



LEHIGH COUNTY AUTHORITY

LCA Main Office:
1053 Spruce Road
Wescosville, PA 18106
610-398-2503

Agendas & Minutes Posted:
www.lehighcountyauthority.org

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BOARD MEETING AGENDA – July 13, 2020

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 22, 2020 Board meeting minutes*

4. Public Comments

5. Action / Discussion Items:

FINANCE AND ADMINISTRATION

WATER

WASTEWATER

- *Suburban Division – Lynn Township Manhole Rehabilitation Project (Approval) (goldenrod)*

6. Monthly Project Updates / Information Items (1st Board meeting per month) – **July 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 27, 2020

August 10, 2020

August 24, 2020

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 22, 2020

The Regular Meeting of the Lehigh County Authority Board of Directors was called to order at 12:01 p.m. on Monday, June 22, 2020, Chairman Brian Nagle presiding. The meeting was held via video and audio advanced communication technology ("ACT"), using the ZOOM internet application, due to the national COVID-19 pandemic emergency. Each Board member and other attendees of the meeting were able to hear each other attendee and be heard by each other attendee. The public could also participate in the meeting via ACT, using the ZOOM internet application. A Roll Call of Board members present was taken. Chairman Brian Nagle, Linda Rosenfeld, Ted Lyons, Kevin Baker, Jeff Morgan, Norma Cusick, Richard Bohner, and Amir Famili were present through ACT for the duration of the meeting.

Solicitor Michael Gaul was also present via ACT. Authority Staff present via ACT were Liesel Gross, Ed Klein, Susan Sampson, Phil DePoe, John Parsons, Chris Moughan, Amy Kunkel, Lisa Miller, Chuck Volk and Todd Marion.

Nate Swartz and Mike Sampson from Zelenkofske Axelrod and Chris Gibbons from Concord Public Finance were also present.

Chairman Nagle announced the Board received the Board packet in advance of the meeting; however, a revised agenda was received along with the May 2020 Financial statement paperwork that was emailed to the Board separately at a later date.

REVIEW OF AGENDA

Liesel Gross stated there are no changes to the agenda and reiterated that a revised agenda was emailed to the Board and also the May 2020 Financial statements were emailed separately and also posted to the website. There will be an Executive Session after the regular meeting to discuss a matter of potential litigation.

APPROVAL OF MINUTES

June 8, 2020 Meeting Minutes

On a motion by Richard Bohner, seconded by Norma Cusick, the Board approved the minutes of the June 8, 2020 Board meeting as written (8-0).

PUBLIC COMMENTS

None.

ACTION AND DISCUSSION ITEMS

2019 Audit & Financial Statements

Ed Klein introduced Nate Swartz and Mike Sampson from Zelenkofske Axelrod LLC to give an overview and highlights of the 2019 Audit and Financial Statements. Mike Sampson stated that the Authority was given an unmodified or clean opinion on the Authority's basic financial statements which is the highest level of assurance provided. The Authority adopted GASB 95 "Postponement of the Effective Dates of Certain Authoritative Guidance" which allowed governmental entities to delay

the implementation of certain new statements for one year primarily to provide relief due to the COVID-19 pandemic.

Mr. Swartz thanked Ed Klein and his staff for their timely, accurate assistance regarding the audit and highlighted certain information in the financial statements including a review of the change in Net Position for all funds, noting a decrease in the Suburban Wastewater fund for two years in a row and the impact of the amortization of the intangible assets booked in the City Division fund due to the outstanding lease bond debt. He reviewed other notes to the financial statements including a review of the Other Post-Retirement Employee Benefits (OPEB) liabilities. Some discussion followed.

On a motion by Norma Cusick, seconded by Linda Rosenfeld, the Board accepted the 2019 Audit and Financial Statements as prepared by Zelenkofske Axelrod LLC (8-0).

Lease Bond Refinancing Evaluation – Authorization of Professional Service Providers

Liesel Gross introduced Chris Gibbons from Concord Public Finance and gave an overview of the evaluation to refinance a portion of the bonds issued in conjunction with Allentown water and sewer Concession Lease Agreement, known as the “Lease bonds,” to take advantage of near-historic low interest rates. In order to evaluate this option, a team of professionals needs to be assembled.

Ed Klein explained the steps in the selection process and his recommendations, which include engaging Concord Public Finance as the financial advisor, AUS Consultants as an appraiser, and McNees, Wallace & Nurick for bond counsel. He noted his recommendation to contract with Arcadis to prepare the required independent engineer’s certificate. In addition, an underwriter and their associated underwriter’s counsel must be selected, and through a proposal and evaluation process, RBC Capital Markets and Janney Montgomery Scott are recommended to jointly serve as underwriters for this financing.

Chris Gibbons further reviewed the proposal process for selecting the underwriting team along with the selection of other professions as noted by Mr. Klein. He explained that the selection of AUS Consultants as the appraiser required acceptance by the City of Allentown in accordance with the terms of the Concession Lease Agreement. The City issued a letter stating its acceptance of AUS for this role, a copy of which was attached to the documents provided to the Board. Mr. Gibbons then reviewed the outstanding Lease bonds and potential new bond rates and reviewed the costs for the underwriter and other professionals selected for this team. He noted the costs would be paid from the proceeds of the bond issue, if the refinancing is completed.

Liesel Gross commented that the authorization being requested today is not a commitment to complete the bond refinancing. The authorization requested is to contract with the recommended team of professionals to complete the evaluation of a potential bond refinancing. Once the data is collected and bond documents prepared, authorization to complete the financing would be brought to the Board in the form of a financing Resolution.

On a motion by Richard Bohner, seconded by Norma Cusick, the Board approved contracting with Concord Public Finance as the financial advisor, AUS Consultants as the appraiser, McNees, Wallace & Nurick as bond counsel, Arcadis as the independent engineer, and RBC Capital Markets and Janney Montgomery Scott jointly as the underwriters with their associated underwriter’s counsel. (8-0).

Allentown Division – Emergency Declaration – Water Main Break at 17th & Sumner Sts.

John Parsons reviewed the water main break that occurred at 17th & Sumner streets on May 17, 2020. Mr. Parsons explained that the leak was isolated and repaired quickly but there was significant damage to the road and curbing, which needed to be replaced. Along with that, it was determined that the 12-inch main that ran south of the main break towards Sumner Avenue also needed to be replaced prior to street repairs.

On a motion by Linda Rosenfeld, seconded by Richard Bohner, the Board approved the Emergency Declaration for the water main repair at 17th and Sumner Avenue in the amount of \$110,319.00 (8-0).

Suburban Division – Additional (Redundant) Water Supply – Small Satellite Divisions

Amy Kunkel gave an overview of the project describing the Madison Park North water system, which was acquired by the Authority in 2010 and includes a single groundwater source. This project will address the development of an additional well as a secondary water source and as a backup for the system. The Authority worked with ARRO Consulting to select a well site that is on private property. A temporary easement was secured and step-drawdown testing was performed, and the new well was determined to be capable of supplying 45 gallons per minute of water to the system. DEP has approved a combined pre-drilling and aquifer test plan and the next step is to perform a sustained pumping test and also monitor three nearby wells to be sure there are no adverse impacts. Upon completion and approval of this request, the design of the well building and piping will be the next phase.

On a motion by Linda Rosenfeld, seconded by Norma Cusick, the Board approved the Capital Project Authorization for the Pre-Design Phase in the amount of \$76,580.00 which includes the Professional Services Authorization to ARRO Consulting, Inc. in the amount of \$42,400.00 and the Professional Services Authorization to Odenheimer Co. in the amount of \$19,180.00 (8-0).

Suburban Division – Heidelberg Heights Consent Order & Agreement (Resolution No. 6-2020-3)

Liesel Gross summarized the challenges over the past few years with the Heidelberg Heights sewer system and the plant bypasses and other permit violations that have occurred during wet-weather events. The Authority has been working cooperatively with the Pa. Department of Environmental Protection (DEP) to develop a corrective action plan to address the system's challenges. She outlined the major components of the corrective action plan that was developed and presented to the Authority Board in 2019. There are three critical components of the plan: ongoing system monitoring to identify system leakage, annual capital projects to replace the public portion of the sewer collection system, and inspection of private service laterals and basements to identify leaking laterals and unauthorized connections. Ms. Gross explained that to officially approve the corrective action plan, DEP has prepared a Consent Order and Agreement which was attached to the Board's agenda packet. Ms. Gross noted that the Consent Order and Agreement must be approved by a Resolution of the Authority Board, which will serve as the Authority's commitment to complete the work outlined in the corrective action plan.

Amir Famili asked how the Authority would be able to recover the costs associated with the plan due to the small size of the system. Liesel Gross explained the system is part of the Authority's common rate system, which includes several other small sewer systems operated by the Authority. The costs to manage all systems are combined into the rate structure applied to the Authority's customers. Any rate adjustments needed to fund the corrective action plan will be reviewed as part of the development of the 2021 budget.

Chairman Nagle suggested obtaining a grant to help alleviate some of the costs. There was some Board discussion.

On a motion by Linda Rosenfeld, seconded by Norma Cusick, the Board approved resolution No. 6-2020-3 authorizing the agreement of the PA-DEP Consent Order for Heidelberg Heights Sewer System (8-0). A Roll call vote was taken:

Brian Nagle – yes
Linda Rosenfeld – yes
Ted Lyons – yes
Jeff Morgan – yes
Kevin Baker – yes
Norma Cusick – yes
Amir Famili – yes
Richard Bohner – yes
Scott Bieber – not present

Suburban Division – Asset Management Upgrade Project – Construction Phase

Chuck Volk described the project for the Spring Creek Pump Station Roof Replacement that consists of removing the roof decking and membrane. He noted the roof has been leaking for an extended period and can no longer be repaired through regular maintenance. He also noted that the bids came in lower than the engineer's estimate.

On a motion by Norma Cusick, seconded by Richard Bohner, the Board approved the Capital Project Authorization for the Construction Phase in the amount of \$93,950.00 which includes the Construction Contract to Munn Roofing Corporation in the amount of \$71,450.00 and the Professional Services Authorization for the Construction Phase Engineering to D'Huy Engineering in the amount of \$7,500.00 (8-0).

MONTHLY FINANCIAL REVIEW

Chairman Nagle announced that the May 2020 report was received via email the day before and asked Ed Klein to provide a brief review with highlights and any questions can be answered at another time after the Board has had more time to review the statements. Mr. Klein provided a brief review of the May 2020 financial report, highlighting variances in year-to-date performance against the budget and forecast.

Amir Famili suggested recalibrating the forecast due to the COVID19 pandemic emergency. Mr. Klein stated there is a plan to revisit the forecast, especially as it relates to capital expenses as many projects have been delayed due to the pandemic. Liesel Gross commented that revenues in the Allentown Division appear to be lower as a result of reduced commercial water sales during the pandemic. She noted the Authority is participating in a national study by Raftelis on the impact the COVID-19 pandemic on utility water sales. Chairman Nagle asked for an overall summary of the pandemic's impact on the Authority. Ms. Gross said a report could be prepared for the second meeting in July.

MONTHLY SYSTEM OPERATIONS OVERVIEW

John Parsons gave an overview of the May 2020 report highlighting the significant repairs and upgrades that occurred during that month.

STAFF COMMENTS

Liesel Gross commented on the Authority's COVID-19 pandemic response, noting that the advanced work that was done early in the process has made it easier to transition through each phase of the guidelines provided by the state Department of Health. Daily temperature screenings are being conducted for all employees and contractors who are working on-site and all who are able to work from home are continuing to do so. The Authority has made some minor adjustments to staffing schedules and safety protocols to prepare for the transition to the "green" phase on Friday, June 26th. She inquired about the Board's preferences regarding meeting format in the future when the restrictions in the region become more relaxed with respect to the allowable size of meetings and social gatherings. After some discussion, the Board agreed that meetings will continue to be held via Zoom until further notice.

Susan Sampson reported that starting on June 24th, the Authority's website will be updated to a new design that will allow for easier navigation for customer use and simplified administration for staff content updates.

Chairman Nagle commended the Staff for their great work during the COVID19 pandemic and the efforts of Chris Moughan to provide technology support to the Authority to allow for remote operations and Board meetings.

SOLICITOR'S COMMENTS

None.

PUBLIC COMMENTS / OTHER COMMENTS

None.

EXECUTIVE SESSION

Chairman Nagle announced that an Executive Session will be held after the regular meeting to discuss a matter of potential litigation.

ADJOURNMENT

There being no further business, the Chairman adjourned the meeting at 1:37 p.m.

Richard Bohner
Secretary

MEMORANDUM

Date: July 13, 2020

To: Lehigh County Authority Board of Directors

From: Charles Volk, P.E., Chief Capital Works Officer and Jason Peters, Capital Works Project Coordinator

Subject: Suburban Division – Lynn Township Sanitary Sewer Manhole Rehabilitation – Construction Phase

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization – Construction Phase	\$238,344
2	Contract Award (Construction): Standard Pipe Services, LLC	\$207,600
3	Professional Services Authorization: Keystone Consulting Engineers	\$13,244

BACKGROUND

This project is part of the Lynn Township Sanitary Sewer System Corrective Action Plan Amendment (“CAP”), which was submitted to DEP in September 2019. The CAP Amendment, which commits LCA to eliminating hydraulic overloads and bypasses at the Lynn Township Wastewater Treatment Plant, includes an updated sewer system condition assessment and an implementation schedule for corrective measures to mitigate wet weather I/I flows. Updated CCTV work and visual inspection of the entire system was performed in 2019, and the manhole inspection data was used to scope this capital repair project. The manhole inspection work revealed numerous deficiencies, including unsealed pipe penetrations, active joint and chimney leaks, broken frames and covers, broken risers, offset frames, recessed tops, missing gaskets, missing inflow dishes, and interior concrete deterioration.

PROJECT OVERVIEW

This project is the first large comprehensive sanitary sewage collection system rehabilitation project for the Lynn Township system since the system was acquired by LCA in 2012. The manhole rehabilitation work includes interior pipe penetration sealing and other interior concrete work, injection grouting of cracks and leaking joints, chimney lining, based section lining, full depth lining, grade adjustments, replacement of frames and covers, replacement of inflow dishes, exterior treatment, and bituminous sealing around the covers within roadways. Approximately 185 manholes are in the scope of work. The contractor will be responsible for temporary measures, including bypass pumping, in order to minimize sanitary sewer service disruption. Roadway restoration is included where required.

FUNDING

The Project will be funded by the LCA Suburban Division

BUDGET AMENDMENT

Not required

PROJECT STATUS

The project was designed by Keystone Consulting Engineers in early 2020. Board approval for construction phase is requested.

THIS APPROVAL – CONSTRUCTION PHASE**BIDDING SUMMARY**

This project consists of one contract. The project was advertised for bid via PennBid in early June 2020 and bids were opened on June 26, 2020. Bids results are follows:

General Construction	
Bidder	Bid Amount
Standard Pipe Services, LLC	\$207,600
PIM Corporation	\$271,610
Mobile Dredging & Video Pipe, Inc.	\$640,225

Standard Pipe Services (SPS), based in Newark DE, has performed several projects for LCA related to different phases of WLI pipe inspection and rehabilitation efforts, and also completed CCTV inspection work for the Lynn Township wastewater collection system. SPS was recently awarded two LCA projects – the sewer main internal lining project in the City of Allentown and the manhole rehabilitation project in the Western Lehigh Interceptor. The contractor is well qualified to perform the scope of work and the bid documents are complete. Capital Works recommends award of the Lynn Township Manhole Rehabilitation Project to SPS.

PROFESSIONAL SERVICES

The design engineer, Keystone Consulting Engineers, will provide the following construction phase services:

- Attend pre-construction conference
- Provide on-site construction management, including scheduling review
- Provide daily construction inspection services (full time or part time depending on phase of work)
- Verify conformance with the specifications
- Prepare daily inspection reports
- Verify daily job material installation quantities
- Document installation (post construction photos)
- Attend progress meetings as required
- Prepare and verify punchlist completion

PROJECT SCHEDULE

Based on contract award following the July 13, 2020 board meeting, it is anticipated that the project will be completed by the end of the year.

FUTURE AUTHORIZATIONS

none

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	<u>SD-S-26</u>	BUDGET FUND:	<u>Suburban Div\Wastewater\Capital</u>
PROJECT TITLE:	<u>Suburban Division – Lynn Township Manhole Rehabilitation Project</u>	PROJECT TYPE:	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input type="checkbox"/> Amendment
THIS AUTHORIZATION:	<u>\$238,344</u>		
TO DATE (W/ ABOVE)	<u>\$252,644</u>		

DESCRIPTION AND BENEFITS:

Lynn Township Manhole Rehabilitation Project:

This project is part of the continuing effort to reduce inflow and infiltration in the Lynn Township collection system as outlined in the Corrective Action Plan Amendment and involves leak repairs at manholes identified as deficient in a system-wide condition assessment. The rehabilitation work proposed for the approximate 185 manholes in this project includes the following:

- interior concrete work
- injection grouting
- chimney lining
- based section lining
- full depth lining
- grade adjustments
- replacement of frames and covers
- replacement of inflow dishes
- exterior treatment
- bituminous sealing around manhole frames within roadways

The work to be performed in this project should have a positive impact on reducing infiltration and inflow leakage at manholes in the Lynn Township collection system.

Previous Authorizations	
Design Phase – Keystone Consulting Engineers	\$14,300

REQUESTED THIS AUTHORIZATION	
Construction Phase	
Construction Contract – Standard Pipe Services, LLC	\$207,600
Construction phase Services – Keystone Consulting Engineers	\$13,244
Staff	\$7,500
Contingency	\$10,000
Total This Authorization	\$238,344

REVIEW AND APPROVALS:

<u>Project Manager</u>	<u>Date</u>	<u>Chief Executive Officer</u>	<u>Date</u>
<u>Chief Capital Works Officer</u>	<u>Date</u>	<u>Chairman</u>	<u>Date</u>



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

Professional: KEYSTONE CONSULTING
ENGINEERS
5012 Medical Center Circle,
Allentown, PA 18106

Date: July 13, 2020

Requested By: Jason Peters

Approvals

Department Head: _____

Chief Executive Officer: _____

Suburban Division – Lynn Township manhole rehabilitation project

Previous Authorizations- Design Phase: \$14,300

This Authorization- Construction Phase: \$13,244

Keystone Consulting Engineers will provide but are not limited to the following construction related services:

- Attend pre-construction conference
- Provide on-site construction management, including scheduling review
- Provide daily construction inspection services (full time or part time depending on phase of work)
- Verify conformance with the specifications
- Prepare daily inspection reports
- Verify daily job material installation quantities
- Document installation (post construction photos)
- Attend progress meetings as required
- Prepare and verify punchlist completion

Cost Estimate (includes prior authorization; not to be exceeded without further authorization):
\$27,544

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

(For Authority Use Only)

Authorization Completion:

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

FINANCE & ADMINISTRATION

ACTION ITEMS

DISCUSSION ITEMS

INFORMATION ITEMS

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

CERTIFICATES OF DEPOSIT						
30-Jun-20						
Fund	Bank	Location	Gross Amount	Date of Purchase	Date Due	Net Rate %
Cons Wtr (2)	Florida Capital Bank	Jacksonville, FL	249,000.00	5/15/2020	5/1/2022	0.500
WW Capac	Westfield Bank	Westfield, MA	249,000.00	5/15/2020	11/15/2021	0.350
LLRI CR	American National Bank - Fox Citi	Appleton, WI	245,000.00	5/20/2020	5/20/2022	0.400
Cons Wtr (2)	Quantum Naational Bank	Suwanee, GA	248,000.00	5/21/2020	5/23/2022	0.350
Cons Wtr (2)	Security State Bank	Scott City, KS	248,000.00	5/22/2020	5/23/2022	0.350
LLRI CR	Preferred Bank	Los Angeles, CA	245,000.00	5/22/2020	3/22/2022	0.350
Cons Wtr (2)	US Treasury Bills		244,682.38	5/22/2020	5/20/2021	-
Cons Wtr (2)	Maine Community Bank	Biddeford, ME	245,000.00	6/5/2020	6/6/2022	0.300

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:

5374/5392 Hamilton Blvd., 1 commercial lot, LMT
 8615/8783 Congdon Hill Drive, 2 industrial lots with warehouses, LMT
 Fields at Indian Creek, Phases 4 & 5, 86 residential units (sfd), water and sewer, UMiIT & Emmaus
 Kohler Tract, 123 residential lots (sfa), water and sewer, UMiIT
 Mill Creek Hotel, 1 commercial lot with 205 room hotel & restaurant, UMT
 Ridings at Parkland, 53 residential units (sfd), NWT-NEW
 Schaefer Run Commons, Phase 1, 61 residential units (sfd), UMT

Water system plans are being reviewed for the following developments:

749 Route 100, 1 industrial lot with warehouse, UMT
 1047 Cetronia Road, 8 unit apartment building, UMT
 1224 Weilers Road Townhouses, 144 townhouse units (sfa), UMT
 5329-5347-5357 Hamilton Blvd., 1 commercial lot, LMT
 5354 Hamilton Blvd., 1 commercial lot, LMT
 5420 Crackersport Road, 1 commercial lot, UMT
 8323/8449 Congdon Hill Drive, 2 industrial lots with warehouses, LMT
 ATAS International, 1 industrial lot, UMT

Cedarbrook Road Industrial Park, 2 industrial lots, LMT
Estates at Maple Ridge, 30 residential units (sfd), UMiIT
Jaundl Commercial Park North, 1 commercial lot, LMT
Laurel Field, Phase 5, 25 townhouses, UMT
Madison Village at Penn's View, 66 manufactured homes, 1 lot, water and sewer, LynnT
Mountain View Estates, 27 residential units (sfd), LMT
Ridings at Parkland – Phase 2, 38 residential units (sfd), NWT
Schoeneck Road, Lot 1, 1 lot warehouse, LMT
Shepherds Corner, 1 commercial lot, LMT
Towneplace Suites by Marriott, 91-room hotel, UMT

Sewage Planning Modules Reviewed in Prior Month:
None.

WATER**ACTION ITEM**

DISCUSSION ITEMS

INFORMATION ITEMS

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

As part of the Pennsylvania Rapid Bridge Replacement Program, the replacement of the Cedar Creek Bridge on Hamilton Street has required the relocation of approximately 500 linear feet of water main. The design 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 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 was completed, however an additional relocation of a LCA sanitary sewer line was added to the original scope and agreement as of April 15, 2019 with an anticipated completion of April 26, 2019. LCA anticipates submitting all final paper work to the state for reimbursement in the very near future when the project has reached 100% completion. As of November 27, 2019 the project is still under construction due to delays caused by environmental timelines to preserve the high quality clear water fishery. It is anticipated that this work will be reimbursed 100% by the state and that the construction related activities. As of February 2020, the LCA utility relocation portion of this project is 100% complete; total project is approximately 75% complete. **(No Change)**

2. Allentown Division – Water Main Replacement Program Cycle 5

The project is for the replacement of 2-miles of aged and/or failing cast iron water main in multiple locations throughout the City, in accordance with the lease requirement, and using our engineer's risk prioritization protocol. The design engineer (Gannett Fleming) halted work on Cycle 5 following main replacement prioritization identification and preliminary project scoping until funds become available. Construction is not anticipated in 2020. **(No Change)**

3. 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 early 2020. Construction is 95% complete. This project will be funded by LCA Allentown Division. **On hold temporarily based on current situation. NO CHANGE**

4. Allentown Division – Water Filtration Plant: High Lift Pump VFD Replacements

The Water Filtration Plan (WFP) supplies water to residential and commercial customers in the City of Allentown, as well as wholesale water to surrounding communities. One of the critical elements at the WFP is the High Service Pumping System (HSPS), which is the primary means of conveying treated water into the distribution system. The HSPS has experienced regular failures of aging electrical components. The July 2017 Allentown Water Master Plan categorizes the pump variable frequency drives (VFDs) in very poor condition and notes that the VFDs are no longer supported by the manufacturer. This project will replace two of the existing VFDs and add a third VFD. This project is currently unfunded, but may be supported through a PENNVEST loan pending ongoing discussion with the City of Allentown. Board approval was granted at the 8/12/19 Meeting for the design phase of this project to ensure loan application timelines can be met - in the event an agreement can be reached. Contract drawings representing 90% design were received in mid-November. Since the discussions with Allentown were not concluded by

the 5/6/20 PENNVEST application deadline, the project is on hold. The next application deadline is 8/5/20. **(No Change)**

5. **Allentown Division – Water Filtration Plant: Raw Water Pump Room Painting Construction Phase**

Since 2015, the piping and appurtenances of the high lift pump station (Phase 1) and the filter gallery (Phase 2) have been painted. It is the intent of Phase 3 to paint the piping and associated appurtenances in and around the raw water pump room, as the coatings are in poor condition. The project was advertised for bid in late December and bids were received mid-January. Construction phase Board approval was approved at the 2/10/20 Board meeting. The pre-construction meeting was held on 2/12/20, construction began in March and is currently on hold due to pandemic related concerns. Construction is anticipated to resume once restrictions are eased with should be completed in fall 2020. **(No Change)**

6. **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 8/28/19. Construction was substantially completed in February 2020. Current status is addressing punch list items not completed during start-up testing – construction is 99% complete. **(No Change)**

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

The project features 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 (Jasper Ridge). Pumping station bids were opened on 4/25/19. Board approval for the construction phase of the project was granted at the 5/13/19 meeting and a preconstruction meeting was held on 6/25/19. The NPDES permit was issued on 3/9/20 and a premobilization teleconference was held on 3/19/20. Upper Milford Township has issued building permits. Construction is underway and is anticipated to be completed in October of 2020 – construction is 25% complete. **(No Change)**

8. **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. In 2018, USGS selected the Delaware River Basin to pilot the National Next Generation Integrated Water Observing System (NGWOS). The Little Lehigh Watershed was picked as a targeted area of the NGWOS Project and additional surface water and ground water monitoring stations will be developed. USGS and LCA met on 11/19/2019 to discuss the proposed monitoring stations and the program in general. A follow up meeting was held on 12/16/2019. USGS and LCA have now found all three GW monitoring wells, LE860, LE 861 and LE862, who's usage had all been discontinued decades ago and their locations were presently unknown. USGS is now checking the viability of using them again. USGS has now completed the installation of (3) new SW Gauging Stations in the Little Lehigh Watershed and all (3) are collecting data. Additional SW flow monitoring stations are within the installation process. All six (6) Fybr sites are currently collecting flow data and the calibration process is expected to last several months. **(No Change)**

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

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. The project is in construction phase. The Notice to Proceed was issued to the contractors on 9/24/19. Construction began in February 2020 and is approximately 15% complete.

10. Suburban Division – Water Meter Reading Equipment Upgrade

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. Construction phase services for the first round of 10,000 units was approved at the 5/13/19 Board meeting. Construction began in July 2019 and a change order was issued to the contractor for the installation of the remaining transceiver units that were originally scheduled for replacement in 2020, in order to expedite the completion of the work under the program and take advantage of favorable contract unit pricing. The project is substantially complete. Work has been suspended due to the Covid-19 virus as soon as restrictions are lifted, the contractor will return to install remaining radios and replace any radios that are not working properly. **(No Change)**

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

This Project is focusing on the development of an additional well for the Madison Park North system. An engineer has been retained to assist with the development of a second well for Madison Park North. 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 was conditionally approved by DEP in late September of 2019. The reconstruction of the test well was completed in mid-January of 2020. The next item to be completed will be a 72-hour sustained pump test, scheduled for this summer. If the test is successful, we will need to obtain approval from the Agricultural Lands Condemnation Approval Board prior to permitting and construction of the new well facilities. Authorization was granted at the June 22 Board meeting for aquifer testing of the proposed well as per the combined Pre-Drilling and Aquifer Test Plan.

WASTEWATER

ACTION ITEMS

1. **Suburban Division – Lynn Township Manhole Rehabilitation Project – July 13, 2020**

This project involves the rehabilitation of manholes in the Lynn Township service area found to be structurally deficient &/or leaking. The project includes frame and cover replacement, interior pipe connection grouting, exterior concrete work and sealing of manholes, and sealing around manhole frames located within roadway surfaces that are found experiencing infiltration through the frame and cover. The purpose of the project is to eliminate inflow and infiltration into manholes in the system. The project scope includes approximately 185 manholes will be rehabilitated in 2020. The project is anticipated to be advertised for bid in early June 2020, bids will be opened on 6/26/20, and construction phase authorization will be requested at the 7/13/20 LCA board meeting. Construction will be completed by late fall of 2020.

2. **Suburban Division - Heidelberg Heights 2020 Sanitary Sewer Replacement Project – July 27, 2020**

In accordance with the adopted, executed Corrective Action Plan mandated by DEP, LCA is required to complete annual I/I mitigation projects to eliminate hydraulic overloads and bypass events at the Heidelberg Heights wastewater treatment plant. The Order requires that all original vitrified clay sewer main and lateral pipe be replaced within the next 5 years. This project was originally advertised for bid in March 2020 and bids were opened on 3/24/20. The low bid price exceeded this capital project construction budget for 2020, and the LCA board authorized rejection of bids at the 4/13/20 board meeting. The project scope was modified to reduce cost and the project was re-advertised for bid in June 2020, bids will be opened on 7/13/20, and board authorization of construction phase is to be requested at the 7/27/20 LCA board meeting. Construction will be completed by late fall of 2020.

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 directed to “pause” the design phase of the project. The City has now directed LCA to keep this project on indefinite hold. **(No Change)**

2. **Allentown Division – Kline’s Island WWTP: Max Monthly Flow Capacity Evaluation**

DEP has noted that the KIWWTP has been performing at a high level and meeting its permitted effluent quality limits during a period of prolonged wet weather since early 2018. This study will provide the basis for confirming the plant’s maximum monthly average that can be sustained during prolonged periods of wet weather – while remaining in full compliance with effluent quality requirements of the plant’s permit. Approval of the study was granted at the 8/26/19 Board Meeting. The study was completed in mid-October 2019 and a Part II Permit was sent to DEP on 10/18/19. The permit will be resubmitted in early 2021 upon action by DEP on the Interim Act 537 Plan (to be submitted in September 2020). Therefore, the original permit submission is

100% completed – awaiting Revision #1. This project is considered an AO expense under terms of the Lease and is City funded.

3. **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. Because the bridge is owned by Lehigh County and not the Commonwealth, the normal PennDOT relocation reimbursement schedules do not apply. Therefore, the County and LCA have executed an agreement on cost reimbursement on similar terms. 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. Construction will commence in 2021. **(No Change)**

4. **Allentown Division – Sanitary Sewer Collection System: I&I Source Reduction Program Plan (Year 1)**

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. Design has been approved for all five years, with the first project commencing in 2020 and the last project finishing in 2024. Board approval for the construction phase of the "Year 1 Project" was granted at the March 9, 2020 Board Meeting. This project commenced in early May 2020 and was finished in the middle of June 2020. This project is considered an AO expense under terms of the Lease and is City funded.

5. **Kline's Island Sewer System – Regional Sewer Capacity & Wet-Weather Planning – Interim Act 537 Plan Preparation**

Following several months of discussion with the Pennsylvania Department of Environmental Protection (PA-DEP), all municipalities flowing into the Kline's Island Wastewater Treatment Plan have agreed to complete an Interim Act 537 Plan ("Interim Plan") by September 2020. This Interim Plan will primarily consist of projecting new connections to the regional sewer system from 2021 through 2025 and outlining steps to be taken during this timeframe to prepare a full Regional (Long-Term) Act 537 Plan ("Regional Plan"). This two-step planning process has been developed to allow all municipalities to work cooperatively toward a Regional Plan to meet future sewer capacity needs of the region, and to provide proper regulatory oversight and control of new connections to the system while the Interim Plan is in force from 2021 to 2025. To begin the process of compiling the Interim Plan, a consulting engineer has been preliminarily retained, and approval of their full Professional Service proposal was granted at the February 10, 2020 Board meeting. Costs associated with the development of the Interim Plan will be paid by the City of Allentown and reimbursed through existing intermunicipal agreements and by City customers through the use of the Administrative Order Fee. As of late June 2020, the Interim 537 Draft is 100% completed and was delivered to sixteen planning commissions on 3/16/2020. Planning commission meetings have occurred with public advertisement opening on 6/10/20 and will be closing on 7/10/20. Municipal resolution adoptions are anticipated in August with delivery to DEP by 9/14/20.

6. **Kline's Island Sewer System – Regional Sewer Capacity & Wet-Weather Planning – Sewage Billing Meter QA/QC Data Analytics and 2021 Flow Metering Preparation**

As part of the Interim Act 537 Plan, the municipalities served by the Kline's Island Sewer System have committed to completing a flow metering and modeling project beginning in 2021. The flow

metering data will be used to prepare modeling and identify the capital improvements needed to meet the future sewage capacity needs of the region through 2050. The flow metering will include a mix of temporary meters and the existing sewage billing meters. Data delivery and storage procedures, quality assurance, and flow analytics need implemented in 2020 for these sewage billing meters. Without this meter development program, the data cannot be used from these meters. Therefore, to prepare for 2021 flow metering, a consulting engineer has been preliminarily retained, and approval of their full Professional Service proposal was granted at the April 27, 2020 Board meeting. Costs associated with the development of the QAQC data analytics and the 2021 flow metering preparation will be paid by the City of Allentown and reimbursed through existing intermunicipal agreements and by City customers through the use of the Administrative Order Fee. **(No change)**

7. Suburban Division – Western Lehigh Service Area – 2020 Flow Metering Program

Future flow metering work is anticipated over the next several years for both the Western Lehigh service area as well as the entire regional Kline's Island Sewer System. In 2020, the Western Lehigh group will conduct flow metering for a period of eight months to gather additional data on inflow and infiltration and the impact of prior rehabilitation work. It is anticipated that more extensive flow metering will be required in 2021 and 2022 to develop a Regional Plan. Approval of a Professional Services Authorization and three-year contract with Flow Assessment Services was granted at the February 10, 2020 Board meeting. Also on February 10, 2020, the Board approved a Professional Services Authorization for Arcadis to provide quality assurance and data analysis services for the 2020 flow monitoring program. As of late June 2020, all temporary flow meters and rain gauges for the 2020 program have been installed (data collection is 50% completed). The initial QA/QC of the data has concluded and recommendations provided.

8. Suburban Division – Western Lehigh Service Area: 2020 Sewer Modeling

The Western Lehigh Sewer Partnership (WLSP) hydraulic model has been calibrated using 2019 flow meter and rainfall data and is available to support long-term Act 537 planning for the Western Lehigh Interceptor (WLI). Five separate modeling tasks will be performed in order to facilitate broader Kline's Island Sewer System (KISS) planning need discussions. The results of this 2020 modeling will help to inform further future modeling decisions and alternative analyses that will occur during the full KISS model calibration period in 2022. A consulting engineer has been preliminarily retained and full authorization was granted at the 5/11/2020 Board meeting. The full model results will be available by November of 2020. The project will be funded by the LCA Suburban Division.

9. Suburban Division – Park Pump Station Force Main Rehabilitation

The Park Pump Station and Force Main line were constructed in 1980 to provide wet weather relief to the Little Lehigh Creek Interceptor, which conveys wastewater from ten municipalities from outlying areas to the Kline's Island Wastewater Treatment Plant (KIWWTP). The force main consists of 8,715 linear feet of prestressed concrete cylinder pipe (PCCP) of various sizes (2,615' of 24"; 2,695' of 30"; and 3,405' of 36"), and connects with the 54" sanitary sewer interceptor that runs to KIWWTP. PCCP is particularly sensitive to deterioration due to hydrogen sulfide gas from wastewater, and corrosion of exposed reinforcing steel can result in structural degradation and pipe failure. An internal investigation of the pipe is required to assess the condition of the PCCP pipe and identify damage areas, in order to determine the locations and extent of rehabilitation needed to restore the level of service, prolong service life, and mitigate the risk of failure. LCA will conduct 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.

10. 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 1/4/2018, and bids were opened 2/1/2018. Construction phase was authorized at the 2/12/2018 Board meeting. Notice to proceed for the construction contracts was issued dated 3/26/2018. A pre-construction meeting was conducted in early April 2018, and construction was substantially completed in January 2020. Start-up and performance testing of the new mechanical and electrical equipment was successfully performed in January 2020, and the project is approximately 99% complete. Final project completion and contract closeout will be completed early Summer 2020. **(No Change)**

11. 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 Summer 2020. Construction is approximately 95% complete. **(No Change)**

12. Suburban Division - Lynn Township Corrective Action Plan

Excessive inflow and infiltration (I&I) and high wet-weather flows into the Lynn Township sewer system has been ongoing and increasingly challenging to address. As noted in LCA's monthly operations reports, treatment plant bypasses and sanitary sewer overflows have occurred in this system and must be addressed. On 6/4/19 a meeting was held with DEP, Lynn Township and LCA representatives as a result of a hydraulic overload at the wastewater treatment plant, based on 2018 Chapter 94 Report monthly plant flows. At the meeting, DEP directed LCA to submit an amendment to the pre-existing Corrective Action Plan (originally submitted by Lynn Township Sewer Authority) to include an updated system condition assessment and an outline of steps to be taken to mitigate I/I flows and maintain NPDES permit compliance. The Corrective Action Plan (CAP) includes structural and non-structural initiatives and involves coordination with the host municipality. The framework for the CAP was shared with the Board in February 2019. A meeting was held at Lynn Township with DEP in June 2019 to discuss the Lynn Township CAP and Township sewer planning/growth issues, and DEP directed LCA to submit a CAP Amendment by the end of summer 2019. The CAP Amendment contained an updated sewer system condition assessment and a corrective plan to further mitigate I/I flows. Updated CCTV work of the entire system was substantially completed in August 2019, and the inspection data was summarized in the CAP Amendment and is being used to scope a capital repair project. The Lynn Township Board of Supervisors adopted a sewer system rules and regulations ordinance on 9/12/19, which gives LCA the authority to inspect private laterals and facilities for illegal connections and perform follow-up enforcement. A meeting with DEP and Lynn Township representatives was held on 1/15/20 to discuss the CAP Amendment and plan moving forward.

DEP sent a letter to LCA dated 6/8/20 granting 55 EDUs of sewer allocation relief for new connections to the system.

13. Suburban Division - Heidelberg Heights Corrective Action Plan

On 2/11/19, 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 has been 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 prepared a comprehensive Corrective Action Plan (CAP) and submitted DEP on 5/5/19. A draft of the plan was attached for Board review at the 4/22/19 Board meeting. The final CAP was submitted to DEP on 4/29/19. The Heidelberg Heights Board of Supervisors approved the advertisement for adoption of a sewer system rules and regulations ordinance on 9/19/19, which gives LCA the authority to inspect private laterals and facilities for illegal connections and perform follow-up enforcement. The ordinance was adopted by the township the in October 2019. A Consent Order & Agreement (CO&A) was drafted by DEP and sent to LCA in May 2020, which incorporates the projects and schedule outlined in LCA's proposed CAP. The final CAP was adopted by resolution by the LCA board at the 6/22/20 meeting.

14. Suburban Division – Sand Spring WWTP Upgrade Project Construction

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 final design was 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, the design was finalized in late Spring 2019, and the project was advertised for bid in July 2019. Bids were opened on 8/13/19 and construction phase authorization was approved at the 8/26/19 Board meeting. A pre-construction meeting was held on 11/1/19 following execution of contract documents. Conditional Use approval and land development waiver were granted by North Whitehall Township in Spring 2020. Construction mobilization for site work occurred in late winter 2020 and construction is proceeding. **(No Change)**

15. Suburban Division - Trexlertown Wastewater Storage Facility

As part of the Western Lehigh service area's Sewer Capacity Assurance & Rehabilitation Program (SCARP), a conveyance capacity "bottleneck" was identified in the Trexlertown area of the Western Lehigh Interceptor, and this area was assigned a high priority due to occurrence of sanitary sewer overflows and basement backups in the vicinity. A parallel interceptor was originally conceived to run approximately from Cetronia Rd to Spring Creek Rd. The concept was modified to focus on providing storage capacity in the system for this area, due to concerns about downstream hydraulic impacts. This project is an interim solution to address local impacts of the system bottleneck, and will become part of the future long-term solution to alleviate regional conveyance capacity challenges. A pre-design feasibility study is being performed to

evaluate various engineering alternatives, including an “in-line” parallel storage tank, conventional concrete tank (flow equalization basin), or other options. Award of the pre-design feasibility study to HDR was authorized at the 10/21/2019 Board meeting. The study is on hold until modeling data is received from Arcadis. **(No Change)**