



BOARD MEETING AGENDA – March 12, 2018

1. Call to Order

- NOTICE OF MEETING RECORDINGS

Meetings of Lehigh County Authority's Board of Directors that are held at LCA's Main Office at 1053 Spruce Road, Wescosville, PA, may be recorded for viewing online at lehighcountauthority.org. 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

- *February 26, 2018 Board meeting minutes*

4. Public Comments

5. Action / Discussion Items:

FINANCE AND ADMINISTRATION

WATER

- *Suburban Division – Asset Management presentation*

WASTEWATER

- *Suburban Division – Heidelberg Heights Sanitary Sewer Rehabilitation (blue)*
- *Allentown Division – Kline's Island WWTP Master Plan (yellow)*

6. Monthly Project Updates / Information Items (1st Board meeting per month) – **March 2018 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

Meetings begin at Noon at LCA's Main Office, unless noted otherwise below.

March 26, 2018

April 9, 2018

April 23, 2018

PUBLIC PARTICIPATION POLICY

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

REGULAR MEETING MINUTES
February 26, 2018

The Regular Meeting of the Lehigh County Authority was called to order at 12:01 p.m. on Monday, February 26, 2018, Vice Chairman Scott Bieber presiding. Other Members present at the commencement of the meeting were: Linda Rosenfeld, Kevin Baker, Jeff Morgan, Richard Bohner, Norma Cusick, Ted Lyons and Deana Zosky. Brian Nagle was on the conference phone for the duration of the meeting and voted on all Authority business. Authority Staff present were Liesel Gross, Brad Landon, Ed Klein, Chuck Volk, Chris Moughan, Susan Sampson, and Lisa Miller.

REVIEW OF AGENDA

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

Liesel Gross noted there are no agenda changes but did announce that the January Financial report was issued under separate cover. There will also be an Executive Session at the end of the regular agenda to discuss potential litigation.

APPROVAL OF MINUTES

February 12, 2018 Regular Meeting Minutes

Richard Bohner suggested there may be an error in the bid amounts reported in the Minutes for the Park Pump station and the Chestnut Street Bridge replacement projects. The Staff will verify the numbers and make any necessary changes.

On a motion by Richard Bohner, seconded by Norma Cusick, the Board approved the Minutes of the February 12, 2018 meeting (9-0) with any necessary changes per Mr. Bohner's comments.

PUBLIC COMMENTS

None.

ACTION AND DISCUSSION ITEMS

Election of Officers

Norma Cusick, serving as the Nominating Committee, indicated she had polled the Board members to determine what capacity they are willing to serve on the Board. She then offered the following slate of nominations for 2018:

Brian C. Nagle, Chair
Richard H. Bohner, Secretary
Scott Bieber, Vice Chair

Norma A. Cusick, Assistant Secretary
Ted Lyons, Treasurer

Ms. Cusick asked if there were any other nominations, which there were not. Richard Bohner made a motion to close the nominations, which was seconded by Deana Zosky. With no additional nominations from the floor, on a vote of 9-0, the nominations were closed and the Vice Chairman directed the Secretary to cast one ballot for each of the nominees, thus electing the officers for 2018. The term of the officers elected will begin on March 1, 2018.

LCA 2020 Action Plans – Part 2

Liesel Gross reviewed the remaining two of four 2020 Action Plans related to Infrastructure Stability and Employee & Leadership Development. Infrastructure Stability has been broken into two sub-categories -- Asset Management Program Development and Preventive Maintenance Program Development. She explained the Action Plans described for 2018, 2019 and 2020 are progressive and work toward

developing an integrated approach that includes use of the Computerized Maintenance Management System (CMMS) to tie various asset management plans together including the Suburban study completed in 2016, the Allentown Water Master Plan completed in 2017, and the upcoming work on the Allentown Wastewater Master Plan. On the Preventive Maintenance side, the Action Plan has been developed to create an Authority-wide standard for maintaining the assets and tracking the work that must be completed. Deana Zosky asked if the plan will be to have real-time integration between the budget and capital program from a financial perspective. Chuck Volk explained there is no automated mechanism envisioned to achieve what she is suggesting, but explained that the CMMS system can be used to report on a variety of activities, costs and asset conditions that will support more comprehensive capital planning and budgeting.

Ms. Gross explained that the Employee & Leadership Development Action Plan focuses primarily on addressing risk associated with upcoming retirements via succession planning, training and knowledge transfer. Board discussion continued, focusing on turnover rates the Authority is experiencing and how to plan for retirements. Ms. Gross explained that the succession planning effort undertaken will depend on the position, how difficult it is to recruit and train for certain positions, qualifications required for the job, existence of internal candidates, and other factors. Ms. Gross explained that to support this effort, the Action Plan outlines the need to develop training requirements for each position and to update retirement risk profiles and recruiting strategies.

Ms. Gross informed the Board that in addition to finalizing the LCA 2020 Action Plans, the Authority will be participating in the American Water Works Association benchmarking program to further refine its key performance indicators for each organizational strategy.

Rt. 29 Bridge Cost Reimbursement (Resolution No. 2-2018-1)

Brad Landon clarified the need for the resolution and why it was not acted upon at the previous meeting when the project was approved. It was previously believed that the resolution was the same reimbursement procedure as the Hamilton Street Bridge replacement project but turned out it was not. Resolution No. 2-2018-1 provides 75% reimbursement to the Authority for all costs incurred, less any betterments, from the Pennsylvania Department of Transportation (PennDOT) as a result of utility relocations for the State Route 29 bridge relocation project in Upper Milford Township and must be approved by the Board since the Authority facilities are in public right-of-way and relocation costs wouldn't typically be reimbursable at all.

Deana Zosky asked why the Authority is only getting 75% reimbursement and not 100% reimbursement. Chuck Volk explained that this is a new PennDOT program allowing for 75% reimbursement for work being done in their right of way. Normally, the Authority would not receive any reimbursement for this work.

On a motion by Linda Rosenfeld, seconded by Deana Zosky, the Board approved Resolution No. 2-2018-1 (9-0).

MONTHLY FINANCIAL REVIEW

The monthly financial review for January 2018 was prepared by Ed Klein and sent to the Board and Staff under separate cover. Deana Zosky commented on the loss of revenue on the City side and cautioned about being clear in communicating these losses as this trend continues.

MONTHLY SYSTEM OPERATIONS OVERVIEW

Liesel Gross reviewed the report and highlighted the Emergency Declarations on the January 2018 Monthly System Operations Overview report. Ms. Gross informed the Board that the costs for the

Emergency Declarations were attributed to the freezing temperatures and significant repairs that were required due to main breaks.

Linda Rosenfeld questioned what the injury accident was. Ms. Gross said she was uncertain but would find out and report back to the Board.

Deana Zosky asked that the report include 2016 Totals in the bottom section of the report that includes Precipitation Totals through Emergency Declarations.

Scott Bieber inquired about the amount of daily water loss of the 17 leaks discovered during the Smart Ball Project at Schantz Spring. Chuck Volk commented that he will look into this and report back to the Board. Ms. Gross added that John Parsons stated at the previous meeting that there is metering in place out there to have detected this amount.

Ted Lyons questioned the Authority's computer system security in light of the recent security breach in the City of Allentown. Chris Moughan reviewed the Authority's information technology security protocols and explained precautions that were taken to safeguard against impacts from the City breach.

STAFF COMMENTS

None.

SOLICITOR'S COMMENTS

None.

PUBLIC COMMENTS / OTHER COMMENTS

None.

Vice Chairman Bieber called a recess at 12:42 p.m. The meeting reconvened at 12:52 p.m.

EXECUTIVE SESSION

An Executive Session was held at 12:52 p.m. to discuss potential litigation. The Executive Session ended at 1:12 p.m.

ADJOURNMENT

There being no further business, the Vice Chairman adjourned the meeting at 1:12 p.m.

Richard H. Bohner
Secretary

MEMORANDUM

Date: March 12, 2018

To: Lehigh County Authority Board
From: Charles Volk, Chief Capital Works Officer
Subject: Suburban Division – Heidelberg Heights Sanitary Sewer Rehabilitation –
Construction Phase

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization – Construction Phase	\$326,500
2	Construction Contract: J.P. Smith Contractors, Inc.	\$296,500

BACKGROUND

Recent closed circuit video inspection (CCTV) of the Heidelberg Heights sanitary sewer system revealed numerous pipe breaks, root intrusions, settlement deflections and other defects that has resulted in excessive infiltration of groundwater during storm events. The goal of this project is to perform sewer pipe replacement on sections of sewer main prioritized from the CCTV condition assessment data, in order to mitigate wet weather overflow/bypass events as part of an on-going program to reduce wet weather hydraulic overloads at the wastewater treatment plant.

PROJECT OVERVIEW

This project involves the replacement of approximately 1,070 feet of 8-inch sewer main and 54 residential sewer laterals in the Heidelberg Heights sanitary sewage collection system. Sewer laterals will be replaced to the property line with a cleanout assembly installed on each one. Existing manholes will be re-used with new watertight gaskets installed at the connections. The contractor will be responsible for temporary measures, including bypass pumping, in order to minimize sanitary sewer service disruption.

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 on January 31, 2018. A pre-bid meeting was held on February 14, 2018. Bids were received via PennBid on February 28, 2018, the results of which are as follows:

General Construction	
Bidder	Bid Amount
SJM Construction Co., Inc. (SJM)	\$296,500
Sikora Brothers Paving, Inc.	\$312,058
Doli Construction Corporation	\$333,333
Wexcon, Inc.	\$354,950
Joao & Bradley Construction Co., Inc.	\$425,150
RGC Development LP	\$437,674

SJM (Spring House, PA) specializes in water and sewer system installation with extensive experience in sanitary sewer system installation. The firm's qualifications and experience statement indicates numerous projects of similar scope and type in eastern PA. The bid documents are in order and the firm appears well qualified for to perform the work.

PROFESSIONAL SERVICES

Construction management is to be performed in-house by Capital Works staff.

PROJECT SCHEDULE

Based on contract award following the March 12, 2018 board meeting, it is anticipated that the project will be completed by the early Summer 2018.

FUTURE AUTHORIZATIONS

None

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	SD-S-17	BUDGET FUND:	Suburban Div\Wastewater\Capital
PROJECT TITLE:	Suburban Division – Heidelberg Heights Sanitary Sewer Rehabilitation Project	PROJECT TYPE:	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input type="checkbox"/> Amendment
THIS AUTHORIZATION:	\$326,500		
TO DATE (W/ ABOVE)	\$326,500		

DESCRIPTION AND BENEFITS:

Sanitary Sewer Rehabilitation Project:

This project involves the replacement of approximately 1,070 feet of 8-inch sewer main and 54 residential sewer laterals in the Heidelberg Heights sanitary sewage collection system. Sewer laterals will be replaced to the property line with a cleanout assembly installed on each one.

Previous Authorizations	
none	

REQUESTED THIS AUTHORIZATION	
Construction Phase	
Staff	\$10,000
Construction Contract -	\$296,500
Contingency	\$20,000
Total This Authorization	\$326,500

Future Authorization	
None	

REVIEW AND APPROVALS:

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

MEMORANDUM

Date: March 12, 2018

To: Lehigh County Authority Board
From: John Parsons, Chief Operations Officer
Subject: Allentown Wastewater Plant Master Plan

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization	\$199,952
2 ⁽¹⁾	Professional Services Authorization – Kleinfelder	\$159,952

(1) Included in the Capital Project Authorization.

PROJECT OVERVIEW:

The Project provides for an engineering study that will produce a Master Plan for the Allentown Wastewater Plant at Kline’s Island. The Master Plan will include analyses on the wastewater plant only. There will not be any analysis performed on the collection system.

The Master Plan is a requirement of the lease with the City of Allentown, and it must be updated every five (5) years throughout the lifetime of the lease. This initial project and subsequent reports will serve as a basis for the future updates. The Master Plan will address the following areas:

- Full-scale condition assessments of all facilities
- Process audits and optimization
- Short-term and long-term capital plans
- Safety, security, and building code audits.

The condition assessments will be very timely as we develop an asset management plan which has been a major LCA goal for several years. Many of the wastewater assets are very old. The

plant was commissioned in 1929 and some components of the original plant are still in-use. It was made very clear to the consultants proposing on the Master Plan that they should be looking at the wastewater plant in terms of what the current status is, and also what structures/equipment/facilities may not have an expected lifetime that will last throughout the remainder of the lease with the City of Allentown. A detailed structural analysis will be performed on the Plastic Media Trickling Filters (PMTFs) and the Rock Media Trickling Filters (RMTFs) as well. The RMTFs are part of the original plant of 1929.

The condition assessments will be a major part of this project. Among other tasks, the consultant will provide specialists to perform detailed evaluations in the following areas:

- Structural
- HVAC
- Electrical
- Security
- SCADA/Instrumentation Control

Short-term and long-term capital plans will also be developed as part of this project.

FINANCIAL:

This Project is will be funded by LCA. It is not a Major Capital Improvement Project. No Labor Stabilization Agreement will be required.

CONSULTANT SELECTION PROCESS:

Five (5) engineering firms including Arcadis, CH2M, Hazen & Sawyer, Kleinfelder and AECOM were invited to tour the facilities, access the conditions and ask questions related to the proposed work. All the firms have vast experience in the preparation of Master Plans for large utilities.

Results of the proposals are summarized below:

Consultant	Cost ⁽¹⁾	Man-hours
Kleinfelder	\$159,952	980
AECOM	\$218,289	1,065
Arcadis	\$240,000	1,474
CH2M	\$249,352	1,342
Hazen and Sawyer	No Response	-

(1) Total Proposal Cost

Based upon our review of all aspects of proposals submitted by the four firms, we recommend award of the Design Phase services to Kleinfelder, Inc. Their proposal is on scope and represents what we believe is the best overall value for the Authority. Kleinfelder, Inc. will perform the services outlined in their proposal dated January 25, 2018.

PROJECT SCHEDULE: The Request for Proposals (RFP) had a requirement that all project tasks were to be completed by the end of 2018. Kleinfelder proposes to complete the entire project by that deadline. This will be very timely to LCA as the project will be completed well in advance of the preparation timeframe that will be needed for the 2019-2028 Capital Plan.

FUTURE AUTHORIZATIONS:

None at this time.

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	AD-S-9	BUDGET FUND:	Allentown Div\Wastewater\Capital
PROJECT TITLE:	Allentown Wastewater Treatment Plant Master Plan	PROJECT TYPE:	<input type="checkbox"/> Construction <input checked="" type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input type="checkbox"/>
THIS AUTHORIZATION:	\$ 199,952		

DESCRIPTION AND BENEFITS:

The Project provides for an engineering study that will create a Master Plan for the Allentown Wastewater Plant. The Master Plan is a requirement of the lease with the City of Allentown, and it must be updated every five (5) years throughout the lifetime of the lease. This initial project and subsequent reports will serve as a basis for the future updates.

The Master Plan will address the following areas of concern: full-scale condition assessments, process audits and optimization, short-term and long-term capital plans, and safety, security, and building code audits.

The anticipated schedule for this project provides for completion of all tasks by the end of 2018.

Authorization Status:

<i>Previous Authorizations</i>	
None	\$0

Requested This Authorization	
Staff	\$25,000
Engineering Consultant	\$159,952
Contingency	\$15,000
Total This Authorization	\$199,952

Future Authorizations	
None at this time	\$0

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: KLEINFELDER INC.
321 Wall Street
Princeton, NJ 08540

Date: March 12, 2018
Requested By: John Parsons
Approvals

Department Head: _____
Chief Executive Officer: _____

Allentown Water System Master Plan

Kleinfelder will create a Master Plan for the Allentown Wastewater Plant. The Master Plan is a requirement of the lease with the City of Allentown, and it must be updated at five (5) year intervals throughout the lifetime of the lease. Kleinfelder will provide the following services as part of the contract:

Professional Services
1. Perform a full-scale condition assessment of all facilities
2. Complete Process Optimization to reduce operational costs
3. Prepare capital plans of 1-10, 10-25, and 25-50 years
4. Complete building code, safety and security audits
5. Provide appropriate reports and presentations on all findings

Please reference the cover Memo for additional information.

Design Phase:

Cost Estimate (not to be exceeded without further authorization): \$159,952

Time Table and Completion Deadline: As required to meet various critical deadlines as set forth in the proposal.



(For Authority Use Only)

Authorization Completion:

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

**PROFESSIONAL SERVICES AUTHORIZATION
INDEMNIFICATION
Allentown Wastewater Treatment Plant Master Plan**

(To be signed by Professional and returned to the Authority)

I am or represent the Professional indicated above, and as such I am authorized to:

Accept the terms of the professional services authorization dated March 12, 2018, attached; and

Name (signature):

Name (printed)

Title: _____

FINANCE & ADMINISTRATION

ACTION ITEMS

DISCUSSION ITEMS

INFORMATION ITEMS

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

CERTIFICATES OF DEPOSIT						
26-Feb-18						
Fund	Bank	Location	Gross Amount	Date of Purchase	Date Due	Net Rate %
Cons Wtr (2)	Crossfirst Bank	Leawood, KS	249,000.00	1/24/18	1/24/20	2.00
Cons Wtr (2)	Flagstar Bank FSNB	Troy, MI	249,000.00	1/26/18	1/27/20	2.15
Cons Wtr (2)	Volunteer State Bank	Portland, TN	245,000.00	2/9/18	2/10/20	2.00
LLRI CR	PSDLAF Flex Pool		400,000.00	1/12/18	6/26/18	1.25
Cons Wtr (2)	PSDLAF Flex Pool		155,000.00	1/12/18	6/26/18	1.25
Cons LL2 (314)	PSDLAF Flex Pool		245,000.00	1/12/18	6/26/18	1.25
WW Capac	PSDLAF Flex Pool		600,000.00	1/12/18	6/26/18	1.25
Wtr R&R	PSDLAF Flex Pool		1,000,000.00	1/12/18	6/26/18	1.25
LLRI CR	Customers Bank	Phoenixville, PA	245,000.00	2/21/18	8/21/19	2.10

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:

- Spring View (Bortz Tract), 14 commercial units, UMT – No Change
- Trexler Business Center, 1 Commercial 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:

- 5354 Hamilton Blvd., 1 commercial lot, LMT – No Change
- 5374/5392 Hamilton Blvd., 1 Commercial lot, LMT – No Change
- 5329-5347-5357 Hamilton Blvd., 1 Commercial lot, LMT – No Change
- CVS, 1 commercial lot, LMT – No Change
- Diocesan Pastoral Center, 2 commercial lots, 3 additional lots and residual lot for existing cemetery, LMT – No Change
- Farr Tract, 17 residential lots (sfd), LMT – No Change
- Grant Street Townes, 18 residential lots (sfa), WashT – No Change
- Green Acres Mobile Home Court, master meter 590 existing units (sfd), UMT – No Change
- Hickory Park Estates, 3 residential lots (sfd), UMT – No Change
- Hillview Farms, 31 residential lots (sfd), LMT/SWT – No Change
- Indian Creek Industrial Park, 6 commercial lots, UMiIT, water and sewer – No Change

Kohler Tract, 125 residential lots (sfa), UMiIT, water and sewer – No Change
Lehigh Hills, Lot 5, Phase 1, 273 apartments & clubhouse, UMT – No Change
Lower Macungie Township Community Center Expansion, 1 institutional lot, LMT – No Change
Madison Village at Penn's View, 66 manufactured homes, 1 lot, LynnT, water and sewer – No Change
Millbrook Farms, Section VI, 45 residential lots (sfd), LMT – No Change
Morgan Hills, 40 residential lots (sfd), WeisT, water and sewer – No Change
Parkland School District, new elementary school, 1 lot, UMT – No Change
Schoeneck Road, Lot 1, 1 lot warehouse, LMT – No Change
Shepherd's Corner, 1 commercial lot, LMT – No Change
Spring Creek Properties Settlement Subdivision, Lot 1, 1 commercial lot, LMT – No Change
Stone Hill Meadows, Phase 2, 85 residential units (sfd), LMT – No Change
Weilers Road Twins, 82 residential lots (sfa), UMT – No Change
Woodmere Estates, 60 residential units (sfd), UMT – No Change

Sewage Planning Modules Reviewed in Prior Month:
None.

WATER

ACTION ITEMS

1. **Suburban Division – Watershed Monitoring Program – March 26, 2018**

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 Guisepppe (SSM, Inc.) in 2017. An RFP for vendors to supply flow-monitoring and data transmission equipment to be used at six (6) local bridges was released on 2/1/2018, with proposals due on 3/2/2018. Flow monitoring in 2018 will focus on the Little Lehigh Creek only. In 2019, LCA will develop plans to add new monitoring wells to supplement existing groundwater data that is being collected. SSM will assist LCA in calibrating surface flows under the bridges based on the recorded stream elevations. Authorization for the award of the contract will be requested at the 3/26/2018 Board meeting following staff review of the proposals and plans submitted by the vendors.

DISCUSSION ITEMS

1. **Suburban Division – Asset Management – March 12, 2018**

A brief presentation will be given on the Suburban Division Facilities Asset Management Upgrade project, which was completed in February 2018. The presentation will include before and after pictures for representative sites, to illustrate the improvements. The project scope included the structural and electrical upgrade of following water facilities: Beverly Hills, NL-15/16, NL-19, Clear View Farms, WL-6, WL-10, WL-11, WL-13, and WL-16. The project scope included the structural upgrades of the Lynn Twp WWTP and WLI siphon chambers (8 each).

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. It is anticipated at this time the contractor will return by late May to finish all of the LCA line relocation. It is anticipated that this work will be reimbursed 100% by the state and that the construction related activities will be incorporated within the state's work.

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

The project is the replacement of 2-miles of aged and/or failing Cast Iron water main in multiple locations throughout the City. Design is currently under way. This Project is required under the Operating Standards in the Concession Agreement and will be funded by the LCA Allentown Division.

3. **Allentown Division – Schantz Spring Exposed Main Replacement**

This project replaces approximately 110 linear feet of the 30-inch diameter water main that supplies water from Schantz Spring to the Water Filtration Plant on the county's property at Cedarbrook where the line crosses a swale from I-78. The project will also demolish the concrete culvert that carries the pipe over the swale and install a new pipe under the swale. The project will be funded by the LCA Allentown Division. The contractor has installed the pipeline. After the Schantz Spring raw water line was disinfected and passed the bacteriological testing,

the main was returned to service. Restoration will be completed when the weather allows, and two trees that were removed during construction will be replaced under the easement agreement with the county.

4. **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 (PACl) as the plant's primary coagulant, proper treatment requires that the raw water must be kept within a very small pH range for optimum treatment. The acid feed system will control pH within these parameters to achieve treatment goals. Submission of a Major Permit Application with PaDEP is currently in process. Installation and startup is anticipated by late April or early May 2018.

5. **Allentown Division – Water Filtration Plant: Roof Replacement Phase II**

The project consists of various replacements at the Kline's Island Wastewater Treatment Plant, Water, Filtration Plant, and miscellaneous gatehouses and pump stations. Phase I of the project was completed in mid-2016. Phase II of the project was advertised on 3/6/2018 and bids are due on 3/27/2018. Board approval for the construction phase of the project is anticipated at the 4/9/2018 Meeting. This project will be funded by LCA Allentown Division.

6. **Suburban Division - Water Main Replacement Program Cycle 4**

The project consists of the replacement of approximately 2 miles of aged and/or failing Cast Iron water main. The design phase of this project was approved at the October 2017 Board meeting. The project is currently in design phase with an anticipated bid date of mid May 2018.

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

The project will feature the installation of a new booster pumping station and water main extension to pump water from the Lower Pressure System to the Upper Pressure System. The project will also involve installation of a SCADA system. The Public Water Supply (PWS) permit has been issued by DEP. We are reviewing changes to the proposed pump station easement requested by the property owner. We anticipate bidding the pump station project later this year.

8. **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 pump water from the Central Lehigh Division (CLD) to the 125-lot Kohler Tract subdivision in Upper Milford Township. Design of the pump station is under way. The Public Water Supply (PWS) permit has been issued by DEP. One property owner has granted us a water line easement. We are still in discussions with the other property owner for that easement.

9. **Suburban Division – Pine Lakes Pumping Station Improvements**

This project was originally bid in July 2016 and bids were subsequently rejected due to the lack of competitiveness and significant exceedance of the engineer's estimate. The project was modified and rebid in May 2017 resulting in greater bidder interest and lower prices. The purpose of this project is to upgrade the original hydro-pneumatic well station (built in mid-1970s) to continue the level of service, replace aged and problematic equipment, reduce the probability and consequence of risk, and prolong the useful life of the station. The station is to be upgraded to a double pumping variable speed system with full SCADA telemetry. A pre-construction meeting was held in August and work began in fall 2017 **(No Change)**.

10. **Suburban Division – Crestwood Alternate Water Supply**

The project consists of abandonment of existing wells and storage tank currently serving higher elevation customers and a connection of the pumping station to the main North Whitehall Division System. The project will also involve installation of a SCADA system. The project bids were opened on July 7 and authorization to award was given at the July 24, 2017 Board

meeting. A pre-construction meeting was held in September. Construction started in October 2017 and is expected to be completed in April 2018.

11. Suburban Division – Well Abandonments

The project consists of the abandonment of six wells that are no longer used due to water quality issues: WL4, WL7, NL7, NL8, NL9, and NL10. Authorization to award a professional services agreement to ARRO Consulting Engineers was given at the July 24, 2017 Board meeting. Construction began in September 2017 and will be completed in early 2018 **(No Change)**.

12. Suburban Division – 2017 Water Meter Replacement Project

The project consists of the replacement of approximately 2000 residential meters and 430 commercial meters as well as replacing “non-read” meters with new transceiver units. Residential meters which are 20 years and older and commercial meters 15 years and older will be replaced. All meters will be upgraded to the most current radio read capability. The project was approved at the September 25, 2017 Board meeting. The Notice to Proceed was issued in November. Replacement of meters began the second week of January 2018 **(No Change)**.

13. 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 accommodate the future addition of radon removal equipment to be implemented upon DEP’s mandate of a regulatory limit. Design phase was authorized at the 8/28/17 board meeting, and the project is anticipated to be ready for bidding in Summer 2018 **(No Change)**.

14. Suburban Division – Green Acres MHP Interconnection

This is a developer-initiated project to interconnect the Green Acres Mobile Home Park water system in Upper Macungie Township with the LCA Central Lehigh Division. LCA responsibility would end at the meter pit. The owner would continue to own the mobile home park’s pump station and internal distribution system and maintain them. Permitting approvals have been received from DEP and the township (road opening permit), and we have signed a developer’s water service agreement with the owner. The contractor should be starting construction the week of March 3rd now that the meter pit has been fabricated.

WASTEWATER

ACTION ITEMS

1. **Suburban Division – Heidelberg Heights Sanitary Sewer Rehabilitation – March 12, 2018**

This project involves replacement of approximately 1000 feet of 8-inch sewer main and 60 sewer laterals (public portion only) in the Heidelberg Heights sanitary sewer system. Recent internal CCTV inspection of the system revealed numerous pipe breaks, root intrusions, and other defects that has resulted in excessive infiltration of groundwater, particularly during storm events. The targeted sewer lines appear to be in the worst condition, and have the highest priority for replacement. This project is part on an on-going effort to reduce hydraulic overloads at the Heidelberg Heights wastewater treatment plant. The project was advertised for bid in January 2018 and bids were opened on 2/28/2018. Authorization for construction phase is to be requested at the 3/12/2018 Board meeting.

2. **Allentown Division – Kline’s Island WWTP Master Plan – March 12, 2018**

This project involves the development of a Master Plan that is required as part of the lease with the City of Allentown. The Master Plan is similar in scope to what was done previously for the Allentown Water System in 2017, and will include Condition Assessments, Process Optimizations, and both short-term and long-term Capital Improvement Plans. The city lease requirements dictate that the Master Plans must be updated every 5 years for the duration of the lease, and 2018 is the first year that a Master Plan is to be prepared for the wastewater system. A Request for Proposal (RFP) was released to five (5) qualified firms on 12/15/2017 and the proposal due date was 1/26/2018. Authorization for the award of the contract will be requested at the 3/12/2018 Board meeting.

DISCUSSION ITEMS

1. **Administrative Order Update – March 26, 2018 or April 9, 2018**

The Authority and Western Lehigh Sewerage Partners, along with representatives from the City of Allentown and other municipal signatories, will be meeting with EPA and PA-DEP in March to discuss a path forward to addressing the requirements of the Administrative Orders to eliminate sanitary sewer overflows. Following this meeting, staff will provide an update to the Board for discussion of next steps.

INFORMATION ITEMS

1. **Allentown Division – Kline’s Island WWTP: Electrical Substation Replacements**

This project involves the replacement of the existing 12.4 kV Switchgear and existing Substation No. 1 and 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. Approval of the construction contract is tentatively scheduled to be requested at the May 14, 2018 Board Meeting. Construction of the project is expected to begin in June of 2018 and will be completed by the end of 2019. This Major Capital Project will be funded by the LCA Allentown Division.

2. **Allentown Division – Kline’s Island WWTP: Miscellaneous Clarifier Improvements**

In December 2016, the drive unit on Final Clarifier #5 at Kline’s Island WWTP experienced a complete failure. The drive was the original unit that was installed during construction of the clarifier in 1968. An emergency declaration was declared to reduce the installation time by several weeks. A request for a retroactive emergency declaration was requested and approved at the January 9, 2017 Board meeting. The drive was installed in April 2017 and is now fully operational. The remaining mechanisms of Final Clarifier #5, and the drive unit and similar

mechanisms of Final Clarifier #6 have also reached the end of their useful life and will be replaced in early 2018. Construction approval was granted at the August 28, 2017 Board meeting. Construction should be completed by the end of August 2018. This capital project will be funded by the LCA Allentown Division.

3. **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. Construction is expected to begin in early 2019 and is expected to be complete in early 2021, subject to regulatory review and approval. **(No Change)**

4. **Allentown Division – Kline’s Island WWTP: Primary No. 2 Digester Cleaning**

This project includes the cleaning of the Primary No. 2 Digester at the wastewater treatment plant. The project was advertised on February 23, 2018 and bids will be opened on March 23, 2018. Construction approval is going to be requested at the April 9, 2018 Board Meeting. The cleaning of Primary No. 2 Digester will then begin on May 1, 2018 and be completed by early June 2018. This capital project will be funded by the LCA Allentown Division

5. **Allentown Division – Kline’s Island WWTP: Primary No. 2 Digester Miscellaneous Improvements**

This project includes miscellaneous improvements (additional scumbuster and control panel, minor pipe replacement, etc.) for the Primary No. 2 Digester at the wastewater treatment plant. Construction documents are expected to be bid ready in late March 2018. Construction approval is expected at the May 14, 2018 Board Meeting. Construction will begin in early June and will be completed in early July. This capital project will be funded by the LCA Allentown Division.

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 is expected to finish by the end of Summer 2017; additional scope work under existing contract is being concluded in March 2018. **(No Change)**

7. **Suburban Division – Lynn Township WWTP Improvements, Phases 1 & 2**

This project will upgrade the wastewater treatment plant (WWTP) headworks to install a mechanical fine screen, in order to protect the influent pumps and mitigate rag buildup. The project is funded by the Lynn Township Suburban Division. The contractor has installed the meter vault. The mechanical screen was also installed and a successful startup performed. The chemical feed line must still be installed along with some minor plumbing and electrical work **(No Change)**.

8. **Suburban Division – SCARP**

All respondents to the USEPA Administrative Order (AO) received a letter from EPA in December 2017 indicating that an extension has been granted for submission of an Implementation Plan, which had been due for submittal on December 31, 2017. EPA requested a meeting with the respondents to discuss the path forward, requesting the Respondents develop a regional flow management program. EPA has indicated that the following critical elements should be included in the program: collection system operation and maintenance plan,

system characterization, source removal, flow modeling, and flow targets. The meeting is currently being scheduled in March 2018. A pre-meeting was held with the City of Allentown and other municipal signatories to discuss the EPA direction for addressing the AO. Paul Calamita from AquaLaw represented the Western Lehigh Sewerage Partners at the meeting, and he suggested that all Respondents work together to address EPA's requested critical elements, and submit a regional plan. Due to the legal enforcement nature of the AO, all Respondents are encouraged to participate in the meeting with EPA with legal counsel present. **(No Change)**

9. Suburban Division – Spring Creek Pump Station

This project involves the following upgrades to the existing pumping station: Install a comminutor to reduce buildup of debris on the bar screens, replace the manually operated weir gates with new motorized weir gates, and upgrades to the SCADA system. Design of the project is complete. The Notice to Proceed was issued on December 12, 2017. Construction will begin in early 2018 **(No Change)**.

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. Capital Works is currently evaluating technologies and procedures for performing an internal force main pipe condition assessment that require minimal interruption of operation of the pump station and force main **(No Change)**.

11. Suburban Division – Park Pump Station Upgrade Design

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 will follow receipt of satisfactory bonds and insurance in late March 2018.