



**BOARD MEETING AGENDA – September 10, 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](http://lehighcountauthority.org). Recordings of LCA meetings are for public convenience and internal use only and are not considered as minutes for the meeting being recorded, nor are they part of public record. Recordings may be retained or destroyed at LCA’s discretion.

• *Public Participation Sign-In Request*

2. Review of Agenda / Executive Sessions

3. Approval of Minutes

• *August 27, 2018 Board meeting minutes*

4. Public Comments

5. Action / Discussion Items:

**FINANCE AND ADMINISTRATION**

**WATER**

- *Allentown Division – Water Main Replacement Program Cycle 4 (tan)*
- *Suburban Division – Water Meter Replacement Project Change Order (yellow)*

**WASTEWATER**

- 6. Monthly Project Updates / Information Items (1<sup>st</sup> Board meeting per month) – **September 2018 report attached**
- 7. Monthly Financial Review (2<sup>nd</sup> Board meeting per month)
- 8. Monthly System Operations Overview (2<sup>nd</sup> 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.*

September 24, 2018

October 8, 2018

October 22, 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** **August 27, 2018**

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The Meeting of the Lehigh County Authority was called to order at 12:05 p.m. on Monday, August 27, 2018, Chairman Brian Nagle presiding. Other Members present at the commencement of the meeting were: Linda Rosenfeld, Jeff Morgan, Richard Bohner, Norma Cusick, Scott Bieber and Ted Lyons. Authority Staff present were Liesel Gross, Chuck Volk, Ed Klein, Pat Mandes, Susan Sampson, Chris Moughan, John Parsons, Kevin German, Mark Bowen 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 stated there are no changes to the agenda but there are two items for Executive Session at the end of the meeting to discuss matters of real estate and potential litigation.

### **APPROVAL OF MINUTES**

#### **August 13, 2018 Regular Meeting Minutes**

Richard Bohner noted a minor correction to the Minutes of August 13, 2018.

On a motion by Richard Bohner, seconded by Norma Cusick, the Board approved the Minutes of the August 13, 2018 meeting as corrected (5-0). Scott Bieber and Norma Cusick abstained.

### **PUBLIC COMMENTS**

None.

### **ACTION AND DISCUSSION ITEMS**

Chairman Nagle announced that the Board received their packets of meeting information prior to the meeting.

#### **2017 Annual Risk Management Report**

Liesel Gross gave a brief overview of the 2017 Annual Risk Management Report as presented for information only. Kevin German, Risk Manager for the Authority was also present to answer any questions. Ted Lyons asked about the drug testing policy. Mr. German and Ms. Gross explained the drug testing is done randomly to CDL drivers while all other employees would only be tested if there was cause such as an accident which would require towing or cause an injury.

Kevin Baker arrived at 12:10 p.m.

Richard Bohner congratulated Mr. German on another good year. Norma Cusick asked about insurance premium costs and if they have been lowered due to our good performance. Mr. German replied the Authority has received credits for strong performance in the workers compensation area. Mr. German also noted that the Authority's highest risk is at the wastewater treatment plant regarding environmental hazards, employee safety issues, small accidents, and cuts.

#### **LCA 2020 Strategy – 2018 Action Plan Update & Key Performance Indicators**

Liesel Gross gave an overview of the 2018 Action Plan as it pertains to the Authority's strategic goals. Mark Bowen was present to give a brief presentation and review of what the new key performance indicators (KPI) dashboard looks like. Ms. Gross reviewed the highlights of all four goal areas, Product Quality, Financial Viability, Infrastructure Stability, and Employee/Leadership Development. Scott Bieber asked about the status of the program regarding the loss of institutional knowledge under Employee/Leadership Development. Ms. Gross explained that the program is working but is constantly evolving as retirement risk changes for the mix of employees. In addition, because the Authority has many individual contributors on the team, internal candidates are not always available to fill open positions when they become available, and planning for retirements in those cases take a long lead time that is not always available.

Mark Bowen presented the draft of the KPI dashboard to highlight the program's capabilities. The KPI dashboard is a customizable system using live data capturing all work performed in all divisions, and static data in other cases as provided by managers. The KPIs are focused on measuring and displaying performance related to the four primary goal areas. For the Product Quality goal, the dashboard displays information on compliance incidents such as notices of violation and sewer system overflows. For the Financial Viability goal, the dashboard displays key indicators drawn from the monthly financial report. For the Infrastructure Stability goal, the dashboard displays data from the work order management system on preventive and corrective maintenance and asset condition scores. For the Employee/Leadership Development goal, the dashboard displays key employee statistics and a qualitative scoring of the Authority's implementation of best practices. The plan is to have a final dashboard format accessible for all employees on SharePoint.

#### **Allentown Division – Water Filtration Plant: SCADA System Replacement**

Chris Moughan gave an overview of the Allentown Division – Water Filtration Plant SCADA Upgrade project that will replace the existing SCADA application with Dynac ES SCADA application, providing a plant-wide control system. This project is part of the Water Master Plan. Approximately \$280,000.00 will be spent this year for equipment with the program closing out by October 2019. Mr. Moughan is asking for approval of the Capital Project Authorization in the amount of \$697,559.00 which included the Professional Services Authorization to Kapsch TrafficCom USA, Inc. in the amount of \$667,559.00.

Mr. Moughan explained that this upgrade will allow the Authority to make in-place upgrades to the system and equipment. Kapsch is a good choice because of the work history and their programming language is comparable to what is already in place at the other plants. Board discussion followed.

On a motion by Norma Cusick, seconded by Linda Rosenfeld, the Board approved the Capital Project Authorization in the amount of \$697,559.00 which included the Professional Services Authorization to Kapsch TrafficCom USA, Inc. in the amount of \$667,559.00 (8-0).

#### **MONTHLY FINANCIAL REVIEW**

Ed Klein gave an overview of the July 2018 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 July 2018. Richard Bohner asked if the people who get shut off for non-payments get reconnected. Sue Sampson replied that most customers pay the same day or the next day to have their service restored.

**STAFF COMMENTS**

Ed Klein updated the Board on the status of the 2013C Bond refinancing efforts. After pursuing a number of institutions regarding bank loans or bonds, there are two interested parties, M & T Bank and Lafayette Ambassador Bank. The City is currently reviewing an amendment to the existing consent agreement that would allow the refinancing to occur on a parity basis, which would be favorable for the Authority. Mr. Klein stated that the Authority is going to start the process of pursuing a bond in case the efforts to secure a bank loan are not successful. The Board questioned what the difference would be between the bank loan and a bond. Mr. Klein said the optimum would be the bank loan because the bonds would require a lengthy process and a higher interest rate and financing fees.

**SOLICITOR'S COMMENTS**

None.

**PUBLIC COMMENTS / OTHER COMMENTS**

Jennifer McKenna, City of Allentown Compliance Office, thanked the Board and Staff for the City Works presentation and asked what the field inspections and staff assessment ratios would be between preventative maintenance and corrective maintenance. Chris Moughan responded by explaining that there will be dashboards that will be evaluated by upper management to make weighted calculations.

Ms. McKenna also asked for an update on the County Task Force meetings regarding the Authority's charter extension request. Liesel Gross gave an update regarding a meeting with the team last week. Copies of the Authority's audit were provided and there was a positive discussion regarding the Authority's finances. She explained that the County Commissioners will get back to her about what they recommend as the next step to requesting a charter extension.

Chairman Nagle called a recess at 1:25 p.m. The meeting reconvened at 1:30 p.m.

**EXECUTIVE SESSION**

An Executive Session was held at 1:30 p.m. to discuss real estate and potential litigation. The Executive Session ended at 2:18 p.m.

**ADJOURNMENT**

There being no further business, the Chairman adjourned the meeting at 2:18 p.m.

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Richard Bohner  
Assistant Secretary



**Lehigh County Authority**

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**MEMORANDUM**

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**Date:** September 10, 2018

**To:** Lehigh County Authority Board of Directors  
**From:** Jason Peters, Capital Projects Coordinator  
**Subject:** Allentown Division- Water Main Replacement Program  
Construction Phase for- Cycle 4

**MOTIONS /APPROVALS REQUESTED:**

No.	Item	Amount
1	<u>Capital Project Authorization – Amendment No. 1</u> Construction Phase, Cycle-4:	\$1,799,411
2 **	<u>Professional Services Authorization Cycle 4:</u> <ul style="list-style-type: none"> <li>• Construction Engineering and Managements Services, Amendment No. 1 - <i>Gannett Fleming Inc.</i></li> </ul>	\$53,395
3 **	<u>Contract Award Cycle-4:</u> <ul style="list-style-type: none"> <li>• General Construction – <i>DOLI Construction Corporation</i></li> </ul>	\$1,526,016

(\*\*) *Included in the Capital Project Authorization*

**PROJECT OVERVIEW:**

The Operating Standards of the Lease Agreement (Agreement) require Lehigh County Authority (LCA) to annually replace 2 miles of aged spun and/or pit cast-iron water mains, except in the first year where only 1-mile was required. This Project covers Cycles 4-6 which addresses the main replacement requirements for years 2018 through 2020 and includes approximately 6 miles of pipe. The main replacements must be coordinated with the City of Allentown’s (COA) Streets program, other City departments, outside agencies, PennDOT and private utilities such as UGI. Given the complex nature of a project that includes construction in a highly populated urban area with many underground facilities and maintenance of traffic flow, the many challenges presented require a significant amount of coordination and public relations efforts.

**FUNDING:**

The Project will be funded by the LCA Allentown Division. It is identified as Required work in the Lease and is classified as a Major Capital Improvement where the cost of the project will be recovered from the ratepayers over a 30-year period above the Lease rate caps.

**PROJECT STATUS:**

In March 2016 the Board approved the Design Phase and Pipe Prioritization Assessment Program for Cycles 4-6 of the Allentown Division Project. On July 23, 2018 the Board rejected bids for the construction phase of 2.2 miles of main replacement, due to significantly higher bids than anticipated, which exceeded LCA’s 2018 budget for this work. On August 13, 2018 the board rejected the authorization of a construction contract change order to the Suburban Division Main Replacement Project (Cycle 4) to include an additional 0.97 mile of water main located in the Allentown Division, in order to satisfy the Lease requirement for 2018. At that time the Board directed rebidding the Project as soon as possible.

Working closely with the City to obtain Major Capital Improvement approvals (as required by the lease) and other outside agencies, LCA has obtained all approvals and permits required for the Cycle-4 Construction Phase of this project.

Construction inspection services are to be performed in-house by LCA staff, in order to reduce budget costs.

**THIS APPROVAL: CONSTRUCTION PHASE CYCLE 4**

The Allentown Division Cycle 4 main replacement project will include the a pipe replacement length of 0.97 mile in order to satisfy the annual Lease requirement in 2018 (utilizing 1.1 mile of credited water main replacements from previous cycles). The 0.97 mile sections are located mainly along City streets, with only one intersection within a PennDOT right of way.

**BIDDING SUMMARY - CONSTRUCTION CONTRACTS**

The project was advertised for bid on August 17, 2018, and bids were opened on September 7, 2018. The bidding results are as shown in Table 1 below.

<b>Table 1</b>	
<b>General Construction</b>	
<b>Bidder</b>	<b>Amount</b>
<b><i>DOLI Construction Corporation</i></b>	<b><i>\$1,526,016.00</i></b>
JOAO Bradley Construction Co., Inc.	\$1,896,247.00
Anrich, Inc	\$2,231,634.53
James T. O’Hara, Inc.	\$2,392,055.00
PACT ONE, LLC	\$2,062,882.00
Wexcon, Inc.	\$2,063,162.50

Reference checks for, DOLI Construction Corporation have identified no issues. In fact, DOLI Construction Corporation performed well a few years ago on the LCA Allentown Division Cycle 1 water main replacement project. Therefore, we recommend awarding the General Construction contract to DOLI Construction Corporation of Chalfont, PA; subject to the receipt of the necessary Performance Bonds, Insurance and other required documentation.

## **PROFESSIONAL SERVICES CYCLE 4**

### *1. Construction Engineering & Management*

Gannett Fleming Inc. our design consultant, will provide construction engineering and management related services for the construction phase of the project. The work will generally include:

- Conduct pre construction conference.
- Review contractor's construction schedule and updates for compliance with project.
- Arrange and conduct monthly progress meetings and provide meeting minutes.
- Review all contractor submittals to ensure that design objectives and requirements of the Contract Documents are met.
- Review documentation for change order requests
- Review monthly pay estimates
- Perform substantial and final completion inspections
- Prepare Change Orders.
- Respond to contractor Requests-for-Information.
- Review certified payrolls.
- Conduct walkover of the project site with contractors and LCA representatives.
- Provide LCA with recommendation on completeness of work, final acceptance and release of final payment.

### **SCHEDULE:**

Assuming approval of the Construction Phase at the September 10, 2018 Board meeting, all water main replacements for cycle 4 will be operational by December 3, 2018 (i.e. the substantial completion date).

# CAPITAL PROJECT AUTHORIZATION

## Amendment No.1

**PROJECT NO.:** AD-W-18-3 **BUDGET FUND:** Allentown Div\Water\Capital

**PROJECT TITLE:** Allentown Division -Water Main Replacement Program Cycles 4-6

- PROJECT TYPE:**
- Construction
  - Engineering Study
  - Equipment Purchase
  - Amendment No.1

**THIS AUTHORIZATION TO DATE (W/ABOVE)** \$ 1,799,411  
\$ 2,760,866

**DESCRIPTION AND BENEFITS:**

The Operating Standards of the Lease Agreement (Agreement) require Lehigh County Authority (LCA) to annually replace 2 miles of aged spun and/or pit cast-iron water mains, except in the first year where only 1-mile was required. This Project covers Cycles 4-6 which addresses the main replacement requirements for years 2018 through 2020 and includes approximately 6 miles of pipe.

The replacements of these mains are critical in meeting the requirements of the Lease Agreement but also will provide increased reliability of water service for our customers.

This CPA includes 0.97 mile of main replacement and will satisfy the 2018 Lease requirements per the Operating Standards.

**THIS AMENDMENT –Construction Phase, Cycle-4**

Please reference the cover Memo for additional information.

Previous Authorizations	
Design Phase Cycles 4-6	\$961,455

<b>REQUESTED THIS AUTHORIZATION</b>	
<b>Construction Phase Cycle 4</b>	
<b>Staff</b>	<b>\$100,000</b>
<b>Professional Services</b>	
<b>Construction Engineering / Management</b>	<b>\$53,395</b>
<b>General Construction Contract</b>	<b>\$1,526,016</b>
<b>Miscellaneous</b>	<b>\$20,000</b>
<b>Contingency</b>	<b>\$100,000</b>
<b>Total This Authorization</b>	<b>\$1,799,411</b>

Total Estimated Project	\$2,760,866
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**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:** GANNETT FLEMING, INC.  
P.O. Box 67100  
Harrisburg, PA 17106

**Date:** September 10, 2018

**Requested By:** Jason Peters

**Approvals**  
**Department Head:** \_\_\_\_\_  
**Chief Executive Officer:** \_\_\_\_\_

**Allentown Division – Water Main Replacement Program Cycles 4-6**

*Previous Authorizations- Design Phase, Cycles 4-6: \$601,455*

**This Authorization- Construction Phase, Cycle-4: \$53,395**

Gannett Fleming, Inc. will provide construction phase services including but not limited to conducting pre-construction, progress and close out meetings; catalog cut / shop drawing review and approval; change order administration, RFI responses; and technical assistance within the following Professional Services.

<b>Professional Services</b>
1. Construction Engineering and Management Services

Please reference the cover Memo for additional information.

**Cost Estimate (not to be exceeded without further authorization): \$654,850**

**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:** \_\_\_\_\_

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# MEMORANDUM

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**Date:** August 31, 2018

**To:** Lehigh County Authority Board of Directors  
**From:** Amy Kunkel, Capital Works Project Engineer  
**Subject:** Suburban Division – 2017 Water Meter Replacement Project - Construction Phase  
CHANGE ORDER #1

**MOTIONS / APPROVALS REQUESTED:**

No.	Item	Amount
1	<u>Capital Project Authorization – Construction Phase Amendment No. 1:</u>  Core and Main– Construction phase change order	\$100,000

**PROJECT OVERVIEW:**

The existing (MXU) radio read unit that Sensus used on the older meters is being replaced with new “M Units” and meter reading equipment. The new radio read equipment is compatible with our existing meter reading equipment, which will continue to read the old style radio units that have not been upgraded as part of this project.

The older MXU units were expected to have a 7 year battery life. As such, there are many meters less than 15 years old which do not fall within the meter replacement project, but cannot be read because of MXU failure. The General Construction contract includes replacement of approximately 800 of these failed units with new M Units. These new units will have a 20 year battery life.

**CHANGE ORDER SUMMARY:**

The older MXU radio units continue to fail as they reach the end of their battery life. This construction phase change order requested by LCA is to replace approximately 600 additional transceiver units on “non-read” meters. The additional quantity will be paid at the unit price per the contract.

**FINANCIAL:**

This project is funded by the LCA Suburban Division.

**PROJECT STATUS:**

Construction of the original contract is substantially complete. A time extension will be granted to complete the additional work under this change order.

**FUTURE AUTHORIZATIONS:**

None anticipated.

## CAPITAL PROJECT AUTHORIZATION AMENDMENT NO. 1

<b>PROJECT NO.:</b>	SD-W-17-5	<b>BUDGET FUND:</b>	Suburban Div\Water\Capital
<b>PROJECT TITLE:</b>	Suburban Division 2017 Water Meter Replacement Project - Construction Phase	<b>PROJECT TYPE:</b>	
<b>THIS AUTHORIZATION:</b>	\$100,000	<input checked="" type="checkbox"/>	Construction
<b>TO DATE (W/ ABOVE)</b>	\$1,768,800	<input type="checkbox"/>	Engineering Study
		<input type="checkbox"/>	Equipment Purchase
		<input checked="" type="checkbox"/>	Amendment No. 1

### CONTRACT AMENDMENT NO. 1 – CONSTRUCTION PHASE CHANGE ORDER

#### DESCRIPTION AND BENEFITS:

This construction phase change order requested by LCA is to replace approximately 600 additional transceiver units on “non-read” meters. Existing radio units continue to fail as they reach the end of their battery life. The additional “non-read” units have been accumulating since the start of this project. The additional quantity will be paid at the unit price per the contract.

Please see attached Board Memo for further project details.

#### Authorization Status:

<i>Previous Authorizations</i>	
<i>Construction Phase</i>	<i>\$1,668,800</i>
<b>Requested This Authorization</b>	
<i>Construction Phase Contract Amendment No. 1</i>	
<b>General Contractor: Core and Main</b>	<b>\$100,000</b>
<b>Total This Authorization</b>	<b>\$100,000</b>
Future Authorizations Anticipated	None
Total Estimated Project	\$1,768,800

#### REVIEW AND APPROVALS:

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

**FINANCE & ADMINISTRATION**

**ACTION ITEMS**

**1. Allentown Division – 2013C Bonds – September 24, 2018**

Authority staff are soliciting short-term borrowing for the refinancing of the City Series 2013C Bonds. An offer has been received from Lafayette Ambassador Bank which is contingent upon approval from the City for the allowance of this debt to be in parity with existing debt. City approval is expected and when the Consent Agreement is signed by the City and all appropriate parties, then a Board resolution to approve the financing will be offered at the next available meeting. It is feasible that this can be ready for the September 24, 2018 meeting.

**2. 2019 Budget – September 24, 2018**

Preliminary budget review of each of the major funds is scheduled for the September 24, 2018 meeting.

**DISCUSSION ITEMS**

**INFORMATION ITEMS**

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

CERTIFICATES OF DEPOSIT						
27-Jun-18			Gross	Date of	Date	Net Rate
Fund	Bank	Location	Amount	Purchase	Due	%
LLRI CR	Eaglebank	Bethesda, MD	245,000.00	5/31/18	3/31/20	2.60
LLRI CR	BMO Harris Bank National Assn	Chicago, IL	245,000.00	5/31/18	6/1/20	2.80
LLRI CR	UBS Bank USA	Salt Lake City, UT	200,000.00	6/13/18	6/15/20	2.80

- 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:

- 67 Werley Road, 112 apartments & clubhouse, UMT – No Change
- 5354 Hamilton Blvd., 1 commercial lot, LMT – No Change
- Above & Beyond (personal care facility), 2 commercial lots, UMT – No Change
- CVS, 1 commercial lot, LMT
- Fields at Indian Creek, Phase 3, 57 residential units (sfd), UMiIT/Emmaus, water & sewer – No Change
- Kohler Tract, 123 residential lots (sfa), UMiIT, water and sewer – No Change
- Mary Ann’s Plaza, 1 lot with 5 commercial units, NWT – No Change
- Parkland School District, new elementary school, 1 lot, UMT
- Spring View (Bortz Tract), 14 commercial units, UMT – 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  
Cedarbrook Road Industrial Park, 2 industrial lots, 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  
Lehigh Hills, Lot 2 Pad Sites, 1 commercial lot with medical office building & restaurant, UMT  
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  
Ridings at Parkland, 63 residential units (sfd), NWT – 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  
Towneplace Suites by Marriott, 91-room hotel, UMT – 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

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1. **Allentown Division – Water Main Replacement Program Cycle 4 – September 10, 2018**

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 bids will be opened on September 7, 2018.

2. **Suburban Division – Water Meter Replacement Project Change Order – September 10, 2018**

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 substantially complete. A change order is requested for the replacement of approximately 600 additional “non-read” radio units.

### DISCUSSION ITEMS

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### INFORMATION ITEMS

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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 September 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 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 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 has been submitted to PaDEP. This project has been delayed several times, and the goal for Installation and startup is now in the Q4 timeframe. Approval for the construction phase is anticipated at the October 8 Board meeting. This project will be funded by LCA Allentown Division.

3. **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 were received on 3/27/2018. Board approval for the construction phase of the project was granted at the 4/23/2018 Meeting. Construction was completed in late August and minor punchlist items remain. This project was funded by LCA Allentown Division.

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.

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

The project consists of the replacement of approximately 1.36 miles of aged and/or failing Cast Iron water main throughout multiple location in the Suburban Division. The LCA Suburban Division will fund the project. The project bids were opened on July 18, 2018 and project authorization was awarded at the 7/23/18 board meeting. Construction is to be completed in Q4 of 2018. **(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 investigating an alternate site for the pumping station. **(No Change)**

7. **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 28<sup>th</sup> and construction should be completed by late Spring 2019.

8. **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. The Public Water Supply Permit was submitted to DEP at the end of July and bid phase is expected to occur in the last quarter of 2018.

9. **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 Guiseppa (SSM, Inc.) in 2017. 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 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. **(No change)**

**10. 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 was authorized at the 4/23/18 Board meeting, and design is anticipated to be completed and ready for bid by Fall 2018. **(No Change)**



**WASTEWATER****ACTION ITEMS**

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**DISCUSSION ITEMS**

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**INFORMATION ITEMS**

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**1. 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 was completed at the end of August 2018 and minor punchlist items remain. This capital project will be funded by the LCA Allentown Division.

**2. 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 has now directed to “pause” the design phase of the project as the EPA is scheduled to provide further AO direction. **(No Change)**

**3. 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. A kickoff meeting was held on May 24, 2018. Data collection and site assessments have been completed. Condition Assessment and Process Optimization Workshops have been conducted. The project is to be finished by the end of 2018. This project will be funded by LCA Allentown Division.

**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. The project was advertised in late April 2018 and bids were received on May 24, 2018. Construction approval granted at the June 11, 2018 Board Meeting. Construction began in early August and will be completed by the end of September. This capital project will be funded by the LCA Allentown Division.

**5. 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 will be completed by October 2019. This Major 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 finished by Summer 2017. Additional scope work under existing contract has been performed and is anticipated to be closed out by end of Summer 2018 (**No Change**).

7. **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. High flows to the pump station due to wet weather events have delayed work on the project so completion is expected to be pushed back to the Fall of 2018.

8. **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 dry weather period in late Summer 2018 to conduct test trials at the PTP for reducing flow to the Park Pump Station via utilization of the pretreatment plant flow equalization basin (hold back flow) in order to determine the acceptable duration for a temporary shut-down of the station in order to perform the force main inspection (**No Change**).

9. **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 Summer 2019. **(No Change)**

**10. 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. This 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. A proposal for design phase services has been requested of the engineer for structural improvements to the tank per the study.

**11. Suburban Division – Wynnewood and Sand Spring 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 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.

Each plant, while meeting effluent limits, has reached the end of its useful life. Both plants are 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 facilities in entirety with new facilities utilizing a proven technology appropriate for the wastewater flows and loading characteristics at each site. The new facilities 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 mid-Summer 2018.

The DEP Part 2 Water Quality Management Permit was received in March 2018 for the Wynnewood project. DEP permitting for the Sand Spring project has been delayed due to technical issues and lengthy DEP review times. In order to avoid continued delays, we proceeded with bidding the Wynnewood project in advance of Sand Spring. The Wynnewood project was advertised for bid in August 2018 and bids will be opened in September 2018. Approval for the construction phase is anticipated in October 2018 **(No Change)**.

**12. Suburban Division – SCARP**

EPA is considering terminating the Administrative Order after submission and approval of a regional flow management strategy (RFMS) inclusive of all EPA AO respondents. 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. Should this action take place, then the Pa. Department of Environmental Protection would resume its enforcement oversight of the program through the Chapter 94 regulations.

The submission for all City Signatories was sent to EPA for the August 1<sup>st</sup> deadline. The submission included the RFMS inclusive of all Signatories, individual Operation & Maintenance plans, and individual Source Reduction Plans.

Reports are being prepared to present to all Signatories so there is an understanding of what system conditions caused the various bypasses and overflows in August during the wet weather events. Peak flow reporting was initiated for the City signatories for 6 storms between May and mid-August that generated flows at the WWTP in excess of 60 mgd.