parity Indebtedness and any Parity Reimbursement Obligation or any fees on any Additional Parity Indebtedness or Parity Reimbursement Obligation payable from the Debt Service Fund on such date, and after any transfers to fund such deficiency have been made from the Distribution Fund and the Subordinated Indebtedness Fund, the amount of such deficiency shall be transferred from the Sewer Collection System Improvement Fund to the Debt Service Fund.

Subordinated Indebtedness Fund. The Trustee is required to apply amounts deposited in the Subordinated Indebtedness Fund from time to time in the following order of priority:

(i) to the extent that there is any deficiency in the Debt Service Fund on any Interest Payment Date in the amounts necessary to pay all interest due on the 2020 Bonds, the Existing Authority Bonds, any Parity Indebtedness, any Parity Reimbursement Obligation and any Parity Swap Payment on such date, and after any transfers to fund such deficiency have been made from the Distribution Fund, the amount of such deficiency will be transferred from the Subordinated Indebtedness Fund to the Debt Service Fund;

(ii) to the extent that there is any deficiency in the Operation and Maintenance Reserve Fund, and after any transfers to fund such deficiency have been made from the Distribution Fund, the amount of such deficiency will be transferred from the Subordinated Indebtedness Fund to the Operation and Maintenance Reserve Fund;

(iii) to the extent that there is any deficiency in the Debt Service Reserve Fund, and after any transfers to fund such deficiency have been made from the Distribution Fund, the amount of such deficiency will be transferred from the Subordinated Indebtedness Fund to the Debt Service Reserve Fund;

(iv) upon notification by the Authority that there is a deficiency in the funding of any required deposit to the Capex Fund to satisfy the Capex Fund Deposit Requirement and the amount of such deficiency, and after any transfers to fund such deficiency have been made from the Distribution Fund, the amount of such deficiency will be transferred from the Subordinated Indebtedness Fund to the Capex Fund; and

(v) to the extent that there is any deficiency on any date in the amounts necessary to pay all principal or mandatory Redemption Price due on the 2020 Bonds, any Parity Indebtedness and any Parity Reimbursement Obligation or any fees on any Parity Indebtedness or Parity Reimbursement Obligation payable from the Debt Service Fund on such date, and after any transfers to fund such deficiency have been made from the Distribution Fund, the amount of such deficiency will be transferred from the Subordinated Indebtedness Fund to the Debt Service Fund.

Following the transfers described above, the Trustee is required to transfer, pro rata, to the holder of any Subordinated Indebtedness (or any paying agent of such holder) and to the holder of any Reimbursement Obligation, the principal, interest and fees coming due on such Subordinated Indebtedness or such Reimbursement Obligation and the Swap Termination Payment coming due to such Swap Counterparty, in each case on the day on which such principal, interest, fees or Swap Termination Payment is due and payable.

Distribution Fund. The Trustee will fund the Distribution Fund provided that the following conditions (the “Distribution Conditions”) have been satisfied: (i) all transfers and distributions required under the Indenture have been satisfied in full, (ii) no Event of Default under the Indenture or Concessionaire Default has occurred and is continuing or would occur as a direct result of the proposed transfer of funds to the Distribution Fund, (iii) the Trustee has received a Consulting Engineers’ Certificate stating that the estimated Concession Revenues, together with money otherwise estimated to be available under the provisions of the Indenture, will be sufficient in such Fiscal Year to meet the Rate Covenant, (iv) the Debt Service Reserve Fund, the Operation and Maintenance Reserve Fund and the Major Maintenance Reserve Fund have been funded in amounts equal to the Debt Service Reserve Fund Requirement, Operation and Maintenance Reserve Fund Requirement and the Major Maintenance Reserve Fund Requirement, respectively, (v) the Capex Fund is funded in such amounts as required by the requirements of the Concession Agreement and the Indenture and (vi) the City Payment Reserve Fund is funded to the City Payment Reserve Requirement.

The Trustee is required to apply amounts deposited in the Distribution Fund from time to time in the following order of priority:

(i) to the extent that there is any deficiency in the Debt Service Fund on any Interest Payment Date in the amounts necessary to pay all interest due on the 2020 Bonds, the Existing Authority Bonds, any Parity Indebtedness, any Parity Reimbursement Obligation and any Parity Swap Payment on such date, the amount of such deficiency will be transferred from the Distribution Fund to the Debt Service Fund;

(ii) to the extent that there is any deficiency on any date in the amounts necessary to pay all principal or mandatory Redemption Price due on the 2020 Bonds, any Parity Indebtedness and any Parity Reimbursement Obligation or any fees on any Parity Indebtedness or Parity Reimbursement Obligation payable from the Debt Service Fund on such date, the amount of such deficiency will be transferred from the Distribution Fund to the Debt Service Fund;

(iii) upon notification by the Authority of a deficiency in the funding of any required deposit to the City Payment Reserve Fund to satisfy the City Payment Reserve Requirement and the amount of such deficiency, such deficiency will be transferred from the Distribution Fund to the City Payment Reserve Fund;

(iv) to the extent there is any deficiency in the Operation and Maintenance Reserve Fund, the amount of such deficiency will be transferred from the Distribution Fund to the Operation and Maintenance Reserve Fund;

(v) to the extent there is any deficiency in the Debt Service Reserve Fund, the amount of such deficiency will be transferred from the Distribution Fund to the Debt Service Reserve Fund;

(vi) to the extent there is any deficiency in the Major Maintenance Reserve Fund, the amount of such deficiency will be transferred from the Distribution Fund to the Major Maintenance Reserve Fund;

(vii) upon notification by the Authority of a deficiency in the funding of any required deposit to the Capex Fund to satisfy the Capex Fund Deposit Requirement and the amount of such deficiency, such deficiency will be transferred from the Distribution Fund to the Capex Fund; and

(viii) to the extent that there is any deficiency on the date in the amounts necessary to pay Subordinated Indebtedness (or any paying agent of such holder) and to pay the holder of any Reimbursement Obligation, the principal, interest and fees coming due on such Subordinated Indebtedness or such Reimbursement Obligation and the Swap Termination Payment coming due to such Swap Counterparty, in each case on the day on which such principal, interest, fees or Swap Termination Payment is due and payable on such date, the amount of such deficiency will be transferred from the Distribution Fund to the Subordinated Indebtedness Fund.

Following any transfers described above, the Authority may withdraw funds on deposit in the Distribution Fund on a semi-annual basis (and on a date which constitutes a Semi-Annual Funding Date) to any account as directed by the Authority to the Trustee in writing, free and clear of the lien of the Indenture, provided that all of the Distribution Conditions have been satisfied as of such Semi-Annual Funding Date.

Project Fund. On each Monthly Funding Date (or any other date) on which costs and expenses relating to the undertaking of the Capex Plan are due and payable or reasonably expected to become due and payable prior to the next succeeding Monthly Funding Date, the Trustee will disburse moneys in the Project Fund upon delivery by the Authority of a requisition or certificate.

Loss Proceeds Fund. The Authority agrees in the Indenture that all Loss Proceeds received by the Authority (other than business income or casualty loss proceeds involving a casualty loss of less than \$2,000,000, which are to be paid directly to the Revenue Fund) will be transferred to the Trustee for deposit in the Loss Proceeds Fund. The Trustee may withdraw amounts on deposit in the Loss Proceeds Fund in the following order of priority: (i) to the Authority to pay the costs of any restoration of the Concessioned System or any portion thereof, (ii) to the Redemption Fund for the extraordinary redemption of the 2020 Bonds (see “THE 2020 BONDS – Redemption – Extraordinary Redemption”) and (iii) to the Revenue Fund.

CERTAIN INVESTMENT RISKS

The purchase and ownership of the 2020 Bonds involve investment risks and may not be suitable for all investors. The factors set forth below, among others, may affect the security for the 2020 Bonds.

Limited Recourse

The 2020 Bonds are special, limited obligations of the Authority payable solely from, and secured solely by a first lien on and pledge of the Trust Estate. The Authority has not mortgaged, assigned or pledged any interest in any real or personal property or improvements comprising the Concessioned System as security for payment of the 2020 Bonds. See “SECURITY AND SOURCES OF PAYMENT FOR THE 2020 BONDS – Limited Obligations.” The Authority owns and operates the Existing LCA System, but none of the assets or revenues of the Existing LCA System are pledged as security for the 2020 Bonds.

The 2020 Bonds are special limited obligations of the Authority. None of the County of Lehigh, the City of Allentown, the Commonwealth of Pennsylvania, or any political subdivision thereof is obligated to pay the principal, redemption premium, if any, or interest on the 2020 Bonds, and neither the full faith, credit nor taxing power of the County of Lehigh, the City of Allentown nor the Commonwealth of Pennsylvania or any other political subdivision thereof is pledged to such payment. The Authority has no taxing power.

The City of Allentown

City Payment Obligations. The Concession Agreement contains provisions requiring the City to meet material financial commitments to the Authority and in certain circumstances to provide Concession Compensation, Termination Compensation or contract indemnification payments. The City is not required to set aside funds from the large up-front payment made to it by the Authority under the Concession Agreement to support the financial commitments of the City to the Authority under the Concession Agreement, including the City’s obligations to fund the costs of the Administrative Order Project or the other components of the Uncompleted Work. However, under the Concession Agreement, the City is obligated to fund the Administrative Order Fund in order to finance the Administrative Order Project and to fund other Uncompleted Work, the costs of which the City is obligated to pay under the Concession Agreement.

The City’s payment obligations under the Concession Agreement, including Concession Compensation, AA-Compensation and Termination Compensation are subject to the Laws of the Commonwealth regarding the appropriation of public funds. Subject to applicable Law (including the Pennsylvania Local Government Unit Debt Act), the City has covenanted to use its “best efforts” to lease City assets or to borrow funds, in order to finance any obligation to pay any amounts due and payable to the Authority under the Concession Agreement. “Best efforts” means all legally permissible actions that a prudent person, acting in good faith and desirous of achieving the result, would use to achieve that result as expeditiously as possible, including expeditiously undertaking and diligently prosecuting any applications or submissions required to obtain necessary approvals from any other Governmental Authority or Person. However, in those instances where the City’s obligation to pay requires the approval of City Council, no assurances can be given that City Council will vote to approve such payment, or to approve it in the amount requested.

The City reserves all rights pursuant to its sovereign immunity, including non-liability of public officials and limits of liability as to damages on account of any injury to a person or property pursuant to the Pennsylvania Political Subdivisions Tort Claims Act.

Municipal Service Agreements. Because the City has determined not to assign its rights and responsibilities under the Municipal Service Agreements to the Authority, the Authority does not have a direct contractual relationship with each Municipal Customer. However, the City has agreed to enforce its rights under each Municipal Service Agreement, including its right to collect Service Charges via utility services provided to Municipal Customers through the Concessioned System. The City has also agreed not to waive any of its material rights or claims to affirmatively enforce its rights under the Municipal Service Agreement and not to amend a Municipal Service Agreement in a manner that would affect the Concessionaire's Interest without the prior consent of the Authority. Nevertheless, no assurances can be given that the City will exercise its rights under the Municipal Service Agreements in the same manner as the Authority would have were they assigned to the Authority. The City and the Authority will enter into the Services Agreement, pursuant to which the Authority will bill and collect Revenues from the Municipal Service Agreements, remit the Municipal Customer Share of Annual Debt Service portion of those payments to the City and remit the balance to the Trustee for deposit in accordance with the Indenture.

City Payment Reserve Fund. The City has reserved the right to make the Authority stop operating the Concessioned System unless the City Payment Reserve Fund is funded to the City Payment Reserve Requirement of \$500,000 annually, adjusted each year for increases in inflation. The Concession Agreement requires that a separate "City Payment Reserve Fund" be established in an amount equal to the Annual City Payment. Monies in the City Payment Reserve Fund are held outside the lien of the Indenture and are available to pay the Annual City Payment to the extent the Authority does not make such payment in a timely manner. See "CONCESSION AGREEMENT – Annual City Payment; City Payment Reserve Fund" for a description of the City Payment Reserve Fund and the City Payment Reserve Requirement.

City Approvals. The Concession Agreement provides that the City's approval must be obtained in connection with several activities, including design and construction of Major Capital Improvements, changes in the Operating Standards, and modifications in insurance requirements. Generally, when a matter is properly presented to the City for its approval or consent, the City may not unreasonably withhold, condition or delay that consent or approval, unless it is specifically permitted to do so in its discretion. Where an approval is particularly material to the operation of the Concessioned System, the Concession Agreement often provides for specific limits on the City's discretion. For example, the City is subject to a "good faith" standard in negotiating and approving Capital Cost Recovery Charges.

The Concession Agreement provides that other than the approval of a proposed Transferee of the Concessionaire Interest (which would require City Council approval), whenever the City's approval or consent is required, such approval or consent may be given by the Mayor of the City without further action by City Council.

Although the Concession Agreement provides that the Authority may contest the City's failure to grant an approval or consent through mediation, technical arbitration and binding arbitration, no assurances can be given as to the outcome of any mediation or arbitration process or as to how long the process will take. Moreover, if a tribunal of competent jurisdiction determines that the arbitration provisions set forth in the Concession Agreement cannot be used because of a constraint arising out of sovereign immunity or lack of jurisdiction, then the dispute in question must be presented to the courts for resolution.

Governmental Actions; Environmental Matters

Permits. The City currently has the approvals and permits for operating the Concessioned System from all Government Authorities. As described above in “GOVERNMENTAL REGULATION OF THE CONCESSIONED SYSTEM – Permits and Approvals,” the City and the Authority currently intend to leave the City in place as permittee under all of the permits for the Concessioned System and to obtain confirmation from the PADEP and the DRBC that the Authority, as concessionaire under the Concession Agreement, will have the authority to operate and maintain the Concessioned System under Law even though the Permits and approvals to do so will continue to be held by the City.

The Authority, on behalf of the City, is required to obtain, comply with, promptly renew and maintain in good standing all Permits, licenses, registrations, or other requirements reasonably required from time to time for operation of the Concessioned System. The City is required to sign those permit renewals so long as it remains the permittee on such permit.

Hazardous Substances. System Operations are subject to all applicable federal and state environmental laws and regulations. In the Concession Agreement, the City has assumed responsibility and liability for (i) any Hazardous Substances existing at the Acquisition Date that during the Term has a Material Adverse Effect on System Operations or System Concession Value; (ii) the Administrative Order Project; and (iii) violations arising under any Environmental Law and solely related to (A) the ownership, operation or condition of the Concessioned System at any time prior to the Acquisition Date or (B) any Hazardous Substance contaminant that was released at, on, under or from the Concessioned System at any time prior to the Acquisition Date. However, the City’s representations and warranties in the Concession Agreement with respect to environmental issues expire twenty-four months after the Acquisition Date unless a bona fide notice of claim is filed prior to the expiration of the two year period. Additionally, no indemnification for breach of a City representation or warranty related to environmental matters can be claimed until aggregate Losses exceed \$2,000,000 (the “deductible”) and then only for the excess. Each instance of indemnifiable Loss related to environmental matters in excess of the “deductible” is subject to a “basket” of \$10,000. All City indemnities related to environmental matters are subject to an aggregate cap of \$110,000,000. See “CONCESSION AGREEMENT – Expiration of and Financial Limitations on Representations and Warranties.” The Authority is responsible for all other costs and expenses relating to Hazardous Substances.

Future Governmental Actions. Federal, Commonwealth and local statutory and regulatory requirements (including requirements to obtain governmental actions) applicable to the operation of the Concessioned System are subject to change, and no assurances can be given that the Authority will be able to comply with such changes. Delay in obtaining or failure to obtain and maintain in full force and effect any such Permits and other governmental actions, or delay or failure to satisfy any such conditions, and/or result in additional costs or reduced Revenues. Further, there can be no assurance that: (i) existing Laws will not be revised or reinterpreted; (ii) new Laws will not be adopted or become applicable to the Concessioned System; (iii) the technology and equipment selected by the Authority to comply with current and future Laws will be implemented in a timely fashion or will meet such requirements upon implementation; or (iv) the Authority’s business and financial condition will not be materially and adversely affected by future changes in or reinterpretation of Laws. Any such new requirements could materially increase the cost of operating the Concessioned System or might impose additional capital costs on the Concessioned System, which could have a negative impact on the Authority’s cash flow.

The Concession Agreement permits the Schedule of Service Charges to be adjusted annually to account for any Change of Law in order to reflect any costs related to the Concessioned System incurred by the Authority, as may be reasonably agreed to by the City and the Authority. However, to the extent a Change of Law requires a Major Capital Improvement or other capital improvements to the Concessioned

System, the Authority may be required to provide financing for such costs in the first instance, even though the Concession Agreement generally permits those costs to be recovered through special Service Charges. See “CERTAIN INVESTMENT RISKS – Financial Risks – Authority’s Responsibility to Raise Capital and Limits on Borrowing for Future Capital Expenditures” for a description of certain risks relating to the Authority’s ability to raise such financing. For a discussion of certain environmental permitting and regulatory issues relating to the Concession System, see “GOVERNMENTAL REGULATION OF THE CONCESSIONED SYSTEM”.

Operating Risks

General. As with any water and sewer system of this size and nature, operation of the Concession System could be affected by many factors, including the breakdown or failure of equipment or processes, the performance of the Concession System below expected levels of efficiency, failure to operate at design specification, failure by third parties to perform their obligations under the Concession Agreement or the Major System Documents (whether or not excused by force majeure), labor disputes and catastrophic events including fires, explosions, costs of supplies or services not under contract, earthquakes, droughts, extreme weather conditions, changes in law, delays in receipt of or failure to obtain or maintain necessary permits, government exercise of eminent domain power or similar events. The occurrence of such events could significantly reduce Revenues and/or significantly increase the costs of operating the Concession System, thereby jeopardizing the ability of the Concession System to generate Revenues sufficient to make timely payments of debt service on the 2020 Bonds. While the Authority is required to maintain certain insurance coverages, including business interruption insurance, to protect against certain of these operating risks, the proceeds of such insurance and warranties may not be adequate to cover Concession System lost revenues or increased costs, and such insurance may not be available on commercially reasonable terms. See “CONCESSION AGREEMENT – Insurance.”

Water Quality Risks. In the Concession Agreement, the City has agreed to provide Raw Water to the Authority that meets the Raw Water Specifications. The City has not made any other representations or warranties regarding Raw Water including, without limitation, its treatability by the Water Plant and Distribution System, its chemical and physical characteristics, temperature, and the presence of pollutants or Hazardous Substances.

If one or more sources of the City’s Raw Water delivered to the Authority do not meet the Raw Water specifications set forth in the Concession Agreement, the Authority is required to take all appropriate mitigation and treatment actions in accordance with prudent industry practices and the Operating Standards previously used by the City. The Concession Agreement does provide that, if the Authority is required to secure a replacement source of Raw Water when Raw Water from the Retained Water Supply System does not meet the Raw Water Specifications, the Authority is entitled to recover its Costs incurred in replacement sources of water and to treat Raw Water that does not meet specifications. No assurances can be given that sufficient quantities of water will be available to do so, and no assurances can be given that the Authority will be able to find a replacement source of Raw Water that meets the Raw Water Specifications.

Collection Risks. The Authority is responsible for the collection of all Service Charges including (as agent for the City) those levied under the Municipal Service Agreements. In the Concession Agreement, the City agrees to assist and cooperate with the Authority in such collection and in the enforcement of Service Charges to the extent the City may be authorized by law to provide such assistance or cooperation. Any costs the City incurs in cooperating in the collection and enforcement of Service Charges on behalf of the Authority will be at the Authority’s sole cost and the Authority is required to reimburse the City for its costs.

The risk of enforcement and collection of Service Charges remains with the Authority under the Concession Agreement. The City has agreed to assist and cooperate with the Authority to collect and enforce Service Charges to the extent that the City may be authorized by Law to provide such assistance or cooperation.

Financial Risks

Authority's Responsibility to Raise Capital. In certain instances, the Authority may be required to provide capital to pay the costs of compliance with or implementation of: (i) a modified or additional Operating Standard to comply with any new Law or Change of Law (other than a City-enacted new Law or Change of Law) prior to recouping the costs of compliance through adjustments to Service Charges to retail customers and Municipal Customer;; (ii) a modified or additional Operating Standard to conform with generally adopted standards or practices prior to negotiating with the City to reduce the impact of any increased costs and expenses to the Authority associated with such modified or additional Operating Standard; and (iii) a Directive, a Compensation Event or a modified or additional Operating Standard other than as described in clauses (i) and (ii) above prior to recouping the costs of compliance through Concession Compensation. In order to issue Additional Bonds or Parity Indebtedness, the Authority is required to satisfy certain debt service coverage and other tests, as described in greater detail above in "SECURITY AND SOURCES OF PAYMENT FOR THE 2020 BONDS – Additional Bonds and Other Indebtedness." It cannot be determined at this time whether the Authority will have sufficient Revenues to pay for such costs without incurring debt, and if the Authority needs to incur debt, whether it will be able to do so at favorable terms or at all.

Limits on Borrowing for Future Capital Expenditures. Under the Concession Agreement, generally any indebtedness other than Leasehold Mortgage Debt may not be secured by liens and encumbrances on the Concession Interest and System Revenues. The 2020 Bonds will be considered Leasehold Mortgage Debt, but future indebtedness, including indebtedness acquired to fund capital improvements to the Concession System, will have to pass an appraisal test to be so characterized. Under the Concession Agreement in order to qualify new debt as Leasehold Mortgage Debt, the Authority will have to procure an independent Written Appraisal of the Concession System indicating (after giving effect to the incurrence or commitment of any such new debt) that the Concession System's total debt load is not in excess of 80% of the fair market value of the Concessionaire Interest set forth in the Written Appraisal at the time of incurrence or commitment of the new debt. No assurances can be given that the Authority will be able to make such a demonstration for a considerable period of time, and therefore the ability of the Authority to meet its responsibilities to fund capital expenditures should be evaluated on the basis of the adequacy of reserve funds and the likelihood of the availability of projected Revenue surpluses available to the Authority for capital expenditures. The Authority may issue subordinated indebtedness to fund capital improvements to the Concession System. However, it is not possible at this time to predict what terms such subordinated debt may contain, or whether there will be a market for such subordinated debt at all.

Limits on Termination Compensation. The Authority may exercise its right to terminate the Concession Agreement in accordance with its terms upon: the occurrence of an Adverse Action by the City; the occurrence of an uncured City Default; and any other termination, cancellation, rescission or action by the City to void the Concession Agreement other than in accordance with its terms. Upon a termination described in the preceding sentence, the City is required to pay Termination Compensation plus, without duplication, reasonable out-of-pocket costs and other documented costs and expenses incurred by the Authority as a result of such termination.

"Termination Compensation" is equal to the greater of (i) the System Concession Value (generally, the fair market value of the Concessionaire Interest at the time of the relevant action triggering

the termination payment obligation) and (ii) the lesser of (A) the amount required to retire all Leasehold Mortgage Debt and (B) the sum of all Remaining Amortized Rent.

Both the Authority and the City acknowledge that the 2020 Bonds are “Leasehold Mortgage Debt” for purposes of the Concession Agreement. The Termination Compensation provisions above set out the maximum amount of Leasehold Mortgage Debt (such as the 2013 Bonds) that the City is obligated to pay in any year in which the Concession Agreement is terminated in the circumstances described above.

As of the Acquisition Date, Termination Compensation as calculated above is sufficient to pay the principal of the 2020 Bonds upon a termination in any year while the 2020 Bonds remain outstanding. However, there are no provisions in the Concession Agreement that require an increase in the Termination Compensation calculation solely due to the issuance of any additional debt or other obligations by the Authority with respect to the Concessioned System, even additional Leasehold Mortgage Debt. Consequently, the Authority may be restricted in its ability to fund the payment of capital costs and other obligations under the Concession Agreement with respect to the Concessioned System through the issuance of Parity Indebtedness that is also Leasehold Mortgage Debt. As a result of this debt limitation, the Authority is planning to accumulate Revenues, as opposed to relying primarily on additional debt, to provide for capital costs and other costs of operating the Concessioned System or issue Subordinated Indebtedness as described in “SECURITY AND SOURCES OF PAYMENT FOR THE 2020 BONDS – Additional Bonds and Other Indebtedness – Subordinated Indebtedness.” See “FLOW OF FUNDS” for a designation of the provisions of the Indenture requiring deposits into the Operation and Maintenance Reserve Fund, the Major Maintenance Reserve Fund and the Capex Fund. However, no assurances can be given that any Revenues accumulated by the Authority will be sufficient to pay such costs.

Force Majeure and Adequacy of Insurance

The Concessioned System is at risk from Force Majeure events such as an intervening act of God or public enemy, water shortage, flooding, earthquake, or other natural disaster, war, act of terror, sabotage, civil commotions, interference by civil or military authorities, condemnation or confiscation of property or equipment by any Governmental Authority, nuclear or other explosion, radioactive or chemical contamination, fire, subsurface condition, public disorder, epidemic, quarantine restriction, strike, labor dispute or other labor protest, stop-work order or injunction issued by a Governmental Authority or governmental embargo.

The Concession Agreement requires that, if the Concessioned System is damaged or destroyed in whole or in part by a casualty event, then the net insurance proceeds (other than proceeds less than \$2 million) are required to be deposited with the Trustee, as depositary and held outside of the lien of the Indenture. The Concession Agreement further provides that any such proceeds will be applied to the restoration of the Concessioned System and that the Authority must fund any shortfall if the amount of insurance proceeds is insufficient to restore the Concessioned System. The Concession Agreement does not provide that the insurance proceeds may be applied to redeem the 2020 Bonds. See “CONCESSION AGREEMENT – Restoration.”

Risks Related to Collateral

It may be difficult to realize the value of the Trust Estate, and the proceeds received from a sale of the Trust Estate may be insufficient to repay the 2020 Bonds. Foreclosure on the Trust Estate on the Holders’ behalf may be subject to perfection and priority issues, to the need for third party approvals and consents and to practical problems associated with the realization of the Holders’ security interest in the

Trust Estate. The enforcement of the security interest with respect to the Trust Estate may not provide sufficient funds to repay all amounts due on the 2020 Bonds.

In addition, because the Authority's principal asset is the Concessionaire Interest (i.e., its rights under the Concession Agreement), there are practical limitations on the exercise of remedies in respect thereof. Under the Consent Agreement, any assignment of the Authority's rights and obligations under the Concession Agreement is subject to the prior approval of the City, which approval may only be withheld by the City if the proposed substitute is not a qualified substitute concessionaire or, under certain circumstances, if certain breaches of the Concession Agreement have not been remedied or waived. Thus, as a practical matter, the Authority's creditors (including the Holders of the 2020 Bonds) will have certain limitations on their ability to replace the Authority as the concessionaire under the Concession Agreement.

Limitations on Enforceability

Upon a default under the Concession Agreement or the Indenture, the remedies available to the Authority, the City or the Trustee may depend upon judicial actions that may be subject to substantial discretion and delay. Some of these remedies in fact may turn out not to be enforceable at all. The rights of the Holders of the 2020 Bonds and the enforceability of the Authority's obligations may be subject to the exercise of judicial discretion under a variety of circumstances in various jurisdictions. The enforceability of governmental obligations also is subject to constitutional, statutory and public policy limitations and to other considerations that do not limit enforcement of obligations of private parties. The City makes a number of agreements in the Concession Agreement that are for the benefit of lenders such as the Holders of the 2020 Bonds, but no assurances can be given that a court exercising its judicial discretion will always enforce such provisions.

Bankruptcy-Related Risks

Authority. Currently, Pennsylvania Law does not permit a municipal authority like the Authority to file bankruptcy, insolvency or similar proceedings. However, that restriction could be changed at any time when the 2020 Bonds are outstanding. If the Authority were to enter bankruptcy, the Trustee and the Holders of the 2020 Bonds could be prohibited from taking any action to enforce the Concession Agreement or any other applicable transaction document against the Authority without the permission of the bankruptcy court. In addition, with the authorization of the bankruptcy court, the Authority may be able to reject any transaction document to which it is a party. That rejection would excuse the Authority from performing its obligations (including payment obligations) under the applicable transaction document, and any right under that document that has been assigned to the Trustee may be limited or terminated. That rejection also could excuse the other parties to the applicable transaction document from performing their obligations. The Holders of the 2020 Bonds may be required to return payments already received if the Authority were to become a debtor in a bankruptcy case, and the Authority as a debtor in possession or the bankruptcy trustee of the Authority may be able to restructure its obligations under the Indenture.

In addition, regardless of the terms of the Indenture or any other applicable transaction document, and regardless of the instructions of those authorized to direct the Authority's or the Trustee's actions, the filing of a bankruptcy petition creates an "automatic stay" that enjoins litigation against the bankrupt Authority and other efforts by creditors to enforce their claims or to enforce their lien on the assets of the bankrupt party, pending further order of the bankruptcy court. As a secured creditor, however, the Holders of the 2020 Bonds would nonetheless be entitled to "adequate protection" of their security interest against a decrease in the value of the collateral or any proposed use of or priming lien on the collateral. Such adequate protection may take the form of (among other things) periodic cash payments,

additional liens, or such other relief as will result in the realization of the “indubitable equivalent” of the Holders’ interests in the pledged assets.

Although the Authority may be able to confirm a plan that modifies the terms of the 2020 Bonds, if the Holders of the 2020 Bonds, as a class, vote to reject a plan and object to confirmation of a plan, the plan cannot be confirmed unless the plan (1) allows the Holders of the 2020 Bonds to retain their lien on the assets that secure their claim and makes payments to the Holders of the 2020 Bonds equal to the total value of such assets that secure their claim, as of the effective date of the plan; or (2) proposes to sell the assets that secure the Holders of the 2020 Bonds, subject to the rights of the Holders of the 2020 Bonds, if any, to bid on their claim at the sale, and provided that the lien of the Holders of the 2020 Bonds will attach to the proceeds of the sale; or (3) provides for the Holders of the 2020 Bonds to receive what the bankruptcy court determines to be the indubitable equivalent of their claim.

Regardless of any decision made by a court, the fact that a bankruptcy case has been commenced by or against the Authority could have an adverse effect on the liquidity and value of the 2020 Bonds.

City. Under Pennsylvania Law, municipalities such as the City are permitted to file bankruptcy proceedings, subject to certain exceptions. Were the City to file a bankruptcy, insolvency or similar proceeding, the same kinds of considerations described above under “– Authority” would come into play and, regardless of any decision made by a court, the fact that a bankruptcy case has been commenced by or against the City could have an adverse effect on the liquidity and value of the 2020 Bonds.

Risks Relating to Market Liquidity for the 2020 Bonds

Prior to this offering of the 2020 Bonds, no market existed for the 2020 Bonds. The Authority has been informed by the Underwriters that it intends to make a market in the 2020 Bonds after the completion of this offering; however, the Underwriters are not required to make a market in the 2020 Bonds, and they may cease market-making at any time without notice. The Authority cannot assure potential investors that an active market for the 2020 Bonds will develop. Even if a market for the 2020 Bonds does develop, depending on prevailing interest rates and market conditions generally, the 2020 Bonds could trade at a discount from their initial offering price. Holders of the 2020 Bonds may not be able to sell their 2020 Bonds in the future or such sale may not be at a price equal to or greater than the initial offering price of the 2020 Bonds. As a result, Holders of the 2020 Bonds may not be able to liquidate their investment quickly or to liquidate it at an attractive price or at all.

TAX MATTERS

Federal Income Tax Treatment

Interest on the 2020 Bonds is not excludable from gross income for federal income tax purposes.

The Internal Revenue Code of 1986, as amended, contains a number of provisions relating to the taxation of securities such as the 2020 Bonds, including, but not limited to, tax treatment and accounting for interest, premium and original issue discount thereon, gain from the sale, exchange or other disposition thereof, withholding tax on income therefrom and the 3.8% Net Investment Income Tax or “Medicare Tax” imposed for taxable years beginning after December 31, 2012 under the Health Care and Education Reconciliation Act of 2010. Such provisions may affect the taxation of certain owners of the Bonds, depending on their particular tax situations.

BOND COUNSEL WILL NOT DELIVER ANY OPINION WITH RESPECT TO ANY FEDERAL TAX CONSEQUENCES OF OWNERSHIP OF THE 2020 BONDS, AND WILL NOT

DELIVER ANY OPINION AS TO STATE OR LOCAL TAX CONSEQUENCES OF OWNERSHIP OF THE 2020 BONDS EXCEPT FOR THE MATTERS SET FORTH UNDER THE CAPTION “STATE TAX EXEMPTION” BELOW.

State Tax Exemption

Under the laws of the Commonwealth as presently enacted and construed, the interest on the 2020 Bonds is exempt from Pennsylvania personal income tax and Pennsylvania corporate net income tax.

The 2020 Bonds and the interest thereon may be subject to state or local taxes in jurisdictions other than the Commonwealth under applicable state or local tax laws.

Other

ALL PURCHASERS OF 2020 BONDS SHOULD CONSULT THEIR TAX ADVISORS REGARDING THE POSSIBLE FEDERAL, STATE AND LOCAL TAX CONSEQUENCES OF OWNERSHIP OF THE 2020 BONDS.

LITIGATION AND CLAIMS

Authority

There is no litigation now pending or, to the best of the Authority’s knowledge, threatened which (i) seeks to restrain or enjoin (A) the sale, execution, issuance or delivery of the 2020 Bonds or (B) the Authority’s continued status as the concessionaire for the Concessions System or the execution and delivery of the Concession Agreement and the System Agreements; (ii) in any way contests the validity of the 2020 Bonds or any proceedings of the Authority taken with respect to (A) the authorization, sale or issuance of the 2020 Bonds, (B) the pledge or application of any moneys provided for the payment of or security for the 2020 Bonds or (C) the 2020 Project; or (iii) materially affects the Authority’s obligations under the Indenture, the Concession Agreement or the 2020 Bonds. If such litigation is filed prior to the Acquisition Date, the pendency of such litigation might permit either or both parties to terminate the Concession Agreement without liability were an injunction to be issued.

The Authority is involved in several claims and lawsuits arising in the ordinary course of business. The Authority believes that any liability assessed against the Authority as a result of claims or lawsuits which are not covered by insurance would not materially adversely affect the financial condition of the Authority.

City

There is no litigation now pending or, to the best of the City’s knowledge, threatened which (i) seeks to restrain or enjoin the Authority’s continued status as the concessionaire or the execution and delivery of the Concession Agreement and the Major System Documents to which the City is a party; (ii) in any way contests any proceedings of the City taken with respect to the Concession Agreement; or (iii) materially affects the City’s obligations under the Concession Agreement or the Major System Documents.

UNDERWRITING

RBC Capital Markets, LLC, acting on behalf of itself and on behalf of Janney Montgomery Scott LLC (collectively, the “Underwriters”) has agreed, subject to certain conditions, to purchase the Bonds from the Authority at a purchase price of \$_____ (consisting of an aggregate principal amount of \$_____ less an underwriter’s discount of \$_____ plus/less a net original issue premium/discount of \$_____). The Underwriters’ obligation to purchase the Bonds is subject to certain conditions precedent; however, the Underwriters are obligated to purchase all such Bonds if any such Bonds are purchased. The Bonds may be offered and sold to certain dealers (including dealers depositing such Bonds into investment trusts) at prices lower than such public offering prices, and such public offering prices may be changed, from time to time, by the Underwriters.

The Underwriters have provided the following information for inclusion in this Official Statement: The Underwriters and their respective affiliates are full service financial institutions engaged in various activities, that may include securities trading, commercial and investment banking, municipal advisory, brokerage and asset management. In the ordinary course of business, the Underwriters and their respective affiliates may actively trade debt and if applicable equity securities (or related derivative securities) and provide financial instruments (which may include bank loans, credit support or interest rate swaps). The Underwriters and their respective affiliates may engage in transactions for their own accounts involving the securities and instruments made the subject of this securities offering or other offering of the Authority. The Underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and publish independent research views in respect of this securities offering or other offerings of the Authority. The Underwriters do not make a market in credit default swaps with respect to municipal securities at this time but may do so in the future.

FINANCIAL ADVISOR

The Authority has retained Concord Public Financial Advisors, Inc., Lancaster, Pennsylvania as financial advisor (the “Financial Advisor”) in connection with the preparation, authorization and issuance of the 2020 Bonds. The Financial Advisor is not obligated to undertake, and has not undertaken to make, an independent verification or to assume responsibility for the accuracy, completeness, or fairness of the information contained in the Official Statement. The Financial Advisor is an independent registered municipal advisory firm and is not engaged in the business of underwriting, trading, or distributing municipal securities or other public securities.

RATINGS

S&P Global Ratings (“Standard & Poor’s”) assigned its rating of “A” with a stable outlook to the 2020 Bonds. The 2020 Bonds are expected to be assigned the rating of “AA” (stable outlook) by Standard & Poor’s on the understanding that a municipal bond insurance policy insuring the timely payment of the principal and interest on the 2020 Bonds will be issued by BAM upon delivery of the 2020 Bonds. These ratings reflect only the views of Standard & Poor’s. Investors may obtain an explanation of the significance of the ratings from Standard & Poor’s, as follows:

Standard & Poor’s Rating Service
55 Water Street
New York, New York 100410
(212) 438-2400
www.standardandpoors.com

As part of the process of obtaining public ratings for the 2020 Bonds, the Authority submitted certain materials and other information and requested private “credit assessments/indicative ratings” from Standard & Poor’s and Moody’s Investors Service, Inc. (“Moody’s”). Based on the rating levels provided by the rating agencies approached in conjunction with ascertaining such private credit assessments/indicative ratings, the Authority selected Standard & Poor’s as providing the most favorable rating level to publicly rate the 2020 Bonds. Had the Authority selected Moody’s to rate the 2020 Bonds, there can be no assurance to the investors that a Moody’s rating would not have been materially less favorable than the Standard & Poor’s rating that the Authority selected.

Other credit rating agencies that the Authority has not engaged to rate the 2020 Bonds may nevertheless issue unsolicited credit ratings on the 2020 Bonds. If any such unsolicited ratings are issued, the Authority cannot assure you that they will not be different from those ratings assigned by Standard & Poor’s. The issuance of unsolicited ratings on the 2020 Bonds that are different from the ratings assigned by Standard & Poor’s may impact the value of the 2020 Bonds.

Although unsolicited ratings may be issued by any rating agency, a rating agency might be more likely to issue an unsolicited rating if it was not selected after having provided preliminary feedback to the Authority.

Generally, each rating agency bases its ratings on that information and on independent investigations, studies, and assumptions made by that rating agency. Investors have no assurance that ratings will continue for any given period of time or that they will not be revised downward or withdrawn entirely by a rating agency if, in the judgment of that rating agency, circumstances warrant the revision or withdrawal. Those circumstances may include, among other things, changes in or unavailability of information relating to the Authority, the City, the Concessed System or the 2020 Bonds being offered. Any downward revision or withdrawal of a rating may have an adverse effect on the market price of the 2020 Bonds.

The Authority undertakes no responsibility either to bring to the attention of the owners of the 2020 Bonds any downward revision or withdrawal of any rating obtained or to oppose any such revision or withdrawal.

INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS

The financial statements of the Authority as of December 31, 2019 and 2018 and for the years then ended, included in Appendix B of this Official Statement, have been audited by Zelenkofske Axelrod LLC, independent certified public accountants, as stated in their report appearing in Appendix B.

LEGAL MATTERS

All legal matters incident to the validity and enforceability of the 2020 Bonds are subject to the approval of McNees Wallace & Nurick LLC, Harrisburg, Pennsylvania, Bond Counsel. The substantially final text of the Bond Counsel opinion is attached as Appendix G. Certain legal matters will be passed upon for the Authority by its Solicitor, King, Spry, Herman, Freund & Faul LLC, Bethlehem, Pennsylvania and by its transaction counsel, McNees Wallace & Nurick LLC, Harrisburg, Pennsylvania, and for the Underwriters by Stevens & Lee, P.C., Reading, Pennsylvania.

INDEPENDENT ENGINEER

Malcolm Pirnie/ARCADIS U.S. Inc. is serving as the independent engineer to the Authority for the Concessed System, and is delivering its certificate in connection with the issuance of the

2020 Bonds in accordance with the Indenture. The Independent Engineer has not undertaken either to make an independent verification of or to assume responsibility for the accuracy or completeness of the information contained in this Official Statement, including the Appendices hereto.

APPRAISER

AUS Consultants (the “Appraiser”) will be providing a written appraisal of the fair market value of the Concessionaire Interest at the time of the issuance of the 2020 Bonds. The Appraiser has not undertaken either to make an independent verification of or to assume responsibility for the accuracy or completeness of the information contained in this Official Statement, including the Appendices hereto (other than Appendix A).

VERIFICATION OF MATHEMATICAL COMPUTATIONS

The accuracy of the mathematical computations of the adequacy of the maturing principal amounts of and interest on the investments held in escrow to pay the principal of and interest and any redemption premium on the Refunded 2013A Bonds when due and on the Redemption Date, will be verified solely as to mathematical accuracy by Zelenkofske Axelrod LLC, certified public accountants.

CONTINUING DISCLOSURE

The Authority has covenanted for the benefit of the owners of the 2020 Bonds to provide annually certain financial information and operating data concerning the Authority to the Electronic Municipal Market Access (“EMMA”) of the Municipal Securities Rulemaking Board (the “MSRB”) pursuant to the requirements of Rule 15c2-12 (the “Rule”) of the Securities and Exchange Commission (“SEC”). See Appendix H for the form of Continuing Disclosure Agreement.

The Authority has covenanted to provide such annual financial statements and other information in the manner required by the Rule of the SEC. The Authority is entering into a Continuing Disclosure Agreement with the Trustee (the “Continuing Disclosure Agreement”) for the benefit of the holders of the 2020 Bonds to provide certain financial information and operating data concerning the Authority to the MSRB pursuant to the requirements of the Rule. See Appendix H for the form of Continuing Disclosure Agreement. A failure by the Authority to provide any information required thereunder will not constitute an Event of Default under the Indenture.

Continuing Disclosure Filing History

Pursuant to the terms of the continuing disclosure agreements executed in connection with the issuance of its outstanding water and sewer revenue bonds, the Authority agreed to provide, among other things, (i) its annual audited financial statements (the “Annual Audit”); and (ii) an update of certain operating data related to the Concessions System (the “Operating Data”) to the MSRB through the EMMA following each fiscal year ending December 31.

The Authority failed to file, in a timely manner, its Annual Audit for the fiscal year ended December 31, 2015. Additionally, the Authority failed to file, in a timely manner, its Operating Data for the fiscal years ended December 31, 2015 through December 31, 2019. The Authority has filed notices that such information was not timely filed.

In an effort to augment the Authority’s procedures and policies to maintain future compliance, the Authority has taken additional steps intended to assure future compliance with the Rule by engaging Digital Assurance Certification LLC as dissemination agent.

CERTAIN RELATIONSHIPS

McNees Wallace & Nurick LLC is acting as Bond Counsel and as Transaction Counsel to the Authority in this transaction, and also acts as counsel to RBC Capital Markets LLC and Manufacturers and Traders Trust Company from time to time on unrelated matters.

MISCELLANEOUS

The Appendices are integral parts of this Official Statement and must be read together with all other parts of this Official Statement. The description of the Indenture does not purport to be comprehensive or definitive, and prospective purchasers of the 2020 Bonds are referred to the Indenture for the complete terms thereof. During the offering period of the 2020 Bonds, copies of the Indenture may be obtained from the Authority. So far as any statements made in this Official Statement involve matters of opinion, forecasts or estimates, whether or not expressly stated, they are set forth as such and not as representations of fact.

The Authority has authorized the distribution of this Official Statement. This Official Statement has been duly executed and delivered on behalf of the Authority.

LEHIGH COUNTY AUTHORITY

By: _____
Chief Executive Officer

By: _____
Chief Financial Officer

BOND PURCHASE AGREEMENT

\$ _____
LEHIGH COUNTY AUTHORITY
WATER AND SEWER REVENUE BONDS
(CITY OF ALLENTOWN CONCESSION)
SERIES 2020 (FEDERALLY TAXABLE)

September __, 2020

Lehigh County Authority
1053 Spruce Street
P.O. Box 3348
Allentown, PA 18106

Ladies and Gentlemen:

The undersigned, RBC Capital Markets, LLC (the “Representative”), acting on its behalf and on behalf of the other underwriters listed on Schedule I hereto (collectively, the “Underwriters”), offers to enter into the following bond purchase agreement (the “Agreement”) with the Lehigh County Authority (the “Authority”) which, upon the Authority’s written acceptance of this offer, will be binding upon the Authority and upon the Underwriters. This offer is made subject to your acceptance, evidenced by your execution and delivery of this Agreement to the Representative at or before 9:00 a.m., New York City time, on the date hereof, and, if not so accepted, will be subject to withdrawal by the Representative upon written notice delivered to you at any time thereafter before acceptance by you. Terms not otherwise defined in this Agreement shall have the same meanings set forth in the Resolution (as defined herein).

1. Purchase and Sale of the Bonds. Subject to the terms and conditions and in reliance upon the representations, warranties and agreements set forth herein, the Underwriters hereby agree to purchase from the Authority, and the Authority hereby agrees to sell and deliver to the Underwriters, all, but not less than all, of the Authority’s Water and Sewer Revenue Bonds (City of Allentown Concession) Series 2020 (Federally Taxable) (the “Bonds”).

The Bonds are being issued pursuant to a Trust Indenture, dated as of August 1, 2013 (the “Original Indenture”), as amended and supplemented, including by a 2020-1 Supplemental Trust Indenture dated as of September 1, 2020 (the “2020-1 Supplemental Indenture” and together with all other amendments and supplements to the Original Indenture, the “Existing Indenture”), each by and between the Authority and Manufacturers and Traders Trust Company, as trustee (the “Trustee”). In connection with the issuance of the Bonds, the Authority is amending and restating in its entirety the Indenture, by the execution and delivery of an Amended and Restated Trust Indenture dated as of September 1, 2020 (the “Indenture”).

The Bonds are being issued to provide funding for: (i) the advance refunding of a portion of the Lehigh County Authority, Water and Sewer Revenue Bonds (City of Allentown Concession), Series 2013A (the “Refunded 2013A Bonds”); (ii) the funding of a debt service reserve fund with respect to the 2020 Bonds; and (iii) the payment of transaction costs and

expenses in connection with the issuance of the 2020 Bonds (the “Project”). A portion of the proceeds of the Bonds will be applied to advance refund the Refunded 2013A Bonds. Such portion of the proceeds of the Bonds will be irrevocably deposited with Manufacturers and Traders Trust Company (the “Escrow Agent”) for deposit in an escrow fund (the “Escrow Fund”) to be held under the terms of an Escrow Agreement dated as of September 1, 2020 (the “Escrow Agreement”) between the Escrow Agent and the Authority. The proceeds of the Bonds deposited in the Escrow Fund are expected to be sufficient to pay principal and interest on the Refunded 2013A Bonds when due and the redemption price of the Refunded 2013A Bonds on December 1, 2023.

Proceeds of the Refunded 2013A Bonds, together with other indebtedness of the Authority, were issued pursuant to the provisions of the Original Indenture, to provide funding for a project consisting generally of: (i) a single, up-front concession and lease payment to the City of Allentown, Lehigh County, Pennsylvania (the “City”) pursuant to the Allentown Water and Sewer Utility System Concession and Lease Agreement dated as of May 1, 2013, as amended, between the City and the Authority (the “Existing Concession Agreement”) to acquire the Concessionaire Interest in the Concessioned System, (ii) certain anticipated capital improvements to the Concessioned System, (iii) deposits to certain reserve and other funds and (iv) transaction costs and expenses in connection with the acquisition of the Concessioned System and the issuance of the such indebtedness. Concurrently with the issuance of the Bonds (as defined herein), the Authority and the City will enter into an Amended and Restated Allentown Water and Sewer Utility System Concession and Lease Agreement dated as of September 1, 2020 (the “Concession Agreement”) pursuant to which the Existing Concession Agreement will be amended and restated in its entirety.

Concurrently with the issuance of the Bonds, the Authority and the City will enter into an Amended and Restated Allentown Water and Sewer Utility System Concession and Lease Agreement dated as of September 1, 2020 (the “Concession Agreement”) pursuant to which the Existing Concession Agreement will be amended and restated in its entirety.

(a) Inasmuch as this purchase and sale represents a negotiated transaction, the Authority acknowledges and agrees that: (i) the purchase and sale of the Bonds pursuant to this Agreement is an arm’s length, commercial transaction between the Authority and the Underwriters; (ii) in connection with such transaction, each Underwriter is acting solely as a principal and not as a municipal advisor, financial advisor, agent or fiduciary to the Authority; (iii) the Underwriters have not assumed (individually or collectively) any advisory or fiduciary responsibility in favor of the Authority with respect to the transactions contemplated hereby or the process leading thereto (irrespective of whether any Underwriter, or affiliate of an Underwriter, has advised or is currently advising the Authority on other matters or any obligations to the Authority) except the obligations expressly set forth in this Agreement or otherwise provided by applicable law or regulation; and (iv) the Authority has consulted its own legal, accounting, tax, financial and other advisors, as applicable, to the extent it has deemed appropriate in connection with the transactions contemplated hereby.

(b) The Representative has been duly authorized to execute this Agreement and to act hereunder by the Underwriters, and it and each other Underwriter are registered under the Securities Exchange Act of 1934, as amended, as a broker dealer, or are exempt from such

registration pursuant to the rules promulgated, or an order issued, by the Securities Exchange Commission and are not prohibited from acting as an underwriter of the Bonds by the application of Rule G-37 of the Municipal Securities Rulemaking Board (the “MSRB”). The principal amount of the Bonds to be issued, the dated dates therefor, the maturities, sinking fund redemption and optional redemption provisions, as applicable, and interest rates per annum are set forth in Schedule II hereto.

(c) The purchase price for the Bonds shall be \$[_____] (which equals the par amount of the Bonds, minus an underwriting discount of \$[_____]).

2. Public Offering. The Underwriters agree to make a bona fide initial public offering of all of the Bonds at prices equal to the respective initial public offering prices set forth on the inside front cover of the Official Statement dated September __, 2020 (the “Official Statement”). It shall be a condition to the Authority’s obligation to sell and deliver the Bonds to the Underwriters that all Bonds shall be sold and delivered by the Authority at the Closing (as defined in Section 5 hereof).

3. The Official Statement.

(a) Copies of the Preliminary Official Statement dated August __, 2020 (the “Preliminary Official Statement”) and a draft of the final Official Statement have been provided to the Authority, Bond Counsel, Authority Counsel and administrative officers of the Authority and the City for their final review.

(b) The Preliminary Official Statement has been prepared for use by the Underwriters in connection with the public offering, sale and distribution of the Bonds. The Authority hereby represents and warrants that the Preliminary Official Statement has been deemed final by the Authority as of its date for purposes of the Rule (as defined below), except for the omission of such information which is dependent upon the final pricing of the Bonds for completion and other information permitted to be omitted under the Rule.

(c) The Authority hereby authorizes the Official Statement and the information therein contained to be used by the Underwriters in connection with the public offering and the sale of the Bonds. The Authority consents to the use by the Underwriters prior to the date hereof of the Preliminary Official Statement in connection with the public offering of the Bonds. The Authority shall provide, or cause to be provided, to the Underwriters as soon as practicable after the date of the Authority’s acceptance of this Agreement (but, in any event, not later than within seven business days after the Authority’s acceptance of this Agreement and in sufficient time to accompany any confirmation that requests payment from any customer) copies of the Official Statement which is complete as of the date of its delivery to the Underwriters in such quantity as the Representative shall request in order for the Underwriters to comply with Section (b)(4) of Rule 15c2-12 (the “Rule”) promulgated by the Securities and Exchange Commission under the Securities Exchange Act of 1934 and the rules of the MSRB. In addition to the printed copies of the Official Statement, the Authority shall provide, or cause to be provided to the Underwriters, at the times described above, an electronic copy of the Official Statement and any supplement or amendment thereto prepared as a word-searchable PDF file as required by the Electronic Municipal Market Access (“EMMA”) system of the MSRB.

(d) If, after the date of this Agreement to and including the date the Underwriters are no longer required to provide an Official Statement to potential customers who request the same pursuant to the Rule (the earlier of (i) 90 days from the “end of the underwriting period” (as defined in the Rule) and (ii) the time when the Official Statement is available to any person from the MSRB through the EMMA system as approved by the Securities and Exchange Commission for purposes of the Rule, but in no case less than 25 days after the “end of the underwriting period” for the Bonds), the Authority becomes aware of any fact or event which might or would cause the Official Statement, as then supplemented or amended, to contain any untrue statement of a material fact or to omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, or if it is necessary to amend or supplement the Official Statement to comply with law, the Authority will notify the Representative (and for the purposes of this clause provide the Representative with such information as it may from time to time request), and if, in the opinion of the Representative, such fact or event requires preparation and publication of a supplement or amendment to the Official Statement, the Authority will forthwith prepare and furnish, or cause to be prepared and furnished, at the Authority’s own expense (in a form and manner approved by the Representative), a reasonable number of copies of either amendments or supplements to the Official Statement so that the statements in the Official Statement as so amended and supplemented will not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading or so that the Official Statement will comply with law. If such notification shall be subsequent to the Closing (hereafter defined), the Authority shall furnish such legal opinions, certificates, instruments and other documents as the Representative may reasonably deem necessary to evidence the truth and accuracy of such supplement or amendment to the Official Statement.

(e) The Representative hereby agrees to file the Official Statement with the MSRB through EMMA. Unless otherwise notified in writing by the Representative prior to Closing, the Authority can assume that the “end of the underwriting period” for purposes of the Rule is the date of the Closing.

4. Representations, Warranties, and Covenants of the Authority. The Authority hereby represents and warrants to and covenants with the Underwriters that:

(a) The Authority is a body corporate and politic organized by the Board of County Commissioners of Lehigh County, Pennsylvania (the “County”) under the Municipality Authorities Act of 1945 (the Act of May 2, 1945, P.L. 382, as amended and supplemented) (the “Act”) of the Commonwealth of Pennsylvania (the “Commonwealth”), and as such has full legal right, power and authority to authorize the issuance of the Bonds for the purposes described in the Preliminary Official Statement, and at the date of the Closing the Authority will have full legal right, power and authority under the Act and the Resolution adopted August 24, 2020 (the “Resolution”) (i) to enter into, execute and deliver this Agreement, the Indenture, the 2020-1 Supplemental Indenture, the Concession Agreement, the Escrow Agreement, the Amended and Restated Consent Agreement dated as of September 1, 2020 by and among the City, the Authority and the Trustee (the “Consent Agreement”), the Continuing Disclosure Agreement dated as of September 1, 2020 (the “Continuing Disclosure Agreement” and, together with this Agreement, the Indenture, the 2020-1 Supplemental Indenture, the Concession Agreement, the

Escrow Agreement, the Consent Agreement and the Continuing Disclosure Agreement, the “Authority Documents”), (ii) to sell, issue and deliver the Bonds to the Underwriters as provided herein, and (iii) to carry out and consummate the transactions contemplated by the Resolution, the Authority Documents and the Official Statement;

(b) By all necessary official action of the Authority prior to or concurrently with the acceptance hereof, the Authority has duly authorized all necessary action to be taken by it for (i) the adoption of the Resolution and the issuance and sale of the Bonds, (ii) the approval, execution and delivery of, and the performance by the Authority of the obligations on its part, contained in the Bonds and the Authority Documents and (iii) the consummation by it of all other transactions contemplated by the Official Statement and the Authority Documents and any and all such other agreements and documents as may be required to be executed, delivered and/or received by the Authority in order to carry out, give effect to, and consummate the transactions contemplated herein and in the Official Statement. The Resolution is in full force and effect and has not been amended, supplemented or otherwise modified except as may be indicated in the Official Statement;

(c) When duly executed and delivered by the Authority, each of the Authority Documents will constitute a legal, valid and binding obligation of the Authority, enforceable against the Authority in accordance with its terms (subject to bankruptcy, insolvency, reorganization, receivership, arrangement, moratorium and other similar laws and principles of equity relating to or affecting the enforcement of creditors’ rights and by the exercise of judicial discretion in appropriate cases regardless of whether such enforceability is considered in a proceeding in equity or at law); the Bonds, when issued or delivered and paid for, in accordance with the Indenture and this Agreement, will constitute legal, valid and binding obligations of the Authority entitled to the benefits of the Indenture, and enforceable in accordance with their terms (subject to bankruptcy, insolvency, reorganization, receivership, arrangement, moratorium and other similar laws and principles of equity relating to or affecting the enforcement of creditors’ rights and by the exercise of judicial discretion in appropriate cases regardless of whether such enforceability is considered in a proceeding in equity or at law); and upon the issuance, authentication and delivery of the Bonds as aforesaid, the Indenture will provide for the benefit of the holders, from time to time, of the Bonds, the legally valid and binding pledge it purports to create as set forth in the Indenture;

(d) With respect to the Bonds, the Authority is not in breach of or default in any material respect under any applicable constitutional provision, law or administrative regulation of the Commonwealth or the United States or any applicable judgment or decree or any loan agreement, indenture, bond, note, resolution, agreement or other instrument, including any prior undertakings to satisfy the requirements of Section (b)(5)(i) of the Rule (except as disclosed in the Official Statement), to which the Authority is a party or to which the Authority is otherwise subject; no event of default exists under the Indenture or the Concession Agreement; and no event has occurred and is continuing which constitutes or with the passage of time or the giving of notice, or both, would constitute a default or event of default by the Authority under any of the foregoing; and the execution and delivery of the Bonds, the Authority Documents and the adoption of the Resolution and compliance with the provisions on the Authority’s part contained therein, will not conflict with or constitute a material breach of or material default under any

constitutional provision, administrative regulation, judgment, decree, loan agreement, indenture, bond, note, resolution, agreement or other instrument to which the Authority is a party;

(e) All authorizations, approvals, licenses, permits, consents and orders of any governmental authority, legislative body, board, agency or commission having jurisdiction of the matter which are required for the due authorization of, which would constitute a condition precedent to, or the absence of which would materially adversely affect the due performance by the Authority of its obligations under the Authority Documents and the Bonds have been or will be duly obtained, other than compliance with state Blue Sky laws for which the Authority agrees to cooperate with the Underwriters for qualification of the Bonds as may be requested by the Representative pursuant to Section 4(u) hereof;

(f) The Bonds shall conform to the descriptions thereof contained in the Official Statement under the caption "THE 2020 BONDS"; the Indenture shall conform to the form of the Indenture contained in the Official Statement under "APPENDIX E – SUBSTANTIAL FORM OF THE INDENTURE"; the Concession Agreement shall conform to the form of the agreement contained in the Official Statement under "APPENDIX F - SUBSTANTIAL FORM OF THE CONCESSION AGREEMENT"; the proceeds of the sale of the Bonds will be applied generally as described in the Official Statement under the caption "PLAN OF FINANCE";

(g) The Continuing Disclosure Agreement shall conform to the form of the agreement contained in the Official Statement under "APPENDIX H - FORM OF CONTINUING DISCLOSURE AGREEMENT;"

(h) There is no litigation, action, suit, proceeding, inquiry or investigation, at law or in equity, before or by any court, government agency, public board or body, pending or, to the best knowledge of the Authority after due inquiry, threatened against the Authority, affecting the existence of the Authority or the titles of its officers to their respective offices, or affecting or seeking to prohibit, restrain or enjoin the sale, issuance or delivery of the Bonds, or the collection of Revenues or other components of the Trust Estate pledged or to be pledged by the Authority to pay the principal of and interest on the Bonds, or the pledge thereof, or in any way contesting or affecting the validity or enforceability of the Bonds, the Authority Documents, or contesting the exclusion of interest on the Bonds from Pennsylvania personal income tax and the Pennsylvania corporate net income tax, protesting the City's procurement process for the concession and lease of the Concession System and the selection of the Authority as the concessionaire under the Concession Agreement, affecting the Authority's ability to undertake the Project, to perform its obligations under the Concession Agreement or to operate the Concession System, or contesting in any way the completeness or accuracy of the Preliminary Official Statement or the Official Statement or any supplement or amendment thereto, or contesting the powers of the Authority or any authority for the issuance of the Bonds, the adoption of the Resolution or the execution and delivery of the Authority Documents, nor, to the best knowledge of the Authority, if any such action does exist or is threatened, is there any basis therefor, wherein an unfavorable decision, ruling or finding would materially adversely affect the validity or enforceability of the Bonds, or any of the Authority Documents or any agreement or instrument to which the Authority is a party which is contemplated for use in the consummation of the transactions contemplated herein or in the Official Statement;

(i) As of the date thereof, the Preliminary Official Statement (except for the information with respect to DTC, for which the Authority makes no representation) was correct in all material respects and did not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(j) At the time of the Authority's acceptance hereof and (unless the Official Statement is amended or supplemented pursuant to paragraph (d) of Section 3 of this Agreement) at all times subsequent thereto during the period up to and including the date of Closing, the Official Statement (except for the information with respect to DTC, for which the Authority makes no representation) is and will be correct in all material respects and does not and will not contain any untrue statement of a material fact or omit to state any material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading;

(k) Except as may otherwise be described in the Preliminary Official Statement and the Official Statement, the Authority is not a party to any litigation or other proceeding pending or, to its knowledge, threatened which, if decided adversely to the Authority, would have a materially adverse effect on the financial condition of the Authority;

(l) The Authority will apply, or cause to be applied, the proceeds from the sale of the Bonds, as provided in and subject to all of the terms and provisions of the Resolution, the Indenture, the Concession Agreement and the Escrow Agreement, as applicable;

(m) Prior to the Closing the Authority will not offer or issue any bonds, notes or other obligations for borrowed money payable from or secured by any of the revenues which will also secure the Bonds without prior notice to the Representative;

(n) Any certificate, signed by any official of the Authority authorized to do so in connection with the transactions contemplated by this Agreement, shall be deemed a representation and warranty by the Authority to the Underwriters as to the statements made therein;

(o) The information relating to the Authority under the caption "CONTINUING DISCLOSURE" (i) in the Preliminary Official Statement as of the date thereof was and is correct in all material respects and did not and does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading and (ii) in the Official Statement as of the date thereof will be correct in all material respects and shall not and will not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in light of the circumstances under which they will be made, not misleading; and

(p) Except as may otherwise be described in the Official Statement, during the last five (5) years, the Authority has complied in all material respects with its previous continuing disclosure undertakings made by it in accordance with the Rule;

(q) The Authority has a valid leasehold interest in the Concessioned System free and clear of all Encumbrances except the Permitted Concessionaire Encumbrances under the Concession Agreement and Encumbrances created under the Indenture;

(r) To the knowledge of the Authority, after due inquiry, the County has not adopted a resolution or ordinance limiting or restricting the Authority's ability to perform its obligations under the Concession Agreement;

(s) Except as otherwise set forth in the Preliminary Official Statement and the Official Statement, and, subject to the provisions of Section 3.15 of the Concession Agreement, the Authority owns or is licensed to use all material intellectual property necessary for the conduct of its business as currently conducted. To the knowledge of the Authority, no material claim has been asserted and is pending by any person challenging or questioning the use of any material intellectual property or the validity or effectiveness of any material intellectual property, nor does the Authority know of any valid basis for any such claim;

(t) Except as set forth in the Preliminary Official Statement and the Official Statement, the Authority has not received nor is aware of any notice of (a) violation, (b) alleged violation, (c) non-compliance, (d) liability, (e) potential liability, or (f) other claim regarding environmental matters arising under or compliance with environmental laws with regard to the Concessioned System nor does the Authority have knowledge or reason to believe that any such notice will be received or is being threatened; and

(u) The Authority agrees to cooperate with the Underwriters and their counsel in any endeavor to qualify the Bonds for offer and sale under the Blue Sky laws of such jurisdictions of the United States as the Underwriters may designate, except where such qualification would subject the Authority to service of process or to register as a foreign entity. The Authority consents to the use of the Preliminary Official Statement and drafts of the Official Statement prior to the availability of the Official Statement by the Underwriters in obtaining such qualification.

5. Closing.

(a) On September __, 2020, or at such other time and date as shall have been mutually agreed upon by the Authority and the Representative (the "Closing"), the Authority will, subject to the terms and conditions hereof, deliver the Bonds to the Underwriters duly executed and authenticated, together with the other documents hereinafter mentioned, and the Underwriters will, subject to the terms and conditions hereof, accept such delivery and pay the purchase price of the Bonds as set forth in Section 1 of this Agreement by a wire transfer payable in immediately available funds to the order of the Authority. The Authority will cause the Bonds to be delivered to the Underwriters in accordance with FAST delivery procedures of The Depository Trust Company, New York, New York ("DTC"). Payment for the Bonds as aforesaid shall be made at the offices of the Trustee as paying agent for the Bonds or such other place as shall have been mutually agreed upon by the Authority and the Representative.

(b) The Bonds shall be delivered to the Trustee as paying agent for the Bonds in definitive fully registered form, bearing CUSIP numbers without coupons, with one bond

certificate for each maturity of the Bonds, registered in the name of Cede & Co., all as provided in the Indenture. Upon request, copies of the executed Bonds shall be made available to the Representative at least one business day before the Closing for purposes of inspection. It is anticipated that CUSIP identification numbers will be printed on the Bonds, but neither the failure to print the numbers on any Bond nor any error in the numbers or the printing will constitute cause for a failure or refusal by the Underwriters to accept delivery and pay the purchase price.

6. Closing Conditions. The Underwriters have entered into this Agreement in reliance upon the representations, warranties and agreements of the Authority contained herein, and in reliance upon the representations, warranties and agreements to be contained in the documents and instruments to be delivered at the Closing and upon the performance by the Authority of its obligations hereunder, both as of the date hereof and as of the date of the Closing. Accordingly, the Underwriters' obligations under this Agreement to purchase, to accept delivery of and to pay for the Bonds shall be conditioned upon the performance by the Authority of its obligations to be performed hereunder and under such documents and instruments at or prior to the Closing, and shall also be subject to the following additional conditions, including the delivery by the Authority of such documents as are enumerated herein, in form and substance reasonably satisfactory to the Representative:

(a) The representations and warranties of the Authority contained herein shall be true, complete and correct on the date hereof and on and as of the date of the Closing, as if made on the date of the Closing;

(b) The Authority shall have performed and complied with all agreements and conditions required by this Agreement to be performed or complied with by it prior to or at the Closing;

(c) At the time of the Closing, (i) the Authority Documents, the Resolution and the Bonds shall be in full force and effect in the form heretofore approved by the Representative and shall not have been amended, modified or supplemented, and the Official Statement shall not have been supplemented or amended, except in any such case as may have been agreed to by the Representative; and (ii) all actions of the Authority required to be taken by the Authority shall be performed in order for Bond Counsel to deliver its opinion referred to hereafter;

(d) At or prior to the Closing, the Resolution shall have been duly adopted, executed and delivered by the Authority and the Authority shall have duly executed and delivered, the Bonds to the Trustee for the Trustee's authentication of the Bonds;

(e) At the time of the Closing, there shall not have occurred any change or any development involving a prospective change in the condition, financial or otherwise, or in the revenues or operations of the Authority from that set forth in the Official Statement that in the judgment of the Representative, is material and adverse and that makes it, in the judgment of the Representative, impracticable to market the Bonds on the terms and in the manner contemplated in the Official Statement;

(f) The Authority shall not have failed to pay principal or interest when due on any of its outstanding obligations for borrowed money;

(g) All steps to be taken and all instruments and other documents to be executed, and all other legal matters in connection with the transactions contemplated by this Agreement shall be reasonably satisfactory in legal form and effect to the Representative;

(h) At or prior to the Closing, the Representative shall have received copies of each of the following documents:

(1) The Official Statement, and each supplement or amendment thereto, if any, executed on behalf of the Authority by an officer of the Authority, or such other official as may have been agreed to by the Representative;

(2) The Resolution shall have been duly adopted and be in full force and effect as certified by the Secretary or Assistant Secretary of the Authority or such other officers as authorized by the Resolution;

(3) Executed counterparts of the Indenture, including all supplements thereto, the Concession Agreement and the Continuing Disclosure Agreement;

(4) Executed counterparts of the Bonds and the other Authority Documents;

(5) The approving opinions of McNees Wallace & Nurick LLC (“Bond Counsel”), in substantially the form attached to the Official Statement as Appendix G thereto, together with a reliance letter or letters addressed to the Representative, on behalf of the Underwriters, each dated the day of Closing;

(6) A supplemental opinion of Bond Counsel, dated the day of Closing, addressed to the Representative on behalf of the Underwriters, substantially to the effect that (i) this Agreement has been duly authorized, executed and delivered by the Authority, and constitutes the legal, valid and binding agreement of the Authority, enforceable against the Authority in accordance with its terms except as enforcement may be limited by bankruptcy, reorganization, insolvency, moratorium or other laws affecting the enforcement of creditors’ rights generally, and by general principles of equity; (ii) no approval or other action is required to be obtained by the Authority from any governmental authority or agency in connection with the issuance and sale of the Bonds, or the execution by the Authority of the Authority Documents, or the Official Statement that has not already been obtained or taken, except that the offer and sale of the Bonds in certain jurisdictions may be subject to compliance with the provisions of the securities or blue sky laws of such jurisdictions (as to which no opinion need be expressed); (iii) the descriptions and statements concerning, and summarizing provisions of, the Bonds, the Authority Documents, and the Act contained in the Official Statement fairly summarize the provisions of the documents or matters of law indicated therein, and the statements describing the Indenture contained in an appendix to the Official Statement fairly summarize the provisions of such document purported to be summarized; (iv) the statements under the caption

“TAX MATTERS,” insofar as such statements purport to summarize certain provisions of tax law, regulations, and rulings, are reasonable summaries of the provisions so summarized; and (v) the Continuing Disclosure Agreement has been duly authorized, executed and delivered by the Authority;

(7) The opinion of the Solicitor to the Authority, addressed to the Underwriters and the Authority, in form and substance satisfactory to the Underwriters, dated the day of Closing, and in form and substance satisfactory to the Underwriters, to the effect that: (i) the Authority is a municipal authority, duly incorporated and validly existing under the provisions of the Constitution of Pennsylvania and the Act; (ii) the Authority has full legal right, power, and authority to enter in the Authority Documents, and to issue the Bonds and apply the proceeds thereof pursuant to the Indenture; (iii) the distribution of the Preliminary Official Statement and the execution, delivery, and distribution of the Official Statement have been duly authorized by the Authority; (iv) the Resolution approving and authorizing the issuance and sale of the Bonds, and the execution and delivery of the Authority Documents, and the Official Statement was duly adopted at a meeting of the Authority that was called and held pursuant to all applicable laws and regulations, and with all public notice required by all applicable laws and regulations and at which a quorum was present and acting throughout; (v) the representations and warranties of the Authority as set forth in this Agreement are, as to all matters of law, true and accurate on and as of the day of Closing as if made on the day of Closing; (vi) the descriptions and summaries of the Authority in the Official Statement accurately and fairly present the information stated with respect thereto; and (vii) no event affecting the Authority has occurred since the date of the Official Statement that should be disclosed in the Official Statement for the purpose for which it is to be used or that it is necessary to disclose therein in order to make the statements and information therein with respect to the Authority not misleading in any material respect;

(8) The opinion of McNees Wallace & Nurick LLC, transaction counsel to the Authority, dated the day of Closing, addressed to the Underwriters and the Authority, in form and substance satisfactory to the Underwriters and covering the matters attached hereto as Exhibit A;

(9) The warranty certificate dated the day of Closing delivered by the Authority to McNees Wallace & Nurick LLC, as transaction counsel to the Authority attached to Exhibit A;

(10) The opinion of McNees Wallace & Nurick LLC, transaction counsel to the Authority, addressed to the City and the Underwriters, dated the day of Closing, in the form attached to the Concession Agreement;

(11) An opinion of Stevens & Lee, P.C., counsel to the Underwriters (“Underwriters’ Counsel”) addressed to the Representative with respect to the Bonds, in form and substance acceptable to the Representative;

(12) The opinion of Dilworth Paxson LLP, local counsel to the City, addressed to the Authority and the Underwriters, dated the day of Closing, in the form attached to the Concession Agreement;

(13) The opinion of Dilworth Paxson LLP, local counsel to the City, addressed to the Authority and the Underwriters, dated the day of Closing, to the effect that the Consent Agreement and the Services Agreement constitute valid and binding obligations of the City, enforceable against the City in accordance with its terms;

(14) A certificate, dated the date of Closing, of the Authority to the effect that (i) the representations and warranties of the Authority contained herein, in the Concession Agreement and in the Indenture are true and correct on and as of the Closing Date; (ii) the Authority has complied with all agreements and satisfied all the conditions on its part to be performed or satisfied at or prior to the Closing; (iii) the Authority has performed all of the covenants required to be performed by the day of Closing; (iv) the Authority is not in default under this Agreement or the Concession Agreement; (v) no event affecting the Authority has occurred since the date of the Official Statement, which causes the Official Statement to contain an untrue statement of a material fact or to omit to state a material fact necessary in order to make the statements contained therein, in the light of the circumstances under which they were made, not misleading; (vi) the Concession Agreement has not been terminated by either party thereto pursuant to Section 2.4(d) of the Concession Agreement; (vii) the conditions precedent for the benefit of the Authority set forth in Section 2.4(a) and (c) of the Concession Agreement have been satisfied; (viii) the Authority is not in material breach of any material covenant on its part contained in the Concession Agreement which is to be performed or complied with by the Authority at or prior to the Closing Date; (ix) the Authority has not filed a notice with the City under the Concession Agreement with respect to any Compensation Event, Delay Event, Major Force Majeure Event or Adverse Action; and (x) the Authority is not in breach of or in default of, and no event has occurred and is continuing which, with the passage of time or the giving of notice, or both, would constitute a breach of or in default of Pennsylvania law, or any applicable law or administrative regulation of the Commonwealth or the United States or any applicable judgment or decree or, any indenture, loan agreement, note, resolution, agreement, lease or other instrument to which the Authority is a party or is otherwise subject or by which it or its properties may be bound, in each case which breach or default would (a) affect adversely the undertaking of the Project or the validity or enforceability against the Authority of the Bonds or the Authority Documents, or (b) would affect materially and adversely the financial condition, operations, or properties of the Authority or the ability of the Authority to perform its obligations thereunder or to carry out and consummate the transactions contemplated by the Authority Documents;

(15) [A certificate dated the day of Closing by a duly authorized officer of the City in the form set forth in Exhibit B hereto;]

(16) **[Bond Insurance documents];**

(17) A certificate of an officer of the Trustee, acceptable to the Underwriters, dated the day of Closing, to the effect that the Indenture has been duly authorized, executed and delivered by the Trustee and, assuming due authorization, execution and delivery thereof by the Authority, constitutes a valid and binding agreement of the Trustee enforceable against the Trustee in accordance with its terms, and the Bonds have been authenticated in accordance with the Indenture by duly authorized officers or signatories of the Trustee; and an incumbency certificate of the Trustee, in form and content acceptable to the Underwriters and Bond counsel, dated the day of Closing, with respect to the officers or other signatories of the Trustee who have executed, authenticated and delivered the Bonds, the Indenture, and all other financing documents to be signed by the Trustee;

(18) A letter from Standard & Poor's Rating Group assigning a long-term municipal bond rating of "___" to the Bonds, which rating has not been suspended, lowered or withdrawn and remain in effect on the Closing Date;

(19) A certificate of the Independent Engineer, in form and substance satisfactory to the Underwriters and Bond Counsel, stating that the estimated revenues from the Concessioned System, together with money otherwise estimated to be available under the Indenture, will be sufficient in each Fiscal Year to (i) pay all of the Operation and Maintenance Expenditures of the Authority and (ii) provide an amount equal to 120% of the Debt Service Requirements with respect to the Bonds and the Existing Authority Bonds;

(20) A written appraisal from AUS Consultants addressing the fair market value of the Concessionaire Interest at the time of the issuance of the Bonds delivered in compliance with the provisions of the Indenture and in form and substance satisfactory to the Underwriters and Bond Counsel;

(21) A copy of the Blanket Letter of Representations to DTC executed by the Authority;

(22) Certificate of Financial Advisor Regarding Preliminary Official Statement and Official Statement;

(23) Verification Report of Zelenkofske Axelrod LLC, certified public accountants, with respect to the refunding of the Refunded 2013A Bonds;

(24) Any other legal opinions, certificates, documents and instruments as the Underwriters may reasonably request in form and substance satisfactory to the Underwriters and counsel to the Underwriters.

All of the opinions, letters, certificates, instruments and other documents mentioned above or elsewhere in this Agreement shall be deemed to be in compliance with the provisions hereof if, but only if, they are in form and substance satisfactory to the Underwriters.

If the Authority shall be unable to satisfy the conditions to the obligations of the Underwriters to purchase, to accept delivery of and to pay for the Bonds contained in this

Agreement, or if the obligations of the Underwriters to purchase, to accept delivery of and to pay for the Bonds shall be terminated for any reason permitted by this Agreement, this Agreement shall terminate and neither the Underwriters nor the Authority shall be under any further obligation hereunder.

7. Termination. Either party shall have the right to terminate this Agreement and its obligations hereunder if, between the date of this Agreement and the Closing, the market price or marketability of the Bonds or the ability of the Underwriters to enforce contracts for the sale, at the contemplated offering prices, of the Bonds shall be materially adversely affected by the occurrence of any of the following:

(a) Legislation shall be enacted by or introduced in the Congress of the United States or recommended to the Congress for passage by the President of the United States, or the Treasury Department of the United States or the Internal Revenue Service or any member of the Congress or favorably reported for passage to either House of the Congress by any committee of such House to which such legislation has been referred for consideration, a decision by a court of the United States or of the Commonwealth or the United States Tax Court shall be rendered, or an order, ruling, regulation (final, temporary or proposed), press release, statement or other form of notice by or on behalf of the Treasury Department of the United States, the Internal Revenue Service or other governmental agency shall be made or proposed, the effect of any or all of which would have the purpose or effect, directly or indirectly, of changing the federal income tax consequences of any of the transactions contemplated herein;

(b) Legislation introduced in or enacted (or resolution passed) by the Congress or an order, decree, or injunction issued by any court of competent jurisdiction, or an order, ruling, regulation (final, temporary, or proposed), press release or other form of notice issued or made by or on behalf of the Securities and Exchange Commission, or any other governmental agency having jurisdiction of the subject matter, to the effect that obligations of the general character of the Bonds, including any or all underlying arrangements, are not exempt from registration under or other requirements of the Securities Act of 1933, or that the Indenture is not exempt from qualification under or other requirements of the Trust Indenture Act, or that the issuance, offering, or sale of obligations of the general character of the Bonds, including any or all underlying arrangements, as contemplated hereby or by the Official Statement or otherwise, is or would be in violation of the federal securities law as amended and then in effect;

(c) A general suspension of trading in securities on the New York Stock Exchange or the American Stock Exchange, the establishment of minimum prices on either such exchange, the establishment of material restrictions (not in force as of the date hereof) upon trading securities generally by any governmental authority or any national securities exchange, a general banking moratorium declared by federal, State of New York, or Commonwealth officials authorized to do so;

(d) The New York Stock Exchange or other national securities exchange or any governmental authority, shall impose, as to the Bonds or as to obligations of the general character of the Bonds, any material restrictions not now in force, or increase materially those now in force, with respect to the extension of credit by, or the charge to the net capital requirements of, the Underwriters;

(e) Any amendment to the federal or State Constitution or action by any federal or State court, legislative body, regulatory body, or other authority materially adversely affecting the tax status of the Authority, its property, income or securities (or interest thereon);

(f) Any event occurring, or information becoming known which, in the judgment of the Representative, makes untrue in any material respect any statement or information contained in the Preliminary Official Statement or Official Statement, or has the effect that the Preliminary Official Statement or Official Statement contains any untrue statement of material fact or omits to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(g) The United States shall have become engaged in hostilities which have resulted in a declaration of war or a national emergency or there shall have occurred any other outbreak or escalation of hostilities or a national or international calamity or crisis, financial or otherwise which in the judgment of the Representative would have a material adverse effect upon the Underwriters' ability to market the Bonds;

(h) Any fact or event shall exist or have existed that, in the Representative's judgment, requires or has required an amendment of or supplement to the Official Statement and such amendment of or supplement to the Official Statement has not been issued within a reasonable time prior to the Closing;

(i) There shall have occurred or any notice shall have been given of any intended downgrading, suspension, withdrawal, or negative change in credit watch status by any national rating service to any of the Authority's obligations, including the Bonds;

(j) There shall have occurred a material disruption in securities settlement, payment or clearance services; and

(k) The purchase of and payment for the Bonds by the Underwriters, or the resale of the Bonds by the Underwriters, on the terms and conditions herein provided shall be prohibited by any applicable law, governmental authority, board, agency or commission.

8. Expenses. The Authority shall pay all costs of issuance. Included in these costs are any rating, filing or bond insurance fees; printing of Bonds and official statements; fees and expenses of the Trustee; fees and expenses of the escrow agents, fees and expenses of Authority Counsel, Bond Counsel and Underwriters' Counsel and the financial advisor to the Authority; and any other such miscellaneous expenses which occur in the normal underwriting of a bond issue. The Underwriters shall pay (from the expense component of the Underwriters' discount) the cost of qualifying the Bonds for offer and sale in various states and jurisdictions chosen by the Underwriters, the fees of Digital Assurance Certification, L.L.C. (or other third party) for a continuing disclosure compliance review, all advertising expenses in connection with the offer and sale of the Bonds and all other expenses incurred by them in connection with their offer and sale of the Bonds, provided that the Underwriters shall be reimbursed for meals, travel and lodging expenses incurred by them in connection with the offer and sale of the Bonds. The Authority acknowledges that it has had an opportunity, in consultation with such advisors as it

may deem appropriate, if any, to evaluate and consider the fees and expenses being incurred as part of the issuance of the Bonds.

9. Relationships.

(a) The Authority shall be liable, to the extent permitted by Pennsylvania law, to each Underwriter and officer, employee or agent of each Underwriter and each person, if any, who controls an Underwriter within the meaning of the Securities Act of 1933, as amended, to the extent of all losses, claims, damages, liabilities, and expenses, joint or several, to which such Underwriter or any officer, employee or agent of such Underwriter or such controlling person may become subject, under federal laws or regulations, or otherwise, insofar as such losses, claims, damages, liabilities and expenses (or actions in respect thereof) arise out of or are based upon any untrue statement or alleged untrue statement of any material fact as set forth in the Official Statement, or any amendment or supplement thereto, or the Preliminary Official Statement or any amendment or supplement thereto, or arise out of or are based upon the omission or alleged omission to state therein a material fact necessary to make such statements not misleading in any material respect; and the Authority shall be liable to pay the reasonable expenses of the defense of any action against the Underwriters or any of them or any officer, employee or agent of any of the Underwriters based upon allegations of any such loss, claim, damage, liability or action, including the retention of counsel not unsatisfactory to the Representative and the payment of reasonable counsel fees and all other reasonable expenses relating to such defense; provided, however, that any party to whom the Authority may be liable hereunder may retain separate counsel in any such action and may participate in the defense thereof at its individual expense unless such retention of separate counsel has been specifically authorized by the Authority; and provided further that the Authority will not be liable in any such case to the extent that any such loss, claim, damage, liability and expense arises out of or is based upon any untrue statement, alleged untrue statement or omission or alleged omission made in any such documents in reliance upon and in conformity with written information furnished by the Representative or by such Underwriters specifically for use therein. This agreement will be in addition to any liability which the Authority may otherwise have.

(b) The Underwriters shall be liable to the Authority and each member, employee or agent of the Authority for any losses, claims, damages, liabilities and expenses to which the Authority, each member of the Authority or each employee or agent of the Authority, may become subject, under federal laws, state laws or regulations or otherwise, insofar as such losses, claims, damages, liabilities and expenses (or actions in respect thereof) arise out of or are based upon any untrue statement or alleged untrue statement of any material fact contained in the Official Statement, any amendment or supplement thereto, or the Preliminary Official Statement or any amendment or supplement thereto, or arise out of or are based upon the omission or the alleged omission to state therein a material fact necessary to make the statements therein not misleading, and will assume the defense of any action against the Authority, and each member, employee or agent of the Authority based upon allegations of any such loss, claim, damage, liability or action, including the retaining of counsel and payment of reasonable counsel fees and all other expenses relating to such defense; provided that the Underwriters will not be liable in any such case unless any such loss, claim, damage, liability or expense arises out of, or is based upon, any untrue statement, alleged untrue statement, or alleged omission made in any such documents in reliance upon and in conformity with the written information furnished by the

Underwriters specifically for use therein. For purposes of this Section 9, the only written information furnished by the Underwriters specifically for use in the Preliminary Official Statement and Official Statement is the written information set forth under the caption “UNDERWRITING” in the Preliminary Official Statement and the Official Statement and the information regarding principal amounts, interest rates, prices and yields of the Bonds in the Official Statement. This agreement will be in addition to any liability which such Underwriters may otherwise have.

(c) Promptly after receipt by a party under this Section 9 of notice of the commencement of any action, such party will, if a claim in respect thereof is to be made against a responsible party (the “Responsible Party”) under this Section 9, notify the Responsible Party of the commencement thereof; but the omission to so notify the Responsible Party will not relieve it from any liability (except as to lack of notification which causes actual damage) which it may have to the other party under this Section 9 or otherwise. In case any such action is brought against a party, and it notifies a Responsible Party of the commencement thereof, the Responsible Party (i) will assume the defense thereof if and as required under this Section, or (ii) if not required to assume the defense, will be entitled to participate in, and, to the extent that it may wish, jointly with any other Responsible Party, assume the defense thereof, with counsel satisfactory to such other party. After notice from the Responsible Party to such other party of its assumption of the defense, the Responsible Party will not be liable to such other party under this Section 9 for any legal or other expenses subsequently incurred by such other party in connection with the defense thereof, other than reasonable costs of investigation.

10. Parties in Interest. This Agreement as heretofore specified shall constitute the entire agreement between the parties and is made solely for the benefit of the Authority and the Underwriters (including successors or assigns of the Underwriters) and no other person shall acquire or have any right hereunder or by virtue hereof, except as provided in Section 9 hereof. This Agreement may not be assigned by the Authority or the Underwriters. All of the Authority’s representations, warranties and agreements contained in this Agreement shall remain operative and in full force and effect, regardless of (i) any investigations made by or on behalf of the Underwriters; (ii) delivery of and payment for the Bonds pursuant to this Agreement; and (iii) any termination of this Agreement.

11. Notice. Any notice or other communication to be given under this Agreement may be given by delivering the same in writing as follows:

AUTHORITY:	Lehigh County Authority 1053 Spruce Street <u>Road</u> P.O. Box 3348 Allentown, PA 18106 Attention: Chief Executive Officer
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UNDERWRITERS:	RBC Capital Markets, LLC 2101 Oregon Pike Lancaster, PA 17601 Attention: Scott Kramer, Managing Director
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12. Effectiveness. This Agreement shall become effective upon the acceptance hereof by the Authority and shall be valid and enforceable at the time of such acceptance.

13. Choice of Law. This Agreement and all matters arising out of or relating to this Agreement shall be governed by and construed in accordance with the laws of the Commonwealth.

14. Severability. If any provision of this Agreement shall be held or deemed to be or shall, in fact, be invalid, inoperative or unenforceable as applied in any particular case in any jurisdiction or jurisdictions, or in all jurisdictions because it conflicts with any provisions of any Constitution, statute, rule of public policy, or any other reason, such circumstances shall not have the effect of rendering the provision in question invalid, inoperative or unenforceable in any other case or circumstance, or of rendering any other provision or provisions of this Agreement invalid, inoperative or unenforceable to any extent whatever.

15. Business Day. For purposes of this Agreement, “business day” means any day on which the New York Stock Exchange is open for trading.

16. Section Headings. Section headings have been inserted in this Agreement as a matter of convenience of reference only, and it is agreed that such section headings are not a part of this Agreement and will not be used in the interpretation of any provisions of this Agreement.

17. Counterparts. This Agreement may be executed in several counterparts each of which shall be regarded as an original (with the same effect as if the signatures thereto and hereto were upon the same document) and all of which shall constitute one and the same document.

[Signature page follows]

If you agree with the foregoing, please sign the enclosed counterpart of this Agreement and return it to the Representative. This Agreement shall become a binding agreement between you and the Underwriters when at least the counterpart of this letter shall have been signed by or on behalf of each of the parties hereto.

Respectfully submitted,

RBC CAPITAL MARKETS, LLC, as
Representative

By: _____
Name:
Title:
Date: September __, 2020

ACCEPTANCE

ACCEPTED this ____ day of September, 2020

LEHIGH COUNTY AUTHORITY

By: _____
Name:
Title:

RESOLUTION NO. 8-2020-2

(Duly adopted 24 August 2020)

AUTHORIZING AND DIRECTING THE ISSUANCE OF THE AUTHORITY'S WATER AND SEWER REVENUE BOND (CITY OF ALLENTOWN CONCESSION), SERIES 2020A (FEDERALLY TAXABLE), IN THE MAXIMUM PRINCIPAL AMOUNT OF \$18,500,000; AUTHORIZING AND DIRECTING THE AUTHORIZED OFFICERS OF THE AUTHORITY TO APPROVE AND ACCEPT A PROPOSAL FOR THE PURCHASE OF THE 2020A BOND FROM FULTON BANK, N.A.; APPROVING THE FORM OF AND AUTHORIZING AND DIRECTING THE EXECUTION AND DELIVERY OF A 2020-2 SUPPLEMENTAL INDENTURE; APPROVING THE FORM OF AND AUTHORIZING AND DIRECTING THE EXECUTION AND DELIVERY OF AN AMENDED AND RESTATED CONSENT AGREEMENT; AUTHORIZING AND DIRECTING THE PAYMENT OF FEES AND EXPENSES; AUTHORIZING AND DIRECTING THE PROPER AUTHORIZED OFFICERS OF THE AUTHORITY TO EXECUTE OTHER DOCUMENTS AND AGREEMENTS AND TO DO ALL THINGS NECESSARY TO CARRY OUT THIS RESOLUTION; AND RESCINDING ALL INCONSISTENT RESOLUTIONS.

WHEREAS, the Lehigh County Authority (the "Authority") is a body corporate and politic organized by the Board of County Commissioners of the County of Lehigh, Pennsylvania under the provisions of the Pennsylvania Municipality Authorities Act, 53 Pa. C.S. § 5601 *et seq.*, as amended (the "Act"); and

WHEREAS, the City of Allentown, Pennsylvania (the "City") owns the Allentown Sewer Utility System and the Allentown Water Utility System (the "System"); and

WHEREAS, pursuant to the terms and conditions of the Allentown Water and Sewer Utility System Concession and Lease Agreement dated as of May 1, 2013, as amended and supplemented from time to time (collectively, the "Existing Concession Agreement"), by and between the City and the Authority, the City leased to the Authority, and the Authority leased from the City, the System, upon the terms and conditions set forth therein; and

WHEREAS, the Authority, in connection with the lease and operation of the System pursuant to the Existing Concession Agreement, has from time to time issued bonds under and pursuant to a Trust Indenture dated as of August 1, 2013 (the "Original Indenture"), from the Authority to Manufacturers and Traders Trust Company, as trustee (the "Trustee"), as amended and supplemented by a First Supplemental Trust Indenture dated as of August 1, 2015 (the "First Supplemental Indenture"), a Second Supplemental Trust Indenture dated as of October 1, 2018 (the "Second Supplemental Indenture"), and a 2020-1 Supplemental Trust indenture dated as of September 1, 2020 (the "2020-1 Supplemental

Indenture,” and together with the Original Indenture, the First Supplemental Indenture and the Second Supplemental Indenture, the “Existing Indenture”); and

WHEREAS, the Authority has issued and its Water and Sewer Revenue Bond (City of Allentown Concession), Series 2018 (Federally Taxable) (the “2018 Bond”), pursuant to the Second Supplemental Indenture, to Fulton Bank, N.A., successor to Lafayette Ambassador Bank (the “Bank”); and

WHEREAS, the Authority desires to undertake as a project (the “Project”) under and in accordance with the Act the: (i) current refunding of the Authority’s outstanding 2018 Bond; (ii) funding of a Debt Service Reserve Fund with respect to the 2020A Bond (as hereinafter defined); and (iii) payment of transaction costs and expenses in connection with the issuance of the 2020A Bond; and

WHEREAS, in order to finance the Project, the Authority desires to duly authorize the issuance and sale, as an Additional Bond under the Original Indenture, of its \$18,500,000 maximum principal amount Lehigh County Authority Water and Sewer Revenue Bond (City of Allentown Concession), Series 2020A (Federally Taxable) (the “2020A Bond”); and

WHEREAS, the Bank has submitted to the Board of the Authority its proposal to purchase the 2020A Bond, under and pursuant to the terms and conditions of its Financing Proposal dated August 12, 2020 (the “Proposal”), and the Authority desires to accept the Bank’s Proposal for the purchase of the 2020A Bond; and

WHEREAS, the Original Indenture provides that the Authority, under certain conditions, may issue, from time to time, one of more Series of Additional Bonds for the purposes set forth in Article III thereof, which purposes encompass the financing of the Project; and

WHEREAS, the Original Indenture provides that the Authority, prior to issuance of Additional Bonds for such purposes, shall enter into a supplement to the Original Indenture, which supplement shall comply with certain requirements set forth in the Original Indenture; and

WHEREAS, the 2020A Bond will be issued under and secured by the Existing Indenture, as amended and supplemented by a 2020-2 Supplemental Trust Indenture, dated as of September 1, 2020 (the “2020-2 Supplemental Indenture,” and together with the Existing Indenture, the “Indenture”) from the Authority to the Trustee; and

Whereas, in connection with the issuance and sale of the 2020A Bond, the Authority, the Trustee and the City will enter into an Amended and Restated Consent Agreement to be dated and effective as of the date of delivery of the 2020A Bond (the “Amended and Restated Consent Agreement”), amending and restating in its entirety the Amended and Restated Consent Agreement, dated as of September 14, 2018, whereby, *inter alia*, the City shall consent to the Authority’s grant of a first lien on and security interest in the Concessionaire Interest to the Trustee; and

WHEREAS, certain action is required to be taken by the Authority as a prerequisite to the undertaking of the Project and the execution and delivery of the 2020-2 Supplemental Indenture.

NOW, THEREFORE, the Board of the Lehigh County Authority resolves as follows:

Section 1. Authorizing the Project. The Project as heretofore described is hereby authorized and directed to be undertaken.

Section 2. Authorizing Issuance of 2020A Bond; Terms of 2020A Bond; Execution, Authentication and Delivery Thereof. For the purpose of providing funds to finance the Project, the Authority hereby authorizes and directs (i) the issuance of the 2020A Bond in the maximum principal amount of \$18,500,000; (ii) the execution of the 2020-2 Supplemental Indenture; and (iii) the execution of the Amended and Restated Consent Agreement, all pursuant to the provisions of the Act and subject to the conditions hereinafter set forth.

The 2020A Bond initially shall be dated as of such date, shall bear interest, mature and be subject to redemption, all as set forth in the Proposal and in the Indenture, subject to the conditions herein set forth. Payment of the principal or redemption price of, and interest on, the 2020A Bond shall be made to the registered owner of the 2020A Bond in the manner and at the times set forth in the 2020A Bond and in the Indenture. The Bank shall be the initial registered owner of the 2020A Bond.

The 2020A Bond shall be executed by the manual or facsimile signature of the Chair, Vice Chair of the Board, or the Chief Executive Officer or Chief Financial Officer of the Authority (collectively and individually, the "Authority Officials") and shall have the corporate seal or a facsimile thereof impressed thereon, duly attested by the manual or facsimile signature of the Secretary or Assistant Secretary, Solicitor of the Authority, or Human Resources Manager of the Authority (collectively and individually, the "Attesting Officials") and such officers are hereby authorized and directed to execute, or cause to be executed, the 2020A Bond in such manner.

The Authority Officials are further authorized and directed to deliver the 2020A Bond to the Trustee for authentication and delivery, and the Trustee is hereby requested, authorized and directed to authenticate and deliver the same to, or upon the order of, the Authority Officials in accordance with the provisions of the Indenture.

Payment of the principal of and interest on the 2020A Bond shall be made to the registered owner thereof, when due, in lawful money of the United States of America as provided in the 2020-2 Supplemental Indenture.

Section 3. Security for 2020A Bond; Limited Obligation; Confirmation of Trustee. The 2020A Bond shall be secured under the Indenture by the Trust Estate defined therein from the Authority to the Trustee, whose appointment as Trustee under the Indenture is hereby ratified and confirmed. Under the terms of the Indenture the Concessionaire Interest (as therein defined) is assigned, transferred and pledged to the Trustee for, *inter alia*, the

payment of the principal or redemption price of and interest on the 2020A Bond and such assignment, transfer and pledge is hereby confirmed.

The 2020A Bond shall not in any manner pledge the credit or taxing power of the Commonwealth of Pennsylvania, County of Lehigh, or of any political subdivision thereof; nor shall they be deemed to be obligations of the Commonwealth of Pennsylvania, the County of Lehigh, or any political subdivision thereof; nor shall the Commonwealth of Pennsylvania, the County of Lehigh, or any political subdivision thereof be liable for the payment of the principal of, and interest on, such obligations but they shall be secured upon and be payable from the sources referred to above and from such other moneys as may be available for such purpose.

Section 4. Approval of 2020-2 Supplemental Indenture. The 2020-2 Supplemental Indenture, in such form and subject to such terms and conditions as shall be acceptable to the Authority Officials, with the advice of counsel to the Authority and McNees Wallace & Nurick LLC, bond counsel for the Authority ("Bond Counsel"), as well as the form, terms and conditions of the 2020A Bond secured thereby, are hereby approved. The Authority Officials are hereby authorized and directed to execute the 2020-2 Supplemental Indenture in such form on behalf of the Authority, with the advice of counsel to the Authority and Bond Counsel, subject to such changes and modifications, if any, as may be approved by such Authority Officials, the execution of the 2020-2 Supplemental Indenture to be conclusive evidence of such approval, and the Attesting Officials of the Authority are hereby authorized and directed to cause the corporate seal of the Authority to be affixed thereto and to attest the same. The Authority Officials are further authorized and directed to acknowledge the same on behalf of the Authority and to deliver the 2020-2 Supplemental Indenture to the Trustee.

Section 5. Approval of Amended and Restated Consent Agreement. The Amended and Consent Agreement, in such form and subject to such terms and conditions as shall be acceptable to the Authority Officials, with the advice of counsel to the Authority and Bond Counsel, is hereby approved. The Authority Officials are hereby authorized and directed to execute the Amended and Restated Consent Agreement in such form on behalf of the Authority, with the advice of counsel to the Authority and Bond Counsel, subject to such changes and modifications, if any, as may be approved by such Authority Officials, the execution of the Amended and Restated Consent Agreement to be conclusive evidence of such approval, and the Attesting Officials are hereby authorized and directed to cause the corporate seal of the Authority to be affixed thereto and to attest the same.

Section 6. Approval and Acceptance of Bank Proposal. The Authority Officials, upon receipt of favorable advice from Concord Public Financial Advisors, Inc., municipal advisor to the Authority, counsel to the Authority and Bond Counsel with respect thereto, are hereby authorized and directed to accept, approve, execute and deliver the Proposal for the purchase of the 2020A Bond as presented to the Authority by the Bank. The Authority hereby approves the designation of the Bank so selected as the purchaser of the 2020A Bond. The Authority authorizes and directs that: (a) the 2020A Bond be issued and sold to the Bank upon the terms and conditions set forth in the Proposal and the Indenture, as fully executed, and (b) the 2020A Bond shall be delivered to the Bank, upon execution thereof by

the Authority, against receipt from the Bank of the full purchase price plus accrued interest, if any, and the performance of all other conditions of the Proposal and Indenture, as fully executed.

Section 7. Disposition of Bond Proceeds. The Authority, upon receipt of the proceeds of the 2020A Bond, shall deposit the same with the Trustee to be held and disbursed all as provided in the 2020-2 Supplemental Indenture.

Section 8. Refunding Project. The Authority, exercising its option to do so, hereby authorizes and directs the current refunding of the 2018 Bond contemplated herein in the manner set forth herein and in the Indenture, and authorizes the delivery of any written notice to the Trustee required to effectuate such redemption of the 2018 Bond.

Subject only to completion of delivery of, and settlement for, the 2020A Bond, the Authority hereby authorizes and directs the irrevocable deposit in trust with the Trustee, proceeds of the 2020A Bond in an amount which will be sufficient, together with other funds of the Authority, to effect the redemption of the 2018 Bond on September 17, 2020, or such other date as shall be selected by the Authority Officials, provided, however, that in no event shall the date of redemption be more than 90 days after the date of issuance of the 2020A Bond (the "Redemption Date"). On the Redemption Date, the Trustee is irrevocably authorized and directed to pay the principal of, and interest due on, the 2018 Bond. The Authority hereby gives and grants the Trustee full authority to do and perform all and every act and thing whatsoever requisite and necessary to effectuate said purposes as the Authority might do on its own behalf, and hereby ratifies and confirms all that said agent shall do or cause to be done by virtue hereof.

Section 9. Payment of Fees and Expenses. The proper officers of the Authority are hereby authorized and directed to pay or cause to be paid all fees and expenses of accomplishing the Project and effectuating the purposes thereunder.

Section 10. Liability of the Authority. No covenant, stipulation, obligation or agreement contained in this Resolution, the 2020-2 Supplemental Indenture, the Amended and Restated Consent Agreement, the 2020A Bond or other related and appropriate documents shall be deemed to be a covenant, stipulation, obligation or agreement of any past, present or future member, officer, agent or employee of the Authority in his or her individual capacity and neither the members of the Authority nor any officer executing any documents associated with the undertaking of the Project and the issuance of the 2020A Bond shall be liable personally, or be subject to any personal liability or accountability by reason of the issuance of the 2020A Bond.

Section 11. Authorizing Incidental Actions. The proper officers of the Authority are hereby authorized, directed and empowered on behalf of the Authority to execute any and all papers, documents, agreements, deposit account agreements, and to do or cause to be done any and all acts and things necessary or proper for the carrying out of the provisions of this Resolution, the Proposal, the 2020-2 Supplemental Indenture, the Amended and Restated Consent and the Project; and in the issuance, sale and delivery to the Bank of the 2020A Bond.

Section 12. Rescinding Inconsistent Resolutions. All resolutions or parts of resolutions inconsistent herewith be and the same hereby are rescinded, canceled and annulled.

Section 13. Effective Date. This Resolution shall take effect immediately.

NOW THEREFORE, BE IT RESOLVED that the Lehigh County Authority Board hereby approves Resolution No. 8-2020-2.

On motion of _____, seconded by _____, this resolution was adopted the 24th day of August 2020.

Tally of Votes: Yeas _____ Nays _____

✍ ✍

I, Michael A. Gaul, of the law firm of King, Spry, Herman, Freund & Faul, LLC, Solicitor to the 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 Board at a public meeting of the Authority Board held on 24 August 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. 8-2020-2 is now in full force and effect on the date of this certification.

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

Attest:

Lisa J. Miller Date
Executive Administrative Support Specialist

NON-BINDING DISCUSSION SHEET



This Non-Binding Discussion Sheet (this “*Discussion Sheet*”) has been prepared by Fulton Bank (the “*Bank*”) for discussion purposes only. ***Please note that this Discussion Sheet is not binding on the Bank, and is not an offer of financing or a commitment to lend.*** This Discussion Sheet is provided only as a basis for the discussion of financing needs that might lead to an offer of financing by the Bank. Without limiting the foregoing, this Discussion Sheet does not include a comprehensive list of all terms and conditions of any offer of financing that might be made by the Bank.

Date: August 12, 2020

Borrower: Lehigh County Authority

Proposed Loan:	\$18,160,000
Purpose:	Refinance 2018 Water and Sewer Revenue Bond
Term:	159 months
Payment:	Accrued interest shall be paid semiannually on June 1 and December 1, commencing on December 1, 2020. Principal payments shall fully amortize over the term of the loan on December 1 of each year commencing on December 1, 2020, in an amount to effect level debt service through the final maturity of December 1, 2033
Rate:	The interest rate will be fixed for 5 years at the taxable bank rate of 2.90%, followed by a floating rate of One-month LIBOR plus 165 bps with a cap of 5.0%
Fees:	The borrower shall be responsible for all applicable documentation costs associated with this transaction including attorney’s fees
Collateral:	Secured by the Trust Indenture initially dated August 1, 2013. The Bond will be on parity, to the extent provided in the Indenture, to all Bonds currently outstanding under the Indenture. The Bond will constitute “Leasehold Mortgage Debt” as defined in the Indenture.
Financial Covenants:	The Financial Covenants will mirror the covenants defined in the Indenture, including but not limited to the requirement that the Cash Available for Debt Service shall be at least sufficient to provide annually an amount equal to 120% of the Debt Service Requirements during the current Fiscal Year of the Authority.
Prepayment Charge:	None
Deposits:	During the term of the Bond the Authority shall: (i) maintain a depository and cash management relationship with the Bank (provided, however, that lack of such relationship shall not constitute an event of default under the Indenture); and (ii) maintain Bank funds sufficient to satisfy the Debt Service Reserve Fund Requirement with respect to the Bond.
Closing Documents:	As a condition of closing, the Authority shall deliver to the lender all necessary documentation for the transaction.

Important Information About Procedures for Opening a New Account

To help the government fight the funding of terrorism and money laundering activities, Federal law requires all financial institutions to obtain, verify, and record information that identifies each person who opens an account.

What this means for you: when you open an account, we will ask for your name, address, date of birth and other information that will allow us to identify you. We may also ask to see your driver's license or other identifying documents. The results of all searches and/or verifications must be satisfactory to the Bank.



LEHIGH COUNTY AUTHORITY

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, Chief Executive Officer
DATE: August 17, 2020
RE: Kline's Island Sewer System (KISS) Interim Act 537 Plan
Resolution 8-2020-3 Approving Adoption of the Plan

In May 2020, Lehigh County Authority (LCA) staff presented an overview of the Interim Act 537 Plan ("Interim Plan") that was being developed for the Kline's Island Sewer System (KISS), which serves 15 municipalities including the City of Allentown, LCA's Western Lehigh sewer signatories, and several others. The development of this Interim Plan follows more than a decade of work LCA and the KISS municipalities have undertaken to address two major sewer system challenges:

1. Excess inflow and infiltration (I&I) that creates operational and environmental challenges during wet-weather events; and
2. Sewer capacity for future growth in our region.

These interrelated challenges have been difficult to address due to a variety of factors including complex historical inter-municipal agreements, varying needs and priorities of each of the municipalities, and shifting regulatory guidance and oversight between the U.S. Environmental Protection Agency (EPA) and the Pa. Department of Environmental Protection (DEP). Most recently, in mid-2019, DEP assumed oversight of the planning efforts of the KISS after over a decade of EPA oversight. Through discussion with DEP, the KISS municipalities have agreed to address both I&I and sewer capacity challenges through the development of a regional Act 537 Plan (the first regional sewage facilities plan in our region).

The Interim Plan has been developed to address the planning period of 2021 to 2025, which will allow DEP to provide more direct oversight of the work being completed and the new connections that occur during this time period. For the five-year planning period, the region will work under a Connection Management Plan that will allow new connections to continue so long as the work described in the Interim Plan is completed on schedule. The new connections requested in the Interim Plan total 2.9 million gallons per day, allocated to each of the municipalities based on their projected needs.

Key components of the Interim Plan include:

- Connection Management Plan for 2021-2025, as described above
- Municipalities' individual efforts to remove I&I from their sewer collection systems
- Western Lehigh system upgrade to address conveyance system "bottleneck" in Trexlertown
- Flow characterization and system modeling (to be completed in 2021 and 2022)
- Alternatives analysis and final plan development (to be completed by 2025)

Since presenting the Interim Plan to the LCA Board in May, the plan has been distributed to all municipal planning commissions and the Lehigh Valley Planning Commission for comment, along with a public comment period. Due to the nature of this Interim Plan, which is focused on near-term planning activities which are not controversial, no significant comments were received.

The 15 KISS municipalities are required to reflect their commitment to the Interim Plan via adoption by resolution, a process which is currently under way and expected to be completed by early September 2020. The Interim Plan, complete with authorizing municipal resolutions, will be submitted to DEP in September, with approval requested by January 2021.

LCA's Role: Since Lehigh County Authority is not a “municipality” for purposes of Act 537 Plan adoption, no action is officially required. However, due to the leadership role LCA will play in developing the long-term regional Act 537 Plan, it is recommended that LCA indicate its support for the Interim Plan via adoption of Resolution 8-2020-3, approving adoption of the plan.

RESOLUTION No. 8-2020-3

(Duly adopted 24 August 2020)

**A RESOLUTION OF LEHIGH COUNTY AUTHORITY APPROVING ADOPTION OF THE
INTERIM ACT 537 PLAN FOR THE KLINE'S ISLAND SEWER SYSTEM (KISS)
SERVICE AREA SERVED BY THE KLINE'S ISLAND WASTEWATER TREATMENT
PLANT (WWTP) IN THE CITY OF ALLENTOWN.**

WHEREAS, the Lehigh County Authority (the "Authority") is a Pennsylvania municipal authority organized by the Board of County Commissioners of the County of Lehigh, Pennsylvania, under the provision of the Pennsylvania Municipality Authorities Act, 53 P.S. Sec. 5601, *et. seq.*, as amended (the "Act"); and

WHEREAS, the Authority's authorized purposes and powers include, *inter alia*, owning, leasing (both as lessor and lessee) and operating sewer systems; and

WHEREAS, the Authority's Board shall have full authority to manage the properties and business of the Authority, and to prescribe, amend and repeal bylaws, rules and regulations governing the manner in which the business of the Authority may be conducted, and the powers granted to it may be exercised and embodied; and

WHEREAS, the Authority leases and operates the City of Allentown ("City") Sewer Utility System pursuant to the Allentown Water and Sewer Utility System Concessional Lease Agreement, dated as of May 1, 2013, as amended, between the City and the Authority; and

WHEREAS, the City Sewer Utility System includes the Kline's Island Wastewater Treatment Plant (WWTP) and portions of the City sewer collection system and regional interceptors that serve other municipalities known as the Kline's Island Sewer System ("KISS") service area; and

WHEREAS, the KISS service area includes all or a portion of the following municipalities: the City of Allentown, the Townships of Whitehall, South Whitehall, North Whitehall, Salisbury, Hanover, Lower Macungie, Upper Macungie, Lowhill, Weisenberg, and Upper Milford, and the Boroughs of Coplay, Emmaus, Alburtis, and Macungie (the "KISS Municipalities"); and

WHEREAS, the KISS provides service to the KISS Municipalities through service agreements directly with the KISS Municipalities, or indirectly through service agreements with the Lehigh County Authority or Coplay-Whitehall Sewer Authority; and

WHEREAS, Section 5 of the Act of January 24, 1966, P.L. 1535, No. 537, known as the "Pennsylvania Sewage Facilities Act," as amended, and the Rules and Regulations of the Department of Environmental Protection ("Department") adopted thereunder, Chapter 71 of Title 25 of the Pennsylvania Code, requires the KISS Municipalities to adopt an Official Sewage Facilities

Plan providing for sewage services adequate to prevent contamination of waters and/or environmental health hazards with sewage wastes, and to revise said plan whenever it is necessary to meet the sewage disposal needs of the KISS Municipalities; and

WHEREAS, ARRO Consulting has prepared an Interim Act 537 Plan (the “KISS Interim Act 537 Plan” or “Plan”) which provides for sewage facilities in the KISS Municipalities; and

WHEREAS, Lehigh County Authority has acted as agent for the KISS Municipalities in the preparation of the KISS Interim Act 537 Plan; and

WHEREAS, the Plan consists of an interim facilities plan for the planning period from 2021 to 2025 to address corrective actions at the Kline’s Island WWTP, all KISS Municipalities’ sewer collection systems, and portions of the Western Lehigh Interceptor, which is owned and operated by Lehigh County Authority.

WHEREAS, the alternative of choice to be implemented includes a paper re-rate of the Design Hydraulic Capacity of the Kline’s Island WWTP; an alternatives analysis for a portion of the Trexlertown Interceptor; ongoing inflow and infiltration source reductions within the KISS service area; a flow characterization study of current and future sewage dry-day and wet-weather flows within the KISS service area; and development of a long-term regional Act 537 Plan, with the key implementation activities to be concluded in 2025; and

WHEREAS, the Authority Board finds that the KISS Interim Act 537 Plan described above conforms to (i) the Authority’s plans and policies, (ii) applicable zoning, subdivision, other municipal ordinances and plans in the KISS Municipalities and (iii) a comprehensive program of pollution control and water quality management.

WHEREAS, the Board desires to signify its approval for, support of, and concurrence in the KISS Interim Act 537 Plan.

NOW THEREFORE, BE IT RESOLVED that the Lehigh County Authority Board hereby approves, adopts and supports the KISS Interim Act 537 Plan, and concurs with the action of the KISS Municipalities in regard to amending and revising their respective Act 537 Plans in regard thereto. The Authority approves the submission of the KISS Interim Act 537 Plan to the Department of Environmental Protection for its approval as the “Official Plan” of the KISS Municipalities. The Authority Board hereby assures the Department of the complete and timely implementation of Authority’s responsibilities as described in the said Plan, and as required by law.

On motion of _____, seconded by _____,
this resolution was adopted the 24th day of August 2020.

Tally of Votes: Yeas _____ Nays _____

☞ ☞

Michael A. Gaul, Esquire King, Spry, Herman, Freund & Faul, LLC Lehigh County Authority Solicitor	Date
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Lisa J. Miller Executive Administrative Support Specialist	Date
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MEMORANDUM

Date: August 17, 2020

To: LCA Board of Directors
Liesel Gross, CEO

From: Phil DePoe, Interim Senior Planning Engineer

Subject: Regional Act 537 Plan Alternatives Analysis: Pretreatment Plant (PTP)
Upgrade Option – Planning Phase

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
A	Professional Services Authorization – AECOM – Program Manager for PTP Upgrade Option	\$203,500
B	Professional Services Authorization – Jacobs – Technical Lead for PTP Upgrade Option	\$284,800

Introduction & Background

Since 2008, Lehigh County Authority (LCA) and the Western Lehigh sewer signatories have been developing plans to address two major sewer system challenges:

1. Excess inflow and infiltration (I&I) that creates operational and environmental challenges during wet-weather events; and
2. Sewer capacity for future growth in our region.

These interrelated challenges have been difficult to address due to a variety of factors including complex historical inter-municipal agreements, varying needs and priorities of each of the 15 municipalities that use the Kline's Island Sewer System (KISS), and shifting regulatory guidance and oversight between the U.S. Environmental Protection Agency (EPA) and the Pa. Department of Environmental Protection (DEP). Most recently, in mid-2019, DEP assumed oversight of the planning efforts of the KISS after over a decade of EPA oversight. Through discussion with DEP, the KISS municipalities have agreed to address both I&I and sewer capacity challenges through the development of a regional Act 537 Plan (the first regional sewage facilities plan in our region) by 2025.

Prior efforts to address the sewer capacity challenge have involved developing detailed alternatives analyses looking at treatment capacity and conveyance capacity requirements to meet future needs in the 20-30 year time horizon. The work that will be completed over the next five years to develop a regional Act 537 Plan will require an update to the prior alternatives analysis, reflecting current dry- and wet-weather flows, updated growth projections, updated climate projections, and more. Early estimates of the cost to complete the required system upgrades was in the range of \$300 million, which means extensive financial analysis will be required in addition to the development of updated inter-municipal agreements to reflect how these costs will be shared among all municipalities.

LCA Pretreatment Plant Upgrade Alternative

A key component of the planning work completed over the last decade was an evaluation of treatment alternatives, as the Kline's Island Wastewater Treatment Plant (KIWWTP) has limited additional capacity to address future growth. While an upgrade and expansion of the KIWWTP has been viewed as the most cost-effective option to achieve regional goals, an alternative approach has been studied which involves upgrading LCA's Industrial Pretreatment Plant (PTP) in Fogelsville. If the PTP could be upgraded to full treatment, with a new, separate discharge point, the diversion of flows out of the KISS could provide significant benefit to downstream KISS municipalities by freeing up both conveyance capacity in the regional interceptors and treatment capacity in the KIWWTP.

Prior studies have indicated the PTP performs at a very high level, such that upgrading to full treatment is a viable alternative to pursue further. Specific additional study is required to more fully evaluate the capacity of the PTP to treat current and future dry-day and wet-weather flows, and to quantify the impact on downstream conveyance systems if those flows are removed from the system. This analysis is complicated by the dynamic and somewhat unpredictable nature of the industrial flows and loads being discharged to the PTP.

Prior studies on the PTP upgrade alternative had focused on the viability of various discharge options, including a new discharge to the Lehigh River (located near the KIWWTP discharge), discharge to the Jordan Creek, or land application of treated effluent through a drip irrigation "living filter" system. These studies, conducted from 2011 to 2015, highlighted the permitting challenges of each of these options and treatment standards that would need to be met in each scenario. Ultimately, the Lehigh River discharge was determined to be the most cost effective, and the most viable option for the PTP upgrade to be compared to the KIWWTP upgrade option. However, due to shift in regulatory focus at that time, the studies were discontinued.

August 24, 2020 Update

As the region moves forward with developing a regional Act 537 Plan by 2025, a critical first step is to refine the scope of the alternatives that will be pursued, picking up on prior work that was discontinued about five years ago. The PTP upgrade option is a critical piece of the puzzle, as it has potential to drastically alter the downstream conveyance capacity projects that will be needed, which will be the most expensive portion of the future system upgrades.

As outlined in the Interim Act 537 Plan (which covers the planning horizon of 2021 to 2025), flow characterization and system modeling work will commence in 2021, with full alternatives analysis beginning in 2022. In order to keep pace with an aggressive planning schedule, LCA and the Western Lehigh sewer signatories recommend moving forward with the analysis of the PTP upgrade option so that full analysis is available in time for the regional system modeling to begin next year. The professional services authorizations described in subsections A and B below represent the next steps in the process, which will be geared toward developing a detailed engineering, regulatory and financial feasibility analysis of the PTP upgrade option, focusing on a potential new discharge point to the Lehigh River.

The intended outcome of this work is a clear understanding of the feasibility and cost associated with upgrading the PTP to full treatment, along with a calculation of the flows that could be diverted out of the KISS via this alternative approach. This work will provide a baseline of engineering analysis that can then be used to compare with other alternatives, including an upgrade and expansion to the KIWWTP.

A. Regional Act 537 PTP Upgrade Option – Program Manager

AUTHORIZATION OVERVIEW

In order to fully understand if the PTP full treatment upgrade is a viable option for the Regional Act 537 Plan, AECOM has provided a Program Manager proposal to analyze this option in detail. They will build upon prior engineering analysis of the PTP and the KIWWTP as well as knowledge of the overall system through the 2011-2015 wastewater planning effort and more recent support in 2019-2020. Collaborating with LCA and other consultant partners and acting as the overall Act 537 Program Manager, AECOM will facilitate efforts, provide coordination, and provide critical technical insight for specific components to meet the over Act 537 program goals.

FINANCIAL

The LCA Suburban Division will fund these 2020 services.

CURRENT STATUS

The consulting engineer has completed preliminary planning preparation, with a report submitted in March of 2020.

This authorization is required per the Interim 537 Plan schedule via this Board approval request.

THIS APPROVAL

AECOM will serve as the Program Manager for the Regional Act 537 Plan PTP Upgrade Option analysis. These services include but are not limited to the following:

Professional Services
<ul style="list-style-type: none">• Pretreatment Plant Capacity and Direct Discharge Options
<ul style="list-style-type: none">• Kline's Island Wastewater Treatment Plant Coordination
<ul style="list-style-type: none">• Pretreatment Plant Disinfection, Effluent Pump Station, and Force Main Concept Design
<ul style="list-style-type: none">• Arcadis Coordination for collection system integration
<ul style="list-style-type: none">• General Consultation

CONSULTANT SELECTION PROCESS

AECOM was retained by LCA during the 2011-2015 timeframe to investigate wastewater treatment capacity options for the WLSP. In late 2019, AECOM was once again retained to provide a status update on prior planning efforts. Due to their intimate knowledge acquired through the prior planning process, LCA recommends AECOM be retained again for this phase of the Regional Act 537 Plan.

SCHEDULE

This authorization includes PTP planning services through June of 2021. A final report of recommendations is expected at that time.

FUTURE AUTHORIZATIONS

Future authorizations are anticipated in 2021 and beyond, spanning throughout the Regional Act 537 planning process.

B. Regional Act 537 PTP Upgrade Option – Technical Lead

AUTHORIZATION OVERVIEW

In order to fully understand if the PTP full treatment upgrade is a viable option for the Regional Act 537 Plan, Jacobs has provided a technical proposal to analyze this in detail. LCA will utilize Jacobs' assistance to address the requirements of the Regional Act 537 Plan in the form of analyzing improvements that may be needed at the existing PTP to increase its capacity and ensure conformance with converting the plant to a surface water discharge. The analysis will include evaluating several promising alternative improvements and determining the cost of implementation, including operating costs. They will build upon their prior engineering analysis of the PTP as well as their PTP operations expertise. Jacobs will collaborate with the LCA and AECOM (proposed Act 537 Program Manager) to ensure recommendations are sound and meet LCA's program goals.

FINANCIAL

The LCA Suburban Division will fund these 2020 services.

CURRENT STATUS

The consulting engineer (and PTP operator) has recently completed a capacity study of the PTP, with a report submitted in June of 2020.

This authorization is required per the Interim 537 Plan schedule via this Board approval request.

THIS APPROVAL

Jacobs will serve as the Technical Lead for the Regional Act 537 Plan PTP Upgrade Option analysis. These services include but are not limited to the following:

Professional Services
<ul style="list-style-type: none">• Data Analysis and Planning
<ul style="list-style-type: none">• Chemically Enhanced Primary Treatment (CEPT) Testing
<ul style="list-style-type: none">• Alternatives Analysis for Surface Water Discharge
<ul style="list-style-type: none">• Coordination and Meetings (Monthly, DRBC, Public Facing)
<ul style="list-style-type: none">• Delivery of Final Report and Task Memos as Supplements

CONSULTANT SELECTION PROCESS

Jacobs is the current PTP operator and maintains proprietary modeling software of the facility. Their intimate knowledge of the PTP and their expert engineering staff makes their involvement critical to this portion of the Regional Act 537 planning process.

SCHEDULE

This authorization includes PTP planning services through June of 2021. A final report of recommendations is expected at that time.

FUTURE AUTHORIZATIONS

Ongoing support services to continue in 2021 and beyond if recommendations warrant further analysis.

August 13, 2020

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

RE: **Lehigh County Authority Act 537 Support Proposal, Phase 2**

Dear Ms. Gross,

AECOM Technical Services, Inc. (AECOM) appreciates the opportunity to provide this proposal to Lehigh County Authority (the “Authority”, or “LCA”) for continuing our support of the ACT 537 planning effort as described herein. We will build on our prior engineering analysis of the Pre-Treatment Plant (PTP) and the Kline’s Island Wastewater Treatment Plant (KIWWTP), as well as knowledge of the overall system through the 2013 -16 wastewater planning effort and more recent support in 2019-2020. AECOM will collaborate with the LCA and your other consultant partners and act as the overall Act 537 Program Manager to facilitate efforts, provide coordination, and provide critical technical insight for specific components to meet LCA’s program goals.

1.0 Scope of Work

The following sections outline AECOM’s project understanding, proposed scope, assumptions, schedule, and proposed cost for this Project. Task elements that involve technical or engineering efforts above those associated with fulfilling Program Manager duties are shown in **bold** for easy identification.

Item A. Pretreatment Plant Capacity and Direct Discharge Options

Task 1 – Data Analysis and Planning

- Coordinate with Jacobs to review current PTP data sets available from SCADA and analytical data
- Discuss additional waste flow characterization desired – LCA, AECOM, Jacobs
- **Identify any data gaps on sampling/data collection needed to fill to answer pertinent questions such as primary clarifiers capacity/limitations**
- Review and comment on workplan to address data gaps

Task 2 – CEPT trials on Primary Clarifiers

- **Assist Jacobs with test plan development** and review draft and final Work Plans as developed by Jacobs
- Overview test plan assuming a 2-week testing period in colder weather conditions and a 2-week testing period in warm weather conditions. Assume site visit during each testing period. It will be important to identify the appropriate number of samples and timing of the sampling to cover a representative spectrum of the influent received at the PTP. The primary clarifier performance (based on data acquired to date) is highly atypical with a wide range of results and without an expected correlation to flow. Throughout the testing program this will be reviewed and assessed.
- Review results and technical memorandum prepared by Jacobs.

Task 3 – Alternatives Analysis for Surface Water Discharge

- Work with LCA/Jacobs in a workshop setting to develop alternatives to increase capacity and redundancy/reliability needed for a surface water discharge. Technologies to consider include, but not limited to: MBBR, HPO RAS Regen, CEPT, Aerobic Lagoons
- Provide input on the selection of 3 to 4 alternatives for further development, and include for each alternative multiple flow scenarios based on input from Arcadis on future flows to the PTP
- Review hydraulic and process model analyses with selected alternatives to look at expected performance and potential impacts to other areas of the plant
- **AECOM to assist with the evaluation of the HPO-RAS alternative. AECOM will draw on our practical experience with Capital Region Water to comment on a conceptual site layout, and review CAPEX/OPEX costs and process considerations.**
- Review CAPEX and OPEX costs for the alternatives, site layouts, and assessment of each alternative as prepared by Jacobs
- Attend meeting with the LCA/Jacobs team
- Review and comment on a technical memorandum of the evaluation

Task 4 – Coordination and Meetings

- Prepare for and attend monthly steering meetings (in person or virtually) organized by LCA
- Prepare for and attend up to two virtual meetings with DRBC
- Prepare for and attend up to two public facing/LCA board meetings

Task 5 – Final Report

- Review and comment on executive summary of project findings
- Review and comment on the plan for the recommended/selected capital improvements that shows schedule and costs over time

Item B. Kline's Island Wastewater Treatment Plant Coordination

Task 1 – Coordination and Meetings

- Prepare for and attend monthly steering meetings (in person or virtually) organized by LCA (consolidated with Item A meetings)
- Prepare for and attend one virtual meeting with DRBC (consolidated with meeting in Item A)
- Prepare for and attend two meetings with LCA/Allentown/Kleinfelder to discuss the PTP effluent outfall impacts to KIWWTP

Task 2 – General Coordination with Kleinfelder concerning KIWWTP impacts with PTP Stream discharge scenario

- **Provide TDS sampling plan and review analytical results for use with DRBC negotiations around separate outfall for PTP while complying with PADEP and DRBC requirements for TDS in the receiving water course.**
- **Investigate impact to KIWWTP under a reduced flow and loading scenario under the PTP stream discharge option. AECOM will develop scenarios for Kleinfelder to evaluate from hydraulic and process perspective considering the load/flow transfer to the new PTP outfall which may reduce dry flow capacity needs and offer redundancy in tanks.**
- **Evaluate incorporation of the PTP effluent into the plant outfall.** Scenarios to include introduction at KIWWTP include:
 - chlorine contact tank
 - de-chlorination tank
 - effluent pump station (PS) (during high river conditions)
 - secondary clarifier influent

Task 3 – Final Report and Meeting

- **AECOM will prepare Technical Memo summarizing evaluations at KIWWTP**
- Attend one summary meeting to present findings.

Item C. Pretreatment Plant Disinfection, Effluent Pump Station and Force Main Concept Design

Task 1 – Coordination and Meetings

- Prepare for and attend monthly steering meetings (in person or virtually) organized by LCA (consolidated with meetings indicated in Item A and B above)
- Attend meeting with LCA/Jacobs regarding operational preferences for Pump Station arrangement
- Attend meeting with LCA regarding pipeline alternative routes

Task 2 - Disinfection Design

- **AECOM to assist with disinfection-specific alternatives for the plant and proposed force main arrangement (a maximum of three will advance to detailed assessment)**
- Review CAPEX and OPEX costs for the alternatives, site layouts, and assessment of each alternative for comparison with application of disinfection at KIWWTP

Task 3 – **Pump Station Conceptual Design**

- **Evaluate style (submersible, suction lift, dry-pit submersible) pump station, wet well, valve configuration, metering, instrumentation, power needs/availability and controls for pumping facility**
- **Evaluate flow conditions to determine pump and force main needs**
- **Develop CAPEX and OPEX costs for the alternatives, site layouts, and assessment of each alternative**

Task 4 – **Effluent Force Main Alignment Conceptual Design**

- **Determine pipe size to manage peak discharge needs for the future PTP capacity under up to three flow scenarios from Arcadis**
- **Collect and review available geotechnical data along pipeline corridor to aid in cost assessments, constructability and trenchless crossing needs.**
- **Review environmental databases for sensitive areas along pipeline corridor for avoidance where possible and potential trenchless crossing needs.**
- **Review County Parcel mapping for identification of potential Right-of-Way acquisition needs outside of roadway alignments**
- **Review major highway and rail crossings and identify special crossing provisions that will be required and impact pricing**
- **Perform windshield survey of pipeline corridor to optimize alignment considerations**
- **Prepare up to three alignments (using Google Earth) and assessment of each alternative for review by LCA**
- **Develop CAPEX costs for the preferred alternative piping plan**

Task 5 – Final Report and Meeting

- **AECOM will prepare Technical Memo summarizing evaluations for Conceptual PS and force main**
- Attend one summary meeting to present findings.

Item D. Arcadis Coordination

Task 1 – Coordination and Meetings

- Prepare for and attend monthly steering meetings (in person or virtually) organized by LCA (consolidated with meetings in Item A thru C above)
- Attend up to two meetings with LCA/Arcadis regarding hydraulic model and flow scenarios

Task 2 – AECOM to evaluate diversion of sanitary flows from WLI to the PTP to reduce loading on conveyance systems

- **Coordinate with Arcadis to evaluate up to three locations for additional sanitary flow capture for the PTP based on the sewer network, existing bottlenecks and flow contributions**
- **Determine additional flow and load to PTP with new pump station redirection**
- Review Arcadis model and simulation runs for context
- **Develop CAPEX and OPEX cost estimates for new pump station and new force main improvements necessary to divert flow to the PTP from the collection system (ex. Spring Creek PS). AECOM assumes one location will be selected based on flow from input from Arcadis hydraulic sewer modeling and the available PTP capacity from Jacobs study**
- Coordinate with Arcadis to capture CAPEX savings on planned interceptor improvements that would no longer be necessary to alleviate hydraulic bottlenecks

Task 3 – Final Report and Meeting

- **AECOM will prepare Technical Memo summarizing PTP flow diversion scenarios**
- Attend one summary meeting to present findings.

Item E. General Consultation

AECOM will provide consultation on related matters as requested by LCA that arise that are not specifically covered in the above scope.

2.0 Assumptions

The proposal has been based on the following assumptions:

1. Data requests to LCA or Jacobs will be responded to in a timely manner to maintain schedule.
2. Local travel will be based on mileage from AECOM's Conshohocken Office to LCA's offices or facilities. No air travel or overnight stays are included.
3. Physical visits (meetings and site visits) will be limited to ten (for two people) over the course of the project. Virtual meetings will be used to supplement to provide the total number of meetings enumerated above.
4. Support for a full scale CEPT trial is not included in this proposal; however, AECOM anticipates that such a trial will be necessary to confidently include CEPT as a component of a PTP upgrade, given the highly variable nature of the PTP influent. If LCA elects to not include as a contingency in the initial Board authorization, it is recommended that the Board be informed of what may follow if we confirm CEPT's attractiveness.
5. To fit within LCA 2020 budget constraints, additional 2020 invoices paid for this project will not exceed \$70,000 without prior LCA authorization. This does not include invoices for developing the Cost-Revenue Tool. If advancement of the Cost-Revenue Tool is desired concurrent, ACT 537 invoicing will reduce accordingly for 2020 unless advised otherwise.
6. It is anticipated the General Consultation will average \$5,000 per month over the next 10 months.

3.0 Schedule and Budget Estimate

AECOM is prepared to immediately start on this project upon authorization and has already been in active consultation with the Authority staff through our prior meetings and conference calls along with execution of Phase 1 which enabled initial planning and insight on the project objectives. This Phase 2 is expected to run through June 2021.

A proposed Phase 2 budget to enable immediate initiation and expeditious advancement of activities is indicated below:

Item	Budget
Labor	\$ 199,500
ODCs	\$ 4,000
TOTAL	\$ 203,500

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

Once again, we appreciate the opportunity to provide this proposal to you and look forward to assisting the Authority with this important project. Please reply that we are authorized to proceed in accordance with this proposal for our records. If you have any questions or need additional information, please contact me at 610-234-0404 or chris.curran@aecom.com.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Chris Curran', with a long horizontal flourish extending to the right.

Christopher Curran, PE
AVP, Project Director

Cc: Mr. Philip DePoe, PE



Lehigh County Authority

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

PROFESSIONAL SERVICES AUTHORIZATION AMENDMENT NO. 1

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

Date: August 24, 2020

Requested By: Phil DePoe

Approvals

Department Head: _____

Chief Executive

Officer: _____

Regional Act 537 Plan Alternatives Analysis: Pretreatment Plant Upgrade Option - Planning Phase

To begin the process of developing the long-term Regional Act 537 Plan, the evaluation of the LCA Pretreatment Plant (PTP) Alternatives was identified as an immediate need to assist with completing the full alternatives analysis to be completed within the next five years. The alternative to upgrade the PTP to full treatment was previously evaluated in the 2011-2016 timeframe. Additional study is required to fully evaluate the facility's capacity to treat current and future dry-day, wet-weather, and peak flows. To complete this evaluation, LCA staff has received a proposal from an engineering firm that will serve as the Program Manager. The Program Manager will oversee all alternatives being evaluated at both the Pretreatment and Kline's Island Wastewater Treatment Plant as the Regional Act 537 is being developed. Current planned services include, but are not limited to, the following:

Professional Services ⁽¹⁾
1. Pretreatment Plant Capacity and Direct Discharge Options
2. Kline's Island Wastewater Treatment Plant Coordination
3. Pretreatment Plant Disinfection, Effluent Pump Station, and Force Main Concept Design
4. Arcadis Coordination for collection system integration
5. General Consultation

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

Prior Approval: \$39,696 (Q4 of 2019)

This Approval: \$203,500

Approval Amount (not to be exceeded without further authorization): \$243,196

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

(For Authority Use Only)

Authorization Completion:

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

Philip M. DePoe
Senior Planning Engineer
Lehigh County Authority
1053 Spruce Rd
Allentown, PA 18106

August 14, 2020

Subject: Task Order 2- LCA Act 537 Plan Assistance – Pretreatment Plant Capacity and Direct Discharge Options – Scope of Work

Dear Phil,

It is our understanding that Lehigh County Authority (LCA) is seeking Jacobs' assistance to address the requirements of PA-DEP's Act 537 Sewage Facilities Program (Act 537). Assistance is in form of analyzing improvements that may be needed at the existing pretreatment plant (PTP) to increase its capacity and ensure conformance with converting the plant to a surface water discharge. Our analysis will include evaluating several promising alternative improvements and determining the cost of implementation, including operating costs. We will build on our prior engineering analysis of the PTP as well as our PTP operations expertise. Jacobs will collaborate with the LCA and AECOM (Act 537 Program Manager) to ensure recommendations are sound and meet LCA's program goals.

Scope of Work

Task 1- Data Analysis and Planning

In order to determine and evaluate means to increase plant capacity the characteristics of the wastewater flow must be determined. Characterization should represent influent values and breakdown of different parameters (such as BOD & COD) into their constituents (such as soluble and particulate BOD, and nonbiodegradable organics). This segregation of wastewater components is a key input to process modeling tools due to the different behavior and fate of each of these wastewater components in the chemical, physical, and biological processes that it will be subject to in the plant. Determining the influent wastewater flow characteristics, as well as the wastewater characteristics after alteration through Chemically Enhanced Primary Treatment (CEPT), will allow the accurate evaluation of a wide range of treatment options.

The objective of Task 1 is to review existing data, determine desired data, perform a data-gap analysis, and develop a workplan for additional sampling and data collection that may be required.

Jacobs has plant flow and analytical data from our work on previous tasks; including, the PTP Capacity Analysis. We will update the data set to present day with more recent data. Jacobs will process and analyze the data and review the completeness of the data with LCA and AECOM. LCA, AECOM, and Jacobs will work together to determine any additional wastewater characterization and flows desired to complete the CEPT Testing (Task 2) and Alternatives Analysis (Task 3). Jacobs will compare the data available against the data desired and identify data gaps in operational and analytical data needed to answer pertinent questions such as primary clarifier capacity and limitations. Review of the data, identification of data gaps, and a workplan to address the data gaps will be summarized in a Data Gap Workplan.

Assumptions:

1. Data will be provided in excel format to allow for efficient analysis.

2. The Data Gap Workplan may call for additional sampling and laboratory analysis. This additional effort would be managed via a Task amendment or addressed via an addition to Jacobs' PTP O&M contract.
3. There will be one iteration of comments from LCA and AECOM on the deliverable listed below.

Deliverable:

1. Data Gap Workplan

Task 2- CEPT Testing

Chemically Enhanced Primary Treatment (CEPT) is a proven technology that combines coagulant and/or polymers with the normal gravity settling of primary clarifiers to enhance removal of solids (TSS and VSS) and organics (BOD and COD). CEPT allows primary clarifiers to operate at higher loading rates than without chemical addition. It also reduces the BOD loadings for secondary treatment. Less loading to the bioreactors results in less oxygen required for biological treatment thereby reducing energy needs. The additional captured loading is redirected to the residuals process.

The objective of Task 2 is to analyze the benefits of CEPT for increasing primary treatment capacity, by using jar testing. If promising, the results of the CEPT testing will be incorporated into a CEPT alternative for further consideration in Task 3. If the bench-scale CEPT testing is promising, Jacobs will propose a full-scale trial under a new task.

Jacobs will develop a Test Plan for bench scale CEPT jar testing. The relative ease of execution of the bench scale jar tests, and the ability to scan a wide range of operating points (coagulant dose, polymer usage) make this a critical component of this effort. This effort, coupled with an understanding of the settling behavior of the wastewater particles (which will be developed through settleometer analysis) will define the critical information needed to assess the treatment plant operating envelope.

The Test Plan will be reviewed and commented on by LCA and AECOM and a Testing Kickoff Meeting will be held with LCA, AECOM, Plant Staff, and Jacobs. Jacobs will work with vendors to obtain coagulants and polymers for testing.

Bench scale testing will include jar testing. Initial tests will be used to screen coagulants and polymers. Subsequent testing will be used to optimize a dosage for the selected coagulant and polymer. It is assumed that the jar testing will be performed over a consecutive two-week period to try to capture both dry weather and wet weather loads. Initial screening tests will be determined either visually or with TSS testing. Optimal coagulant and polymer dosages will be determined from the bench scale testing by measuring TSS and BOD removal efficiency. Settleometer tests will be conducted simultaneously while evaluating optimal chemical dosages. Jacobs will provide one staff member to perform the testing, with assistance from plant staff, as needed. Costs for chemicals, equipment required for testing, and laboratory analysis will be further refined with the development and concurrence of the Test Plan. A budgetary allowance is included in our proposed fee for these costs.

Results of the testing will be summarized in a Technical Memorandum.

Assumptions:

1. One Jacobs staff member will be provided for onsite CEPT bench and settleometer testing for a consecutive two-week period.
2. Operations staff will assist Jacobs field staff, as needed.
3. One sampling kickoff meeting will be held with Jacobs, AECOM, and Plant staff.
4. Jacobs will coordinate with vendors for chemicals, equipment, and laboratory testing.
5. There will be one iteration of comments from LCA and AECOM on the deliverables listed below.
6. The budgetary allowance for the equipment required for jar testing and laboratory analysis of samples is \$4,000. The laboratory portion of the budget was developed using the ALS Environmental wastewater testing schedule of prices to LCA.

Deliverables:

2. CEPT Test Plan
3. CEPT Results Technical Memorandum

Task 3 – Alternatives Analysis for Surface Water Discharge

For LCA to convert the pretreatment plant (PTP) to a direct discharging facility, significant changes to the existing treatment scheme would be required to meet a State Pollution Discharge Elimination System (SPDES) permit. The objective of this task is to collaboratively identify and screen alternatives, evaluate the feasibility of the selected treatment alternatives, and develop planning level costs for the selected alternatives that will achieve LCA's goals.

Technology Review and Screening Workshop

Jacobs will work collaboratively with LCA and AECOM, in a workshop setting, to develop and screen a list of treatment technologies for evaluation and further development. The technology alternatives will be screened based on their suitability to achieve process goals, overall site suitability, compatibility with existing facility, having a proven track record, and relative costs. AECOM has initially suggested the three following technologies for consideration:

- Moving Bed Bio Reactor (MBBR)
- High Purity Oxygen (HPO) Return Activated Sludge (RAS) Regeneration
- Chemically Enhanced Primary Treatment (CEPT)

In addition to these suggestions Jacobs will provide other technologies for this initial evaluation and screening (e.g. aerated lagoons). From this screening process, three liquid stream technology alternatives will be selected for further development and evaluation. The technology and screening workshop will also be used to finalize the flow and loading scenarios to be used to further evaluate the selected alternatives. Up to 3 flow/loading scenarios will be evaluated for each treatment technology.

Assumptions:

1. Three Jacobs staff (plus Pretreatment Plant Staff) for 4-hour workshop
2. Draft workshop summary document to Program Team for comments. Two weeks to review.
3. Three to four liquid stream technology alternatives will be selected for further development and evaluation.

Deliverables:

1. Workshop Summary / Technology Screening Report

Alternatives Development and Evaluation

Each of the alternatives selected in the technology screening will be further developed and evaluated at the flow and loading scenarios selected by AECOM. For each alternative, several evaluation steps will be performed.

Process Evaluation: A process model for each alternative will be developed using Jacobs' existing calibrated whole plant process model, which was last used on the PTP Capacity Analysis, as a starting point. The process model will be modified to reflect the proposed alternative and then be used to estimate plant performance, determine the feasibility of meeting proposed discharge limits, and to determine basic unit process sizing requirements. Each unit process will be evaluated to ensure resiliency and redundancy are provided and comply with applicable state regulations. The process evaluation will also include identifying the needed modifications to the residuals processing and handling system.

Hydraulic Evaluation: A hydraulic model for each alternative will be developed using Jacobs' existing hydraulic model for the PTP as a starting point. The hydraulic model will be updated to reflect the process changes identified in the process evaluation and then will be used to determine the needed hydraulic improvements to ensure future flows can be accommodated within the facility.

Disinfection Evaluation: As the current facility is a pretreatment facility, the plant effluent is not disinfected. Jacobs will evaluate suitability of chemical-based disinfection and UV disinfection for each alternative. Jacobs will narrow down the disinfection alternatives to maximum of three for detailed assessment.

Site Layout Evaluation: A conceptual site layout will be developed for each alternative utilizing the unit process footprints developed in the process evaluation. The layouts will consider conflicts from existing infrastructure and note the extent of any major demolition that may be required. Jacobs will also examine the existing electrical infrastructure at the PTP to determine impacts from each alternative and develop needed improvements.

Cost Evaluation: For each alternative, Jacobs will prepare a planning-level capital cost estimate (Class 4, AACEI). These estimates typically carry an accuracy range of +50% / -30% at a project definition of 1% - 15%. Additionally, an estimate of the operation and maintenance (O&M) cost will accompany the capital cost. Jacobs will prepare all cost estimates using its proprietary Conceptual Parametric Estimating System (CPES). CPES uses a parametric approach to develop cost estimates using a cost database that is based on past constructed projects and up-to-date material and labor costs. Jacobs will assign a professional cost estimator to review each estimate. Jacobs will collaborate with AECOM to develop net present values for each alternative based on consistent factors used throughout LCA's Act 537 planning (e.g. life cycle duration, interest rates, etc.).

A second workshop will allow Jacobs to present the results of these evaluations to LCA and AECOM and solicit comments. Jacobs will compile all the above evaluations as well as the key conclusions from the workshop into a single technical memorandum that will ultimately be included in the Plant Evaluation Final Report (see task 5).

Assumptions

1. Up to four technology alternatives will be evaluated.
2. Up to 3 flow/ loading scenarios (by AECOM) will be evaluated for each technology alternative.
3. Residuals treatment analysis assumes expansion of existing processes.
4. Disinfection evaluation assumes three alternatives.
5. Site layouts will use existing plant record drawings. No new base drawings will be prepared.
6. Additional scenario modelling or modified assumptions not already included in this scope of work may require additional fees to complete the work, depending on the complexity of the changes requested, and are not included in this project.
7. Process model assumptions and outputs will be provided to LCA and AECOM. However, Jacobs uses some proprietary modeling software (Jacobs whole plant process model, Jacobs hydraulic model, CPES) that cannot be released to LCA or others.
8. Draft Alternatives Evaluation Technical Memorandum to Program Team for comments. Four weeks to review and provide comments to Jacobs.

Deliverables

1. Workshop Summary
2. Draft Alternatives Evaluation Technical Memorandum
3. Final Alternatives Evaluation Technical Memorandum

Task 4- Coordination and Meetings

Jacobs will provide knowledgeable and engaged project staff for coordination and meetings appropriate to support the LCA and AECOM for this Task. The following meetings are assumed:

- Jacobs will prepare for and attend Monthly Steering Meetings (in person or virtually) organized by LCA/AECOM. It is assumed there will be 9 monthly meetings. Attendance will be by 2 Jacobs staff.

- Jacobs will prepare for and attend up to two meetings with DRBC (AECOM in lead). Attendance will be by 2 Jacobs staff.
- Jacobs will prepare for and attend up to two public facing/LCA board meetings. Attendance will be by 2 Jacobs staff.

Assumptions

1. Monthly meetings will be 3 in-person attendance and 6 virtual attendance.

Task 5- Final Report

The objective of this task is to provide LCA with a Final Report summarizing project findings. As part of the Final Report, Jacobs will develop and submit an executive summary of project findings with task generated technical memos as supplements. The report will include a plan for the recommended/selected capital improvements, showing the schedule for implementation and costs over time. It will also discuss risks and impacts to the PTP O&M contract with recommended/selected improvements.

Assumptions:

1. There will be one iteration of comments from LCA and AECOM on the final report.

Deliverables:

1. Act 537 Plan Assistance – Pretreatment Plant Capacity and Direct Discharge Options – Final Report

Schedule

The following 9-month schedule is assumed for this project.

Project Notice to Proceed	August 24, 2020
Kickoff Meeting	September 15, 2020
Task 1- Data Analysis and Planning	September 2020
Task 2- CEPT Testing – Bench-Scale	October-November 2020
Task 3 – Alternatives Analysis for Surface Water Discharge	December 2020 -April 2021
Task 4- Coordination and Meetings	September 2020 – May 2021
Task 5- Final Report	May 2021

Fee

The total not to exceed fee for the proposed scope of work is \$284,800. Jacobs fee breakdown is provided in the following table.

Project Task	Labor Hours	Labor Cost	Other Direct Costs and Allowances	Task Totals
1. Data Analysis and Planning	166	\$23,300	\$0	\$23,300
2. CEPT Testing – Bench-Scale	274	\$44,900	\$5,800	\$50,700
3. Alternatives Analysis for Surface Water Discharge	824	\$142,500	\$1,100	\$143,600

4. Coordination and Meetings	185	\$44,500	\$1,500	\$46,000
5. Final Report	131	\$21,200	\$0	\$21,200
Project Total	1,581	\$276,400	\$8,400	\$284,800

We propose this project being Task Order 2 under the existing September 23, 2019 Master Services Agreement with LCA. Jacobs pricing includes a 3% escalation on labor expended in 2021.

We appreciate the opportunity to propose on this important project and look forward to moving forward at your convenience. If you should have any questions, please do not hesitate to contact me at 215.327.0848, joe.nattress@jacobs.com, or our proposed project manager John Tobia, at 908.581.3739, john.tobia@jacobs.com.

Sincerely,



Joseph M. Nattress, P.E.

Vice President



Shivani Patel, P.E.

Geographic Manager of Projects

Attachments:

- a) Task Order No. 2 Form



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: JACOBS
2301 Market Street
Philadelphia, PA 19103

Date: August 24, 2020

Requested By: Phil DePoe

Approvals

Department Head: _____

Chief Executive

Officer: _____

Regional Act 537 Plan Alternatives Analysis: Pretreatment Plant Upgrade Option - Planning Phase

To begin the process of developing the long-term Regional Act 537 Plan, the evaluation of the LCA Pretreatment Plant (PTP) Alternatives was identified as an immediate need to assist with completing the full alternatives analysis to be completed within the next five years. The alternative to upgrade the PTP to full treatment was previously evaluated in the 2011-2016 timeframe. Additional study is required to fully evaluate the facility's capacity to treat current and future dry-day, wet-weather, and peak flows. To complete this evaluation, LCA staff has received a proposal from an engineering firm (and current plant operator) that will serve as the PTP Technical Lead. The Technical Lead will provide specific engineering and treatment plant modeling services to support evaluation of the PTP alternatives, including but not limited to, the following:

Professional Services ⁽¹⁾
1. Data Analysis and Planning
2. Chemically Enhanced Primary Treatment (CEPT) Testing
3. Alternatives Analysis for Surface Water Discharge
4. Coordination and Meetings (Monthly, DRBC, Public Facing)
5. Delivery of Final Report and Task Memos as Supplements

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

Prior Approval: \$0

This Approval: \$284,800

Approval Amount (not to be exceeded without further authorization): \$284,800

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

(For Authority Use Only)

Authorization Completion:

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

**LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS
JULY 2020**

LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS - SUMMARY
JULY 2020

MONTH					JULY 2020	YEAR-TO-DATE					FULL YEAR				
Actual	Q3 FC	Prior Year	FC Var	PY Var		Actual	Q3 FC	Prior Year	FC Var	PY Var	Q3 FC	Budget	Prior Year	Bud Var	PY Var
					Income Statement										
295,898	234,172	134,424	61,726	161,474	Suburban Water	1,008,037	946,311	549,862	61,726	458,175	48,939	(78,407)	2,670,094	127,346	(2,621,155)
125,594	100,525	(289,080)	25,069	414,674	Suburban Wastewater	3,474,603	3,449,534	(251,974)	25,069	3,726,577	1,376,758	(1,269,292)	(473,333)	2,646,050	1,850,091
(774,716)	(771,032)	(30,462)	(3,684)	(744,254)	City Division	(2,313,405)	(2,309,721)	(1,314,488)	(3,684)	(998,917)	(5,841,234)	(4,106,561)	(4,130,921)	(1,734,673)	(1,710,313)
(353,224)	(436,335)	(185,118)	83,111	(168,106)	Total LCA	2,169,235	2,086,124	(1,016,600)	83,111	3,185,835	(4,415,537)	(5,454,260)	(1,934,160)	1,038,723	(2,481,377)
					Cash Flow Statement										
(39,394)	(98,288)	546,849	58,894	(586,243)	Suburban Water	(737,010)	(795,904)	2,504,696	58,894	(3,241,706)	(254,028)	(2,048,282)	2,681,907	1,794,254	(2,935,935)
(171,966)	(220,035)	(1,114,144)	48,069	942,178	Suburban Wastewater	1,372,556	1,324,487	(4,050,206)	48,069	5,422,762	(2,672,667)	17,484,855	(1,685,495)	(20,157,522)	(987,172)
817,990	823,352	2,403,434	(5,362)	(1,585,444)	City Division	1,275,442	1,280,804	(5,362)	(5,362)	1,280,804	735,783	3,142,950	7,328,430	(2,407,167)	(6,592,647)
606,630	505,029	1,836,139	101,601	(1,229,509)	Total LCA	1,910,988	1,809,387	(1,550,872)	101,601	3,461,860	(2,190,912)	18,579,523	8,324,842	(20,770,435)	(10,515,754)
					Debt Service Coverage Ratio										
2.30	2.12	1.86	0.18	0.44	Suburban Water	1.70	1.68	1.63	0.03	0.07	1.25	1.25	1.59	(0.01)	(0.35)
5.77	5.34	2.00	0.43	3.78	Suburban Wastewater	9.85	9.79	6.47	0.06	3.38	5.68	2.56	6.34	3.12	(0.66)
0.87	0.88	1.50	(0.00)	(0.63)	City Division	1.22	1.22	1.40	-	(0.18)	1.22	1.34	1.40	(0.11)	(0.18)

LEHIGH COUNTY AUTHORITY
CONSOLIDATED FINANCIAL STATEMENTS
JULY 2020

MONTH				JULY 2020				YEAR-TO-DATE				Q3 FULL YEAR FORECAST				FULL YEAR BUDGET			
Sub W	Sub WW	City	LCA	INCOME STATEMENT				Sub W	Sub WW	City	LCA	Sub W	Sub WW	City	LCA	Sub W	Sub WW	City	LCA
				Operating Revenues															
1,121,213	1,387,087	3,420,774	5,929,074	User Charges				6,161,197	9,117,954	21,757,116	37,036,267	10,213,498	15,595,243	37,872,355	63,681,096	10,582,010	16,446,154	38,712,488	65,740,652
47,478	160,125	22,609	230,212	Connection & System Charges				460,691	3,022,932	104,755	3,588,378	1,088,283	3,048,006	188,043	4,324,332	776,500	846,282	2,959,800	4,582,582
1,168,691	1,547,212	3,443,383	6,159,286	Total Operating Revenues				6,621,888	12,140,886	21,861,871	40,624,645	11,301,781	18,643,249	38,060,397	68,005,428	11,358,510	17,292,436	41,672,288	70,323,234
				Operating Expenses															
182,529	67,444	763,411	1,013,384	Personnel Costs				1,130,189	489,235	5,436,375	7,055,799	2,087,444	956,496	8,164,964	11,208,904	2,106,222	992,555	7,883,195	10,981,972
96,532	42,983	577,907	717,422	General and Administrative				476,294	245,666	1,994,634	2,716,594	1,169,762	447,683	4,532,727	6,150,172	1,193,837	452,684	4,604,681	6,251,202
32,172	23,101	80,880	136,153	Utilities				225,448	161,735	1,011,182	1,398,365	443,167	358,735	1,955,785	2,757,688	596,540	464,325	2,141,069	3,201,934
14,859	24,703	125,370	164,932	Materials and Supplies				132,030	166,085	724,747	1,022,862	401,175	334,307	1,294,829	2,030,311	563,005	430,139	1,688,624	2,681,768
209,274	867,971	161,487	1,238,732	Miscellaneous Services				1,415,289	4,940,618	698,748	7,054,655	2,869,851	9,678,773	1,908,717	14,457,341	2,875,124	10,015,943	2,342,341	15,233,408
-	-	-	-	Treatment & Transportation				-	-	-	-	-	-	-	-	-	-	-	-
220,000	383,460	490,000	1,093,460	Depreciation and Amortization				1,540,000	2,684,220	3,430,000	7,654,220	2,644,500	4,636,302	5,880,000	13,160,802	2,750,000	4,603,000	5,880,000	13,233,000
1,521	1,677	566,294	569,492	Other Expenses				5,260	27,845	856,954	890,059	281,937	838,168	980,660	2,100,765	3,400	1,000,000	2,782,916	3,786,316
756,887	1,411,339	2,765,349	4,933,575	Total Operating Expenses				4,924,510	8,715,404	14,152,640	27,792,554	9,897,837	17,250,464	24,717,683	51,865,984	10,088,128	17,958,646	27,322,826	55,369,600
411,804	135,873	678,034	1,225,711	Net Operating Income				1,697,378	3,425,482	7,709,231	12,832,091	1,403,944	1,392,786	13,342,714	16,139,445	1,270,382	(666,210)	14,349,462	14,953,634
				Non-Operating Income (Expense)															
5,257	13,057	534	18,848	Interest Income				53,105	125,082	157,662	335,849	76,665	131,025	166,146	373,837	160,000	200,000	900,000	1,260,000
(119,642)	(16,739)	(1,453,284)	(1,589,665)	Interest Expense				(745,541)	(118,198)	(10,172,983)	(11,036,722)	(1,436,287)	(195,887)	(19,342,779)	(20,974,953)	(1,508,789)	(803,082)	(19,356,023)	(21,667,894)
(1,521)	(6,597)	-	(8,118)	Other Miscellaneous Income (Expenses)				3,095	42,237	(7,315)	38,017	4,616	48,834	(7,315)	46,135	-	-	-	-
(115,906)	(10,279)	(1,452,750)	(1,578,935)	Net Non-Operating Income (Expense)				(689,341)	49,121	(10,022,636)	(10,662,856)	(1,355,005)	(16,028)	(19,183,948)	(20,554,981)	(1,348,789)	(603,082)	(18,456,023)	(20,407,894)
295,898	125,594	(774,716)	(353,224)	Net Income Before Capital Contributions				1,008,037	3,474,603	(2,313,405)	2,169,235	48,939	1,376,758	(5,841,234)	(4,415,537)	(78,407)	(1,269,292)	(4,106,561)	(5,454,260)
-	-	-	-	Capital Contributions				-	-	-	-	-	-	-	-	-	-	-	-
295,898	125,594	(774,716)	(353,224)	NET INCOME				1,008,037	3,474,603	(2,313,405)	2,169,235	48,939	1,376,758	(5,841,234)	(4,415,537)	(78,407)	(1,269,292)	(4,106,561)	(5,454,260)

MONTH				JULY 2020				YEAR-TO-DATE				Q3 FULL YEAR FORECAST				FULL YEAR BUDGET			
Sub W	Sub WW	City	LCA	CASH FLOW STATEMENT				Sub W	Sub WW	City	LCA	Sub W	Sub WW	City	LCA	Sub W	Sub WW	City	LCA
				Cash Flows From Operating Activities															
1,168,691	1,547,212	3,443,383	6,159,286	Operating Revenues				6,621,888	12,140,886	21,861,871	40,624,645	11,301,781	18,643,249	38,060,397	68,005,428	11,358,510	17,292,436	41,672,288	70,323,234
(536,887)	(1,027,879)	(2,275,349)	(3,840,115)	Operating Expenses (ex D&A)				(3,384,510)	(6,031,184)	(10,722,640)	(20,138,334)	(7,253,337)	(12,614,162)	(18,837,683)	(38,705,182)	(7,338,128)	(13,355,646)	(21,442,826)	(42,136,600)
116,663	(618,270)	(110,177)	(611,784)	Non-Cash Working Capital Changes				(461,687)	(1,332,515)	(2,042,771)	(3,836,973)	-	(514,245)	(500,000)	(1,014,245)	-	-	-	-
748,467	(98,937)	1,057,857	1,707,387	Net Cash Provided by (Used In) Operating Activities				2,775,691	4,777,187	9,096,460	16,649,338	4,048,444	5,514,842	18,722,714	28,286,001	4,020,382	3,936,790	20,229,462	28,186,634
				Cash Flows From Financing Activities															
-	-	-	-	Capital Contributions				-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	Proceeds New Borrowing				-	-	-	-	5,000,000	-	-	5,000,000	5,119,500	22,635,000	-	27,754,500
(4,120)	(13,774)	-	(17,894)	Interest Payments				(720,776)	(97,776)	(6,627,694)	(7,446,246)	(1,435,855)	(299,590)	(13,978,236)	(15,713,681)	(1,508,789)	(803,082)	(13,978,238)	(16,290,109)
(30,898)	(44,859)	-	(75,757)	Principal Payments				(215,119)	(316,434)	-	(531,553)	(1,879,217)	(793,249)	(1,442,928)	(4,115,394)	(1,832,775)	(813,353)	(1,442,932)	(4,089,060)
(35,018)	(58,633)	-	(93,651)	Net Cash Provided by (Used In) Financing Activities				(935,895)	(414,210)	(6,627,694)	(7,977,799)	1,684,928	(1,092,839)	(15,421,164)	(14,829,075)	1,777,936	21,018,565	(15,421,170)	7,375,331
				Cash Flows from Capital and Related Activities															
(1,521)	(6,597)	-	(8,118)	Non-Operating Income (Expenses)				3,095	42,237	(273,944)	(228,612)	4,616	48,834	(540,573)	(487,123)	-	-	(533,258)	(533,258)
(756,579)	(269,856)	(240,401)	(1,266,836)	Capital Expenditures, net				(2,637,324)	(3,707,042)	(1,077,042)	(7,421,408)	(6,070,000)	(7,823,832)	(2,191,340)	(16,085,172)	(8,006,600)	(7,670,500)	(2,032,084)	(17,709,184)
(758,100)	(276,453)	(240,401)	(1,274,954)	Net Cash Provided By (Used In) Capital and Related Activities				(2,634,229)	(3,664,805)	(1,350,986)	(7,650,020)	(6,065,384)	(7,774,998)	(2,731,913)	(16,572,295)	(8,006,600)	(7,670,500)	(2,565,342)	(18,242,442)
				Cash Flows From Investing Activities															
-	249,000	-	249,000	Investments Converting To Cash				1,982,000	2,580,604	-	4,562,604	1,982,000	2,580,604	-	4,562,604	-	-	-	-
-	-	-	-	Purchased Investments				(1,977,682)	(2,031,302)	-	(4,008,984)	(1,980,682)	(2,031,302)	-	(4,011,984)	-	-	-	-
5,257	13,057	534	18,848	Interest Income				53,105	125,082	157,662	335,849	76,665	131,025	166,146	373,837	160,000	200,000	900,000	1,260,000
5,257	262,057	534	267,848	Net Cash Provided By (Used In) Investing Activities				57,423	674,384	157,662	889,469	77,983	680,327	166,146	924,457	160,000	200,000	900,000	1,260,000
(39,394)	(171,966)	817,990	606,630	FUND NET CASH FLOWS				(737,010)	1,372,556	1,275,442	1,910,988	(254,028)	(2,672,667)	735,783	(2,190,912)	(2,048,282)	17,484,855	3,142,950	18,579,523
				DEBT SERVICE RATIO															
635,540	525,793	1,124,130	2,285,463	Total Cash Available For Debt Service				3,293,578	6,277,021	10,978,512	20,549,111	4,129,726	6,208,947	18,848,287	29,186,960	4,180,382	4,136,790	20,596,204	28,913,376
276,256	91,070	1,285,097	1,652,423	Debt Service				1,933,792	637,490	8,995,679	11,566,961	3,315,072	1,092,839	15,421,164	19,829,075	3,341,564	1,616,435	15,421,170	20,379,169
2.30	5.77	0.87	1.38	DSCR				1.70	9.85	1.22	1.78	1.25	5.68	1.22	1.47	1.25	2.56	1.34	1.42

LEHIGH COUNTY AUTHORITY
CASH & INVESTMENT ANALYSIS
YTD JULY 2020

US DOLLARS	Suburban Water	Suburban Wastewater	City Division	LCA Total
CURRENT YEAR ENDING BALANCES				
Cash				
Unrestricted Operating Cash	8,326,809	3,541,048	3,348,436	15,216,293
Unrestricted Project Cash	2,042,546	4,973,686	170,975	7,187,207
Total Unrestricted Cash	10,369,355	8,514,734	3,519,411	22,403,500
Restricted Cash	1,499,756	338,136	57,293,519	59,131,411
Total Cash	11,869,111	8,852,870	60,812,930	81,534,911
Investments				
Unrestricted Investments	3,144,967	6,853,513	-	9,998,480
Restricted Investments	4,456,239	-	-	4,456,239
Total Investments	7,601,206	6,853,513	-	14,454,719
Total Cash + Investments				
Unrestricted	13,514,322	15,368,247	3,519,411	32,401,980
Restricted	5,955,995	338,136	57,293,519	63,587,650
Total	19,470,317	15,706,383	60,812,930	95,989,630

CURRENT YEAR BEGINNING BALANCES				
Cash				
Unrestricted Operating Cash	9,073,285	4,470,391	3,691,201	17,234,877
Unrestricted Project Cash	2,037,248	2,671,991	169,980	4,879,219
Total Unrestricted Cash	11,110,533	7,142,382	3,861,181	22,114,096
Restricted Cash	1,495,588	337,932	55,676,307	57,509,827
Total Cash	12,606,121	7,480,314	59,537,488	79,623,923
Investments				
Unrestricted Investments	3,136,930	7,757,276	-	10,894,206
Restricted Investments	4,593,110	-	-	4,593,110
Total Investments	7,730,040	7,757,276	-	15,487,316
Total Cash + Investments				
Unrestricted	14,247,463	14,899,658	3,861,181	33,008,302
Restricted	6,088,698	337,932	55,676,307	62,102,937
Total	20,336,161	15,237,590	59,537,488	95,111,239

NET ACTIVITY - INCREASE (DECREASE)				
Cash				
Unrestricted Operating Cash	(746,476)	(929,343)	(342,765)	(2,018,584)
Unrestricted Project Cash	5,298	2,301,695	995	2,307,988
Total Unrestricted Cash	(741,178)	1,372,352	(341,770)	289,404
Restricted Cash	4,168	204	1,617,212	1,621,584
Total Cash	(737,010)	1,372,556	1,275,442	1,910,988
Investments				
Unrestricted Investments	8,037	(903,763)	-	(895,726)
Restricted Investments	(136,871)	-	-	(136,871)
Total Investments	(128,834)	(903,763)	-	(1,032,597)
Total Cash + Investments				
Unrestricted	(733,141)	468,589	(341,770)	(606,322)
Restricted	(132,703)	204	1,617,212	1,484,713
Total	(865,844)	468,793	1,275,442	878,391

Days on Hand - Unrestricted Cash	521.80	246.38	68.19	211.27
Days on Hand - Unrestricted Cash + Investments	680.06	444.69	68.19	305.56

LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS - SUBURBAN WATER
JULY 2020

MONTH					JULY 2020					YEAR-TO-DATE					FULL YEAR				
Actual	Q3 FC	Prior Yr	FC Var	PY Var	INCOME STATEMENT					Actual	Q3 FC	Prior Yr	FC Var	PY Var	Q3 FC	Budget	Prior Yr	Bud Var	PY Var
Operating Revenues																			
1,121,213	1,115,464	975,816	5,749	145,397	User Charges					6,161,197	6,155,448	5,705,881	5,749	455,316	10,213,498	10,582,010	9,930,537	(368,512)	282,961
47,478	43,239	41,557	4,239	5,921	Connection & System Charges					460,691	456,452	517,342	4,239	(56,651)	1,088,283	776,500	1,000,653	311,783	87,630
1,168,691	1,158,703	1,017,373	9,988	151,318	Total Operating Revenues					6,621,888	6,611,900	6,223,223	9,988	398,665	11,301,781	11,358,510	10,931,190	(56,729)	370,591
Operating Expenses																			
182,529	182,723	117,468	194	(65,061)	Personnel Costs					1,130,189	1,130,383	877,922	194	(252,267)	2,087,444	2,106,222	1,525,462	18,778	(561,982)
96,532	65,000	102,747	(31,532)	6,215	General and Administrative					476,294	444,762	549,522	(31,532)	73,228	1,169,762	1,193,837	919,226	24,075	(250,536)
32,172	32,919	32,654	747	482	Utilities					225,448	226,195	269,337	747	43,889	443,167	596,540	488,568	153,373	45,401
14,859	50,127	66,979	35,268	52,120	Materials and Supplies					132,030	167,298	195,350	35,268	63,320	401,175	563,005	402,069	161,830	894
209,274	244,464	219,206	35,190	9,932	Miscellaneous Services					1,415,289	1,450,479	1,382,104	35,190	(33,185)	2,869,851	2,875,124	2,575,929	5,273	(293,922)
-	-	-	-	-	Treatment & Transportation					-	-	-	-	-	-	-	-	-	-
220,000	220,375	229,166	375	9,166	Depreciation and Amortization					1,540,000	1,540,375	1,604,162	375	64,162	2,644,500	2,750,000	2,602,179	105,500	(42,321)
1,521	1,543	-	22	(1,521)	Other Expenses					5,260	5,282	3,391	22	(1,869)	281,937	3,400	113,253	(278,537)	(168,684)
756,887	797,152	768,220	40,265	11,333	Total Operating Expenses					4,924,510	4,964,775	4,881,788	40,265	(42,722)	9,897,837	10,088,128	8,626,686	190,291	(1,271,151)
411,804	361,551	249,153	50,253	162,651	Net Operating Income					1,697,378	1,647,125	1,341,435	50,253	355,943	1,403,944	1,270,382	2,304,504	133,562	(900,560)
Non-Operating Income (Expense)																			
5,257	4,803	16,894	454	(11,637)	Interest Income					53,105	52,651	103,831	454	(50,726)	76,665	160,000	194,200	(83,335)	(117,535)
(119,642)	(132,183)	(131,623)	12,541	11,981	Interest Expense					(745,541)	(758,082)	(895,404)	12,541	149,863	(1,436,287)	(1,508,789)	(1,545,029)	72,502	108,742
(1,521)	-	-	(1,521)	(1,521)	Other Miscellaneous Income (Expenses)					3,095	4,616	-	(1,521)	3,095	4,616	-	-	4,616	4,616
(115,906)	(127,380)	(114,729)	11,474	(1,177)	Net Non-Operating Income (Expense)					(689,341)	(700,815)	(791,573)	11,474	102,232	(1,355,005)	(1,348,789)	(1,350,829)	(6,216)	(4,176)
295,898	234,172	134,424	61,726	161,474	Net Income Before Capital Contributions					1,008,037	946,311	549,862	61,726	458,175	48,939	(78,407)	953,675	127,346	(904,736)
-	-	-	-	-	Capital Contributions					-	-	-	-	-	-	-	1,716,419	-	(1,716,419)
295,898	234,172	134,424	61,726	161,474	NET INCOME					1,008,037	946,311	549,862	61,726	458,175	48,939	(78,407)	2,670,094	127,346	(2,621,155)
MONTH					JULY 2020					YEAR-TO-DATE					FULL YEAR				
Actual	Q3 FC	Prior Yr	FC Var	PY Var	CASH FLOW STATEMENT					Actual	Q3 FC	Prior Yr	FC Var	PY Var	Q3 FC	Budget	Prior Yr	Bud Var	PY Var
Cash Flows From Operating Activities																			
1,168,691	1,158,703	1,017,373	9,988	151,318	Operating Revenues					6,621,888	6,611,900	6,223,223	9,988	398,665	11,301,781	11,358,510	10,931,190	(56,729)	370,591
(536,887)	(576,777)	(539,054)	39,890	2,167	Operating Expenses (ex D&A)					(3,384,510)	(3,424,400)	(3,277,626)	39,890	(106,884)	(7,253,337)	(7,338,128)	(6,024,507)	84,791	(1,228,830)
116,663	110,000	35,237	6,663	81,426	Non-Cash Working Capital Changes					(461,687)	(468,350)	(799,757)	6,663	338,070	-	-	6,008,985	-	(6,008,985)
748,467	691,926	513,556	56,541	234,911	Net Cash Provided by (Used In) Operating Activities					2,775,691	2,719,150	2,145,840	56,541	629,851	4,048,444	4,020,382	10,915,668	28,062	(6,867,224)
Cash Flows From Financing Activities																			
-	-	-	-	-	Capital Contributions					-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	Proceeds New Borrowing					-	-	-	-	-	5,000,000	5,119,500	-	(119,500)	5,000,000
(4,120)	(4,120)	(6,245)	-	2,125	Interest Payments					(720,776)	(720,776)	(748,261)	-	27,485	(1,435,855)	(1,508,789)	(1,475,406)	72,934	39,551
(30,898)	(30,897)	(30,242)	(1)	(656)	Principal Payments					(215,119)	(215,118)	(210,544)	(1)	(4,575)	(1,879,217)	(1,832,775)	(1,725,137)	(46,442)	(154,080)
(35,018)	(35,017)	(36,487)	(1)	1,469	Net Cash Provided by (Used In) Financing Activities					(935,895)	(935,894)	(958,805)	(1)	22,910	1,684,928	1,777,936	(3,200,543)	(93,008)	4,885,471
Cash Flows from Capital and Related Activities																			
(1,521)	-	-	(1,521)	(1,521)	Non-Operating Income (Expenses)					3,095	4,616	-	(1,521)	3,095	4,616	-	-	4,616	4,616
(756,579)	(760,000)	(365,990)	3,421	(390,589)	Capital Expenditures, net					(2,637,324)	(2,640,745)	(1,688,901)	3,421	(948,423)	(6,070,000)	(8,006,600)	(8,687,268)	1,936,600	2,617,268
(758,100)	(760,000)	(365,990)	1,900	(392,110)	Net Cash Provided By (Used In) Capital and Related Activities					(2,634,229)	(2,636,129)	(1,688,901)	1,900	(945,328)	(6,065,384)	(8,006,600)	(8,687,268)	1,941,216	2,621,884
Cash Flows From Investing Activities																			
-	-	665,377	-	(665,377)	Investments Converting To Cash					1,982,000	1,982,000	4,507,017	-	(2,525,017)	1,982,000	-	5,849,670	1,982,000	(3,867,670)
-	-	(246,501)	-	246,501	Purchased Investments					(1,977,682)	(1,977,682)	(1,604,286)	-	(373,396)	(1,980,682)	-	(2,389,820)	(1,980,682)	409,138
5,257	4,803	16,894	454	(11,637)	Interest Income					53,105	52,651	103,831	454	(50,726)	76,665	160,000	194,200	(83,335)	(117,535)
5,257	4,803	435,770	454	(430,513)	Net Cash Provided By (Used In) Investing Activities					57,423	56,969	3,006,562	454	(2,949,139)	77,983	160,000	3,654,050	(82,017)	(3,576,067)
(39,394)	(98,288)	546,849	58,894	(586,243)	FUND NET CASH FLOWS					(737,010)	(795,904)	2,504,696	58,894	(3,241,706)	(254,028)	(2,048,282)	2,681,907	1,794,254	(2,935,935)
DEBT SERVICE RATIO																			
635,540	586,729	495,213	48,811	140,327	Total Cash Available For Debt Service					3,293,578	3,244,767	3,049,428	48,811	244,150	4,129,726	4,180,382	5,100,883	(50,656)	(971,157)
276,256	276,256	266,712	-	9,544	Debt Service					1,933,792	1,933,792	1,866,984	-	66,808	3,315,072	3,341,564	3,200,543	(26,492)	114,529
2.30	2.12	1.86	0.18	0.44	DSCR					1.70	1.68	1.63	0.03	0.07	1.25	1.25	1.59	(0.01)	(0.35)

LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS - SUBURBAN WATER
JULY 2020

FORECAST VARIANCES - MONTH				
INCOME STATEMENT	Actual	Q3 FC	Variance	Comments
Operating Revenues				
User Charges	1,121,213	1,115,464	5,749	
Connection & System Charges	47,478	43,239	4,239	
Total Operating Revenues	1,168,691	1,158,703	9,988	Higher user charges along with higher system charges
Operating Expenses				
Salaries and Wages	182,529	182,723	194	
General and Administrative	96,532	65,000	(31,532)	Higher allocated costs in from other departments
Utilities	32,172	32,919	747	
Materials and Supplies	14,859	50,127	35,268	
Miscellaneous Services	209,274	244,464	35,190	
Treatment & Transportation	-	-	-	
Depreciation and Amortization	220,000	220,375	375	
Other Expenses	1,521	1,543	22	
Total Operating Expenses	756,887	797,152	40,265	Lower materials/supplies and lower spending on services
Net Operating Income	411,804	361,551	50,253	Higher operating revenues along with lower operating expenses
Non-Operating Income (Expenses)				
Interest Income	5,257	4,803	454	
Interest (Expense)	(119,642)	(132,183)	12,541	
Other Miscellaneous Income (Expenses)	(1,521)	-	(1,521)	
Capital Contributions	-	-	-	
Total Non-Operating Income (Expenses)	(115,906)	(127,380)	11,474	Lower interest expense
NET INCOME	295,898	234,172	61,726	Higher operating revenues, lower operating expenses, and lower non-operating expenses

FORECAST VARIANCES - MONTH				
CASH FLOW STATEMENT	Actual	Q3 FC	Variance	Comments
Cash Flows From Operating Activities				
Operating Revenues	1,168,691	1,158,703	9,988	
Operating Expenses (ex D&A)	(536,887)	(576,777)	39,890	
Non-Cash Working Capital Changes	116,663	110,000	6,663	
Net Cash Provided by (Used in) Operating Activities	748,467	691,926	56,541	Higher operating revenues, lower operating expenses, and favorable working capital movements
Cash Flows From Financing Activities				
Capital Contributions	-	-	-	
Proceeds New Borrowing	-	-	-	
Interest Payments	(4,120)	(4,120)	-	
Principal Payments	(30,898)	(30,897)	(1)	
Net Cash Provided by (Used in) Financing Activities	(35,018)	(35,017)	(1)	
Cash Flows from Capital and Related Activities				
Capital Expenditures, Net	(756,579)	(760,000)	3,421	
Non-Operating Income (Expenses)	(1,521)	-	(1,521)	
Net Cash Provided By (Used In) Capital and Related Activities	(758,100)	(760,000)	1,900	
Cash Flows From Investing Activities				
Investments Converting To Cash	-	-	-	
Purchased Investments	-	-	-	
Interest Income	5,257	4,803	454	
Net Cash Provided By (Used In) Investing Activities	5,257	4,803	454	
FUND NET CASH FLOWS	(39,394)	(98,288)	58,894	Higher cash generated by operations

LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS - SUBURBAN WASTEWATER
JULY 2020

MONTH					JULY 2020					YEAR-TO-DATE					FULL YEAR				
Actual	Q3 FC	Prior Yr	FC Var	PY Var	INCOME STATEMENT					Actual	Q3 FC	Prior Yr	FC Var	PY Var	Q3 FC	Budget	Prior Yr	Bud Var	PY Var
Operating Revenues																			
1,387,087	1,363,506	782,334	23,581	604,753	User Charges					9,117,954	9,094,373	8,324,435	23,581	793,519	15,595,243	16,446,154	14,082,154	(850,911)	1,513,089
160,125	158,532	36,573	1,593	123,552	Connection & System Fees					3,022,932	3,021,339	857,636	1,593	2,165,296	3,048,006	846,282	1,616,882	2,201,724	1,431,124
1,547,212	1,522,038	818,907	25,174	728,305	Total Operating Revenues					12,140,886	12,115,712	9,182,071	25,174	2,958,815	18,643,249	17,292,436	15,699,036	1,350,813	2,944,213
Operating Expenses																			
67,444	76,000	62,588	8,556	(4,856)	Personnel Costs					489,235	497,791	462,371	8,556	(26,864)	956,496	992,555	854,472	36,059	(102,024)
42,983	35,000	43,724	(7,983)	741	General and Administrative					245,666	237,683	236,388	(7,983)	(9,278)	447,683	452,684	396,588	5,001	(51,095)
23,101	37,400	37,727	14,299	14,626	Utilities					161,735	176,034	260,120	14,299	98,385	358,735	464,325	438,942	105,590	80,207
24,703	41,782	39,794	17,079	15,091	Materials and Supplies					166,085	183,164	189,250	17,079	23,165	334,307	430,139	333,610	95,832	(697)
867,971	848,279	542,292	(19,692)	(325,679)	Miscellaneous Services					4,940,618	4,920,926	5,626,195	(19,692)	685,577	9,678,773	10,015,943	9,666,619	337,170	(12,154)
-	-	-	-	-	Treatment & Transportation					-	-	-	-	-	-	-	-	-	-
383,460	367,985	383,527	(15,475)	67	Depreciation and Amortization					2,684,220	2,668,745	2,684,689	(15,475)	469	4,636,302	4,603,000	4,571,324	(33,302)	(64,978)
1,677	-	3,210	(1,677)	1,533	Other Expenses					27,845	26,168	20,250	(1,677)	(7,595)	838,168	1,000,000	45,545	161,832	(792,623)
1,411,339	1,406,446	1,112,862	(4,893)	(298,477)	Total Operating Expenses					8,715,404	8,710,511	9,479,263	(4,893)	763,859	17,250,464	17,958,646	16,307,100	708,182	(943,364)
135,873	115,593	(293,955)	20,280	429,828	Net Operating Income					3,425,482	3,405,202	(297,192)	20,280	3,722,674	1,392,786	(666,210)	(608,064)	2,058,996	2,000,850
Non-Operating Income (Expense)																			
13,057	3,167	23,135	9,890	(10,078)	Interest Income					125,082	115,192	169,221	9,890	(44,139)	131,025	200,000	332,846	(68,975)	(201,821)
(16,739)	(18,234)	(18,260)	1,495	1,521	Interest Expense					(118,198)	(119,693)	(124,003)	1,495	5,805	(195,887)	(803,082)	(213,115)	607,195	17,228
(6,597)	-	-	(6,597)	(6,597)	Other Miscellaneous Income (Expenses)					42,237	48,834	-	(6,597)	42,237	48,834	-	-	48,834	48,834
(10,279)	(15,067)	4,875	4,788	(15,154)	Net Non-Operating Income (Expense)					49,121	44,333	45,218	4,788	3,903	(16,028)	(603,082)	119,731	587,054	(135,759)
125,594	100,525	(289,080)	25,069	414,674	Net Income Before Capital Contributions					3,474,603	3,449,534	(251,974)	25,069	3,726,577	1,376,758	(1,269,292)	(488,333)	2,646,050	1,865,091
-	-	-	-	-	Capital Contributions					-	-	-	-	-	-	-	15,000	-	(15,000)
125,594	100,525	(289,080)	25,069	414,674	NET INCOME					3,474,603	3,449,534	(251,974)	25,069	3,726,577	1,376,758	(1,269,292)	(473,333)	2,646,050	1,850,091
MONTH					JULY 2020					YEAR-TO-DATE					FULL YEAR				
Actual	Q3 FC	Prior Yr	FC Var	PY Var	CASH FLOW STATEMENT					Actual	Q3 FC	Prior Yr	FC Var	PY Var	Q3 FC	Budget	Prior Yr	Bud Var	PY Var
Cash Flows From Operating Activities																			
1,547,212	1,522,038	818,907	25,174	728,305	Operating Revenues					12,140,886	12,115,712	9,182,071	25,174	2,958,815	18,643,249	17,292,436	15,699,036	1,350,813	2,944,213
(1,027,879)	(1,038,461)	(729,335)	10,582	(298,544)	Operating Expenses (ex D&A)					(6,031,184)	(6,041,766)	(6,794,574)	10,582	763,390	(12,614,162)	(13,355,646)	(11,735,776)	741,484	(878,386)
(618,270)	(618,000)	(483,552)	(270)	(134,718)	Non-Cash Working Capital Changes					(1,332,515)	(1,332,245)	(909,688)	(270)	(422,827)	(514,245)	-	5,595,449	(514,245)	(6,109,694)
(98,937)	(134,423)	(393,980)	35,486	295,043	Net Cash Provided by (Used In) Operating Activities					4,777,187	4,741,701	1,477,809	35,486	3,299,378	5,514,842	3,936,790	9,558,709	1,578,052	(4,043,867)
Cash Flows From Financing Activities																			
-	-	-	-	-	Capital Contributions					-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	Proceeds New Borrowing					-	-	-	-	-	-	22,635,000	-	(22,635,000)	-
(13,774)	(17,000)	(15,265)	3,226	1,491	Interest Payments					(97,776)	(101,002)	(103,853)	3,226	6,077	(299,590)	(803,082)	(178,219)	503,492	(121,371)
(44,859)	(45,779)	(40,873)	920	(3,986)	Principal Payments					(316,434)	(317,354)	(286,307)	920	(30,127)	(793,249)	(813,353)	(499,110)	20,104	(294,139)
(58,633)	(62,779)	(56,138)	4,146	(2,495)	Net Cash Provided by (Used In) Financing Activities					(414,210)	(418,356)	(390,160)	4,146	(24,050)	(1,092,839)	21,018,565	(677,329)	(22,111,404)	(415,510)
Cash Flows from Capital and Related Activities																			
(6,597)	-	-	(6,597)	(6,597)	Non-Operating Income (Expenses)					42,237	48,834	-	(6,597)	42,237	48,834	-	15,000	48,834	33,834
(269,856)	(275,000)	(680,626)	5,144	410,770	Capital Expenditures, net					(3,707,042)	(3,712,186)	(3,273,049)	5,144	(433,993)	(7,823,832)	(7,670,500)	(9,613,149)	(153,332)	1,789,317
(276,453)	(275,000)	(680,626)	(1,453)	404,173	Net Cash Provided By (Used In) Capital and Related Activities					(3,664,805)	(3,663,352)	(3,273,049)	(1,453)	(391,756)	(7,774,998)	(7,670,500)	(9,598,149)	(104,498)	1,823,151
Cash Flows From Investing Activities																			
249,000	249,000	519,196	-	(270,196)	Investments Converting To Cash					2,580,604	2,580,604	3,376,626	-	(796,022)	2,580,604	-	5,481,724	2,580,604	(2,901,120)
-	-	(525,731)	-	525,731	Purchased Investments					(2,031,302)	(2,031,302)	(5,410,653)	-	3,379,351	(2,031,302)	-	(6,783,296)	(2,031,302)	4,751,994
13,057	3,167	23,135	9,890	(10,078)	Interest Income					125,082	115,192	169,221	9,890	(44,139)	131,025	200,000	332,846	(68,975)	(201,821)
262,057	252,167	16,600	9,890	245,457	Net Cash Provided By (Used In) Investing Activities					674,384	664,494	(1,864,806)	9,890	2,539,190	680,327	200,000	(968,726)	480,327	1,649,053
(171,966)	(220,035)	(1,114,144)	48,069	942,178	FUND NET CASH FLOWS					1,372,556	1,324,487	(4,050,206)	48,069	5,422,762	(2,672,667)	17,484,855	(1,685,495)	(20,157,522)	(987,172)
DEBT SERVICE RATIO																			
525,793	486,744	112,707	39,049	413,086	Total Cash Available For Debt Service					6,277,021	6,237,972	2,556,718	39,049	3,720,303	6,208,947	4,136,790	4,296,106	2,072,157	1,912,841
91,070	91,070	56,444	-	34,626	Debt Service					637,490	637,490	395,108	-	242,382	1,092,839	1,616,435	677,329	(523,596)	415,510
5.77	5.34	2.00	0.43	3.78	DSCR					9.85	9.79	6.47	0.06	3.38	5.68	2.56	6.34	3.12	(0.66)

LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS - SUBURBAN WASTEWATER
JULY 2020

FORECAST VARIANCES - MONTH				
INCOME STATEMENT	Actual	Q3 FC	Variance	Comments
Operating Revenues				
User Charges	1,387,087	1,363,506	23,581	
Connection & System Charges	160,125	158,532	1,593	
Total Operating Revenues	1,547,212	1,522,038	25,174	Higher user charges & system charges
Operating Expenses				
Salaries and Wages	67,444	76,000	8,556	
General and Administrative	42,983	35,000	(7,983)	
Utilities	23,101	37,400	14,299	
Materials and Supplies	24,703	41,782	17,079	
Miscellaneous Services	867,971	848,279	(19,692)	
Treatment & Transportation	-	-	-	
Depreciation and Amortization	383,460	367,985	(15,475)	Higher than forecasted
Other Expenses	1,677	-	(1,677)	
Total Operating Expenses	1,411,339	1,406,446	(4,893)	
Net Operating Income	135,873	115,593	20,280	Higher operating revenues with a small offset from higher operating expenses
Non-Operating Income (Expenses)				
Interest Income	13,057	3,167	9,890	
Interest (Expense)	(16,739)	(18,234)	1,495	
Other Miscellaneous Income (Expenses)	(6,597)	-	(6,597)	
Capital Contributions	-	-	-	
Total Non-Operating Income (Expenses)	(10,279)	(15,067)	4,788	
NET INCOME	125,594	100,525	25,069	Higher Operating Revenues

FORECAST VARIANCES - MONTH				
CASH FLOW STATEMENT	Actual	Q3 FC	Variance	Comments
Cash Flows From Operating Activities				
Operating Revenues	1,547,212	1,522,038	25,174	
Operating Expenses (ex D&A)	(1,027,879)	(1,038,461)	10,582	
Non-Cash Working Capital Changes	(618,270)	(618,000)	(270)	
Net Cash Provided by (Used in) Operating Activities	(98,937)	(134,423)	35,486	Higher operating revenues and lower cash expenses
Cash Flows From Financing Activities				
Capital Contributions	-	-	-	
Proceeds New Borrowing	-	-	-	
Interest Payments	(13,774)	(17,000)	3,226	
Principal Payments	(44,859)	(45,779)	920	
Net Cash Provided by (Used in) Financing Activities	(58,633)	(62,779)	4,146	
Cash Flows from Capital and Related Activities				
Capital Expenditures, Net	(269,856)	(275,000)	5,144	
Non-Operating Income (Expenses)	(6,597)	-	(6,597)	
Net Cash Provided By (Used In) Capital and Related Activities	(276,453)	(275,000)	(1,453)	
Cash Flows From Investing Activities				
Investments Converting To Cash	249,000	249,000	-	
Purchased Invesments	-	-	-	
Interest Income	13,057	3,167	9,890	
Net Cash Provided By (Used In) Investing Activities	262,057	252,167	9,890	
FUND NET CASH FLOWS	(171,966)	(220,035)	48,069	Higher cash from operations and higher interest income

LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS - CITY DIVISION
JULY 2020

MONTH					JULY 2020					YEAR-TO-DATE					FULL YEAR				
Actual	Q3 FC	Prior Yr	FC Var	PY Var	INCOME STATEMENT					Actual	Q3 FC	Prior Yr	FC Var	PY Var	Q3 FC	Budget	Prior Yr	Bud Var	PY Var
					Operating Revenues														
3,420,774	3,381,246	3,377,953	39,528	42,821	User Charges					21,757,116	21,717,588	21,662,357	39,528	94,759	37,872,355	38,712,488	38,630,691	(840,133)	(758,336)
22,609	25,629	26,036	(3,020)	(3,427)	Connection & System Fees					104,755	107,775	517,912	(3,020)	(413,157)	188,043	2,959,800	1,101,025	(2,771,757)	(912,982)
3,443,383	3,406,875	3,403,989	36,508	39,394	Total Operating Revenues					21,861,871	21,825,363	22,180,269	36,508	(318,398)	38,060,397	41,672,288	39,731,716	(3,611,891)	(1,671,319)
					Operating Expenses														
763,411	772,000	645,322	8,589	(118,089)	Personnel Costs					5,436,375	5,444,964	4,617,579	8,589	(818,796)	8,164,964	7,883,195	8,050,023	(281,769)	(114,941)
577,907	576,000	480,549	(1,907)	(97,358)	General and Administrative					1,994,634	1,992,727	2,759,991	(1,907)	765,357	4,532,727	4,604,681	4,481,586	71,954	(51,141)
80,880	90,699	211,141	9,819	130,261	Utilities					1,011,182	1,021,001	1,330,017	9,819	318,835	1,955,785	2,141,069	2,241,593	185,284	285,808
125,370	120,498	103,687	(4,872)	(21,683)	Materials and Supplies					724,747	719,875	680,097	(4,872)	(44,650)	1,294,829	1,688,624	1,240,260	393,795	(54,569)
161,487	110,830	132,775	(50,657)	(28,712)	Miscellaneous Services					698,748	648,091	944,399	(50,657)	245,651	1,908,717	2,342,341	1,834,666	433,624	(74,051)
-	-	-	-	-	Treatment & Transportation					-	-	-	-	-	-	-	-	-	-
490,000	490,000	490,000	-	-	Depreciation and Amortization					3,430,000	3,430,000	3,430,000	-	-	5,880,000	5,880,000	5,880,000	-	-
566,294	565,000	57,844	(1,294)	(508,450)	Other Expenses					856,954	855,660	215,302	(1,294)	(641,652)	980,660	2,782,916	1,269,658	1,802,256	288,998
2,765,349	2,725,026	2,121,318	(40,323)	(644,031)	Total Operating Expenses					14,152,640	14,112,317	13,977,385	(40,323)	(175,255)	24,717,683	27,322,826	24,997,786	2,605,143	280,103
678,034	681,849	1,282,671	(3,815)	(604,637)	Net Operating Income					7,709,231	7,713,046	8,202,884	(3,815)	(493,653)	13,342,714	14,349,462	14,733,930	(1,006,748)	(1,391,216)
					Non-Operating Income (Expense)														
534	1,503	106,252	(969)	(105,718)	Interest Income					157,662	158,631	670,864	(969)	(513,202)	166,146	900,000	1,193,573	(733,854)	(1,027,427)
(1,453,284)	(1,454,384)	(1,419,385)	1,100	(33,899)	Interest Expense					(10,172,983)	(10,174,083)	(10,188,236)	1,100	15,253	(19,342,779)	(19,356,023)	(19,387,424)	13,244	44,645
-	-	-	-	-	Other Miscellaneous Income (Expenses)					(7,315)	(7,315)	-	-	(7,315)	-	-	(671,000)	(7,315)	663,685
(1,452,750)	(1,452,881)	(1,313,133)	131	(139,617)	Net Non-Operating Income (Expense)					(10,022,636)	(10,022,767)	(9,517,372)	131	(505,264)	(19,183,948)	(18,456,023)	(18,864,851)	(727,925)	(319,097)
(774,716)	(771,032)	(30,462)	(3,684)	(744,254)	Net Income Before Capital Contributions					(2,313,405)	(2,309,721)	(1,314,488)	(3,684)	(998,917)	(5,841,234)	(4,106,561)	(4,130,921)	(1,734,673)	(1,710,313)
-	-	-	-	-	Capital Contributions					-	-	-	-	-	-	-	-	-	-
(774,716)	(771,032)	(30,462)	(3,684)	(744,254)	NET INCOME					(2,313,405)	(2,309,721)	(1,314,488)	(3,684)	(998,917)	(5,841,234)	(4,106,561)	(4,130,921)	(1,734,673)	(1,710,313)
Actual	Q3 FC	Prior Yr	FC Var	PY Var	JULY 2020					YEAR-TO-DATE					FULL YEAR				
					CASH FLOW STATEMENT					Actual	Q3 FC	Prior Yr	FC Var	PY Var	Q3 FC	Budget	Prior Yr	Bud Var	PY Var
					Cash Flows From Operating Activities														
3,443,383	3,406,875	3,403,989	36,508	39,394	Operating Revenues					21,861,871	21,825,363	22,180,269	36,508	(318,398)	38,060,397	41,672,288	39,731,716	(3,611,891)	(1,671,319)
(2,275,349)	(2,235,026)	(1,631,318)	(40,323)	(644,031)	Operating Expenses (ex D&A)					(10,722,640)	(10,682,317)	(10,547,385)	(40,323)	(175,255)	(18,837,683)	(21,442,826)	(19,117,786)	2,605,143	280,103
(110,177)	(110,000)	900,655	(177)	(1,010,832)	Non-Cash Working Capital Changes					(2,042,771)	(2,042,594)	(548,512)	(177)	(1,494,259)	(500,000)	-	1,039,533	(500,000)	(1,539,533)
1,057,857	1,061,849	2,673,326	(3,992)	(1,615,469)	Net Cash Provided by (Used In) Operating Activities					9,096,460	9,100,452	11,084,372	(3,992)	(1,987,912)	18,722,714	20,229,462	21,653,463	(1,506,748)	(2,930,749)
					Cash Flows From Financing Activities														
-	-	-	-	-	Capital Contributions					-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	Proceeds New Borrowing					-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	Interest Payments					(6,627,694)	(6,627,694)	(6,775,522)	-	147,828	(13,978,236)	(13,978,238)	(13,426,458)	2	(551,778)
-	-	-	-	-	Principal Payments					-	-	-	-	-	(1,442,928)	(1,442,932)	(1,245,000)	4	(197,928)
-	-	-	-	-	Net Cash Provided by (Used In) Financing Activities					(6,627,694)	(6,627,694)	(6,775,522)	-	147,828	(15,421,164)	(15,421,170)	(14,671,458)	6	(749,706)
					Cash Flows from Capital and Related Activities														
-	-	-	-	-	Non-Operating Income (Expenses)					(273,944)	(273,944)	(262,431)	-	(11,513)	(540,573)	(533,258)	(1,195,861)	(7,315)	655,288
(240,401)	(240,000)	(376,144)	(401)	135,743	Capital Expenditures, net					(1,077,042)	(1,076,641)	(2,356,967)	(401)	1,279,925	(2,191,340)	(2,032,084)	(3,591,927)	(159,256)	1,400,587
(240,401)	(240,000)	(376,144)	(401)	135,743	Net Cash Provided By (Used In) Capital and Related Activities					(1,350,986)	(1,350,585)	(2,619,398)	(401)	1,268,412	(2,731,913)	(2,565,342)	(4,787,788)	(166,571)	2,055,875
					Cash Flows From Investing Activities														
-	-	-	-	-	Investments Converting To Cash					-	-	-	-	-	-	-	3,940,640	-	(3,940,640)
-	-	-	-	-	Purchased Investments					-	-	-	-	-	-	-	-	-	-
534	1,503	106,252	(969)	(105,718)	Interest Income					157,662	158,631	670,864	(969)	(513,202)	166,146	900,000	1,193,573	(733,854)	(1,027,427)
534	1,503	106,252	(969)	(105,718)	Net Cash Provided By (Used In) Investing Activities					157,662	158,631	670,864	(969)	(513,202)	166,146	900,000	5,134,213	(733,854)	(4,968,067)
817,990	823,352	2,403,434	(5,362)	(1,585,444)	FUND NET CASH FLOWS					1,275,442	1,280,804	2,360,316	(5,362)	(1,084,874)	735,783	3,142,950	7,328,430	(2,407,167)	(6,592,647)
					DEBT SERVICE RATIO														
1,124,130	1,128,914	1,835,185	(4,784)	(711,055)	Total Cash Available For Debt Service					10,978,512	10,983,296	11,997,582	(4,784)	(1,019,070)	18,848,287	20,596,204	20,611,642	(1,747,917)	(1,763,355)
1,285,097	1,285,097	1,222,621	-	62,476	Debt Service					8,995,679	8,995,679	8,558,347	-	437,332	15,421,164	15,421,170	14,671,458	(6)	749,706
0.87	0.88	1.50	(0.00)	(0.63)	DSCR					1.22	1.22	1.40	(0.00)	(0.18)	1.22	1.34	1.40	(0.11)	(0.18)

LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS - CITY DIVISION
JULY 2020

FORECAST VARIANCES - MONTH				
INCOME STATEMENT	Actual	Q3 FC	Variance	Comments
Operating Revenues				
User Charges	3,420,774	3,381,246	39,528	
Connection & System Charges	22,609	25,629	(3,020)	
Total Operating Revenues	3,443,383	3,406,875	36,508	Higher capital cost recovery charges
Operating Expenses				
Salaries and Wages	763,411	772,000	8,589	
General and Administrative	577,907	576,000	(1,907)	
Utilities	80,880	90,699	9,819	
Materials and Supplies	125,370	120,498	(4,872)	
Miscellaneous Services	161,487	110,830	(50,657)	Higher contracted operating services
Treatment & Transportation	-	-	-	
Depreciation and Amortization	490,000	490,000	-	
Other Expenses	566,294	565,000	(1,294)	
Total Operating Expenses	2,765,349	2,725,026	(40,323)	Higher supplies and outside contractor costs partially offset by lower employee costs and lower utilities costs
Net Operating Income	678,034	681,849	(3,815)	
Non-Operating Income (Expenses)				
Interest Income	534	1,503	(969)	
Interest (Expense)	(1,453,284)	(1,454,384)	1,100	
Other Miscellaneous Income (Expenses)	-	-	-	
Capital Contributions	-	-	-	
Total Non-Operating Income (Expenses)	(1,452,750)	(1,452,881)	131	
NET INCOME	(774,716)	(771,032)	(3,684)	Lower net operating income

FORECAST VARIANCES - MONTH				
CASH FLOW STATEMENT	Actual	Q3 FC	Variance	Comments
Cash Flows From Operating Activities				
Operating Revenues	3,443,383	3,406,875	36,508	
Operating Expenses (ex D&A)	(2,275,349)	(2,235,026)	(40,323)	
Non-Cash Working Capital Changes	(110,177)	(110,000)	(177)	
Net Cash Provided by (Used in) Operating Activities	1,057,857	1,061,849	(3,992)	Lower net income
Cash Flows From Financing Activities				
Capital Contributions	-	-	-	
Proceeds New Borrowing	-	-	-	
Interest Payments	-	-	-	
Principal Payments	-	-	-	
Net Cash Provided by (Used in) Financing Activities	-	-	-	
Cash Flows from Capital and Related Activities				
Capital Expenditures, Net	(240,401)	(240,000)	(401)	
Non-Operating Income (Expenses)	-	-	-	
Net Cash Provided By (Used In) Capital and Related Activities	(240,401)	(240,000)	(401)	
Cash Flows From Investing Activities				
Investments Converting To Cash	-	-	-	
Purchased Investments	-	-	-	
Interest Income	534	1,503	(969)	
Net Cash Provided By (Used In) Investing Activities	534	1,503	(969)	
FUND NET CASH FLOWS	817,990	823,352	(5,362)	Lower cash from operations

Lehigh County Authority
System Operations Review - July 2020
Presented: August 24, 2020

System Operations Review - July 2020

Presented: August 24, 2020

Critical Activities	System	Description	Jul-20	2020 Totals	2019 Totals	Permit
			Daily Avg (MGD)	Daily Avg (MGD)	Daily Avg (MGD)	Daily Max (MGD)
Water Production	Allentown	Total	22.80	21.52	21.51	39.0
		Schantz Spring	7.01	7.42	7.77	9.0
		Crystal Spring	3.84	3.89	3.88	4.0
		Little Lehigh Creek	11.90	10.14	9.85	30.0
		Lehigh River	0.05	0.06	0.01	28.0
	Central Lehigh	Total	12.00	10.14	9.75	19.04 MGD Avg
		Feed from Allentown	6.98	6.86	6.93	7.0 MGD Avg 10.5 MGD Max
		Well Production (CLD)	5.02	3.28	2.80	8.54 MGD Avg
		Sum of all (12) other Suburban Water Systems	0.15	0.15	0.17	1.71 Sum of all wells
Wastewater Treatment		Kline's Island	30.81	31.98	37.63	40.0
		Pretreatment Plant	5.08	4.94	5.88	5.75 (design capacity)
		Sum of all (5) other Suburban WW Systems	0.17	0.20	0.19	0.36
			Jul-20	2020 Totals	2019 Totals	2018 Totals
Precipitation Totals (inches)			4.90	22.81	60.66	66.96
Compliance Reports Submitted to Allentown			29	180	278	285
Notices of Violation (NOVs)		(Allentown + Suburban)	1	1	1	1
Sanitary Sewer Overflows (SSOs)/Bypasses		(Allentown + Suburban)	0	7	37	78
Main Breaks Repaired		Allentown	2	11	20	33
		Suburban	5	12	12	23
Customer Service Phone Inquiries		(Allentown + Suburban)	1,340	9,896	22,992	26,440
Water Shutoffs for Non-Payment		(Allentown + Suburban)	0	280	1,956	1,838
Injury Accidents		(Allentown + Suburban)	3	7	10	14
Emergency Declarations		Allentown	0	(2)@ \$229,491	(2)@ \$152,053	(5) @ \$76,469
		Suburban	0	\$0	(1) @ \$19,335	(1) @ \$21,197

Significant Repairs/Upgrades: Operations continues to evaluate equipment and infrastructure to fully itemize the damages resulting from Tropical Storm Isaias. At this point, the sewage collection systems appear to have received the most damages. Estimates for manhole repairs and replacements are in the process of being obtained from contractors. Some electronic equipment was damaged by lightning strikes, but in general, both Allentown Plants got through the storm with relatively minor damages. All storm-related costs will be summarized and a retroactive emergency declaration will be requested, if necessary, at the September 14, 2020 LCA Board Meeting.

Description of NOVs and/or SSOs:	There were zero (0) SSOs or bypasses for any LCA water or wastewater system during July, 2020. LCA received one (1) NOV in July, 2020 for Lynn Township WWTP for unpermitted bypasses.
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<p>Other Highlights: After working for the City and LCA for a combined total of 41 years, Bob Kerchusky is retiring on September 4, 2020. Bob has been an extremely dedicated employee throughout his career and everyone who has had the privilege of working with him will miss his presence here. We all wish Bob well in his well-earned retirement.</p>
