



**LCA Main Office:**  
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**Agendas & Minutes Posted:**  
[www.lehighcountyauthority.org](http://www.lehighcountyauthority.org)

## LEHIGH COUNTY AUTHORITY

Published: August 21, 2023

### BOARD MEETING AGENDA – August 28, 2023 – 12:00 p.m.

**In-Person or Virtual Meeting Attendance Options Available:** Meetings of the LCA Board of Directors will be held at LCA's Main Office as well as online using the Zoom Meetings application, which includes a telephone option. Public participation is welcomed both in-person or virtually. 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 if you are attending virtually. If attending in-person at LCA's Main Office, please follow all safety and sanitation protocols posted.

#### 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

- Additions to Agenda (vote required if action will be taken)

#### 3. Approval of Minutes

- *August 14, 2023 Board meeting minutes*

#### 4. Public Comments

#### 5. Action / Discussion Items:

#### **FINANCE AND ADMINISTRATION**

- *Suburban Division Preliminary 2024-2028 Capital Plan (Discussion) (digital Board packet, pages 7-72)*
- *Resolution 8-2023-1: Specifying Authorized Persons to Perform Financial Transactions (Approval) (pink) (digital Board packet, pages 73-74)*

#### **WATER**

#### **WASTEWATER**

- *KISS Modeling – Final Alternatives Analysis (FAA) (Presentation)*

#### 6. Monthly Project Updates / Information Items (1<sup>st</sup> Board meeting per month)

#### 7. Monthly Financial Review (2<sup>nd</sup> Board meeting per month) (*digital Board packet, pages 75-87*) – **July 2023 report attached**

8. Monthly System Operations Overview (2<sup>nd</sup> Board meeting per month) (*digital Board packet, pages 88-89*) – **July 2023 report attached**
9. Staff Comments
10. Solicitor's Comments
11. Public Comments / Other Comments
12. Board Member Comments
13. Executive Sessions
14. Adjournment

UPCOMING BOARD MEETINGS		
September 11, 2023	September 18, 2023	October 9, 2023

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 14, 2023**

The Regular Meeting of the Lehigh County Authority Board of Directors was called to order at 12:00 p.m. on Monday, August 14, 2023, Chairman Brian Nagle presiding. The meeting was hybrid via in-person and video and audio advanced communication technology ("ACT"), using the Zoom internet application, including telephone option. 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 in-person or via ACT, using the Zoom internet application, including telephone option. A Roll Call of Board members present was taken. Brian Nagle, Linda Rosenfeld, Jeff Morgan, Sean Ziller, and Marc Grammes were present for Roll Call, and remained for the duration of the meeting. Amir Famili and Ted Lyons entered the meeting at 12:01 p.m.

Attorney Mike Gaul of KingSpry, the Authority's Solicitor, was present along with Authority Staff, Ed Klein, Chris Moughan, Andrew Moore, Albert Capuzzi, Phil DePoe, Susan Sampson, and Lisa Miller.

Chairman Nagle announced that the Board received their electronic and hard copies of the Board packet in advance. He noted that there was a change to the agenda to the page numbers due to the addition of the Allentown Division Preliminary 2024-2028 Capital Plan. He then asked if anyone did not receive their copy of the packet. A copy of the packet is also available online.

#### **REVIEW OF AGENDA**

Liesel Gross announced that there are no other changes to the agenda. An Executive Session is planned after the regular meeting to discuss personnel matters.

#### **APPROVAL OF MINUTES**

##### **July 24, 2023 Meeting Minutes**

On a motion by Linda Rosenfeld, seconded by Sean Ziller, the Board approved the minutes of the July 24, 2023, Board meeting as presented (7-0).

#### **PUBLIC COMMENTS**

None.

##### **Allentown Division Preliminary 2024-2028 Capital Plan**

Liesel Gross provided an introduction to the Authority's process for developing the Capital Plan (Plan), which is conducted annually. She noted the various Board approvals and public input process, and explained that today's presentation is focused on the Allentown Division draft Plan for the 2024 to 2028 time period. The Suburban Division draft Plan would be presented at the next meeting. She reviewed key highlights of the Allentown Division Plan, which includes significant cost increases from prior five-year plans. Major drivers for the increases include inclusion of \$55 million for a lead service line replacement program; \$10 million for treatment of PFAS at the Water Filtration Plant (WFP); \$29 million for expanded programs to address inflow and infiltration in the sewer collection system; and \$20 million for wet-weather treatment capacity upgrades at the Kline's Island Wastewater Treatment Plant (KIWWTP). She noted that some potential grant funding is included in the financial analysis for this Plan, but there is potential for more grants than noted in the Plan. She also explained that while this Plan represents a significant cost increase from prior plans, there are other costs not included related to the regional Act 537 Plan that is under development. The projects that are determined through the Act 537 Plan process will be incorporated into future plans.

Chuck Volk then presented the Allentown Division water and wastewater project details included in the Plan and detailed PowerPoint presentation. His presentation included a review of annual projects, smaller repair and rehabilitation projects, large projects, and new projects included for the first time in this year's Capital Plan. The new projects included: PFAS Compliance Planning & Upgrades, WFP Influent Channel Modifications, WFP Redundant Power Supply, Lead Service Line Replacement Program, and the KIWWTP Primary Sludge Digester Feed Line Replacement.

Ed Klein reviewed the financial analysis included in the Plan, noting water projects total \$117 million, and the wastewater projects total \$73 million. To fund the Plan, approximately \$33 million is expected in grant funding for the lead service line replacement program, \$6.9 million is expected from grants and reimbursements from the City of Allentown, \$96 million will be funded through current revenues or reserves, and \$55 million will be funded from new borrowing. He presented a simplified cash flow statement that indicates these funding sources will result in the Plan being fully funded and the Authority's key financial metrics related to cash balances and debt service coverage can be achieved.

Liesel Gross concluded the presentation with a review of the Plan's impact on water and sewer rates in Allentown, which are projected to increase 6 to 10 percent per year over the next five years. The current average residential water and sewer bill is \$808 per year, which may increase to about \$1,200 per year over the Plan period. This is a significant increase, which could be reduced somewhat if additional grant funding can be secured for selected projects. However, she also noted that the plan excludes several large projects that are expected to be recommended as part of the regional Act 537 Plan, which will be presented in 2024.

There was some Board discussion about the lead service line replacement program totaling \$55 million in the draft Plan, and the need to replace privately owned lead service lines. Liesel Gross explained that the program to replace lead service lines in the future will be shaped by the U.S. Environmental Protection Agency's upcoming Lead and Copper Rule update, which is expected to be published later this year. However, in the meantime, grant funding is available through the Infrastructure Investment and Jobs Act, which specifies that the funding must be used to replace both public and private lead service lines within the project area. If additional grant funding is received, then the privately owned lead service lines will continue to be included in the projects. If grant funding is not received or the new EPA rule provides new guidance on how these programs are to be run, the Authority may decide on a different approach.

There was additional Board discussion about the PFAS project for the WFP, what the project scope entails, and how the costs compare to other communities. Albert Capuzzi explained that the preliminary cost estimate of \$10 million was included in the Plan for the potential need to treat water drawn from Crystal Spring. If all sources entering the WFP need to be treated, the cost will be much higher. A study was authorized last month for the Authority to review the water source data and determine the most cost-effective approach to treating for PFAS. Liesel Gross added that grant funding is available for PFAS treatment through the IJA. To be conservative, no grant funding for this project was included in the Plan, but will be actively pursued to help reduce the cost impact to customers.

Liesel Gross reviewed the timeline for future presentations and public input, and noted that Plan approval will be requested in October.

### **North Whitehall Meter Replacement**

Amy Kunkel provided an overview of the project to replace and upgrade 616 older and non-functioning residential water meters in the North Whitehall Division. Meters in this system have been affected by manganese accumulation generated from the Authority's prior well sources. These water

sources have been abandoned and the North Whitehall system is now served exclusively through an interconnection with the Northampton Borough Municipal Authority. Therefore, there should be no continued issues with manganese within the system. The Authority will use the iPerl model of Sensus brand meters because they do not have any internal moving parts and any residual manganese in the system will not affect the meters operation and accuracy. Core & Main, L.P. is the authorized distributor for Sensus meters and are listed on COSTARS as an approved provider for meter equipment and installation services.

The Board asked what the life expectancy is for the iPerl meters now that the source of the manganese has been removed. Amy Kunkel said they have a 20-year life expectancy.

On a motion by Linda Rosenfeld, seconded by Amir Famili, the Board approved the Capital Project Authorization for the North Whitehall Meter Replacement Project Construction Phase in the amount of \$283,905.00 which includes the Contract Award for the project to Core & Main, LP in the amount of \$243,905.00 (7-0).

#### **Sanitary Sewer Collection System: City of Allentown Manhole Inspections**

Phil DePoe gave an overview of the project for the next phase of the inflow and infiltration removal in the City of Allentown system. The Trout Creek Interceptor has been identified as being undersized and subject to future sanitary sewer overflows during peak wet-weather events. The flow characterization study and system hydraulic modeling work has identified rainwater inflow via manholes as a primary driver for these conditions. Therefore, the Authority proposes to add the 1,800 manholes in the Trout Creek Interceptor drainage basin to the inspection program authorized in December 2022, which Arcadis is conducting. Mr. DePoe commented that there are funds available for this project within the 2023 capital budget.

All manhole inspections will be coordinated with Authority staff and Arcadis. All field data from the inspections will be uploaded to the Authority's Geographic Information System. The data being collected will be used to develop bid specifications for repairs to be conducted in 2024.

There was some Board discussion about the repairs to be conducted and how the Authority will ensure the expected inflow reductions will be achieved over the long-term horizon.

On a motion by Marc Grammes, seconded by Linda Rosenfeld, the Board approved the Capital Project Authorization for the Allentown Division 2023 Manhole Inspections at the Trout Creek Interceptor Basin in the amount of \$292,000.00 which included the Professional Services Authorization to Arcadis for Inspection Services in the amount of \$267,000.00 (7-0).

#### **Heidelberg Heights Sanitary Sewer Consent Order & Agreement**

Chuck Volk gave an overview of the Heidelberg Heights Consent Order and Agreement to eliminate hydraulic overloads and bypasses at the Heidelberg Heights Wastewater Treatment Plant. Jason Peters presented an overview of the project to replace approximately 1,300 feet of 8-inch vitrified clay pipe and 10 residential sewer laterals in the system. Existing manhole structures will be re-used and new frames and covers retrofitted, watertight chimney wrap and watertight gaskets will be installed at manhole pipe connections.

The funding source for this project will be funded by the LCA Suburban Division, along with support provide through a \$75,000.00 grant from the state's Local Share Assessment program.

There was some Board discussion regarding the Consent Order and Agreement and the efforts needed to remove inflow and infiltration from the private side of the system. Andrew Moore noted

that while this is the last project to be conducted on the public side of the system, wet-weather plant bypasses continue, indicating continued problems with leaking sewer laterals and sump pumps. Overall, the volume of untreated sewage discharged from the system has decreased.

On a motion by Sean Ziller, seconded by Amir Famili, the Board approved the Capital Project Authorization for the Construction Phase in the amount of \$471,750.00 which includes the Construction Contract to Barrasso Excavation, Inc. in the amount of \$393,750.00 and a Professional Services Authorization to Keystone Consulting Engineers in the amount of \$48,000.00 (7-0).

### **MONTHLY PROJECT UPDATES / INFORMATION ITEMS**

Liesel Gross highlighted the items in the report that are listed for the next meeting in August.

### **STAFF COMMENTS**

Liesel Gross acknowledged the 10-year anniversary of the Authority's operation of the Allentown water and sewer systems under the terms of the Concession Lease Agreement with the City of Allentown that was executed in 2013. She thanked the staff and Board for their support along the way.

### **SOLICITOR'S COMMENTS**

Solicitor Gaul stated he is looking forward to reading the article in the PMAA magazine regarding the crocodile found at the Kline's Island Wastewater Treatment Plant.

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

None.

### **BOARD MEMBER COMMENTS**

None.

### **EXECUTIVE SESSION**

There will be an Executive Session at 1:45 p.m. to discuss personnel matters. No decisions will be made during this session.

### **ADJOURNMENT**

There being no further business, the Chairman adjourned the meeting at 1:33 p.m.

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Linda A. Rosenfeld  
Secretary



# Lehigh County Authority

DRAFT 5-YEAR CAPITAL PLAN

SUBURBAN DIVISION

2024-2028

AUGUST 2023

**LEHIGH COUNTY AUTHORITY**  
**5-YEAR CAPITAL PLAN**  
**2024-2028**

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## 2024-2028 Capital Plan

### Glossary of Acronyms & Terms

The following is a listing of acronyms and terms used in the Capital Plan Summary and Project Detail Sheets.

#### LCA Water and/or Wastewater Divisions/Systems

LCA Water and/or Wastewater Divisions/Systems			
		Water	Wastewater
<i>AD</i>	Allentown Division	X	X
<i>AWD</i>	Arcadia West Division	X	X
<i>BHD</i>	Beverly Hills Division	X	
<i>CLD</i>	Central Lehigh Division	X	
<i>CFD</i>	Clear View Farms Division	X	
<i>ECD</i>	Emmaus Consecutive Division	X	
<i>HHD</i>	Heidelberg Heights Division	X	X
<i>LLRI-1</i>	Little Lehigh Relief Interceptor, Phase 1		X
<i>LLRI-2</i>	Little Lehigh Relief Interceptor, Phase 2		X
<i>LTD</i>	Lynn Township Division		X
<i>MCD</i>	Mill Creek Division	X	
<i>MND</i>	Madison Park Division	X	
<i>NWD</i>	North Whitehall Division	X	
<i>PLD</i>	Pine Lakes Division	X	
<i>SSD</i>	Sand Spring Division		X
<i>UMD</i>	Upper Milford Division		X
<i>UMCD</i>	Upper Central Milford Division (Buss Acres)	X	
<i>WLI</i>	Western Lehigh Interceptor		X
<i>WTD</i>	Washington Township Division	X	X
<i>WWD</i>	Wynnewood Division		X

#### Project Type

Project Type	Description
<i>AO</i>	Administrative Order
<i>LCA-MCI</i>	LCA Developed Major Capital Improvement <sup>(1)</sup>
<i>Regular</i>	A project that does not fit in any of the aforementioned special categories

*(1) Major Capital Improvement: In accordance with the Lease, all Major Capital Improvements must be approved by the City.*

## **Project Funding**

<b>Project Funding</b>	<b>Description</b>
<i>LCA</i>	Funded by LCA
<i>100% Reimb</i>	All costs are 100% reimbursable by fees charged
<i>Fees &amp; LCA</i>	Costs partly recovered through fees charged and partly funded by LCA
<i>Allentown</i>	Funded by the City of Allentown
<i>CCRC</i>	Capital Cost Recovery Charge <sup>(1)</sup> ; Applies only to City approved MCI

*(1) Capital Cost Recovery Charge: An on-going user fee that is above the rate caps set forth in the Lease to allow the recovery of the cost of an MCI. Rate payers are charged based upon usage.*

## **Project Category**

Projects have been categorized to identify the primary and secondary reasons for the need. In some cases there is no secondary reason that would be applicable.

<b>Project Category</b>	<b>Description</b>
<i>Regulatory</i>	Required to meet Regulatory requirements
<i>New Cust</i>	New Customers
<i>CA/OS</i>	Concession Lease/Operating Standards
<i>AM - Low</i>	Asset Management - Low Risk
<i>AM - Med</i>	Asset Management - Medium Risk
<i>AM - High</i>	Asset Management - High Risk
<i>AM - Varies</i>	Asset Management - Varies <sup>(1)</sup>
<i>Efficiency</i>	Efficiency
<i>Sys Imp</i>	System Improvement
<i>Rev Opprt</i>	Revenue Opportunity
<i>Planning</i>	Planning
<i>N/A</i>	Not Applicable

*(1) Applies to Asset Management Projects, where there are multiple standalone sub-projects of varied levels of "risk".*

## **Approval Stage**

<b>Approval Stage</b>	<b>Description</b>
<i>A</i>	Annual Project, no approvals required
<i>S</i>	Study/Planning Phase
<i>D</i>	Design Phase
<i>C</i>	Construction/Implementation Phase
<i>E</i>	Entire Project
<i>V</i>	Various Phases
<i>P</i>	Pending Board approval

**WATER**

**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION WATER  
5-YEAR CAPITAL PLAN  
2024–2028**

**CAPITAL FINANCING JUSTIFICATION**

Capital additions to the Water System are justified by using six revenue sources: user charges, assessments or distribution tapping fees, supply tapping fees, contributions-in-aid of construction, reimbursements from the wastewater funds, and grants. This would comprise the amount of cash available from operations for capital projects.

Beyond the operating cash available, remaining sources are project reserves from previous debt issuance and any new borrowing required.

The table below summarizes the capital project sourcing by year and each major financial sourcing category:

<b>CAPITAL FINANCING SOURCES</b>						
	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>TOTAL</b>
Project Costs	\$6,617,000	\$5,383,500	\$8,816,500	\$6,975,500	\$5,795,500	\$33,588,000
<b><i>Sources of Funding:</i></b>						
Current Cash Flows	\$1,154,184	\$2,783,500	\$3,385,000	\$2,967,500	\$3,047,500	\$13,337,684
Cash Reserves	-	-	-	-	-	-
New Borrowing	\$5,462,816	\$2,600,000	\$5,431,500	\$4,008,000	\$2,748,000	\$20,250,316
<b>TOTAL FUNDING</b>	<b>\$6,617,000</b>	<b>\$5,383,500</b>	<b>\$8,816,500</b>	<b>\$6,975,500</b>	<b>\$5,795,500</b>	<b>\$33,588,000</b>

Total spending on capital projects for the five-year period totals \$33,588,000. Current cash flows and cash reserves over the period will provide \$13,337,684 for capital projects. New borrowing for plan period projects will be in the amount of \$20,017,500 over the five years for specific projects being executed each year with a borrowing balance forward of \$232,816 from year 2023.

The \$20,017,500 borrowing along with the \$232,816 balance forward is to fund main replacement projects, water meter replacement projects, North Whitehall improvement projects, and Upper System pump station and water main extension projects. To support the additional debt service an increase in rates will be 4.0% in years 1-3 and 3.5% in years 4-5. Modestly conservative growth of 1% annually is included to reflect expected new customer connections during the plan period.

**CONDENSED CASH FLOW - SUBURBAN WATER**

<b>US DOLLARS</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>
User Charges	16,800,000	17,640,000	18,522,000	19,355,490	20,226,487
Other Operating Revenues	287,500	287,500	287,500	287,500	287,500
Non-Operating Revenues	261,342	261,342	261,342	261,342	261,342
Operating expenses	(11,290,563)	(11,648,094)	(12,017,010)	(12,397,675)	(12,790,466)
Debt Service - Current Debt	(3,137,124)	(3,138,325)	(2,850,924)	(3,081,325)	(3,064,124)
Debt Service - NEW Debt	(284,362)	(425,727)	(721,045)	(938,965)	(1,088,377)
Investments Converting to Cash	-	-	-	-	-
Proceeds From NEW Debt	5,230,000	2,600,000	5,431,500	4,008,000	2,748,000
Capex	(7,065,750)	(5,458,500)	(8,891,500)	(7,038,000)	(5,858,000)
<b>NET FUND FLOWS</b>	<b>801,043</b>	<b>118,196</b>	<b>21,863</b>	<b>456,367</b>	<b>722,362</b>
Plan Volume Increase %	1.00%	1.00%	1.00%	1.00%	1.00%
User Charge Rate Increase %	4.00%	4.00%	4.00%	3.50%	3.50%
Total User Charge Revenue Increase %	5.00%	5.00%	5.00%	4.50%	4.50%
Unrestricted Cash Balance	9,277,213	9,395,409	9,417,272	9,873,639	10,596,001
Unrestricted Investments	2,975,123	2,975,123	2,975,123	2,975,123	2,975,123
Total Unrestricted Balances	12,252,336	12,370,532	12,392,395	12,848,762	13,571,124
Days on Hand	300	294	286	291	302
DEBT SERVICE COVERAGE RATIO	1.77	1.84	1.97	1.87	1.92

LEHIGH COUNTY AUTHORITY  
 SUBURBAN DIVISION  
 2024-2028 CAPITAL PROGRAM  
 WATER

Project #	Name or Title of Proposal	Prj. Category	(1) Prj. Funding	Approval Stage (1)		This Capital Program					
					2023 Budget Approved	2024 Year 1	2025 Year 2	2026 Year 3	2027 Year 4	2028 Year 5	2024-2028 Total
SD-W-A	Annual Projects	AM - Varies	LCA	A	\$ 2,315,000	\$ 2,367,000	\$ 2,283,500	\$ 2,191,500	\$ 1,925,500	\$ 1,845,500	\$ 10,613,000
SD-W-12	Water Main Replacement Projects	AM - Varies	LCA	V	\$ 2,900,000	\$ 2,900,000	\$ -	\$ 3,000,000	\$ 3,100,000	\$ 3,100,000	\$ 12,100,000
SD-W-37	Water Quality Studies & Upgrades	Sys Imp	LCA	p	\$ -	\$ 100,000	\$ 100,000	\$ 75,000	\$ -	\$ -	\$ 275,000
SD-W-50	Fixed Base Meter Reading System	Sys Imp	LCA	P	\$ 100,000	\$ 50,000	\$ 250,000	\$ 250,000	\$	\$ -	\$ 550,000
SD-W-51	North Whitehall Division Water System Supply Study and Improvements	Sys Imp	LCA	P	\$ -	\$ 100,000	\$ 750,000	\$ 1,150,000	\$ -	\$ -	\$ 2,000,000
SD-W-55	Water Systems Master Planning	Sys Imp	LCA	A	\$ 100,000	\$ 100,000	\$ 100,000	\$ -	\$ -	\$ -	\$ 200,000
SD-W-56	Upper System Pump Station & Water Main Extension	Sys Imp	LCA	A	\$ 75,000	\$ 50,000	\$ 100,000	\$ 800,000	\$ 1,100,000	\$ -	\$ 2,050,000
SD-W-57	Water Meter Replacement Program	AM-Rev Opprt	LCA	P	\$ 350,000	\$ 800,000	\$ 800,000	\$ 850,000	\$ 850,000	\$ 850,000	\$ 4,150,000
SD-W-58	Central Lehigh System Supply Improvements	Sys Imp	LCA	P	\$ 100,000	\$ 150,000	\$ 1,000,000	\$ 500,000	\$ -	\$ -	\$ 1,650,000
	GRAND TOTAL				\$ 5,940,000	\$ 6,617,000	\$ 5,383,500	\$ 8,816,500	\$ 6,975,500	\$ 5,795,500	\$ 33,588,000

(1) Reference Glossary of Acronyms & Terms found immediately after the Table of Contents. All projects are LCA funded  
 (2) If blank , cost is not applicable (annual project) or to be determined

**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	ANNUAL PROJECTS						
<b>Budget Area</b>	Water	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-W-A
<b>Location</b>	All LCA Suburban Divisions, Multiple Municipalities			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	<b>Primary</b>	AM - Varies	<b>Secondary</b>	Efficiency	<b>Preparer</b>		CEV

Purpose of Expenditure (check all that apply)	
<input checked="" type="checkbox"/> New Facility	Correct Known or Potential Safety Issue
<input checked="" type="checkbox"/> Existing Facility - Rehabilitation/Upgrade	<input checked="" type="checkbox"/> Equipment Obsolete
<input type="checkbox"/> Scheduled Replacement	Comply with Regulatory Requirements
<input checked="" type="checkbox"/> Improved Service	<input checked="" type="checkbox"/> Equipment/Infrastructure at End of Useful Life
<input type="checkbox"/> Study	<input checked="" type="checkbox"/> Other (explain): New Mobile and Other Equipment

Additional Information			
Expected Useful Life (Years)	N/A	Project inception date	N/A
Approx. No. of Customers Benefitted	N/A		
Is this System part of a Common User Rate?	Yes	Anticipated Project completion date	N/A
Will the Project Require Obtaining Land Rights	N/A		

Varies by system.

Detailed Project Description
This consolidated annual project is a collection of separate recurring small projects. This annual project includes the following: New Water Main Installation, Distribution Mains - Development & Service Connections, Distribution Mains - Upsizing/Contribution, Reservoir Rehabilitation/Maintenance, Water Company Acquisitions, Mobile Equipment, Other Equipment, General Water System Improvements, SCADA System Upgrades, Water Facilities Asset Management Improvements and New and Replacement Water Meters.

Project Drivers and Needs to be Met by the Project
The primary drivers for these projects are asset management, operational efficiency and improved service. Annual items help maintain the operation and satisfactory level of service for existing water supply, distribution, and support facilities in the Suburban Division, and accommodate water distribution needs due to growth.

Project Status - Describe what work, if any has been completed or underway for this project
This is an annual project, therefore, work is on-going.

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary

<b>Project No.</b>	SD-W-A
<b>Project Name</b>	ANNUAL PROJECTS

<b>Prior Project Cost</b>	N/A
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 250,000
Land Acquisition	\$ -
Construction/Equipment	\$ 12,448,000
Professional Services	\$ 200,000
Other	
Contingencies	\$ 50,000
<b>Total Project Cost</b>	<b>\$ 12,948,000</b>

Project Estimate Level	
	Conceptual Estimate
	Preliminary Estimate
<b>x</b>	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 10,613,000</b>
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		Need	Phase of Work
2023 Budget		\$ 2,315,000	service contract, planning, design & construction
1st Year	2024	\$ 2,367,000	service contract, planning, design & construction
2nd Year	2025	\$ 2,283,500	service contract, planning, design & construction
3rd Year	2026	\$ 2,191,500	service contract, planning, design & construction
4th Year	2027	\$ 1,925,500	service contract, planning, design & construction
5th Year	2028	\$ 1,845,500	service contract, planning, design & construction



**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	WATER MAIN REPLACEMENT PROJECTS						
<b>Budget Area</b>	Water	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-W-12
<b>Location</b>	Various LCA Divisions located in multiple municipalities			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	<b>Primary</b>	AM - Varies	<b>Secondary</b>	Efficiency	<b>Preparer</b>		JMP

Purpose of Expenditure (check all that apply)			
<input checked="" type="checkbox"/>	New Facility		Correct Known or Potential Safety Issue
	Existing Facility - Rehabilitation/Upgrade		Equipment Obsolete
	Scheduled Replacement		Comply with Regulatory Requirements
<input checked="" type="checkbox"/>	Improved Service	<input checked="" type="checkbox"/>	Equipment/Infrastructure at End of Useful Life
	Study		Other (explain):

Additional Information			
Expected Useful Life (Years)	30	Project inception date	N/A
Approx. No. of Customers Benefitted	**		
Is this System part of a Common User Rate?	Yes	Anticipated Project completion date	N/A
Will the Project Require Obtaining Land Rights	No		

Varies by system - Main Replacements are located in multiple systems.

Detailed Project Description
<p>This project entails replacement of aging and problematic cast iron (CI) and plastic water mains in LCA Central Lehigh and satellite water systems. Scope of work is prioritized based on break history, geology (sinkholes), pipe condition, pipe age, and probability and consequence of failure. The Capital Plan reflects the replacement of approximately one-mile of water main per year, per annual prioritization efforts. Annual funding is provided in the Capital Plan for replacing mains that exhibit high failure rates.</p>

Project Drivers and Needs to be Met by the Project
<p>Replacing cast iron and plastic mains will reduce the frequency of breaks in the system thereby saving the Authority repair costs, customer outages and reducing the potential for damage which can occur to private property.</p>

Project Status - Describe what work, if any has been completed or underway for this project
<p>This is an annual project so work is on-going. No work is planned for 2025 due to budget concerns.</p>

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary
<p>Replacement of aged cast iron mains will reduce the number of main breaks, thereby saving repair costs and reducing the possibility of ground subsidence and property damage. Exact savings to be determined.</p>

<b>Project No.</b>	SD-W-12
<b>Project Name</b>	WATER MAIN REPLACEMENT PROJECTS

<b>Prior Project Cost</b>	0
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 500,000
Land Acquisition	\$ -
Construction/Equipment	\$ 12,200,000
Professional Services	\$ 1,500,000
Other	
Contingencies	\$ 800,000
<b>Total Project Cost</b>	<b>\$ 15,000,000</b>

Project Estimate Level	
	Conceptual Estimate
	Preliminary Estimate
<b>x</b>	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 12,100,000</b>
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	Need	Phase of Work
2023 Budget	\$ 2,900,000	design & construction
1st Year 2024	\$ 2,900,000	design & construction
2nd Year 2025	\$ -	
3rd Year 2026	\$ 3,000,000	design & construction
4th Year 2027	\$ 3,100,000	design & construction
5th Year 2028	\$ 3,100,000	design & construction

**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	WATER QUALITY STUDIES AND UPGRADES						
<b>Budget Area</b>	Water	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-W-37
<b>Location</b>	Various			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	Primary	Regulatory	Secondary	Sys Imp	<b>Preparer</b>		ALK

Purpose of Expenditure (check all that apply)	
<input type="checkbox"/> New Facility	<input type="checkbox"/> Correct Known or Potential Safety Issue
<input checked="" type="checkbox"/> Existing Facility - Rehabilitation/Upgrade	<input type="checkbox"/> Equipment Obsolete
<input type="checkbox"/> Scheduled Replacement	<input checked="" type="checkbox"/> Comply with Regulatory Requirements
<input type="checkbox"/> Improved Service	<input type="checkbox"/> Equipment/Infrastructure at End of Useful Life
<input checked="" type="checkbox"/> Study	<input type="checkbox"/> Other (explain):

Additional Information			
Expected Useful Life (Years)	20	<b>Project inception date</b>	2023
Approx. No. of Customers Benefitted	N/A		
Is this System part of a Common User Rate?	Varies	<b>Anticipated Project completion date</b>	TBD
Will the Project Require Obtaining Land Rights	Unknown		

Detailed Project Description
<p>This project consists of water quality studies and rehabilitation work to comply with evolving state and federal water quality standards and regulations. The primary project locations are LCA's satellite systems, which are small developer-built systems acquired by LCA and upgraded over the years to maintain level of service and comply with regulations. These systems include the Buss Acres Division (Upper Milford Township), Madison Park North Division (Lynn Township), Heidelberg Heights Division (Heidelberg Township), Pine Lakes Division (Lynn Township), Arcadia West Division (Weisenberg Township), Clearview Farms Division (Northampton County), and Beverly Hills Division (Lower Milford Township).</p>

Project Drivers and Needs to be Met by the Project
<p>The primary project driver is regulatory and public health protection. EPA and DEP have proposed limits for Per- and Polyfluoroalkyl substances, referred to as PFAS compounds. PFAS are a category of manufactured chemicals that have been used in industry and consumer products since the 1940s. PFAS tend to break down extremely slowly in the environment, and have been determined to cause health concerns. In March 2023, EPA announced proposed National Primary Drinking Water Regulation for six PFAS compounds. The rule is anticipated to be finalized by the end of 2023. This project also includes compliance with the Lead and Copper Rule, with the initial task consisting of a lead service inventory.</p>

Project Status - Describe what work, if any has been completed or underway for this project
<p>LCA is closely monitoring emerging water quality regulations has begun sampling various systems for the presence of PFAS.</p>

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	\$ -

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary

<b>Project No.</b>	SD-W-37
<b>Project Name</b>	WATER QUALITY STUDIES AND UPGRADES

<b>Prior Project Cost</b>	\$ -
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 20,000
Land Acquisition	\$ -
Construction/Equipment	\$ -
Professional Services	\$ 245,000
Other	\$ -
Contingencies	\$ 10,000
<b>Total Project Cost</b>	<b>\$ 275,000</b>

Project Estimate Level	
<input checked="" type="checkbox"/>	Conceptual Estimate
<input type="checkbox"/>	Preliminary Estimate
<input type="checkbox"/>	Budget Estimate
<input type="checkbox"/>	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 275,000</b>
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		Need	Phase of Work
2023		\$ -	
1st Year	2024	\$ 100,000	Study/Planning
2nd Year	2025	\$ 100,000	Study/Planning
3rd Year	2026	\$ 75,000	Study/Planning
4th Year	2027	\$ -	TBD
5th Year	2028	\$ -	TBD

**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	FIXED BASE METER READING SYSTEM						
<b>Budget Area</b>	Water	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-W-50
<b>Location</b>	CLD			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	Primary	Sys Imp	Secondary	Efficiency	<b>Preparer</b>		ALK

Purpose of Expenditure (check all that apply)	
<input checked="" type="checkbox"/> New Facility	Correct Known or Potential Safety Issue
<input type="checkbox"/> Existing Facility - Rehabilitation/Upgrade	Equipment Obsolete
<input type="checkbox"/> Scheduled Replacement	Comply with Regulatory Requirements
<input checked="" type="checkbox"/> Improved Service	Equipment/Infrastructure at End of Useful Life
<input type="checkbox"/> Study	Other (explain):

Additional Information			
Expected Useful Life (Years)	20	Project inception date	2019
Approx. No. of Customers Benefitted	19,000		
Is this System part of a Common User Rate?	Yes	Anticipated Project completion date	2026
Will the Project Require Obtaining Land Rights	TBD		

Detailed Project Description
Development of a fixed base system for meter reading. A communication study by Sensus to evaluate the number and location of antenna towers for Suburban area coverage was performed in 2019 and updates to the study are performed as site locations are refined. Four antennas are anticipated in order to provide adequate coverage of the Suburban system, to be co-located on existing cellular towers within our service area.

Project Drivers and Needs to be Met by the Project
The new system will allow for more efficient meter reading, consistent billing and faster dispute resolution. As meters are upgraded, the AMI system will allow us to monitor customer usage in real time and proactively address problems.

Project Status - Describe what work, if any has been completed or underway for this project
The radio transceiver units were upgraded in 2019/2020 and are now compatible with an AMI system. Colliers Engineering & Design prepared a feasibility study in 2022 to optimize site locations and better refine installation costs. A temporary tower/base station was erected at two locations to demonstrate the capabilities of the system. Following an internal cost/benefit analysis, an engineer will prepare site plans and facilitate Township approvals for the antenna sites.

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss ) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary
Project to commence in 2020.

<b>Project No.</b>	SD-W-50
<b>Project Name</b>	FIXED BASE METER READING SYSTEM

<b>Prior Project Cost</b>	\$ 80,000
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 20,000
Land Acquisition	
Construction/Equipment	\$ 480,000
Professional Services	\$ 100,000
Other	\$ 10,000
Contingencies	\$ 40,000
<b>Total Project Cost</b>	<b>\$ 730,000</b>

Project Estimate Level	
	Conceptual Estimate
	Preliminary Estimate
<b>x</b>	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 550,000</b>
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		Need	Phase of Work
2023 Budget		\$ 100,000	Planning
1st Year	2024	\$ 50,000	Design
2nd Year	2025	\$ 250,000	Construction
3rd Year	2026	\$ 250,000	Construction
4th Year	2027	\$	
5th Year	2028	\$ -	

**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	NORTH WHITEHALL DIVISION WATER SYSTEM IMPROVEMENTS						
<b>Budget Area</b>	Water	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-W-51
<b>Location</b>	NWD			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	Primary	Sys Imp	Secondary	Efficiency	<b>Preparer</b>		ALK

Purpose of Expenditure (check all that apply)		
<input type="checkbox"/>	New Facility	Correct Known or Potential Safety Issue
<input checked="" type="checkbox"/>	Existing Facility - Rehabilitation/Upgrade	Equipment Obsolete
<input type="checkbox"/>	Scheduled Replacement	Comply with Regulatory Requirements
<input checked="" type="checkbox"/>	Improved Service	Equipment/Infrastructure at End of Useful Life
<input type="checkbox"/>	Study	Other (explain):

Additional Information			
Expected Useful Life (Years)	20	<b>Project inception date</b>	2020
Approx. No. of Customers Benefitted	N/A		
Is this System part of a Common User Rate?	Yes	<b>Anticipated Project completion date</b>	TBD
Will the Project Require Obtaining Land Rights	No		

Detailed Project Description
The first phase of this project consists of an engineering study that commenced in 2021 to identify improvements in system reliability. The assumption is that an improvements plan will be prepared that may include interconnection with surrounding water systems, including a second interconnection with the NBMA water system. The existing system is supplied from the NBMA interconnection, and a critical main serves the southern portion of the system. Looping of dead end lines was also identified as an option, along with identifying sources of high unaccounted-for water. The scope and cost of an improvements project to be implemented as part of this project is not known at this time (will be identified and recommended under SD-W-55 Master Plan).

Project Drivers and Needs to be Met by the Project
Inadequate looping of the distribution system affects system reliability and water quality, and will drive the need for modifications. LCA's objective is to be proactive and identify capital improvements required in order to adequately serve current and future customers. High levels of unaccounted-for water need to be identified and reduced.

Project Status - Describe what work, if any has been completed or underway for this project
The Phase 1 assessment study began in 2021 and will be completed in 2023. The improvements project will commence in 2024 and beyond. Since the scope of this effort is undefined at this time, only estimated design costs are included.

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary

<b>Project No.</b>	SD-W-51
<b>Project Name</b>	NORTH WHITEHALL DIVISION WATER SYSTEM IMPROVEMENTS

<b>Prior Project Cost</b>	\$ 30,000
<b>Estimated Project Costs:</b>	<b>2022-2027</b>
LCA Staff	\$ 20,000
Land Acquisition	\$ -
Construction/Equipment	\$ 1,700,000
Professional Services	\$ 180,000
Other	\$ -
Contingencies	\$ 100,000
<b>Total Project Cost</b>	<b>\$ 2,030,000</b>

Project Estimate Level	
	Conceptual Estimate
	Preliminary Estimate
<input checked="" type="checkbox"/>	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 2,000,000</b>
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		Need	Phase of Work
2023 Budget		\$ -	
1st Year	2024	\$ 100,000	Design and permitting
2nd Year	2025	\$ 750,000	Construction
3rd Year	2026	\$ 1,150,000	Construction
4th Year	2027	\$ -	
5th Year	2028	\$ -	



**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	WATER SYSTEMS MASTER PLANNING						
<b>Budget Area</b>	Water	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-W-55
<b>Location</b>	CLD			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	Primary	Sys Imp	Secondary	Regulatory	<b>Preparer</b>		PMD/ALK

Purpose of Expenditure (check all that apply)		
<input type="checkbox"/>	New Facility	Correct Known or Potential Safety Issue
<input checked="" type="checkbox"/>	Existing Facility - Rehabilitation/Upgrade	Equipment Obsolete
<input type="checkbox"/>	Scheduled Replacement	Comply with Regulatory Requirements
<input type="checkbox"/>	Improved Service	Equipment/Infrastructure at End of Useful Life
<input checked="" type="checkbox"/>	Study	Other (explain):

Additional Information			
Expected Useful Life (Years)	20	<b>Project inception date</b>	2022
Approx. No. of Customers Benefitted	N/A		
Is this System part of a Common User Rate?	Yes	<b>Anticipated Project completion date</b>	2025
Will the Project Require Obtaining Land Rights	No		

Detailed Project Description
<p>This project involves the preparation of a preliminary water supply study for two major Suburban Water Systems (Central Lehigh and North Whitehall Division). The study will review supply capacity requirements to meet current and future demands, and evaluate existing water sources, storage, and interconnections to ensure long-term supply needs can be met. From this study, additional engineering work will be initiated to develop and design water supply projects that enhance the region's water system resiliency and redundancy. This water supply study will serve as the backbone for future development of a Master Plan for the entire LCA Suburban Water System.</p>

Project Drivers and Needs to be Met by the Project
<p>The study word aligns with LCA's Strategic Plan to identify and evaluate feasible means to address current and long-term water supply needs in the CLD and NWD. The initial preliminary water study will identify potential additional sources to supplement flow should water demand increase due to development in the Western Lehigh service area or a potential large industrial user. The study will provide information which will allow us to prioritize and budget for the addition of wells as sources of supply &amp;/or interconnections with neighboring water systems.</p>

Project Status - Describe what work, if any has been completed or underway for this project
<p>An engineering consultant has been retained to complete the first phase of the study in 2022 and 2023. Additional master planning related studies and capital project selection will occur in 2023 and 2024.</p>

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss ) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary

<b>Project No.</b>	SD-W-55
<b>Project Name</b>	WATER SYSTEMS MASTER PLANNING

<b>Prior Project Cost</b>	\$ -
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 40,000
Land Acquisition	\$ -
Construction/Equipment	\$ -
Professional Services	\$ 220,000
Other	\$ -
Contingencies	\$ 40,000
<b>Total Project Cost</b>	<b>\$ 300,000</b>

Project Estimate Level	
	Conceptual Estimate
	Preliminary Estimate
<b>x</b>	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 200,000</b>
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		Need	Phase of Work
2023 Budget		\$ 100,000	Study
1st Year	2024	\$ 100,000	Study
2nd Year	2025	\$ 100,000	Design
3rd Year	2026		
4th Year	2027		
5th Year	2028		

**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	UPPER SYSTEM PUMP STATION AND WATER MAIN EXTENSION						
<b>Budget Area</b>	Water	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-W-56
<b>Location</b>	CLD			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	Primary	Sys Imp	Secondary	Efficiency	<b>Preparer</b>		CEV

Purpose of Expenditure (check all that apply)	
<input checked="" type="checkbox"/> New Facility	Correct Known or Potential Safety Issue
<input type="checkbox"/> Existing Facility - Rehabilitation/Upgrade	Equipment Obsolete
<input type="checkbox"/> Scheduled Replacement	Comply with Regulatory Requirements
<input checked="" type="checkbox"/> Improved Service	Equipment/Infrastructure at End of Useful Life
<input type="checkbox"/> Study	Other (explain): Provide capacity for future growth

Additional Information			
Expected Useful Life (Years)	20	<b>Project inception date</b>	2020
Approx. No. of Customers Benefitted	N/A		
Is this System part of a Common User Rate?	Yes	<b>Anticipated Project completion date</b>	TBD
Will the Project Require Obtaining Land Rights	Yes		

Detailed Project Description
The project consists of improvements to LCA's Western Lehigh water distribution system ("CLD Upper System") that is located north of I-78 and west of the village of Fogelsville. The first phase of the project consisted of water modeling and an engineering study that was completed in 2020 to evaluate future water demand scenarios and alternatives for system improvements to provide adequate water supply and pressure to future industrial customers. The study recommended an interconnection with the CLD Lower System. This consists of a water main extension under I-78 (via steel casing pipe acquired from Upper Macungie Township) and a new pump station on the north side of I-78 to convey water from LCA's Central Lehigh Division "lower system" to provide adequate supply conditions for future customers.

Project Drivers and Needs to be Met by the Project
The project will meet the supply needs of potential large industrial water users in the CLD Upper System, located in western Lehigh County north of I-78. The final design and construction of improvements to convey water to a large user, including a booster pumping station and transmission main, will depend upon execution of a DWSA with the potential large user. We anticipate that these improvement costs will be the responsibility of the large user. LCA's objective is to be proactive and identify capital improvements required in order to provide adequate water service to meet future demands. The complete scope of the capital improvements is not known at this time and is dependent upon approved development(s) in the Upper System.

Project Status - Describe what work, if any has been completed or underway for this project
The engineering study to evaluate supply capacity and distribution piping needs in the CLD Upper System was completed in 2020. Installation of a capped 20" water main through a 30" steel casing pipe across I-78 was completed in early 2023 (steel casing pipe was acquired from Upper Macungie Township). The commencement of design phase of a pump station began in 2021 due to a proposed dairy processing plant to be constructed in 2023. However, in early 2022 the developer formally terminated the project. Substantial completion of the pump station design occurred 2023, and the easement acquisition process commenced for the station, with final design and DEP permitting paused pending future development plans. The schedule for future pump station construction and related distribution improvements is dependent upon development timing and demand.

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary

<b>Project No.</b>	SD-W-56
<b>Project Name</b>	UPPER SYSTEM PUMP STATION AND WATER MAIN EXTENSION

<b>Prior Project Cost</b>	350,000
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 30,000
Land Acquisition	\$ 10,000
Construction/Equipment	\$ 1,600,000
Professional Services	\$ 175,000
Other	
Contingencies	\$ 100,000
<b>Total Project Cost</b>	<b>\$ 2,265,000</b>

Project Estimate Level	
	Conceptual Estimate
	Preliminary Estimate
x	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 2,050,000</b>
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		Need	Phase of Work
2023 Budget		\$ 75,000	design
1st Year	2024	\$ 50,000	Permitting and final pump station design
2nd Year	2025	\$ 100,000	bidding & construction
3rd Year	2026	\$ 800,000	construction
4th Year	2027	\$ 1,100,000	construction
5th Year	2028	\$ -	

**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	WATER METER REPLACEMENT PROGRAM						
<b>Budget Area</b>	Water	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-W-57
<b>Location</b>	All Suburban Divisions, located in various municipalities			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	<b>Primary</b>	AM - Med	<b>Secondary</b>	Rev Opprt	<b>Preparer</b>	ALK	

Purpose of Expenditure (check all that apply)	
<input type="checkbox"/> New Facility	<input type="checkbox"/> Correct Known or Potential Safety Issue
<input type="checkbox"/> Existing Facility - Rehabilitation/Upgrade	<input type="checkbox"/> Equipment Obsolete
<input checked="" type="checkbox"/> Scheduled Replacement	<input type="checkbox"/> Comply with Regulatory Requirements
<input type="checkbox"/> Improved Service	<input checked="" type="checkbox"/> Equipment/Infrastructure at End of Useful Life
<input type="checkbox"/> Study	<input type="checkbox"/> Other (explain):

Additional Information			
Expected Useful Life (Years)	20	<b>Project inception date</b>	2022
Approx. No. of Customers Benefitted	1,250	<b>Anticipated Project completion date</b>	2026
Is this System part of a Common User Rate?	Yes		
Will the Project Require Obtaining Land Rights	No		

Detailed Project Description
The program consists of annual projects to replace aging and inoperable water meters. Meters are to be replaced annually with higher priority assigned to meters that are non-functioning and/or have reached the end of their useful lives. All new meters will have radio-read (RR) capability.

Project Drivers and Needs to be Met by the Project
The probability of inaccuracies in meter readings increases with age and usage of the meters. The improved accuracy of the new meters creates the potential to increase water system revenues. Radio Read technology will increase meter reading accuracy, leakage tracking and efficiency that will improve customer service and streamline operations.

Project Status - Describe what work, if any has been completed or underway for this project
Aging meters are periodically replaced as part of an on-going program. The construction of the 2018 Water Meter Replacement project included the installation of approximately 3,000 new meters. A 2022 commercial meter project replaces approximately 140 1-1/2" and 2" meters. In 2023 the replacement of 620 water meters in the North Whitehall Division was completed.

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss) in Annual Revenue	\$ 100,000
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary
An increase in revenue is anticipated as older meters are replaced. This is due to wear on internal parts that generally causes lower measurements. A 5% increase was assumed in the revenue gain reported above.

<b>Project No.</b>	SD-W-57
<b>Project Name</b>	WATER METER REPLACEMENT PROGRAM

<b>Prior Project Cost</b>	
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 75,000
Land Acquisition	\$ -
Construction/Equipment	\$ 4,100,000
Professional Services	
Other	\$ 10,000
Contingencies	\$ 315,000
<b>Total Project Cost</b>	<b>\$ 4,500,000</b>

<b>Project Estimate Level</b>	
	Conceptual Estimate
	Preliminary Estimate
<b>x</b>	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 4,150,000</b>
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		<b>Need</b>	<b>Phase of Work</b>
2023 Budget		\$ 350,000	Construction
1st Year	2024	\$ 800,000	Design/Construction
2nd Year	2025	\$ 800,000	Design/Construction
3rd Year	2026	\$ 850,000	Design/Construction
4th Year	2027	\$ 850,000	Design/Construction
5th Year	2028	\$ 850,000	Design/Construction

**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	CENTRAL LEHIGH SYSTEM SUPPLY IMPROVEMENTS						
<b>Budget Area</b>	Water	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-W-58
<b>Location</b>	CLD Upper System, Upper Macungie Township			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	<b>Primary</b>	Sys Imp	<b>Secondary</b>	Efficiency	<b>Preparer</b>		ALK

Purpose of Expenditure (check all that apply)		
<input checked="" type="checkbox"/>	New Facility	Correct Known or Potential Safety Issue
<input type="checkbox"/>	Existing Facility - Rehabilitation/Upgrade	Equipment Obsolete
<input type="checkbox"/>	Scheduled Replacement	Comply with Regulatory Requirements
<input checked="" type="checkbox"/>	Improved Service	Equipment/Infrastructure at End of Useful Life
<input type="checkbox"/>	Study	Other (explain):

Additional Information			
Expected Useful Life (Years)	50	<b>Comments</b>	
Approx. No. of Customers Benefitted	N/A	<b>Project inception date</b>	2023
Is this System part of a Common User Rate?	yes		
Will the Project Require Obtaining Land Rights	TBD	<b>Anticipated Project completion date</b>	2026

Detailed Project Description
Water system master planning in the Central Lehigh Division is being done under project SD-W-55 in the Capital Plan. Improvement recommendations from the study are yet to be determined but may include additional interconnections with other water systems, increased water storage or the development of additional well sources. Improvements will address long term system capacity needs, improve system resilience, and provide for system redundancy for maintenance.

Purpose and Needs to be Met by the Project
Although existing sources in the Central Lehigh System are adequate for current needs, they are insufficient to support current demand if our largest source was not available for various reasons, or future needs from anticipated growth or the addition of a large industrial user.

Project Status - Describe what work, if any has been completed or underway for this project
A Water Supply Study is being performed in 2022 and 2023 as part of the Water Systems Master Planning effort which will focus on future needs. The Study is addressing potential additional sources to supplement flow should water demand increase due to development in the Western Lehigh service area or a potential large industrial user.

Annual Cost Impact	
Operating - Increase/(Decrease)	
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss ) in Annual Revenue	
Assessment, Contribution in Aid-of-Construction	
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary

<b>Project No.</b>	SD-W-58
<b>Project Name</b>	CENTRAL LEHIGH SYSTEM SUPPLY IMPROVEMENTS

<b>Prior Project Cost</b>	\$ -
<b>Estimated Project Costs :</b>	<b>2023-2028</b>
LCA Staff	\$ 40,000
Land Acquisition	\$ -
Construction/Equipment	\$ 1,480,000
Professional Services	\$ 130,000
Other	\$ -
Contingencies	\$ 100,000
<b>Total Project Cost</b>	<b>\$ 1,750,000</b>

Project Estimate Level	
X	Conceptual Estimate
	Preliminary Estimate
	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 1,650,000</b>
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		Need	Phase of Work
2023 Budget		\$ 100,000	Planning, preliminary design
1st Year	2024	\$ 150,000	Design
2nd Year	2025	\$ 1,000,000	Construction
3rd Year	2026	\$ 500,000	Construction
4th Year	2027		
5th Year	2028		



**WASTEWATER**

**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION  
WASTEWATER  
5-YEAR CAPITAL PLAN  
2024–2028**

**CAPITAL FINANCING JUSTIFICATION**

Capital additions to the Wastewater System are justified by calculating the operating cash available based upon projections of revenues over the five-year period. Beyond the operating cash available, remaining sources are project reserves from previous debt issuance and any new borrowing required.

The table below summarizes the capital project sourcing by year and each major financial sourcing category:

<b>CAPITAL FINANCING SOURCES</b>						
	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>TOTAL</b>
Project Costs	\$11,242,500	\$12,882,500	\$5,487,500	\$1,832,500	\$2,047,500	\$33,492,500
<b><i>Sources of Funding:</i></b>						
Current Cash Flows	\$4,892,500	\$2,852,500	\$5,487,500	\$1,832,500	\$2,047,500	\$17,112,500
Cash Reserves	-	-	-	-	-	-
New Borrowing	\$6,350,000	\$10,030,000	-	-	-	\$16,380,000
<b>TOTAL FUNDING</b>	<b>\$11,242,500</b>	<b>\$12,882,500</b>	<b>\$5,487,500</b>	<b>\$1,832,500</b>	<b>\$2,047,500</b>	<b>\$33,492,500</b>

Total spending on capital projects for the five-year period totals \$33,492,500. Current cash flows and cash reserves over the period will provide \$17,112,500 for capital projects. New borrowing will provide \$16,380,000 of project funding. This approach is recommended to allow for continued growth of reserves, which will be needed in the future as additional projects are incorporated into the plan as a result of the regional Act 537 Plan that is currently under development. The Act 537 Plan is expected to be drafted in 2024 and completed in 2025, with projects commencing in 2025. However, due to the size and scope of this work, which will require separate detailed financial analysis, and the draft status of this Act 537 Plan, future project costs are not shown in this Capital Plan. The Act 537 Plan will be presented separately during 2024 and will be incorporated into future Capital Plan documents.

Revenue requirements will also be impacted by inflation for both the WLI group along with other users of the system. Signatory Revenue increases by year to support the capital plan are as follows:

Year 2022	17.2%
Year 2023	-2.0%
Year 2024	0.5%
Year 2025	1.9%
Year 2026	1.9%

**CONDENSED CASH FLOW - SUBURBAN WASTEWATER**

<b>Dollars</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>
User Charges	22,142,274	21,691,388	21,796,936	22,211,650	22,635,806
Other Operating Revenues	251,596	251,596	251,596	251,596	251,596
Non-Operating Revenues	1,755,296	1,755,296	1,755,296	1,755,296	1,755,296
Operating expenses	(14,346,603)	(14,777,002)	(15,220,313)	(15,676,923)	(16,147,230)
Debt Service - Current Debt	(727,928)	(727,928)	(727,928)	(727,928)	(727,928)
Debt Service - NEW Debt	(413,077)	(1,065,543)	(1,065,543)	(1,065,543)	(1,065,543)
Investments Converting to Cash	-	-	-	-	-
Proceeds From NEW Debt	6,350,000	10,030,000	-	-	-
Capex	(11,691,250)	(12,957,500)	(5,562,500)	(1,895,000)	(2,110,000)
<b>NET FUND FLOWS</b>	<b>3,320,308</b>	<b>4,200,307</b>	<b>1,227,544</b>	<b>4,853,148</b>	<b>4,591,997</b>
User Charge Revenue Increase %	17.2%	-2.0%	0.5%	1.9%	1.9%
Unrestricted Cash Balance	13,338,735	17,539,042	18,766,585	23,619,734	28,211,731
Unrestricted Investments	7,084,095	7,084,095	7,084,095	7,084,095	7,084,095
Total Unrestricted Balances	20,422,830	24,623,137	25,850,680	30,703,829	35,295,826
Unrestricted Cash - Days on Hand	339	433	450	550	638
DEBT SERVICE COVERAGE RATIO	8.59	4.97	4.79	4.76	4.74

**Sourcing of Projects and Debt Service related to various systems is as follows:**

<b>BY SYSTEM</b>	<b>PROJECTS</b>	<b>TOTAL</b>	<b>CURRENT CASH FLOWS</b>	<b>RESERVES</b>	<b>NEW DEBT</b>
Annual Projects	SA	\$3,472,500	\$3,472,500	-	-
Western Lehigh Interceptor	S3, S7, S9, S12, S13, S24, S28	\$19,680,000	\$3,300,000	-	\$16,380,000
LCA Wastewater Treatment Plant	S22	\$6,000,000	\$6,000,000	-	-
Common Rate Collector Systems	S6, S10, S17, S18, S19	\$1,040,000	\$1,040,000	-	-
Arcadia West	S8	\$350,000	\$350,000	-	-
Lynn Township	S25, S26	\$850,000	\$850,000	-	-
Little Lehigh Relief Interceptor System	S15	\$2,100,000	\$2,100,000	-	-
<b>TOTAL</b>		<b>\$33,492,500</b>	<b>\$17,112,500</b>	<b>-</b>	<b>\$16,380,000</b>

LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION  
2024-2028 CAPITAL PROGRAM  
WASTEWATER

Project #	Name or Title of Proposal	Prj. Category	(1) Prj. Funding	Approval Stage (1)	This Capital Program						
					2023 Budget Approved	2024 Year 1	2025 Year 2	2026 Year 3	2027 Year 4	2028 Year 5	2024-2028 Total
	<u>Operating/Capital Reserve Funds</u>										
	<u>Annual</u>										
SD-S-A	Annual Projects	AM - Varies	LCA	A	\$ 332,500	\$ 912,500	\$ 747,500	\$ 732,500	\$ 482,500	\$ 597,500	\$ 3,472,500
	<b>Subtotal</b>				<b>\$ 332,500</b>	<b>\$ 912,500</b>	<b>\$ 747,500</b>	<b>\$ 732,500</b>	<b>\$ 482,500</b>	<b>\$ 597,500</b>	<b>\$ 3,472,500</b>
	<u>Pretreatment Plant</u>										
SD-S-22	Pretreatment Plant Capital Improvements	AM - Varies	LCA	A	\$ 750,000	\$ 1,000,000	\$ 1,100,000	\$ 1,200,000	\$ 1,300,000	\$ 1,400,000	\$ 6,000,000
	<b>Subtotal</b>				<b>\$ 750,000</b>	<b>\$ 1,000,000</b>	<b>\$ 1,100,000</b>	<b>\$ 1,200,000</b>	<b>\$ 1,300,000</b>	<b>\$ 1,400,000</b>	<b>\$ 6,000,000</b>
	<u>Western Lehigh Interceptor</u>										
SD-S-3	Central Lehigh County WW Capacity Planning & Expansion	New Cust	LCA	V	\$ 325,000	\$ 350,000	\$ 250,000	\$ 50,000	\$ -	\$ -	\$ 650,000
SD-S-7	WLI Major Rehabilitation and Repairs	Regulatory	LCA	P	\$ 200,000	\$ 250,000	\$ 3,750,000	\$ 3,000,000	\$ -	\$ -	\$ 7,000,000
SD-S-9	Spring Creek Force Main Condition Assessment	AM-High	LCA	S	\$ 100,000	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ 150,000
SD-S-12	Spring Creek Pump Station Upgrades	AM-High	LCA	D	\$ 100,000	\$ 1,000,000	\$ 430,000	\$ -	\$ -	\$ -	\$ 1,430,000
SD-S-13	Spring Creek Force Main Relocation	Regulatory	LCA	D	\$ 50,000	\$ 100,000	\$ 1,100,000	\$ -	\$ -	\$ -	\$ 1,200,000
SD-S-24	Signatory I & I Investigation & Remediation Program	Regulatory	LCA	V	\$ 1,700,000	\$ 1,000,000	\$ 500,000	\$ -	\$ -	\$ -	\$ 1,500,000
SD-S-28	Upper Western Lehigh Interceptor Pump Station & Force Main	Regulatory	LCA	A	\$ 250,000	\$ 3,500,000	\$ 4,000,000	\$ 250,000	\$ -	\$ -	\$ 7,750,000
	<b>Subtotal</b>				<b>\$ 2,725,000</b>	<b>\$ 6,350,000</b>	<b>\$ 10,030,000</b>	<b>\$ 3,300,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 19,680,000</b>
	<u>Satellite Systems</u>										
SD-S-6	Wynnewood I & I Investigation & Remediation Program	AM - Varies	LCA	V	\$ 25,000	\$ 125,000	\$ 25,000	\$ -	\$ -	\$ -	\$ 150,000
SD-S-8	Arcadia West WWTP Mechanical Screen	Efficiency	LCA	P	\$ 100,000	\$ 75,000	\$ 275,000	\$ -	\$ -	\$ -	\$ 350,000
SD-S-10	North Whitehall Township Act 537 Sewage Facilities Planning	Regulatory	LCA	V	\$ -	\$ 70,000	\$ 80,000	\$ 30,000	\$ -	\$ -	\$ 180,000
SD-S-17	Heidelberg Heights I & I Investigation & Remediation Program	AM - Varies	LCA	V	\$ 350,000	\$ 100,000	\$ 100,000	\$ 50,000	\$ 25,000	\$ 25,000	\$ 300,000
SD-S-18	Heidelberg Heights WWTP Rehabilitation	AM - High	LCA	P	\$ 250,000	\$ 160,000	\$ -	\$ -	\$ -	\$ -	\$ 160,000
SD-S-19	Sand Spring WWTP improvements	Regulatory	LCA	P	\$ -	\$ 100,000	\$ 100,000	\$ 50,000	\$ -	\$ -	\$ 250,000
SD-S-25	Lynn Township WWTP Improvements	AM - High	LCA	P	\$ 10,000	\$ 500,000	\$ 100,000	\$ 100,000	\$ -	\$ -	\$ 700,000
SD-S-26	Lynn Township I & I Investigation & Remediation Program	AM - High	LCA	V	\$ 50,000	\$ 50,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 150,000
	<b>Subtotal</b>				<b>\$ 785,000</b>	<b>\$ 1,180,000</b>	<b>\$ 705,000</b>	<b>\$ 255,000</b>	<b>\$ 50,000</b>	<b>\$ 50,000</b>	<b>\$ 2,240,000</b>
	<u>Little Lehigh Relief Interceptor System</u>										
SD-S-15	Park Pump Station Upgrade - Phase 2	AM - High	LCA	C	\$ 1,500,000	\$ 1,800,000	\$ 300,000	\$ -	\$ -	\$ -	\$ 2,100,000
	<b>Subtotal</b>				<b>\$ 1,500,000</b>	<b>\$ 1,800,000</b>	<b>\$ 300,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 2,100,000</b>
	<b>GRAND TOTAL WASTEWATER PROJECTS</b>				<b>\$ 6,092,500</b>	<b>\$ 11,242,500</b>	<b>\$ 12,882,500</b>	<b>\$ 5,487,500</b>	<b>\$ 1,832,500</b>	<b>\$ 2,047,500</b>	<b>\$ 33,492,500</b>

(1) Reference Glossary of Acronyms & Terms found immediately after the Table of Contents. All projects are LCA funded.  
(2) If blank , cost is not applicable (annual project) or to be determined

**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

Project Name	ANNUAL PROJECTS						
Budget Area	Wastewater	Department	Capital Works	Date	7/1/2023	Project No.	SD-S-A
Location	LCA WLI facilities located in various municipalities			Prj. Type	Regular	Prj. Funding	LCA
Prj. Category	Primary	AM - Varies	Secondary	Efficiency	Preparer		CEV

Purpose of Expenditure (check all that apply)			
<input type="checkbox"/>	New Facility	<input type="checkbox"/>	Correct Known or Potential Safety Issue
<input checked="" type="checkbox"/>	Existing Facility - Rehabilitation/Upgrade	<input checked="" type="checkbox"/>	Equipment Obsolete
<input type="checkbox"/>	Scheduled Replacement	<input type="checkbox"/>	Comply with Regulatory Requirements
<input checked="" type="checkbox"/>	Improved Service	<input checked="" type="checkbox"/>	Equipment/Infrastructure at End of Useful Life
<input type="checkbox"/>	Study	<input checked="" type="checkbox"/>	Other (explain): New Mobile and Other Equipment

Additional Information			
Expected Useful Life (Years)	N/A	Project inception date	N/A
Approx. No. of Customers Benefitted	N/A		
Is this System part of a Common User Rate?	N/A	Anticipated Project completion date	N/A
Will the Project Require Obtaining Land Rights	No		

Detailed Project Description
This is a consolidated annual project that has been previously listed as separate smaller annual projects. The consolidated project includes the following: Mobile Equipment, Sewer Company Acquisitions, Other Equipment, SCADA System Upgrades, Wastewater Facility Asset Management Upgrades, General Sewer System Improvements, and development related service connections and extensions.

Project Drivers and Needs to be Met by the Project
Asset management, efficiency, and improved service are the primary project drivers. Annual improvements help maintain the operation and satisfactory level of service of various wastewater facilities in the Suburban Division.

Project Status - Describe what work, if any has been completed or underway for this project
This is an annual project.

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary

<b>Project No.</b>	SD-S-A
<b>Project Name</b>	ANNUAL PROJECTS

<b>Prior Project Cost</b>	
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 500,000
Land Acquisition	\$ -
Construction/Equipment	\$ 2,865,000
Professional Services	\$ 330,000
Other	\$ 10,000
Contingencies	\$ 100,000
<b>Total Project Cost</b>	<b>\$ 3,805,000</b>

<b>Project Estimate Level</b>	
	Conceptual Estimate
	Preliminary Estimate
<b>x</b>	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 3,472,500</b>
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		<b>Need</b>	<b>Phase of Work</b>
2023 Budget		\$ 332,500	procurement, planning, design & construction
1st Year	2024	\$ 912,500	procurement, planning, design & construction
2nd Year	2025	\$ 747,500	procurement, planning, design & construction
3rd Year	2026	\$ 732,500	procurement, planning, design & construction
4th Year	2027	\$ 482,500	procurement, planning, design & construction
5th Year	2028	\$ 597,500	procurement, planning, design & construction

**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	CENTRAL LEHIGH COUNTY WASTEWATER CAPACITY PLANNING & EXPANSION						
<b>Budget Area</b>	Wastewater	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-S-3
<b>Location</b>	Western Lehigh LCA Service Area tributary to the AD WWTP			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	<b>Primary</b>	Regulatory	<b>Secondary</b>	Rev Opprt	<b>Preparer</b>		PMD

Purpose of Expenditure (check all that apply)			
<input type="checkbox"/>	New Facility	<input type="checkbox"/>	Correct Known or Potential Safety Issue
<input checked="" type="checkbox"/>	Existing Facility - Rehabilitation/Upgrade	<input type="checkbox"/>	Equipment Obsolete
<input type="checkbox"/>	Scheduled Replacement	<input checked="" type="checkbox"/>	Comply with Regulatory Requirements
<input checked="" type="checkbox"/>	Improved Service	<input type="checkbox"/>	Equipment/Infrastructure at End of Useful Life
<input type="checkbox"/>	Study	<input checked="" type="checkbox"/>	Other (explain): SD-Future Wastewater Treatment Capacity

Additional Information			
Expected Useful Life (Years)	30	<b>Project inception date</b>	2009
Approx. No. of Customers Benefitted	N/A		
Is this System part of a Common User Rate?	N/A	<b>Anticipated Project completion date</b>	2025
Will the Project Require Obtaining Land Rights	No		

Detailed Project Description
<p>This project has evolved over the past 15 years, starting with the EPA Administrative Orders being issued in 2007 and 2009. In 2010, DEP enacted a Connection Management Plan on the Western Lehigh Interceptor (WLI) - known as the "SCARP" (Sewer Capacity Assurance and Rehabilitation Program). LCA initiated its own version of Act 537 during 2013-2016, with DEP ultimately saying "do not submit". With a commitment to a flow characterization study and a Regional Flow Management Strategy (RFMS), the EPA lifted both AOs in 2019. During this time period, the Region experienced an abnormal rainfall pattern that lasted from August 2018 through July 2019. This caused a Chapter 94 violation at the Kline's Island WWTP, which forced DEP to place the entire system under Act 537 Planning. This Plan is due to DEP by March 2025.</p>

Project Drivers and Needs to be Met by the Project
<p>This project includes the LCA Suburban portion of the engineering analysis required for the Regional Act 537 Plan development.</p>

Project Status - Describe what work, if any has been completed or underway for this project
<p>Various forms of engineering analysis on the Western Lehigh Interceptor and the LCA Pretreatment Plant (PTP) has occurred since 2007. Most recently with the DEP Act 537 Plan mandate, long term solutions for the WLI and the PTP need to be addressed for inclusion into the Regional Plan. All engineering analyses related to the Act 537 mandate are nearing completion.</p>

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss) in Annual Revenue	N/A
Assessment, Contribution	N/A
in Aid-of-Construction	
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary

<b>Project No.</b>	SD-S-3
<b>Project Name</b>	CENTRAL LEHIGH COUNTY WASTEWATER CAPACITY PLANNING & EXPANSION

<b>Prior Project Cost</b>	\$ 600,000
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 150,000
Land Acquisition	\$ -
Construction/Equipment	\$ -
Professional Services	\$ 700,000
Other	\$ -
Contingencies	\$ 125,000
<b>Total Project Cost</b>	<b>\$ 1,575,000</b>

Project Estimate Level	
	Conceptual Estimate
	Preliminary Estimate
<b>x</b>	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 650,000</b>
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		Need	Phase of Work
2023 Budget		\$ 325,000	537 Planning
1st Year	2024	\$ 350,000	537 Planning
2nd Year	2025	\$ 250,000	537 Planning
3rd Year	2026	\$ 50,000	537 Planning
4th Year	2027	\$ -	
5th Year	2028	\$ -	



**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	WYNNEWOOD INFLOW & INFILTRATION INVESTIGATION & REMEDIATION PROGRAM						
<b>Budget Area</b>	Wastewater	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-S-6
<b>Location</b>	WWD, North Whitehall Township			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	<b>Primary</b>	AM - Varies	<b>Secondary</b>	Regulatory	<b>Preparer</b>		JP

Purpose of Expenditure (check all that apply)	
<input type="checkbox"/> New Facility	<input type="checkbox"/> Correct Known or Potential Safety Issue
<input checked="" type="checkbox"/> Existing Facility - Rehabilitation/Upgrade	<input type="checkbox"/> Equipment Obsolete
<input type="checkbox"/> Scheduled Replacement	<input checked="" type="checkbox"/> Comply with Regulatory Requirements
<input type="checkbox"/> Improved Service	<input type="checkbox"/> Equipment/Infrastructure at End of Useful Life
<input type="checkbox"/> Study	<input type="checkbox"/> Other (explain):

Additional Information			
Expected Useful Life (Years)	20	<b>Project inception date</b>	2019
Approx. No. of Customers Benefitted	219		
Is this System part of a Common User Rate?	Yes	<b>Anticipated Project completion date</b>	2025
Will the Project Require Obtaining Land Rights	No		

Detailed Project Description
In 2020, LCA completed updated CCTV inspection condition assessment of the sanitary sewer collection system. This data was used in identifying problem areas, which typically consist of cracked pipes, offset joints, protruding lateral taps, root intrusion, etc. LCA will begin implementing repair/remediation measures to eliminate excess wet weather flow into the Wynnewood Terrace sanitary sewer system, located in North Whitehall Township. A construction project to rehabilitate identified problem areas in the sewage collection system will commence in 2024 and conclude in 2025.

Project Drivers and Needs to be Met by the Project
The primary drivers for the project are: asset management, maintain the level of service, avoid regulatory violations due to peak wet weather flows, and reduce system operation cost. During wet-weather events, excess flows create capacity problems at the wastewater treatment plant and drive operating costs higher. Removal of wet weather I/I will reduce treatment costs, avoid hydraulic overloads, and reclaim capacity for utilization by potential new customers.

Project Status - Describe what work, if any has been completed or underway for this project
A "Test & Seal" project was completed in the Wynnewood Terrace sanitary sewer system in 2016, however, wet weather flows have remained a problem. An updated system-wide CCTV inspection condition assessment was completed in 2020 that was used to identify problem locations and scope out necessary repairs. Capital plan cost is to perform system spot repairs. Periodic CCTV inspection updates are required as a follow up in later years to track system condition and identify problems.

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary
Reducing inflow and infiltration should result in electrical savings by reducing volume of wastewater to pump. However, it is difficult to quantify the amount of flow reduction and therefore electrical savings. Exact costs to be determined.

<b>Project No.</b>	SD-S-6
<b>Project Name</b>	WYNNEWOOD INFLOW & INFILTRATION INVESTIGATION & REMEDIATION PROGRAM

<b>Prior Project Cost</b>	\$20,000
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 10,000
Land Acquisition	\$ -
Construction/Equipment	\$ 125,000
Professional Services	\$ 20,000
Other	
Contingencies	\$ 20,000
<b>Total Project Cost</b>	<b>\$ 195,000</b>

Project Estimate Level	
	Conceptual Estimate
	Preliminary Estimate
<b>X</b>	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 150,000</b>
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		Need	Phase of Work
2023 Budget		\$ 25,000	planning
1st Year	2024	\$ 125,000	construction
2nd Year	2025	\$ 25,000	construction
3rd Year	2026	\$ -	
4th Year	2027	\$ -	
5th Year	2028	\$ -	

**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	WESTERN LEHIGH INTERCEPTOR REHABILITATION AND REPAIRS						
<b>Budget Area</b>	Wastewater	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-S-7
<b>Location</b>	Western Lehigh LCA Service Area tributary to the AD WWTP			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	<b>Primary</b>	Regulatory	<b>Secondary</b>	AM - High	<b>Preparer</b>		CV/JP

Purpose of Expenditure (check all that apply)			
	New Facility		Correct Known or Potential Safety Issue
<b>X</b>	Existing Facility - Rehabilitation/Upgrade		Equipment Obsolete
	Scheduled Replacement	<b>X</b>	Comply with Regulatory Requirements
	Improved Service		Equipment/Infrastructure at End of Useful Life
	Study		Other (explain):

Additional Information			
Expected Useful Life (Years)	20	<b>Project inception date</b>	2022
Approx. No. of Customers Benefitted	N/A		
Is this System part of a Common User Rate?	N/A	<b>Anticipated Project completion date</b>	N/A
Will the Project Require Obtaining Land Rights	No		

Detailed Project Description
<p>This project is a result of continued planning and investigatory work in the Western Lehigh Interceptor (WLI) service area. The project scope includes inflow and infiltration investigation and remediation of sanitary sewer manholes and interceptor main line, in order to extend service life and seal the system from wet weather I/I, with the ultimate objective of demonstrating additional conveyance capacity for the WLI area. The work includes testing and sealing pipe joints, internal lining of damaged sewer main line, flood-proofing manholes, replacing manhole frames and covers, structural manhole repairs, and sealing of manhole interiors. In 2025, the focus shifts to performing a test and seal project downstream of Spring Creek Pump Station (all the way to Park Pump Station).</p>

Project Drivers and Needs to be Met by the Project
<p>The primary project driver is regulatory. The in-progress regional Act 537 planning required by DEP has mandated implementation of I/I source removal work to mitigate Trexlertown area capacity problems. Repairing and sealing leaky sewerage system components will not only service to comply with the I/I reduction mandate, but also align with LCA's strategic plan for implementing a comprehensive asset management program.</p>

Project Status - Describe what work, if any has been completed or underway for this project
<p>A "Test &amp; Seal" project was performed in the WLI service area in 2016 and 2017 to investigate and mitigate leaking interceptor pipe joints. Follow-up CCTV inspection was conducted in 2018 to identify problems following peak weather events. Repair of leaking end seals was completed in 2018 for interceptor sections that were previously lined in sections that experienced liner separation at manholes. In 2020, 2021, 2022, and 2023 annual manhole flood proofing and related external repairs were performed. Future rehabilitation work will be prioritized based on continued inspection and investigation efforts.</p>

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary
Reducing inflow and infiltration in the WLI sewer area is a regulatory requirement to eliminate dry and wet weather overflows

<b>Project No.</b>	SD-S-7
<b>Project Name</b>	WESTERN LEHIGH INTERCEPTOR REHABILITATION AND REPAIRS

<b>Prior Project Cost</b>	
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 100,000
Land Acquisition	\$ -
Construction/Equipment	\$ 6,000,000
Professional Services	\$ 600,000
Other	
Contingencies	\$ 500,000
<b>Total Project Cost</b>	<b>\$ 7,200,000</b>

<b>Project Estimate Level</b>	
<b>X</b>	Conceptual Estimate
	Preliminary Estimate
	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 7,000,000</b>
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		<b>Need</b>	<b>Phase of Work</b>
2023 Budget		\$ 200,000	Planning and design
1st Year	2024	\$ 250,000	Design and construction
2nd Year	2025	\$ 3,750,000	Design and construction
3rd Year	2026	\$ 3,000,000	Design and construction
4th Year	2027	\$ -	
5th Year	2028	\$ -	

**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	ARCADIA WEST WWTP MECHANICAL SCREEN						
<b>Budget Area</b>	Wastewater	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-S-8
<b>Location</b>	AWD, Weisenberg Township			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	<b>Primary</b>	Efficiency	<b>Secondary</b>	Sys Imp	<b>Preparer</b>		CEV

Purpose of Expenditure (check all that apply)	
<input type="checkbox"/> New Facility	<input type="checkbox"/> Correct Known or Potential Safety Issue
<input type="checkbox"/> Existing Facility - Rehabilitation/Upgrade	<input type="checkbox"/> Equipment Obsolete
<input type="checkbox"/> Scheduled Replacement	<input type="checkbox"/> Comply with Regulatory Requirements
<input checked="" type="checkbox"/> Improved Service	<input type="checkbox"/> Equipment/Infrastructure at End of Useful Life
<input type="checkbox"/> Study	<input checked="" type="checkbox"/> Other (explain): Operational Efficiency, safety

Additional Information			
Expected Useful Life (Years)	20	<b>Project inception date</b>	2018
Approx. No. of Customers Benefitted	22		
Is this System part of a Common User Rate?	No	<b>Anticipated Project completion date</b>	2025
Will the Project Require Obtaining Land Rights	No		

Serves Arcadia West Industrial Park, West Hills Business Center, NW Lehigh SD Elementary School.

Detailed Project Description
The project involves the installation of an automatic mechanical screen and associated components at the influent end (headworks) of the Arcadia West Industrial Park Wastewater Treatment Plant, located in Weisenberg Township. A mechanical screen operates in an automatic mode to remove bulky debris from the influent wastewater at plant. The debris is dewatered and conveyed to a trash container or small dumpster.

Project Drivers and Needs to be Met by the Project
The primary drivers for the project are: increased operational efficiency, system improvement and reduce operation costs. There is currently no means to automatically remove the inorganic debris (rags, wipes, plastics, etc.) from the facility's influent waste stream. This bulky material clogs pumps and periodically accumulates on and fouls downstream process equipment (such as pump floats, piping, and air diffusers). Removal of this material requires manual effort (often in difficult and dangerous access locations) and sometimes complete tank draining (which increases operational costs). A mechanical screen will improve facility operation by removing the rags and other inorganic debris from the influent plant flow and should reduce operational costs.

Project Status - Describe what work, if any has been completed or underway for this project
An internal investigation was performed to determine if the comminutor performance can be optimized to decrease the debris accumulation, which proved to be unsuccessful. Rags and wipes have been plaguing the plant for years (likely from one or more of the connected industries) and should be removed from the waste stream. The preferred alternative to removing the rags and resolving the problem is a mechanical screen. The screen project will be designed in 2023 and constructed in 2024 - 2025.

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary
The mechanical screen will increase operational costs marginally mainly due to electrical power and debris disposal. However, the increase in operational costs will be offset by a decrease in staff costs associated with not having to periodically remove rags and inorganic debris that currently are not screened from the waste stream and clog downstream pumps and accumulate on mechanical and instrumentation equipment. Exact costs to be determined.

<b>Project No.</b>	SD-S-8
<b>Project Name</b>	ARCADIA WEST WWTP MECHANICAL SCREEN

<b>Prior Project Cost</b>	0
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 20,000
Land Acquisition	\$ -
Construction/Equipment	\$ 300,000
Professional Services	\$ 100,000
Other	\$ -
Contingencies	\$ 30,000
<b>Total Project Cost</b>	<b>\$ 450,000</b>

Project Estimate Level	
<input checked="" type="checkbox"/>	Conceptual Estimate
<input type="checkbox"/>	Preliminary Estimate
<input type="checkbox"/>	Budget Estimate
<input type="checkbox"/>	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 350,000</b>
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		Need	Phase of Work
2023 Budget		\$ 100,000	design
1st Year	2024	\$ 75,000	final design, permitting & bidding
2nd Year	2025	\$ 275,000	construction
3rd Year	2026		
4th Year	2027	\$ -	
5th Year	2028	\$ -	

**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	SPRING CREEK FORCE MAIN CONDITION ASSESSMENT						
<b>Budget Area</b>	Wastewater	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-S-9
<b>Location</b>	WLI, various municipalities			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	<b>Primary</b>	AM High	<b>Secondary</b>	Sys Imp	<b>Preparer</b>		ALK

Purpose of Expenditure (check all that apply)		
<input type="checkbox"/>	New Facility	Correct Known or Potential Safety Issue
<input checked="" type="checkbox"/>	Existing Facility - Rehabilitation/Upgrade	Equipment Obsolete
<input type="checkbox"/>	Scheduled Replacement	Comply with Regulatory Requirements
<input checked="" type="checkbox"/>	Improved Service	Equipment/Infrastructure at End of Useful Life
<input checked="" type="checkbox"/>	Study	Other (explain):

Additional Information			
Expected Useful Life (Years)	TBD	<b>Project inception date</b>	2019
Approx. No. of Customers Benefitted	**		
Is this System part of a Common User Rate?	N/A	<b>Anticipated Project completion date</b>	2025
Will the Project Require Obtaining Land Rights	No		

\*\*= The Spring Creek Force Main provides service to 7 WL signatories.

Detailed Project Description
The Spring Creek Force Main was installed in two phases. The first section was installed in 1995 and an extension to Little Lehigh Parkway was installed in 2004. A broadband electromagnetic (BEM) test will be conducted in 2023 at locations where gas pockets are found to determine remaining wall thickness and assess the remaining useful life of the force main before scoping a repair, rehabilitation, or replacement project. Pipeline rehabilitation work may follow but the scope and cost of that work is not known at this time.

Project Drivers and Needs to be Met by the Project
Asset management is the primary driver for this project. The Spring Creek Pump Station and Force Main is an integral part of the Western Lehigh service area. It is essential to perform necessary rehabilitation of the force main to extend the service life of the infrastructure, restore level of service, and mitigate the risk of a catastrophic failure.

Project Status - Describe what work, if any has been completed or underway for this project
Access points for investigation of key sections of the force main were identified in early 2023. Pipe investigation will commence in late 2023.

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary
Exact costs to be determined.

<b>Project No.</b>	SD-S-9
<b>Project Name</b>	SPRING CREEK FORCE MAIN CONDITION ASSESSMENT

<b>Prior Project Cost</b>	0
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 10,000
Land Acquisition	\$ -
Construction/Equipment	\$ 20,000
Professional Services	\$ 170,000
Other	\$ -
Contingencies	\$ 50,000
<b>Total Project Cost</b>	<b>\$ 250,000</b>

Project Estimate Level	
	Conceptual Estimate
	Preliminary Estimate
<b>x</b>	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 150,000</b>
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		Need	Phase of Work
2023 Budget		\$ 100,000	investigation and study
1st Year	2024	\$ 150,000	investigation and study
2nd Year	2025	\$ -	
3rd Year	2026	\$ -	
4th Year	2027	\$ -	
5th Year	2028	\$ -	



**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	NORTH WHITEHALL TOWNSHIP ACT 537 SEWAGE FACILITIES PLANNING						
<b>Budget Area</b>	Wastewater	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-S-10
<b>Location</b>	Weisenberg, Lowhill, and Upper Milford Townships			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA/NWT
<b>Prj. Category</b>	<b>Primary</b>	Regulatory	<b>Secondary</b>	Sys Imp	<b>Preparer</b>		PD

Purpose of Expenditure (check all that apply)			
<input type="checkbox"/>	New Facility	<input type="checkbox"/>	Correct Known or Potential Safety Issue
<input type="checkbox"/>	Existing Facility - Rehabilitation/Upgrade	<input type="checkbox"/>	Equipment Obsolete
<input type="checkbox"/>	Scheduled Replacement	<input checked="" type="checkbox"/>	Comply with Regulatory Requirements
<input type="checkbox"/>	Improved Service	<input type="checkbox"/>	Equipment/Infrastructure at End of Useful Life
<input checked="" type="checkbox"/>	Study	<input type="checkbox"/>	Other (explain):

Additional Information			
Expected Useful Life (Years)	30	<b>Project inception date</b>	2022
Approx. No. of Customers Benefitted	TBD		
Is this System part of a Common User Rate?	N/A	<b>Anticipated Project completion date</b>	2028
Will the Project Require Obtaining Land Rights	No		

Detailed Project Description
<p>This project involves the development of an Act 537 Sewage Facilities Plan for North Whitehall Township, and is a coordinated effort between the township and LCA. The project will incorporate regional sewer facilities planning concepts to evaluate the feasibility of consolidation of small wastewater treatment plants that currently serve separate small sewer districts/developments.</p>

Project Drivers and Needs to be Met by the Project
<p>The primary driver for this project is regulatory. The Township lacks an up to date Act 537 Sewage Facilities Plan, which provides a roadmap for addressing sewage needs and accommodating growth. Numerous small sewer systems with small wastewater plants exist in the township, and updated Act 537 planning is needed to address future sewage treatment capacity needs.</p>

Project Status - Describe what work, if any has been completed or underway for this project
<p>A cost sharing agreement was executed between LCA and North Whitehall Township in 2023. The township intends to solicit for and retain a planning consultant in 2023.</p>

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss ) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary
<p>Exact costs to be determined.</p>

<b>Project No.</b>	SD-S-10
<b>Project Name</b>	NORTH WHITEHALL TOWNSHIP ACT 537 SEWAGE FACILITIES PLANNING

<b>Prior Project Cost</b>	0
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 20,000
Land Acquisition	\$ -
Construction/Equipment	\$ -
Professional Services	\$ 150,000
Other	\$ -
Contingencies	\$ 10,000
<b>Total Project Cost</b>	<b>\$ 180,000</b>

Project Estimate Level	
	Conceptual Estimate
	Preliminary Estimate
<b>x</b>	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 180,000</b>
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		Need	Phase of Work
2023 Budget		\$ -	
1st Year	2024	\$ 70,000	planning
2nd Year	2025	\$ 80,000	planning
3rd Year	2026	\$ 30,000	planning
4th Year	2027	\$ -	
5th Year	2028	\$ -	

**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	SPRING CREEK PUMP STATION UPGRADES						
<b>Budget Area</b>	Wastewater	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-S-12
<b>Location</b>	WLI, various municipalities			<b>Prj. Type</b>	regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	<b>Primary</b>	AM - High	<b>Secondary</b>	Efficiency	<b>Preparer</b>		ALK

Purpose of Expenditure (check all that apply)			
<input type="checkbox"/>	New Facility	<input type="checkbox"/>	Correct Known or Potential Safety Issue
<input checked="" type="checkbox"/>	Existing Facility - Rehabilitation/Upgrade	<input checked="" type="checkbox"/>	Equipment Obsolete
<input type="checkbox"/>	Scheduled Replacement	<input type="checkbox"/>	Comply with Regulatory Requirements
<input checked="" type="checkbox"/>	Improved Service	<input type="checkbox"/>	Equipment/Infrastructure at End of Useful Life
<input type="checkbox"/>	Study	<input type="checkbox"/>	Other (explain):

Additional Information			
Expected Useful Life (Years)	20	<b>Project inception date</b>	2023
Approx. No. of Customers Benefitted	**		
Is this System part of a Common User Rate?	N/A	<b>Anticipated Project completion date</b>	2025
Will the Project Require Obtaining Land Rights	No		

Detailed Project Description
The Spring Creek Pump Station and force main were constructed in the mid-1990s to provide wet weather relief to the Western Lehigh Interceptor (WLI). As dry and weather flows have increased over the years due to community growth and inflow and infiltration (I&I), the station operates daily and is a critical component of the WLI system. The upgrade project consists of replacing the VFDs, mini power system, and the upstream weir gate, installing a new gate in the interceptor channel, and improvements to the access hatches and dry well ventilation system.

Project Drivers and Needs to be Met by the Project
The primary drivers are asset management, efficiency and maintain level of service.

Project Status - Describe what work, if any has been completed or underway for this project
In 2019 an upgrade project was completed at the station which consisted of installation of a comminutor (grinder), downstream weir gate, gate actuators, ultrasonic level detectors, and new PLCs with SCADA upgrades. An electrical assessment was completed in 2023. Equipment that was determined to be in poor condition were incorporated into this project. The design engineer was selected in mid-2023, and design phase is to be substantially completed by the end of 2023.

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary
Exact costs to be determined.

<b>Project No.</b>	SD-S-12
<b>Project Name</b>	SPRING CREEK PUMP STATION UPGRADES

<b>Prior Project Cost</b>	15,000
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 50,000
Land Acquisition	\$ -
Construction/Equipment	\$ 1,300,000
Professional Services	\$ 120,000
Other	
Contingencies	\$ 60,000
<b>Total Project Cost</b>	<b>\$ 1,545,000</b>

Project Estimate Level	
	Conceptual Estimate
<b>X</b>	Preliminary Estimate
	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 1,430,000</b>
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		Need	Phase of Work
2023 Budget		\$ 100,000	design
1st Year	2024	\$ 1,000,000	construction
2nd Year	2025	\$ 430,000	construction
3rd Year	2026	\$ -	
4th Year	2027	\$ -	
5th Year	2028	\$ -	

## PROJECT DETAIL SHEET

<b>Project Name</b>	SPRING CREEK FORCE MAIN RELOCATION						
<b>Budget Area</b>	Wastewater	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-S-13
<b>Location</b>	WLI, various municipalities			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	<b>Primary</b>	N/A	<b>Secondary</b>	Sys Imp	<b>Preparer</b>	ALK	

Purpose of Expenditure (check all that apply)			
	New Facility		Correct Known or Potential Safety Issue
	Existing Facility - Rehabilitation/Upgrade		Equipment Obsolete
	Scheduled Replacement		Comply with Regulatory Requirements
X	Improved Service		Equipment/Infrastructure at End of Useful Life
	Study	X	Other (explain): PennDOT required

Additional Information			
Expected Useful Life (Years)	40	Project inception date	2022
Approx. No. of Customers Benefitted	**		
Is this System part of a Common User Rate?	N/A	Anticipated Project completion date	2025
Will the Project Require Obtaining Land Rights	Yes		

Detailed Project Description
The Lower Macungie Road bridge that spans the PA Turnpike is being relocated as part of the Turnpike widening project. The Spring Creek Force Main is located adjacent to Lower Macungie Road and crosses the Turnpike in direct conflict with the new bridge. Approximately 2,200 LF of force main will need to be relocated. Design and construction will be incorporated into PennDOT's road realignment and bridge construction project. A 50/50 cost sharing agreement will be entered in to with the PA Turnpike commission, and LCA's share will be due following project completion in 2025.

Project Drivers and Needs to be Met by the Project
The Highway project requires the adjustment and relocation of the Spring Creek Force Main.

Project Status - Describe what work, if any has been completed or underway for this project
The project is being designed by Gannett Fleming, engineer for the Lower Macungie Road realignment. The project will be anticipated to be advertised for bid in May 2024.

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary
Exact costs to be determined.

<b>Project No.</b>	SD-S-13
<b>Project Name</b>	SPRING CREEK FORCE MAIN RELOCATION

<b>Prior Project Cost</b>	20,000
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 30,000
Land Acquisition	\$ -
Construction/Equipment	\$ 1,000,000
Professional Services	\$ 150,000
Other	
Contingencies	\$ 70,000
<b>Total Project Cost</b>	<b>\$ 1,270,000</b>

<b>Project Estimate Level</b>	
	Conceptual Estimate
<b>X</b>	Preliminary Estimate
	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 1,200,000</b>
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		<b>Need</b>	<b>Phase of Work</b>
2023 Budget		\$ 50,000	Design
1st Year	2024	\$ 100,000	Design and Construction
2nd Year	2025	\$ 1,100,000	Construction
3rd Year	2026	\$ -	
4th Year	2027	\$ -	
5th Year	2028	\$ -	

**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	PARK PUMP STATION UPGRADE - PHASE 2						
<b>Budget Area</b>	Wastewater	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-S-15
<b>Location</b>	LLRI-1, City of Allentown			<b>Prj. Type</b>	AO	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	Primary	AM - High	Secondary	Regulatory	<b>Preparer</b>		CEV

Purpose of Expenditure (check all that apply)			
<input type="checkbox"/>	New Facility	<input type="checkbox"/>	Correct Known or Potential Safety Issue
<input checked="" type="checkbox"/>	Existing Facility - Rehabilitation/Upgrade	<input checked="" type="checkbox"/>	Equipment Obsolete
<input type="checkbox"/>	Scheduled Replacement	<input checked="" type="checkbox"/>	Comply with Regulatory Requirements
<input checked="" type="checkbox"/>	Improved Service	<input checked="" type="checkbox"/>	Equipment/Infrastructure at End of Useful Life
<input type="checkbox"/>	Study	<input type="checkbox"/>	Other (explain):

Additional Information			
Expected Useful Life (Years)	20	<b>Project inception date</b>	2016
Approx. No. of Customers Benefitted	**		
Is this System part of a Common User Rate?	N/A	<b>Anticipated Project completion date</b>	2024
Will the Project Require Obtaining Land Rights	No		

\*\*= The Park Pump Station provides service to 7 WLI signatories and 3 of City signatories.

Detailed Project Description
Phase 1 improvements to the pump station included replacement of the existing pumps, suction and discharge side valves, pump speed controllers, motor control center (MCC) panel, SCADA system, wet well level instrumentation, building roof and force main drain valve. Also included are miscellaneous structural, HVAC and other improvements as outlined in Option 3 of the March 21, 2016 Park Pump Station Evaluation Technical Memorandum prepared by Arcadis. Construction of Phase 1 was completed in early 2020. Phase 2 of the station upgrade consists of replacement of the original backup diesel generator, which is nearing the end of its service life and slightly undersized for the upgraded station. The replacement unit will be natural gas powered, which will eliminate the need for diesel fuel storage in the environmentally sensitive area.

Project Drivers and Needs to be Met by the Project
Asset management is the primary driver for this project. Park Pump Station is a critical component of the sewerage infrastructure network in the region, serving ten municipalities. Its operation is critical to conveying wet weather flows and normal day flows, and significantly impacts the operation of Allentown's wastewater treatment plant at Kline's Island. The improvements are needed to restore the station to its design capacity, maintain level of service and extend service life into the foreseeable future.

Project Status - Describe what work, if any has been completed or underway for this project
An Evaluation Technical Memorandum was prepared by Arcadis which assessed various options for continued operation of the pump station. The recommendations outlined in Option 3 of the Memorandum were selected to improve the reliability and capacity of the pump station through 2025. The Phase 1 upgrade design was completed in late 2017, the project was bid in early 2018, construction phase commenced in mid-2018 and the project was completed in early 2020. Design and bidding of the replacement generator was completed in mid-2022. A long lead time for the generator pushed construction to mid-2024. Since no bids were received for the General/Site Work portion of the project, that contract will be rebid closer to the expected delivery of the generator.

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary
A new generator will insure station operation reliability and enhance resiliency in event of a catastrophic event that results in an extended period of electrical power outage. The long term cost of ownership of a natural gas versus a diesel generator is comparable and a triple bottom line analysis revealed that natural gas is preferable.

<b>Project No.</b>	SD-S-15
<b>Project Name</b>	PARK PUMP STATION UPGRADE - PHASE 2

<b>Prior Project Cost</b>	\$ 4,000,000
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 50,000
Land Acquisition	\$ -
Construction/Equipment	\$ 3,100,000
Professional Services	\$ 200,000
Other	\$ 50,000
Contingencies	\$ 200,000
<b>Total Project Cost</b>	<b>\$ 7,600,000</b>

<b>Project Estimate Level</b>	
	Conceptual Estimate
	Preliminary Estimate
<b>x</b>	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 2,100,000</b>
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		<b>Need</b>	<b>Phase of Work</b>
2023 Budget		\$ 1,500,000	construction
1st Year	2024	\$ 1,800,000	construction
2nd Year	2025	\$ 300,000	
3rd Year	2026	\$ -	
4th Year	2027	\$ -	
5th Year	2028	\$ -	



**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	HEIDELBERG HEIGHTS INFLOW & INFILTRATION INVESTIGATION & REMEDIATION PROGRAM						
<b>Budget Area</b>	Wastewater	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-S-17
<b>Location</b>	HHD, Heidelberg Township			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	<b>Primary</b>	Regulatory	<b>Secondary</b>	AM-high	<b>Preparer</b>		JP

Purpose of Expenditure (check all that apply)	
<input type="checkbox"/> New Facility	<input type="checkbox"/> Correct Known or Potential Safety Issue
<input checked="" type="checkbox"/> Existing Facility - Rehabilitation/Upgrade	<input type="checkbox"/> Equipment Obsolete
<input type="checkbox"/> Scheduled Replacement	<input checked="" type="checkbox"/> Comply with Regulatory Requirements
<input checked="" type="checkbox"/> Improved Service	<input checked="" type="checkbox"/> Equipment/Infrastructure at End of Useful Life
<input type="checkbox"/> Study	<input type="checkbox"/> Other (explain):

Additional Information			
Expected Useful Life (Years)	20	<b>Project inception date</b>	2016
Approx. No. of Customers Benefitted	145		
Is this System part of a Common User Rate?	Yes	<b>Anticipated Project completion date</b>	2027
Will the Project Require Obtaining Land Rights	No		

Detailed Project Description
<p>This project includes investigative and rehabilitative work to address wet weather inflow and infiltration (I/I), and is part of the Corrective Action Plan implementation within the DEP Consent Order and Agreement. Rehabilitative work includes replacement of all original vitrified clay pipe (VCP) sewer main, VCP sewer lateral replacement, manhole replacement, manhole sealing, cleanout installation on laterals, and private side investigation and remediation. It is assumed that the annual construction projects will be designed, managed and bid in-house.</p>

Project Drivers and Needs to be Met by the Project
<p>The primary driver for this project is regulatory. In 2020 LCA executed a Consent Order and Agreement with DEP that memorializes an implementation schedule to perform annual investigation and rehabilitation work on the sanitary sewer system in order to eliminate DEP violations from wet weather overflows, bypasses, and treatment plant effluent limit exceedance events. Historical flows into the wastewater treatment plant have been 3 to 4 times the plant capacity during peak weather events. Mitigation of the compliance issues requires elimination of excess inflow and infiltration into the sewage collection system.</p>

Project Status - Describe what work, if any has been completed or underway for this project
<p>Updated CCTV system inspection was performed in 2017 to document I/I problem areas. In 2018 the replacement of 54 laterals and 1,070 linear-feet of sewer main was completed on Glen Court. In 2019 the replacement of 25 laterals and 1,100 linear feet of sewer main was completed along Heidelberg Heights Road. In 2020 the replacement of 18 laterals and 850 linear feet of sewer main was completed along Lake View Street. In 2021 the replacement of 18 laterals and 700 linear feet of sewer main was completed along Thompson St. The remaining sections of original VCP sewer mains and laterals were replaced in 2022 and 2023. Rehabilitation work beyond 2023 will focus private side sewer system inspection and rehabilitation and follow-up flow monitoring work.</p>

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary
<p>Reducing excess inflow/infiltration will reduce occurrence of overflows/bypasses at the wastewater treatment plant, facilitate continued compliance with PaDEP, and save staff time and money. It is difficult to quantify potential savings with varying intensity storms and fluctuating groundwater levels.</p>

<b>Project No.</b>	SD-S-17
<b>Project Name</b>	HEIDELBERG HEIGHTS INFLOW & INFILTRATION INVESTIGATION & REMEDIATION PROGRAM

<b>Prior Project Cost</b>	1,000,000
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 50,000
Land Acquisition	\$ -
Construction/Equipment	\$ 400,000
Professional Services	\$ 150,000
Other	\$ -
Contingencies	\$ 50,000
<b>Total Project Cost</b>	<b>\$ 1,650,000</b>

Project Estimate Level	
	Conceptual Estimate
	Preliminary Estimate
<b>x</b>	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 300,000</b>
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		Need	Phase of Work
2023 Budget		\$ 350,000	construction
1st Year	2024	\$ 100,000	private side investigation, administration & construction
2nd Year	2025	\$ 100,000	private side investigation, administration & construction
3rd Year	2026	\$ 50,000	private side investigation, administration & construction
4th Year	2027	\$ 25,000	private side investigation, administration & construction
5th Year	2028	\$ 25,000	private side investigation, administration & construction

**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	HEIDELBERG HEIGHTS WWTP REHABILITATION						
<b>Budget Area</b>	Wastewater	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-S-18
<b>Location</b>	HHD, Heidelberg Township			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	<b>Primary</b>	AM - High	<b>Secondary</b>	Efficiency	<b>Preparer</b>		CEV

Purpose of Expenditure (check all that apply)	
<input type="checkbox"/> New Facility	<input type="checkbox"/> Correct Known or Potential Safety Issue
<input checked="" type="checkbox"/> Existing Facility - Rehabilitation/Upgrade	<input checked="" type="checkbox"/> Equipment Obsolete
<input type="checkbox"/> Scheduled Replacement	<input type="checkbox"/> Comply with Regulatory Requirements
<input type="checkbox"/> Improved Service	<input checked="" type="checkbox"/> Equipment/Infrastructure at End of Useful Life
<input type="checkbox"/> Study	<input type="checkbox"/> Other (explain):

Additional Information			
Expected Useful Life (Years)	20	<b>Project inception date</b>	2018
Approx. No. of Customers Benefitted	145		
Is this System part of a Common User Rate?	Yes	<b>Anticipated Project completion date</b>	2025
Will the Project Require Obtaining Land Rights	No		

Detailed Project Description
<p>This is a multi-year project to provide needed upgrades at the Heidelberg Heights wastewater treatment plant. The current project is the installation of a mechanical screen at the headworks of the plant (2023 - 2024 installation) to remove rags and other inorganic material. Future projects include installation of an expanded catwalk grating system above the elevated SBR tanks in order to improve maintenance access, canopy roof constructed over the SBR tanks, and miscellaneous equipment upgrade/replacement.</p>

Project Drivers and Needs to be Met by the Project
<p>The primary project drivers are efficiency, asset management and safety. An expanded catwalk grating system above the SBR tanks will improve maintenance access and operator safety. A mechanical screen will remove bulky inorganics and rags from the influent waste stream and thereby extend downstream pump life and reduce maintenance problems caused by accumulation of rags and debris. A canopy roof over the SBR tanks will eliminate the problem of fallen debris accumulation in the open tanks (leaves, nuts, branches).</p>

Project Status - Describe what work, if any has been completed or underway for this project
<p>The steel SBR tanks were cleaned and painted in 2016. Rehabilitation of the 40+ year old steel EQ/sludge holding tank was completed early 2019. Design of the mechanical screen project was completed in 2022 with construction to be substantially completed by early 2024.</p>

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary
Exact costs to be determined.

<b>Project No.</b>	SD-S-18
<b>Project Name</b>	HEIDELBERG HEIGHTS WWTP REHABILITATION

<b>Prior Project Cost</b>	\$ 40,000
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 10,000
Land Acquisition	\$ -
Construction/Equipment	\$ 350,000
Professional Services	\$ 40,000
Other	
Contingencies	\$ 10,000
<b>Total Project Cost</b>	<b>\$ 450,000</b>

Project Estimate Level	
	Conceptual Estimate
	Preliminary Estimate
<input checked="" type="checkbox"/>	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 160,000</b>
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		Need	
2023 Budget		\$ 250,000	construction
1st Year	2024	\$ 160,000	construction
2nd Year	2025	\$ -	
3rd Year	2026	\$ -	
4th Year	2027	\$ -	
5th Year	2028	\$ -	

**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	SAND SPRING WWTP IMPROVEMENTS						
<b>Budget Area</b>	Wastewater	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-S-19
<b>Location</b>	North Whitehall Township			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	Primary	Sys Imp	Secondary	Efficiency	<b>Preparer</b>		CEV

Purpose of Expenditure (check all that apply)	
<input type="checkbox"/> New Facility	<input type="checkbox"/> Correct Known or Potential Safety Issue
<input checked="" type="checkbox"/> Existing Facility - Rehabilitation/Upgrade	<input type="checkbox"/> Equipment Obsolete
<input type="checkbox"/> Scheduled Replacement	<input checked="" type="checkbox"/> Comply with Regulatory Requirements
<input type="checkbox"/> Improved Service	<input type="checkbox"/> Equipment/Infrastructure at End of Useful Life
<input type="checkbox"/> Study	<input type="checkbox"/> Other (explain):

Additional Information			
Expected Useful Life (Years)	20	<b>Project inception date</b>	2017
Approx. No. of Customers Benefitted	258		
Is this System part of a Common User Rate?	Yes	<b>Anticipated Project completion date</b>	2026
Will the Project Require Obtaining Land Rights	No		

Detailed Project Description
The original Sand Spring WWTP was built in the early 1970s to serve an apartment complex and adjacent commercial uses in North Whitehall Township. LCA acquired the Sand Spring WWTP in 2005 from the developer. The old steel tank plant was replaced in entirety by LCA and new plant put on line in 2021. A new warehouse development was connected to the Sand Spring sanitary sewer system around the same time as the startup of the new plant, and operational problems ensued due to changed hydraulic and organic loading conditions. This resulted in DEP permit violations and a potential future Consent Order and Agreement to be executed between LCA and DEP. This project includes structural and non-structural initiatives to restore the plant to NPDES permit compliance.

Project Drivers and Needs to be Met by the Project
The primary project driver is regulatory compliance.

Project Status - Describe what work, if any has been completed or underway for this project
LCA retained a third party engineering consultant in 2022 to perform a detailed Process Performance Evaluation of the plant. The Evaluation recommended short term and long term process improvement and rehabilitation options. Implementation of some of those options will commence in 2023.

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary
Exact costs to be determined.

<b>Project No.</b>	SD-S-19
<b>Project Name</b>	SAND SPRING WWTP IMPROVEMENTS

<b>Prior Project Cost</b>	\$ 3,800,000
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 25,000
Land Acquisition	\$ -
Construction/Equipment	\$ 60,000
Professional Services	\$ 120,000
Other	
Contingencies	\$ 25,000
<b>Total Project Cost</b>	<b>\$ 4,030,000</b>

Project Estimate Level	
	Conceptual Estimate
	Preliminary Estimate
<b>x</b>	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 250,000</b>
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		Need	
2023 Budget		\$ -	
1st Year	2024	\$ 100,000	planning and process modifications
2nd Year	2025	\$ 100,000	planning and process modifications
3rd Year	2026	\$ 50,000	planning and process modifications
4th Year	2027	\$ -	
5th Year	2028	\$ -	

**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	PRETREATMENT PLANT CAPITAL IMPROVEMENTS						
<b>Budget Area</b>	Wastewater	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-S-22
<b>Location</b>	LCA Pretreatment Plant ( <i>Industrial Blvd &amp; Rt 100</i> )			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	Primary	AM - Varies	Secondary	Sys Imp	<b>Preparer</b>		CEV

Purpose of Expenditure ( <i>check all that apply</i> )		
<input type="checkbox"/>	New Facility	<input type="checkbox"/> Correct Known or Potential Safety Issue
<input checked="" type="checkbox"/>	Existing Facility - Rehabilitation/Upgrade	<input checked="" type="checkbox"/> Equipment Obsolete
<input type="checkbox"/>	Scheduled Replacement	<input type="checkbox"/> Comply with Regulatory Requirements
<input type="checkbox"/>	Improved Service	<input checked="" type="checkbox"/> Equipment/Infrastructure at End of Useful Life
<input type="checkbox"/>	Study	<input type="checkbox"/> Other (explain):

Additional Information			
Expected Useful Life (Years)	20	Project inception date	N/A
Approx. No. of Customers Benefitted	**		
Is this System part of a Common User Rate?	N/A	Anticipated Project completion date	N/A
Will the Project Require Obtaining Land Rights	No		

Provides pretreatment for industrial customers such as Boston Beer, Coca-Cola, Nestle Waters, Niagara, Ocean Spray, Bimbo and others.

Detailed Project Description
This capital project is a comprehensive on-going program to address the continued reliability and functionality of the LCA Wastewater Pre-treatment Plant. Planned projects include influent metering, belt filter press rebuilds, air deck mixer replacements (multi-year), solids processing buildings HVAC systems upgrade, primary clarifiers mechanical refurbish (multi-year), final clarifiers mechanical rehabilitation (multi-year), annual pavement rehabilitation, cryogenic plant control center modernization, and miscellaneous mechanical and electrical upgrades/replacements.

Project Drivers and Needs to be Met by the Project
The primary project drivers are asset management and system improvements. This facility is critical to the local economy and growth in the Western Lehigh sewer service area. Capital improvements are needed annually to maintain the level of service for the pretreatment facility, which has been in continuous operation since 1990, with significant equipment exposed to corrosive &/or severe duty conditions. The increased industrial loading rates experienced since the plant was placed into service drives the need for repairs, replacements and process modifications/optimization. The Capital Plan intends to maintain the reliability, performance, and structural integrity of the physical plant while maintaining economic viability.

Project Status - Describe what work, if any has been completed or underway for this project
A semi-annual program to rebuild the belt filter presses was started in 2015. Annual pavement reconstruction projects are performed on the main access routes used by the waste hauler trucks within the plant site to replace failed and deteriorated asphalt pavement with concrete pavement. The SCADA system and grease station projects were completed in 2019. Replacement of the cryogenic plant "B-Mac" compressor was completed in 2019, along with other capital improvements to the cryogenic plant. In 2020 and 2021 a project to modify the waste hauler station piping in order to pre-thicken the waste (prior to conveyance to the digesters) was completed, along with mechanical upgrades of the 3 digesters, pavement rehabilitation, and influent pump station upgrade. In 2022 and 2023 the mechanical screens in the plant headworks area were replaced. Also in 2023 air deck mixers were re-built, pavement reconstruction was performed in one of the waste hauler off-load areas, and VFDs were replaced for the influent pump station.

Annual Cost Impact	
Operating - <i>Increase/(Decrease)</i>	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
<i>Gain/(Loss )</i> in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary
Exact costs to be determined.

<b>Project No.</b>	SD-S-22
<b>Project Name</b>	PRETREATMENT PLANT CAPITAL IMPROVEMENTS

<b>Prior Project Cost</b>	
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 100,000
Land Acquisition	\$ -
Construction/Equipment	\$ 6,100,000
Professional Services	\$ 350,000
Other	\$ -
Contingencies	\$ 200,000
<b>Total Project Cost</b>	<b>\$ 6,750,000</b>

<b>Project Estimate Level</b>	
	Conceptual Estimate
	Preliminary Estimate
<b>x</b>	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 6,000,000</b>
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		<b>Need</b>	<b>Phase of Work</b>
2023 Budget		\$ 750,000	planning, design & construction
1st Year	2024	\$ 1,000,000	planning, design & construction
2nd Year	2025	\$ 1,100,000	planning, design & construction
3rd Year	2026	\$ 1,200,000	planning, design & construction
4th Year	2027	\$ 1,300,000	planning, design & construction
5th Year	2028	\$ 1,400,000	planning, design & construction



**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	SIGNATORY INFLOW & INFILTRATION INVESTIGATION & REMEDIATION PROGRAM						
<b>Budget Area</b>	Wastewater	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-S-24
<b>Location</b>	LCA WLI Sewer Service Area			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	<b>Primary</b>	Regulatory	<b>Secondary</b>	Sys Imp	<b>Preparer</b>		PMD

Purpose of Expenditure (check all that apply)	
<input checked="" type="checkbox"/> New Facility	Correct Known or Potential Safety Issue
<input checked="" type="checkbox"/> Existing Facility - Rehabilitation/Upgrade	Equipment Obsolete
<input type="checkbox"/> Scheduled Replacement	<input checked="" type="checkbox"/> Comply with Regulatory Requirements
<input type="checkbox"/> Improved Service	Equipment/Infrastructure at End of Useful Life
<input type="checkbox"/> Study	Other (explain):

Additional Information			
Expected Useful Life (Years)	NA	<b>Project inception date</b>	2009
Approx. No. of Customers Benefitted	WLI		
Is this System part of a Common User Rate?	N/A	<b>Anticipated Project completion date</b>	2026
Will the Project Require Obtaining Land Rights	No		

Provides service to 7 WLI signatories, the Borough of Emmaus & others.

Detailed Project Description
LCA provides the leadership, technical expertise and administration for coordinating the projects located within the Signatory sewer systems. The project included two major components: (1) Investigatory/planning work such as flow monitoring, the SCARP development, SSES, Level of Service Determination, Alternatives Analysis, etc., that are necessary to develop the best course of action to reduce I&I within the system(s). Much of this work has been completed. Part (2) - Design, permitting and the construction for rehabilitation of infrastructure that will be necessary to comply with recent PA DEP 537 directives. Annual engineering assistance for the Western Lehigh Sewer group is also included within this project.

Project Drivers and Needs to be Met by the Project
Throughout the 2010s, SSES work, flow monitoring and preliminary modeling work was completed to define the characteristics of the sewer basins and identify the leakiest basins with the Western Lehigh Sewer group. Now that DEP has re-engaged the Region, Act 537 Planning has restarted and efforts have been realigned to meet the March 2025 deadline.

Project Status - Describe what work, if any has been completed or underway for this project
From 2013-2016, investigation and preliminary alternatives analysis work was completed under the guidelines of Act 537. Flow monitoring and analysis also occurred in 2017, 2019 and 2020. The WLI model recalibration was completed in 2020 and an annual program to rehab WLI manholes was started in 2020. In 2023, a joint project with Upper and Lower Macungie was implemented to address some leaky lateral tap connections. A second round of lateral tap connections will be addressed in 2024.

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss ) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary
Exact costs to be determined.

<b>Project No.</b>	SD-S-24
<b>Project Name</b>	SIGNATORY INFLOW & INFILTRATION INVESTIGATION & REMEDIATION PROGRAM

<b>Prior Project Cost</b>	<b>\$ 300,000</b>
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 100,000
Land Acquisition	\$ -
Construction/Equipment	\$ 2,400,000
Professional Services	\$ 600,000
Other	\$ -
Contingencies	\$ 100,000
<b>Total Project Cost</b>	<b>\$ 3,500,000</b>

Project Estimate Level	
	Conceptual Estimate
	Preliminary Estimate
<b>x</b>	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 1,500,000</b>
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		Need	Phase of Work
	2023 Budget	\$ 1,700,000	Planning/Construction
1st Year	2024	\$ 1,000,000	Planning/Construction
2nd Year	2025	\$ 500,000	Planning/Construction
3rd Year	2026	\$ -	
4th Year	2027	\$ -	
5th Year	2028	\$ -	

**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	LYNN TOWNSHIP WWTP IMPROVEMENTS						
<b>Budget Area</b>	Wastewater	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-S-25
<b>Location</b>	Lynn Township			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	<b>Primary</b>	AM - High	<b>Secondary</b>	Efficiency	<b>Preparer</b>		CEV

Purpose of Expenditure (check all that apply)	
<input type="checkbox"/> New Facility	<input type="checkbox"/> Correct Known or Potential Safety Issue
<input checked="" type="checkbox"/> Existing Facility - Rehabilitation/Upgrade	<input checked="" type="checkbox"/> Equipment Obsolete
<input type="checkbox"/> Scheduled Replacement	<input type="checkbox"/> Comply with Regulatory Requirements
<input type="checkbox"/> Improved Service	<input checked="" type="checkbox"/> Equipment/Infrastructure at End of Useful Life
<input type="checkbox"/> Study	<input checked="" type="checkbox"/> Other (explain): critical process redundancy

Additional Information			
Expected Useful Life (Years)	40	<b>Project inception date</b>	2022
Approx. No. of Customers Benefitted	381		
Is this System part of a Common User Rate?	No	<b>Anticipated Project completion date</b>	2024
Will the Project Require Obtaining Land Rights	No		

Detailed Project Description
<p>The inception of this facility expansion project pre-dates LCA's acquisition of the Lynn Township sewer system and was originally planned by the Lynn Township Sewer Authority (LTSA) in accordance with the Lynn Township Act 537 Sewage Facilities Plan. The project involved the expansion of the WWTP capacity from 80,000 GPD to 160,000 GPD, in order to accommodate significant anticipated growth. Since that time the significant growth pressure has subsided, and Lynn Township was directed by DEP in 2019 to perform and update to their Act 537 Sewage Facilities Plan with updated growth projections. The updated growth projections in the upcoming township Act 537 Plan will be used to assess the urgency and magnitude of a future facility expansion project. This capital plan does not include a plant expansion; it reflects the addition of another final clarifier to supplement the single original final clarifier, followed by rehabilitation of the aeration system.</p>

Project Drivers and Needs to be Met by the Project
<p>Asset management, redundancy, and regulatory compliance are the primary project drivers for the addition of a second final clarifier. The existing 20' diameter tank has been in service 24/7 since the plant was put on line and is in need of rehabilitation. It is also undersized for current flows. A second final clarifier is critical to facilitate maintenance and asset management work on the original unit, and to supplement the original clarifier. Rehabilitation of the aeration system is critical for maintaining treatment efficiency and regulatory compliance. Timing of the WWTP expansion construction will be dependent upon long term capacity needs.</p>

Project Status - Describe what work, if any has been completed or underway for this project
<p>Final clarifier design work and construction bidding will be performed in 2023, with construction to be completed in 2024. Regarding a future plant expansion, the timing of that project is a function of updated township sewer planning and development pressure, and also contingent upon developer capacity charges to fund an expansion. Therefore, conceptual design and construction phase costs for a plant expansion are not reflected in this Capital Plan.</p>

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary
Exact costs to be determined.

<b>Project No.</b>	SD-S-25
<b>Project Name</b>	LYNN TOWNSHIP WWTP IMPROVEMENTS

<b>Prior Project Cost</b>	\$ -
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 20,000
Land Acquisition	\$ -
Construction/Equipment	\$ 570,000
Professional Services	\$ 80,000
Other	
Contingencies	\$ 40,000
<b>Total Project Cost</b>	<b>\$ 710,000</b>

Project Estimate Level	
	Conceptual Estimate
	Preliminary Estimate
X	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 700,000</b>
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		Need	Phase of Work
2023 Budget		\$ 10,000	design
1st Year	2024	\$ 500,000	construction
2nd Year	2025	\$ 100,000	procurement and construction
3rd Year	2026	\$ 100,000	construction
4th Year	2027	\$ -	
5th Year	2028	\$ -	

**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	LYNN TOWNSHIP INFLOW & INFILTRATION INVESTIGATION & REMEDIATION PROGRAM						
<b>Budget Area</b>	Wastewater	<b>Department</b>		<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-S-26
<b>Location</b>	LTD, Lynn Township Division			<b>Prj. Type</b>	Regular	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	<b>Primary</b>	Regulatory	<b>Secondary</b>	AM-high	<b>Preparer</b>		JMP

Purpose of Expenditure (check all that apply)	
<input type="checkbox"/> New Facility	<input type="checkbox"/> Correct Known or Potential Safety Issue
<input checked="" type="checkbox"/> Existing Facility - Rehabilitation/Upgrade	<input type="checkbox"/> Equipment Obsolete
<input type="checkbox"/> Scheduled Replacement	<input checked="" type="checkbox"/> Comply with Regulatory Requirements
<input type="checkbox"/> Improved Service	<input type="checkbox"/> Equipment/Infrastructure at End of Useful Life
<input checked="" type="checkbox"/> Study	<input type="checkbox"/> Other (explain):

Additional Information			
Expected Useful Life (Years)	20	<b>Project inception date</b>	2018
Approx. No. of Customers Benefitted	381		
Is this System part of a Common User Rate?	No	<b>Anticipated Project completion date</b>	2028
Will the Project Require Obtaining Land Rights	No		

Detailed Project Description
<p>This project is part of a DEP mandated Corrective Action Plan, and is intended to mitigate inflow and infiltration into the collection system during and after peak weather events and eliminate system overflows and treatment plant bypasses. Internal CCTV inspection of the majority of the sewage collection system and the inspection of manholes were performed in 2019, and the data was used to identify and target and repair locations in the Lynn Township sewage collection system. Capital rehabilitation projects were performed in 2019 - 2021 which included easement clearing, comprehensive manhole rehabilitation, and collection system repairs. Investigation and enforcement of illegal connections on the private side of the sewer system will be performed in moving forward.</p>

Project Drivers and Needs to be Met by the Project
<p>The primary project driver is regulatory, as the work is part of the DEP-mandated Corrective Action Plan to reduce occurrence and magnitude of wet weather peak flows at the WWTP that cause hydraulic overloads and bypasses. The purpose of the project is to mitigate extraneous flow into the system, maintain DEP compliance, and obtain additional sewer allocations for growth within Township sewer service area.</p>

Project Status - Describe what work, if any has been completed or underway for this project
<p>In 2017 a flow meter study was conducted throughout the system providing data on the areas contributing to excess wet weather flows. In 2018 a manhole inspection program was implemented, along with smoke testing at the Northwestern Lehigh School District campus. In 2019 repairs to the on-site sanitary sewer system were performed by the school district, and LCA performed numerous collection system spot repairs to abate significant system leaks. In 2019 an updated internal CCTV inspection of the entire sewage collection system was performed, along with easement clearing and stabilization. In 2020 - 2021 a manhole rehabilitation project repaired approx. 180 structures in the system. Public and private lateral inspections, illegal connection investigations, repairs, and enforcement will commence in 2024 to further address inflow and infiltration flows.</p>

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary
<p>Reducing I/I flow should result in a reduction of treatment plant operating costs by reducing volume of wastewater that must be conveyed through the plant processes. It is difficult to quantify amount of extraneous flow to be removed, and therefore quantifying cost savings is difficult. Exact costs to be determined.</p>

<b>Project No.</b>	SD-S-26
<b>Project Name</b>	LYNN TOWNSHIP INFLOW & INFILTRATION INVESTIGATION & REMEDIATION PROGRAM

<b>Prior Project Cost</b>	200,000
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 50,000
Land Acquisition	\$ -
Construction/Equipment	\$ 90,000
Professional Services	\$ 50,000
Other	\$ -
Contingencies	\$ 10,000
<b>Total Project Cost</b>	<b>\$ 400,000</b>

Project Estimate Level	
	Conceptual Estimate
	Preliminary Estimate
<b>x</b>	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 150,000</b>
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		Need	Phase of Work
2023 Budget		\$ 50,000	planning & investigation
1st Year	2024	\$ 50,000	planning & investigation
2nd Year	2025	\$ 25,000	planning & investigation
3rd Year	2026	\$ 25,000	planning & investigation
4th Year	2027	\$ 25,000	planning & investigation
5th Year	2028	\$ 25,000	planning & investigation

**LEHIGH COUNTY AUTHORITY  
SUBURBAN DIVISION - CAPITAL IMPROVEMENTS PLAN  
PROJECT DETAIL SHEET**

<b>Project Name</b>	UPPER WESTERN LEHIGH INTERCEPTOR PUMP STATION & FORCE MAIN						
<b>Budget Area</b>	Wastewater	<b>Department</b>	Capital Works	<b>Date</b>	7/1/2023	<b>Project No.</b>	SD-S-28
<b>Location</b>	WLI, Upper and Lower Macungie Townships			<b>Prj. Type</b>	AO	<b>Prj. Funding</b>	LCA
<b>Prj. Category</b>	<b>Primary</b>	Regulatory	<b>Secondary</b>	Sys Imp	<b>Preparer</b>		AK

Purpose of Expenditure (check all that apply)			
<input checked="" type="checkbox"/>	New Facility		Correct Known or Potential Safety Issue
	Existing Facility - Rehabilitation/Upgrade		Equipment Obsolete
	Scheduled Replacement	<input checked="" type="checkbox"/>	Comply with Regulatory Requirements
<input checked="" type="checkbox"/>	Improved Service		Equipment/Infrastructure at End of Useful Life
	Study	<input checked="" type="checkbox"/>	Other (explain): Provide capacity for future growth.

Additional Information			
Expected Useful Life (Years)	100	<b>Project inception date</b>	2021
Approx. No. of Customers Benefitted	**		
Is this System part of a Common User Rate?	N/A	<b>Anticipated Project completion date</b>	2026
Will the Project Require Obtaining Land Rights	Yes		

\*\*=The WLI system provides service to 7 WLI signatories.

Detailed Project Description
As identified in the Interim Act 537 plan approved by DEP in June 2021, conveyance capacity in the Trexlertown area of the Western Lehigh Interceptor was assigned a high priority due to sanitary surcharging and overflows in the vicinity. In late 2019, a study commenced to look at the possible solutions in this area: parallel interceptors, underground storage pipe, and an above ground storage tank. These alternatives indicated downstream impacts and long construction times. A third alternative was recommended by Upper Macungie Township to bypass pump 2.5 mgd of effluent from the Industrial Pretreatment plant flow to a downstream location in the Upper Macungie Township sewer interceptor which has capacity to handle the additional flows. The alternatives are documented in a Special Act 537 Study prepared at the request of DEP.

Project Drivers and Needs to be Met by the Project
The primary drivers for the project are regulatory and system improvement. Per the DEP approved Interim 537 Plan, action is required to alleviate the current sanitary sewer interceptor system bottleneck in the Trexlertown area. This project is intended to address dry-day surcharging and overflows, and allow for future growth.

Project Status - Describe what work, if any has been completed or underway for this project
A Special Interim Act 537 Study was prepared in 2022 as part of the Trexlertown Area Capacity Solution Alternatives project. This project is the recommended alternative identified in that study. Design phase commenced in 2022 and final design and permit procurement was substantially completed by mid-2023, with bid phase to follow in late 2023.

Annual Cost Impact	
Operating - Increase/(Decrease)	N/A
Debt Service	\$ -
<b>Net</b>	<b>\$ -</b>

Revenue Impact	
Gain/(Loss) in Annual Revenue	N/A
Assessment, Contribution in Aid-of-Construction	N/A
Other	

Borrowing Information	
Interest Rate	5.5000%
Term (Years)	30

Explanation if Necessary
Exact costs to be determined.

<b>Project No.</b>	SD-S-28
<b>Project Name</b>	UPPER WESTERN LEHIGH INTERCEPTOR PUMP STATION & FORCE MAIN

<b>Prior Project Cost</b>	\$100,000
<b>Estimated Project Costs:</b>	<b>2023-2028</b>
LCA Staff	\$ 50,000
Land Acquisition	\$ 25,000
Construction/Equipment	\$ 7,400,000
Professional Services	\$ 250,000
Other	
Contingencies	\$ 175,000
<b>Total Project Cost</b>	<b>\$ 8,000,000</b>

Project Estimate Level	
	Conceptual Estimate
	Preliminary Estimate
<b>x</b>	Budget Estimate
	Definitive Estimate

<b>Requested in this Capital Program</b>	<b>\$ 7,750,000</b>
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		Need	Phase of Work
	2023 Budget	\$ 250,000	Design and Permitting
1st Year	2024	\$ 3,500,000	Construction
2nd Year	2025	\$ 4,000,000	Construction
3rd Year	2026	\$ 250,000	Construction
4th Year	2027		
5th Year	2028	\$ -	



# RESOLUTION No. 8-2023-1

(Duly adopted 28 August 2023)

## ***A RESOLUTION SPECIFYING PARTICULAR EMPLOYEES AS AUTHORIZED PERSONS TO PERFORM AUTHORITY FINANCIAL TRANSACTIONS***

WHEREAS, Lehigh County Authority (hereinafter the "Authority") Board of Directors (the "Board") periodically takes action designating particular staff positions to fulfill certain responsibilities under Authority policies, procedures, rules, etc.; and

WHEREAS, to reflect current staff positions and employees who are responsible for managing key functions of the Authority, the Board wishes to update its standing resolution naming specific persons as the Authorized Persons for financial transactions with banks and other financial institutions;

NOW THEREFORE, it shall be resolved that:

1. The following persons are duly appointed Authorized Persons or otherwise authorized to act on behalf of the Authority in the capacities set forth below and that the following original signatures are genuine in all respects:

### **AUTHORIZED PERSONS**

<i>Name of Authority Employee</i>	<i>Title / Position</i>	<i>Specimen Signature</i>
Liesel M. Gross	Chief Executive Officer	
Edward C. Klein	Chief Financial Officer	
Todd A. Marion	Controller	
Linda M. Eberhardt	Accounting Supervisor	

2. This resolution hereby supersedes and amends all previous actions taken by the Authority appointing Authorized Persons for financial transactions with banks and other financial institutions.

On motion of \_\_\_\_\_, seconded by \_\_\_\_\_,  
this Resolution was adopted the 28<sup>th</sup> day of August 2023.

Tally of Votes:      Yeas \_\_\_\_\_      Nays \_\_\_\_\_

I, Linda A. Rosenfeld, Secretary of the Lehigh County Authority Board of Directors, do hereby certify that the foregoing is a true, correct and complete copy of a resolution which was duly adopted by the Authority at a public meeting of the Authority held on 28 August 2023, after notice thereof had been duly given as required by law, at which meeting a quorum was present and voting and which resolution No. 8-2023-1 is now in full force and effect on the date of this certification.

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Linda A. Rosenfeld	Date
Secretary	
Lehigh County Authority Board of Directors	

Attest:

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Lisa J. Miller	Date
Executive Administrative Support Specialist	

**LEHIGH COUNTY AUTHORITY  
FINANCIAL STATEMENTS  
JULY 2023**

LEHIGH COUNTY AUTHORITY  
FINANCIAL STATEMENTS - SUMMARY  
For the Period Ended July 31, 2023

	Consolidated Financial Statements														
	Month					Year To Date					FULL YEAR				
	Actual	Q3 FC	Prior Year	FC Var	PY Var	Actual	Q3 FC	Prior Year	FC Var	PY Var	Q3 FC	Budget	Prior Year	Bud Var	PY Var
Income Statement															
Suburban Water	781,051	567,463	879,081	213,588	(98,030)	2,020,696	1,358,289	1,860,198	662,407	160,498	2,360,014	2,169,036	4,140,698	190,977	(1,780,684)
Suburban Wastewater	(40,427)	(122,807)	(467,328)	82,380	426,901	13,417	(404,398)	(344,048)	417,815	357,466	(412,374)	2,150,192	(455,127)	(2,562,566)	42,753
City Division	4,260,378	3,958,021	769,054	302,357	3,491,324	10,959,493	9,918,240	4,536,387	1,041,253	6,423,106	4,584,426	4,780,898	6,545,431	(196,472)	(1,961,005)
Total LCA	5,001,001	4,402,676	1,180,806	598,325	3,820,195	12,993,606	10,872,131	6,052,537	2,121,475	6,941,070	6,532,066	9,100,126	10,231,002	(2,568,060)	(3,698,936)
Cash Flow Statement															
Suburban Water	195,472	25,397	223,571	170,075	(28,098)	4,555,546	4,034,784	901,782	520,762	3,653,764	3,600,137	46,653	543,740	3,553,484	3,056,397
Suburban Wastewater	(1,616,020)	(1,684,049)	(827,270)	68,029	(788,751)	1,286,873	891,844	(2,175,580)	395,029	3,462,453	2,252,136	762,612	1,362,181	1,489,524	889,955
City Division	6,364,771	6,138,526	1,191,849	226,245	5,172,921	13,739,898	13,009,433	3,762,023	730,464	9,977,874	3,201,348	2,671,275	2,809,215	530,073	392,132
Total LCA	4,944,223	4,479,873	588,150	464,349	4,356,072	19,582,316	17,936,061	2,488,225	1,646,255	17,094,091	9,053,621	3,480,540	4,715,136	5,573,081	4,338,485
Debt Service Coverage Ratio															
Suburban Water	3.99	3.40	4.73	0.58	(0.74)	2.26	2.00	2.37	0.26	(0.10)	2.06	1.83	2.77	0.23	(0.71)
Suburban Wastewater	7.93	6.75	1.10	1.17	6.83	8.79	7.83	8.23	0.96	0.56	9.20	11.69	9.69	(2.49)	(0.49)
City Division	4.83	4.58	2.18	0.24	2.64	2.68	2.59	2.08	0.09	0.60	2.20	2.10	2.62	0.10	(0.42)

LEHIGH COUNTY AUTHORITY  
CONSOLIDATED FINANCIAL STATEMENTS  
For the Period Ended July 31, 2023

STATEMENTS OF ACTIVITIES	Consolidated Financial Statements															
	Month				Year To Date				Q3 FULL YEAR FORECAST				Full Year Budget			
	Sub W	Sub WW	City	LCA	Sub W	Sub WW	City	LCA	Sub W	Sub WW	City	LCA	Sub W	Sub WW	City	LCA
Operating Revenues:																
User Charges	1,651,731	1,480,725	6,225,908	9,358,364	9,498,911	10,519,845	31,655,427	51,674,183	16,691,473	18,892,784	50,488,223	86,072,480	16,287,500	21,822,513	50,680,860	88,790,873
Connection & System Charges	88,203	55,969	1,305,139	1,449,311	293,856	1,016,550	2,592,052	3,902,458	796,419	1,541,094	4,421,699	6,759,211	680,700	875,600	4,096,600	5,652,900
Other Miscellaneous Revenues	3,115	60	15,565	18,740	39,738	345	77,862	117,945	64,026	2,450	121,197	187,673	31,800	2,300	69,300	103,400
Total Operating Revenues	1,743,049	1,536,754	7,546,612	10,826,415	9,832,505	11,536,740	34,325,341	55,694,586	17,551,918	20,436,328	55,031,119	93,019,365	17,000,000	22,700,413	54,846,760	94,547,173
Operating Expenses:																
Personnel	163,214	76,199	891,928	1,131,341	2,212,967	974,742	6,416,112	9,603,821	3,849,242	1,718,938	11,659,603	17,227,783	3,838,376	1,739,145	12,818,583	18,396,104
Shared Services - General & Administrative	16,087	9,384	131,319	156,790	421,718	185,723	1,188,944	1,796,385	851,972	354,954	2,248,803	3,455,729	847,837	353,525	2,197,452	3,398,813
Utilities	38,826	17,533	117,863	174,221	285,080	146,696	1,155,404	1,587,180	447,491	287,233	2,135,769	2,870,493	516,389	312,787	2,018,173	2,847,348
Materials and Supplies	84,894	54,754	272,874	412,521	363,118	246,798	1,710,500	2,320,416	961,564	435,313	3,159,541	4,556,417	887,370	324,100	2,621,000	3,832,470
Miscellaneous Services	339,674	607,383	177,557	1,124,614	2,228,751	4,130,804	1,021,530	7,381,086	4,584,910	7,287,795	2,191,704	14,064,410	4,610,690	7,212,206	2,112,700	13,935,596
Treatment and Transportation	-	336,871	-	336,871	-	2,386,606	5,220	2,391,825	-	3,864,746	14,330	3,879,076	-	4,293,345	14,318	4,307,663
Depreciation and Amortization	258,527	508,465	523,094	1,290,087	1,801,578	3,628,557	3,623,209	9,053,345	3,480,534	6,955,318	6,384,824	16,820,676	3,023,000	6,221,900	6,160,000	15,404,900
Major Maintenance Expenses	-	754	58,047	58,801	-	2,435	148,838	151,272	-	21,003	4,000,000	4,021,003	-	25,200	4,000,000	4,025,200
Other Miscellaneous	-	-	-	-	-	-	-	-	41,600	-	-	41,600	41,600	-	-	41,600
Total Operating Expenses	901,222	1,611,343	2,172,682	4,685,247	7,313,213	11,702,361	15,269,756	34,285,331	14,217,312	20,925,300	31,794,574	66,937,186	13,765,262	20,482,207	31,942,225	66,189,694
Net Operating Profit	841,828	(74,589)	5,373,930	6,141,168	2,519,292	(165,621)	19,055,584	21,409,256	3,334,606	(488,973)	23,236,545	26,082,179	3,234,738	2,218,206	22,904,535	28,357,479
Non-Operating Income (Expense)																
Interest Income	32,198	40,302	300,931	373,431	181,722	236,537	1,774,804	2,193,063	173,004	195,541	1,051,524	1,420,070	64,782	85,128	128,661	278,572
Interest (Expense)	(95,449)	(12,935)	(1,414,483)	(1,522,867)	(692,796)	(92,564)	(9,870,895)	(10,656,255)	(1,161,335)	(155,495)	(19,703,643)	(21,020,473)	(1,130,484)	(153,143)	(18,252,298)	(19,535,925)
Other Miscellaneous	2,475	6,795	-	9,270	12,478	35,065	-	47,544	13,738	36,551	-	50,290	-	-	-	-
Net Non-Operating Income (Expense)	(60,776)	34,162	(1,113,552)	(1,140,167)	(498,596)	179,038	(8,096,091)	(8,415,649)	(974,593)	76,598	(18,652,119)	(19,550,113)	(1,065,702)	(68,015)	(18,123,637)	(19,257,353)
Net Income (Loss)	781,051	(40,427)	4,260,378	5,001,001	2,020,696	13,417	10,959,493	12,993,606	2,360,014	(412,374)	4,584,426	6,532,066	2,169,036	2,150,192	4,780,898	9,100,126
CASH FLOW STATEMENT																
Cash Flows From Operating Activities																
Operating Revenues	1,743,049	1,536,754	7,546,612	10,826,415	9,832,505	11,536,740	34,325,341	55,694,586	17,551,918	20,436,328	55,031,119	93,019,365	17,000,000	22,700,413	54,846,760	94,547,173
Operating Expenses (ex D&A)	(642,695)	(1,102,124)	(1,591,541)	(3,336,359)	(5,511,635)	(8,071,369)	(11,497,709)	(25,080,714)	(10,736,778)	(13,948,980)	(21,409,749)	(46,095,507)	(10,742,262)	(14,235,107)	(21,782,225)	(46,759,594)
Non-Cash Working Capital Changes	(172,108)	(1,372,967)	878,170	(666,905)	(3,018,071)	(2,695,876)	(1,876,348)	(7,590,295)	(222,116)	(3,196)	(1,193,694)	(1,419,007)	(0)	(25,200)	0	(25,200)
Net Cash Provided by (Used in) Operating Activities	928,247	(938,337)	6,833,241	6,823,151	1,302,799	769,495	20,951,284	23,023,578	6,593,024	6,484,152	32,427,675	45,504,851	6,257,738	8,440,106	33,064,535	47,762,379
Cash Flows From Financing Activities																
Capital Contributions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Proceeds New Borrowing	-	-	-	-	6,950,000	-	1,371,118	8,321,118	6,950,000	-	1,400,000	8,350,000	3,950,000	-	1,200,000	5,150,000
Interest Payments	(944)	(12,262)	(3,733)	(16,938)	(592,320)	(87,445)	(5,741,693)	(6,421,458)	(1,129,937)	(151,832)	(11,788,844)	(13,070,613)	(1,130,484)	(153,143)	(11,788,844)	(13,072,471)
Principal Payments	(6,299)	(48,076)	(10,326)	(64,701)	(43,927)	(334,485)	(10,326)	(388,737)	(2,287,508)	(576,096)	(3,342,077)	(6,205,681)	(2,344,383)	(575,980)	(3,342,077)	(6,262,440)
Net Cash Provided by (Used in) Financing Activities	(7,243)	(60,338)	(14,059)	(81,639)	6,313,754	(421,930)	(4,380,901)	1,510,923	3,532,555	(727,928)	(13,730,921)	(10,926,294)	475,133	(729,123)	(13,930,921)	(14,184,911)
Cash Flows from Capital and Related Activities																
Non-Operating Income (Expenses)	2,475	6,795	-	9,270	12,478	35,065	(680,590)	(633,046)	13,738	36,551	(1,361,180)	(1,310,890)	-	-	(1,400,000)	(1,400,000)
Capital Expenditures, net	(760,206)	(171,442)	(755,342)	(1,686,990)	(3,260,207)	(1,114,469)	(3,924,699)	(8,299,375)	(6,717,184)	(5,518,355)	(15,185,750)	(27,421,290)	(6,751,000)	(7,033,500)	(15,191,000)	(28,975,500)
Net Cash Provided By (Used In) Capital and Related Activities	(757,730)	(164,648)	(755,342)	(1,677,720)	(3,247,728)	(1,079,404)	(4,605,289)	(8,932,421)	(6,703,446)	(5,481,803)	(16,546,930)	(28,732,180)	(6,751,000)	(7,033,500)	(16,591,000)	(30,375,500)
Cash Flows From Investing Activities																
Investments Converting To Cash	-	-	-	-	739,000	4,887,174	-	5,626,174	494,000	4,887,174	-	5,381,174	-	-	-	-
Purchased Investments	-	(493,000)	-	(493,000)	(734,000)	(3,105,000)	-	(3,839,000)	(489,000)	(3,105,000)	-	(3,594,000)	-	-	-	-
Interest Income	32,198	40,302	300,931	373,431	181,722	236,537	1,774,804	2,193,063	173,004	195,541	1,051,524	1,420,070	64,782	85,128	128,661	278,572
Net Cash Provided By (Used In) Investing Activities	32,198	(452,698)	300,931	(119,569)	186,722	2,018,711	1,774,804	3,980,237	178,004	1,977,715	1,051,524	3,207,244	64,782	85,128	128,661	278,572
FUND NET CASH FLOWS	195,472	(1,616,020)	6,364,771	4,944,223	4,555,546	1,286,873	13,739,898	19,582,316	3,600,137	2,252,136	3,201,348	9,053,621	46,653	762,612	2,671,275	3,480,540
DEBT SERVICE RATIO																
Debt Service Ratio (Indenture Based)																
Total Operating Revenues	1,651,731	1,480,725	6,225,908	9,358,364	9,498,911	10,519,845	31,655,427	51,674,183	16,691,473	18,892,784	50,488,223	86,072,480	16,287,500	21,822,513	50,680,860	88,790,873
Total Operating Expenses (Cash Based)	(642,695)	(1,102,878)	(1,649,588)	(3,395,160)	(5,511,635)	(8,073,804)	(11,646,547)	(25,231,986)	(10,736,778)	(13,969,983)	(21,409,749)	(46,116,510)	(10,742,262)	(14,260,307)	(21,782,225)	(46,784,794)
Interest Income	32,198	40,302	300,931	373,431	181,722	236,537	1,774,804	2,193,063	173,004	195,541	1,051,524	1,420,070	64,782	85,128	128,661	278,572
Annual Lease Payment (City)	-	-	(113,432)	(113,432)	-	-	(794,022)	(794,022)	-	-	(1,361,180)	(1,361,180)	-	-	(1,400,000)	(1,400,000)
Total Non-Operating Revenues (Expenses)	93,794	62,824	1,320,704	1,477,321	346,073	1,051,961	2,669,913	4,067,947	915,784	1,580,095	4,542,895	7,038,774	754,100	877,900	4,165,900	5,797,900
Cash Available For Debt Service	1,135,028	480,973	6,084,523	7,700,524	4,515,070	3,734,539	23,659,576	31,909,185	7,043,483	6,698,438	33,311,713	47,053,634	6,364,120	8,525,235	31,793,196	46,682,551
Interest Paid	94,161	12,653	982,404	1,089,218	659,130	88,569	6,876,826	7,624,524	1,129,937	151,832	11,788,844	13,070,613	1,130,484	153,143	11,788,844	13,072,471
Debt Retirement (Principal Payments)	190,626	48,008	278,506	517,140	1,334,380	336,056	1,949,545	3,619,980	2,287,508	576,096	3,342,077	6,205,681	2,344,383	575,980	3,342,077	6,262,440
Total Debt Service	284,787	60,661	1,260,910	1,606,358	1,993,510	424,625	8,826,371	11,244,505	3,417,445	727,928	15,130,921	19,276,294	3,474,867	729,123	15,130,921	19,334,911
Debt Service Ratio	3.99	7.93	4.83	4.79	2.26	8.79	2.68	2.84	2.06	9.20	2.20	2.44	1.83	11.69	2.10	2.41

LEHIGH COUNTY AUTHORITY  
FINANCIAL STATEMENTS - SUBURBAN WATER  
For the Period Ended July 31, 2023

STATEMENTS OF ACTIVITIES	Suburban - Water														
	Month					Year To Date					Full Year				
	Actual	Q3 FC	Prior Year	FC Var	PY Var	Actual	Q3 FC	Prior Year	FC Var	PY Var	Q3 FC	Budget	Prior Year	Bud Var	PY Var
Operating Revenues:															
User Charges	1,651,731	1,690,350	1,645,139	(38,619)	6,592	9,498,911	9,379,063	8,799,783	119,848	699,127	16,691,473	16,287,500	16,347,372	403,973	344,101
Connection & System Charges	88,203	146,910	151,590	(58,707)	(63,387)	293,856	401,519	315,834	(107,663)	(21,978)	796,419	680,700	653,031	115,719	143,388
Other Miscellaneous Revenues	3,115	1,030	4,915	2,085	(1,800)	39,738	37,766	26,506	1,972	13,232	64,026	31,800	151,924	32,226	(87,898)
Total Operating Revenues	1,743,049	1,838,290	1,801,644	(95,241)	(58,594)	9,832,505	9,818,348	9,142,123	14,157	690,382	17,551,918	17,000,000	17,152,327	551,918	399,591
Operating Expenses:															
Personnel	163,214	319,573	170,782	156,359	7,568	2,212,967	2,367,147	1,826,574	154,180	(386,394)	3,849,242	3,838,376	3,020,808	(10,865)	(828,434)
Shared Services - General & Administrative	16,087	86,410	55,999	70,323	39,913	421,718	505,462	324,937	83,743	(96,782)	851,972	847,837	549,501	(4,135)	(302,471)
Utilities	38,826	35,220	32,866	(3,606)	(5,960)	285,080	260,131	307,146	(24,949)	22,066	447,491	516,389	481,998	68,898	34,507
Materials and Supplies	84,894	73,910	37,079	(10,984)	(47,815)	363,118	419,784	448,116	56,666	84,998	961,564	887,370	864,220	(74,194)	(97,343)
Miscellaneous Services	339,674	359,500	279,940	19,826	(59,734)	2,228,751	2,413,020	1,905,828	184,269	(322,923)	4,584,910	4,610,690	3,654,426	25,780	(930,484)
Treatment and Transportation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Depreciation and Amortization	258,527	306,817	251,752	48,290	(6,775)	1,801,578	1,946,448	1,756,927	144,870	(44,651)	3,480,534	3,023,000	3,681,806	(457,534)	201,272
Major Maintenance Expenses	-	-	1,292	-	1,292	-	-	6,006	-	6,006	-	-	-	-	-
Other Miscellaneous	-	-	-	-	-	-	-	-	-	-	41,600	41,600	156,699	-	115,099
Total Operating Expenses	901,222	1,181,430	829,711	280,208	(71,511)	7,313,213	7,911,992	6,575,533	598,779	(737,680)	14,217,312	13,765,262	12,409,458	(452,050)	(1,807,853)
Net Operating Profit	841,828	656,860	971,933	184,968	(130,105)	2,519,292	1,906,357	2,566,590	612,935	(47,298)	3,334,606	3,234,738	4,742,869	99,868	(1,408,262)
Non-Operating Income (Expense)															
Interest Income	32,198	4,810	7,675	27,388	24,523	181,722	128,494	32,391	53,227	149,331	173,004	64,782	103,451	108,222	69,554
Interest (Expense)	(95,449)	(94,207)	(100,425)	(1,242)	4,976	(692,796)	(690,300)	(702,929)	(2,496)	10,133	(1,161,335)	(1,130,484)	(847,133)	(30,851)	(314,202)
Other Miscellaneous	2,475	-	(102)	2,475	2,577	12,478	13,738	(35,855)	(1,260)	48,334	13,738	-	141,512	13,738	(127,774)
Net Non-Operating Income (Expense)	(60,776)	(89,397)	(92,852)	28,621	32,075	(498,596)	(548,068)	(706,393)	49,472	207,797	(974,593)	(1,065,702)	(602,171)	91,109	(372,422)
Net Income (Loss)	781,051	567,463	879,081	213,588	(98,030)	2,020,696	1,358,289	1,860,198	662,407	160,498	2,360,014	2,169,036	4,140,698	190,977	(1,780,684)
CASH FLOW STATEMENT															
Cash Flows From Operating Activities															
Operating Revenues	1,743,049	1,838,290	1,801,644	(95,241)	(58,594)	9,832,505	9,818,348	9,142,123	14,157	690,382	17,551,918	17,000,000	17,152,327	551,918	399,591
Operating Expenses (ex D&A)	(642,695)	(874,613)	(577,959)	231,918	(64,735)	(5,511,635)	(5,965,544)	(4,818,606)	453,909	(693,029)	(10,736,778)	(10,742,262)	(8,727,652)	5,484	(2,009,126)
Non-Cash Working Capital Changes	(172,108)	(172,108)	(478,532)	1	306,425	(3,018,071)	(3,015,952)	(1,296,446)	(2,119)	(1,721,625)	(222,116)	(0)	2,384,609	(222,116)	(2,606,726)
Net Cash Provided by (Used in) Operating Activities	928,247	791,569	745,152	136,678	183,095	1,302,799	836,852	3,027,071	465,947	(1,724,272)	6,593,024	6,257,738	10,809,284	335,286	(4,216,260)
Cash Flows From Financing Activities															
Capital Contributions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Proceeds New Borrowing	-	-	-	-	-	6,950,000	6,950,000	-	-	6,950,000	6,950,000	3,950,000	-	3,000,000	6,950,000
Interest Payments	(944)	(981)	(1,041)	37	98	(592,320)	(566,050)	(601,506)	(26,270)	9,187	(1,129,937)	(1,130,484)	(1,200,136)	547	70,199
Principal Payments	(6,299)	(9,707)	(7,971)	3,408	1,672	(43,927)	(75,967)	(109,091)	32,040	65,164	(2,287,508)	(2,344,383)	(1,925,231)	56,875	(362,277)
Net Cash Provided by (Used in) Financing Activities	(7,243)	(10,687)	(9,012)	3,445	1,770	6,313,754	6,307,983	(710,597)	5,770	7,024,351	3,532,555	475,133	(3,125,367)	3,057,422	6,657,922
Cash Flows from Capital and Related Activities															
Non-Operating Income (Expenses)	2,475	-	(102)	2,475	2,577	12,478	13,738	(35,855)	(1,260)	48,334	13,738	-	(112,090)	13,738	125,828
Capital Expenditures, net	(760,206)	(760,295)	(520,143)	89	(240,062)	(3,260,207)	(3,257,284)	(1,417,228)	(2,923)	(1,842,979)	(6,717,184)	(6,751,000)	(7,137,538)	33,816	420,354
Net Cash Provided By (Used In) Capital and Related Activities	(757,730)	(760,295)	(520,245)	2,565	(237,486)	(3,247,728)	(3,243,546)	(1,453,083)	(4,182)	(1,794,646)	(6,703,446)	(6,751,000)	(7,249,628)	47,554	546,182
Cash Flows From Investing Activities															
Investments Converting To Cash	-	-	-	-	-	739,000	494,000	990,000	245,000	(251,000)	494,000	-	990,000	494,000	(496,000)
Purchased Invesments	-	-	-	-	-	(734,000)	(489,000)	(984,000)	(245,000)	250,000	(489,000)	-	(984,000)	(489,000)	495,000
Interest Income	32,198	4,810	7,675	27,388	24,523	181,722	128,494	32,391	53,227	149,331	173,004	64,782	103,451	108,222	69,554
Net Cash Provided By (Used In) Investing Activities	32,198	4,810	7,675	27,388	24,523	186,722	133,494	38,391	53,227	148,331	178,004	64,782	109,451	113,222	68,554
FUND NET CASH FLOWS	195,472	25,397	223,571	170,075	(28,098)	4,555,546	4,034,784	901,782	520,762	3,653,764	3,600,137	46,653	543,740	3,553,484	3,056,397
DEBT SERVICE RATIO															
Debt Service Ratio (Indenture Based)															
User Charges	1,651,731	1,690,350	1,645,139	(38,619)	6,592	9,498,911	9,379,063	8,799,783	119,848	699,127	16,691,473	16,287,500	16,347,372	403,973	344,101
Operating Expenses (Cash Based)	(642,695)	(874,613)	(577,959)	231,918	(64,735)	(5,511,635)	(5,965,544)	(4,818,606)	453,909	(693,029)	(10,736,778)	(10,742,262)	(8,727,652)	5,484	(2,009,126)
Interest Income	32,198	4,810	7,675	27,388	24,523	181,722	128,494	32,391	53,227	149,331	173,004	64,782	103,451	108,222	69,554
Annual Lease Payment (City)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-Operating Revenues (Expenses)	93,794	147,940	156,404	(54,146)	(62,610)	346,073	453,024	306,484	(106,951)	39,588	915,784	754,100	946,467	161,684	(30,683)
Cash Available For Debt Service	1,135,028	968,487	1,231,258	166,541	(96,230)	4,515,070	3,995,037	4,320,053	520,033	195,017	7,043,483	6,364,120	8,669,637	679,362	(1,626,155)
Interest Paid	94,161	94,161	100,011	-	(5,850)	659,130	659,130	700,079	-	(40,949)	1,129,937	1,130,484	1,200,136	(547)	(70,199)
Debt Retirement (Principal Payments)	190,626	190,626	160,436	-	30,190	1,334,380	1,334,380	1,123,052	-	211,328	2,287,508	2,344,383	1,925,231	(56,875)	362,277
Total Debt Service	284,787	284,787	260,447	-	24,340	1,993,510	1,993,510	1,823,131	-	170,379	3,417,445	3,474,867	3,125,367	(57,422)	292,078
Debt Service Ratio	3.99	3.40	4.73	0.58	(0.74)	2.26	2.00	2.37	0.26	(0.10)	2.06	1.83	2.77	0.23	(0.71)

**LEHIGH COUNTY AUTHORITY**  
**VARIANCE ANALYSIS - YTD**  
**For the Period Ended July 31, 2023**

**STATEMENTS OF ACTIVITIES**

**Operating Revenues:**

User Charges  
Connection & System Charges  
Other Miscellaneous Revenues

**Total Operating Revenues**

**Operating Expenses:**

Personnel  
Shared Services - General & Administrative  
Utilities  
Materials and Supplies  
Miscellaneous Services  
Treatment and Transportation  
Depreciation and Amortization  
Major Maintenance Expenses  
Other Miscellaneous

**Total Operating Expenses**

**Net Operating Profit**

**Non-Operating Income (Expense)**

Interest Income  
Interest (Expense)  
Other Miscellaneous

**Net Non-Operating Income (Expense)**

**Net Income (Loss)**

**CASH FLOW STATEMENT**

**Cash Flows From Operating Activities**

Operating Revenues  
Operating Expenses (ex D&A)  
Non-Cash Working Capital Changes

**Net Cash Provided by (Used in) Operating Activities**

**Cash Flows From Financing Activities**

Capital Contributions  
Proceeds New Borrowing  
Interest Payments  
Principal Payments

**Net Cash Provided by (Used in) Financing Activities**

**Cash Flows from Capital and Related Activities**

Non-Operating Income (Expenses)  
Capital Expenditures, net

**Net Cash Provided By (Used In) Capital and Related Activities**

**Cash Flows From Investing Activities**

Investments Converting To Cash  
Purchased Investments  
Interest Income

**Net Cash Provided By (Used In) Investing Activities**

**FUND NET CASH FLOWS**

Suburban - Water			
Actual	Q3 FC	FC Var	Comments
9,498,911	9,379,063	119,848	Higher residential revenues
293,856	401,519	(107,663)	Lower tapping fees
39,738	37,766	1,972	
<b>9,832,505</b>	<b>9,818,348</b>	<b>14,157</b>	<b>Higher user charges almost offset by lower system charges</b>
2,212,967	2,367,147	154,180	Lower costs allocated in
421,718	505,462	83,743	Lower G&A allocated in from internal services
285,080	260,131	(24,949)	
363,118	419,784	56,666	
2,228,751	2,413,020	184,269	Lower water purchases and lower maintenance services
-	-	-	
1,801,578	1,946,448	144,870	
-	-	-	
-	-	-	
<b>7,313,213</b>	<b>7,911,992</b>	<b>598,779</b>	<b>Lower personnel costs, lower G&amp;A costs, lower services costs, lower materials &amp; supplies costs, and lower D&amp;A</b>
<b>2,519,292</b>	<b>1,906,357</b>	<b>612,935</b>	<b>Higher operating revenues along with lower operating expenses</b>
181,722	128,494	53,227	
(692,796)	(690,300)	(2,496)	
12,478	13,738	(1,260)	
<b>(498,596)</b>	<b>(548,068)</b>	<b>49,472</b>	<b>Higher interest income</b>
<b>2,020,696</b>	<b>1,358,289</b>	<b>662,407</b>	<b>Higher net operating income aided by higher interest income</b>
9,832,505	9,818,348	14,157	
(5,511,635)	(5,965,544)	453,909	
(3,018,071)	(3,015,952)	(2,119)	
<b>1,302,799</b>	<b>836,852</b>	<b>465,947</b>	<b>Higher operating revenues along with lower operating expenses</b>
-	-	-	
6,950,000	6,950,000	-	
(592,320)	(566,050)	(26,270)	
(43,927)	(75,967)	32,040	
<b>6,313,754</b>	<b>6,307,983</b>	<b>5,770</b>	
12,478	13,738	(1,260)	
(3,260,207)	(3,257,284)	(2,923)	
<b>(3,247,728)</b>	<b>(3,243,546)</b>	<b>(4,182)</b>	
739,000	494,000	245,000	
(734,000)	(489,000)	(245,000)	
181,722	128,494	53,227	
<b>186,722</b>	<b>133,494</b>	<b>53,227</b>	<b>Higher interest income</b>
<b>4,555,546</b>	<b>4,034,784</b>	<b>520,762</b>	<b>Higher cash from operations along with higher interest income</b>

LEHIGH COUNTY AUTHORITY  
FINANCIAL STATEMENTS - SUBURBAN WASTEWATER  
For the Period Ended July 31, 2023

STATEMENTS OF ACTIVITIES	Suburban - Wastewater														
	Month					Year To Date					Full Year				
	Actual	Q3 FC	Prior Year	FC Var	PY Var	Actual	Q3 FC	Prior Year	FC Var	PY Var	Q3 FC	Budget	Prior Year	Bud Var	PY Var
Operating Revenues:															
User Charges	1,480,725	1,517,323	852,292	(36,598)	628,433	10,519,845	9,901,899	8,575,981	617,947	1,943,864	18,892,784	21,822,513	15,021,652	(2,929,729)	3,871,132
Connection & System Charges	55,969	38,410	83,576	17,559	(27,607)	1,016,550	964,964	1,089,338	51,587	(72,788)	1,541,094	875,600	3,319,169	665,494	(1,778,075)
Other Miscellaneous Revenues	60	30	15	30	45	345	360	150	(15)	195	2,450	2,300	1,585	150	865
Total Operating Revenues	1,536,754	1,555,763	935,883	(19,008)	600,871	11,536,740	10,867,222	9,665,469	669,518	1,871,272	20,436,328	22,700,413	18,342,406	(2,264,085)	2,093,922
Operating Expenses:															
Personnel	76,199	137,170	59,770	60,971	(16,429)	974,742	1,025,889	759,114	51,147	(215,627)	1,718,938	1,739,145	1,245,134	20,206	(473,804)
Shared Services - General & Administrative	9,384	33,680	21,435	24,296	12,051	185,723	213,434	134,970	27,711	(50,753)	354,954	353,525	225,034	(1,429)	(129,920)
Utilities	17,533	25,910	19,412	8,377	1,880	146,696	152,933	171,247	6,237	24,551	287,233	312,787	271,866	25,554	(15,367)
Materials and Supplies	54,754	25,970	17,104	(28,784)	(37,650)	246,798	212,443	160,408	(34,355)	(86,390)	435,313	324,100	339,120	(111,213)	(96,193)
Miscellaneous Services	607,383	567,720	509,846	(39,663)	(97,537)	4,130,804	4,018,385	3,698,911	(112,419)	(431,894)	7,287,795	7,212,206	6,503,137	(75,589)	(784,658)
Treatment and Transportation	336,871	357,779	250,422	20,908	(86,449)	2,386,606	2,075,853	1,267,969	(310,753)	(1,118,637)	3,864,746	4,293,345	2,846,176	428,599	(1,018,570)
Depreciation and Amortization	508,465	519,616	516,262	11,151	7,796	3,628,557	3,637,882	3,613,791	9,325	(14,767)	6,955,318	6,221,900	7,090,828	(733,418)	135,510
Major Maintenance Expenses	754	4,409	4,404	3,655	3,650	2,435	16,271	20,445	13,836	18,010	21,003	25,200	-	4,197	(21,003)
Other Miscellaneous	-	-	-	-	-	-	-	-	-	-	-	-	86,525	-	86,525
Total Operating Expenses	1,611,343	1,672,254	1,398,655	60,911	(212,689)	11,702,361	11,353,090	9,826,854	(349,272)	(1,875,507)	20,925,300	20,482,207	18,607,820	(443,094)	(2,317,480)
Net Operating Profit	(74,589)	(116,492)	(462,772)	41,903	388,182	(165,621)	(485,867)	(161,386)	320,247	(4,235)	(488,973)	2,218,206	(265,414)	(2,707,179)	(223,559)
Non-Operating Income (Expense)															
Interest Income	40,302	6,620	10,124	33,682	30,179	236,537	138,201	42,564	98,336	193,973	195,541	85,128	130,269	110,413	65,273
Interest (Expense)	(12,935)	(12,935)	(15,705)	0	2,770	(92,564)	(93,283)	(110,403)	719	17,839	(155,495)	(153,143)	(185,935)	(2,352)	30,440
Other Miscellaneous	6,795	-	1,025	6,795	5,770	35,065	36,551	(114,824)	(1,486)	149,890	36,551	-	(134,047)	36,551	170,598
Net Non-Operating Income (Expense)	34,162	(6,315)	(4,556)	40,477	38,719	179,038	81,469	(182,663)	97,569	361,701	76,598	(68,015)	(189,713)	144,613	266,311
Net Income (Loss)	(40,427)	(122,807)	(467,328)	82,380	426,901	13,417	(404,398)	(344,048)	417,815	357,466	(412,374)	2,150,192	(455,127)	(2,562,566)	42,753
CASH FLOW STATEMENT															
Cash Flows From Operating Activities															
Operating Revenues	1,536,754	1,555,763	935,883	(19,008)	600,871	11,536,740	10,867,222	9,665,469	669,518	1,871,272	20,436,328	22,700,413	18,342,406	(2,264,085)	2,093,922
Operating Expenses (ex D&A)	(1,102,124)	(1,148,229)	(877,989)	46,105	(224,135)	(8,071,369)	(7,698,936)	(6,192,619)	(372,433)	(1,878,750)	(13,948,980)	(14,235,107)	(11,516,992)	286,127	(2,431,988)
Non-Cash Working Capital Changes	(1,372,967)	(1,373,579)	(525,308)	612	(847,659)	(2,695,876)	(2,696,536)	(1,016,853)	660	(1,679,024)	(3,196)	(25,200)	909,713	22,004	(912,909)
Net Cash Provided by (Used in) Operating Activities	(938,337)	(966,045)	(467,414)	27,708	(470,923)	769,495	471,750	2,455,997	297,745	(1,686,502)	6,484,152	8,440,106	7,735,127	(1,955,954)	(1,250,975)
Cash Flows From Financing Activities															
Capital Contributions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Proceeds New Borrowing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest Payments	(12,262)	(12,612)	(11,634)	350	(628)	(87,445)	(88,470)	(82,821)	1,025	(4,624)	(151,832)	(153,143)	(141,271)	1,311	(10,561)
Principal Payments	(48,076)	(48,046)	(46,916)	(30)	(1,160)	(334,485)	(334,394)	(326,414)	(91)	(8,071)	(576,096)	(575,980)	(562,430)	(116)	(13,666)
Net Cash Provided by (Used in) Financing Activities	(60,338)	(60,658)	(58,550)	320	(1,788)	(421,930)	(422,864)	(409,235)	934	(12,695)	(727,928)	(729,123)	(703,701)	1,195	(24,227)
Cash Flows from Capital and Related Activities															
Non-Operating Income (Expenses)	6,795	-	1,025	6,795	5,770	35,065	36,551	(114,824)	(1,486)	149,890	36,551	-	(134,047)	36,551	170,598
Capital Expenditures, net	(171,442)	(170,966)	(312,455)	(476)	141,012	(1,114,469)	(1,113,969)	(2,154,083)	(500)	1,039,614	(5,518,355)	(7,033,500)	(3,673,467)	1,515,145	(1,844,888)
Net Cash Provided By (Used In) Capital and Related Activities	(164,648)	(170,966)	(311,430)	6,319	146,782	(1,079,404)	(1,077,418)	(2,268,907)	(1,986)	1,189,503	(5,481,803)	(7,033,500)	(3,807,513)	1,551,697	(1,674,290)
Cash Flows From Investing Activities															
Investments Converting To Cash	-	-	-	-	-	4,887,174	4,887,174	2,167,000	-	2,720,174	4,887,174	-	2,906,000	4,887,174	1,981,174
Purchased Investments	(493,000)	(493,000)	-	-	(493,000)	(3,105,000)	(3,105,000)	(4,163,000)	-	1,058,000	(3,105,000)	-	(4,898,000)	(3,105,000)	1,793,000
Interest Income	40,302	6,620	10,124	33,682	30,179	236,537	138,201	42,564	98,336	193,973	195,541	85,128	130,269	110,413	65,273
Net Cash Provided By (Used In) Investing Activities	(452,698)	(486,380)	10,124	33,682	(462,821)	2,018,711	1,920,375	(1,953,436)	98,336	3,972,147	1,977,715	85,128	(1,861,731)	1,892,587	3,839,447
FUND NET CASH FLOWS	(1,616,020)	(1,684,049)	(827,270)	68,029	(788,751)	1,286,873	891,844	(2,175,580)	395,029	3,462,453	2,252,136	762,612	1,362,181	1,489,524	889,955
DEBT SERVICE RATIO															
Debt Service Ratio (Indenture Based)															
User Charges	1,480,725	1,517,323	852,292	(36,598)	628,433	10,519,845	9,901,899	8,575,981	617,947	1,943,864	18,892,784	21,822,513	15,021,652	(2,929,729)	3,871,132
Operating Expenses (Cash Based)	(1,102,878)	(1,152,638)	(882,393)	49,760	(220,485)	(8,073,804)	(7,715,207)	(6,213,064)	(358,597)	(1,860,740)	(13,969,983)	(14,260,307)	(11,516,992)	290,324	(2,452,991)
Interest Income	40,302	6,620	10,124	33,682	30,179	236,537	138,201	42,564	98,336	193,973	195,541	85,128	130,269	110,413	65,273
Annual Lease Payment (City)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-Operating Revenues (Expenses)	62,824	38,440	84,616	24,384	(21,792)	1,051,961	1,001,875	974,664	50,086	77,297	1,580,095	877,900	3,186,707	702,195	(1,606,612)
Cash Available For Debt Service	480,973	409,744	64,639	71,229	416,335	3,734,539	3,326,768	3,380,145	407,771	354,394	6,698,438	8,525,235	6,821,636	(1,826,797)	(123,198)
Interest Paid	12,653	12,653	11,773	-	880	88,569	88,569	82,408	-	6,161	151,832	153,143	141,271	(1,311)	10,561
Debt Retirement (Principal Payments)	48,008	48,008	46,869	-	1,139	336,056	336,056	328,084	-	7,972	576,096	575,980	562,430	116	13,666
Total Debt Service	60,661	60,661	58,642	-	2,019	424,625	424,625	410,492	-	14,132	727,928	729,123	703,701	(1,195)	24,227
Debt Service Ratio	7.93	6.75	1.10	1.17	6.83	8.79	7.83	8.23	0.96	0.56	9.20	11.69	9.69	(2.49)	(0.49)



LEHIGH COUNTY AUTHORITY  
VARIANCE ANALYSIS - YTD  
For the Period Ended July 31, 2023

**STATEMENTS OF ACTIVITIES**

**Operating Revenues:**

User Charges  
Connection & System Charges  
Other Miscellaneous Revenues

**Total Operating Revenues**

**Operating Expenses:**

Personnel  
Shared Services - General & Administrative  
Utilities  
Materials and Supplies  
Miscellaneous Services  
Treatment and Transportation  
Depreciation and Amortization  
Major Maintenance Expenses  
Other Miscellaneous

**Total Operating Expenses**

**Net Operating Profit**

**Non-Operating Income (Expense)**

Interest Income  
Interest (Expense)  
Other Miscellaneous

**Net Non-Operating Income (Expense)**

**Net Income (Loss)**

**CASH FLOW STATEMENT**

**Cash Flows From Operating Activities**

Operating Revenues  
Operating Expenses (ex D&A)  
Non-Cash Working Capital Changes

**Net Cash Provided by (Used in) Operating Activities**

**Cash Flows From Financing Activities**

Capital Contributions  
Proceeds New Borrowing  
Interest Payments  
Principal Payments

**Net Cash Provided by (Used in) Financing Activities**

**Cash Flows from Capital and Related Activities**

Non-Operating Income (Expenses)  
Capital Expenditures, net

**Net Cash Provided By (Used In) Capital and Related Activities**

**Cash Flows From Investing Activities**

Investments Converting To Cash  
Purchased Investments  
Interest Income

**Net Cash Provided By (Used In) Investing Activities**

**FUND NET CASH FLOWS**

Suburban - Wastewater				
Actual	Q3 FC	FC Var	Comments	
10,519,845	9,901,899	617,947	Higher municipal charges, higher residential & commercial charges and higher hauler revenues	
1,016,550	964,964	51,587	Higher tapping fees	
345	360	(15)		
<b>11,536,740</b>	<b>10,867,222</b>	<b>669,518</b>	<b>Higher user charges and higher system charges</b>	
974,742	1,025,889	51,147		
185,723	213,434	27,711		
146,696	152,933	6,237		
246,798	212,443	(34,355)		
4,130,804	4,018,385	(112,419)	Higher contract operator costs	
2,386,606	2,075,853	(310,753)	Higher T&T volumes	
3,628,557	3,637,882	9,325		
2,435	16,271	13,836		
-	-	-		
<b>11,702,361</b>	<b>11,353,090</b>	<b>(349,272)</b>	<b>Mostly due to higher T&amp;T volumes along with higher services costs</b>	
<b>(165,621)</b>	<b>(485,867)</b>	<b>320,247</b>	<b>Higher operating revenues partially offset by higher operating expenses</b>	
236,537	138,201	98,336		
(92,564)	(93,283)	719		
35,065	36,551	(1,486)		
<b>179,038</b>	<b>81,469</b>	<b>97,569</b>	<b>Higher interest income</b>	
<b>13,417</b>	<b>(404,398)</b>	<b>417,815</b>	<b>Higher net operating income and higher interest income</b>	
11,536,740	10,867,222	669,518		
(8,071,369)	(7,698,936)	(372,433)		
(2,695,876)	(2,696,536)	660		
<b>769,495</b>	<b>471,750</b>	<b>297,745</b>	<b>Higher operating revenues partially offset by higher operating expenses</b>	
-	-	-		
-	-	-		
(87,445)	(88,470)	1,025		
(334,485)	(334,394)	(91)		
<b>(421,930)</b>	<b>(422,864)</b>	<b>934</b>		
35,065	36,551	(1,486)		
(1,114,469)	(1,113,969)	(500)		
<b>(1,079,404)</b>	<b>(1,077,418)</b>	<b>(1,986)</b>		
4,887,174	4,887,174	-		
(3,105,000)	(3,105,000)	-		
236,537	138,201	98,336		
<b>2,018,711</b>	<b>1,920,375</b>	<b>98,336</b>	<b>Higher interest income</b>	
<b>1,286,873</b>	<b>891,844</b>	<b>395,029</b>	<b>Higher cash from operations along with higher interest income</b>	

LEHIGH COUNTY AUTHORITY  
FINANCIAL STATEMENTS - CITY DIVISION  
For the Period Ended July 31, 2023

STATEMENTS OF ACTIVITIES	City Division														
	Month					Year To Date					Full Year				
	Actual	Q3 FC	Prior Year	FC Var	PY Var	Actual	Q3 FC	Prior Year	FC Var	PY Var	Q3 FC	Budget	Prior Year	Bud Var	PY Var
Operating Revenues:															
User Charges	6,225,908	6,602,403	3,943,682	(376,495)	2,282,226	31,655,427	31,939,826	26,269,616	(284,399)	5,385,811	50,488,223	50,680,860	46,757,244	(192,637)	3,730,979
Connection & System Charges	1,305,139	1,018,400	235,054	286,739	1,070,085	2,592,052	2,260,659	2,163,213	331,393	428,839	4,421,699	4,096,600	8,334,971	325,099	(3,913,272)
Other Miscellaneous Revenues	15,565	1,250	3,855	14,315	11,710	77,862	62,777	33,810	15,085	44,052	121,197	69,300	214,662	51,897	(93,465)
Total Operating Revenues	7,546,612	7,622,053	4,182,591	(75,441)	3,364,021	34,325,341	34,263,261	28,466,639	62,079	5,858,702	55,031,119	54,846,760	55,306,877	184,359	(275,758)
Operating Expenses:															
Personnel	891,928	1,082,849	884,482	190,921	(7,446)	6,416,112	6,598,749	6,489,167	182,637	73,054	11,659,603	12,818,583	10,317,615	1,158,980	(1,341,988)
Shared Services - General & Administrative	131,319	213,200	155,790	81,881	24,471	1,188,944	1,339,393	941,228	150,449	(247,715)	2,248,803	2,197,452	1,605,755	(51,351)	(643,048)
Utilities	117,863	145,290	129,745	27,427	11,882	1,155,404	1,146,879	1,016,540	(8,525)	(138,864)	2,135,769	2,018,173	1,802,290	(117,596)	(333,479)
Materials and Supplies	272,874	232,920	177,512	(39,954)	(95,361)	1,710,500	1,777,601	1,203,645	67,101	(506,855)	3,159,541	2,621,000	2,227,858	(538,541)	(931,683)
Miscellaneous Services	177,557	232,150	191,040	54,593	13,483	1,021,530	983,084	808,735	(38,446)	(212,796)	2,191,704	2,112,700	1,807,096	(79,004)	(384,608)
Treatment and Transportation	-	-	-	-	-	5,220	6,950	5,625	1,730	405	14,330	14,318	11,594	(12)	(2,736)
Depreciation and Amortization	523,094	517,210	521,492	(5,884)	(1,602)	3,623,209	3,615,033	3,650,528	(8,176)	27,318	6,384,824	6,160,000	6,492,068	(224,824)	107,244
Major Maintenance Expenses	58,047	126,951	27,936	68,904	(30,111)	148,838	263,078	180,037	114,240	31,200	4,000,000	4,000,000	5,708,208	-	1,708,208
Other Miscellaneous	-	-	-	-	-	-	-	5,200	-	5,200	-	-	-	-	-
Total Operating Expenses	2,172,682	2,550,570	2,087,998	377,888	(84,684)	15,269,756	15,730,766	14,300,704	461,010	(969,052)	31,794,574	31,942,225	29,972,483	147,652	(1,822,090)
Net Operating Profit	5,373,930	5,071,483	2,094,593	302,447	3,279,337	19,055,584	18,532,495	14,165,934	523,090	4,889,650	23,236,545	22,904,535	25,334,393	332,010	(2,097,848)
Non-Operating Income (Expense)															
Interest Income	300,931	300,700	68,896	231	232,035	1,774,804	1,498,934	128,661	275,870	1,646,143	1,051,524	128,661	914,680	922,863	136,844
Interest (Expense)	(1,414,483)	(1,414,162)	(1,394,435)	(321)	(20,048)	(9,870,895)	(10,113,188)	(9,758,208)	242,293	(112,687)	(19,703,643)	(18,252,298)	(19,703,643)	(1,451,345)	-
Other Miscellaneous	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Non-Operating Income (Expense)	(1,113,552)	(1,113,462)	(1,325,539)	(90)	211,987	(8,096,091)	(8,614,254)	(9,629,547)	518,163	1,533,456	(18,652,119)	(18,123,637)	(18,788,962)	(528,482)	136,844
Net Income (Loss)	4,260,378	3,958,021	769,054	302,357	3,491,324	10,959,493	9,918,240	4,536,387	1,041,253	6,423,106	4,584,426	4,780,898	6,545,431	(196,472)	(1,961,005)
CASH FLOW STATEMENT															
Cash Flows From Operating Activities															
Operating Revenues	7,546,612	7,622,053	4,182,591	(75,441)	3,364,021	34,325,341	34,263,261	28,466,639	62,079	5,858,702	55,031,119	54,846,760	55,306,877	184,359	(275,758)
Operating Expenses (ex D&A)	(1,591,541)	(1,906,409)	(1,538,570)	314,868	(52,971)	(11,497,709)	(11,852,656)	(10,470,139)	354,946	(1,027,570)	(21,409,749)	(21,782,225)	(23,480,415)	372,476	2,070,666
Non-Cash Working Capital Changes	878,170	878,073	(1,106,050)	97	1,984,220	(1,876,348)	(1,876,636)	(4,265,604)	288	2,389,256	(1,193,694)	0	(1,754,753)	(1,193,694)	561,059
Net Cash Provided by (Used in) Operating Activities	6,833,241	6,593,717	1,537,970	239,524	5,295,271	20,951,284	20,533,970	13,730,895	417,314	7,220,388	32,427,675	33,064,535	30,071,709	(636,859)	2,355,967
Cash Flows From Financing Activities															
Capital Contributions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Proceeds New Borrowing	-	-	-	-	-	1,371,118	1,400,000	-	(28,882)	1,371,118	1,400,000	1,200,000	-	200,000	1,400,000
Interest Payments	(3,733)	-	-	(3,733)	(3,733)	(5,741,693)	(5,813,938)	(5,755,505)	72,245	13,812	(11,788,844)	(11,788,844)	(11,670,361)	-	(118,483)
Principal Payments	(10,326)	-	-	(10,326)	(10,326)	(10,326)	-	-	(10,326)	(10,326)	(3,342,077)	(3,342,077)	(2,514,642)	0	(827,435)
Net Cash Provided by (Used in) Financing Activities	(14,059)	-	-	(14,059)	(14,059)	(4,380,901)	(4,413,938)	(5,755,505)	33,037	1,374,604	(13,730,921)	(13,930,921)	(14,185,003)	200,000	454,082
Cash Flows from Capital and Related Activities															
Non-Operating Income (Expenses)	-	-	-	-	-	(680,590)	(680,590)	(643,325)	-	(37,265)	(1,361,180)	(1,400,000)	(1,286,651)	38,820	(74,529)
Capital Expenditures, net	(755,342)	(755,892)	(415,017)	549	(340,325)	(3,924,699)	(3,928,943)	(3,698,703)	4,245	(225,995)	(15,185,750)	(15,191,000)	(12,705,520)	5,250	(2,480,231)
Net Cash Provided By (Used In) Capital and Related Activities	(755,342)	(755,892)	(415,017)	549	(340,325)	(4,605,289)	(4,609,533)	(4,342,028)	4,245	(263,260)	(16,546,930)	(16,591,000)	(13,992,171)	44,070	(2,554,760)
Cash Flows From Investing Activities															
Investments Converting To Cash	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Purchased Investments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest Income	300,931	300,700	68,896	231	232,035	1,774,804	1,498,934	128,661	275,870	1,646,143	1,051,524	128,661	914,680	922,863	136,844
Net Cash Provided By (Used In) Investing Activities	300,931	300,700	68,896	231	232,035	1,774,804	1,498,934	128,661	275,870	1,646,143	1,051,524	128,661	914,680	922,863	136,844
FUND NET CASH FLOWS	6,364,771	6,138,526	1,191,849	226,245	5,172,921	13,739,898	13,009,433	3,762,023	730,464	9,977,874	3,201,348	2,671,275	2,809,215	530,073	392,132
DEBT SERVICE RATIO															
Debt Service Ratio (Indenture Based)															
User Charges	6,225,908	6,602,403	3,943,682	(376,495)	2,282,226	31,655,427	31,939,826	26,269,616	(284,399)	5,385,811	50,488,223	50,680,860	46,757,244	(192,637)	3,730,979
Operating Expenses (Cash Based)	(1,649,588)	(2,033,360)	(1,566,506)	383,772	(83,081)	(11,646,547)	(12,115,733)	(10,650,177)	469,186	(996,370)	(21,409,749)	(21,782,225)	(17,772,207)	372,476	(3,637,542)
Interest Income	300,931	300,700	68,896	231	232,035	1,774,804	1,498,934	128,661	275,870	1,646,143	1,051,524	128,661	914,680	922,863	136,844
Annual Lease Payment (City)	(113,432)	(113,432)	(107,221)	-	(6,211)	(794,022)	(794,022)	(750,546)	-	(43,475)	(1,361,180)	(1,400,000)	(1,286,651)	38,820	(74,529)
Non-Operating Revenues (Expenses)	1,320,704	1,019,650	238,909	301,054	1,081,795	2,669,913	2,323,435	2,197,023	346,478	472,891	4,542,895	4,165,900	8,549,633	376,995	(4,006,738)
Cash Available For Debt Service	6,084,523	5,775,962	2,577,760	308,562	3,506,763	23,659,576	22,852,441	17,194,577	807,135	6,464,999	33,311,713	31,793,196	37,162,699	1,518,518	(3,850,986)
Interest Paid	982,404	982,404	972,530	-	9,874	6,876,826	6,876,826	6,807,711	-	69,115	11,788,844	11,788,844	11,670,361	-	118,483
Debt Retirement (Principal Payments)	278,506	278,506	209,554	-	68,953	1,949,545	1,949,545	1,466,875	-	482,670	3,342,077	3,342,077	2,514,642	(0)	827,435
Total Debt Service	1,260,910	1,260,910	1,182,084	-	78,827	8,826,371	8,826,371	8,274,585	-	551,786	15,130,921	15,130,921	14,185,003	(0)	945,918
Debt Service Ratio	4.83	4.58	2.18	0.24	2.64	2.68	2.59	2.08	0.09	0.60	2.20	2.10	2.62	0.10	(0.42)

**LEHIGH COUNTY AUTHORITY**  
**VARIANCE ANALYSIS - YTD**  
**For the Period Ended July 31, 2023**

**STATEMENTS OF ACTIVITIES**

**Operating Revenues:**

User Charges  
Connection & System Charges  
Other Miscellaneous Revenues

**Total Operating Revenues**

**Operating Expenses:**

Personnel  
Shared Services - General & Administrative  
Utilities  
Materials and Supplies  
Miscellaneous Services  
Treatment and Transportation  
Depreciation and Amortization  
Major Maintenance Expenses  
Other Miscellaneous

**Total Operating Expenses**

**Net Operating Profit**

**Non-Operating Income (Expense)**

Interest Income  
Interest (Expense)  
Other Miscellaneous

**Net Non-Operating Income (Expense)**

**Net Income (Loss)**

**CASH FLOW STATEMENT**

**Cash Flows From Operating Activities**

Operating Revenues  
Operating Expenses (ex D&A)  
Non-Cash Working Capital Changes

**Net Cash Provided by (Used in) Operating Activities**

**Cash Flows From Financing Activities**

Capital Contributions  
Proceeds New Borrowing  
Interest Payments  
Principal Payments

**Net Cash Provided by (Used in) Financing Activities**

**Cash Flows from Capital and Related Activities**

Non-Operating Income (Expenses)  
Capital Expenditures, net

**Net Cash Provided By (Used In) Capital and Related Activities**

**Cash Flows From Investing Activities**

Investments Converting To Cash  
Purchased Investments  
Interest Income

**Net Cash Provided By (Used In) Investing Activities**

**FUND NET CASH FLOWS**

City Division			
Actual	Q3 FC	FC Var	Comments
31,655,427	31,939,826	(284,399)	Lower residential & commercial revenues and lower water purchase revenues
2,592,052	2,260,659	331,393	Higher tapping fees
77,862	62,777	15,085	
<b>34,325,341</b>	<b>34,263,261</b>	<b>62,079</b>	<b>Higher tapping fees offset in large part by lower user charges</b>
6,416,112	6,598,749	182,637	
1,188,944	1,339,393	150,449	
1,155,404	1,146,879	(8,525)	
1,710,500	1,777,601	67,101	
1,021,530	983,084	(38,446)	
5,220	6,950	1,730	
3,623,209	3,615,033	(8,176)	
148,838	263,078	114,240	
-	-	-	
<b>15,269,756</b>	<b>15,730,766</b>	<b>461,010</b>	<b>Lower personnel, G&amp;A, and materials/supplies</b>
<b>19,055,584</b>	<b>18,532,495</b>	<b>523,090</b>	<b>Lower operating expenses</b>
1,774,804	1,498,934	275,870	
(9,870,895)	(10,113,188)	242,293	
-	-	-	
<b>(8,096,091)</b>	<b>(8,614,254)</b>	<b>518,163</b>	<b>Higher interest income and lower interest expense</b>
<b>10,959,493</b>	<b>9,918,240</b>	<b>1,041,253</b>	<b>Higher net operating income along with favorable financial activity</b>

34,325,341	34,263,261	62,079	
(11,497,709)	(11,852,656)	354,946	
(1,876,348)	(1,876,636)	288	
<b>20,951,284</b>	<b>20,533,970</b>	<b>417,314</b>	<b>Lower operating expenses</b>
-	-	-	
1,371,118	1,400,000	(28,882)	
(5,741,693)	(5,813,938)	72,245	
-	-	-	
<b>(4,370,575)</b>	<b>(4,413,938)</b>	<b>43,363</b>	
(10,326)	-	(10,326)	
(3,924,699)	(3,928,943)	4,245	
<b>(3,935,025)</b>	<b>(3,928,943)</b>	<b>(6,082)</b>	
-	-	-	
-	-	-	
1,774,804	1,498,934	275,870	
<b>1,774,804</b>	<b>1,498,934</b>	<b>275,870</b>	<b>Higher interest income</b>
<b>14,420,488</b>	<b>13,690,023</b>	<b>730,464</b>	<b>Higher cash from operations along with higher interest income</b>

LEHIGH COUNTY AUTHORITY  
CASH & INVESTMENT SUMMARY  
For the Period Ended July 31, 2023

	Suburban Water				Suburban Wastewater				City Division				Total			
	7/31/2023 Actual	2023 Forecast	2023 Budget	2022 Actual	7/31/2023 Actual	2023 Forecast	2023 Budget	2022 Actual	7/31/2023 Actual	2023 Forecast	2023 Budget	2022 Actual	7/31/2023 Actual	2023 Forecast	2023 Budget	2022 Actual
Cash																
Operating																
Unrestricted	2,775,492	8,807,233	7,075,935	5,207,096	(938,088)	3,152,590	4,964,460	900,454	19,674,726	12,209,363	23,660,027	9,008,015	21,039,311	24,169,186	35,700,423	15,115,564
Restricted	-	-	-	-	-	-	-	-	23,927,927	25,438,613	18,916,156	25,794,847	23,927,927	25,438,613	18,916,156	25,794,847
Total Operating	2,775,492	8,807,233	7,075,935	5,207,096	(938,088)	3,152,590	4,964,460	900,454	43,602,653	37,647,976	42,576,183	34,802,862	44,967,238	49,607,799	54,616,578	40,910,412
Capital																
Unrestricted	7,299,910	321,054	319,718	321,054	9,929,977	6,862,722	5,955,385	6,862,722	3,453,690	3,022,601	3,022,601	3,022,601	20,683,577	10,206,378	9,297,704	10,206,378
Restricted	-	-	-	-	340,171	338,677	338,360	338,677	7,529,141	7,500,035	7,500,035	7,500,035	7,869,312	7,838,712	7,838,396	7,838,712
Total Capital	7,299,910	321,054	319,718	321,054	10,270,148	7,201,399	6,293,745	7,201,399	10,982,831	10,522,636	10,522,636	10,522,636	28,552,888	18,045,090	17,136,099	18,045,090
Other Restricted																
Debt Reserves	1,664,862	1,656,568	1,648,569	1,656,568	-	-	-	-	32,459,160	28,335,482	28,976,677	27,979,247	34,124,022	29,992,050	30,625,246	29,635,815
Escrow	-	-	295,372	218,888	56,666	-	-	-	-	-	-	32,090	56,666	-	295,372	250,978
Total Other Restricted	1,664,862	1,656,568	1,943,942	1,875,456	56,666	-	-	-	32,459,160	28,335,482	28,976,677	28,011,337	34,180,688	29,992,050	30,920,619	29,886,793
Total Cash	11,740,264	10,784,855	9,339,595	7,403,606	9,388,726	10,353,989	11,258,205	8,101,853	87,044,644	76,506,094	82,075,496	73,336,835	107,700,814	97,644,938	102,673,296	88,842,294
Investments																
Operating																
Unrestricted	1,940,104	1,944,885	1,975,123	1,944,885	7,133,566	7,084,095	6,977,548	8,866,269	-	-	-	-	9,073,670	9,028,980	8,952,671	10,811,154
Restricted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Operating	1,940,104	1,944,885	1,975,123	1,944,885	7,133,566	7,084,095	6,977,548	8,866,269	-	-	-	-	9,073,670	9,028,980	8,952,671	10,811,154
Capital																
Unrestricted	1,043,522	1,000,184	1,000,000	1,000,184	-	-	-	-	-	-	-	-	1,043,522	1,000,184	1,000,000	1,000,184
Restricted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital	1,043,522	1,000,184	1,000,000	1,000,184	-	-	-	-	-	-	-	-	1,043,522	1,000,184	1,000,000	1,000,184
Other Restricted																
Debt Reserves	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Escrow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Other Restricted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Investments	2,983,626	2,945,069	2,975,123	2,945,069	7,133,566	7,084,095	6,977,548	8,866,269	-	-	-	-	10,117,193	10,029,164	9,952,671	11,811,338
Total Cash and Investments	14,723,890	13,729,924	12,314,718	10,348,675	16,522,292	17,438,084	18,235,753	16,968,122	87,044,644	76,506,094	82,075,496	73,336,835	117,818,006	107,674,102	112,625,967	100,653,633
Summary																
Cash																
Unrestricted	10,075,402	9,128,287	7,395,653	5,528,150	8,991,889	10,015,312	10,919,845	7,763,176	23,128,416	15,231,964	26,682,628	12,030,616	41,722,888	34,375,563	44,998,126	25,321,942
Restricted	1,664,862	1,656,568	1,943,942	1,875,456	396,837	338,677	338,360	338,677	63,916,228	61,274,130	55,392,868	61,306,219	65,977,926	63,269,375	57,675,170	63,520,352
Total Cash	11,740,264	10,784,855	9,339,595	7,403,606	9,388,726	10,353,989	11,258,205	8,101,853	87,044,644	76,506,094	82,075,496	73,336,835	107,700,814	97,644,938	102,673,296	88,842,294
Investments																
Unrestricted	2,983,626	2,945,069	2,975,123	2,945,069	7,133,566	7,084,095	6,977,548	8,866,269	-	-	-	-	10,117,193	10,029,164	9,952,671	11,811,338
Restricted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Investments	2,983,626	2,945,069	2,975,123	2,945,069	7,133,566	7,084,095	6,977,548	8,866,269	-	-	-	-	10,117,193	10,029,164	9,952,671	11,811,338
Total Cash and Investments	14,723,890	13,729,924	12,314,718	10,348,675	16,522,292	17,438,084	18,235,753	16,968,122	87,044,644	76,506,094	82,075,496	73,336,835	117,818,006	107,674,102	112,625,967	100,653,633

# CERTIFICATES OF DEPOSIT

July 2023

Fund	Bank	Location	Gross Amount	Date of Purchase	Date Due	Net Rate %
LLRI CR	Chartway FCU	Virginia Beach, VA	245,000.00	7/12/23	7/14/25	5.250
WW Capac	Freedom First FCU	Roanoke, VA	248,000.00	7/12/23	7/14/25	5.000

## DEVELOPMENT ACTIVITY

### **Water system construction is occurring in the following developments:**

7034 Ambassador Drive -Warehouse, UMT  
 8323/8449 Congdon Hill Drive, 2 industrial lots with warehouses, LMT  
 ABE Doors & Windows Redevelopment, 1 commercial lot, LMT  
 Chick-Fil-A Building redesign existing water line staying  
 Estates at Maple Ridge, Water main extension-UMiLT  
 Fields at Indian Creek, Phases 4 & 5, 86 residential units (sfd), water and sewer, UMiLT & Emmaus  
 Home Depot Sub Lot Condo unit LMT  
 Kohler Tract, 123 residential lots (sfa), water and sewer, UMiLT  
 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  
 Mosser Road 10 Townhouses,UMT  
 Mountain View Estates, 27 residential units (sfd), LMT  
 Parkland Crossings Main Extension 144 Town homes UMT  
 Sauerkraut Lane Extension, Roadway & water line extension, LMT  
 Trexler Point (Towns at Schaefer Run) 128 Townhouses UMT  
 Wrenfield Townhouses 98 Townhomes UMT  
 3369 Rt 100 Neighborhood Hospital & Medical Offices, 1 commercial lot, LMT

### **Water system plans are being reviewed for the following developments:**











































2619 Grove Street Sewer Main Extension,Washington Township  
 3400 Brookside Road, Indian Creek- 26 Single family homes-Main extension, LMT  
 3952 Independence Drive,NW  
 4002 Chestnut Street water main extension,Umilford  
 Valley at Indian Creek 3510 Macungie Road 22 Single family homes-LMT  
 5329-5347-5357 Hamilton Blvd., 1 commercial lot, LMT  
 Advanced Health Care of Allentown, 1 commercial lot, LMT  
 Air Products & Chemicals-Cetronia Road, 1 commercial lot, UMT  
 ATAS International, 1 industrial lot, UMT  
 Bandit Truck Stop Sewer Main Extension, WT  
 Carriage East Residential Development, 11 residential units, (sfd), UMT  
 Chick-Fil-A Redevelopment, LMT  
 Fallbrooke Residential Subdivision, 90 sf residential units, UMT  
 Fields at Emmaus 78 Town Homes, UMT  
 Glenlivet Drive West Main extension and subdivision  
 Grant Street Townes, 18 Townhouse, WT  
 Heidelberg Heights 10 Townhouses water ext on lot septic, HH  
 Hidden Meadows - Phase 3, 20 townhouse units, UMT  
 Lehigh Valley Town Center, Mixed use development, UMT  
 Madison Village at Penn's View, 66 manufactured homes, 1 lot, water and sewer, Lynnt  
 Mertztown Residential Subdivision, 264 sf units & 136 townhouse units, LMT  
 Raising Canes 1 commercial lot LMT water  
 Schoeneck Road, Lot 1, 1 lot, warehouse, LMT  
 Self-Storage Facility, Cedarbrook Road – 1 Commercial Lot, LMT  
 Spring Creek Properties, Lot 12, 1 lot, warehouse, LMT  
 Spring Creek Estates 2022 LMT 2 lots, 2 6 unit Apt, 8 single family homes, water  
 The Annex at Fields at Indian Creek, 22 sf residential units, Emmaus Borough  
 Towneplace Suites by Marriott, 91-room hotel, UMT  
 Towns At Schaefer Run, 128 townhouse unit (sfa), UMT  
 Trexler Center Unit 5-Wawa-LMT  
 Trexlertown Retail Center-UMT gas station, carwash  
 Twin Ponds 8739 Hamilton Blvd 22 Apts and 1 Daycare UMT  
 Upper Macungie Community Center UMT commercial lot, water and Main Extension  
 Woodmont Valley 2, 129 apartment units (former Allen Organ Co.) LMT-New

### **Sewage Facilities Planning Modules Reviewed in Prior Month:**

### **GPD**

Spring Creek Estates 2022	1255 Danner Rd & 6659 Stein Way	L Mac	3,568
Carriage East Residential	5137 Schantz Rd	U Mac	2,230
Twin Ponds Mixed Use Development	8739 Hamilton Blvd	U Mac	31,686
Outdoor Storage	1429 Eck Rd	SWT	10
WIP South 12th Street Redevelopment	1901 S 12th St	Allentown	1,204

**LEHIGH COUNTY AUTHORITY**  
**YTD SUMMARY SCORESHEET**  
**JULY 2023**

	<b>Sub W</b>	<b>Sub WW</b>	<b>City</b>
YTD Net income >0			
YTD Net income >= FC			
YTD Cash Flow >0			
YTD Cash Flow >= FC			
YTD DSCR >= FC			
YTD DSCR >= 1.20			
YTD Operating Ratio >= 1.00			
YTD Operating Ratio >= Budget Target			
YTD Days Cash on Hand >= 180.0			
YTD Operating Revenues >= FC			
YTD Operating Expenses <= FC			
FY FC Net Income >= Budget			
FY FC Cash Flows >=Budget			
FY FC DSCR >= Budget			
TOTAL GREEN	<b>14</b>	<b>9</b>	<b>13</b>

Presented: August 28, 2023

Critical Activities	System	Description	Jul-23	2023 Totals	2022 Totals	Permit
			Daily Avg (MGD)	Daily Avg (MGD)	Daily Avg (MGD)	Daily Max (MGD)
Water Production	Allentown	Total	22.77	22.66	22.47	39.0
		Schantz Spring	7.19	7.11	6.90	9.0
		Crystal Spring	3.89	3.88	3.87	4.0
		Little Lehigh Creek	11.63	11.63	11.68	30.0
		Lehigh River	0.05	0.03	0.03	28.0
	Central Lehigh	Total	12.27	11.33	11.30	19.04 MGD Avg
		Feed from Allentown	7.47	7.38	7.20	7.0 MGD Avg 10.5 MGD Max
		Well Production (CLD)	4.80	3.95	4.10	8.54 MGD Avg
		Sum of all (12) other Suburban Water Systems	0.14	0.13	0.14	1.71 Sum of all wells
Wastewater Treatment		Kline's Island	32.93	31.77	32.61	40.0
		Pretreatment Plant	4.90	4.81	5.06	5.75 (design capacity)
		Sum of all (5) other Suburban WW Systems	0.14	0.18	0.20	0.36
			Jul-23	2023 Totals	2022 Totals	2021 Totals
Precipitation Totals (inches)			6.27	24.39	46.47	44.67
Compliance Reports Submitted to Allentown			29	184	277	280
Notices of Violation (NOVs)		(Allentown + Suburban)	0	0	4	3
Sanitary Sewer Overflows (SSOs)/Bypasses		(Allentown + Suburban)	2	9	18	26
Main Breaks Repaired		Allentown	1	3	34	20
		Suburban	0	5	15	14
Customer Service Phone Inquiries		(Allentown + Suburban)	906	6290	10,539	15,857
Water Shutoffs for Non-Payment		(Allentown + Suburban)	177	1179	1,975	1,773
Injury Accidents		(Allentown + Suburban)	1	10	7	8
Emergency Declarations		Allentown	0	0	(3) @ \$386,225.43	0
		Suburban	0	0	(4) @ \$933,077.1	(1) @ \$48,000
Significant Repairs/Upgrades:						
N/A						
Description of Non-Compliance Events:						
Two bypasses occurred at Heidelberg Heights WWTP. The first bypass occurred from July 9th to July 11th and discharged ~81,826 gallons. The second bypass occurred from July 16th to July 18th and discharged ~107,016 gallons. Both bypasses were the result of significant wet weather events.						
Other:						
In July, one injury was reported. The injury occurred when an employee pinched his finger in between piping of a Vac truck.						



Lehigh County Authority  
System Operations Review - July 2023

Presented: August 28, 2023

Page 2

<u>Critical Activities</u>	<u>System</u>	<u>Description</u>	<u>Jul-23</u>	<u>2023 Totals</u>	<u>2022 Totals</u>
Wastewater Compliance	Allentown	Bypass	0	1	2
		Bypass Volume	0	1,595	369,704
		Permit Exceedances	0	0	1
		Sanitary Sewer Overflows	0	1	3
		COA Issued NOVs	0	0	1
		Regulatory Agency issued NOVs	0	0	0
	Arcadia	Bypass	0	0	0
		Bypass Volume	0	0	0
		Permit Exceedances	0	0	7
		Sanitary Sewer Overflows	0	0	0
		NOVs	0	0	0
	Heidelberg Heights	Bypass	2	5	8
		Bypass Volume	188,842	475,882	1,392,261
		Permit Exceedances	3	11	16
		Sanitary Sewer Overflows	0	0	0
		NOVs	0	0	0
	Lynn	Bypass	0	0	2
		Bypass Volume	0	0	472,000
		Permit Exceedances	0	0	7
		Sanitary Sewer Overflows	0	0	1
		NOVs	0	0	0
	Sand Spring	Bypass	0	0	0
		Bypass Volume	0	0	0
		Permit Exceedances	2	25	77
		Sanitary Sewer Overflows	0	0	0
		NOVs	0	0	1
	Wynnewood	Bypass	0	0	0
		Bypass Volume	0	0	0
		Permit Exceedances	2	3	4
		Sanitary Sewer Overflows	0	2	0
		NOVs	0	0	0
Water Compliance	Allentown	Boil Water Advisories	0	1	1
	Central Lehigh	Boil Water Advisories	0	0	2
	Suburban Water Systems	Boil Water Advisories	0	1	4