



BOARD MEETING AGENDA – April 9, 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

- *March 26, 2018 Board meeting minutes*

4. Public Comments

5. Action / Discussion Items:

FINANCE AND ADMINISTRATION

- *Allentown Water / Sewer System Lease – Overview of Agreement*

WATER

- *Allentown Division – Water Filtration Plant: Roof Replacement Phase II (blue)*

WASTEWATER

- *Allentown Division – Kline's Island WWTP: Primary No. 2 Digester Cleaning (green)*

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

April 23, 2018

May 14, 2018

May 21, 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

March 26, 2018

The Regular Meeting of the Lehigh County Authority was called to order at 12:00 p.m. on Monday, March 26, 2018, Chairman Brian Nagle presiding. Other Members present at the commencement of the meeting were: Jeff Morgan, Richard Bohner, Norma Cusick, Scott Bieber and Deana Zosky. Authority Staff present were Liesel Gross, Brad Landon, Ed Klein, Chuck Volk, Chris Moughan, Susan Sampson, John Parsons and Lisa Miller.

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.

Liesel Gross noted there will be an Executive Session at the end of the regular agenda to discuss potential litigation. She also noted that the item under Wastewater, the Administrative Order Update that was marked as "tentative" on the agenda, will be discussed. Ms. Gross also noted that the February 2018 financial report was emailed to the Board under separate cover, posted to the website, and printed copies distributed at today's meeting.

APPROVAL OF MINUTES

March 12, 2018 Regular Meeting Minutes

Richard Bohner suggested minor corrections to the March 12, 2018 minutes.

On a motion by Richard Bohner, seconded by Norma Cusick, the Board approved the Minutes of the March 12, 2018 meeting as corrected (5-0). Deana Zosky abstained.

Kevin Baker arrived at 12:03 p.m.

PUBLIC COMMENTS

None.

ACTION AND DISCUSSION ITEMS

Suburban Division – Watershed Monitoring Program

John Parsons provided a PowerPoint presentation giving a brief update on the watershed flow monitoring program being developed by Al Guisepppe, Spotts, Stevens & McCoy (SSM). Mr. Parsons is asking for approval of the Capital Project Authorization in the amount of \$92,912.00 which includes the Professional Services Authorization to FYBR, Inc. in the amount of \$72,912.00 for the monitoring equipment and installation of the six additional monitoring stations that will be established and developed along the Little Lehigh Creek. The project will include having SSM calibrate each bridge site by comparing stream depth to flow volume. By measuring stream flow at selected locations, the continuous stream height monitoring stations will be used to calculate near-continuous flow readings of the stream discharge for the stream monitoring network. Chris Moughan explained the intent is to create a live data link to display stream levels internally for LCA staff, and in the future on the Authority's website for public viewing. Using the mesh network provided by FYBR will allow the Authority to set up thresholds and notifications that will notify Authority staff when levels drop or

flow is too high which may indicate flooding or water quality disturbances at the water treatment plant.

Deana Zosky had questions regarding the technical data regarding the depth versus flow and quantity versus quality. John Parsons commented that the network system will allow for greater expansion of monitoring capabilities for both quality and quantity parameters in the future, but the current proposal is for stream flow monitoring only.

Kevin Baker questioned the term of the maintenance agreement. Chris Moughan explained that the term is currently one year with an evaluation at the end of the year to discuss other options.

On a motion by Norma Cusick, seconded by Kevin Baker, the Board approved the Capital Project Authorization in the amount of \$92,912.00 which includes the Professional Services Authorization to FYBR, Inc. in the amount of \$72,912.00 (7-0).

Administrative Order Update

Liesel Gross updated the Board on the meeting with EPA and DEP that was held at the Authority on Friday, March 23, 2018. The Western Lehigh Sewerage Partners were also in attendance as well as representatives from the City of Allentown and its sewer signatory municipal entities. Both agencies would like to have a regional flow management plan developed and submitted in 120 days after receiving written notification of such request from EPA. If the plan is to their satisfaction, EPA will terminate the Administrative Order, with DEP assuming responsibility to oversee implementation of the regional plan that is submitted. The EPA stated they would like to see collaboration and coordination of all parties, a collection system operation and maintenance plan formalized for all parties, system characterization – flow metering and modeling and other ways to quantify peak flows coming from each jurisdiction and systems which will help municipalities with their infiltration and inflow (I&I) program, and have an I&I program codified with ongoing flow modeling and flow targets. There is a general agreement as to how this plan would come together amongst all the partners. Ms. Gross said the challenge will be to establish peak flow targets but the municipalities expressed commitment to collaboration at the EPA meeting.

MONTHLY FINANCIAL REVIEW

The monthly financial review for February 2018 was prepared by Ed Klein and sent to the Board and Staff under separate cover. Mr. Klein provided a brief review of the highlights in that report, and explained that a full-year forecast will be completed after the March financial statements are complete.

MONTHLY SYSTEM OPERATIONS OVERVIEW

John Parsons reviewed the Monthly System Operations Overview report for February 2018. Kevin Baker asked what drives the amount of water that is taken from each source. Mr. Parsons stated that a safe yield was determined for permitting purposes, and the Authority utilizes sources according to actual flows, treatment costs and other factors to increase efficiency and address fluctuating water quality that results from the weather patterns at times. Some discussion followed.

STAFF COMMENTS

None.

SOLICITOR'S COMMENTS

None.

PUBLIC COMMENTS / OTHER COMMENTS

Chairman Nagle called a recess at 12:50 p.m. The meeting reconvened at 12:55.

EXECUTIVE SESSION

An Executive Session was held at 12:55 p.m. to discuss potential litigation. The Executive Session ended at 1:31 p.m.

ADJOURNMENT

There being no further business, the Chairman adjourned the meeting at 1:31 p.m.

Richard H. Bohner
Secretary

MEMORANDUM

Date: April 9, 2018

To: Lehigh County Authority Board of Directors
From: Phil DePoe, Capital Works Program Manager
Subject: Allentown Division - Roof Replacements Phase II: Construction Phase

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization – Construction Phase	\$356,325
2 ⁽¹⁾	Professional Services Authorization – D’Huy Engineering	\$21,400
3	General Contract Award – Alan Kunsman Roofing	\$309,925

(1) Included in the Capital Project Authorization.

PROJECT OVERVIEW:

In accordance with the Trust Indenture securing Lehigh County Authority’s Series 2013 Bonds, Arcadis was hired to prepare an Independent Engineer’s Report (prepared annually in April) for the Allentown Water and Sewer Utility Concession. This overall condition assessment included the structures at the Allentown Division: Water Filtration Plant, Wastewater Treatment Plant, water booster stations, and reservoirs. This Report identified numerous roofs as in need of immediate repair.

D’Huy Engineering prepared a Roof Conditions Assessment Report in July 2014 to assist LCA with establishing a priority list for the roof replacements on the various buildings. Roof replacements identified in the Phase I Roof Replacement Project are complete. Ten out of thirteen roofs (Phase II) are planned for replacement in 2018. These are identified as follows:

- 19th Ward Pump Station (asphalt shingles)
- South Mountain Reservoir Gatehouse (asphalt shingles)
- Schantz Spring Gatehouse (asphalt shingles)
- Halstead Pump Station (asphalt shingles)
- 28th Street Pump Station (asphalt shingles)
- 16th Ward Pump Station (asphalt shingles)
- East Side Reservoir Gatehouse (asphalt shingles)
- Huckleberry Reservoir Gatehouse (modified membrane)
- KIWWTP Boiler Addition Area (modified membrane)
- KIWWTP Odor Control Building 13 (modified membrane)

Three roof systems at the Water Filtration Plant remain to be replaced at a later date, as they were assigned a lower risk based priority rating. These are identified as follows:

- 1928 Filter Building (modified membrane)
- Passageway Roof (modified membrane)
- High Service Pump Station (modified membrane)

FINANCIAL:

This Project will be funded by the LCA Allentown Division.

PROJECT STATUS:

The project was advertised for bid on March 6, 2018. A mandatory pre-bid meeting was held on March 13, 2018. Bids were received on March 28, 2018.

THIS APPROVAL – CONSTRUCTION PHASE:

The construction phase includes activities that are necessary to replace the ten roof systems. The General Contractor will be responsible for all construction activities. The design engineer will be responsible for periodic oversight of the construction, which will be supplemented by in-house project management provided by LCA.

BIDDING SUMMARY:

The project requires a General Construction (GC) Contract. The bid results are summarized below:

Bidder	Amount
Alan Kunsman Roofing	\$309,925
Pro Com Roofing Corp.	\$329,470
Pro D.A. Nolt, Inc.	\$330,938

Based upon the review of the bids, we recommend award of the General Construction contract to Alan Kunsman Roofing, subject to the receipt of the necessary Performance Bonds, Insurance and other required documentation.

PROFESSIONAL SERVICES:

D’Huy Engineering has been our design consultant on this project and will provide construction engineering and on-site inspection services for the construction phase of the roof replacements. Their work will also include:

1. Attend and facilitate a pre-construction conference
2. Attend two job conference meetings
3. Review and approve contractor’s submittals and respond to RFIs
4. Process any necessary change orders
5. Provide limited construction observation
6. Prepare punch list and final project close-out
7. As-built drawing preparation

PROJECT SCHEDULE:

The specifications require the project to be complete by the end of July 2018.

FUTURE AUTHORIZATIONS:

No future authorizations are anticipated for this project.

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	AD-W-18-2	BUDGET FUND:	Allentown Div\Water\Capital
PROJECT TITLE:	Allentown Division – Roof Replacements Phase II: Construction Phase	PROJECT TYPE:	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input type="checkbox"/> Amendment No. 1
THIS AUTHORIZATION:	\$356,325		
TO DATE (W/ ABOVE)	\$408,825		

DESCRIPTION AND BENEFITS:

D’Huy Engineering prepared a Roof Conditions Assessment Report in July 2014 to assist LCA with establishing a priority list for the roof replacements on buildings located at the Wastewater Treatment Plant, Water Distribution & Filtration Plant, Wastewater Pretreatment Plant and various satellite gate and pump houses. Roof replacements for the buildings identified during the Phase I Project were completed in 2016. Ten of the 13 remaining roofs (Phase II) are planned to be completed as part of this authorization.

This capital project will be funded by the LCA Allentown Division.

Please see attached Board Memo for further project details.

Authorization Status:

<i>Previous Authorizations</i>	
<i>Design Phase</i>	<i>\$52,500</i>

Requested This Authorization	
<i>Construction Phase</i>	
Staff	\$15,000
Construction Contractor	\$309,925
Engineering Consultant	\$21,400
Contingency	10,000
Total This Authorization	\$356,325

Future Authorizations	None Anticipated
Total Estimated Project	\$408,825

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
AMENDMENT NO. 1**

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

Date: April 9, 2018
Requested By: Phil DePoe

Approvals
Department Head: _____
Chief Executive Officer: _____

Allentown Division – Roof Replacements Phase II: Construction Phase

D'Huy Engineering, Inc. will assist LCA with construction administration support and will provide periodic inspection services for the roof replacement project.

This Authorization

Professional Services Authorization: ***\$21,400***

Professional Services (1)
1. Prepare for, attend, and facilitate a pre-construction conference
2. Prepare for and attend two job conference meetings
3. Review and approve contractor's submittals and respond to RFIs
4. Process any necessary change orders
5. Provide limited construction observation
6. Prepare punch list and final project close-out
7. As-built drawing preparation

(1) For Construction Phase Only.

Please reference the cover Memo for additional information.

Design and Bidding Phase

Previous Authorization: ***\$48,500 (authorized in December 2015)***

Total

Not to be exceeded without further authorization: ***\$69,900***

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:** _____

MEMORANDUM

Date: April 9, 2018

To: Lehigh County Authority Board of Directors
From: Phil DePoe, Capital Works Program Manager
Subject: Allentown Division – WWTP: Primary No. 2 Cleaning - Construction Phase

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization – Construction Phase	\$122,089
2 ⁽¹⁾	Professional Services Authorization – GHD Inc.	\$2,819
3 ⁽¹⁾	General Contract Award – Denali Water Solutions LLC	\$104,270

(1) Included in the Capital Project Authorization.

PROJECT OVERVIEW:

During the recent Digester Cover Replacement Project, both the Secondary and Primary No. 1 Digester were cleaned by a contractor prior to their covers being removed and replaced. As the cleaning of these digester tanks is performed on a 5 year cycle at KIWWTP, Primary Digester No. 2 is due for cleaning. This work is to be performed by an outside contractor as well.

FINANCIAL:

This Project will be funded by the LCA Allentown Division.

PROJECT STATUS:

The project was advertised for bid on February 23, 2018. A pre-bid meeting was held on March 8, 2018. Bids were received on March 23, 2018.

THIS APPROVAL – CONSTRUCTION PHASE:

The construction phase includes activities that are necessary to clean the Primary No. 2 Digester. The General Contractor will be responsible for all construction activities, including but not limited to the following:

- Removal of residuals content
- Dewatering and transfer of residuals content to trucks for LCA disposal
- Internal cleaning of digester with high pressure plant utility water

The design engineer will be responsible for periodic oversight of the construction, which will be supplemented by in-house project management provided by LCA.

BIDDING SUMMARY:

The project requires a General Construction (GC) Contract. The bid results are summarized below:

Bidder	Bid Results
Denali Water Solutions LLC	\$105,270.00
Spectraserv Inc.	\$115,842.20

Vapor Industries	\$164,985.00
Franc Environmental, Inc.	\$166,589.70

Based upon the review of the bids, we recommend award of the General Construction contract to Denali Water Solutions LLC, subject to the receipt of the necessary Performance Bonds, Insurance and other required documentation. LCA staff has reviewed the supplied references and Denali Water Solutions LLC is qualified to complete this project.

PROFESSIONAL SERVICES:

GHD Inc. has been our design consultant on this project and will provide construction engineering services for the construction phase of the project. Their work will include:

1. Attend the pre-construction meeting and one progress meeting
2. Review and respond to contractor RFIs
3. Process any necessary change orders
4. Prepare final project close-out

PROJECT SCHEDULE:

The specifications require the project to be complete by the middle of June 2018.

FUTURE AUTHORIZATIONS:

No future authorizations are anticipated for this project.

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	AD-S-18-2	BUDGET FUND:	Allentown Div\Wastewater\Capital
PROJECT TITLE:	Allentown Division – WWTP: Primary No. 2 Digester Cleaning - Construction Phase	PROJECT TYPE:	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input type="checkbox"/> Amendment No. 1
THIS AUTHORIZATION:	\$122,089		
TO DATE (W/ ABOVE)	\$129,689		

DESCRIPTION AND BENEFITS:

During the recent Digester Cover Replacement Project, both the Secondary and Primary No. 1 Digester were cleaned by a contractor prior to their covers being removed and replaced. As the cleaning of these digester tanks is performed on a 5 year cycle at KIWWTP, Primary Digester No. 2 is due for cleaning. This work is to be performed by an outside contractor as well.

This capital project will be funded by the LCA Allentown Division.

Please see attached Board Memo for further project details.

Authorization Status:

<i>Previous Authorizations</i>	
<i>Design Phase</i>	<i>\$7,600</i>

Requested This Authorization	
Construction Phase	
Staff	\$5,000
Construction Contractor	\$104,270
Engineering Consultant	\$ 2,819
Contingency	10,000
Total This Authorization	\$122,089

Future Authorizations	None Anticipated
Total Estimated Project	\$129,689

REVIEW AND APPROVALS:

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



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**PROFESSIONAL SERVICES AUTHORIZATION
AMENDMENT NO. 1**

Professional: GHD INC.
3655 East Swamp Road
Doylestown, PA 18902

Date: April 9, 2018

Requested By: Phil DePoe

Approvals

Department Head: _____

Chief Executive

Officer: _____

Allentown Division – WWTP: Primary No. 2 Digester Cleaning – Construction Phase

GHD Inc. will perform the construction phase related services for the cleaning of the Primary No. 2 Digester at the City of Allentown’s Wastewater Treatment Plant (WWTP).

This Authorization

Professional Services Authorization: **\$2,819**

Professional Services ⁽¹⁾
1. Attend the pre-construction meeting and one progress meeting
2. Review and respond to contractor RFIs
3. Process any necessary change orders
4. Prepare final project close-out

(1) For Construction Phase Only.

Please reference the cover Memo for additional information.

Design and Bidding Phase

Previous authorization: **\$3,538**

Total

Not to be exceeded without further authorization: **\$6,357**

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:** _____

FINANCE & ADMINISTRATION

ACTION ITEMS

DISCUSSION ITEMS

1. Allentown Water / Sewer System Lease – Overview of Agreement – April 9, 2018

Since more than half of LCA’s Board of Directors were appointed within the past five years and were not present at the time that decisions were made to enter into the Allentown Concession Agreement to lease the water and sewer system in 2013, staff would like to present details about the agreement, key provisions and other terms of interest, for review and discussion.

2. Muhlenberg College Student Presentation – Senior Business Project – April 23, 2018

A team of three students from the Muhlenberg College Business program has selected LCA for a senior / graduation project for their Business Policy and Strategy class, in which they would provide some aspect of business analysis and advice. Working with LCA personnel over the past two months, the three Muhlenberg seniors have been developing a methodology to prioritize proposed capital projects via multiple input data points including both financial and qualitative factors. As part of their efforts to complete the project, they would like to present their study to the LCA Board of Directors on April 23, 2018.

3. Allentown Water / Sewer System Lease – Financial Evaluation – April 23, 2018

In October 2017, LCA authorized a project to develop a detailed, long-term financial model of the Allentown water/sewer system lease and to analyze recommendations for the Authority’s consideration to improve financial conditions and ensure long-term financial sustainability of the system. The primary team of consultants who worked on this project will be available to present results and recommendations for Board discussion.

INFORMATION ITEMS

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

CERTIFICATES OF DEPOSIT						
26-Feb-18			Gross	Date of	Date	Net Rate
Fund	Bank	Location	Amount	Purchase	Due	%
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:

- Green Acres Mobile Home Court, master meter 590 existing units (sfd), UMT
- 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:

- 5329-5347-5357 Hamilton Blvd., 1 Commercial lot, LMT – No Change
- 5354 Hamilton Blvd., 1 commercial lot, LMT – No Change
- 5374/5392 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
- 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:

- Suburban Self Serve Carwash, LMT, 1104 gpd
- 3612 Orchid Place, LMT, 800 gpd

WATER

ACTION ITEMS

1. **Allentown Division – Water Filtration Plant: Roof Replacement Phase II – April 9, 2018**

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 were received 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.

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. 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. **(No Change)**.

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. **(No Change)**.

3. **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. The goal for Installation and startup is in the May/June 2018 timeframe. Board approval for the construction phase is anticipated during May 2018.

4. **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. **(No Change)**.

5. **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 revising the proposed pump station easement as requested

by the property owner. We anticipate bidding the pump station project later this year (**No Change**).

6. **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. 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.

7. **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**).

8. **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 May 2018.

9. **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. The project is substantially complete.

10. **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 and the project is approximately two thirds complete.

11. **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**).

12. 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. The installation of the water line and meter pit is complete. Testing of the line should be completed the week of April 2nd. The tie-in can then be made to the MHP's pump station.

13. 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. 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. Total daily flow recordings at Schantz Spring that will include the spring field bypass and the tank overflow will be developed. SSM will assist LCA in calibrating surface flows under the bridges based on the recorded stream elevations. Authorization for the award of the contract was approved at the 3/26/2018 Board meeting. Contract development with FYBR is currently underway.

14. 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 is 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 authorization will be requested at the 4/23/18 board meeting.

WASTEWATER

ACTION ITEMS

1. **Allentown Division – Kline’s Island WWTP: Primary No. 2 Digester Cleaning – April 9, 2018**

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 were received on March 23, 2018. Construction approval is requested at the 4/9/18 Board Meeting. The cleaning of Primary No. 2 Digester will then begin on May 7, 2018 and be completed by mid-June 2018. This capital project will be funded by the LCA Allentown Division

DISCUSSION ITEMS

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 June 11, 2018 Board Meeting. Construction of the project is expected to begin in July 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. **(No Change)**

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. The 30% design drawings and specifications have been received and are being reviewed. The project is tentatively on hold - awaiting formal direction from the City.

4. **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 April 2018. Construction approval is

expected at the June 11, 2018 Board Meeting. Construction will begin in early July and will be completed in early August. This capital project will be funded by the LCA Allentown Division.

5. **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 Spring 2018. **(No Change)**

6. **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. It will be about one month until the chemical tanks will be delivered.

7. **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 was held on March 23, 2018, at which time EPA representatives indicated they would like to see the regional flow management plan prepared and submitted to EPA within 120 days and so long as the plan is satisfactory, EPA would consider terminating the Administrative Order. Should this action take place, then the Pa. Department of Environmental Protection would resume its enforcement oversight of the program. LCA, the Western Lehigh Sewerage Partnership, City of Allentown, and City municipal signatories agreed to this approach in concept and are awaiting written instructions and a submission deadline from EPA following the meeting. Meetings are being arranged for additional collaboration among the parties to develop the details of a regional flow management program in advance of submission to EPA.

8. **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. The project is currently under construction.

9. **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)**.

10. 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 was issued dated 3/26/18. A pre-construction meeting will be conducted in early April 2018.

11. Allentown Division – Kline’s Island WWTP Master Plan

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 was approved at the 3/12/2018 Board meeting.

12. Suburban Division – Heidelberg Heights Sanitary Sewer Rehabilitation

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. The board authorized the construction phase of this project at the 3/12/2018 Board meeting. LCA will be issuing a notice to proceed on March 29, 2018 to SJM construction.