



BOARD MEETING AGENDA – June 10, 2019

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

- *May 20, 2019 Board meeting minutes*

4. Public Comments

5. Action / Discussion Items:

FINANCE AND ADMINISTRATION

- *Resolution No. 6-2019-1 Proposing Amendment to the Authority’s Articles of Incorporation (gray)*

WATER

- *Suburban Division – Heidelberg Heights Wastewater Treatment Plant Improvements (Approval) (salmon)*

WASTEWATER

6. Monthly Project Updates / Information Items (1st Board meeting per month) – **June 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		
<i>Meetings begin at Noon at LCA’s Main Office, unless noted otherwise below.</i>		
June 24, 2019	July 8, 2019	July 22, 2019

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

May 20, 2019

The Regular Meeting of the Lehigh County Authority was called to order at 12:00 p.m. on Monday, May 20, 2019, Chairman Brian Nagle presiding. Other Members present at the commencement of the meeting were: Jeff Morgan, Richard Bohner, and Ted Lyons. Authority Staff present were Liesel Gross, Brad Landon, Ed Klein, Pat Mandes, John Parsons, Chris Moughan, Sue Sampson, Todd Marion, Phil DePoe, Jason Peters and Lisa Miller.

Chairman Nagle announced that since there is no quorum, only discussion items will be discussed. When Scott Bieber, scheduled to arrive at 1:00 PM, is in attendance, the Board will continue with the agenda items that require approval.

REVIEW OF AGENDA

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

Chairman Nagle noted the Agenda will be in a different order due to the lack of a quorum and there will also be an Executive Session to discuss potential litigation.

Liesel Gross stated that official Minutes of the meeting will be taken even though there is no quorum.

PUBLIC COMMENTS

None.

ACTION AND DISCUSSION ITEMS

Chairman Nagle announced that the Board received their packet in the mail prior to the meeting.

2018 Audited Financial Statements

Ed Klein introduced Nate Schwartz and Mike Sampson from Zelenkofske Axelrod LLC to discuss and give an overview of the 2018 Audited Financial Statements. Mr. Sampson explained that the Authority had to adopt three new GASB pronouncements, GASB Statement No. 75 "Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions", GASB Statement No. 85 "Omnibus 2017" and GASB Statement No. 86 "Certain Debt Extinguishment Issues". Mssrs. Sampson and Schwartz answered questions and there was discussion from Board members.

Mr. Schwartz thanked Ed Klein and his staff for their quick turn over of the information and gave a brief overview of the financial statements.

Jennifer McKenna, City of Allentown, Office of Compliance questioned the increase of the equivalent fulltime employees from 2016 to 2018 and wanted to know how many of them were City employees. Ed Klein responded that employee increase was due to an increase in staff both in the Suburban Division and the City Division as well as a fair number in administrative positions the cost of which get divided between both divisions. Liesel Gross commented that at the end of 2015, the Authority had an early retirement incentive, and that the Authority has slowly been rebuilding staffing levels since that time.

Liesel Gross stated that Ed Klein has a 2018 Year-In-Review financial statement presentation that will be held when there is a full quorum at the next meeting.

Well NL6 – North Whitehall Divisions Water Supply

Liesel Gross provided a PowerPoint for discussion and gave a background of the water supply issues in the North Whitehall Division. The system, which serves about 950 customers, is comprised of a series of smaller developer-built systems. Some of the wells have been impacted by high levels of manganese naturally occurring in this area. The system has been challenging to operate requiring monthly system flushing to remove the manganese build up in the water lines.

The Environmental Protection Agency (EPA) has established a lifetime health advisory for manganese of 0.3 milligrams per liter and well NL6 has recently tested at 0.332 milligrams per liter. Ms. Gross suggested that since 86% of the water comes from Northampton Borough Municipal Authority (NBMA) currently and NBMA has significant excess capacity available, the Authority management proposes to shut down and replace NL6 with water from NBMA system. By doing this, it would eliminate the high levels of manganese, achieve water quality compliance in advance of new regulations for manganese, and also provide more consistent fluoride levels throughout the system. The cost to purchase the additional water supply would be approximately 5%. There was some Board discussion.

The next steps are to communicate with the public about the manganese and the discontinuance of Well NL6 and purchase the additional water from NBMA. Moving forward may require the revision of the agreement with NBMA and an evaluation of capital improvements to increase redundancy of the system. Any changes in the agreement will be brought before the Board for discussion.

MONTHLY FINANCIAL REVIEW

Ed Klein presented a PowerPoint presentation of the April 2019 financial report, highlighting variances between budgeted expenses and actual or forecasted expenses.

MONTHLY SYSTEM OPERATIONS OVERVIEW

John Parsons reviewed the Monthly System Operations Overview report for April 2019 which included a status report of the Western Lehigh Interceptor High Flow Emergency Project as of May 10, 2019. The rain has delayed Phase 1 by almost two weeks. Chairman Nagle asked about the bypasses at Heidelberg Heights WWTP. Pat Mandes stated that it is being chlorinated. Liesel Gross stated that the Corrective Action Plan has been submitted to DEP and the Authority is awaiting response from DEP.

STAFF COMMENTS

Liesel Gross informed the Board that on Wednesday, May 23rd, the Lehigh County Board of Commissioners has the Ordinance for the Authority's Articles of Incorporation on both their Governance Committee meeting agenda and their full Board of Commissioners meeting agenda for review. The full vote is expected in June. Ms. Gross also informed the Board that she will be attending the 2019 American Water Works Association (AWWA) annual meeting in June where she will mark the end of her term on the Board of Directors. Ms. Gross will remain active on other AWWA committees.

SOLICITOR'S COMMENTS

None.

PUBLIC COMMENTS / OTHER COMMENTS

None.

Chairman Nagle called a recess at 12:58 p.m. The meeting reconvened at 1:10 p.m.

EXECUTIVE SESSION

An Executive Session was held at 1:10 p.m. to discuss potential litigation.

Scott Bieber arrived at 1:25 p.m.

The Executive Session ended at 1:25 p.m.

Chairman Nagle called the second part of the regular meeting to order at 1:26 p.m. with a quorum.

APPROVAL OF MINUTES

May 13, 2019 Regular Meeting Minutes

On a motion by Richard Bohner, seconded by Scott Bieber, the Board approved the minutes of May 13, 2019 meeting (5-0).

Chairman Nagle asked if anyone had any questions regarding the 2018 Audited Financial Statements to which there was none. On a motion by Ted Lyons, seconded by Richard Bohner, the Board accepted the 2018 Audited Financial Statements (5-0).

Suburban Division – Water Main Replacement Program Cycle 5

Jason Peters gave an overview of the project to replace aging and failing infrastructure to prevent excessive leakage or disruptive water main breaks that can impact our customers. Cycle 5 of the project includes 1.41 miles of water main replacement in Lower Macungie Township. Mr. Peters is asking for Board approval of the Capital Project Authorization – Construction Phase, Cycle 5 in the amount of \$2,211,226.00 which includes the Professional Services Authorization, Cycle 5 for Construction Engineering, Management and Inspection Services, Amendment No. 2 to Gannett Fleming Inc. in the amount of \$130,000.00 and Contract Award, Cycle 5 for General Construction to JOAO & Bradley Construction Co. Inc. in the amount of \$1,821,226.00.

On a motion by Ted Lyons, seconded by Richard Bohner, the Board approved the Capital Project Authorization – Construction Phase, Cycle 5 in the amount of \$2,211,226.00 which includes the Professional Services Authorization, Cycle 5 for Construction Engineering, Management and Inspection Services, Amendment No. 2 to Gannett Fleming Inc. in the amount of \$130,000.00 and Contract Award, Cycle 5 for General Construction to JOAO & Bradley Construction Co. Inc. in the amount of \$1,821,226.00 (5-0).

Chairman Nagle called a recess at 1:31 p.m. Jeff Morgan left at 1:31 p.m. The meeting reconvened at 1:35 p.m.

EXECUTIVE SESSION

An Executive Session was called at 1:35 p.m. to discuss personnel.

The Executive Session ended at 2:40 p.m.

ADJOURNMENT

There being no further business, the Chairman adjourned the meeting at 2:40 p.m.

Richard H. Bohner
Secretary

RESOLUTION No. 6-2019-1

(Duly adopted 10 June 2019)

A RESOLUTION MODIFYING THE PROPOSING AMENDMENT OF THE AUTHORITY'S ARTICLES OF INCORPORATION TO EXTEND THE AUTHORITY'S TERM OF EXISTENCE

WHEREAS, the Lehigh County Authority (the "Authority") was duly formed by the Board of Commissioners of Lehigh County (the "Board of Commissioners") under the Pennsylvania Municipality Authorities Act, with the Articles of Incorporation having been filed and approved by the Department of State of the Commonwealth of Pennsylvania (the "Department") on 21 September 1966 and amendments approved and filed with the Department on 3 June 1970, 22 April 1975, 9 June 1999 and 2 May 2014; and

WHEREAS, the Municipality Authorities Act establishes an initial term of existence for municipal authorities of fifty years from the approval of the Articles of Incorporation, which in the case of the Authority would have expired on 21 September 2016, but to accommodate financing of capital improvements for its systems, the date was extended by the 9 June 1999 Amendment until 9 June 2049; and

WHEREAS, the Authority continues to have the need to arrange financing for capital improvements to its many water and wastewater systems serving fourteen municipalities; and

WHEREAS, limiting financing to the remaining Authority life will result in substantially increased costs and higher rates to the public for capital project financing;

NOW, THEREFORE, BE IT RESOLVED THAT:

1. The Authority proposes that its Articles of Incorporation be amended to include a provision extending its term of existence for forty-three (43) years from the date such amendment is approved by the Department so that it may continue to provide capital improvements for the public with the most reasonable and favorable financing rates. Furthermore, the amendment shall include a statement of the Authority's intent to facilitate ongoing communications with the Board of Commissioners by providing an annual report and offering to provide an annual public presentation to the Board of Commissioners to review organizational performance including financial performance, capital improvements, audit performance, and other information reasonably requested by the then-current Board of Commissioners. The Authority shall also provide a semi-annual report and offer to provide public presentations to the Board of Commissioners to review environmental performance including sewer system overflows and plans to address any deficiencies, and other environmental information reasonably requested by the then-current Board of Commissioners. The form of the Articles of Amendment,

without appendices that will be attached before submittal to the Department, is attached hereto as Exhibit A and thereby made a part hereof.

2. This Resolution, and its proposal, is to be presented to the Board of Commissioners for their consideration and adoption.

3. Resolution No. 5-2019-1 is hereby rescinded and replaced by this resolution.

4. Upon adoption by the Board of Commissioners, the Articles of Amendment are to be executed and verified by two officers of the Authority, advertised in accordance with the Municipality Authorities Act, and submitted to the Department for approval in accordance with the time frame necessary for any Authority financings.

On motion of _____, seconded by _____, this resolution was adopted the 10th day of June 2019.

ARTICLES OF AMENDMENT

TO: SECRETARY OF THE COMMONWEALTH OF PENNSYLVANIA

In compliance with requirements of the Pennsylvania Municipality Authorities Act and pursuant to a resolution duly adopted by the Board of Lehigh County Authority proposing an amendment to the Articles of Incorporation of the Authority, which proposed amendment has been submitted and adopted and approved by the Board of County Commissioners of the County of Lehigh, Pennsylvania (the governing authority of the municipality forming the Authority) by an ordinance duly adopted, the Authority does file these Articles of Amendment to its Articles of Incorporation and does certify:

1. The name of the Authority is LEHIGH COUNTY AUTHORITY and the registered office of the Authority presently is 1053 Spruce Road, Wescosville, Pennsylvania, with a mailing address of P.O. Box 3348, Allentown, Pennsylvania 18106-0348.
2. The Authority has been duly formed under the Pennsylvania Municipality Authorities Act, the Articles of Incorporation having been filed and approved by the Pennsylvania Department of State of on 21 September 1966, with Articles of Amendment filed and approved by the Department on 3 June 1970, 22 April 1975, 9 June 1999 and 2 May 2014.
3. A copy of the ordinance by the Board of Commissioners of the County of Lehigh, Pennsylvania, duly certified by the Chief Clerk of said Board of County Commissioners, adopting the amendment herein set forth, is attached hereto as Appendix I and thereby is made a part of these Articles of Amendment.
4. A copy of the resolution by the Board of the Lehigh County Authority, proposing the amendment herein set forth, is attached hereto as Appendix II and thereby is made a part of these Articles of Amendment.
5. The amendment proposed by the Board of the Authority and adopted and approved by the Lehigh County Board of Commissioners, is to amend the Articles of Incorporation of the Authority as follows:

"The Authority shall have a term of existence continuing through and until the date forty-three (43) years after the date of the Pennsylvania Department of State approval of the Authority's fifth Articles of Amendment."

and

"The Authority shall provide an annual report and offer to provide an annual public presentation to the Board of Commissioners to review organizational performance including financial performance, capital improvements, audit performance, and other information reasonably requested by the then-current Board of Commissioners. The Authority shall also provide a semi-annual report and offer to provide semi-annual public presentations to the Board of Commissioners to review environmental performance including sewer system overflows and plans to address any deficiencies, and other environmental information

reasonably requested by the then-current Board of Commissioners. The form and schedule of such presentations and reports by the Authority is to be determined by the then-current Board of Commissioners.”

IN WITNESS WHEREOF, the Lehigh County Authority has caused these Articles of Amendment to be executed and verified by two Authority officers and its official seal to be affixed hereunto and attested by its Secretary or Assistant Secretary, all as of the _____ day of _____ 2019.

Attest:

LEHIGH COUNTY AUTHORITY

Name
Office

By: _____
Name:
Office:

Name
Office

By: _____
Name:
Office:

EXHIBIT A



I, Bradford E. Landon, Solicitor of Lehigh County Authority, do hereby certify that the foregoing is a true, correct and complete copy of a resolution which was duly adopted by the Authority at a public meeting of the Authority held on 10 June 2019, after notice thereof had been duly given as required by law, at which meeting a quorum was present and voting and which Resolution No. 6-2019-1 is now in full force and effect on the date of this certification.

Bradford E. Landon
Solicitor

MEMORANDUM

Date: June 10, 2018

To: Lehigh County Authority Board of Directors
From: Charles Volk, Chief Capital Works Officer
Subject: Suburban Division – Heidelberg Heights Wastewater Treatment Plant
Equalization Tank Rehabilitation Project – Construction Phase

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization – Construction Phase	\$215,000
2	Construction Contract: JEV Construction, LLC.	\$168,000
3	Professional Services Authorization – D’Huy Engineering	\$12,000

BACKGROUND:

As part of an asset management approach to maintaining the level of service and mitigating risk of failure at the Heidelberg Heights Wastewater Treatment Plant, a condition assessment evaluation was performed for the Equalization/Sludge Holding tank. This steel tank is part of the original plant, installed in the mid-1970s, and consists of two compartments to serve as both a raw sewage equalization tank (the larger compartment) and for storing liquid sludge (for pump and haul removal). The tank was drained and cleaned and a condition assessment was performed to determine structural integrity and evaluate useful service life. A rehabilitation project was designed based on the findings of the investigation, which identified the need for structural rehabilitation and coating of all exposed areas of the tank.

PROJECT OVERVIEW:

The rehabilitation project consists of replacement of key structural members, installation of supplemental structural steel stiffeners, application of an industrial coating system on all exposed portions of the tank, and replacement of internal raw wastewater pumps in order to restore level of service and extend the useful life of the tank. A critical component of this project is maintaining plant operations and the uninterrupted treatment of wastewater. A Maintenance of Operations Plan (“MOPO”) was incorporated into the project specifications that requires the contractor to install a temporary tank(s) and bypass pump system to replicate the function of the EQ tank during construction. The contractor

will closely coordinate with LCA operations staff to maintain 24/7 operation of all temporary storage, conveyance, and treatment facilities during construction.

FUNDING:

The Project will be funded by the LCA Suburban Heidelberg Heights Division

BUDGET AMENDMENT:

Not required

PROJECT STATUS:

Board approval is requested for the Construction Phase.

THIS APPROVAL – CONSTRUCTION PHASE

BIDDING SUMMARY:

This project consists of one contract. The project was advertised for bid in early April 2019. A mandatory pre-bid meeting was held on April 16, 2019. Bids were received via PennBid on May 2, 2019, the results of which are as follows:

General Construction	
Bidder	Bid Amount
JEV Construction, LLC	\$168,000
Blooming Glen Contractors	\$174,218
Titan Industrial Services	\$254,585
GMH Associates	\$259,933

JEV Construction, LLC (Clinton, NJ) has extensive experience in water and wastewater treatment plant construction, and has successfully completed several projects for LCA in the past 3 years. The firm's qualifications and experience statement indicates numerous projects of similar scope and type. The bid documents are in order and the firm appears well qualified for to perform the work.

PROFESSIONAL SERVICES:

Construction management and part-time field inspection is to be performed by D'Huy Engineering.

PROJECT SCHEDULE:

Based on contract award following the May 22, 2017 board meeting, it is anticipated that the project will be completed by the end of Summer 2017.

FUTURE AUTHORIZATIONS:

None

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	SD-S-18	BUDGET FUND:	Suburban Div\Wastewater\Capital
PROJECT TITLE:	Suburban Division – Heidelberg Heights Wastewater Treatment Plant Equalization Tank Rehabilitation Project – Construction Phase	PROJECT TYPE:	
THIS AUTHORIZATION:	\$215,000	<input checked="" type="checkbox"/>	Construction
TO DATE (W/ ABOVE)	\$235,000	<input type="checkbox"/>	Engineering Study
		<input type="checkbox"/>	Equipment Purchase
		<input type="checkbox"/>	Amendment

DESCRIPTION AND BENEFITS:

Equalization Tank Rehabilitation Project:

The rehabilitation project consists of replacement of key structural members, installation of supplemental structural steel stiffeners, application of an industrial coating system on all exposed portions of the steel tank, and replacement of internal raw wastewater pumps in order to restore level of service and extend the useful life of the tank.

Previous Authorizations	
none	

REQUESTED THIS AUTHORIZATION	
Construction Phase	
Construction Contract - JEV Construction, LLC	\$168,000
Construction Inspection Services – D’Huy Engineering	\$12,000
Staff	\$15,000
Contingency	\$20,000
Total This Authorization	\$215,000

Future Authorization	
none	

REVIEW AND APPROVALS:

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



Lehigh County Authority

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

PROFESSIONAL SERVICES AUTHORIZATION

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

Date: June 10, 2019

Requested By: Charles Volk

Approvals

Department Head: _____

Chief Executive

Officer: _____

Description of Services:

Suburban Division Facilities – Heidelberg Heights Wastewater Treatment Plant EQ Tank Rehabilitation Project: Construction Management and Inspection Services

D'Huy Engineering will perform construction phase management and part-time inspection services for the construction of the Heidelberg Heights WWTP EQ Tank Rehabilitation Project, in accordance with their proposal dated May 24, 2019. The scope of services includes the following:

Professional Services
1. Attend pre-construction conference
2. Attend field meetings as required
3. Respond to RFIs
4. Perform part-time field inspection services
5. Contractor payment application review
6. Perform Substantial Completion inspection and issue punchlist to Contractor
7. Perform Final Completion inspection

Cost Estimate (not to be exceeded without further authorization): \$12,000

Time Table and Completion Deadline: Assumes work will be substantially complete by Fall 2019.

(For Authority Use Only)

Authorization Completion:

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

FINANCE & ADMINISTRATION

ACTION ITEMS

DISCUSSION ITEMS

INFORMATION ITEMS

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

CERTIFICATES OF DEPOSIT						
21-May-19			Gross	Date of	Date	Net Rate
Fund	Bank	Location	Amount	Purchase	Due	%
WW Capac	TIAA, FSB	Jacksonville, FL	249,000.00	4/30/19	11/2/20	2.400
LLRI CR	Welch State Bank	Welch, Oklahoma	245,000.00	4/30/19	4/30/21	2.450
WW Capac	University of Iowa Community	North Liberty, IA	248,000.00	5/15/19	5/14/21	2.500
LLRI CR	State Bank of India	New York, NY	250,000.00	5/15/19	5/17/21	2.500

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:

- 5354 Hamilton Blvd., 1 commercial lot, LMT – No Change
- Kohler Tract, 123 residential lots (sfa), UMiIT, water and sewer – No Change
- Lower Macungie Twp. Community Center Expansion, 1 institutional lot, LMT – No Change
- Stone Hill Meadows, Phase 2, 85 residential units (sfd), LMT – No Change
- Trexler Business Center, 1 lot with 6 commercial buildings, LMT – No Change
- Trexler Fields, Phase 1B/8/9, 100 residential lots (sfa), UMT – No Change

Water system plans are being reviewed for the following developments:

- 5329-5347-5357 Hamilton Blvd., 1 commercial lot, LMT – No Change
- 5374/5392 Hamilton Blvd., 1 commercial lot, LMT – No Change
- 8615/8783 Congdon Hill Drive, 2 industrial lots with warehouses, LMT – No Change
- Cedarbrook Road Industrial Park, 2 industrial lots, LMT – No Change
- Lehigh Hills, Lot 5, Phase 1, 273 apartments & clubhouse, UMT – No Change
- Madison Village at Penn’s View, 66 manufactured homes, 1 lot, LynnT, water and sewer – No Change
- Mill Creek Hotel, 1 commercial lot with 205 room hotel & restaurant, UMT – No Change
- Schoeneck Road, Lot 1, 1 lot warehouse, LMT – No Change
- Towneplace Suites by Marriott, 91-room hotel, UMT – No Change
- Weilers Road Twins, 82 residential lots (sfa), UMT – No Change
- Woodmont Ridge, Phase II, 30 apartment units, UMT – No Change

Sewage Planning Modules Reviewed in Prior Month:

ATAS International, Inc., Upper Macungie Township, 1,560 gpd.

Mill Creek Hotel, Upper Macungie Township, 17,000 gpd.

WATER

ACTION ITEMS

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 construction 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 has 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 has been completed, however an additional relocation of a LCA sanitary sewer line has been added to the original scope and agreement as of April 15, 2019 with an anticipated completion of April 26, 2019. LCA anticipated submitting all final paper work to the state for reimbursement in the very near future. It is anticipated that this work will be reimbursed 100% by the state and that the construction related activities. **(No Change)**

2. **Allentown Division – Water Main Replacement Program Cycle 4**

The project is the replacement of 0.97-mile of aged and/or failing cast iron water main in multiple locations throughout the City, in accordance with our prioritization protocol. We propose to utilize the 1.1-mile credit of excess water main replacement length accumulated from previous years in order to satisfy the 2.0 miles of annual pipe replacement as outlined in the lease. This Project is required under the Operating Standards in the Concession Agreement and will be funded by the LCA Allentown Division. The reduced-scale project was re-bid following rejection of the bids for the original 2.2-mile project. The project was authorized by the Board on 9/10/18 and will be completed by December 2018. As of October 30, 2018 or contractor Doli Construction Corp has begun water main installation and is progressing. As of January 4, 2019 all water main construction, prelease valve and meter replacement has been completed. Currently as of April 8, 2019, Doli has begun final restoration throughout the project with an anticipated completion by late May 2019. **(No Change)**

3. **Allentown Division – Water Main Replacement Program Cycle 5**

The project is the replacement of 2-mile of aged and/or failing cast iron water main in multiple locations throughout the City, in accordance with our prioritization protocol. Currently Gannett Fleming is designing the 2-miles of required water main replacement. At this time, the construction phase of this project is not budgeted for unless monies become available in early 2019. **(No Change)**

4. **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 late 2019. This project will be funded by LCA Allentown Division. **(No Change)**

5. **Allentown Division – Water Filtration Plant: Carbon Dioxide Feed System**

The project consists of the addition of a carbon dioxide feed system at the Allentown Water Plant. With the present conversion from alum to polyaluminum chloride (PACI) as the plant's primary coagulant, proper treatment requires the raw water to be kept within a very small pH

range for optimum treatment. The acid feed system will control pH within tight parameters to achieve treatment goals. A Major Permit Application was submitted to PaDEP. Approval for the construction phase was granted at the October 8, 2018 Board meeting. Construction of the pad and piping began on 11/26/2018 and work has progressed to the point of punch list items. All work is to be completed by late March or early April. The contract with Matheson to supply the storage tank and CO2 feed system has been finalized. The CO2 Project was completed on May 17, 2019. This project was funded by the LCA Allentown Division.

6. **Suburban Division - Water Main Replacement Program Cycle 5**

The project consists of the replacement of approximately 1.4 miles of aged and/or failing Cast Iron water mains throughout multiple location in the Suburban Division. The construction phase of this project was approved at the May 20, 2019 meeting. This project will be funded by the LCA Suburban Division.

7. **Suburban Division – Mechanical Asset Management Upgrade Project**

This next phase of Asset Management upgrade work focuses on mechanical components, along with some HVAC and electrical system improvements at ten locations in the Suburban Division. The upgrade locations were determined from asset management data collected from internal interviews conducted by Capital Works with senior Operations staff, and based on risk rating. Also as part of the design phase of this project was the condition assessment of seven (7) hydropneumatic tanks that were placed into service in the 1970s and are reaching the end of their service lives. Design phase was authorized in April 2018, the project was advertised for bid in September 2018, bids were opened on October 11, 2018, and award of bids was authorized at the October 22, 2018 Board meeting. Construction will be finished by Summer 2019. **(No Change)**

8. **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 August 28th and construction should be completed by Fall of 2019. **(No Change)**

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

The project will feature 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. 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. A preconstruction meeting will be scheduled after contracts have been signed. Construction should be completed by May of 2020.

Receipt of two waterline easements are still pending. Both the Engelmans and Fosters have indicated their willingness to sign the agreements, but we are still waiting to receive them back. Legal counsel will be retained during the zoning process to assist with obtaining a “Special Exception” from Upper Milford Township to use the Kern Tract as a pumping station site.

10. **Suburban Division – Buss Acres Pump Station Replacement**

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. Design phase was authorized at the August 28, 2017 Board meeting. The Public Water Supply Permit was received from DEP at the end of December 2018. Zoning approval from Upper Milford Township for a "Special Exception" use for the upgrade project was denied in February 2019. The written opinion of the Township solicitor was received in early April 2019 and is being reviewed prior to pursuing an appeal or change in design. The appeal process has been initiated and a revised plan has been submitted, with the assistance of legal counsel. Bid phase will begin following township zoning approval.

11. **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 is expected to be concluded by December of 2019. This project will be funded by the LCA Suburban Division **(No Change)**.

12. **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. Flow monitoring in 2019 will focus on the Little Lehigh Creek only. In 2019, LCA will develop plans for subsequent years to add new monitoring wells to supplement existing groundwater data that is being collected. Total daily flow recordings at Schantz Spring that will need to include the spring field bypass and the tank overflows as well. SSM will assist LCA in calibrating surface flows under the bridges based on the recorded stream elevations. Authorization for the award of the project was approved at the 3/26/2018 Board meeting. LCA and Fybr are currently gaining PennDOT and PPL approvals that will allow us to mount our equipment on their bridges and poles, which has turned out to be a very slow process. Agreement received from PPL on April 22. Now PennDOT permits need to be addressed yet so we can mount equipment under their bridges. PennDOT wouldn't move until the PPL agreement was completed.

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

This Project addresses the needs of three satellite water systems that currently are operating on one source of supply and have no redundant water supply. The Madison Park North system has only one well, and an additional well is planned to be developed and constructed. The Clear View Farms and Mill Creek systems have one operating well each, but have at least one other existing well that has water supply or quality issues and cannot be presently utilized. An engineer has been retained to assist with the development of a second well for Madison Park North and the rehabilitation of an existing well at Clear View Farms. An agreement is in place with an adjoining property owner to Madison Park North to drill a test well on their property, in coordination with DEP guidelines. 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 will be prepared by our Engineer as required by DEP **(No Change)**.

WASTEWATER

ACTION ITEMS

1. **Suburban Division – Heidelberg Heights Wastewater Treatment Plant Improvements – June 10, 2019**

As part of an asset management approach to maintaining the level of service and mitigating risk of failure at the Heidelberg Heights Wastewater Treatment Plant, a condition assessment evaluation was performed for the Equalization/Sludge Holding tank. This steel tank is part of the original plant, installed in the mid-1970s, and consists of two compartments to serve as both a raw sewage equalization tank and for storing liquid sludge (for pump and haul removal). The exposed portions of this tank display areas of corrosion. The tank was drained and cleaned and a thorough assessment was performed to determine structural integrity and remaining service life, and a rehabilitation project was then designed. The project was advertised for bid in early April, and a pre-bid meeting was held on 4/16/19. Bids will be opened on 5/2/19 and award of bid and construction phase services will be requested at the **6/10/19** meeting. The project is anticipated to be completed by Fall 2019.

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.

2. **Allentown Division – I&I Source Reduction Program Plan**

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 of the “Year 1 Project” will be requested in Q1 of 2020. This project is considered an AO expense under terms of the Lease and is City funded.

3. **Allentown Division – Kline’s Island WWTP: Electrical Substation Replacement**

This project involves the replacement of the existing Substation No. 2. The equipment was installed in 1977 and has reached the end of its useful life. The City has reviewed this and has approved this project as a Major Capital Project. Approval of the design engineer was granted at the May 8, 2017 Board Meeting. The project was advertised in early May 2018 and bids were due on June 8, 2018. Approval of the construction contract (Base Bid) was granted at the July 9, 2018 Board Meeting. The construction phase of the project began in August of 2018 and was completed in May 2019. Minor punchlist items remain. This Major Capital Project was funded by the LCA Allentown Division.

4. **Allentown Division – Kline’s Island WWTP: Sodium Hypochlorite Disinfection**

This project involves the replacement of the existing gas chlorination system at the WWTP. The use of gas chlorination for sewage disinfection, while reliable, is outdated and contains inherent risks. In addition, the existing equipment has reached the end of its useful life. Switching to sodium hypochlorite was also identified in the recently completed WWTP Maser Plan. The design started in March of 2019. Approval of the construction contract will be requested at a Board Meeting in early 2020. The construction phase of the project will begin in Q1 of 2020 and will be completed by Q4 of 2020. This project will be funded by the LCA Allentown Division. **(No Change)**

5. **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. PennDOT initially indicated that LCA would be eligible for 75% reimbursement for all projects costs associated with the utility relocations, and the LCA board adopted Resolution No. 3-2019-1 in March 2019 to authorize the negotiation of the PennDOT cost reimbursement. Following the submission of project incorporation paperwork to PennDOT by LCA’s design engineer, the local PennDOT office submitted the resolution and agreement to the Harrisburg office, and was later informed that this bridge is owned by Lehigh County and not the Commonwealth. Although PennDOT is handling all preconstruction activities and will administer the federal funding participation between the Commonwealth and the County, the cost reimbursement agreement with PennDOT does not apply. 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. LCA staff will pursue water and sewer relocation cost reimbursement from the County out of the federal (80%) and state (15%) funds being applied to this project. Design work will be finalized by early Summer 2019 **(No Change)**.

6. **Suburban Division – Test & Seal Project, Western Lehigh Interceptor Service Area**

Project consists of sanitary sewer cleaning, inspections via CCTV, cured-in-place point repairs, pressure testing and chemical grout sealing of joints, and post construction inspection for sanitary sewer lines located in western and central Lehigh County previously identified as areas subject to leakage. This project is part of the SCARP program. Construction began in August 2016 and finished by Summer 2017. Additional scope work under existing contract has been performed and is anticipated to be closed out in 2019. **(No Change)**

7. **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. Capital Works is planning a limited manned inspection 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. Using this data, the need for performing a complete pipeline condition assessment will be

determined, possibly utilizing a new electromagnetic technology for performing an internal pipe condition assessment that entails minimal interruption of operation of the pump station and force main. LCA and Arcadis are currently waiting for a “normal flow” dry weather period to use the PTP Flow Equalization Basin (FEB) at the pretreatment plant to hold back flow in order to perform a temporary shut-down of the Park Pump Station to perform the force main inspection. **(No Change)**

8. **Suburban Division – Park Pump Station Upgrade**

The Park Pump Station is to be upgraded to address mitigate risk of failure, restore station capacity, and prolong the service life of this critical facility. Design was completed in December 2017. The Park Pump Station Upgrade was advertised for bid in December 2017, pre-bid meeting was held on 1/4/18, and bids were opened 2/1/18. Construction phase was authorized at the 2/12/18 Board meeting. Notice to proceed for the construction contracts was issued dated 3/26/18. A pre-construction meeting was conducted in early April 2018, and construction is anticipated to be completed by late Summer 2019. **(No Change)**

9. **Suburban Division – Heidelberg Heights Wastewater Treatment Plant Improvements**

As part of an asset management approach to maintaining the level of service and mitigating risk of failure at the Heidelberg Heights Wastewater Treatment Plant, a condition assessment evaluation is being performed for the Equalization/Sludge Holding tank. The steel tank is part of the original plant, installed in the mid-1970s, and is compartmentalized to serve as both a raw sewage equalization tank (for sequenced pumping to the newer SBR tanks), and for storing liquid sludge (for pump and haul removal). The exposed portions of this tank display areas of corrosion, and the tank was drained and cleaned and a thorough assessment was performed to determine structural integrity and remaining service life, and a study provided to LCA. Design phase services were completed in March 2019, the project was advertised for bid in early April, and a pre-bid meeting was held on 4/16/19. Bids will be opened on 5/2/19 and award of bid and construction phase services will be requested at the 6/10/19 meeting. The project is anticipated to be completed by early Fall 2019. **(No Change)**

10. **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 early 2020. **(No Change)**

11. **Suburban Division – Sand Spring WWTP Upgrade Project**

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 should be concluded by late 2018; progress has been 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, and the project will proceed to bid phase in Summer 2019. **(No Change)**

12. **Suburban Division – SCARP**

On December 21, 2018, LCA and all of the municipalities named in the AO received a detailed letter from DEP requesting additional information about the Regional Flow Management Strategy (RFMS) including more specifics related to schedules for system characterization, sewer flow metering and monitoring, and other details related to each municipality's operations and maintenance program and inflow and infiltration source removal program. LCA led the effort to develop a full response to DEP, which was submitted on March 8, 2019. On April 25, 2019, DEP submitted a letter asking for some additional information and maps. The information was forwarded to DEP.

Among the commitments made by the municipalities in the response to DEP included submission of RFMS updates and information on system hydraulic restrictions within the annual Chapter 94 submissions, and other schedule commitments related to system characterization work, sewer flow metering and monitoring.

For the Western Lehigh Sewerage Partnership, the closeout of the EPA Administrative Order has no significant impact as the group remains committed to implementing the SCARP plan including inflow and infiltration source removal and conveyance capacity improvements to address dry-day and wet-weather flows for current and future customers. **(No change)**

13. **Sanitary Sewer System Flow Metering for WLI**

The installation of the 35 flow meters began in mid-December and was completed in January. It takes approximately one month to resolve metering issues and have confidence in the meter data. All meters were installed and operating properly by the end of February. As of April 15, 2019 data validation is still in process. **(No Change)**

14. **WLI High Flow Emergency Declaration**

LCA began the Emergency Response protocol to deal with the high flows within the Western Lehigh Interceptor (WLI) on November 28, 2018. The Emergency Declaration was presented to and approved by the Board on December 10, 2018, retroactive to November 29, 2018. Through December 28, 2018, the entire Iron Run Trunk Line (IRTL) has been televised from outside the Pretreatment Plant (PTP) down to the confluence with the Breinigsville Line, which is south of Hamilton Boulevard. This area is referred to as Phase 1 and the total distance televised in this reach was 7,115', and includes 93 manholes. In this section, LCA has identified 18 defects within that reach, the majority of which are joint leaks, along with heavy sediment in several areas. Once repaired, staff expects to have eliminated approximately 500,000 gallons per day of infiltration from the interceptor based on estimates. Repair work will begin while additional downstream inspection is ongoing. Phase 2 will include the WLI from where the IRTL and the Breinigsville lines meet down to the point where the relief line ends. Phase 3, which will include

a major long-term bypass, will start at the end of the relief line and go to the Spring Creek Pump Station. Phases 4-6 will be the WLI from Spring Creek Pump Station down to Park Pump Station. A pre-bid meeting was held for Phase I on 1/29/2019 and bids were due on 2/15/2019. Standard Pipe Services (SPS) out of Delaware was awarded the contract. The Phase I pre-construction meeting was held on 3/25/2019. Construction on Phase 1 will last an estimated 4-6 weeks, or until mid/late May. This timeframe is weather dependent because the project has lost a lot of days due to weather. Phases 2 and 3 construction services will be added to the SPS contract via change orders. Bypass bids were due on 4/26/2019. Only one bid was received for \$483,000 and it was rejected. A re-bid was due on May 10, 2019 and the low bid this round was \$374,400. This project will continue on an expedited emergency basis as long as conditions warrant.

15. Suburban Division - Heidelberg Heights and Lynn Township Sewer System Updates

Excessive inflow and infiltration (I&I) and high wet-weather flows into the Heidelberg Heights and Lynn Township sewer systems have been ongoing and increasingly challenging to address. As noted in LCA's monthly operations report, treatment plant bypasses and sanitary sewer overflows have occurred more frequently in these systems and must be addressed. Staff have developed corrective action plans (CAPs) that include structural and non-structural initiatives and involves coordination with the host municipality. The framework for the CAPs was shared with the Board in February and are being developed further for submission to DEP. A meeting has been scheduled with DEP in early June 2019 to discuss the Lynn Township CAP and Township sewer planning/growth issues.

16. Suburban Division - Heidelberg Heights Sanitary Sewer Rehabilitation Project

High wet-weather flows caused by excessive inflow and infiltration into the sewage collection system have challenged the Heidelberg Heights sanitary sewage system and has been the cause of numerous wastewater treatment plant bypasses over the past two years. This project includes the replacement of approximately 1,100 lf of VCP sewer main and 26 residential sewer laterals to address high priority areas of the system to continue to work toward eliminating leakage. The pre-bid meeting was held on 3/28/19, bids were opened on 4/9/19, and award of bid and construction phase services was requested at the 4/22/19 Board meeting. Construction is anticipated to begin in early Summer 2019. **(No Change)**

17. Suburban Division - Heidelberg Heights Corrective Action Plan

On February 11, 2019, the Pa. Department of Environmental Protection (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 is 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 is preparing a comprehensive corrective action plan (CAP) for submission to DEP by May 5, 2019. A draft of the plan was attached for Board review at the April 22, 2019 Board meeting. The final CAP was submitted to DEP on 4/29/19. **(No Change)**