



LEHIGH COUNTY AUTHORITY

LCA Main Office:
1053 Spruce Road
Wescosville, PA 18106
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Agendas & Minutes Posted:
www.lehighcountyauthority.org

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BOARD MEETING AGENDA – July 10, 2017

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

- *June 26, 2017 Board meeting minutes*

4. Public Comments

5. Action / Discussion Items:

FINANCE AND ADMINISTRATION

- *LCA Strategic Goals & Key Performance Indicators – Discussion only*
- *Geographic Information System (GIS) Field Application – Discussion only*

WATER

- *Suburban Water Division - Curb Box Location Program (blue)*

WASTEWATER

6. Monthly Project Updates / Information Items (1st Board meeting per month) – **July 2017 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.

July 24, 2017

August 14, 2017

August 28, 2017

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
June 26, 2017

The Regular Meeting of the Lehigh County Authority was called to order at 12:00 p.m. on Monday, June 26, 2017, Chairman Nagle presiding. Other Members present at the commencement of the meeting were: Linda Rosenfeld, Kevin Baker, Norma Cusick, Scott Bieber and Deana Zosky. Authority Staff present were Liesel Gross, Brad Landon, Chuck Volk, Ed Klein, Pat Mandes, Chris Moughan, John Parsons, Phil DePoe, 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 are no Agenda changes and there will be Executive Sessions regarding potential litigation and also a real property transaction.

APPROVAL OF MINUTES

May 22, 2017 Regular Meeting Minutes

Liesel Gross read suggested corrections to the Minutes of May 22nd as submitted via email by Richard Bohner. On page two, second paragraph fourth line, the word should be *Spry* not *Spring* and under Allentown Division – Wastewater Treatment Plant: Security Upgrades, first paragraph third line, the word *projected* should be *project*.

On a motion by Norma Cusick, seconded by Linda Rosenfeld, the Board approved the Minutes of the May 22, 2017 meeting as corrected (5-0). Deana Zosky abstained.

PUBLIC COMMENTS

None.

ACTION AND DISCUSSION ITEMS

Suburban Division – Pine Lakes Pumping Station Improvements

Chuck Volk provided an overview of the project, which includes the conversion of the aged existing hydro-pneumatic station to a variable frequency drive controlled double-pumping system. It also includes the addition of a new 10,000 gallon steel non-pressure class underground water storage tank and other miscellaneous improvements. A supervisory control and data acquisition (SCADA) system will be installed to allow full remote control and monitoring of the facilities.

In response to a question from Mr. Nagle, Mr. Volk explained the difference between a hydro-pneumatic station and a variable frequency drive controlled double-pumping system.

On a motion by Kevin Baker, seconded by Norma Cusick, the Board approved the Capital Project Authorization – Construction Phase in the amount of \$540,994.00 which includes the General Construction Contract to DESCCO Design Construction Inc. in the amount of \$366,879.00, the Electrical Construction Contract to PSI Pumping Solutions, Inc. in the amount of \$81,300.00, the Professional Services – Construction Phase Engineering to JMT, Inc. in the amount of \$9,050.00, and the Professional Services – Construction Phase Inspection to Cowan Associates, Inc. in the amount of \$8,765.00 (6-0).

Suburban Division – Asset Management Facility Upgrades

Chuck Volk explained the upgrade project that consists of structural, HVAC, and electrical rehabilitation to nine water facilities and two wastewater facilities to prolong service life, satisfy current codes, and mitigate risk. The project is the result of the Suburban Division Asset Management Facility Condition Assessment

performed in 2016, which evaluated numerous water and sewer facilities and assigned risk ratings for each station based on probability and consequence of failure.

Mr. Volk explained that the scope of work was determined by the projects with the highest risk of failure. More detail about other projects related to asset management upgrades at the Authority's critical facilities will be provided in the draft Capital Plan provided at a future meeting.

On a motion by Norma Cusick, seconded by Kevin Baker, the Board approved the Capital Project Authorization – Construction Phase in the amount of \$961,796.00 which includes the General Construction Contract to JEV Construction, LLC in the amount of \$623,340.00, the Electrical Construction Contract to Blooming Glen Contractors in the amount of \$240,856.00, and the Professional Services – Construction Phase Engineering to D'Huy Engineering in the amount of \$37,600.00 (6-0).

Allentown Division – Pre-Lease Valve Replacements

Phil DePoe provided an overview of the project, which includes the replacement of a minimum of 50 inoperable valves in multiple locations throughout the City of Allentown (COA) that existed prior to the lease agreement. The project is identified as Uncompleted Work in the lease and will be funded by the COA. The Board asked for an explanation of the cash flow process and how it works. Ed Klein explained the Authority does the work, pays for it, and then bills the COA using progress payments with 30-day terms.

On a motion by Linda Rosenfeld, seconded by Norma Cusick, the Board approved the Capital Project Authorization – Construction Phase in the amount of \$1,033,556.00, which includes the Construction Contract awarded to Wexcon, Inc., in the amount of \$881,030.00, and the Professional Services Authorization for Construction Engineering, Management and Inspection services Amendment No. 1 to Barry Isett & Associates, Inc. for \$17,526.00 (6-0).

Stormwater Injection Wells

Liesel Gross used a PowerPoint presentation to report on a meeting held with the Pennsylvania Department of Environmental Protection (DEP), Lehigh County Conservation District (LCCD), and Authority staff to learn more about the permitting process for stormwater injection wells.

The U.S. Environmental Protection Agency issues permits for stormwater injection wells as Class V wells under their Underground Injection Control (UIC) Program. This is viewed as "permit by rule" process with limited public input or technical review or monitoring. Compliance with Class V permit requirements is typically self-regulated by the permit holder. DEP officials reported that this EPA authorization is usually in-hand prior to submission of more detailed stormwater management plans to a municipality, LCCD or DEP. DEP's Waterways & Wetlands Program reviews permit applications from the standpoint of earth disturbance and discharge permit criteria, which do not necessarily match up to the drinking water standards outlined in the EPA permit. While there is no formal process for the Authority to automatically be drawn into the process for impacts of injection wells on drinking water supplies, established procedures, such as working with LCCD and using data on source water protection (SWP) zones surrounding the Authority's water supplies, have been effective in bringing the Authority's concerns into the decision-making process. Additional opportunities exist to submit comment if a National Pollutant Discharge Elimination System (NPDES) permit is drafted and posted for public comment in the Pennsylvania Bulletin.

The Board has been concerned about the increasing number of permit applications. DEP said they welcome and encourage comments to be submitted that provide scientific evidence of potential impact to drinking water and will use submitted studies to defend a position denying or restricting a permit for a stormwater injection well. Liesel Gross explained there are a lot of studies showing water run-off impact to streams; however there is not a lot of data available showing impact of injection wells to streams or watershed impacts in general. Ms. Gross suggested the Authority explore the impacts of stormwater injection wells in Karst aquifers as part of the watershed monitoring project currently being designed.

On a motion by Scott Bieber, seconded by Deana Zosky, the Board approved adopting a policy opposing injection wells in our Karst geology and authorized Staff to take the proposed next steps as listed (6-0):

- Follow-up with LCCD to ensure strong partnership includes looping LCA in on stormwater injection wells proposed (not just those in a designated SWP zone).
- Continue to provide detailed data on impacts to drinking water as appropriate as part of the municipal and LCCD review process.
- Monitor the Pennsylvania Bulletin for information on injection well permit applications that have moved on to the DEP permitting phase, and repeat objections made previously if not addressed.
- Prepare and submit a “standard” objection to injection wells in Karst geology to be used in cases where specific SWP impacts are not identified.
- Include evaluation of stormwater injection well impacts to watershed monitoring project currently being designed.
- Prepare and submit a letter to all townships asking for their support in writing ordinances prohibiting stormwater injection wells.
- Other actions as necessary to support the Authority’s position opposing stormwater injection wells.

Allentown Division – Manhole Collars with Water Tight Frame and Covers: Cycle 4

Phil DePoe provided an overview of the project, which will install a frame and cover anchoring system for 10 aged brick manholes previously identified by COA staff. The selected anchoring systems are intended to eliminate sewage overflows during high flow events. Additionally, all manholes for this project will receive new bolt-down frames if not installed.

On a motion by Linda Rosenfeld, seconded by Norma Cusick, the Board approved the Capital Project Authorization – Construction Phase in the amount of \$58,000.00, which includes the Construction Contract awarded to Joao & Bradley in the amount of \$49,460.00 (6-0).

MONTHLY PROJECT UPDATES/INFORMATION ITEMS

Liesel Gross brought to the attention of the Board items listed in the report for upcoming meetings and highlighted the two items for discussion under Finance & Administration for the July meetings.

MONTHLY FINANCIAL REVIEW

Ed Klein gave an overview of the May 2017 Financial Report, including a short PowerPoint presentation outlining key performance indicators.

MONTHLY SYSTEM OPERATIONS OVERVIEW

John Parsons reviewed the May 2017 Operations Report that was attached to the Board agenda. Norma Cusick asked if the Authority has been able to identify the source of its water loss. Liesel Gross responded that in the City of Allentown, all major losses have been identified and the remaining loss of 20% is suspected to consist mostly of smaller leaks and losses such as service line leaks or individual faulty meters. Kevin Baker asked if the Authority tracks the details about customer inquiries to determine drivers for the call volume and customer satisfaction. Ms. Gross responded that there is a manual tracking system in place and approximately 85% of the calls are billing related. The number of calls have gone down since the implementation of the online bill-payment system last year.

STAFF COMMENTS

Liesel Gross informed the Board of the Annual All-Employee meeting being held on July 19th. The meeting will include a tour of the Kline's Island Wastewater Treatment Plant at 11:30 a.m. which Board members are invited to attend.

SOLICITOR'S COMMENTS

Brad Landon commented on the meeting with DEP, noting that both DEP and LCCD stated they appreciate the Authority being progressive in its approach regarding stormwater injection wells and encouraged the Authority to continue to provide comment.

PUBLIC COMMENTS / OTHER COMMENTS

None.

Chairman Nagle called a break at 1:24 p.m. The meeting reconvened at 1:28 p.m.

EXECUTIVE SESSION

Chairman Nagle called Executive Sessions at 1:29 p.m. to discuss potential litigation and a real property transaction. Attorneys Alessandra Hylander and Devin Chwastyk of McNees Wallace & Nurick LLC entered the meeting at this time.

The Executive Sessions ended at 2:25 p.m.

ADJOURNMENT

There being no further business, the Chairman adjourned the meeting at 2:25 p.m.

Norma A. Cusisk
Assistant Secretary



MEMORANDUM

TO: LCA Board of Directors
FROM: Liesel Gross, CEO
DATE: July 6, 2017
RE: 2017 Goals & Measures – 2nd Quarter Update

At the July 10, 2017 meeting of the Lehigh County Authority Board of Directors, staff will present a brief update on progress on our annual goals. In late 2016, the Authority embarked upon a strategic planning project using the Effective Utility Management (EUM) framework established by the American Water Works Association and seven other water industry associations. Following that framework, four primary areas were identified for specific focus in LCA's goal-setting process. They are:

1. Financial Viability
2. Infrastructure Stability
3. Product Quality*
4. Employee Leadership & Development

Summary information on each of these four EUM attributes is attached, showing LCA's overall progress on the strategies and activities identified for the current calendar year to move our performance to the next level.

In addition to continued progress in each of these areas, an overarching goal for the Authority in 2017 is to establish a longer-term set of business strategies and key performance indicators to measure and illustrate success. A two-day workshop was conducted in May to develop measures associated with each of the four top-priority EUM attributes listed above. While the new measures have been defined, much more work is needed to evaluate the data sources available to fully develop the KPI dashboard as envisioned.

At the July 10, 2017 Board meeting, the preliminary measures will be reviewed at the summary level to explain:

- Measure description / definition (what we're measuring)
- Linkage to EUM strategies (why it's important to us)
- Implementation plan / schedule (when we will measure)

No specific action is requested at the Board meeting, although staff would value and appreciate any feedback the Board may offer to help shape the future of this continuous improvement program.

** **NOTE:** The Product Quality attribute focuses on progress related to addressing the USEPA Administrative Order to eliminate Sanitary Sewer Overflows. This topic requires a special / separate discussion when project consultants are available to help describe the evolution of this program over the past few months. This discussion has been tentatively scheduled for an LCA meeting in August and will therefore not be discussed at length at the July 10, 2017 meeting.*

Every drop matters. Every customer counts.

2017: LCA Organizational Goals – Financial Viability

Attribute Description from Effective Utility Management (EUM) framework:

Understands the full life-cycle cost of utility operations and value of water resources. Establishes and maintains an effective balance between long-term debt, asset values, operations and maintenance expenditures, and operating revenues. Establishes predictable rates—consistent with community expectations and acceptability—adequate to recover costs, provide for reserves, maintain support from bond rating agencies, plan and invest for future needs, and taking into account the needs of disadvantaged households. Implements sound strategies for collecting customer payments. Understands the opportunities available to diversify revenues and raise capital through adoption of new financial management models.

LCA MANAGEMENT GRADE: C+

LCA MANAGEMENT RANK (1-10): 2

2017 LCA FOCUS: Achieving Budget and Capital Financing

- Achieve targeted performance included in 2017 budget

Jan.	June	Dec.
← Results through June generally acceptable Year-end forecast under development		

- Complete new borrowing for known capital needs

Jan.	June	Dec.
← Suburban water financing complete Suburban sewer / AO financing under review		

- Review, revise and adopt capital financing policy that staff & Board agree on

Jan.	June	Dec.
← Suburban tapping fees behind schedule Capital financing policy review to be included in Suburban rate study – 3 rd quarter		

- Understand and develop strategy to address impact of Allentown Division revenue shortfall

Jan.	June	Dec.
← Revised long-term financial model complete Evaluation of revenue scenarios complete		

2017: LCA Organizational Goals – Infrastructure Stability

Attribute Description from Effective Utility Management (EUM) framework:

Understands the condition of and costs associated with critical infrastructure assets. Plans infrastructure investments consistent with anticipated growth, system reliability goals, and relevant community priorities, building in flexibility for evolution in technology and materials, and uncertainty in the overall future operating context (e.g., climate impacts, customer base). Maintains and enhances the condition of all assets over the long-term at the lowest possible life-cycle cost and acceptable risk consistent with customer, community, and regulator-supported service levels. Assures asset repair, rehabilitation, and replacement efforts are coordinated within the community to minimize disruptions and other negative consequences.

LCA MANAGEMENT GRADE: C
LCA MANAGEMENT RANK (1-10): 3 (tied with 5 others)

2017 LCA FOCUS: CityWorks Implementation & Asset Management Strategy Development

- Complete data collection and population of Suburban Division asset data into CityWorks

Jan.	June	Dec.
		← Vertical asset data collected and uploaded Manuals, plans, repair history, etc., ongoing

- Create Suburban Division preventative maintenance program for all major equipment

Jan.	June	Dec.
		← Hydrant, valve & flushing program kick-off PM templates developed in CityWorks

- Incorporate asset management projects into Capital Plan based on needs assessed

Jan.	June	Dec.
		← Suburban year-1 project bid / approved 2018-2022 Capital Plan under development

- Develop strategy to integrate Asset Management approach across all LCA divisions

Jan.	June	Dec.
		← Asset management measures defined Teams assembled to review data collection needs, formats & reporting methods

2017: LCA Organizational Goals – Product Quality

Attribute Description from Effective Utility Management (EUM) framework:

Produces “fit for purpose” water that meets or exceeds full compliance with regulatory and reliability requirements and consistent with customer, public health, ecological, and economic needs. Products include treated drinking water, treated wastewater effluent, recycled water, stormwater discharge, and recovered resources.

LCA MANAGEMENT GRADE: A- *

** Additional discussion required to validate an overall “A” grade in this area, considering some challenges within LCA’s small water and wastewater systems, and continued region-wide need to address sanitary sewer overflows.*

LCA MANAGEMENT RANK (1-10): 1

2017 LCA FOCUS: US EPA Administrative Order (AO) / Elimination of Sanitary Sewer Overflows (SSOs)

- Develop agreement on cost-sharing methodology with Western Lehigh Sewerage Partnership (WLSP) for Western Lehigh projects.

Jan.	June	Dec.
		← To be discussed in August.

- Work with the City / City signatories on agreement on cost-sharing methodology for projects undertaken by City of Allentown.

Jan.	June	Dec.
		← To be discussed in August.

- Planning work completed / approved by WLSP and submitted to EPA by 12/31/2017

Jan.	June	Dec.
		← To be discussed in August.

- Develop method of measure effectiveness of capital program and ongoing operation and maintenance (CMOM) program

Jan.	June	Dec.
		← To be discussed in August.

- Plan for 2018 Western Lehigh projects

Jan.	June	Dec.
		← 2018-2022 Capital Plan under development.

2017: LCA Organizational Goals – Employee & Leadership Devel.

Attribute Description from Effective Utility Management (EUM) framework:

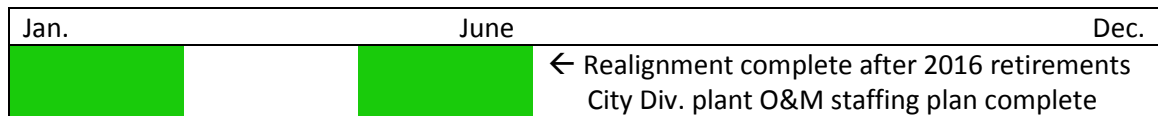
Recruits and retains a workforce that is competent, motivated, adaptive, and safety-focused. Establishes a participatory, collaborative organization dedicated to continual learning, improvement, and innovation. Ensures employee institutional knowledge is retained, transferred, and improved upon over time. Provides a focus on and emphasizes opportunities for professional and leadership development, taking into account the differing needs and expectations of a multi-generational workforce and for resource recovery facilities. Establishes an integrated and well-coordinated senior leadership team.

LCA MANAGEMENT GRADE: C+

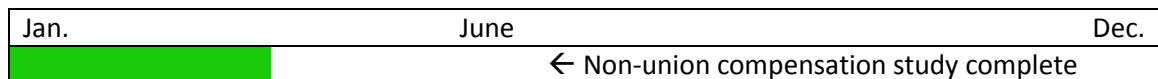
LCA MANAGEMENT RANK (1-10): 3 (tied with 5 others)

2017 LCA FOCUS: Workforce / Succession Planning & Knowledge Loss

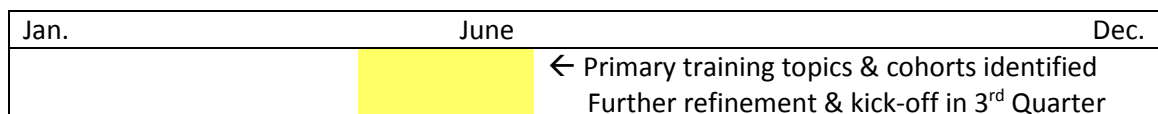
- Identify and plan for retirements in the 1-3 year timeframe



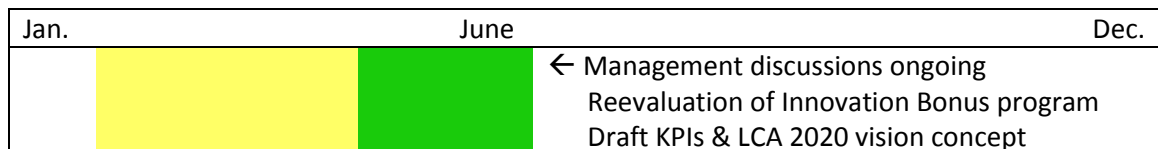
- Evaluate & realign non-union employee pay scales



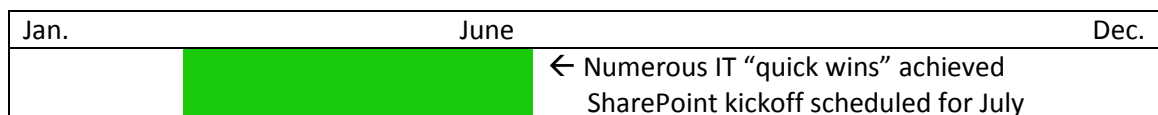
- Developing management training & leadership development strategies



- Develop continuous improvement program / culture



- Leverage technology to address information sharing / training needs of the organization



MEMORANDUM

Date: July 10, 2017

To: Lehigh County Authority Board
From: Chris Moughan, LCA Chief Information Officer
Subject: Administration – GIS Curb Box Location and GPS

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization – Construction Phase	\$168,000
2 ⁽¹⁾	Professional Services Authorization – ValveTek	\$153,000

(1) Included in the Capital Project Authorization.

PROJECT OVERVIEW:

The project will include the geo-locating of approximately 18,000 curb boxes in the Suburban Water Division. All collected data will be imported into the mobile Geographic Information System (GIS) application. Once imported this data will be available to LCA field personnel working anywhere within the water system.

By adding the curb box locations to our GIS application, field personnel will have an easier time locating the curb boxes in emergency situations or inclement weather. In addition, since the curb box are an indication of the location of the customer’s water service line, we expect this project will improve the efficiency and accuracy of leak detection programs and other operational projects that require more precise information about service connections.

FINANCIAL:

This project will be funded by the LCA Administration capital budget earmarked for improvements to LCA’s GIS program and associated mobile applications.

PROJECT STATUS:

Board approval is requested for this Construction Phase.

THIS APPROVAL – CONSTRUCTION PHASE:

This phase includes physically locating and then electronically geo-locating all curb boxes in the Suburban Division. ValveTek will be responsible for data collection, and subsequent delivery to LCA in formats as specified by LCA staff for import into the GIS program. LCA will be responsible for staging and importation of data into the mobile GIS application. LCA will also be responsible for project oversight as well as any maintenance deficiencies identified as part of the project. Any curb boxes that ValveTek cannot locate will be LCA's responsibility.

BIDDING SUMMARY:

N/A – This work is considered to be a professional service due to the Authority's data requirements and technical requirements of the work to be completed.

PROFESSIONAL SERVICES:

Earlier in 2017, ValveTek was approved to begin work on the Valve Exercising and Hydrant Maintenance projects within the Suburban Division operational budgets. As part of this work, ValveTek has been meeting all performance standards for both maintenance activities and data management tasks associated with those operational projects. The data management work required for the operational programs (valves and hydrants) is similar in nature to the proposed curb box work in that data is collected in specific formats for seamless import into LCA systems including the GIS and Computerized Maintenance Management System (CMMS).

As a result of the exceptional work ValveTek is completing, they were invited as a uniquely qualified service provider for this capital project. ValveTek's cost proposal is well within the budget planned for this important work.

Their work will also include:

1. Initial kick off to discuss required data to be collected.
2. Locate curb box with use of a metal detector (probe minimum of 3" to verify if buried)
3. Mark location with a GPS unit to collect data
4. Use as-built drawings to assist locating, provide feedback to LCA staff if unable to mark curb box.
5. Deliver all data back to LCA using required formats for transmitting location data and any necessary maintenance requests to the Authority's GIS and CMMS systems.

PROJECT SCHEDULE:

Project will begin once approval has been given. Expected to be completed by February 2018.

FUTURE AUTHORIZATIONS:

No future authorizations are anticipated for this project in the Suburban Division. Future authorization may be requested to complete curb box locations in the Allentown Division.

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	CON-A-2	BUDGET FUND:	Consolidated Administration
PROJECT TITLE:	GIS Curb Box GPS	PROJECT TYPE:	<input checked="" type="checkbox"/> Professional Services <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input type="checkbox"/> Amendment No. 1
THIS AUTHORIZATION:	\$168,000		
TO DATE (W/ ABOVE)	\$168,000		

DESCRIPTION AND BENEFITS:

The project will include the geo-locating of approximately 18,000 curb boxes in the Suburban Water Division. All collected data will be imported into the mobile GIS application. Once imported this data will be available to LCA field personnel working anywhere within the water system.

Please see attached Board Memo for further project details.

Authorization Status:

<i>Previous Authorizations</i>	
<i>Design Phase</i>	<i>\$0</i>

Requested This Authorization	
<i>Construction Phase</i>	
Staff	\$5,000
Professional Services	\$153,000
Engineering Consultant	\$0
Miscellaneous	\$5,000
Contingency	\$5,000
Total This Authorization	\$168,000

Future Authorizations	None Expected
Total Estimated Project	\$168,000

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: ValveTek Utility Services
16 Interhaven Ave
North Plainfield, NJ 07060

Date: July 10, 2017
Requested By: Chris Moughan

Approvals

Department Head: _____
Chief Executive Officer: _____

Administration – GIS Curb Box Location and GPS

ValveTek will be responsible for finding the physical location and geo-locating of curb boxes in the Suburban division. ValveTek will be responsible for data collection, and subsequent delivery to LCA.

Professional Services (1) (Modify scope of work)
1. Initial kick off to discuss required data to be collected
2. Locate curb box with the use of a Schonstedt metal detector
3. Mark location with a Trimble unit
4. Use as-built drawings to assist locating curb box
5. Notify LCA staff if unable to find curb box
6. Deliver all data back to LCA using required formats for transmitting location data and any necessary maintenance requests to the Authority's GIS and CMMS systems.

(1) For GIS software administration only

This Authorization – Professional Services Authorization: \$153,000

Cost Estimate (not to be exceeded without further authorization): \$153,000

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:** _____

WATER**ACTION ITEMS**

1. Suburban Water Division – Curb Box Location Program – July 10, 2017

Currently, the Authority's Geographic Information System (GIS) does not include actual data on the location of curb boxes or service lines within the Suburban Water Division. Estimated locations are included but are often inaccurate. This project was included in the 2017 capital budget and will include geo-locating approximately 18,000 curb boxes in the Suburban Water Division. All data will be imported into the GIS mobile application and will be available to assist field employees working remotely anywhere in the water system. A quote for this work was provided by ValveTek, and the total project cost is \$168,000. The work is considered to be a Professional Service due to the database expertise that is required, and ValveTech is currently working on similar operational projects for the Authority. Board approval is recommended at the July 10, 2017 meeting.

2. Allentown Division – Schantz Spring Main Replacement – July 24, 2017

The project is the replacement of approximately 2,000 linear feet of 1903 vintage 30-inch diameter water main in Martin Luther King, Jr. Boulevard from the Water Filtration Plant heading towards Schribers Bridge. This project also includes addressing other leaks that were identified during the "SmartBall" leak detection work completed by the City of Allentown (COA). Bids will be received on July 13, 2017. A bid recommendation will be presented for authorization of award at the July 24, 2017 Board meeting. This Project is identified as Schedule-7 Work and will be funded by LCA Allentown Division.

3. Suburban Division – Crestwood Alternate Water Supply – July 24, 2017

The project consists of abandonment of existing wells and a storage tank currently serving higher elevation customers in the Crestwood service area (Schnecksville), and a connection of the pumping station to the main North Whitehall Division System. The project will also involve installation of a SCADA system. Bids will be received on July 7. A bid recommendation will be presented for authorization of award at the July 24 Board meeting.

4. Suburban Division – Well Abandonments – July 24, 2017

The project consists of the abandonment of six wells that are no longer used due to water quality issues: WL4, WL7, NL7, NL8, NL9, and NL10. A professional services authorization for ARRO Consulting Engineers will be presented to the Board for authorization at the July 24 meeting.

5. Suburban Division - Water Main Replacement Program Cycle 3 – July 24, 2017

The project consists of the replacement of approximately 1 mile of aged and/or failing Cast Iron water main. The design phase of this project was approved at the January 2015 Board meeting. Bids will be received on July 13, 2017. A bid recommendation will be presented for authorization of award at the July 24, 2017 Board meeting.

DISCUSSION ITEMS

INFORMATION ITEMS

1. Allentown Division - Water Filtration Plant / Water Distribution: Flood Pump Replacement

Upgrades to the existing stormwater pump/control for the WFP and D&C parking lot are needed due to equipment age. The existing flood pump (centrifugal) will be replaced with a new submersible flood pump. Miscellaneous electrical upgrades will also occur. In addition, a new raw water magmeter and two new chemical feed tanks will be installed at the Water Filtration

Plant. Board Approval was granted at the January 23rd Board Meeting. Construction began in April of 2017 and completion is expected by August of 2017. This capital project is funded by the LCA Allentown Division. **(No Change)**

2. **Allentown Division – Water System Master Plan**

This project involves the creation of a Master Plan for the Allentown Water Plant, water storage tanks, water storage reservoirs, pressure booster stations, raw water springs, and surface water intakes. The Master Plan will involve several key sections including, but not limited to: full-scale condition assessments, treatment process optimization, and development of short term/long term capital plans. The Master Plan is a requirement included within the City of Allentown lease, and it also needs to be updated every 5 years throughout the life of the lease. The project kick-off meeting with Arcadis was held on May 4, 2016. Multiple workshops have also been held since then. Condition Assessments and process control audits/optimizations are to the point of final drafts and short-term and long-term capital plans are being developed. The project continues to move forward and is scheduled to be completed in July 2017 and it will be funded by the LCA Allentown Division.

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

This project will replace approximately 110 linear feet of the 30-inch diameter water main that supplies water from Schantz Spring to the Water Filtration Plant on the county's property at Cedarbrook where the line crosses a swale from I-78. The project will demolish the concrete culvert that carries the pipe over the swale and install a new pipe under the swale. Application will be made to DEP for a Public Water Supply Permit following city review. The project will be funded by the LCA Allentown Division and is anticipated to be constructed late 2017.

4. **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 Design phase was approved at the December 2016 Board meeting. As of June 2, 2017 Gannett Fleming our Engineer has submitted their design of the relocation to the state and is awaiting their approval. It is anticipated that this work will be reimbursed 100% by the state and that the construction related activities will be incorporated within the state's work. **(No Change)**

5. **Allentown Division – Pre-Lease Valve Replacements**

The project scope includes the replacement of approximately 50 inoperable valves in multiple locations throughout the City that existed prior to the lease settlement. The bid was authorized for award at the June 26, 2017 board meeting and construction is anticipated to begin in late August 2017. The project is classified as uncompleted work and will be funded by the City of Allentown.

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

The project will feature the installation of a new booster pumping station and water main extension to pump water from the Lower Pressure System to the Upper Pressure System. The project will also involve installation of a SCADA system. A revised Public Water Supply (PWS) permit application package was received from the consultant and is being reviewed. Design and permitting of the pump station will be completed by the end of 2017.

7. **Suburban Division – Route 309 Crossing at Sand Spring Road**

A 12" water line will cross Route 309 through a previously installed 24" casing. Completion of this line will bring public water to the property line of Lehigh Carbon Community College. The design phase is completed. PennDOT Highway Occupancy Permits have been obtained. An

easement agreement was sent to LCCC for their signatures. The project is planned to be constructed as part of an upcoming Suburban Division main replacement project **(No Change)**.

8. Suburban Division - Water Main Replacement Program Cycles 1 & 2

The project consists of the replacement of 2.85 miles of aged and/or failing Cast Iron water main. The Construction phase was approved at the 4/11/16 Board meeting. As of May 6, 2017 Anrich Inc., our contractor has completed all punch list item deficiencies. Currently as of June 2, 2017 LCA is under discussions with Anrich, Inc. to close out the project. **(No Change)**

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

The project will feature the installation of a new booster pumping station and water main extension to pump water from the Central Lehigh Division (CLD) to the 125-lot Kohler Tract subdivision in Upper Milford Township. We are preparing to make offers to three property owners where easements are needed. Design of the pump station is under way. Design of the water line will commence once the easements are obtained.

10. Suburban Division – Pine Lakes Pumping Station Improvements

This project was originally bid in July 2016 and bids were subsequently rejected due to the lack of competitiveness and significant exceedance of the engineer's estimate. The purpose of this project is to upgrade the original hydro-pneumatic well station (built in mid-1970s) to continue the level of service, replace aged and problematic equipment, reduce the probability and consequence of risk, and prolong the useful life of the station. The station is to be upgraded to a double pumping variable speed system with full SCADA telemetry. The project bids were opened on June 1 and authorization to award was given at the June 26, 2017 Board meeting. Construction is anticipated to begin in August 2017 and be completed by the end of 2017.

11. Suburban Division – Asset Management Facility Upgrades

Project includes the construction of improvements that were identified and prioritized in the Building Condition and Assessment Study prepared by D'Huy Engineering in accordance with LCA's asset management goal. The project scope includes structural, HVAC, and electrical/code improvements to be performed on facilities that were assigned a high risk score (high consequence and probability of failure). Nine (9) water facilities and two (2) wastewater facilities are part of the project scope. The project bids were opened on May 30, and authorization to award was given at the June 26, 2017 Board meeting. Construction is anticipated to be completed in early 2018.

12. Developments

Water system construction is occurring in the following developments:

- Fields at Indian Creek, Phase 2, 35 private, age-restricted/senior residential units (sfd), UMiIT, water & sewer
- Highgate, Phase 3 (Dunbar Tract) SF4/5, 17 residential lots (sfd), UMT
- Spring View (Bortz Tract), 14 commercial units, UMT
- Trexler Business Center, 1 Commercial Lot with 6 commercial buildings, LMT
- Trexler Fields, Phase 1B/8/9, 100 residential lots (sfa), UMT

Water system plans are being reviewed for the following developments:

- 67 Werley Road, 112 apartments & clubhouse, UMT
- Ciocca Audi, 1 additional commercial building at existing business, LMT
- Diocesan Pastoral Center, 2 commercial lots, 3 additional lots and residual lot for existing cemetery, LMT
- Farr Tract, 17 residential lots (sfd), LMT
- Grant Street Townes, 18 residential lots (sfa), WashT

Green Acres Mobile Home Court, master meter 590 existing units (sfd), UMT
Hickory Park Estates, 3 residential lots (sfd), UMT
Hillview Farms, 31 residential lots (sfd), LMT/SWT
Indian Creek Industrial Park, 6 commercial lots, UMiIT, water and sewer
Kohler Tract, 125 residential lots (sfa), UMiIT, water and sewer
Lehigh Hills, Lot 2 Pad Sites, 2 commercial lots, UMT
Lehigh Hills, Lot 5, Phase 1, 273 apartments & clubhouse, UMT
Mary Ann's Plaza, 1 lot with 12 commercial units, NWT
Morgan Hills, 40 residential lots (sfd), WeisT, water and sewer
North Whitehall Commercial Center (Walmart), 5 commercial lots, NWT, water & sewer
Schoeneck Road – Lot 1, 1 lot warehouse, LMT, water
Shepherd's Corner, 1 commercial lot, LMT
Weilers Road Twins, 82 residential lots (sfa), UMT
Woodmere Estates, 60 residential units (sfd), UMT

WASTEWATER

ACTION ITEMS

1. **CH2M Contract – August meeting date TBD**

As discussed in September 2016, staff has engaged CH2M in negotiations for a contract extension for operations and maintenance (O&M) services at the Authority's industrial pretreatment plant in Fogelsville, PA. The contemplated contract extension makes use of provisions in the existing O&M contract that allow for extension through 2028, and adds provisions to enhance the Authority's ability to optimize treatment plant operations for improved performance or cost reduction. Additional details will be provided to the Board for review and approval in August following final legal review.

DISCUSSION ITEMS

INFORMATION ITEMS

1. **Allentown Division – Manhole Collars with Water Tight Frame and Covers: Cycle 4**

This project will permanently secure the frame and cover of approximately 10 aged brick manholes identified by current LCA staff. This work will eliminate inflow from entering these manholes and eliminate the potential for sanitary sewer overflows (SSO's) from these manholes. A kick off meeting has occurred with the City. Board approval for construction was granted at the June 26, 2017 Meeting. Construction is expected to begin by July of 2017. The project is identified as Administrative Order and will be funded by the City. This will be the final cycle of the project.

2. **Allentown Division – Wastewater Treatment Plant: Miscellaneous Improvements**

On 12/20/2016, the drive on Final Settling Tank #5 at Kline's Island WWTP experienced a complete failure. The drive is the original unit that was installed during construction of the clarifier in 1968. Procurement of a replacement drive has a long lead time of 14-17 weeks (**update: the drive has been installed and the clarifier is now fully operational**), which would place installation of the drive on a schedule well into the spring months when peak flows are often experienced - and all tanks and drives must be fully operational. An emergency declaration allows staff to reduce this installation time by several weeks. A request for a retroactive emergency declaration was requested and approved at the January 9, 2017 Board meeting. The remaining mechanisms of Clarifier #5 and #6 have also reached the end of its useful life and will be replaced in late 2017. The design is currently underway and construction approval is expected at the August 14, 2017 Board meeting. This capital project will be funded by the LCA Allentown Division.

3. **Allentown Division – Wastewater Treatment Plant: Digester Cover Replacements**

This project involves the cover replacement of both the Primary Digester No. 1 and the Secondary Digester (the cover for Primary Digester No. 2 was previously replaced in 2010). A Major Capital Improvement (MCI) Conceptual Design has been approved by the City. Board approval of the construction phase was received at the 2/8/16 Board Meeting. The new Secondary Digester cover was installed in late October 2016 and construction was completed in late February of 2017. The new Primary No. 1 Digester is expected to be installed and operational by October 2017. This Project is identified in the Lease as a Schedule 7 (required) project and will be funded by the LCA Allentown Division. (**No Change**)

4. **Allentown Division – Kline’s Island WWTP Phase 1 AO Improvements: Conceptual Design Development**

This portion of the Phase 1 Administrative Order project will develop conceptual designs for the blending and flow equalization alternatives at the wastewater treatment plant. This conceptual design concept has been approved by the City. The City has directed LCA to proceed with these alternatives pending a final determination in late May of 2017. Board approval has been approved for the development of this conceptual design (later to be included in the RFP for full design services). Board approval for the full engineering design phase of the project will be requested in Q4 of 2017. The project is identified as Administrative Order Work and will be funded by the City. Construction is expected to begin in early 2019 and is expected to be complete in late 2020. **(No Change)**

5. **Allentown Division – Wastewater Treatment Plant: WWTP Security Upgrades**

This project involves the installation of security related equipment upgrades at the Kline’s Island Wastewater Treatment Plant (WWTP). Enhanced security will further reduce the risk of breaches that may impair the operation of the facility. Board Approval of the CoStars Agreement with Tyco (to purchase the security cameras, doors, etc. upfront) was granted at the January 23rd Board Meeting. Approval of the electrical contractor to install the security equipment will was granted at the May 22, 2017 Board Meeting. Construction of the project is expected to begin in July of 2017. This Project is identified as an Uncompleted Work (UW) in the Lease Agreement and will be funded by the City of Allentown. **(No Change)**

6. **Allentown Division – Wastewater Treatment Plant: Electrical Substation Replacements**

This project involves the replacement of the existing 12.4 kV Switchgear and existing Substation No. 1 and No. 2. The equipment was installed in 1977 and has reached the end of its useful life. The City has reviewed this and has approved this project as a Major Capital Project. Approval of the design engineer was granted at the May 8, 2017 Board Meeting. Approval of the construction contract will be requested at the December 11, 2017 Board Meeting. Construction of the project is expected to begin in January of 2018. This Major Capital Project will be funded by the LCA Allentown Division. **(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 75% complete, with an expected bid date in August 2017. The water quality management Part 2 permit application was submitted to DEP for approval in June 2017.

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

Project consists of sanitary sewer cleaning, inspections via CCTV, cured-in-place point repairs, pressure testing and chemical grout sealing of joints, and post construction inspection for sanitary sewer lines located in western and central Lehigh County previously identified as areas subject to leakage. This project is part of the SCARP program. Construction began in August 2016 and is expected to finish by Summer 2017. **(No Change)**

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

This project will upgrade the wastewater treatment plant (WWTP) headworks to install a mechanical fine screen, in order to protect the influent pumps and mitigate rag buildup. The project is being funded by the Lynn Township Suburban Division. The Notice to Proceed was issued on 4/24/17. Due to the long lead time for delivery of the mechanical screen, work under the general construction contract is not anticipated to start until August. Some electrical work may be undertaken in the meantime. **(No Change)**

10. Suburban Division – SCARP

A Memo of Cooperation (MOC) for completion of the SCARP Capital Improvements Plan was presented to the Partners Solicitors and several meetings have taken place negotiating the final MOC. Meetings have also been taking place with the City Signatories and their Solicitors negotiating a Memo of Understanding for allocation of the City's capital improvements.

Both the MOC and MOU are ready for submission to the governing bodies as the Solicitors have not come to an agreement at this time.

A meeting between the City, LCA, EPA, and DEP was held in Philadelphia in mid-June. Attorneys for all parties were present. The City capital improvements plan and the LCA capital improvements plan was presented in anticipation of the December 31 submission to EPA. EPA is expected to provide a response in the near future to several requests made at the meeting.

11. Suburban Division – Park Pump Station Upgrade

The Park Pump Station is to be upgraded to address station capacity and age/condition issues, and prolong the service life of this critical facility. The existing pumps are to be replaced with dry pit submersible units, existing motors are to be replaced with high efficiency units, and the old rheostat type motor drives are to be replaced with variable speed drives. The MCC is also to be replaced along with miscellaneous mechanical improvements. The project is currently in design phase with design completion and start of bid phase planned for late 2017. **(No change)**

12. Tank Painting Project – Heidelberg Heights Wastewater Treatment Plant

This project is part of LCA's Asset Management Program and involves the draining, cleaning, surface preparation, and painting of the interior and exterior Sequencing Batch Reactor tanks at the Heidelberg Heights wastewater treatment plant. The exposed tanks are 16 years old and require recoating to prevent degradation from the corrosive effects of wastewater and wastewater gases, and the environment. Bids were opened in May and the project was authorized for bid at the June 12, 2017 board meeting. Construction is anticipated to finish by Fall 2017.