



LEHIGH COUNTY AUTHORITY

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

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BOARD MEETING AGENDA – November 9, 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

- *October 26, 2020 Board meeting minutes*

4. Public Comments

5. Action / Discussion Items:

FINANCE AND ADMINISTRATION

- *2021 Water & Wastewater Rate Schedule (Approval) (Pink)*
- *Customer Assistance Program (Discussion only)*
- *Staff Succession Planning Review (Discussion only)*

WATER

WASTEWATER

6. Monthly Project Updates / Information Items (1st Board meeting per month) – **November report attached**

7. Monthly Financial Review (2nd Board meeting per month)

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

9. Staff Comments

10. Solicitor's Comments

11. Public Comments / Other Comments

12. Executive Sessions

13. Adjournment

UPCOMING BOARD MEETINGS

November 23, 2020

December 14, 2020

January 11, 2021

PUBLIC PARTICIPATION POLICY

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

REGULAR MEETING MINUTES

October 26, 2020

The Regular Meeting of the Lehigh County Authority Board of Directors was called to order at 12:01 p.m. on Monday, October 26, 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 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, Richard Bohner, Norma Cusick, Ted Lyons, Kevin Baker, Jeff Morgan, and Amir Famili were present for the duration of the meeting.

Solicitor Michael Gaul of KingSpry was present along with Authority Staff, Liesel Gross, Ed Klein, John Parsons, Chris Moughan, Chuck Volk, Susan Sampson, Andrew Moore, Phil DePoe, Lisa Miller and Mark Bowen. Linda Eberhardt, Accounting Supervisor was also present.

REVIEW OF AGENDA

Liesel Gross stated there are no changes to the agenda but noted that the September Financial report and the two presentations for today were emailed to the Board and posted on the website after the packet was mailed. There are no topics for Executive Session.

APPROVAL OF MINUTES

September 28, 2020 Meeting Minutes

Richard Bohner presented minor corrections to the October 12, 2020 minutes. On a motion by Richard Bohner, seconded by Norma Cusick, the Board approved the minutes of the October 12, 2020 Board meeting as corrected (8-0).

PUBLIC COMMENTS

None.

ACTION AND DISCUSSION ITEMS

2021 Proposed Budget Review (Approval)

Liesel Gross noted that today is the Board's fourth review of the proposed 2021 Budget. She reviewed the budget timeline and key components of this year's budget discussions. In particular, the Authority staff reviewed ongoing impacts of the COVID-19 pandemic on the Authority's finances; strategic imperatives for 2021; impacts of the settlement of Lease disputes with the City of Allentown; funding for capital improvements; and rate impacts for the Suburban Water and City Divisions. She reviewed the rate impacts that are driven primarily by updates to the Concession Lease Agreement with the City, which were completed earlier this year. She showed comparative water and sewer rates for communities across the Lehigh Valley, noting that the Authority's rates in its Suburban Water and City Divisions will remain among the lowest.

Ed Klein gave a brief summary of the proposed 2021 Budget and reviewed the expected outcomes related to net income, cash flows, capital spending, debt service coverage ratios and operating days

cash on hand. He noted that there were no changes to the proposed 2021 Budget figures since the last presentation provided to the Board on October 12, 2020.

Liesel Gross pointed out that the budget document looks different from prior years but contains more information and detail. She commended the staff for their efforts to produce a budget document that will be useful for both the staff and Board.

Amir Famili questioned the \$2 million increase in the capital improvements funding from the prior presentation of the proposed 2021 Budget. Ms. Gross explained that the change is due to the planned PENNVEST financing for the water filtration plant variable frequency drive replacement project. This had been discussed with the Board previously and the statements updated to reflect the planned borrowing.

Scott Bieber commented that the Suburban Water Division's five-year capital plan includes projections for annual rate increases of 6.5 percent to provide funding for capital improvements. He asked whether this is included in the proposed 10.5 percent increase for the Suburban Water Division. Ed Klein explained that the rate increase covers both capital and operational requirements for 2021, and that future rate increases of approximately 6.5 percent per year are still anticipated.

Chairman Nagle stated that the new budget document is an improvement and thanked the staff for their efforts to provide financial statements in a format that is meaningful for the Board. He noted he likes the system descriptions and the glossary, which will serve as a good reference throughout the year.

On a motion by Norma Cusick, seconded by Richard Bohner, the Board approved the 2021 Budget (8-0).

A roll call vote was taken with the following votes cast:

Brian Nagle – yes
Scott Bieber – yes
Richard Bohner – yes
Norma Cusick – yes
Ted Lyons – yes
Kevin Baker – yes
Jeff Morgan – yes
Amir Famili – yes

LCA Pension Plan – Mandatory Municipal Obligation

Chairman Nagle announced that a revision to this worksheet had been sent to the Board today. Liesel Gross explained the 2021 Minimum Municipal Obligation (MMO) memorandum and worksheet for the Authority's Pension Plan. Ed Klein explained how the formula is calculated for the pension funding obligation and reviewed the additional funding requirements to address the pension program's unfunded liability.

Allentown Division – 26" DI Water Main Condition Assessment (Approval)

John Parsons gave an overview of the project regarding the 36" Ductile Iron (DI) transmission main that runs north along 17th Street in Allentown and was constructed in 1983. After the excavation and repair of the main, resulting from two major main breaks earlier this year, an investigation was

initiated. Preliminary analysis of the pipe material indicated that the pipe thickness was diminished due to external corrosion, most likely caused by corrosive soil types and absence of pipe wrap. Gannett Fleming Inc. currently serves as the Authority's consultant for the water distribution system, and the Authority staff recommends retaining them to perform a more complete assessment of the transmission main. Pure Technologies will perform a robotic enhanced electromagnetic assessment of approximately 5,800 feet of the transmission main as a subcontractor to Gannett Fleming. The purpose of the assessment is to determine the extent of deterioration of the pipe material and develop recommendations for remediation. The transmission main is a critical asset that serves large portions of the City of Allentown.

Mr. Parsons asked for approval of a Professional Services Authorization for Gannett Fleming, Inc. in the amount of \$202,250.00 for the condition assessment.

Chairman Nagle asked how water service customers will be impacted by the shutdown of the water line. Mr. Parsons explained that there are other lines in the system that will remain open and the system will not be shut down for long periods of time. As a planned shut-down operation, the system can be operated safely. Amir Famili asked what the cause of the corrosion was. Mr. Parsons stated the report from US Pipe, who completed the initial assessment of the pipe fragment, indicated it was corrosive soil. There was some Board discussion regarding the standards used for installation of the pipe in 1983. Scott Bieber asked if the City would be responsible for remediation efforts if the study shows the installation was faulty. Mr. Parsons explained that the focus of the study is to determine solutions to prevent additional main breaks.

Jennifer McKenna, City of Allentown Office of Compliance, commented that according to the City's discussion with Authority staff, the 1983 installation of the transmission line was completed following the protocols in place at that time. She asked if the condition assessment will cover all pipe lengths installed in 1983, and whether the 1983-era pipes could be included in the Authority's ongoing pipeline prioritization program to develop future priorities for water main replacements. John Parsons responded that the condition assessment will focus only on the specific 5800 feet of transmission main described, and explained that some portions of the transmission main have already been replaced due to prior work in that part of the water system. Following receipt of the results from the assessment, it will be determined what the next steps are.

On a motion by Norma Cusick, seconded by Jeff Morgan, the Board approved the Professional Services Authorization for Gannett Fleming, Inc. in the amount of \$202,250.00 for the condition assessment (8-0).

A roll call vote was taken with the following votes cast:

Brian Nagle – yes
Scott Bieber – yes
Richard Bohner – yes
Norma Cusick – yes
Ted Lyons – yes
Kevin Baker – yes
Jeff Morgan – yes
Amir Famili – yes

Allentown Division – Resolution No. 10-2020-1 – PENNVEST Application – WFP High Service Pump VFD Project (Approval)

Phil DePoe gave a brief description of the project which will replace variable frequency drives at the high service pumping system in the Allentown Division water system. Resolution No. 10-2020-1 will approve the submission of an application for low-interest financing for the project to the Pennsylvania Infrastructure Investment Authority (PENNVEST).

Liesel Gross explained that PENNVEST financing is being sought for this project due to the critical nature of the assets to be replaced and the recent amendment to the Concession Lease Agreement with the City of Allentown. The amended Lease provides funding through increased rates to complete some, but not all, of the Authority's planned capital improvements. While the new rates are being phased in, the Authority expected to borrow for selected high-priority projects. The amended Lease also provides improved cost-recovery mechanisms for debt-funded projects to ensure the Authority can pay the loans for these selected projects. The PENNVEST program is preferred due to the very low interest rates available for infrastructure replacement projects. The application deadline is November 4, 2020 in order to be considered at the next PENNVEST board meeting in January 2021.

Solicitor Gaul commented that he spoke with the PENNVEST attorney about this application due to the complex nature of the relationship between the Authority and the City of Allentown, and the existing Lease bonds and indenture requirements. He stated that PENNVEST suggested these issues could be worked out, but it will take some time to review all the financing documents. If PENNVEST approves a funding offer for this project, financing documents will be prepared, and future Authority Board approval will be sought to authorize the specific terms of the financing. He noted that Resolution 10-2020-1 merely approves the submission of a financial assistance application to PENNVEST for the project, and not the actual issuance of indebtedness for the project. That will happen at a later point in time, if appropriate.

Jennifer McKenna, City of Allentown Office of Compliance, commented that the City is happy this project is moving forward and has been encouraging the Authority to pursue PENNVEST financing.

On a motion by Norma Cusick, seconded by Richard Bohner, the Board adopted Resolution No. 10-2020-1 approving the submission of a financial assistance application to the Pennsylvania Infrastructure Investment Authority (PENNVEST) for funding in the amount of \$2,000,000.00 for the replacement and addition of high service pumping variable frequency drives in the Allentown Division water system (8-0).

A roll call vote was taken with the following votes cast:

Brian Nagle – yes
Scott Bieber – yes
Richard Bohner – yes
Norma Cusick – yes
Ted Lyons – yes
Kevin Baker – yes
Jeff Morgan – yes
Amir Famili – yes

Chairman Nagle asked if a roll call vote is necessary for all motions. Solicitor Gaul stated that roll call votes are only necessary when there is not a unanimous vote but is at the Board's discretion.

MONTHLY FINANCIAL REVIEW

Ed Klein gave a presentation of the September 2020 financial statements, noting the variances from the 2020 forecast.

MONTHLY SYSTEM OPERATIONS OVERVIEW

John Parsons reviewed the Monthly Systems Operations report for September 2020, highlighting improvements to the Supervisory Control and Data Acquisition (SCADA) system at the water filtration plant in Allentown.

STAFF COMMENTS

None.

SOLICITOR'S COMMENTS

None.

PUBLIC COMMENTS / OTHER COMMENTS

None.

EXECUTIVE SESSION

ADJOURNMENT

There being no further business, the Chairman adjourned the meeting at 1:33 p.m.

Richard Bohner
Secretary



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MEMORANDUM

TO: LCA Board of Directors
FROM: Liesel Gross, CEO
DATE: November 2, 2020
RE: 2021 Water & Sewer Rates

Attached: Sample Residential Bill Calculations for LCA Service Areas
Lehigh Valley Water & Sewer Rate Comparison
Proposed 2021 Water & Sewer Rate Schedules

Important Reminders

1. Lehigh County Authority is a non-profit, municipal authority. All revenues collected through our water and sewer rates are used for the sole benefit of the system to pay for current expenses or to fund future capital improvements. Our Board of Directors are unpaid volunteers, and LCA has no shareholders to pay.
2. While LCA operates as a single organization, the water and sewer revenues collected from our customers in Suburban communities may not and will not be used to pay for expenses associated with the Allentown Division lease agreement. Likewise, revenues from our customers in Allentown may not and will not be used to pay for expenses associated with our Suburban Division water or sewer operations. This is specified in all LCA bond documents that prohibit the mixing of revenues.
3. Across the nation, including in the Lehigh Valley, water and sewer utilities are facing a hidden crisis. Water and sewer infrastructure is buried underground, out of sight, where it is easy to forget or ignore. However, the pipes that deliver safe and reliable tap water to each home we serve, and the sewer systems that safely transport sewage to treatment centers for proper disposal, cannot be taken for granted. Caring for our aging infrastructure will take an estimated \$1 trillion nationwide. As a responsible service provider and member of the community we serve, LCA takes this responsibility very seriously. We do not raise rates because we want to. We increase rates because the responsibility to protect the public's health and our environment is so important.

Discussion of Cost & Rate Increases

Throughout the 2021 Budget process, LCA staff presented information about the drivers for increasing costs and rates across all areas of the organization. They are outlined below in summary form:

- **Resolution of City Disputes** – In 2020, LCA and the City of Allentown achieved a full resolution to long-outstanding disputes related to the 50-year Concession Lease Agreement signed in 2013. The primary outcome desired by both parties was an increased capacity for LCA to maintain and upgrade the City's water and sewer infrastructure, to ensure safe and reliable service for the community. The increased rates that will be applied in 2021 and beyond will provide necessary funding for high-priority projects to upgrade and replace critical system assets.

Every drop matters. Every customer counts.

- **Water Purchase Cost Increase** – Also in 2020, LCA and Allentown renewed the water purchase agreement that allows LCA’s Suburban Division to purchase 7 million gallons per day of water from the City’s water system. This agreement amendment provides a long-term, reliable supply of water for our region and updates the cost-sharing methodology to ensure and equitable distribution of water treatment costs to all users. In 2021, LCA’s Suburban Division faces a one-time cost increase to implement the updated terms of the agreement.
- **Preventive Maintenance & Technology Upgrades** – As part of LCA’s strategic plan, much greater emphasis has been placed on our preventive maintenance program. While the program is currently in a “catch up” phase to address prior deferred maintenance, we expect these program expenses to be closely monitored and will stabilize over the next several years as the program is fully implemented. In addition, technology upgrades are necessary to ensure secure and reliable control systems are in place to properly operate our water and sewer systems.
- **Capital Financing** – Through discussion with the LCA Board, the Lehigh County Commissioners, and other key stakeholders, LCA has adopted a capital financing philosophy that will reduce our reliance on debt in the future. This will take time to achieve as current rates are structured around a more debt-intensive financing approach. Phased-in rate increases over the course of several years will be required to ensure funding for annual rehabilitation projects is available through reserves vs. increasing debt.
- **Payroll & Health Insurance** – LCA is experiencing significant increases in the cost of health insurance for the second year in a row. Our prior positive claims experience, which stabilized our health insurance costs in the past, has not continued and the increases we are experiencing now can be viewed as a “price correction.” Future claims experience will further impact premiums in 2022 and beyond.

Rate Setting & Review Process

Lehigh County Authority’s 2021 water and sewer rates are presented in the attached schedules for the Board of Director’s consideration for adoption on November 9, 2020. They will be posted on the LCA website in advance of their proposed adoption and shared with key customers directly in accordance with any existing service agreements. Should any customer or member of the general public have questions or comments about these rates prior to their effective date of January 1, 2021, we will bring them back to the Board for consideration and to record them publicly for the record.

To assist the Board and the public with reviewing the proposed rates, a summary of the proposed rate changes is shown on the table below, and all changes are highlighted / shaded grey within the rate schedule documents attached. A calculation of the impact to a typical residential customer is also attached to this memo along with a comparison of how LCA’s rates compare to other water/sewer utilities in the Lehigh Valley region.

It is important to note that these rates were discussed, reviewed and preliminarily approved as part of the 2021 Budget process that began in August and was concluded in October. This submission represents formal adoption of the rates that were generated based 2021 Budget calculations of revenue requirements as well as contractual requirements for rate-setting. In other words, there are “no surprises” included in the attached rate schedules.

Water Rates

Rate	Page #	Description / Discussion
Suburban Water Fixed & Volume Charges	1	Proposed changes in the fixed and volume rates were calculated via the water rate study conducted by Keystone Alliance Consulting in 2018, and considering the 2021 cost increases discussed during the budget development process.
Public Fire Protection	2	Fire hydrant and system charges for public fire service provided by the Authority were also evaluated as part of the 2018 water rate study.
Allentown Water Rates	9	The 2021 rates reflect increases based on the terms of the Concession Agreement with the City of Allentown, as amended in the summer of 2020. Such increases include an overall 3.3% increase in general rates, phased in increases to fixed charges, plus an updated calculation of the Capital Cost Recovery Charge per the methodology included in the agreement.

Wastewater Rates

Rate	Page #	Description / Discussion
Suburban Sampling & Testing Charges	5	Updates fees based on actual costs associated with sampling and analysis of high-strength wastes.
Suburban Exceptional Strength Charge	5	As calculated in the Western Lehigh Interceptor User Charge Report that was submitted to municipal signatories in October 2020. Rates are calculated by formula in compliance with municipal agreements.
Western Lehigh Interceptor & Little Lehigh Relief Interceptor User Charges	7	As calculated in the Western Lehigh Interceptor User Charge Report that was submitted to municipal signatories in October 2020. Rates are calculated by formula in compliance with municipal agreements.
Allentown Sewer Rates	9	The 2021 rates reflect increases based on the terms of the Concession Agreement with the City of Allentown, as amended in the summer of 2020. Such increases include an overall 3.3% increase in general rates, phased in increases to fixed charges, plus an updated calculation of the Capital Cost Recovery Charge and Administrative Order Fee per the methodology included in the agreement.
Allentown Exceptional Strength Charge	10	As calculated by formula and applied to the City's municipal signatories and in-City customers with high-strength waste discharges.
Allentown Industrial Pretreatment Charges	10	Fees that may apply to individual customers depending on permit parameters, based on actual costs.

2021 Tapping Fees / Customer Facilities Fees

Any updates to these fees that may be required will be brought to the Board at a later date with required documentation and Resolution.

Lehigh County Authority - Proposed 2021 Rates

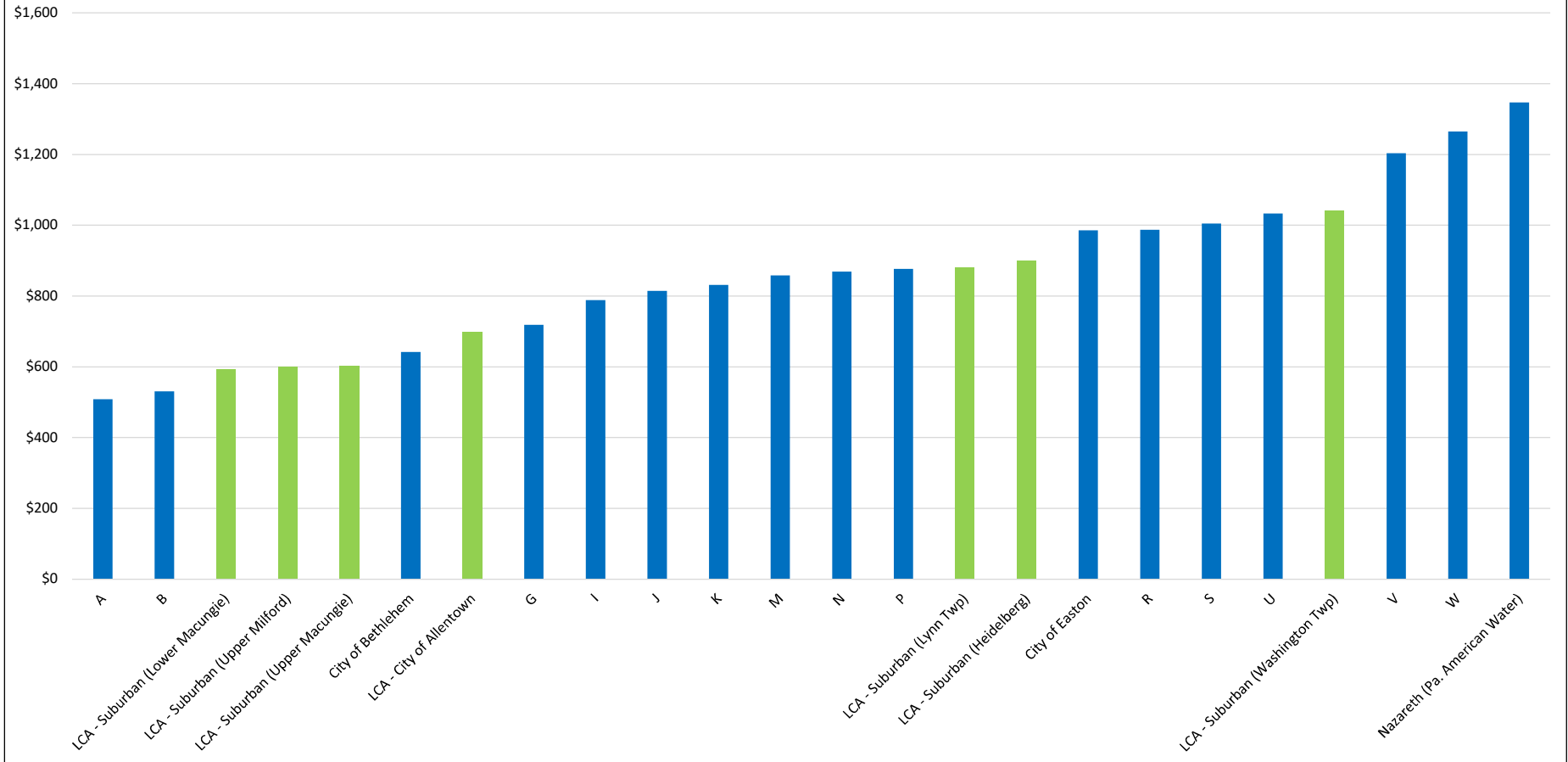
Bill Sample: Average Residential Customer, 15,000 gallons per quarter

	Lower Macungie Twp*	Upper Milford Twp**	Upper Macungie Twp*	Allentown Division	Lynn Twp**	Heidelberg Heights **	Washington Twp **
Water Fixed Charge	\$20.05	\$20.05	\$20.05	\$48.34	\$20.05	\$20.05	\$20.05
Water Volume Charge	\$41.40	\$41.40	\$41.40	\$63.43	\$41.40	\$41.40	\$41.40
Quarterly Water Bill	\$61.45	\$61.45	\$61.45	\$111.77	\$61.45	\$61.45	\$61.45
Sewer Fixed Charge	\$62.50	\$21.00	\$89.00	\$16.79	\$158.98	\$21.00	\$124.00
Sewer Flow Charge	\$24.00	\$67.95	n/a	\$46.32	n/a	\$142.95	\$75.00
Quarterly Sewer Bill	\$86.50	\$88.95	\$89.00	\$63.11	\$158.98	\$163.95	\$199.00
TOTAL QUATERLY BILL	\$147.95	\$150.40	\$150.45	\$174.88	\$220.43	\$225.40	\$260.45
ANNUAL WATER & SEWER BILL	\$591.80	\$601.60	\$601.80	\$699.52	\$881.72	\$901.60	\$1,041.80

* LCA customers in Lower Macungie and Upper Macunige townships receive sewer service and sewer bills directly from the township. Rate information reflects the township's most recently published rate schedule.

** No rate changes are proposed for sewer service in Upper Milford, Lynn, Heidelberg or Washington townships.

Lehigh Valley Water & Sewer Rate Comparison (Data from 2019-2020, LCA proposed 2021 rates)
 24 communities in Lehigh Valley - average annual residential water & sewer bill (5000 gallons per month)



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

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

I. Schedule of Water Rates

A. Metered Water Use

**Central Lehigh, North Whitehall, Washington Township, Heidelberg Heights,
Arcadia, Pine Lakes, Mill Creek, Beverly Hills, Emmaus Consecutive,
Madison Park North, Upper Milford Central & Clearview Farm Estates
Divisions**

(adopted 11/11/19; effective 1/1/20)

Current Fixed Charges		2021 Fixed Charge
Meter Size	Fixed Charge	
<i>Quarterly</i>		
5/8" & 3/4" *	\$ 13.05	\$ 20.05
1"	23.13	35.54
<i>Monthly</i>		
1-1/2"	17.53	26.93
2"	24.26	37.27
3"	43.80	67.29
4"	64.20	98.64
6"	120.30	184.83
8"	186.90	287.15
10"	263.10	404.23

*Typical residential.

Current Volume Charges			2021 Rate per 1,000 Gal.
Quarterly Usage (gal.)	Monthly Usage (gal.)	Rate per 1,000 Gal.	
First 120,000	First 0 - 40,000	\$2.76	\$2.76
Next 2,880,000	Next 960,000	\$2.50	\$2.68
Next 24,000,000	Next 8,000,000	\$2.18	\$2.33
Next 147,000,000	Next 49,000,000	\$1.88	\$2.01
Over 174,000,000	Over 58,000,000	\$1.70	\$1.82

Welshtown Road (Washington Township Division)

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

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

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

B. Public Fire Protection

(adopted 11/9/2020; effective 1/1/2021)

Each Public Fire Hydrant (O&M Charge)	\$9.34/month
Each Inch-Squared Foot (System Charge)	\$0.00150/year

2021 Rates:
\$9.88/month
\$0.00164/year

C. Private Fire Protection

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

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

Arcadia West Division – Direct Fire Protection Service

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

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

II. Meter Test Fee

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

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

III. Meter Inspection Fee

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

\$50.00**IV. Service Order / Site Visit Fees**

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

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

V. Site Revisitation Charge

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

\$100.00

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

VI. Lien Administration Fee

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

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

VII. Hydrant Security Device Fee

Central Lehigh Division

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

\$140.00

VIII. Fire Flow Test Charge

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

\$180.00

IX. Use of Easement Preparation Fee

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

\$90.00

X. Backflow Prevention Non-compliance Charge

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

\$50.00

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

IX. Tapping, Connection and Customer Facilities Fees

Central Lehigh Division

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

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

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

Washington Township Division – Excluding Welshtown Road

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

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

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

Central Lehigh Division – Lehigh Valley South Industrial Park

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

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

EDU = 220 gallons per day

Central Lehigh Division fees also apply

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

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

North Whitehall Township Division

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

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

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

Arcadia Division

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

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

Mill Creek Division

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

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

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

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

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

Pine Lakes Division

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

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

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

Beverly Hills Division

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

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

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

Heidelberg Heights Division

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

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

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

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

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

Emmaus Consecutive Division

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

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

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

Upper Milford Central Division

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

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

Notes:

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

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

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

Customer Facilities Fee

(adopted 12/9/19; effective 1/1/20)

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

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

Meter Size	Meter Fee - With DC Backflow	Meter Fee - With No Backflow
5/8"	\$428	\$395
5/8" Pit	\$491	\$458
3/4"	\$446	\$413
3/4" Pit	\$501	\$468
1"		\$489
1" Pit		\$514
1 1/2" Displacement *		\$704
1 1/2" Turbine *		\$962
1 1/2" Compound *		\$1,305
2" Displacement *		\$911
2" Turbine *		\$1,103
2" Compound *		\$1,491

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

Notes:

Backflow protection devices for commercial/industrial facilities or other facilities with a 1" or larger meter shall be approved by the Authority, and supplied, installed and tested by the applicant. Meters larger than 2" shall be approved by the Authority, supplied and installed by the applicant, and inspected by the Authority at the applicant's expense.

X. Non-Sufficient Funds (NSF) Fee

All Divisions

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

\$25.00

XI. Service Initiation Fee

All Divisions

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

\$15.00

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

CITY OF ALLENTOWN

Adopted 11/9/2020; Effective 1/1/2021

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

A. Metered Water Use

Meter Size	10/1/2020 Monthly Charge	2021 Monthly Charge	10/1/2020 Quarterly Charge	2021 Quarterly Charge
5/8"	n/a	n/a	\$46.80	\$48.34
3/4"	n/a	n/a	\$53.69	\$55.46
1"	n/a	n/a	\$67.65	\$69.88
1 1/2"	\$39.67	\$40.97	n/a	n/a
2"	\$53.57	\$55.34	n/a	n/a
3"	\$90.57	\$93.56	n/a	n/a
4"	\$132.41	\$136.78	n/a	n/a
6"	\$248.27	\$256.47	n/a	n/a
8"	\$387.47	\$400.25	n/a	n/a

Volume	2020 Rate per 1000 Gallons*	2021 Rate per 1000 Gallons*
All Volume	\$3.77037	\$3.87478

* Volume charge includes cost recovery for any Change of Law and cost passed through from the Delaware River Basin Commission as allowed under the Lease Agreement with the City of Allentown.

B. Capital Cost Recovery Charge **\$0.34447 per 1000 gallons**

2021 Rate: \$0.35365

C. Private Fire Protection

Each Hydrant	\$373.48 per year (may be billed monthly or quarterly)	2021 Rate: \$385.81
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D. Tapping Fees

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

\$6.12 per gallon

2021 Rate: \$6.32

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

Capacity Part	\$0.00851 per gallon
Distribution Part	\$0.02551 per gallon

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

E. Customer Facilities Fees

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

Meter Size	With LCA Installation*	Without LCA Installation*
5/8"	\$323	
3/4"	\$383	
1"	\$370	
1 1/2"	\$637	
2"	\$799	
3" Compound		\$1,623
3" Turbine		\$1,263
4" Compound		\$2,809
4" Turbine		\$2,253
6" Compound		\$4,702
6" Turbine		\$3,899
8" Compound		\$7,578
8" Turbine		\$6,487

* LCA will install all meters 2" or smaller. Larger meters may be purchased from LCA at the prices listed above, which includes a \$50 inspection fee. If LCA installation of a larger meter is requested, the customer will pay actual costs, on a time and materials basis.

Other Components	Price
5/8" Meter Horn	\$45.31
3/4" Meter Horn	\$53.04
Curb Box	\$82.25

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

F. Connection Fee

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

Tap Size	Connection Fee
3/4"	\$412
1"	\$440
1 1/2"	\$655
2"	\$807
4" x 4"	\$2,153
6" x 4"	\$2,378
6" x 6"	\$2,525
8" x 4"	\$2,214
8" x 6"	\$2,418
8" x 8"	\$3,206
12" x 4"	\$2,370
12" x 6"	\$2,725
12" x 8"	\$3,260
12" x 12"	\$4,539

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

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

I. Schedule of Wastewater Rates

A. Lowhill Township System

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

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

B. Upper Milford Township System

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

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

C. Weisenberg Township System

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

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

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

Western Weisenberg Township System (Arcadia West)

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

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

C. Heidelberg Heights System

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

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

D. Wynnewood System

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

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

E. Sand Spring System

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

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

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

F. Wastewater Treatment Plant Direct Customer

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

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

* Per Equivalent Dwelling Unit (EDU)

G. Washington Township System

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

Fixed Charge	\$/qtr
All customers	\$124.00
Flow Charge	<u>\$/1,000 gals</u>
All flow	\$5.00

H. Lynn Township

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

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

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

II. Metering Fees

A. Meter Purchase/Installation Fee

(adopted 12/9/19; effective 1/1/20)

Meter Size	Purchase & Inspection *
5/8"	\$321
5/8" Pit	\$384
3/4"	\$339
3/4" Pit	\$394
1"	\$416
1" Pit	\$440
1-1/2"	\$704
1-1/2" Pit	\$962
2" Displacement	\$1,305
2" Displacement Pit	\$911
2" Turbine	\$1,103
2" Compound	\$1,491

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

B. Meter Inspection Fee

\$50.00

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

C. Meter Test Fee

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

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

III. Other Charges

A. Service Order / Site Visit Fee

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

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

After Hours **\$150.00**

B. Site Revisitation Charge

\$100.00

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

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

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

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

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

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

- F. Sampling and Testing Charges** **\$182.00/day**
(adopted 11/11/19; effective 1/1/20)
(Commercial & Industrial)

Fats-Oils-Greases Analysis **\$39.00/sample**
(adopted 11/9/2020; effective 1/1/2021)

2021 Rate: \$43.75/sample

- G. Exceptional Strength Charges**
(adopted 11/9/2020; effective 1/1/2021)

(Commercial & Industrial)	2020 Rates \$ / pound	2021 Rates \$ / pound
BOD	0.31	0.36
TSS	0.29	0.29
TKN	0.41	0.47

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

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

IV. Capital Recovery Charges

System	Tapping Fee \$/gallon/day	Tapping Fee \$/EDU	Connection Fee	Customer Facilities Fee
Upper Milford System (adopted 7/22/19; effective 8/1/19)			Actual Cost Trended*	Actual Cost Trended*
Route 29 Service Area				
Contributed Area (includes Western Lehigh fees plus UMiT Capacity Part)	17.75	4,031.34		
LCA-Installed Area (includes Contributed Area fees plus UMiT Collection Part)	26.24	6,025.84		
Lower Macungie Twp. Customer	2.65	632.06		
Other Service Areas				
Contributed Area (includes Western Lehigh fees plus UMiT Capacity Part- Other)	12.18	2,724.31		
Non-Contributed Area (includes Contributed Area fees plus UMiT Collection Part)	20.68	4,718.80		
Western Weisenberg Twp System (adopted 7/22/19; effective 8/1/19)				
LCA Planning Fee	2.73	715.82	Historical Cost plus Financing	
LCA Land Fee	4.59	1,204.22	Actual Cost Trended	
Wastewater Treatment Plant	41.74	10,957.60	Actual Cost Trended	
Wynnewood System (adopted 7/22/19; effective 8/1/19)				
Capacity	13.48	3,251.76	Actual Cost	Actual Cost
Collection	13.63	3,287.65		
Heidelberg Heights System (adopted 7/22/19; effective 8/1/19)				
Capacity	25.33	6,110.32	Actual Cost	Actual Cost
Collection	3.69	889.37		
Sand Spring System (adopted 7/22/19; effective 8/1/19)				
Capacity	9.78	2,358.58	Actual Cost	Actual Cost
Collection	3.64	878.38		

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

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

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

WESTERN LEHIGH INTERCEPTOR SYSTEM

I. Schedule of Wastewater Rates

(adopted 11/9/2020; effective 1/1/2021)

LCA Signatories	2020 Rates (\$)	2021 Rates (\$)
Flow (per 1,000 gallons)	0.98	0.91
BOD (per pound)	0.31	0.36
TSS (per pound)	0.29	0.29
TKN (per pound)	0.41	0.47
Allocation (per 1,000 gallons per day)	0.21	.22
Emmaus		
Flow (per 1,000 gallons)	0.38	0.38

II. Tapping Fee

(adopted 7/22/19; effective 8/1/19)

<u>System</u>	Tapping Fee \$/gal/day	Tapping Fee \$/EDU	Costing Method
Treatment Allocation	6.32	1,409.42	Historical Trended Cost
Western Lehigh Interceptor	4.10	915.09	

LITTLE LEHIGH RELIEF INTERCEPTOR SYSTEM

I. Schedule of Wastewater Rates

(adopted 11/9/2020; effective 1/1/2021)

	2020 Rate (\$)	2021 Rate (\$)
LCA Signatories – Phase 1 Flow (per 1,000 gallons)	0.19	0.23
Other Users – Lower Macungie Phase 2 & Brookside Road, Salisbury, and So. Whitehall Townships Flow (per 1,000 gallons)	0.14	0.21
LCA Signatories – Phase 2 Flow (per 1,000 gallons)	0.003	0.02

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

II. Tapping Fee

(adopted 7/22/19; effective 8/1/19)

<u>System</u>	<u>Tapping Fee \$/gal/day</u>	<u>Tapping Fee \$/EDU</u>	<u>Costing Method</u>
Little Lehigh Relief Interceptor	1.17	259.90	Historical Trended Cost

LINE INSPECTION AND CLEANING SERVICES

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

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

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

CITY OF ALLENTOWN

Adopted 11/9/2020; Effective 1/1/2021

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

A. Sewer Usage Charges

Meter Size	10/1/2020 Monthly Charge	2021 Monthly Charge	10/1/2020 Quarterly Charge	2021 Quarterly Charge
5/8"	n/a	n/a	\$16.26	\$16.79
3/4"	n/a	n/a	\$18.64	\$19.25
1"	n/a	n/a	\$23.40	\$24.17
1 1/2"	\$13.66	\$14.11	n/a	n/a
2"	\$18.42	\$19.02	n/a	n/a
3"	\$31.19	\$32.22	n/a	n/a
4"	\$45.47	\$46.97	n/a	n/a
6"	\$85.21	\$88.02	n/a	n/a
8"	\$156.32	\$161.48	n/a	n/a

Flow Charge	2020 Rate per 1000 Gallons*	2021 Rate per 1000 Gallons*
All flow based on metered water usage**	\$2.69588	\$2.78520

* Flow charge includes cost recovery for any Change of Law and cost passed through from the Delaware River Basin Commission as allowed under the Lease Agreement with the City of Allentown.

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

B. Capital Cost Recovery Charge

\$0.13391 per 1000 gallons

2021 Rate:
\$0.14954

C. Administrative Order Fee

\$0.03641 per 1000 gallons

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

2021 Rate:
\$0.15305

D. Tapping Fees

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

\$4.66 per gallon

2021 Rate: \$4.82

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

Capacity Part \$0.01538 per gallon
Collection Part \$0.00052 per gallon

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

E. Exceptional Strength Charges

(Commercial & Industrial)	2020 Rate \$ / pound	2021 Rate \$ / pound
BOD	0.259	0.314
TSS	0.214	0.277
TKN	0.369	0.415

F. Industrial Pretreatment Program Fees

Program Charge / Testing Fees	Current Rate	2021 Rate
Issue Initial Two (2) Year Permit	\$1,200.00	\$1,200.00
Renewal Fee	\$575.00	\$575.00
Review of Monitoring Reports Required by Federal Regulations	\$275.00	\$275.00
Single Occurrence Review	\$350.00	\$350.00
Site Visitations and Inspection	\$130.00	\$130.00
Monitoring Reports Preparation	\$135.00	\$135.00
Placement of Chemical Samplers	\$105.00	\$105.00
Sample Collection and Preparation	\$52.50	\$52.50
Biochemical Oxygen Demand	\$27.50	\$27.50
Cyanide, Total	\$43.00	\$36.00
Oil & Grease	\$48.50	\$43.75
pH	\$12.00	\$12.50
Phenols	\$42.50	\$37.50
Solids, Total Dissolved	\$14.50	\$15.00
Solids, Total Suspended	\$17.50	\$17.50
Solids, Total	\$14.50	\$15.00
Sulfides	\$25.50	\$25.00
Total Kjeldahl Nitrogen (TKN)	\$28.50	\$28.50
Total Petroleum Hydrocarbons	\$51.00	\$50.00
Total Phosphorous as P	\$21.00	\$25.00
Cadmium	\$15.00	\$15.00
Chromium	\$15.00	\$15.00
Copper	\$15.00	\$15.00
Lead	\$15.00	\$15.00
Molybdenum	\$15.00	\$15.00
Nickel	\$15.00	\$15.00
Silver	\$15.00	\$15.00
Selenium	\$15.00	\$15.00
Zinc	\$15.00	\$15.00
Mercury	\$23.00	\$25.00
Cobalt	\$15.00	\$15.00
Lithium	\$15.00	\$15.00
SVOA 625	\$225.00	\$187.50
VOA 1666	\$412.00	\$412.00
VOA 624	\$100.00	\$112.50
Diesel Range Organics	\$75.00	\$75.00

FINANCE & ADMINISTRATION

ACTION ITEM

1. 2021 Water & Wastewater Rate Schedules – November 9, 2020

Following completion of the 2021 budget process, a complete package of water and wastewater rate updates is presented to the Board for consideration and adoption. The rates shown in proposed rate schedules are a result of the budget process and prior the Suburban Water Division water rate study. The City Division rates reflect terms of the Concession Lease Agreement. Board approval for the updated rate schedule is requested at the November 9, 2020 meeting to allow for proper notification to customers prior to bills being issued with the new rates.

DISCUSSION ITEMS

1. Customer Assistance Program – November 9, 2020

To prepare for beginning normal collections procedures in January 2021, following 10 months of suspending all late fees and service termination procedures due to the COVID-19 pandemic, LCA staff is exploring methods to provide assistance to customers who are having difficulty paying their water and sewer bills. At the November 9, 2020 meeting, staff will present a conceptual program design for a customer assistance program for discussion. Authorization of funding will be review and approval requested in December 2020 or January 2021.

2. Staff Succession Planning Review – November 9, 2020

LCA staff will present a brief update of the methodologies used to identify retirement risks and plan in advance of key retirements.

INFORMATION ITEMS

1. Recently Purchased Investments – Certificates of Deposit (CDs)

Fund	Bank	Location	Gross Amount	Date of Purchase	Date Due	Net Rate %
LLRI CR	Industrial and Commercial Bank of China USA	New York, NY	245,000.00	8/28/20	2/28/22	0.200
WW Capac	Bank Hapoalim B.M.	New York, NY	249,000.00	8/26/20	8/26/22	0.250
WW Capac	Meridian Bank	Paoli, PA	249,000.00	8/28/20	2/28/22	0.150

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

2. Developments

Water system construction is occurring in the following developments:
 8323/8449 Congdon Hill Drive, 2 industrial lots with warehouses, LMT
 8615/8783 Congdon Hill Drive, 2 industrial lots with warehouses, LMT
 Fields at Indian Creek, Phases 4 & 5, 86 residential units (sfd), water and sewer, UMIIT & Emmaus

Kohler Tract, 123 residential lots (sfa), water and sewer, UMiIT

Water system plans are being reviewed for the following developments:

- 749 Route 100, 1 industrial lot with warehouse, UMT
- 1047 Cetronia Road, 8 unit apartment building, UMT
- 1224 Weilers Road Townhouses, 144 townhouse units (sfa), UMT
- 5329-5347-5357 Hamilton Blvd., 1 commercial lot, LMT
- 5420 Crackersport Road, 1 commercial lot, UMT
- ATAS International, 1 industrial lot, UMT
- Cedarbrook Road Industrial Park, 2 industrial lots, LMT
- Estates at Maple Ridge, 30 residential units (sfd), UMiIT
- Hidden Meadows, Phase 2, 86 townhouse units (sfa), UMT
- Laurel Field, Phase 5, 25 townhouses, UMT
- Lehigh Hills, Lot 5 Phase 2, 240 residential units (sfd.), UMT - New
- Lehigh Hills Townhouses, 24 townhouse units (sfa), UMT – New
- Lehigh Valley West, Lots 5, 7-11, 1 industrial lot, UMT
- Madison Village at Penn's View, 66 manufactured homes, 1 lot, water and sewer, LynnT
- Mountain View Estates, 27 residential units (sfd), LMT
- Ridings at Parkland – Phase 2, 38 residential units (sfd), NWT
- Schoeneck Road, Lot 1, 1 lot warehouse, LMT
- Shepherds Corner, 1 commercial lot, LMT
- Towneplace Suites by Marriott, 91-room hotel, UMT

Sewage Planning Modules Reviewed in Prior Month:

- Townes on Ridge, Allentown, 952 gpd.
- Valania Park, Allentown, 2,281 gpd.

WATER

ACTION ITEM

DISCUSSION ITEMS

INFORMATION ITEMS

1. Allentown Division – Hamilton Street Cedar Creek Bridge Water Main Relocation Project

As part of the Pennsylvania Rapid Bridge Replacement Program, the replacement of the Cedar Creek Bridge on Hamilton Street has required the relocation of approximately 500 linear feet of water main. The design phase was approved at the December 2016 Board meeting and the construction phase at the January 2018 meeting. As of February 22, 2018, the contractor completed a majority of the relocation work for LCA’s facilities; however, they were pulled off the site due to construction conflicts. As of March 22, 2019 the original LCA water line relocation scope of work was completed, however an additional relocation of a LCA sanitary sewer line was added to the original scope and agreement as of April 15, 2019 with an anticipated completion of April 26, 2019. LCA anticipates submitting all final paper work to the state for reimbursement in the very near future when the project has reached 100% completion. As of November 27, 2019 the project is still under construction due to delays caused by environmental timelines to preserve the high quality clear water fishery. It is anticipated that this work will be reimbursed 100% by the state and that the construction related activities. As of February 2020, the LCA utility relocation portion of this project is 100% complete; total project is approximately 95% complete. As of November 2020, the entire project is complete and LCA has submitted to the State for reimbursement all expenses occurred during this project. In future staff and board notes this project will be removed due to its completeness.

2. Allentown Division – Water Main Replacement Program Cycle 5

The project is for the annual replacement of aged and/or failing cast iron water main in multiple locations throughout the City, in accordance with the new amended lease requirements (one mile per year), based on the design engineer’s risk prioritization protocol. The design engineer (Gannett Fleming) halted work on Cycle 5 following City Compliance office acceptance of the Cycle 5 main replacement prioritization, pending available funding. Capital Works has re-started Cycle 5 design phase for construction in 2021 of a water main replacement project. As of November 2020, LCA has begun negotiations for cost sharing of City road surface restorations and anticipates submitting substantially complete plans and specifications in December 2020. Bid phase is anticipated to occur in early 2021.

3. Allentown Division – Water Filtration Plant: SCADA System Replacement

The project consists of the replacement of the existing SCADA System at the Water Filtration Plant. The purchase and installation of new servers, new control panel cabinets, new cabling, and new programming software will encompass this project. Board approval to purchase this equipment was granted at the August 27, 2018 Board Meeting. Replacement will be completed by early 2020. Construction is 99% complete. This project will be funded by LCA Allentown Division. November 2, 2020 Tentative cut over date.

4. Allentown Division – Water Filtration Plant: High Lift Pump VFD Replacements

The Water Filtration Plan (WFP) supplies water to residential and commercial customers in the City of Allentown, as well as wholesale water to surrounding communities. One of the critical elements at the WFP is the High Service Pumping System (HSPS), which is the primary means of conveying treated water into the distribution system. The HSPS has experienced regular failures of aging electrical components. The July 2017 Allentown Water Master Plan categorizes

the pump variable frequency drives (VFDs) in very poor condition and notes that the VFDs are no longer supported by the manufacturer. This project will replace two of the existing VFDs and add a third VFD. This project was identified as unfunded in 2018 and 2019 prior to the dispute settlement with the City and may be supported through a PENNVEST loan pending. Board approval was granted at the 8/12/19 Meeting for the design phase of this project. Contract drawings representing 90% design were received in mid-November 2019. The design engineer also completed an “Arc-Flash” study in summer 2020 to identify related electrical deficiencies at the WTP. Final design engineering work was re-started in early September 2020 following execution of the new Agreement with the City. Capital Works met with a representative of PennVEST on 9/18/20 to discuss an upcoming application submission and final design completion schedule. Capital Works’ is currently preparing the funding application paperwork to meet the 11/4/20 application submission deadline for the 1/20/21 PennVEST meeting. **(No Change)**

5. **Allentown Division – Water Filtration Plant: Raw Water Pump Room Painting Construction Phase**

Since 2015, the piping and appurtenances of the high lift pump station (Phase 1) and the filter gallery (Phase 2) have been painted. It is the intent of Phase 3 to paint the piping and associated appurtenances in and around the raw water pump room, as the coatings are in poor condition. The project was advertised for bid in late December and bids were received mid-January. Construction phase Board approval was approved at the 2/10/20 Board meeting. The pre-construction meeting was held on 2/12/20, construction began in March and is currently on hold due to pandemic related concerns. Construction is anticipated to resume once restrictions are eased and the risk of seasonal pipe sweating has abated, and should be completed in Fall 2020. **(No Change)**

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

The project consists of installation of a new booster pumping station with SCADA and water main extension to pump water from the Lower Pressure System to the Upper Pressure System. The LCA Suburban Division will fund the project. Bids for the project were received on 6/29/18. Board approval for the construction phase of the project was granted at the 7/23/18 meeting. A preconstruction meeting was held on 8/28/19. Construction was substantially completed in February 2020. Punch list items have been completed – construction is 100% complete. In future staff and board notes this project will be removed due to its completeness.

7. **Suburban Division – Upper Milford-CLD Interconnection Project (Kohler Tract)**

The project features the installation of a new booster pumping station and water main extension to interconnect the Central Lehigh Division (CLD) with the Upper Milford Division (UMD) allowing the abandonment of the UMD water supply facilities, and to provide water service to the proposed 123-lot Kohler Tract subdivision in Upper Milford Township. Costs are being shared between the LCA Suburban Division and the developer of the Kohler Tract (Jasper Ridge). Pumping station bids were opened on 4/25/19. Board approval for the construction phase of the project was granted at the 5/13/19 meeting and a preconstruction meeting was held on 6/25/19. The NPDES permit was issued on 3/9/20 and a premobilization teleconference was held on 3/19/20. Upper Milford Township has issued building permits. Construction is approximately 90% complete as of October 2020 and additional start-up testing is scheduled for 11/3/20.

8. **Suburban Division – Watershed Monitoring Program**

The project will include setting up a surface water flow-monitoring network for the Little Lehigh Creek. The work is in response to the Watershed Monitoring Plan that was developed and reported to LCA by AI Guiseppe (SSM, Inc.) in 2017. In 2018, USGS selected the Delaware River Basin to pilot the National Next Generation Integrated Water Observing System (NGWOS).

The Little Lehigh Watershed was picked as a targeted area of the NGWOS Project and additional surface water and ground water monitoring stations will be developed. USGS and LCA met on 11/19/2019 to discuss the proposed monitoring stations and the program in general. A follow up meeting was held on 12/16/2019. USGS and LCA have now found all three GW monitoring wells, LE860, LE 861 and LE862, who's usage had all been discontinued decades ago and their locations were presently unknown. USGS is now checking the viability of using them again. USGS has now completed the installation of (4) new surface water (SW) Gauging Stations in the Little Lehigh Watershed and all are collecting data. Two additional SW stations need to be relocated because of the intermittent streams they were originally planned to monitor. Additional ground water (GW) flow monitoring stations are in the planning stages. All six (6) Fybr sites are currently collecting flow data and the calibration process is expected to last several months. Four (4) out of eight (8) planned weather stations are currently operational and are recording data. **(No Change)**

9. **Suburban Division – Buss Acres Pump Station Replacement Construction**

The project consists of the consolidation and replacement of two well stations with a single new pump station and a new water storage tank to replace two antiquated hydropneumatic pump stations. The new station will be a variable frequency drive controlled double pumping system with full SCADA control. The design will include radon reduction elements and also accommodate the future installation of additional radon removal equipment, to be implemented upon DEP's mandate of a regulatory limit. The project is in construction phase. The Notice to Proceed was issued to the contractors on 9/24/19. Construction began in February 2020 and is approximately **40%** complete.

10. **Suburban Division – Water Meter Reading Equipment Upgrade**

LCA's capital program includes the replacement of 20,000 transceiver units, and 10,000 units will be replaced in 2019 with the remaining to be replaced in 2020 under separate authorization. The new units have a 20-year battery life and are compatible with the new meter reading software purchased in 2017. This project will replace 100% of the remaining old style radio units over a two-year period. Construction phase services for the first round of 10,000 units was approved at the 5/13/19 Board meeting. Construction began in July 2019 and a change order was issued to the contractor for the installation of the remaining transceiver units that were originally scheduled for replacement in 2020, in order to expedite the completion of the work under the program and take advantage of favorable contract unit pricing. The project is substantially complete. Work has been suspended due to the Covid-19 virus. The contractor continues to replace radios that were not working properly. **(No Change)**

11. **Suburban Division - Additional (Redundant) Water Supply - Small Satellite Divisions**

This Project focuses on the development of an additional well for the Madison Park North (MPN) system per DEP guidelines to have a backup source of water supply. An agreement is in place with an adjoining property owner to MPN to drill a test well on their property. The "step drawdown test" was performed on 3/26/19 and indicated that the test well is a viable backup source to Well 1. A Pre-Drilling and Aquifer Test Plan was approved by DEP in late September of 2019. Authorization was granted at the June 22 Board meeting for aquifer testing of the proposed well as per the combined Pre-Drilling and Aquifer Test Plan. Well testing was performed in August in coordination with LCA's engineer. Testing was halted upon discovery of a water bearing zone blocked by casing pipe grouting. A second test well location has been identified on the same property and well drilling has been completed with positive results.

12. **Arcadia West Division – Water Storage Tank Replacement**

The Arcadia West water storage tank has had several leaks in recent years and the coating has reached the end of its useful life. This project is for the replacement of the tank with a new

concrete reservoir. Design phase authorization was awarded to Entech Engineering at the April 27, 2020 Board meeting. This project will be funded by the LCA Suburban Division. Design is underway and expected to be completed and ready for bid at the end of 2020. The DEP Public Water Supply Permit Application will be submitted in November.

13. Allentown Division – 36" DI Water Main Condition Assessment

Water distribution system consultant Gannett Fleming, Inc is working with Pure Technologies to develop a condition assessment project focusing on the 36" ductile iron transmission line that feeds the north end of Allentown and Huckleberry Ridge Reservoir. This line has had two recent major failures and it would be beneficial to determine if there is a root cause for these failures that can be corrected to prevent further damage and water loss. The proposal is being finalized and Board approval will be requested at the October 26, 2020 meeting. If approved, the assessment will begin in late November or early December 2020.

WASTEWATER**ACTION ITEMS**

DISCUSSION ITEMS

INFORMATION ITEMS

1. Allentown Division – Kline’s Island WWTP: Phase 1 AO Design Improvements

This project includes the design of the AO improvements at the wastewater treatment plant. This conceptual design concept was approved by the City and the relevant final deliverables were received by LCA. The City then directed LCA to proceed with the final design of improvements related to the blending alternative. Board approval for the Professional Services Authorization with Kleinfelder East, Inc. was granted at the September 11, 2017 Board Meeting. The project is identified as Administrative Order Work and will be funded by the City. The 30% design drawings and specifications have been received. The City directed to “pause” the design phase of the project. The City has now directed LCA to keep this project on indefinite hold. **(No Change)**

2. Allentown Division – Kline’s Island WWTP: Max Monthly Flow Capacity Evaluation

DEP has noted that the KIWWTP has been performing at a high level and meeting its permitted effluent quality limits during a period of prolonged wet weather since early 2018. This study will provide the basis for confirming the plant’s maximum monthly average that can be sustained during prolonged periods of wet weather – while remaining in full compliance with effluent quality requirements of the plant’s permit. Approval of the study was granted at the 8/26/19 Board Meeting. The study was completed in mid-October 2019 and a Part II Permit was sent to DEP on 10/18/19. The permit will be resubmitted in early 2021 upon action by DEP on the Interim Act 537 Plan (submitted in September 2020). Therefore, the original permit submission is 100% completed – awaiting Revision #1. This project is considered an AO expense under terms of the Lease and is City funded. **(No Change)**

3. Allentown Division – Lehigh Street (Rte. 145) Water and Sewer Main Relocation Project

As part of the Pennsylvania Rapid Bridge Replacement Program, the proposed replacement of the Lehigh Street Bridge near the intersection with MLK Boulevard has required the relocation of existing City water and sewer lines that are located within the PennDOT right of way. Because the bridge is owned by Lehigh County and not the Commonwealth, the normal PennDOT relocation reimbursement schedules do not apply. Therefore, the County and LCA have executed an agreement on cost reimbursement on similar terms. LCA’s engineer is working on behalf of LCA on a final sewer relocation design that minimizes the extent of the relocation. There will be less water infrastructure relocation work required since the existing water main is attached under the bridge and will be reattached after the new bridge is constructed. Construction will commence in 2021. **(No Change)**

4. Allentown Division – Sanitary Sewer Collection System: I&I Source Reduction Program Plan (Year 1 and 2)

This project includes the design of the City of Allentown’s I&I Source Reduction Program Plan. In 2014, Video Pipe Services complete various CCTV inspections throughout twenty Primary and Secondary Basins. All pipe segments that called for complete pipe replacement have already been repaired. The remaining source reduction activities within the twenty Basins have been organized into a 5-Year Plan, with each year focusing on a different geographic region of the City’s sewer collection system. Design has been approved for all five years, with the first project commencing in 2020 and the last project finishing in 2024. Board approval for the construction phase of the “Year 1 Project” was granted at the March 9, 2020 Board Meeting. This project

commenced in early May 2020 and was finished in the middle of June 2020. The project is now officially closed. This project is considered an AO expense under terms of the Lease and is City funded. Year 2 details will be finalized in early 2021, with construction anticipated to start in Q2 of 2021. **(No Change)**

5. **Kline's Island Sewer System – Regional Sewer Capacity & Wet-Weather Planning – Interim Act 537 Plan Preparation**

Following several months of discussion with the Pennsylvania Department of Environmental Protection (PA-DEP), all municipalities flowing into the Kline's Island Wastewater Treatment Plan have agreed to complete an Interim Act 537 Plan ("Interim Plan") by September 2020. This Interim Plan will primarily consist of projecting new connections to the regional sewer system from 2021 through 2025 and outlining steps to be taken during this timeframe to prepare a full Regional (Long-Term) Act 537 Plan ("Regional Plan"). This two-step planning process has been developed to allow all municipalities to work cooperatively toward a Regional Plan to meet future sewer capacity needs of the region, and to provide proper regulatory oversight and control of new connections to the system while the Interim Plan is in force from 2021 to 2025. To begin the process of compiling the Interim Plan, a consulting engineer has been preliminarily retained, and approval of their full Professional Service proposal was granted at the February 10, 2020 Board meeting. Costs associated with the development of the Interim Plan will be paid by the City of Allentown and reimbursed through existing intermunicipal agreements and by City customers through the use of the Administrative Order Fee. As of late August 2020, the Interim 537 Draft is 100% completed and was delivered to sixteen planning commissions on 3/16/2020. Planning commission meetings occurred with public advertisement opening on 6/10/20 and closing on 7/10/20. Municipal resolution adoptions occurred in August and the Plan was delivered to DEP on 9/4/20. **(No Change)**

6. **Kline's Island Sewer System – Regional Sewer Capacity & Wet-Weather Planning – Sewage Billing Meter QAQC Data Analytics and 2021 Flow Metering Preparation**

As part of the Interim Act 537 Plan, the municipalities served by the Kline's Island Sewer System have committed to completing a flow metering and modeling project beginning in 2021. The flow metering data will be used to prepare modeling and identify the capital improvements needed to meet the future sewage capacity needs of the region through 2050. The flow metering will include a mix of temporary meters and the existing sewage billing meters. Data delivery and storage procedures, quality assurance, and flow analytics need implemented in 2020 for these sewage billing meters. Without this meter development program, the data cannot be used from these meters. Therefore, to prepare for 2021 flow metering, a consulting engineer has been preliminarily retained, and approval of their full Professional Service proposal was granted at the April 27, 2020 Board meeting. Costs associated with the development of the QAQC data analytics and the 2021 flow metering preparation will be paid by the City of Allentown and reimbursed through existing intermunicipal agreements and by City customers through the use of the Administrative Order Fee. **(No change)**

7. **Regional Act 537 Plan Alternatives Analysis: Pretreatment Plant Upgrade Option**

To begin the process of developing the long-term Regional Act 537 Plan, the evaluation of the LCA Pretreatment Plant 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 Pretreatment Plant 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 proposals for two engineering firms that will serve in Program Manager and Technical Lead roles. The Program Manager will oversee all alternatives being evaluated at both the Pretreatment Plant and Kline's Island Wastewater Treatment Plan in Allentown as the Act

537 Plan is being developed. The Technical Lead will provide specific engineering and treatment plant modeling services to support evaluation of the Pretreatment Plant alternatives. Board approval for these professional services authorizations was granted at the 8/24/2020 meeting. **(No change)**

8. **Suburban Division – Western Lehigh Service Area – 2020 Flow Metering Program**

Future flow metering work is anticipated over the next several years for both the Western Lehigh service area as well as the entire regional Kline's Island Sewer System. In 2020, the Western Lehigh group will conduct flow metering for a period of eight months to gather additional data on inflow and infiltration and the impact of prior rehabilitation work. It is anticipated that more extensive flow metering will be required in 2021 and 2022 to develop a Regional Plan. Approval of a Professional Services Authorization and three-year contract with Flow Assessment Services was granted at the February 10, 2020 Board meeting. Also on February 10, 2020, the Board approved a Professional Services Authorization for Arcadis to provide quality assurance and data analysis services for the 2020 flow monitoring program. As of late October 2020, data collection is 95% completed. The QA/QC of the data is ongoing.

9. **Suburban Division – Western Lehigh Service Area: 2020 Sewer Modeling**

The Western Lehigh Sewer Partnership (WLSP) hydraulic model has been calibrated using 2019 flow meter and rainfall data and is available to support long-term Act 537 planning for the Western Lehigh Interceptor (WLI). Five separate modeling tasks will be performed in order to facilitate broader Kline's Island Sewer System (KISS) planning need discussions. The results of this 2020 modeling will help to inform further future modeling decisions and alternative analyses that will occur during the full KISS model calibration period in 2022. A consulting engineer has been preliminarily retained and full authorization was granted at the 5/11/2020 Board meeting. The full model results will be available by late 2020 or early 2021. The project will be funded by the LCA Suburban Division. A presentation was presented to the Board at the 8/10/20 Board Meeting.

10. **Suburban Division – Park Pump Station Force Main Rehabilitation**

The Park Pump Station and Force Main line were constructed in 1980 to provide wet weather relief to the Little Lehigh Creek Interceptor, which conveys wastewater from ten municipalities from outlying areas to the Kline's Island Wastewater Treatment Plant (KIWWTP). The force main consists of 8,715 linear feet of prestressed concrete cylinder pipe (PCCP) of various sizes (2,615' of 24"; 2,695' of 30"; and 3,405' of 36"), and connects with the 54" sanitary sewer interceptor that runs to KIWWTP. PCCP is particularly sensitive to deterioration due to hydrogen sulfide gas from wastewater, and corrosion of exposed reinforcing steel can result in structural degradation and pipe failure. An internal investigation of the pipe is required to assess the condition of the PCCP pipe and identify damage areas, in order to determine the locations and extent of rehabilitation needed to restore the level of service, prolong service life, and mitigate the risk of failure. LCA will conduct a limited manned inspection (tentatively Q4 of 2020) of the force main pipe at 5 air release valve (ARV) locations, 100 feet in both directions from the ARV manhole, which will be used as the initial evaluation of the representative condition of the pipe. One-day trial runs are tentatively scheduled in September to verify the amount of time available to keep Park Pump Station offline. The pump station must be inactive in order to perform the investigations. **(No change)**

12. **Suburban Division – Wynnewood WWTP Upgrade Project**

Wynnewood Terrace WWTP was constructed in 1980 by the developer to serve the Wynnewood Terrace subdivision, located in the Laury's Station area in North Whitehall Township. Sewer service is provided to approximately 217 residential and 2 commercial properties. LCA acquired the system in 2003.

The plant, while meeting effluent limits, has reached the end of its useful life. The plant is constructed of in-ground steel tanks that are in poor condition, with areas of corrosion and loss of structural integrity. The mechanical and electrical systems are also at the end of their service life and in need of replacement. The proposed project includes replacement of the existing treatment facility in entirety with new technology and concrete tanks appropriate for the wastewater flows and loading characteristics. The new facility shall meet the effluent limits criteria established in the respective DEP and DRBC permits, including new or additional limits that may be imposed during the permitting process. Design phase was authorized in February 2017 and was concluded in late Summer 2018. The DEP Part 2 Water Quality Management Permit was received in March 2018. The project was advertised for bid in August 2018, bids were opened in September 2018, and bids were authorized for award at the October 22, 2018 Board meeting. Construction work mobilized in early 2019 and is anticipated to finish in Summer 2020. Construction is approximately 95% complete as of October 2020 and start-up testing and training was performed on 10/21/20 and 10/22/20. Outstanding work consists of paving, final restoration, and demolition of the existing plant. .

13. Suburban Division - Lynn Township Corrective Action Plan

Excessive inflow and infiltration (I&I) and high wet-weather flows into the Lynn Township sewer system has been ongoing and increasingly challenging to address. As noted in LCA's monthly operations reports, treatment plant bypasses and sanitary sewer overflows have occurred in this system and must be addressed. On 6/4/19 a meeting was held with DEP, Lynn Township and LCA representatives as a result of a hydraulic overload at the wastewater treatment plant, based on 2018 Chapter 94 Report monthly plant flows. At the meeting, DEP directed LCA to submit an amendment to the pre-existing Corrective Action Plan (originally submitted by Lynn Township Sewer Authority) to include an updated system condition assessment and an outline of steps to be taken to mitigate I/I flows and maintain NPDES permit compliance. The Corrective Action Plan (CAP) includes structural and non-structural initiatives and involves coordination with the host municipality. The framework for the CAP was shared with the Board in February 2019. A meeting was held at Lynn Township with DEP in June 2019 to discuss the Lynn Township CAP and Township sewer planning/growth issues, and DEP directed LCA to submit a CAP Amendment by the end of summer 2019. The CAP Amendment contained an updated sewer system condition assessment and a corrective plan to further mitigate I/I flows. Updated CCTV work of the entire system was substantially completed in August 2019, and the inspection data was summarized in the CAP Amendment and is being used to scope a capital repair project. The Lynn Township Board of Supervisors adopted a sewer system rules and regulations ordinance on 9/12/19, which gives LCA the authority to inspect private laterals and facilities for illegal connections and perform follow-up enforcement. A meeting with DEP and Lynn Township representatives was held on 1/15/20 to discuss the CAP Amendment and plan moving forward. DEP sent a letter to LCA dated 6/8/20 granting 55 EDUs of sewer allocation relief for new connections to the system. **(No Change)**

14. Suburban Division - Heidelberg Heights Corrective Action Plan

On 2/11/19, DEP submitted a notice of violation to LCA regarding bypasses and permit exceedances at the Heidelberg Heights wastewater treatment plant. As discussed with the LCA Board during several meetings in 2018, this small satellite system has been challenged by high groundwater levels and significant infiltration and inflow (I&I) of clear water into the sewer system during rain events. LCA staff met with DEP officials on March 6, 2019 to discuss the problems and, as a result, LCA prepared a comprehensive Corrective Action Plan (CAP) and submitted DEP on 5/5/19. A draft of the plan was attached for Board review at the 4/22/19 Board meeting. The final CAP was submitted to DEP on 4/29/19. The Heidelberg Heights Board of Supervisors approved the advertisement for adoption of a sewer system rules and regulations ordinance on 9/19/19, which gives LCA the authority to inspect

private laterals and facilities for illegal connections and perform follow-up enforcement. The ordinance was adopted by the township the in October 2019. A Consent Order & Agreement (CO&A) was drafted by DEP and sent to LCA in May 2020, which incorporates the projects and schedule outlined in LCA's proposed CAP. The final CAP was adopted by resolution by the LCA board at the 6/22/20 meeting. **(No Change)**

15. **Suburban Division – Sand Spring WWTP Upgrade Project Construction**

The Sand Spring WWTP was constructed in 1972 by the developer to serve the Sand Spring development, located in the Schnecksville area in North Whitehall Township. Sewer service is provided to approximately 248 apartment units, 8 commercial properties, and an elementary school. Lehigh County Authority (LCA) acquired the system in 2005.

The plant, while meeting effluent limits, has reached the end of its useful life. The plant is constructed of in-ground steel tanks that are in poor condition, with areas of corrosion and loss of structural integrity. The mechanical and electrical systems are also at the end of their service life and in need of replacement. The proposed project includes replacement of the existing treatment facility in entirety with new technology and concrete tanks appropriate for the wastewater flows and loading characteristics. The new facility shall meet the effluent limits criteria established in the respective DEP and DRBC permits, including new or additional limits that may be imposed during the permitting process. Design phase was authorized in February 2017 and final design was delayed due to DEP Part 2 Water Quality Management and NPDES permitting issues. DEP approval of the Water Quality Management Permit was received in late December 2018, the design was finalized in late Spring 2019, and the project was advertised for bid in July 2019. Bids were opened on 8/13/19 and construction phase authorization was approved at the 8/26/19 Board meeting. A pre-construction meeting was held on 11/1/19 following execution of contract documents. Conditional Use approval and land development waiver were granted by North Whitehall Township in Spring 2020. Construction mobilization for site work occurred in late winter 2020 and construction is proceeding. Substantial completion and start-up of the new facility is anticipated for early 2021. **(No Change)**

16. **Suburban Division - Trexlertown Wastewater Storage Facility**

As part of the Western Lehigh service area's Sewer Capacity Assurance & Rehabilitation Program (SCARP), a conveyance capacity "bottleneck" was identified in the Trexlertown area of the Western Lehigh Interceptor, and this area was assigned a high priority due to occurrence of sanitary sewer overflows and basement backups in the vicinity. A parallel interceptor was originally conceived to run approximately from Cetronia Rd to Spring Creek Rd. The concept was modified to focus on providing storage capacity in the system for this area, due to concerns about downstream hydraulic impacts. This project is an interim solution to address local impacts of the system bottleneck, and will become part of the future long-term solution to alleviate regional conveyance capacity challenges. A pre-design feasibility study is being performed to evaluate various engineering alternatives, including an "in-line" parallel storage tank, conventional concrete tank (flow equalization basin), or other options. Award of the pre-design feasibility study to HDR was authorized at the 10/21/2019 Board meeting. The project is on hold pending Arcadis' completion of expanded modeling work and reevaluation of downstream impacts. **(No Change)**

17. **Suburban Division – Lynn Township Manhole Rehabilitation Project**

This project involves the rehabilitation of manholes in the Lynn Township service area found to be structurally deficient &/or leaking. The project includes frame and cover replacement, interior pipe connection grouting, exterior concrete work and sealing of manholes, and sealing around manhole frames located within roadway surfaces that are found experiencing infiltration through the frame

and cover. The purpose of the project is to eliminate inflow and infiltration into manholes in the system. The project scope includes approximately 185 manholes will be rehabilitated in 2020. The project was advertised for bid in early June 2020, bids were opened on 6/26/20, and construction phase authorization was approved at the 7/13/20 LCA board meeting. Construction will be completed by late fall of 2020. **(No Change)**

18. Suburban Division - Heidelberg Heights 2020 Sanitary Sewer Replacement Project

In accordance with the adopted, executed Corrective Action Plan mandated by DEP, LCA is required to complete annual I/I mitigation projects to eliminate hydraulic overloads and bypass events at the Heidelberg Heights wastewater treatment plant. The Order requires that all original vitrified clay sewer main and lateral pipe be replaced within the next 5 years. This project was originally advertised for bid in March 2020 and bids were opened on 3/24/20. The low bid price exceeded this capital project construction budget for 2020, and the LCA board authorized rejection of bids at the 4/13/20 board meeting. The project scope was modified to reduce cost and the project was re-advertised for bid in June 2020, bids were opened on 7/13/20, and board authorization of construction phase was approved at the 7/27/20 LCA board meeting. Construction will be substantially completed by the end of 2020. **(No Change)**

19. Suburban Division – Western Lehigh Manhole Rehabilitation Project

This project involves the rehabilitation of key manholes in the Western Lehigh Interceptor service area. The project includes flood-proofing, interior pipe connection grouting, exterior concrete work and sealing of manholes, particularly those manholes that are in close proximity to the floodway and experience floodwater inundation. The purpose of the project is to eliminate floodwater inflow into the system. The project scope includes approximately 50 manholes to be rehabilitated in 2020 as part of a phased manhole rehabilitation program. The project was advertised for bid in April 2020, bids were be opened on 5/12/20, and construction phase authorization was approved at the 6/8/20 board meeting. Construction will be completed in fall 2020. **(No Change)**

20. Allentown Division – Kline’s Island WWTP: Sodium Hypochlorite System Installation Project – Construction Phase Approval

This project involves the replacement of the existing gaseous chlorination system at the Kline’s Island Wastewater Treatment Plant (KIWWTP). The use of gaseous chlorine for effluent disinfection, while reliable, is outdated and creates significant public health and employee safety risks. In addition, the existing equipment has reached the end of its useful life. The 2018 KIWWTP Master Plan recommended abandoning gaseous chlorine and switching to (liquid) sodium hypochlorite. The design commenced in March of 2019 and was completed in early 2020. The project was advertised for bid in February 2020 and bids were opened on 4/14/20. Construction phase was authorized at the 6/8/2020 Board meeting. The project is anticipated to be completed in the first quarter of 2021. The project will be funded by the LCA Allentown Division. **(No Change)**