



## LEHIGH COUNTY AUTHORITY

**LCA Main Office:**  
1053 Spruce Road  
Wescosville, PA 18106  
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**Agendas & Minutes Posted:**  
[www.lehighcountyauthority.org](http://www.lehighcountyauthority.org)

Published: September 8, 2020

### BOARD MEETING AGENDA – September 14, 2020 – 12:00 p.m.

**Notice of COVID-19 Pandemic Meeting Format:** Effective March 23, 2020 and until further notice, meetings of the LCA Board of Directors will be held virtually using the Zoom Meetings application, to avoid risk of infection during the national COVID-19 pandemic emergency. Public participation is welcomed via Zoom, and instructions for joining the meeting online or by phone are posted on the LCA website in the morning on the day of the meeting, prior to the start of each meeting. You may also issue comment to LCA via email to [LCABoard@lehighcountyauthority.org](mailto:LCABoard@lehighcountyauthority.org) in advance of any meeting, or view the meeting at a later time by visiting the LCA website. Please visit <https://www.lehighcountyauthority.org/about/lca-board-meeting-videos/> for specific instructions to join the meeting.

1. Call to Order

- **NOTICE OF MEETING RECORDINGS**

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

- *Public Participation Sign-In Request*

2. Review of Agenda / Executive Sessions

3. Approval of Minutes

- *August 24, 2020 Board meeting minutes*

4. Public Comments

5. Action / Discussion Items:

**FINANCE AND ADMINISTRATION**

- *2020 Lease Bond Financing Update (discussion only)*
- *2021 Preliminary Budget Review (presentation & discussion only)*

**WATER**

- *Emergency Declaration (green)*

**WASTEWATER**

6. Monthly Project Updates / Information Items (1<sup>st</sup> Board meeting per month) – **September report attached**

7. Monthly Financial Review (2<sup>nd</sup> Board meeting per month)

8. Monthly System Operations Overview (2<sup>nd</sup> Board meeting per month)

9. Staff Comments

10. Solicitor's Comments

11. Public Comments / Other Comments

12. Executive Sessions

13. Adjournment

**UPCOMING BOARD MEETINGS**

September 28, 2020

October 12, 2020

October 26, 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**

### **August 24, 2020**

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The Regular Meeting of the Lehigh County Authority Board of Directors was called to order at 12:08 p.m. on Monday, August 24, 2020, Chairman Brian Nagle presiding. The meeting was held via a Microsoft Teams conference call during the COVID-19 pandemic emergency and also due to Zoom virtual meetings software being unavailable. 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 conference calling. A Roll Call of Board members present was taken. Chairman Brian Nagle, Richard Bohner, Kevin Baker, Linda Rosenfeld, Jeff Morgan, and Amir Famili were present on the conference call for the duration of the meeting. Board members Ted Lyons and Scott Bieber left the meeting at 1:52 p.m. and 2:11 p.m. consecutively.

Solicitor Michael Gaul of KingSpry was present along with Authority Staff, Liesel Gross, Ed Klein, John Parsons, Chris Moughan, Chuck Volk, Susan Sampson, Andrew Moore, Phil DePoe and Lisa Miller. Chris Gibbons from Concord Public Finance, Inc., Stephen Flaherty from RBC Capital Markets, and Tim Horstmann from McNees Wallace and Nurick, were also present via conference calling.

#### **REVIEW OF AGENDA**

Liesel Gross stated there are no changes to the agenda but requested to either hold the July 2020 financial statement for a later date or have Ed Klein provide a brief overview of the report. The presentation will not be provided due to not having a screen-sharing system available for the meeting. There are no topics for Executive Session.

Chairman Nagle announced the Board received the Board packet in advance of the meeting and received the July 2020 financial statements via email at a later date. The Chairman requested Mr. Klein give a brief overview of the July 2020 financial report.

#### **APPROVAL OF MINUTES**

##### **August 10, 2020 Meeting Minutes**

On a motion by Richard Bohner, seconded by Linda Rosenfeld, the Board approved the minutes of the August 10, 2020 Board meeting as written (8-0).

#### **PUBLIC COMMENTS**

None.

#### **ACTION AND DISCUSSION ITEMS**

##### **Authorization of Lease Bond Financing**

Liesel Gross gave a brief introduction of the Lease Bond financing and reviewed the two Resolutions the Board would be asked to approve. Along with the Resolutions, the Board received a copy of the preliminary official statement, draft bond purchase agreement, and a financing proposal from Fulton Bank. Ed Klein explained the two Resolutions in more detail. Resolution 8-2020-1 defines the parameters for refinancing a portion of the 2013A Lease Bonds through a bond sale. Resolution 8-2020-2 authorizes refinancing of the 2018 Lease Bonds held by Fulton Bank. Taken together, these actions will result in refinancing of approximately \$179,685,000.00 of the Lease Bonds, which will

achieve the 51 percent bondholder consent required to implement the updated Concession Lease Agreement with the City of Allentown.

Chris Gibbons of Concord Public Finance, Inc. also commented on the parameters detailing the proposed refinancing of a portion of the Authority's 2013A and 2018 Lease Bonds. In summary, the maximum aggregate principal amount of the 2020 bonds shall not exceed the amount necessary to result in the 2020 bonds constituting 51 percent of the bonds, the latest maturity date of the 2020 bonds shall not be longer than 40 years from the date of issuance and the maximum net present value loss shall be no more than \$5,000,000.00. The use of a maximum loss value was determined to provide the most flexibility to the underwriters when preparing the bonds for sale, allowing for some interest rate fluctuation to occur between the time of the Board's action and the actual bond pricing in early September.

Tim Horstmann of McNees Wallace & Nurick LLC gave a brief overview of Resolution No. 8-2020-1. There was discussion regarding the inclusion of the detailed wording of the parameters included in Section 8 of the Resolution within the language shown on the title page of the Resolution. The Board agreed the title page should be amended to include the detailed language in Section 8 of the Resolution.

Ted Lyons asked how the bondholders would be notified that their bonds are being called. Stephen Flaherty of RBC Capital Markets explained that as part of the closing of existing bonds, notices are distributed to those bondholders. However, because the call date for the 2013A bonds is December 2023, the new bond issue will establish an escrow account to continue to pay interest to the bondholders until the call date. Mr. Flaherty explained the notification process including publishing the preliminary official statement for public viewing, pricing of the bonds, publishing a final official statement with the actual bond pricing information, followed by execution of all documents in a final closing process for the new bonds. There was some Board discussion.

On a motion by Richard Bohner, seconded by Kevin Baker, the Board approved Resolution No. 8-2020-1 as amended, including detailed language from Section 8 of the Resolution in the title page (8-0).

A roll call vote was taken with the following votes cast:

Brian Nagle – yes  
Scott Bieber – yes  
Richard Bohner – yes  
Ted Lyons – yes  
Kevin Baker – yes  
Linda Rosenfeld – yes  
Jeff Morgan – yes  
Amir Famili – yes

On a motion by Linda Rosenfeld, seconded by Ted Lyons, the Board approved Resolution No. 8-2020-2 (8-0).

A roll call vote was taken with the following votes cast:

Brian Nagle – yes  
Scott Bieber – yes  
Richard Bohner – yes

Ted Lyons – yes  
Kevin Baker – yes  
Linda Rosenfeld – yes  
Jeff Morgan – yes  
Amir Famili – yes

**Resolution No. 8-2020-3 Adopting the Interim Act 537 Plan for KISS**

Liesel Gross introduced the Resolution giving a brief overview of the Interim Act 537 Plan for the Kline's Island Sewer System (KISS). The interim plan covers the time period of 2021 through 2025 and will allow for new connections to the sewer system while the region is working on the long-term plan that is due by 2025. Other key components of the plan include a connection management plan, municipalities' maintenance programs to remove inflow and infiltration from their sewer collection systems, an updated flow characterization study and system modeling, and an interceptor upgrade project to address a system bottleneck in the Trexlertown area. Phil DePoe noted that another major component of the plan is to re-rate the Kline's Island Wastewater Treatment Plant's permitted hydraulic capacity. The plant is currently rated to treat 40 million gallons per day (mgd), but a recent engineering study shows the plant can effectively treat up to 54 mgd during prolonged periods of wet weather. A permit upgrade application will be submitted to update the plant's permitted hydraulic capacity to a higher flow amount, which amount will be determined following adoption of the Interim Act 537 Plan.

Phil DePoe reported that all 15 KISS municipalities have adopted the Interim Act 537 Plan by resolution. These municipal resolutions along with the Interim Plan will be submitted to the Department of Environmental Protection (DEP) in September 2020 for approval later this year.

Liesel Gross explained the role of the Authority is to provide regional leadership and perspective as the municipalities work together to develop the long-term plan that is due in 2025. While the Authority is not required to formally approve the Interim Act 537 Plan, Authority staff recommend Board approval to illustrate the Authority's commitment to the region and in support of the work that the municipalities are doing.

Chairman Nagle asked if the Authority will be reimbursed for its expenses to develop and implement the plan through all 15 KISS municipalities. Liesel Gross explained that cost reimbursement will depend on the project. The cost for the planning work that benefits the region will be shared by all 15 KISS municipalities. The cost of other projects that only benefit the Western Lehigh service area will be shared by the Western Lehigh municipalities. The work to complete maintenance and upgrades to individual municipal sewer collection systems is paid for by the municipality directly.

On a motion by Linda Rosenfeld, seconded by Kevin Baker, the Board approved Resolution No. 8-2020-3 (8-0).

A roll call vote was taken with the following votes cast:

Brian Nagle – yes  
Scott Bieber – yes  
Richard Bohner – yes  
Ted Lyons – yes  
Kevin Baker – yes  
Linda Rosenfeld – yes

Jeff Morgan – yes

Amir Famili – yes

**Regional Act 537 Plan Alternatives Analysis: Pretreatment Plant Upgrade Option**

Liesel Gross provided a brief background regarding the options for the Pretreatment Plant upgrades. Prior efforts to address the region's sewer capacity challenge have involved developing detailed alternatives analyses looking at treatment capacity and conveyance capacity requirements to meet future needs in the next 20 to 30 years. A key component of the planning work completed was an evaluation of treatment alternatives to the Kline's Island Wastewater Treatment Plant which has limited additional capacity to address future growth. Prior studies of the Pretreatment Plant upgrade alternative focused on the viability of various discharge options including a new discharge to the Lehigh River. In order to fully understand if the full Pretreatment Plant upgrade is a viable option for the Regional Act 537 Plan that must be prepared by 2025, proposals from AECOM and Jacobs have been provided to analyze this option in detail and also provide a full cost analysis. Additional study is required to fully evaluate the Pretreatment Plant's capacity to treat current and future dry-day, wet-weather, and peak flows, and to evaluate the impact on downstream conveyance capacity systems if these flows are removed from the system through an upgrade of the Pretreatment Plant. Prior studies have indicated conveyance capacity projects could cost about \$240 million over the next 20 years. This figure could be lowered significantly if the Pretreatment Plant upgrade option proves to be viable.

Phil DePoe explained the AECOM and Jacobs' proposals. He explained that AECOM will serve as the Program Manager performing quality assurance reviews of Jacobs' technical work, completing options analyses, coordinating reviews of the Kline's Island Wastewater Treatment Plant options, and coordinating with Arcadis regarding the conveyance system modeling work. Jacobs has provided a technical proposal in which they will analyze improvements that may be needed at the existing Pretreatment Plant to increase its capacity and ensure conformance with converting the plant to a surface water discharge facility. Additionally, they will perform data analysis and testing of a variety of new treatment technologies to determine the most beneficial alternatives to allow for upgrade of the facility to full treatment.

Mr. DePoe is asking for approval of the Professional Services Authorization for AECOM as Program Manager for the Pretreatment Plant upgrade option in the amount of \$203,500.00 and a Professional Services Authorization for Jacobs as Technical Lead for the Pretreatment Plant upgrade option in the amount of \$284,800.00. The work for these services is expected to be complete by June 2021.

Liesel Gross noted that regional flow monitoring data will begin in January 2021 and having the results of the Pretreatment Plant options analysis completed by mid-2021 will allow for results to be incorporated into the hydraulic flow modeling work that will be completed in the second half of 2021. There was some Board discussion. Amir Famili questioned if the options on testing will be theoretical or experimental. Phil DePoe explained that most testing will be theoretical. Mr. Famili stated that this is a costly project and wants to have a high level of confidence prior to making a decision, and suggested site visits to other facilities that have successfully undergone conversion from pretreatment to full treatment. Ms. Gross noted that the Pretreatment Plant already performs to a very high level, nearly meeting full-treatment standards through its current operation. Once alternatives have been analyzed and options narrowed down, site visits to other facilities using the proposed new treatment technology can be scheduled.

On a motion by Scott Bieber, seconded by Linda Rosenfeld, the Board approved the Professional Services Authorization for AECOM as Program Manager for the Pretreatment plant upgrade option

in the amount of \$203,500.00 and a Professional Services Authorization for Jacobs as Technical Lead for the Pretreatment plant upgrade option in the amount of \$284,800.00 (7-0)

A roll call vote was taken with the following votes cast:

Brian Nagle – yes  
Scott Bieber – yes  
Richard Bohner – yes  
Kevin Baker – yes  
Linda Rosenfeld – yes  
Jeff Morgan – yes  
Amir Famili – yes

### **MONTHLY FINANCIAL REVIEW**

Ed Klein gave an overview of the July 2020 financial statements highlighting variances between actual expenses and budgeted or forecasted expenses.

### **MONTHLY SYSTEM OPERATIONS OVERVIEW**

John Parsons gave a brief overview of the July System Operations review. Mr. Parsons announced the retirement of Bob Kerchusky on September 4, 2020, who worked for the Authority and the City of Allentown for a combined total of 41 years. Jennifer McKenna, City of Allentown Office of Compliance, commented that on behalf of the City of Allentown, Bob Kerchusky was a tremendous asset to both the City of Allentown and the Authority and wished him very well in his retirement. The Board also commented on Mr. Kerchusky's knowledge, dedication and contributions to the Authority over the course of many years.

### **STAFF COMMENTS**

Liesel Gross informed the Board that Authority staff has begun working on the 2021 Budget. At the next four Board meetings in September and October, preliminary budget figures, assumptions, and rates will be presented. The budget needs to be approved each year by the end of October.

### **SOLICITOR'S COMMENTS**

None.

### **PUBLIC COMMENTS / OTHER COMMENTS**

None.

### **EXECUTIVE SESSION**

None.

### **ADJOURNMENT**

There being no further business, the Chairman adjourned the meeting at 2:19 p.m.

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Richard Bohner  
Secretary





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## MEMORANDUM

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**TO:** LCA Board of Directors  
**FROM:** John Parsons, Chief Operating Officer  
**DATE:** September 14, 2020  
**RE:** Emergency Declaration for Repairs – Tropical Storm Isaias

On Tuesday, August 4, 2020, Tropical Storm Isaias hammered the Lehigh Valley with heavy rain over a very short period of time. The vast majority of the rainfall on August 4<sup>th</sup> came between 8AM and 3PM, just a few minutes before the sun started shining. The official rainfall amount for the day, as provided by Lehigh Valley International Airport, was 4.92". Other recorded amounts that directly affected LCA facilities included: Upper Macungie Township (6.06"), Macungie Township (5.43"), New Tripoli (4.94") and Lynn Township (3.51"). The high intensity storm coming on the heels of over 1.5" rain only 48 hours earlier which served to saturate local soils ahead of the storm, resulted in some record-setting local flooding.

Please refer to the itemized list of damages. As is the case with nearly all large-scale rain events, the sewer collection systems incurred significant repair costs for manhole repairs. Collection system repairs were the vast majority of the relevant costs associated with the storm. Lightning damages were experienced at the Kline's Island WWTP. Remarkably, the Allentown Water Plant got through the event with only minimal damages.

With the total repair and/or replacement costs of this event in excess of \$50,000, we are seeking a retroactive emergency declaration to cover the expenditures for the storm. As itemized, total damages in the City of Allentown facilities totaled \$104,863. Total damages in all LCA Suburban facilities totaled \$110,000. Total damage estimates for the event currently stand at \$214,863. Typical purchasing guidelines were not used during this event, both for materials and contractor services.

## Tropical Storm Isaias - Damages Incurred to LCA Infrastructure

### Allentown WWTP

A-ISE sc ISE Ammonium Probe	\$7,753.54	
SC200 Universal Controller	\$1,805.17	
Analog Output Card	\$859.95	
4" Mag Meter	\$3,632.55	
4" Mag Meter	\$3,632.55	
Bypass Meter flow controller	\$4,704.64	
	WWTP Subtotal	\$22,388.40

### Allentown WFP

Fence Repairs	\$4,975.00	
Boon Replacements at LL Intake	\$500.00	
Flow Meter Module	\$2,500.00	
	WFP Subtotal	\$7,975.00

### Allentown Collection System

(4) Manhole Reconstructions @ \$6,000 each	\$24,000.00	
Sewer Blockage and MH Repairs (20th and Hamilton)	\$10,000.00	
Minor MH Casting Repairs/Replacements	\$5,000.00	
D/C Parking Lot Repairs	\$10,000.00	
2A Modified Stone to repair access roads to elevated water tanks	\$500.00	
Water Damage to CCTV Truck (Exact amount still being determined)	\$25,000.00	
	Collection System Subtotal	\$74,500.00
	Allentown Total Costs	\$104,863.40

### Suburban Systems

Manhole Repairs and Replacements	Lid and Frame Replacements	\$15,000.00
	Total Rebuilds	\$60,000.00
Spring Creek Pump Station	Flow Meter Rebuild	\$4,000.00
	Comminutor Repairs	\$10,000.00
Meter Station #5	Meter Pit Lid Repairs	\$10,000.00
Park Pump Station	Gas Monitor Repairs	\$2,000.00
Wynnewood WWTP Primary Pump Station	Lift Pump Repairs	\$4,000.00
Lynn Township WWTP	Lift Pump Repairs	\$5,000.00
	Suburban Total Costs	\$110,000.00

**FINANCE & ADMINISTRATION**

**ACTION ITEM**

**DISCUSSION ITEMS**

**1. 2020 Lease Bond Refinancing – Update – September 14, 2020**

At the September 14 Board meeting, staff will provide an update on the Lease Bond Refinancing efforts that were authorized on August 24, 2020. It is expected by this date that closing will have occurred on the Fulton Band loan refinancing (scheduled for September 10) and the 2013A lease bond refinancing will have been priced (closing scheduled for September 17).

**2. 2021 Budget - Preliminary Review – September 14 & 28, 2020**

Staff will present the budget timeline, key assumptions, strategic initiatives and economic factors that will be included in the 2021 budget on September 14. At the meeting on September 28, a preliminary budget will be presented for Board review. Additional details will be presented and discussed in October, with Board adoption expected by the end of October 2020.

**INFORMATION ITEMS**

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

Fund	Bank	Location	Gross Amount	Date of Purchase	Date Due	Net Rate %
LLRI CR	PSDLAF Flex Pool		400,000.00	7/30/20	8/27/20	0.03
Cons Wtr (2)	PSDLAF Flex Pool		155,000.00	7/30/20	8/27/20	0.03
Cons LL2 (314)	PSDLAF Flex Pool		245,000.00	7/30/20	8/27/20	0.03
WW Capac	PSDLAF Flex Pool		600,000.00	7/30/20	8/27/20	0.03
Wtr R&R	PSDLAF Flex Pool		1,000,000.00	7/30/20	8/27/20	0.03
LLRI CR	Merrick Bank	South Jordan, UT	245,000.00	8/14/20	8/15/22	0.2
LLRI CR	Greenstate CU	North Liberty, IA	245,000.00	8/18/20	8/18/22	0.3
LLRI CR	Midfirst Bank	Oklahoma City, OK	248,000.00	8/19/20	2/22/22	0.15
LLRI CR	California Bank of Commerce	Lafayette, CA	200,000.00	8/20/20	2/22/22	0.1

- 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:
- 8323/8449 Congdon Hill Drive, 2 industrial lots with warehouses, LMT - NEW
  - 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
  - Ridings at Parkland, 53 residential units (sfd), NWT
  - 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
- 5420 Crackersport Road, 1 commercial lot, UMT
- ATAS International, 1 industrial lot, UMT
- Cedarbrook Road Industrial Park, 2 industrial lots, LMT
- Estates at Maple Ridge, 30 residential units (sfd), UMiIT
- Hidden Meadows, Phase 2, 86 townhouse units (sfa), UMT - NEW
- Jaindl 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:

- Cascades II, Emmaus, 2,200 gpd.
- 950 Hamilton Apartments, Allentown, 14,970 gpd.
- Iron Works Apartments, Emmaus, 15,975 gpd.
- Ava's Acres, Allentown, 714 gpd.

WATERACTION ITEM

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DISCUSSION ITEMS

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INFORMATION ITEMS

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

As part of the Pennsylvania Rapid Bridge Replacement Program, the replacement of the Cedar Creek Bridge on Hamilton Street has required the relocation of approximately 500 linear feet of water main. The 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 95% complete. **(No Change)**

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

The project is for the annual replacement of aged and/or failing cast iron water main in multiple locations throughout the City, in accordance with the new amended lease requirements (one mile per year), based on the design engineer's risk prioritization protocol. The design engineer (Gannett Fleming) halted work on Cycle 5 following City Compliance office acceptance of the Cycle 5 main replacement prioritization, pending available funding. Capital Works has re-started Cycle 5 design phase for construction in 2021 of a water main replacement project. Bid phase is anticipated to occur in late winter 2021.

**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. **(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. The design engineer is also completing an "Arc-Flash" study, to identify related electrical deficiencies at the WTP. Since the discussions with Allentown were not concluded by the 5/6/20 PENNVEST application deadline, the project was put on hold. The next application deadline is 11/4/20. Capital Works has reached out to PennVEST for a meeting to discuss an upcoming application submission and final design completion schedule, and a meeting is anticipated for early September 2020.

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 and the risk of seasonal pipe sweating has abated, and 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 60% complete.

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 (4) new surface water (SW) Gauging Stations in the Little Lehigh Watershed and all are collecting data. Two additional SW stations need to be relocated because of the intermittent streams they were originally planned to monitor. Additional ground water (GW) flow monitoring stations are in the planning stages. All six (6) Fybr sites are currently collecting flow data and the calibration process is expected to last several months. Four (4) out of eight (8) planned weather stations are currently operational and are recording data. **(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 30% 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. The contractor began replacing radios that were not working properly on August 24, 2020.

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

This Project focuses on the development of an additional well for the Madison Park North (MPN) system per DEP guidelines to have a backup source of water supply. An agreement is in place with an adjoining property owner to MPN to drill a test well on their property. 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 approved by DEP in late September of 2019. 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. Well testing was performed in August in coordination with LCA's engineer. Testing was halted upon discovery of a water bearing zone blocked by casing pipe grouting. Additional test well investigation is continuing on the property.

12. **Arcadia West Division – Water Storage Tank Replacement**

The Arcadia West water storage tank has had several leaks in recent years and the coating has reached the end of its useful life. This project is for the replacement of the tank with a new concrete reservoir. Design phase authorization was awarded to Entech Engineering at the April 27, 2020 Board meeting. This project will be funded by the LCA Suburban Division. Design is underway and expected to be completed and ready for bid at the end of 2020. **(No Change)**

WASTEWATER**ACTION ITEMS**

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**DISCUSSION ITEMS**

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**INFORMATION ITEMS**

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**1. Allentown Division – Kline’s Island WWTP: 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 (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. The project is now officially closed. This project is considered an AO expense under terms of the Lease and is City funded. Year 2 details will be finalized in early 2021.

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 August 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 closing on 7/10/20. Municipal resolution adoptions occurred in August and the Plan will be delivered to DEP on 9/4/20.

6. **Kline's Island Sewer System – Regional Sewer Capacity & Wet-Weather Planning – Sewage Billing Meter QAQC 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. **Regional Act 537 Plan Alternatives Analysis: Pretreatment Plant Upgrade Option**

To begin the process of developing the long-term Regional Act 537 Plan, the evaluation of the LCA Pretreatment Plant Alternatives was identified as an immediate need to assist with completing the full alternatives analysis to be completed within the next five years. The alternative to upgrade the Pretreatment Plant to full treatment was previously evaluated in the 2011-2016 timeframe. Additional study is required to fully evaluate the facility's capacity to treat current and future dry-day, wet-weather, and peak flows. To complete this evaluation, LCA staff has received proposals for two engineering firms that will serve in Program Manager and Technical Lead roles. The Program Manager will oversee all alternatives being evaluated at both the Pretreatment Plant and Kline's Island Wastewater Treatment Plan in Allentown as the Act 537 Plan is being developed. The Technical Lead will provide specific engineering and treatment

plant modeling services to support evaluation of the Pretreatment Plant alternatives. Board approval for these professional services authorizations was granted at the 8/24/2020 meeting.

8. **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 August 2020, data collection is 70% completed). The second QA/QC of the data has concluded and recommendations have been provided.

9. **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. A presentation was presented to the Board at the 8/10/20 Board Meeting.

10. **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 (tentatively Q4 of 2020) 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. One-day trial runs are tentatively scheduled in August or September to verify the amount of time available to keep Park Pump Station offline. The pump station must be inactive in order to perform the investigations. (No change)

11. **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 in the final stage of closing out both contracts. **(No Change)**

12. **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 and start-up testing and training is occurring in late August 2020. **(No Change)**

13. **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. **(No Change)**

14. **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. **(No Change)**

**15. 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. Substantial completion and start-up of the new facility is anticipated for late 2020. **(No Change)**

**16. 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. Preliminary modeling

data was received from Arcadis and HDR is reviewing that data with regard to feasible alternatives. **(No Change)**

17. **Suburban Division – Lynn Township Manhole Rehabilitation Project**

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 was advertised for bid in early June 2020, bids were opened on 6/26/20, and construction phase authorization was approved at the 7/13/20 LCA board meeting. Construction will be completed by late fall of 2020. **(No Change)**

18. **Suburban Division - Heidelberg Heights 2020 Sanitary Sewer Replacement Project**

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 were opened on 7/13/20, and board authorization of construction phase was approved at the 7/27/20 LCA board meeting. Construction will be completed by late fall of 2020. **(No Change)**

19. **Suburban Division – Western Lehigh Manhole Rehabilitation Project**

This project involves the rehabilitation of key manholes in the Western Lehigh Interceptor service area. The project includes flood-proofing, interior pipe connection grouting, exterior concrete work and sealing of manholes, particularly those manholes that are in close proximity to the floodway and experience floodwater inundation. The purpose of the project is to eliminate floodwater inflow into the system. The project scope includes approximately 50 manholes to be rehabilitated in 2020 as part of a phased manhole rehabilitation program. The project was advertised for bid in April 2020, bids were be opened on 5/12/20, and construction phase authorization was approved at the 6/8/20 board meeting. As of 8/11/20 construction has begun and will be completed by the end of 2020.