



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 – February 8, 2021 – 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 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. 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

- *January 25, 2021 Board meeting minutes*

4. Public Comments

5. Action / Discussion Items:

FINANCE AND ADMINISTRATION

- *LCA 2020 Action Plan Status Update & Vision for 2021 (Presentation & Discussion only)*

WATER

- *Suburban Division – Fixed Base Meter Reading Stations - Design Phase (Approval) (green)*

WASTEWATER

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

February 22, 2021

March 8, 2021

March 22, 2021

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

January 25, 2021

The Regular Meeting of the Lehigh County Authority Board of Directors was called to order at 12:02 p.m. on Monday, January 25, 2021, Chairman Brian Nagle presiding. The meeting was held via video and audio advanced communication technology ("ACT"), using the Zoom internet application including telephone option, due to the 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 including telephone option. Chairman Nagle announced that the Board received their packet via mail the previous week. A Roll Call of Board members present was taken. Chairman Brian Nagle, Richard Bohner, Norma Cusick, Linda Rosenfeld, Jeff Morgan, Amir Famili, and Kevin Baker were present for the duration of the meeting.

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, Mark Bowen, Lisa Miller, and Todd Marion.

Also present were Mary Sally and Lindsay Mulvihill from Dollar Energy Fund.

Chairman Nagle announced that the Board received their packets electronically and most received a hard copy prior to the meeting.

REVIEW OF AGENDA

Liesel Gross stated there are no changes to the agenda as presented and there will be an Executive Session after the regular meeting to discuss matters of personnel.

APPROVAL OF MINUTES

January 11, 2021 Meeting Minutes

Richard Bohner noted some grammatical errors. On a motion by Richard Bohner, seconded by Norma Cusick, the Board approved the minutes of the January 11, 2021 Board meeting as corrected (7-0).

PUBLIC COMMENTS

None.

ACTION AND DISCUSSION ITEMS

Resolution No. 01-2021-01 Authorizing LCA Customer Hardship Fund

Liesel Gross gave a presentation regarding the proposed Customer Hardship Fund. Since the onset of the COVID-19 pandemic in March 2020, all late fees and service terminations for customer non-payment have been suspended. The impact has been significant, and the Authority is facing potential revenue loss of approximately \$1.7 million. Service terminations for non-payment will tentatively be reinstated in March 2021. The Authority's approach to recovery includes (1) customer notification of late fees and penalties being reinstated which is currently under way, (2) developing a safe way for customers to pay with cash, (3) a phased-in service termination schedule for customer

non-payment tentatively beginning in March 2021, (4) the establishment of a Customer Hardship Fund, and (5) a payment plan program for additional support for low-income customers.

Ms. Gross emphasized that the goal of the Customer Hardship Fund is to allow the Authority to start the process for terminations for non-payment, while providing help to customers who really need it. She then reviewed the initial source of the \$500,000 that would fund the program, the process for offering grants to eligible customers, and the overall benefits to the customer and the Authority. As the program continues, the Authority may seek charitable donations to continue funding the program after the initial block of funding is exhausted. There was some Board discussion regarding the separation of funds to ensure the cost of the program is properly shared between the Authority's Suburban and Allentown divisions.

Ms. Gross then reviewed the benefits to using a third-party administrator to run the Customer Hardship Fund. One critical element for a successful program is to develop a network of local community-based organizations (CBOs) to work directly with Authority customers, accept and evaluate customer applications, and handle customers' personal information securely and confidentially.

Norma Cusick asked what the program is going to cost the Authority in fees. Ms. Gross said program fees are expected to cost \$40,000–50,000. She reviewed the program fees of approximately \$25 per grant, which is split between the third-party administrator and the local CBOs who participate in the program. Amir Famili commented that an overhead factor of 8 to 10 percent for a non-profit organization is typically viewed as acceptable.

Ms. Gross then reviewed the initial customer eligibility requirements that are recommended to kick off the program. The parameters will be re-evaluated after three months to determine if the parameters are working or need to be adjusted, in order to properly support the customers the Authority seeks to assist with this program. Amir Famili asked what the average bill that is due from our customers. Liesel Gross replied that the average customer owes around \$400. She explained that the program criteria includes a maximum grant amount of \$300, provided that the customer has made a payment of at least \$100 toward their outstanding balance. These criteria were selected based on current data on average outstanding balances due from the Authority's customer base.

Liesel Gross recommended contracting with Dollar Energy Fund to serve as the third-party program administrator. She explained the features of the Dollar Energy program and noted the excellent references received from several large utilities including Pennsylvania American Company and the Pittsburgh Water & Sewer Authority. She then introduced Dollar Energy Fund representatives Lindsay Mulvihill and Mary Sally, who gave a presentation on their organization and the proposed service Dollar Energy would provide to the Authority.

Richard Bohner asked how soon the Authority would know that a customer is in communication and applying for funds through Dollar Energy. Lindsay Mulvihill stated the program works in real time using their web-based iPartner software as the main tool to administer the program. The Authority will have access to view its customers using the program in real time, allowing for timely customer communication and coordination with the Authority's service termination proceedings.

Liesel Gross described the next steps that include the approval of Resolution No. 01-2021-01, developing the program details, and completing customer notification about the upcoming service termination process and the availability of assistance grants through this program. She then reviewed the details included in Resolution 01-2021-01, which authorizes the establishment of the Customer Hardship Fund, approves the appropriation of \$500,000 to the Fund, specifies the

requirement to separate funds between Suburban and Allentown divisions, approves initial customer eligibility criteria, with CEO authority to make adjustments in the future to meet program goals, approves the contract with Dollar Energy Fund in substantially the same form attached to Resolution, and authorizes Staff to execute the documents. Solicitor Mike Gaul commented on the Resolution, stating that the idea is for the Board to establish the broad principles of the program, while providing Authority management the necessary flexibility to implement the program.

Kevin Baker commented that he sees value in the program and asked if we will be rehabilitating customers back to becoming regular paying customers. Mary Sally from Dollar Energy stated with a grant program such as the one recommended by the Authority staff, they typically see about 93 percent of customers as one-time grant recipients, with about 7 percent returning for a future grant. Chairman Brian Nagle asked Dollar Energy Fund if in their experience they normally see the program like this established for a short duration, or do they typically continue beyond the end of their initial start-up period. Mary Sally explained that there will always be households with limited income and many utilities establish programs like this and fund them annually to help them keep going. She also noted that many utilities include program features to allow customers to donate directly to the program in order to help their neighbors and provide support for low-income households in their community. These donation programs can help extend the life of a grant program. Liesel Gross added that the current recommendation is to use the funds the Authority has available now to address the immediate concerns related to customers' ability to pay during the pandemic. After that, the Authority can continue the program with additional funding if the Board wishes, but the staff recommends first pursuing the charitable giving approach outlined by Dollar Energy to help extend the reach of the program.

Chairman Nagle stated that in the public communication about the program, it should be made clear that this is a program developed and run by the Authority. He explained his concern that the Authority customers will be more familiar and comfortable with a program offered by a familiar organization like the Authority versus Dollar Energy Fund. Ms. Gross agree and said that Susan Sampson will be communicating with the customers and the community to make everyone aware of the Authority's Customer Hardship Fund.

Jennifer McKenna, City of Allentown Office of Compliance, commented that the City applauds the Authority for joining other community partners in working to relieve the impact of COVID-19 on low-income households. She said they appreciate that the program will be reviewed in three months to see what, if anything, can be improved upon. Ms. McKenna also noted the importance of recommending and working with other community-based organizations. She also commented that the City believes that this program may be a good template to use in 2024 when additional customer assistance may be needed after the final full fixed rate increases go into effect in accordance with the settlement agreement that was signed in 2020.

Solicitor Mike Gaul read the title of Resolution 01-2021-01 for the benefit of all attendees. On a motion by Linda Rosenfeld, seconded by Norma Cusick, the Board approved Resolution No. 01-2021-01 (7-0).

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

Brian Nagle – yes
Richard Bohner – yes
Norma Cusick – yes
Kevin Baker – yes
Linda Rosenfeld – yes

Jeff Morgan – yes
Amir Famili – yes

Richard Bohner asked the staff to consider how the Authority will respond if an employee visits a property to disconnect service and encounters the customer, how will they manage the grant application process in the field.

Liesel Gross thanked Mary Sally and Lindsay Mulvihill from Dollar Energy Fund for their presentation.

Retroactive Emergency Declaration – 36” Water Main Break Devonshire & Mack

John Parsons described the emergency 36” water main break that occurred on December 27, 2020 at Devonshire Avenue near the intersection of Mack Boulevard. The break occurred in the cast iron pipe line that was installed in 1936 and feeds the South Mountain Reservoir. Joao Bradley was called in to assist with heavy equipment because of the size of the main, the amount of water being discharged, Authority staff shortages, and the extensive road damage. Garrison Enterprises was also called in to install line stops so the break could be fully isolated and repairs could be made. A secondary incident occurred when a significant section of macadam roadway fell into the pit causing a new rupture in the line. A boil water advisory was issued on December 29 and was lifted on December 31, 2020.

Mr. Parsons requested the approval of a retroactive Emergency Declaration in the amount of \$415,704.95. He noted that the total does not include costs for final road restoration that will take place in the Spring of 2021.

A presentation was shown of the break and the repairs. Richard Bohner asked if the report from the condition assessment regarding the previous breaks that occurred in 2020 has been received. Mr. Parsons stated he is still waiting on the assessment report.

Liesel Gross commented on the boil water advisory, noting that an internal team worked together to identify the customers that would be affected by the boil water advisory and needed to be contacted. Mark Bowen developed an interactive map for the Authority’s website to show the area affected and allow customers to look up their address to determine if their property was affected by the boil advisory.

On a motion by Linda Rosenfeld, seconded by Richard Bohner, the Board approved the Emergency Declaration in the amount of \$415,704.95 (7-0). Chairman Nagle asked if there would be another emergency declaration required when the final road restoration occurs. Mr. Parsons said no because the repairs will fall under normal purchasing procedures.

Kline’s Island Sewer System – Act 537 Planning: 2021 Flow Data QA/QC

Phil DePoe provided background of the 2021 flow characterization study for the Kline’s Island Sewer System (KISS). Per the commitments to the Department of Environmental Protection (DEP), the study is to take place in 2021 and encompass the entire KISS collection system. The study will require the use of 65 temporary meters, 24 permanent sewer billing meters, and 11 permanent non-billing meters. The purpose is to capture both dry-day and wet-day flow data in a span of approximately 9 months. The data collected will be used for the KISS hydraulic model that will be created later in 2021. The model will then be used to run scenarios and incorporate future flow projections from the municipal signatories to analyze the alternatives to upgrading the system to

meet future needs. Current estimates of future system upgrades over the next 20 to 30 years show an investment of about \$200 million or more may be needed. The model is a critical tool to help the region make decisions about these future upgrades.

In order to validate the metering information that will be collected and used to develop the KISS hydraulic model, the Authority recommends Arcadis be authorized to perform the data quality assurance and quality control (QA/QC) work. Mr. DePoe is requesting approval of the Professional Services Authorization to Arcadis in the amount of \$250,000.00.

Amir Famili asked for clarification on what steps Arcadis will take to complete the QA/QC work. Phil DePoe explained that Arcadis will take the data from the meters and perform various calculations and then compare them to industry standards to ensure the meter data can be relied upon for the model. Arcadis will also review data collected during and after selected high-flow events and storms to ensure peak flows are calculating properly. Because of the time needed to calculate the data from the meters and the expertise required to critically analyze results, the Authority cannot perform this work in-house. Jeff Morgan commented on the rigorous and time-consuming process needed to properly review the meter data and calibrations, and emphasized the importance of having accurate data in the Act 537 plan that will be submitted to DEP.

On a motion by Linda Rosenfeld, seconded by Richard Bohner, the Board approved the Capital Project Authorization in the amount of \$746,550.00 that includes the Professional Services Authorization to Arcadis in the amount of \$250,000.00 and includes the previously approved Professional Services Authorization, Flow Metering Contractor, in the amount of \$476,550.00 (7-0).

Amir Famili asked how much visibility the Authority has regarding the inflow and infiltration source removal programs within the municipal sewer collection systems. Phil DePoe explained that the Authority prepares for DEP quarterly reports outlining sewer system repairs and rehabilitation work being completed by each municipality in the system. Chuck Volk also commented that this data is reported annually to DEP in the Chapter 94 report.

Sand Spring Wastewater Treatment Plant Upgrade – General Contract Change Order No. 1

Chuck Volk reviewed the request for the general contract change order. He explained that, instead of drilling a new well on the site of the Sand Spring Wastewater Treatment plant, a proposal was requested from the contractor to connect the plant to the Authority's water system on Park View Drive. The reason for the request is that the existing well capacity is inadequate to serve the new plant's needs and demand, and a new well would be very costly. The new connection would also improve the flow rate to the plant.

On a motion by Linda Rosenfeld, seconded by Jeff Morgan, the Board approved the Capital Project Authorization Amendment No. 1 for \$39,920.00 which includes the General Contract Change Order to Lobar, Inc. in the amount of \$34,920.00 (7-0).

MONTHLY FINANCIAL REVIEW

Ed Klein noted that the unaudited statements for 2020 will be provided at the February 22, 2021 meeting.

MONTHLY SYSTEM OPERATIONS OVERVIEW

John Parsons reviewed the Monthly System Operations Overview report for December 2020 highlighting SSOs that occurred at both the Kline's Island and Heidelberg Heights wastewater treatment plants due to heavy rainfall. An SSO also occurred at Sand Spring Wastewater Treatment Plant resulting from a ruptured pipe causing approximately 20 gallons of sewage to be released. He also noted that the condition assessment of the 1.1 miles of 36" and 30" ductile iron pipe that was subject to a large water main break in April 2020 was completed by Xylem Inc. and Gannett Fleming. The report is expected in 90 days.

STAFF COMMENTS

None.

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 matters of personnel.

ADJOURNMENT

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

Richard Bohner
Secretary

MEMORANDUM

Date: January 22, 2021

To: Lehigh County Authority Board of Directors
From: Amy Kunkel, P.E. and Chuck Volk, Chief Capital Works Officer
Subject: Suburban Division
Fixed Base Meter Reading Stations- Design Phase

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization – Design Phase	\$162,680
2	Professional Services Authorization – Maser Consulting (1), (2)	\$102,680

- (1) *Included in the Capital Project Authorization.*
- (2) *Does not includes Construction phase related engineering services.*

PROJECT OVERVIEW:

LCA's Suburban water system serves approximately 21,000 customers in ten municipalities in Lehigh County and one municipality in Northampton County. Water meters are read using a Sensus AMR reading system, which requires mobile reading of meters by LCA staff. Plans are to transition to an Advanced Metering Infrastructure (AMI) system which requires the installation of radio antennas throughout the service area to transmit signals from customer meters back to the LCA main office. Emphasis is being placed on locating the radio antennas in the denser customer areas of the Suburban Division such as the Central Lehigh, North Whitehall, and Heidelberg areas. Eight LCA owned properties have been identified for equipment installation and Sensus has performed propagation studies for LCA to determine the height of antenna structures and signal coverage. The sites proposed are located in Upper Macungie, Lower Macungie, North Whitehall, Heidelberg, and Upper Milford Townships. Approval requirements for the construction of the meter reading stations varies by municipality and type of structure.

Radio transceiver units at customer properties were upgraded in 2019/2020 and are now compatible with and AMI system. Once site approvals are obtained, construction of the meter base stations will occur from 2022 through 2024.

FUNDING:

This Project will be funded by the LCA Suburban Division

BUDGET AMENDMENT:

Not required for this approval

PROJECT STATUS:

Pending Board approval of the Design Phase.

THIS APPROVAL-DESIGN PHASE:

Lehigh County Authority (LCA) intends to retain the services of an engineering consulting firm to provide, design and permitting related services. Approval for construction related engineering

services will be requested with the Construction Phase. The following table summarizes the professional services to be performed:

Professional Services ⁽¹⁾
1. Pre-design feasibility assessment of the sites.
2. Site selection evaluation - including site visits, correspondence with municipal representatives, and prioritization.
3. Preparation of zoning drawings to be used in obtaining approvals.
4. Obtain zoning and land development approvals for eight locations in multiple Townships.
5. Preparation of submission waivers as required.
6. Attendance and representation at Planning Board and Zoning Board hearings and meetings.

1. For Design Phase Only.

CONSULTANT SELECTION PROCESS:

Four engineering firms, Barry Isett and Associates, Cowan Associates, Maser Consulting, and Langan were invited to submit proposals for the project in November 2020. The firms were selected based on prior LCA project performance and/or general expertise land development in the Suburban Division area. After reviewing the Request for Proposal, Langan declined to provide a proposal citing current workload and backlog. Proposals from the other consultants were received in December 2020, the results of which follow:

Consultant	Cost ⁽¹⁾
Cowan Associates	\$75,400
<i>Maser Consulting</i>	<i>\$102,680</i>
Barry Isett & Associates	\$141,220
Langan	Declined

(1) Total Proposal Cost

Based upon our review of all aspects of both the Technical and Cost Proposals submitted by the three firms, we recommend award of the Design Phase services to Maser Consulting. Maser Consulting has an extensive background in equipment and tower installations and cellular site projects. Their proposal is on scope and represents what we believe is the best overall value for the Authority. Maser Consulting will perform the services outlined in their proposal dated December 21, 2020.

BUCHART HORN -COMPANY INFORMATION & REFERENCE CHECK:

Established in 1984, Maser Consulting is a multi-disciplinary engineering consulting firm headquartered in Red Bank NJ, and employs over 1,000 professionals in offices across the nation, including Bethlehem. With more than 50 telecommunications professionals and experience designing and analyzing nearly 4,000 communication sites, Maser has sufficient personnel in the required disciplines to guarantee continuity and continued progress with this project.

PROJECT SCHEDULE:

Maser Consulting anticipates having initial plans ready for submittals approximately two months after the pre-design feasibility assessment is conducted with LCA barring any setbacks. Approvals are expected to be obtained by the end of 2021.

FUTURE AUTHORIZATIONS- CONSTRUCTION PHASE:

A Capital Project Authorization (CPA) Amendment will be presented to the Board for approval of the Construction Phase; and will include construction contract award(s), professional services amendment for construction related services, staff costs and other related components.

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	SD-W-21-1	BUDGET FUND:	Suburban Div\Water\Capital
PROJECT TITLE:	Fixed Base Meter Reading Stations	PROJECT TYPE:	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input type="checkbox"/> Amendment
THIS AUTHORIZATION:	\$162,680		
TO DATE (W/ ABOVE)	\$162,680		

DESCRIPTION AND BENEFITS:

This Project is for the Fixed Base Meter Reading Stations. It includes obtaining Zoning and Land Development approvals for eight antenna locations throughout the Suburban Division. Maser Consulting will perform the engineering consulting services. Installation of the antennas will be phased in over the next several years.

Reference the attached Memorandum for additional information.

Previous Authorizations	
None	

REQUESTED THIS AUTHORIZATION	
Design Phase	
Staff	\$30,000
Engineering Consultant – Maser Consulting	\$102,680
Easements	\$0
Legal	\$20,000
Contingency	\$10,000
Total This Authorization	\$162,680

Future Authorization	
Construction Phase	\$800,000

<i>Total Estimated Project</i>	<i>\$962,680</i>
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REVIEW AND APPROVALS:

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



Lehigh County Authority

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

PROFESSIONAL SERVICES AUTHORIZATION

Professional: Maser Consulting
941 Marcon Blvd.
Suite 801
Allentown, PA 18109

Date: January 22, 2021
Requested By: Amy Kunkel
Approvals
Department Head: _____
Chief Executive Officer: _____

Suburban Division- Fixed Base Meter Reading Stations

Previous Authorizations- None

This Authorization – Design Phase: \$102,680

Maser Consulting will provide design engineering related services for the aforementioned project.

Professional Services
1. Pre-design feasibility assessment of the sites.
2. Site selection evaluation - including site visits, correspondence with municipal representatives, and prioritization.
3. Preparation of zoning drawings to be used in obtaining approvals.
4. Obtain zoning and land development approvals for eight locations in multiple Townships.
5. Preparation of submission waivers as required.
6. Attendance and representation at Planning Board and Zoning Board hearings and meetings.

Cost Estimate (not to be exceeded without further authorization): **\$ 102,680**

Time Table and Completion Deadline: As required to meet design timeline requirements

(For Authority Use Only)

Authorization Completion:

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

FINANCE & ADMINISTRATION

ACTION ITEM

1. Board of Directors – Nomination of Officers – February 22, 2021

The Board of Directors will nominate and approve officers for 2021 at the February 22, 2021 Board meeting.

2. Resolution 02-2021-01 – Destruction of Authority Documents – February 22, 2021

Board approval is required to allow for destruction of official Authority documents, in accordance with LCA’s document retention program and the Pennsylvania Municipal Records Act.

DISCUSSION ITEMS

1. LCA 2020 Action Plan Status Update & Vision for 2021 – February 8, 2021

Authority staff will provide a brief update on the status of goals established in the LCA 2020 Action Plan, and review primary goals for 2021.

2. Suburban Division 2022-2026 Capital Plan – February 22, 2021

Distribution of draft SD 2022-2026 Capital Plan and presentation of plan highlights and summary.

INFORMATION ITEMS

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

Fund	Bank	Location	Gross Amount	Date of Purchase	Date Due	Net Rate %
LLRI CR	Industrial and Commercial Bank of China USA	New York, NY	245,000.00	8/28/20	2/28/22	0.200
WW Capac	Bank Hapoalim B.M.	New York, NY	249,000.00	8/26/20	8/26/22	0.250
WW Capac	Meridian Bank	Paoli, PA	249,000.00	8/28/20	2/28/22	0.150

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
 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
 Cedarbrook Road Industrial Park, 2 industrial lots, LMT - New

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
5329-5347-5357 Hamilton Blvd., 1 commercial lot, LMT
5420 Crackersport Road, 1 commercial lot, UMT
ATAS International, 1 industrial lot, UMT
Estates at Maple Ridge, 30 residential units (sfd), UMiIT
Hidden Meadows, Phase 2, 86 townhouse units (sfa), UMT
Laurel Field, Phase 5, 25 townhouses, UMT
Lehigh Hills, Lot 5 Phase 2, 240 residential units (sfd.), UMT
Lehigh Hills Townhouses, 24 townhouse units (sfa), UMT
Madison Village at Penn's View, 66 manufactured homes, 1 lot, water and sewer, LynnT
Mountain View Estates, 27 residential units (sfd), LMT
Parkland Crossing (formerly 1224 Weilers Rd Twins), 144 townhouse units, UMT
Ridings at Parkland – Phase 2, 38 residential units (sfd), NWT
Schoeneck Road, Lot 1, 1 lot warehouse, LMT
Shepherds Corner, 1 commercial lot, LMT
The Annex at Fields at Indian Creek, 22 S.F. residential units, Emmaus Borough
Towneplace Suites by Marriott, 91-room hotel, UMT
West Hills Business Center-Bldg H – 1 Commercial Lot, Weisenberg T

Sewage Planning Modules Reviewed in Prior Month:

Green Acres Outdoor Living, SWT, 446 gpd.
222 & 228 N Arch St Minor Subdivision, Allentown, 238 gpd.
American Parkway Warehouse Development, Allentown, 5,950 gpd.
Turkey Hill, Emmaus, 1,360 gpd.
207 N Front Street Adaptive Reuse Development, Allentown, 5,552 gpd.

WATER

ACTION ITEM

1. **Suburban Division – Fixed Base Meter Reading Stations - Design Phase – February 8, 2021**

The project focuses on securing land development and zoning approvals to construct eight fixed base water meter reading stations located throughout the Suburban Division water service area. The land development and zoning approvals will allow for the future construction of the stations as part a program to transition to a centralized advanced metering infrastructure system which will provide more consistent, timely and accurate billing to the customers. Approval of a consulting engineer to provide the site development engineering services will be requested at the February 8, 2021 Board meeting.

DISCUSSION ITEMS

INFORMATION ITEMS

1. **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. As of November 2020, LCA is in the process of negotiations for cost sharing with the City for road surface restoration. As of December 22, 2020 LCA has submitted the substantially complete plans and specifications to the City for approval with a mandatory scheduled comment meeting set for January 19, 2021. Bid phase is anticipated to comment the first quarter of 2021.

2. **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 99% complete. This project will be funded by LCA Allentown Division. Majority of hardware in place and running. Working through reporting and data collection items. Expected completion on 1/29/2021

3. **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 was identified as unfunded in 2018 and 2019 prior to the dispute settlement with the City and may be supported through a PENNVEST loan pending. Board approval was granted at the 8/12/19 Meeting for the design phase of this project. Contract drawings representing 90% design were received in mid-November 2019. The design engineer also completed an "Arc-Flash" study in summer 2020 to identify related electrical deficiencies at the WTP. Final design engineering work was re-started in early September 2020 following execution of the new Agreement with the City. Capital Works met with a representative of

PennVEST on 9/18/20 to discuss an upcoming application submission and final design completion schedule. Final design was completed in November 2020. Capital Works' submitted the funding application and supporting documentation to PennVEST by the 11/4/20 application submission deadline for the 1/20/21 PennVEST meeting. The application for funding was approved at the 1/20/21 PennVEST meeting, and the paperwork is being drawn up for execution.

4. **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 more than 95% complete. Punch lists for the remaining items to address were sent to the contractors. The station went on-line on November 19th. **(No Change)**

5. **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)**

6. **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 **65%** complete. Equipment delivery delays from the pre-cast building manufacturer have slowed the progress of this project.

7. **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 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. The contractor completed replacing radios that were not working properly on December 2 and will return in January/February to complete any additional accounts that can be scheduled by LCA.

8. **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. A second test well location has been identified on the same property and well drilling has been completed with positive results. Test Well 2 is more productive than the existing source for the system (Well 1). A sustained pump test of Well 2 will be completed as soon as hydrogeologic conditions are favorable, with DEP permitting to follow. **(No Change)**

9. **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 in the first quarter of 2021. The Public Water Supply Permit Application is under review by DEP. **(No Change)**

10. **Allentown Division – 36" DI Water Main Condition Assessment**

Water distribution system consultant Gannett Fleming, Inc is working with Pure Technologies to develop a condition assessment project focusing on the 36" ductile iron transmission line that feeds the north end of Allentown and Huckleberry Ridge Reservoir. This line has had two recent major failures and it would be beneficial to determine if there is a root cause for these failures that can be corrected to prevent further damage and water loss. The work was performed on December 14-15, 2020. A full report will be available within a few weeks. **(No Change)**

WASTEWATER

ACTION ITEM

1. **Kline's Island Sewer System – Regional Sewer Capacity & Wet-Weather Planning: 2021 Model Expansion and Calibration - February or March - TBD**

The prior KISS sewer model from 2014 included only the City of Allentown and LCA/Western Lehigh municipalities. The primary goal of this work is to expand the sanitary sewer model into the surrounding Signatories (Coplay, Whitehall, North Whitehall, Hanover, South Whitehall, Salisbury, and Emmaus). Calibration of this expanded model to current flow characteristics will aid in the identification and evaluation of regional alternatives for solutions to both treatment and conveyance through the year 2050 Act 537 planning horizon (the LCA/Western Leigh portion of this model calibration work was completed in 2019 and 2020). The end result of this proposed work will provide one comprehensive, calibrated sewer model for the entire KISS system using 2021 flow and rainfall data. On February 22, 2021, Board approval will be requested for this next phase of Act 537 planning efforts.

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 was resubmitted in late January 2021 (without action taken by DEP on the Interim Act 537 Plan - submitted in September 2020). 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 2)**

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. The "Year 1 Project" was completed in June 2020. Year 2 details are being finalized with construction anticipated to start in Q2 of 2021. Board approval for the Year 2 construction phase is anticipated in late March. 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 August 2020, the Interim 537 Draft is 100% completed and was delivered to sixteen planning commissions on 3/16/2020. Planning commission meetings occurred with public advertisement opening on 6/10/20 and closing on 7/10/20. Municipal resolution adoptions occurred in August and the Plan was delivered to DEP on 9/4/20. As of late January 2021, even without correspondence from DEP on the Interim Act 537, the KISS Region is proceeding with its commitments as outlined in the Plan.

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 billing 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 QA/QC 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. As of late January 2021, the flow metering program will utilize 24 sewer billing meters.

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 Plant 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. Final reports are expected by June 2021. **(No change)**

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. 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 January 2021, data collection is 100% completed and the Rain Derived I&I (RDII) analysis is underway.

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 retained and full authorization was granted at the 5/11/2020 Board meeting. A presentation was presented to the Board at the 8/10/20 Board Meeting. Various modeling alternatives are still ongoing and the full model results will be available by early 2021. The project is funded by the LCA Suburban Division.

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 Q2 of 2021) 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. Three, one-day trial runs (on a Saturday) were completed in Q4 of 2020 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 – 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 with respect to corroded structural steel tanks and outdated mechanical equipment and is to be replaced with this project. The new facility shall meet the effluent limits criteria established in the 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 was substantially completed in October 2020, with testing, start-up and training tasks completed. Construction is approximately 99% complete as of November 2020. Outstanding work consists of final restoration and demolition of the existing plant. **(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. **(No Change)**

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. **(No Change)**

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. Substantial completion and start-up of the new facility is anticipated for early 2021. **(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 proceeding based on modeling information provided to date from Arcadis and a draft report is expected in early February 2021. **(No Change)**

16. 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 early 2021. **(No Change)**

17. 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 substantially completed by early 2021. **(No Change)**

18. 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. Construction has been completed and project closeout is anticipated to be completed in late January 2021.

19. Allentown Division – Kline’s Island WWTP: Sodium Hypochlorite System Installation Project – Construction Phase Approval

This project involves the replacement of the existing gaseous chlorination system at the Kline’s Island Wastewater Treatment Plant (KIWWTP). The use of gaseous chlorine for effluent disinfection, while reliable, is outdated and creates significant public health and employee safety risks. In addition, the existing equipment has reached the end of its useful life. The 2018 KIWWTP Master Plan recommended abandoning gaseous chlorine and switching to (liquid) sodium hypochlorite. The design commenced in March of 2019 and was completed in early 2020. The project was advertised for bid in February 2020 and bids were opened on 4/14/20. Construction phase was authorized at the 6/8/2020 Board meeting and the contractor mobilized in late summer 2020. The project is anticipated to be completed in the first quarter of 2021. The project will be funded by the LCA Allentown Division. **(No Change)**

20. Suburban Division – Western Lehigh Service Area: Revenue Planning Tool

As part of the long-term Act 537 planning process, a revenue planning tool is required to help predict the impact of proposed system modifications in the Western Lehigh Service Area. This tool will simulate financial impacts based on current and future flows and loads and utilizing the terms of existing inter-municipal agreements. For the alternatives being evaluated by LCA's engineering consultants for potential upgrade of the Pretreatment Plant to full treatment, the revenue planning tool will simulate changes in future flows and loads and general financial analyses to assist with decision-making regarding these alternatives. Prior phases of this work were completed in 2019 and 2020 to review the assumptions and parameters required to develop the financial model. Authorization for Phase 2 (development of the actual revenue planning tool) was approved at the 12/14/2020 Board Meeting. Final tool delivery is expected before June 2021.