



BOARD MEETING AGENDA – May 13, 2019

1. Call to Order

• NOTICE OF MEETING RECORDINGS

Meetings of Lehigh County Authority’s Board of Directors that are held at LCA’s Main Office at 1053 Spruce Road, Wescosville, PA, may be recorded for viewing online at lehighcountauthority.org. Recordings of LCA meetings are for public convenience and internal use only and are not considered as minutes for the meeting being recorded, nor are they part of public record. Recordings may be retained or destroyed at LCA’s discretion.

• *Public Participation Sign-In Request*

2. Review of Agenda / Executive Sessions

3. Approval of Minutes

• *April 22, 2019 Board meeting minutes*

4. Public Comments

5. Action / Discussion Items:

FINANCE AND ADMINISTRATION

• *Articles of Incorporation Amendment (Approval) (salmon)*

WATER

- *Suburban Division – Upper Milford-CLD Interconnection Project (Kohler Tract) (Approval) (yellow)*
- *Suburban Division – Water Meter Reading Equipment Upgrade (Approval) (green)*

WASTEWATER

- *Allentown Division – I&I Source Reduction Program Plan (Approval) (blue)*

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

May 20, 2019

June 10, 2019

June 24, 2019

PUBLIC PARTICIPATION POLICY

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

REGULAR MEETING MINUTES

April 22, 2019

The Regular Meeting of the Lehigh County Authority was called to order at 12:00 p.m. on Monday, April 22, 2019, Chairman Brian Nagle presiding. Other Members present at the commencement of the meeting were: Linda Rosenfeld, Jeff Morgan, Richard Bohner, and Norma Cusick. Deana Zosky was on the phone for the duration of the meeting. Authority Staff present were Liesel Gross, Brad Landon, Charles Volk, Ed Klein, John Parsons, Chris Moughan, Susan Sampson, Todd Marion 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 additional items to the Agenda under Staff Comments regarding Board appointments and the Authority's Charter Extension. There will also be an Executive Session after the regular meeting to discuss a matter of potential litigation and personnel.

Liesel Gross introduced new Staff member Todd Marion to the Board. Mr. Marion was hired as the Controller for the Authority.

APPROVAL OF MINUTES

March 25, 2019 Regular Meeting Minutes

Richard Bohner offered grammatical corrections to the minutes. On a motion by Richard Bohner, seconded by Norma Cusick, the Board approved the minutes of March 25, 2019 meeting as corrected (5-0). Deana Zosky abstained.

PUBLIC COMMENTS

None.

ACTION AND DISCUSSION ITEMS

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

Summary of 2019 Pay Increases

Liesel Gross provided a memorandum to the Board regarding a summary of the 2019 pay increases. All merit increases for non-union employees are within the 2019 Budget and went into effect on April 8, 2019.

Suburban Division – Heidelberg Heights Sanitary Sewer Rehabilitation Project

Kevin Baker arrived at 12:07 p.m.

Chuck Volk explained that this project is part of the corrective action plan for Heidelberg Heights. This particular project involves the replacement of 1100' of 8" sewer main and 26 residential sewer laterals. The project will be funded by the LCA Suburban Wastewater Division. Ankiewicz Enterprises, Inc. was the low bidder and their bid documents are in order. Keystone Consulting

Engineers will oversee the project full time during the pipe replacement. Mr. Volk is asking for approval of the Capital Project Authorization for the Construction Phase in the amount of \$319,300.00 which includes the Construction Contract to be awarded to Ankiewicz Enterprises, Inc. in the amount of \$269,300.00 and the approval of the Professional Services Authorization to Keystone Consulting Engineers in the amount of \$18,000.00.

On a motion by Norma Cusick, seconded by Linda Rosenfeld, the Board approved the Capital Project Authorization for the Construction Phase in the amount of \$319,300.00 which includes the Construction Contract to be awarded to Ankiewicz Enterprises, Inc. in the amount of \$269,300.00 and the approval of the Professional Services Authorization to Keystone Consulting Engineers in the amount of \$18,000.00 (7-0).

Suburban Division – Heidelberg Heights Corrective Action Plan

Chuck Volk gave an overview of the draft Corrective Action Plan (CAP) for Heidelberg Heights that needs to be submitted to Department of Environmental Protection (DEP) by May 5, 2019. The action plan proposes to eliminate the bypasses and overflows at the wastewater treatment plant and bring the system into compliance with the NPDES permit. Liesel Gross explained that the previous CAP presented to the Board in January was for a one-year action plan for the current year's rehabilitation project along with a plan to investigate additional system leakage to develop future rehabilitation projects. At a meeting with DEP in March 2019, it was decided that a multi-year plan would be required to capture all future rehabilitation work that is required along with updated sewer system characterization. Authority Staff are working with Heidelberg Township to update their sewer ordinance to provide the Authority with the authorization to conduct inspection of private property for clear water connections, other inspection work such as smoke testing and private sewer lateral inspections, certifications at the time of property sale, and to also allow enforcement actions regarding resident noncompliance or failure to correct deficiencies or remove clear water connections. Because of the small customer base, the CAP poses some financial challenges. The Authority is actively looking at programs like the Community Development Block Grant (CDBG) program along with private homeowner grants with PennVEST.

Liesel Gross explained that the Corrective Action Plan will be finalized within the next week and be submitted to DEP in early May. The financial section is still being developed and the Township is aware of the potential impact to customers.

MONTHLY PROJECT UPDATES / INFORMATION ITEMS

Liesel Gross noted that the monthly items have already been covered and there are no new action or discussion items. Norma Cusick asked if we are able to accommodate all the water and sewer projects with our developments at the Kline's Island Wastewater Treatment Plant. Ms. Gross explained that our water availability is adequate but the sewer has a limited availability and is a regional issue that needs to be addressed.

MONTHLY FINANCIAL REVIEW

Ed Klein presented a PowerPoint presentation on year-to-date key performance indicators for financial performance for March 2019. The Board asked for an explanation of how depreciation is calculated to which Mr. Klein replied. There was some discussion regarding capital expenditures and the reason for variances as compared to the forecast for the first quarter of 2019, which Mr. Klein explained related to the timing of the projects.

MONTHLY SYSTEM OPERATIONS OVERVIEW

John Parsons reviewed the Monthly System Operations Overview report for March 2019 which included a status report of the Western Lehigh Interceptor (WLI) High Flow Emergency Project as of April 12, 2019. Mr. Parsons reported that the Water Filtration Plant received an Area Wide Optimization Award for the 12th straight year for their continuing excellence in meeting AWWA Partnership for Safe Water guidelines. The award is earned by achieving strict treatment parameters. Mr. Parsons reported that the Western Lehigh Interceptor (WLI) High Flow Emergency Project has taken longer due to the increased number of leaks that were found. DEP requested a Corrective Action Plan for the entire WLI Emergency project which has been submitted and the staff is waiting on their response.

STAFF COMMENTS

Liesel Gross informed the Board that Ted Lyons has been reappointed by the Lehigh County Commissioners to serve on the Board through December 2023. The County Executive is currently looking for a candidate for Deana Zosky's replacement. Ms. Zosky's term was complete in December 2018 but she remains active on the Board until the replacement is appointed.

Ms. Gross reported that the County Board of Commissioners' working team related to the Authority's prior charter extension request has concluded their work and has prepared a report with a recommendation to extend the Authority's Charter for 43 years. The Commissioners on the working team are recommending that the County Commissioners pass a resolution at their next meeting on Wednesday, April 24th; Ms. Gross distributed a draft of that resolution that was published earlier that day. The resolution recommends extending the charter as well as some other activities to increase communication between the Board of Commissioners and the Authority. If the resolution is approved, the LCA Board will then have to consider its own resolution to begin the articles of incorporation amendment process in accordance with the law and decide what to include from the working team's recommendations.

Chuck Volk updated the Board regarding Resolution No. 3-2019-1 which was approved at the March 25, 2019 meeting regarding the bridge relocation at Martin Luther King Blvd. and Lehigh Street in the City of Allentown. Subsequent to the Board resolution approval, PennDOT reversed its prior assertions and recommendations and informed the Authority that the bridge is owned by Lehigh County and not PennDOT. Mr. Volk said he is pursuing whether it is possible to obtain federal relocation reimbursement for this project through the County and will update the Board notes accordingly.

SOLICITOR'S COMMENTS

None.

PUBLIC COMMENTS / OTHER COMMENTS

None.

Chairman Nagle called a recess at 1:03 p.m. The meeting reconvened at 1:12 p.m.

EXECUTIVE SESSION

An Executive Session was held at 1:12 p.m. to discuss potential litigation and personnel.

The Executive Session ended at 2:04 p.m.

ADJOURNMENT

There being no further business, the Chairman adjourned the meeting at 2:04 p.m.

Richard H. Bohner
Secretary

RESOLUTION No. 5-2019-1

(Duly adopted 13 May 2019)

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

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

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

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

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

NOW, THEREFORE, BE IT RESOLVED THAT:

1. The Authority proposes that its Articles of Incorporation be amended to include a provision extending its term of existence for forty-three (43) years from the date such amendment is approved by the Department so that it may continue to provide capital improvements for the public with the most reasonable and favorable financing rates. Furthermore, the amendment shall include a statement of the Authority's intent to facilitate ongoing communications with the Board of Commissioners by scheduling and providing an annual public presentation to the Board of Commissioners to review organizational performance such as financial performance, capital improvements, audit performance, and other information reasonably requested by the then-current Board of Commissioners, and semi-annual public presentations or reports regarding environmental performance including sewer system overflows and plans to address any deficiencies. The form of the Articles of Amendment, without appendices that will be attached before submittal to the Department, is attached hereto as Exhibit A and thereby made a part hereof.

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

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

On motion of _____, seconded by _____,
this resolution was adopted the 13th day of May 2019.

ARTICLES OF AMENDMENT

TO: SECRETARY OF THE COMMONWEALTH OF PENNSYLVANIA

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

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

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

and

"The Authority shall offer to provide an annual public presentation to the Board of Commissioners to review organizational performance such as financial performance, capital improvements, audit performance, and other information reasonably requested by the then-current Board of Commissioners, and semi-annual public presentations or reports regarding environmental performance including sewer system overflows and plans to address any deficiencies. The form and schedule of such presentations or reports offered by the Authority is to be determined by the then-current Board of Commissioners."

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

Attest:

LEHIGH COUNTY AUTHORITY

Name
Office

By: _____
Name:
Office:

Name
Office

By: _____
Name:
Office:

EXHIBIT A



I, Bradford E. Landon, Solicitor of Lehigh County Authority, do hereby certify that the foregoing is a true, correct and complete copy of a resolution which was duly adopted by the Authority at a public meeting of the Authority held on 13 May 2019, after notice thereof had been duly given as required by law, at which meeting a quorum was present and voting and which Resolution No. 5-2019-1 is now in full force and effect on the date of this certification.

Bradford E. Landon
Solicitor



MEMORANDUM

Date: May 03, 2019

To: Lehigh County Authority Board
From: Edward Hoyle, Jr.
Subject: Kohler Tract Pumping Station - Construction Phase

MOTIONS /APPROVALS REQUESTED:

No.	Item	Amount
1	<u>Capital Project Authorization:</u> Construction Phase	\$1,795,642
2	<u>Professional Services Authorizations:</u> Construction Phase	
*	<ul style="list-style-type: none"> • Construction Engineering Services, Amendment No. 2: <i>JMT</i> • Construction Inspection Services: <i>Cowan Associates</i> • SCADA: <i>Aptus Control Systems</i> 	\$34,760 \$20,650 \$58,092
3	<u>Contract Awards:</u> Construction Phase	
*	<ul style="list-style-type: none"> • General Construction: <i>Blooming Glen Contractors WW</i> • Electrical Construction: <i>Brendan Stanton, Inc., dba BSI Electrical Contractors</i> 	\$1,060,420 \$383,480

(*) Included in the Capital Project Authorization

PROJECT OVERVIEW

The LCA Central Lehigh Division (CLD) is the largest system in the Suburban Division and is located principally in Upper and Lower Macungie Townships and also the surrounding townships. The pumping station project that is the subject of this authorization is part of a larger project presented to the Board in September 2016 that will include a 12” diameter water main approximately 4,170’ in length to interconnect the CLD with the Upper Milford Division (UMD) allowing the abandonment of the UMD water supply facilities and providing public water service to the 123-lot Kohler Tract located in Upper Milford Township. Costs are being shared between the LCA Suburban Division and the developer of the Kohler Tract.

The pumping station project consists of installation of a new water booster pumping station with three booster pumps, one high service pump, piping, emergency generator, chemical feed system, instrumentation, SCADA system, fencing and paving.

PROJECT STATUS

The Board approved the Project in September 2016.

Public Water Supply Construction Permit No. 3917510 was issued by the Department of Environmental Protection (DEP) on January 25, 2018.

The pumping station is being constructed on the Kern Tract that was acquired January 31, 2019.

An NPDES permit must be issued for control of erosion and sedimentation during construction. Legal counsel will be retained during the zoning process to assist with obtaining a “Special Exception” from the township for use of the Kern Tract as a pumping station site.

The project was advertised through the PennBid system, an electronic document and bid management program, on March 20, 2019. Bids were opened on April 25, 2019.

THIS APPROVAL: CONSTRUCTION PHASE

A. BIDDING SUMMARY - CONSTRUCTION CONTRACTS

This project requires General Construction and Electrical Construction contracts. The bidding results are as follows:

General Construction	
Bidder	Amount
<i>Blooming Glen Contractors WW</i>	<i>1,060,420</i>
Walabax Construction Services, Inc.	1,097,250
DESCCO Design Construction, Inc.	1,100,200
PSI Pumping Solutions, Inc.	1,216,650
DOLI Construction Corporation	1,250,223

Electrical Construction	
Bidder	Amount
<i>Brendan Stanton, Inc., dba BSI Electrical Contractors</i>	<i>\$383,480</i>
Diefenderfer Electrical Contractors	\$447,175
Wind Gap Electric	\$448,300
Blooming Glen Contractors WW	\$584,855
PSI Pumping Solutions, Inc.	\$628,800
Philips Brothers Electrical Contractors, Inc.	\$736,952

The Engineer's estimates were \$1,300,000 for the General Construction contract and \$400,000 for the Electrical Construction contract.

The General Construction contractor is well qualified based on LCA’s past experience in working with them. A check of references for the Electrical Construction contractor found they are knowledgeable and performed acceptable work. Also, there were no issues identified in the submitted bid packages. Therefore, we recommend awarding the General Construction contract to Blooming Glen Contractors WW and the Electrical Construction contract to Brendan Stanton, Inc., dba BSI Electrical Contractors, subject to the receipt of the executed Agreements, bonds, insurance and other required documentation.

In addition to the General and Electrical Construction contracts, Monks Security Systems, the Authority's security consultant, will provide a new control panel and sensors in the pumping station for an estimated cost of \$5,000.

B. PROFESSIONAL SERVICES

1. JMT, our design consultant, will provide construction engineering services for the construction phase of the project. The work will generally include:

- Coordinate receipt of contract forms from successful bidders.
- Conduct a pre-construction meeting and distribute meeting minutes.
- Participate in progress meetings.
- Review Contractor submittals.
- Provide interpretations and clarifications of the Contract Documents.
- Participate in a substantial completion inspection and issue punch lists.
- Sign off as the engineer on the DEP Certificate of Construction Completion form.
- Provide construction stake out.
- Prepare record drawings.

2. Cowan Associates will provide construction inspection services for construction of the pump station. The work will generally include:

- Participate in a pre-construction meeting.
- Coordinate distribution of all contract submittals and maintain a log of submittal status.
- Provide field inspections to ensure compliance with the Contract Documents.
- Monitor construction progress.
- Assist in negotiations regarding claims for time and/or cost adjustments.
- Prepare work directives for issuance to Contractors.
- Review and recommend Contractor payments.
- Review certified payrolls.
- Conduct progress meetings and distribute meeting minutes.
- Issue monthly progress reports.
- Participate in a substantial completion inspection.
- Attend inspections by PA-DEP and Upper Macungie Township and resolve deficiencies.
- Participate in final completion inspection and provide recommendation on final acceptance and release of final payment. Prepare contract close-out documents.
- Review record drawings and O&M Manuals prepared by Contractors.
- Maintain project files and documents and deliver them to LCA at completion of project.

Cowan has provided acceptable construction phase services on past projects, such as the Pine Lakes and Crestwood pump station projects, and is currently providing similar services on the CLD pumping station project.

3. Aptus Control Systems will provide SCADA services for the project. Aptus has provided the Authority with satisfactory SCADA services on many prior projects, including the CLD pumping station project, and their involvement in the current project ensures on-going SCADA continuity.

A Professional Services Authorization is attached for the three firms for Board approval.

SCHEDULE

Due to long lead times for delivery of pumps and the building, we anticipate construction starting in October 2019, with 300 days to reach Substantial Completion.

FUTURE AUTHORIZATIONS

None Anticipated.

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	SD-W-19-2	BUDGET FUND:	Suburban Div\Water\Capital
PROJECT TITLE:	Kohler Tract Pumping Station	PROJECT TYPE:	
THIS AUTHORIZATION	<u>\$1,795,642</u>	<input checked="" type="checkbox"/>	Construction
TO DATE (W/ ABOVE)	<u>\$1,795,642</u>	<input type="checkbox"/>	Engineering Study
		<input type="checkbox"/>	Equipment Purchase
		<input type="checkbox"/>	Amendment

DESCRIPTION AND BENEFITS:

The project consists of installation of a new water booster pumping station in Upper Milford Township, with three booster pumps, one high service pump, emergency generator, chemical feed system, SCADA system, fencing and paving.

The project will interconnect the Central Lehigh Division (CLD) with the Upper Milford Division (UMD) allowing the abandonment of the UMD water supply facilities, and provide water service to the proposed 123-lot Kohler Tract subdivision. Costs are being shared between the LCA Suburban Division and the developer of the Kohler Tract.

THIS AUTHORIZATION – Construction Phase

The authorization includes staff time, professional services for construction engineering, inspection and SCADA, contracts for general and electrical construction, security, miscellaneous costs and contingencies for the construction of the aforementioned facilities.

Please reference the cover Memo for additional information.

Authorization Status:

Phase / Item	Authorizations	
	<i>This</i>	Total
<i>Construction</i>		
Staff	<i>\$60,000</i>	\$60,000
Engineering Service	<i>\$34,760</i>	\$34,760
Inspection Service	<i>\$20,650</i>	\$20,650
General Contract	<i>\$1,060,420</i>	\$1,060,420
Electrical Contract	<i>\$383,480</i>	\$383,480
SCADA	<i>\$58,092</i>	\$58,092
Security	<i>\$5,000</i>	\$5,000
Miscellaneous	<i>\$10,000</i>	\$10,000
Contingency	<i>\$163,240</i>	\$163,240
TOTAL	<i>\$1,795,642</i>	\$1,795,642

REVIEW AND APPROVALS:

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



Lehigh County Authority

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

PROFESSIONAL SERVICES AUTHORIZATION

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

Professional: Aptus Control Systems, Inc.
332 East Oak Street
Palmyra, PA 17078

Date: May 3, 2019

Requested By: Edward Hoyle, Jr.

Approvals

Department Head: _____

Chief Executive Officer: _____

Description of Services (Work Scope, Steps, Check Points, etc.):

Aptus Control Systems, Inc. will perform the SCADA-related services for the "Kohler Tract Pumping Station" project in Upper Milford Township, Lehigh County, PA, as identified in its Proposal dated May 3, 2019. Their services will include wiring drawings, a new control panel, programming, integration, startup and training. The Standard Agreement for Professional Services signed with Aptus on October 15, 2015 sets forth the Terms and Conditions under which these professional services will be performed.

Cost Estimate *(not to be exceeded without further authorization):*

The tasks outlined in the above-mentioned Proposal will be performed under this PSA for the total not-to-exceed fee of \$58,091.73.

Timetable and Completion Deadline *(either party may terminate upon thirty days written notice):*

The General and Electrical Contracts shall be substantially completed within 300 days following issuance of the Notice to Proceed, and completed and ready for final payment within 360 days from the date of the Notice to Proceed. Aptus Control Systems, Inc. agrees to conduct its work in a manner that will not cause delays in the schedules of the other project participants, including the contractors to be hired by the Authority, whose schedules shall be provided to Aptus Control Systems, Inc. upon request.

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

- Accept the terms of the professional services authorization set forth above; and
- Agree to indemnify and hold harmless LCA, their employees, agents, officials, representatives, attorneys, and assigns from any and all liability, arising out of all activities conducted by the Consultant in connection with this contract and/or the Consultant's performance hereof, including but not limited to payment of all fees for its/their attorneys and all incidental litigation expenses in the event LCA or any of its employees, agents, officials, representatives, attorneys, and assigns are sued upon a claim emanating from the Consultant's performance thereof. Professional shall not, however, be liable for any portion of a judgment nor associated litigation expenses, including attorney's fees, ultimately determined to be the result of the negligence of the Authority.

Name (Signature)

Name (printed):

Title:

(For Authority Use Only)

Authorization Completion:

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



Lehigh County Authority

1053 Spruce Road * P.O. Box 3348 * Allentown, PA 18106-0348
(610)398-2503 * FAX (610)398-8413

PROFESSIONAL SERVICES AUTHORIZATION

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

Professional: Cowan Associates, Inc.
120 Penn-Am Drive
PO Box 949
Quakertown, PA 18951

Date: May 3, 2019

Requested By: Edward Hoyle, Jr.

Approvals _____

Department Head: _____

CEO: _____

Description of Services (*Work Scope, Steps, Check Points, etc.*):

Cowan Associates, Inc. will provide construction inspection services for the "Kohler Tract Pumping Station" project in Upper Milford Township, Lehigh County, PA, as identified in its Proposal dated April 30, 2019. As part of its services, Cowan Associates will inspect construction, review applications for payment, attend progress meetings, review punch lists, as-builts and O&M manuals, etc. A Standard Agreement for Professional Services will be signed with Cowan Associates, Inc. pending this authorization and will set forth the Terms and Conditions under which these professional services will be performed.

Cost Estimate (*not to be exceeded without further authorization*):

The tasks outlined in the above-mentioned Proposal will be performed under this PSA for the total not-to-exceed fee of \$20,650.00. Services will be paid for based on the "Consultant Proposal Manhour/Cost Allocation Work Sheet" attached to the Proposal.

Timetable and Completion Deadline (*either party may terminate upon thirty days written notice*):

The General and Electrical Contracts shall be substantially completed within 300 days following issuance of the Notice to Proceed, and completed and ready for final payment within 360 days from the date of the Notice to Proceed.

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

- Accept the terms of the professional authorization set forth above; and
- Agree to indemnify, hold harmless and defend the Authority, its employees, agents, officials, successors and assigns (hereinafter all jointly referred to as "Authority"), from any and all loss and liability for claims, demands, suits or causes of action at law or in equity for damages and injuries (including death of every kind and nature) to persons (including employees of the Professional) and property arising out of error, omission or negligent act of Professional, or any person under contract to it, in rendering professional services under this authorization. The indemnification shall include, but not be limited to, payment of reasonable attorney fees and reasonable incidental litigation expenses of the Authority. Professional shall not, however, be liable for any portion of a judgment nor associated litigation expenses, including attorney's fees, ultimately determined to be the result of the negligence of the Authority.

Name (Signature)

Name (printed):

Title: _____

(For Authority Use Only)

Authorization Completion:

Approval: _____ Actual Cost: _____ Date: _____



Lehigh County Authority

1053 Spruce Road * P.O. Box 3348 * Allentown, PA 18106-0348
(610)398-2503 * FAX (610)398-8413

PROFESSIONAL SERVICES AUTHORIZATION

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

Amendment No. 2

Professional: Johnson, Mirmiran & Thompson (JMT)
7535 Windsor Drive, Suite 204B
Allentown, PA 18195

Date: May 3, 2019

Requested By: Edward Hoyle, Jr.

Approvals

Department Head: _____

CEO: _____

Description of Services (*Work Scope, Steps, Check Points, etc.*):

JMT will provide construction engineering services for the "Kohler Tract Pumping Station" project in Upper Milford Township, Lehigh County, PA, as identified in its Proposal dated May 1, 2019. As part of its services, JMT will review shop drawings, review applications for payment, attend progress meetings, respond to design related RFI's, provide construction stakeout, etc. The Agreement for Professional Technical Consultant Services signed with JMT on June 17, 2015 sets forth the Terms and Conditions under which these professional services will be performed.

Cost Estimate (*not to be exceeded without further authorization*):

The tasks outlined in the above-mentioned Proposal will be performed under this PSA for the total not-to-exceed fee of \$34,760.00. Services will be paid for based on the estimated number of hours and hourly rates in the Total Cost Summary sheet attached to the Proposal that reflects the Professional's current Rate Schedule.

Timetable and Completion Deadline (*either party may terminate upon thirty days written notice*):

The General and Electrical Contracts shall be substantially completed within 300 days following issuance of the Notice to Proceed, and completed and ready for final payment within 360 days from the date of the Notice to Proceed.

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

- Accept the terms of the professional authorization set forth above; and
- Agree to indemnify, hold harmless and defend the Authority, its employees, agents, officials, successors and assigns (hereinafter all jointly referred to as "Authority"), from any and all loss and liability for claims, demands, suits or causes of action at law or in equity for damages and injuries (including death of every kind and nature) to persons (including employees of the Professional) and property arising out of error, omission or negligent act of Professional, or any person under contract to it, in rendering professional services under this authorization. The indemnification shall include, but not be limited to, payment of reasonable attorney fees and reasonable incidental litigation expenses of the Authority. Professional shall not, however, be liable for any portion of a judgment nor associated litigation expenses, including attorney's fees, ultimately determined to be the result of the negligence of the Authority.

Name (Signature)

Name (printed):

Title:

(For Authority Use Only)

Authorization Completion:

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

MEMORANDUM

Date: May 13, 2019

To: Lehigh County Authority Board of Directors
From: Amy Kunkel, Capital Works Project Engineer
Subject: Suburban Division – Water Meter Reading Equipment Upgrade –
Construction Phase

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization – Construction Phase	\$1,963,292.91
2	Construction Contract – General (*): Core and Main, LP	\$1,808,292.91

(*) Included in Capital Project Authorization

BACKGROUND:

The project consists of the replacement of approximately 10,000 existing water meter radio read units (MXUs) with new Smartpoint radio units. This is the first phase of a two-year project to replace 100% of the MXUs in the Suburban Division. The older MXU units were expected to have a 7-year battery life. Approximately 1,000 transceiver units no longer work and cannot be read, and more continue to fail as they reach the end of their useful life. The new units have a longer (20 year) battery life and are compatible with the new meter reading software purchased in 2017. Moving forward, implementation of a fixed base meter reading system is anticipated.

PROJECT OBJECTIVE:

The project objective is to replace and upgrade older and non-functioning meter reading equipment to increase meter reading accuracy and efficiency which in turn should increase revenue. Existing units which are located inside of customer homes and businesses will be relocated to the exterior of buildings to increase efficiency in obtaining accurate readings.

FUNDING:

The Project will be funded by the LCA Suburban Division.

BUDGET AMENDMENT:

Not required

PROJECT STATUS:

Board approval is requested for the Construction Phase.

THIS APPROVAL – CONSTRUCTION PHASE

BIDDING SUMMARY:

This project was bid as one contract. The project was advertised for bid on March 27, 2019, the pre-bid meeting was held on April 9, 2019 and bids were received via PennBid on April 25, 2019, the results of which are as follows:

General Construction	
Bidder	Bid Amount
Core and Main, LP	\$1,808,292.91

Core and Main, LP has extensive meter replacement experience, has worked with LCA numerous times on other projects, including last year’s meter replacement project, and is a supplier of Sensus products which is the basis of design radio equipment used in the Suburban Division. Both the firm and its subcontractor’s qualifications and experience statements indicate numerous projects of similar scope and type. The bid documents are in order and the company appears well qualified to perform the work. The bid submitted is below the \$1,900,000 engineer’s estimate for their portion of the replacement project.

PROFESSIONAL SERVICES:

Construction engineering and part time inspection services will be performed by LCA personnel.

PROJECT SCHEDULE:

Based on contract award following the May 13, 2019 Board meeting, it is anticipated that the project will be completed by December 2019.

FUTURE AUTHORIZATIONS:

None

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	SD-W-19-3	BUDGET FUND:	Suburban Div\Water\Capital
PROJECT TITLE:	Suburban Division Water Meter Reading Equipment Upgrade – Construction Phase -	PROJECT TYPE:	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input checked="" type="checkbox"/> Equipment Purchase <input type="checkbox"/> Amendment
THIS AUTHORIZATION:	\$1,963,292.91		
TO DATE (W/ ABOVE)	\$1,963,292.91		

DESCRIPTION AND BENEFITS:

This Authorization is for the replacement of approximately 10,000 water meter radio units (MXUs) with new Smartpoint units. This is the first phase of a two-year project to replace 100% of the MXUs in the Suburban Division. This authorization takes the project through construction phase.

Previous Authorizations	
None	

REQUESTED THIS AUTHORIZATION	
Construction Phase	
Staff	\$65,000
Contract 1-General Construction	\$1,808,292.91
Contingency	\$90,000
Total This Authorization	\$1,963,292.91

Future Authorization	
None	

<i>Total Estimated Project</i>	<i>\$1,963,292.91</i>
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REVIEW AND APPROVALS:

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

MEMORANDUM

Date: May 13, 2019

To: LCA Board of Directors
Liesel Gross, C.E.O.
From: Phil DePoe, LCA Capital Program Manager
Subject: Allentown Division: I&I Source Reduction Improvements – Design Phase

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization - Design	\$203,300
2 (1)	Professional Services Authorization – Kleinfelder (1)	\$173,300

(1) Included in the Capital Project Authorization

PROJECT OVERVIEW

The Inflow and Infiltration (I&I) source reduction improvements are described in the *City of Allentown I&I Source Reduction Program Plan (City Source Reduction Program Plan)*, which is Appendix L of the Regional Flow Management Strategy (RFMS) that was submitted to EPA in August 2018 and accepted in March 2019. The City’s source reduction plan is a 5-Year Plan with specific improvements to be implemented each year of the 5-year Plan. The improvements to be implemented are the remaining I&I source reduction measures previously identified within the Primary and Secondary Basins, as well as additional areas identified by LCA and City staff during the ongoing CCTV program.

The City desires that the improvements for each of the five years be authorized for design now. Therefore, the scope of this project is to prepare five (5) sets of plans and specifications; one for each year of the 5-year source reduction program.

FINANCIAL

The project is an Administrative Order (AO) Project and it will be funded by the City. The terms of the concession lease agreement between LCA and the City specify that the City will directly fund projects associated with the AO, and LCA will collect fees from City customers to pay any associated debt service for these projects. The City determines the projects to be completed and directs LCA to complete the projects in the manner desired by the City.

PROJECT STATUS

Pending Board approval of this I&I Source Reduction Improvements Design Phase.

THIS APPROVAL - DESIGN PHASE

Lehigh County Authority (LCA) intends to retain the services of an engineering consulting firm to provide the design related services for Tasks 1 -5. Approval for the bid and construction related engineering services will be requested at a later date. The following table summarizes the professional services to be performed under this approval:

Professional Services ⁽¹⁾
1. Task 1 – Prepare Year 1 (2020) Drawings and Specifications
2. Task 2 – Prepare Year 2 (2021) Drawings and Specifications
3. Task 3 – Prepare Year 3 (2022) Drawings and Specifications
4. Task 4 – Prepare Year 4 (2023) Drawings and Specifications
5. Task 5 – Prepare Year 5 (2024) Drawings and Specifications

(1) For Design Phase Only

The Task 1 (year 1 = 2020) construction work (estimated at \$450,000) involves the following:

- Cured-in-place lining for a section of 30-inch sewer identified by LCA and City Staff (located along the Little Lehigh Creek adjacent to Martin Luther King Jr. Drive)

The Task 2 (year 2 = 2021) construction work (estimated at \$505,000) involves the following:

- Sewer rehabilitation (heavy or special cleaning, grouting, lining point repairs, excavated point repairs, lining entire pipe) in nine separate basins

The Task 3 (year 3 = 2022) construction work (estimated at \$345,000) involves the following:

- Sewer rehabilitation (heavy or special cleaning, grouting, lining point repairs, excavated point repairs, lining entire pipe) in five separate basins

The Task 4 (year 4 = 2023) construction work (estimated at \$270,000) involves the following:

- Sewer rehabilitation (heavy or special cleaning, grouting, lining point repairs, excavated point repairs, lining entire pipe) in two separate basins

The Task 5 (year 5 = 2024) construction work (estimated at \$420,000) involves the following:

- Sewer rehabilitation (heavy or special cleaning, grouting, lining point repairs, excavated point repairs, lining entire pipe) in four separate basins

CONSULTANT SELECTION PROCESS

The City has instructed LCA to utilize Kleinfelder for this conceptual design phase of the project. Over the course of several years, Kleinfelder has been retained by the City to develop prior engineering studies to comply with EPA’s Administrative Order. LCA recently retained Kleinfelder to complete the Master Plan for the Kline’s Island Wastewater Treatment Plant, which was presented to the LCA Board in early 2019. LCA finds the selection of this firm to be acceptable as their work has been satisfactory, on time and cost-effective.

PROJECT SCHEDULE

Task 1 and Task 2 design work will begin immediately, with construction of Task 1 (year 1) rehabilitation work anticipated to kick off in March 2020. Design of future tasks will follow according to a project schedule that will be developed as part of this project.

FUTURE AUTHORIZATIONS – BID AND CONSTRUCTION PHASE

After the design of all five years is approved, a Capital Project Authorization (CPA) will be presented to the Board in March of 2020 for approval of the Bid and Construction Phase (Year 1). This will also include a professional services award, staff costs, and other related components. Projects in Years 2 - 5 will proceed accordingly in 2021, 2022, 2023, and 2024.

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	AD-S-19-1	BUDGET FUND:	Allentown Div\Wastewater\Capital
PROJECT TITLE:	Allentown Division: I&I Source Reduction Improvements - Design 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:	\$203,300		
TO DATE (W/ ABOVE)	\$203,300		

DESCRIPTION AND BENEFITS:

The scope of this project is to prepare give (5) sets of plans and specifications; one for each year of the 5-year source Reduction Program. Bidding assistance and construction administration services will be handled through separate professional service agreements at future dates prior to each individual project being advertised for bid.

This is an Administrative Order (AO) project and will be funded by the City of Allentown. Due to expenditure requirements associated with the AO bond, the City desires that the improvements for each of the five years be authorized for design now. At a minimum, Years 1 (2020) and 2 (2021) will be designed in 2019.

Please see attached Board Memo for further project details.

Authorization Status:

Requested This Authorization	
<i>Design Phase</i>	
Staff	\$20,000
Construction Contractor	\$0
Engineering Consultant	\$173,300
Miscellaneous	5,000
Contingency	5,000
Total This Authorization	\$203,300
Future Authorizations (Construction Phase)	
\$2,240,000	
Total Estimated Project	\$2,443,300

REVIEW AND APPROVALS:

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



Lehigh County Authority

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

PROFESSIONAL SERVICES AUTHORIZATION

Professional: KLEINFELDER
321 Wall Street
Princeton, NJ 08540

Date: May 13, 2019
Requested By: Phil DePoe
Approvals
Department Head: _____
Chief Executive Officer: _____

Allentown Division: I&I Source Reduction Improvements – Design Phase

KLEINFELDER will design the City’s source reduction plan per Appendix L of the Kline’s Island Sewer System Regional Flow Management Strategy (RFMS). The City’s source reduction plan is a 5-year plan with specific improvements to be implemented in each year. The improvements to be implemented are the remaining I&I source reduction measures identified within the Primary and Secondary Basins as well as additional areas identified by LCA and City staff during the ongoing CCTV program.

Professional Services ⁽¹⁾
1. Task 1 – Prepare Year 1 (2020) Drawings and Specifications
2. Task 2 – Prepare Year 2 (2021) Drawings and Specifications
3. Task 3 – Prepare Year 3 (2022) Drawings and Specifications
4. Task 4 – Prepare Year 4 (2023) Drawings and Specifications
5. Task 5 – Prepare Year 5 (2024) Drawings and Specifications

(1) For Design Phase Only.

Please reference the cover Memo for additional information.

Design Phase:

Cost Estimate (not to be exceeded without further authorization): \$173,300

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

1. Articles of Incorporation Amendment – May 13, 2019

In 2018, the Lehigh County Board of Commissioners denied LCA’s request to amend the articles of incorporation to extend the life of the Authority to 50 years. A working group was formed by the Commissioners to address the outstanding questions and concerns that led to that denial. On April 24, 2019, the Board of Commissioners passed a resolution capturing the working group’s findings and presented recommendations for an amendment to LCA’s articles of incorporation. The County’s resolution and the working group’s “Summary of Findings” report was shared with LCA’s Board at the April 22, 2019 LCA Board meeting and is posted on LCA’s website in the details from that meeting. Under the terms of the Pa. Municipality Authorities Act, the LCA Board of Directors must begin the process to amend its articles of incorporation by adopting a resolution requesting the amendment. The Lehigh County Board of Commissioners must then approve the amendment request by ordinance. Therefore, to begin the process, staff has prepared a draft LCA resolution for Board consideration requesting amendment to its articles of incorporation to extend the life of the Authority to 43 years and to specify certain mechanisms for annual and semi-annual information-sharing with the County to support further collaboration and partnership that is desired by both parties.

2. Acceptance of 2018 Audited Financial Statements – May 20, 2019

The 2018 Audited Financial Statements will be distributed to the Board on May 13, 2019. LCA’s auditors will attend the May 20, 2019 Board meeting to review the statements and answer questions. Board acceptance of the financial statements will be requested.

DISCUSSION ITEMS

INFORMATION ITEMS

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

CERTIFICATES OF DEPOSIT						
29-Apr-19			Gross	Date of	Date	Net Rate
Fund	Bank	Location	Amount	Purchase	Due	%
Basin Street	Continental Bank	Salt Lake City, Ut	98,000.00	4/15/19	2/16/21	2.400
WW Capac	Sallie Mae Bank	Salt Lake City, Ut	248,000.00	4/10/19	4/12/21	2.450
Cons Wtr (2)	Reading Co-Operative Bank	Reading, MA	249,000.00	4/10/19	4/10/21	2.500

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

2. **Developments**

Water system construction is occurring in the following developments:

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

Water system plans are being reviewed for the following developments:

- 5329-5347-5357 Hamilton Blvd., 1 commercial lot, LMT – No Change
- 5374/5392 Hamilton Blvd., 1 commercial lot, LMT – No Change
- 8615/8783 Congdon Hill Drive, 2 industrial lots with warehouses, LMT – No Change
- Air Products & Chemicals (New Headquarters), 1 commercial lot, LMT/UMT – No Change
- Cedarbrook Road Industrial Park, 2 industrial lots, LMT – No Change
- Lehigh Hills, Lot 5, Phase 1, 273 apartments & clubhouse, UMT – No Change
- Madison Village at Penn's View, 66 manufactured homes, 1 lot, LynnT, water and sewer – No Change
- Mill Creek Hotel, 1 commercial lot with 205 room hotel & restaurant, UMT – No Change
- Millbrook Farms, Section VI, 45 residential lots (sfd), LMT – No Change
- Ridings at Parkland, 63 residential units (sfd), NWT – No Change
- Schoeneck Road, Lot 1, 1 lot warehouse, LMT – No Change
- Towneplace Suites by Marriott, 91-room hotel, UMT – No Change
- Trexler Business Center, Units 2 & 3, 2 commercial units, LMT
- Weilers Road Twins, 82 residential lots (sfa), UMT – No Change
- Woodmont Ridge, Phase II, 30 apartment units, UMT – No Change

Sewage Planning Modules Reviewed in Prior Month:

- The Towns at South Mountain, Emmaus, 14,700 gpd.

WATER

ACTION ITEMS

1. **Suburban Division – Upper Milford-CLD Interconnection Project (Kohler Tract) – May 13, 2019**

The project will feature the installation of a new booster pumping station and water main extension to interconnect the Central Lehigh Division (CLD) with the Upper Milford Division (UMD) allowing the abandonment of the UMD water supply facilities, and to provide water service to the proposed 123-lot Kohler Tract subdivision in Upper Milford Township. Costs are being shared between the LCA Suburban Division and the developer of the Kohler Tract. Pumping station bids were opened on 4/25/19, and award of bids and construction phase services are to be requested for authorization at the 5/13/19 Board meeting.

2. **Suburban Division – Water Meter Reading Equipment Upgrade – May 13, 2019**

LCA's capital program includes the replacement of 20,000 transceiver units, and 10,000 units will be replaced in 2019 with the remaining to be replaced in 2020 under separate authorization. The new units have a 20-year battery life and are compatible with the new meter reading software purchased in 2017. This project will replace 100% of the remaining old style radio units over a two-year period. The pre-bid meeting was held on 4/9/19, bids were opened on 4/25/19, and award of bid and construction phase services for the first round of 10,000 units will be requested at the 5/13/19 Board meeting.

3. **Suburban Division - Water Main Replacement Program Cycle 5 – May 20, 2019**

The project consists of the replacement of approximately 1.25 miles of aged and/or failing cast iron, galvanized, asbestos cement, and other composition water mains throughout multiple locations in the Suburban Division. The project was advertised for bid on April 5, 2019, with a bid opening of May 7, 2019. Board authorization of bid award and approval of the construction phase of this project is to be requested at the May 20, 2019 meeting. This project will be funded by the LCA Suburban Division.

DISCUSSION ITEMS

1. **Well NL6 – North Whitehall Division Water Supply – May 20, 2019**

Since the early 1990s when LCA began operating the water system in the portion of North Whitehall Township that serves the villages of Schnecksville and Neffs and surrounding areas, groundwater supplies have contained high levels of manganese. This substance is naturally found in the geological formations in this area and can cause aesthetic concerns such as discolored water, staining of laundry, and buildup in plumbing systems. In 1997, LCA completed an interconnection with the Northampton Borough Municipal Authority (NBMA) water system to supplement the well supplies in this area, and approximately 75% of the water supplied to customers is now from the NBMA system. At the May 20, 2019 Board meeting, LCA staff will share additional information about the ongoing concerns about manganese in this system and particularly with the Authority's well NL6.

INFORMATION ITEMS

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

As part of the Pennsylvania Rapid Bridge Replacement Program, the replacement of the Cedar Creek Bridge on Hamilton Street has required the relocation of approximately 500 linear feet of water main. The construction phase was approved at the December 2016 Board meeting and

the construction phase at the January 2018 meeting. As of February 22, 2018, the contractor has completed a majority of the relocation work for LCA's facilities; however, they were pulled off the site due to construction conflicts. As of March 22, 2019 the original LCA water line relocation scope of work has been completed, however an additional relocation of a LCA sanitary sewer line has been added to the original scope and agreement as of April 15, 2019 with an anticipated completion of April 26, 2019. LCA anticipated submitting all final paper work to the state for reimbursement in the very near future. It is anticipated that this work will be reimbursed 100% by the state and that the construction related activities.

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

The project is the replacement of 0.97-mile of aged and/or failing cast iron water main in multiple locations throughout the City, in accordance with our prioritization protocol. We propose to utilize the 1.1 mile credit of excess water main replacement length accumulated from previous years in order to satisfy the 2.0 miles of annual pipe replacement as outlined in the lease. This Project is required under the Operating Standards in the Concession Agreement and will be funded by the LCA Allentown Division. The reduced-scale project was re-bid following rejection of the bids for the original 2.2 mile project. The project was authorized by the Board on 9/10/18 and will be completed by December 2018. As of October 30, 2018 contractor Doli Construction Corp has begun water main installation and is progressing. As of January 4, 2019 all water main construction, prelease valve and meter replacement has been completed. Currently as of April 8, 2019, Doli has begun final restoration throughout the project with an anticipated completion by late May 2019.

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

The project is the replacement of 2-mile of aged and/or failing cast iron water main in multiple locations throughout the City, in accordance with our prioritization protocol. Currently Gannett Fleming is designing the 2-miles of required water main replacement. At this time, the construction phase of this project is not budgeted for unless monies become available in early

4. **Allentown Division – Water Filtration Plant: SCADA System Replacement**

The project consists of the replacement of the existing SCADA System at the Water Filtration Plant. The purchase and installation of new servers, new control panel cabinets, new cabling, and new programming software will encompass this project. Board approval to purchase this equipment was granted at the August 27, 2018 Board Meeting. Replacement will be completed by late 2019. This project will be funded by LCA Allentown Division. **(No Change)**

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

The project consists of the addition of a carbon dioxide feed system at the Allentown Water Plant. With the present conversion from alum to polyaluminum chloride (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 was submitted to PaDEP. Approval for the construction phase was granted at the October 8, 2018 Board meeting. Construction of the pad and piping began on 11/26/2018 and work has progressed to the point of punch list items. All work is to be completed by late March or early April. The contract with Matheson to supply the storage tank and CO2 feed system has been finalized. The CO2 system is expected to be on-line and fully-operational by mid May, 2019. This project will be funded by the LCA Allentown Division.

6. **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. As of early December 2018 the project has been completed and LCA is awaiting final closeout documentation from our contractor.2019.
(No Change)

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

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

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

The project consists of installation of a new booster pumping station with SCADA and water main extension to pump water from the Lower Pressure System to the Upper Pressure System. The LCA Suburban Division will fund the project. Bids for the project were received on 6/29/18. Board approval for the construction phase of the project was granted at the 7/23/18 meeting. A preconstruction meeting was held on August 28th and construction should be completed by Fall of 2019. **(No Change)**

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

The project consists of the consolidation and replacement of two well stations with a single new pump station and a new water storage tank to replace two antiquated hydropneumatic pump stations. The new station will be a variable frequency drive controlled double pumping system with full SCADA control. The design will include radon reduction elements and also accommodate the future installation of additional radon removal equipment, to be implemented upon DEP's mandate of a regulatory limit. Design phase was authorized at the August 28, 2017 Board meeting. The Public Water Supply Permit was received from DEP at the end of December 2018. Zoning approval from Upper Milford Township for a "Special Exception" use for the upgrade project was denied in February 2019. The written opinion of the Township solicitor was received in early April 2019 and is being reviewed prior to pursuing an appeal or change in design. Legal counsel has been retained to assist with the appeal process. Bid phase will begin following township zoning approval.

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

The project will include setting up a surface water flow-monitoring network for the Little Lehigh Creek. The work is in response to the Watershed Monitoring Plan that was developed and reported to LCA by AI Guiseppe (SSM, Inc.) in 2017. Flow monitoring in 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, which has turned out to be a very slow process. Agreement received from PPL on April 22. Now PennDOT permits need to be addressed yet so we can mount equipment under their bridges. PennDOT wouldn't move until the PPL agreement was completed.

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

This Project addresses the needs of three satellite water systems that currently are operating on one source of supply and have no redundant water supply. The Madison Park North system has only one well, and an additional well is planned to be developed and constructed. The Clear View Farms and Mill Creek systems have one operating well each, but have at least one other existing well that has water supply or quality issues and cannot be presently utilized. An engineer has been retained to assist with the development of a second well for Madison Park North and the rehabilitation of an existing well at Clear View Farms. An agreement is in place with an adjoining property owner to Madison Park North to drill a test well on their property, in coordination with DEP guidelines. The “step drawdown test” was performed on 3/26/19 and indicated that the test well is a viable backup source to Well 1. A Pre-Drilling and Aquifer Test Plan will be prepared by our Engineer as required by DEP.

WASTEWATER

ACTION ITEMS

1. **Allentown Division – I&I Source Reduction Program Plan – May 13, 2019**

This project includes the design of the City of Allentown's I&I Source Reduction Program Plan. In 2014, Video Pipe Services complete various CCTV inspections throughout twenty Primary and Secondary Basins. All pipe segments that called for complete pipe replacement have already been repaired. The remaining source reduction activities within the twenty Basins have been organized into a 5-Year Plan, with each year focusing on a different geographic region of the City's sewer collection system. This approval includes the design of all five years, with the first project commencing in 2020 and the last project finishing in 2024. This project is considered an AO expense under terms of the Lease and is City funded.

DISCUSSION ITEMS

INFORMATION ITEMS

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

This project includes the design of the AO improvements at the wastewater treatment plant. This conceptual design concept was approved by the City and the relevant final deliverables were received by LCA. The City then directed LCA to proceed with the final design of improvements related to the blending alternative. Board approval for the Professional Services Authorization with Kleinfelder East, Inc. was granted at the September 11, 2017 Board Meeting. The project is identified as Administrative Order Work and will be funded by the City. The 30% design drawings and specifications have been received. The City had now directed to "pause" the design phase of the project. Awaiting formal direction from the City now that the EPA has withdrawn the AO.

2. **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. **(No Change)**

3. **Allentown Division – Kline's Island WWTP: Sodium Hypochlorite Disinfection**

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

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

As part of the Pennsylvania Rapid Bridge Replacement Program, the proposed replacement of the Lehigh Street Bridge near the intersection with MLK Boulevard has required the relocation of existing City water and sewer lines that are located within the PennDOT right of way. PennDOT initially indicated that LCA would be eligible for 75% reimbursement for all projects costs

associated with the utility relocations, and the LCA board adopted Resolution No. 3-2019-1 in March 2019 to authorize the negotiation of the PennDOT cost reimbursement. Following the submission of project incorporation paperwork to PennDOT by LCA's design engineer, the local PennDOT office submitted the resolution and agreement to the Harrisburg office, and was later informed that this bridge is owned by Lehigh County and not the Commonwealth. Although PennDOT is handling all preconstruction activities and will administer the federal funding participation between the Commonwealth and the County, the cost reimbursement agreement with PennDOT does not apply. LCA's engineer is working on behalf of LCA on a final sewer relocation design that minimizes the extent of the relocation. There will be less water infrastructure relocation work required since the existing water main is attached under the bridge and will be reattached after the new bridge is constructed. LCA staff will pursue water and sewer relocation cost reimbursement from the County out of the federal (80%) and state (15%) funds being applied to this project. Design work will be finalized by early Summer 2019.

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 finished by Summer 2017. Additional scope work under existing contract has been performed and is anticipated to be closed out in 2019. **(No Change)**

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

The Park Pump Station and Force Main line were constructed in 1980 to provide wet weather relief to the Little Lehigh Creek Interceptor, which conveys wastewater from ten municipalities from outlying areas to the Kline's Island Wastewater Treatment Plant (KIWWTP). The force main consists of 8,715 linear feet of prestressed concrete cylinder pipe (PCCP) of various sizes (2,615' of 24"; 2,695' of 30"; and 3,405' of 36"), and connects with the 54" sanitary sewer interceptor that runs to KIWWTP. PCCP is particularly sensitive to deterioration due to hydrogen sulfide gas from wastewater, and corrosion of exposed reinforcing steel can result in structural degradation and pipe failure. An internal investigation of the pipe is required to assess the condition of the PCCP pipe and identify damage areas, in order to determine the locations and extent of rehabilitation needed to restore the level of service, prolong service life, and mitigate the risk of failure. Capital Works is planning a limited manned inspection of the force main pipe at 5 air release valve (ARV) locations, 100 feet in both directions from the ARV manhole, which will be used as the initial evaluation of the representative condition of the pipe. Using this data, the need for performing a complete pipeline condition assessment will be determined, possibly utilizing a new electromagnetic technology for performing an internal pipe condition assessment that entails minimal interruption of operation of the pump station and force main. LCA and Arcadis are currently waiting for a "normal flow" dry weather period to use the PTP Flow Equalization Basin (FEB) at the pretreatment plant to hold back flow in order to perform a temporary shut-down of the Park Pump Station to perform the force main inspection. **(No Change)**

7. **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)**

8. Suburban Division – Heidelberg Heights Wastewater Treatment Plant Improvements

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

9. Suburban Division – Wynnewood WWTP Upgrade Project

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

The plant, while meeting effluent limits, has reached the end of its useful life. The plant is constructed of in-ground steel tanks that are in poor condition, with areas of corrosion and loss of structural integrity. The mechanical and electrical systems are also at the end of their service life and in need of replacement. The proposed project includes replacement of the existing treatment facility in entirety with new technology and concrete tanks appropriate for the wastewater flows and loading characteristics. The new facility shall meet the effluent limits criteria established in the respective DEP and DRBC permits, including new or additional limits that may be imposed during the permitting process. Design phase was authorized in February 2017 and was concluded in late Summer 2018. The DEP Part 2 Water Quality Management Permit was received in March 2018. The project was advertised for bid in August 2018, bids were opened in September 2018, and bids were authorized for award at the October 22, 2018 Board meeting. Construction work mobilized in early 2019 and is anticipated to finish in early 2020. **(No Change)**

10. Suburban Division – Sand Spring WWTP Upgrade Project

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

The plant, while meeting effluent limits, has reached the end of its useful life. The plant is constructed of in-ground steel tanks that are in poor condition, with areas of corrosion and loss of structural integrity. The mechanical and electrical systems are also at the end of their service life and in need of replacement. The proposed project includes replacement of the existing treatment facility in entirety with new technology and concrete tanks appropriate for the wastewater flows and loading characteristics. The new facility shall meet the effluent limits criteria established in the respective DEP and DRBC permits, including new or additional limits that may be imposed during the permitting process. Design phase was authorized in February 2017 and should be concluded by late 2018; progress has been delayed due to DEP Part 2 Water Quality Management and NPDES permitting issues. DEP approval of the Water Quality Management Permit was received in late December 2018, and the project will proceed to bid phase in Summer 2019. **(No Change)**

11. Suburban Division – SCARP

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

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

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

12. Sanitary Sewer System Flow Metering for WLI

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

13. WLI High Flow Emergency Declaration

LCA began the Emergency Response protocol to deal with the high flows within the Western Lehigh Interceptor (WLI) on November 28, 2018. The Emergency Declaration was presented to and approved by the Board on December 10, 2018, retroactive to November 29, 2018. Through December 28, 2018, the entire Iron Run Trunk Line (IRTL) has been televised from outside the Pretreatment Plant (PTP) down to the confluence with the Breinigsville Line, which is south of Hamilton Boulevard. This area is referred to as Phase 1 and the total distance televised in this reach was 7,115', and includes 93 manholes. In this section, LCA has identified 18 defects within that reach, the majority of which are joint leaks, along with heavy sediment in several areas. Once repaired, staff expects to have eliminated approximately 500,000 gallons per day of infiltration from the interceptor based on estimates. Repair work will begin while additional downstream inspection is ongoing. Phase 2 will include the WLI from where the IRTL and the Breinigsville lines meet down to the point where the relief line ends. Phase 3, which will include a major long-term bypass, will start at the end of the relief line and go to the Spring Creek Pump Station. Phases 4-6 will be the WLI from Spring Creek Pump Station down to Park Pump Station. A pre-bid meeting was held for Phase I on 1/29/2019 and bids were due on 2/15/2019. Standard Pipe Services (SPS) out of Delaware was awarded the contract. The Phase I pre-construction meeting was held on 3/25/2019. Construction on Phase 1 will last an estimated 4-6 weeks, or until mid-May. Phases 2 and 3 construction services will be added to the SPS contract via change orders. Bypass bids were due on 4/26/2019. Only one bid was received and it was rejected. A re-bid is due on May 10, 2019. This project will continue on an expedited emergency basis as long as conditions warrant.

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

Excessive inflow and infiltration (I&I) and high wet-weather flows into the Heidelberg Heights and Lynn Township sewer systems have been ongoing and increasingly challenging to address. As noted in LCA's monthly operations report, treatment plant bypasses and sanitary sewer

overflows have occurred more frequently in these systems and must be addressed. Staff have developed corrective action plans (CAPs) that include structural and non-structural initiatives and involves coordination with the host municipality. The framework for the CAPs was shared with the Board in February and are being developed further for submission to DEP. **(No Change)**

15. Suburban Division - Heidelberg Heights Sanitary Sewer Rehabilitation Project

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

16. Suburban Division - Heidelberg Heights Corrective Action Plan

On February 11, 2019, the Pa. Department of Environmental Protection (DEP) submitted a notice of violation to LCA regarding bypasses and permit exceedances at the Heidelberg Heights wastewater treatment plant. As discussed with the LCA Board during several meetings in 2018, this small satellite system is challenged by high groundwater levels and significant infiltration and inflow (I&I) of clear water into the sewer system during rain events. LCA staff met with DEP officials on March 6, 2019 to discuss the problems and, as a result, LCA is preparing a comprehensive corrective action plan (CAP) for submission to DEP by May 5, 2019. A draft of the plan was attached for Board review at the April 22, 2019 Board meeting. The final CAP was submitted to DEP on 4/29/19.