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Agendas & Minutes Posted:
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LEHIGH COUNTY AUTHORITY

Published: October 2, 2023

BOARD MEETING AGENDA – October 9, 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 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. 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

- *September 11, 2023 Board Meeting minutes*
- *September 18, 2023 Board Meeting minutes*

4. Public Comments

5. Action / Discussion Items:

FINANCE AND ADMINISTRATION

- *2024 – 2028 Capital Plan (Approval) (white) (digital Board packet, pages 12-34)*
- *2024 Budget (Discussion) (white) (digital Board packet, pages 35-91)*
- *Western Lehigh Interceptor (WLI) User Charge Report (Approval) (tan) (digital Board packet, pages 92-126)*

WATER

- *Allentown Division – 30" & 36" East Side Transmission main Repair Report (Approval) (blue) (digital Board packet, pages 127-130)*

WASTEWATER

- *Suburban Division – Sand Spring WWTP: Treatment Process Modification (Approval) (digital Board packet, pages 131-134)*

6. Monthly Project Updates / Information Items (1st Board meeting per month) (*digital Board packet, pages 135-143*) – **September 2023 report attached**
7. Monthly Financial Review (2nd Board meeting per month)
8. Monthly System Operations Overview (2nd Board meeting per month)
9. Staff Comments
10. Solicitor's Comments
11. Public Comments / Other Comments
12. Board Member Comments
13. Executive Sessions
14. Adjournment

UPCOMING BOARD MEETINGS		
October 23, 2023	November 13, 2023	November 27, 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

September 11, 2023

The Regular Meeting of the Lehigh County Authority Board of Directors was called to order at 12:00 p.m. on Monday, September 11, 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, Amir Famili, Linda Rosenfeld, Norma Cusick, Kevin Baker, Jeff Morgan, Sean Ziller, and Marc Grammes were present for Roll Call, and remained for the duration of the meeting.

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

Chairman Nagle announced that the Board received their electronic and hard copies of the Board packet in advance. 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 suggested placing the item related to the 2022 Audit & Financial Statements first on the agenda since the Auditor was present. Also, an Executive Session is planned after the regular meeting to discuss a legal matter with the Solicitor.

APPROVAL OF MINUTES

August 28, 2023 Meeting Minutes

Linda Rosenfeld noted a spelling error. On a motion by Linda Rosenfeld, seconded by Amir Famili, the Board approved the minutes of the August 28, 2023 Board meeting as corrected (8-0).

PUBLIC COMMENTS

None.

2022 Audit & Financial Statements

Ed Klein introduced Nate Swartz from Zelenkofske Axelrod LLC who was present to give an overview of the financial statements and auditor's report for the years ending 2021 and 2022. Mr. Swartz explained that the statements from the Pennsylvania Municipal Retirement System (PMRS) were provided much earlier this year. Mr. Swartz stated that the Authority was given an unqualified, or clean, opinion on the Authority's basic financial statements, which is the highest level of assurance provided. He also noted there were no uncorrected misstatements, no disagreements with management, no consulting with other accounting firms, and no control issues that needed to be brought before the Board. Mr. Swartz thanked Ed Klein and his staff for providing the information to him in a timely manner.

Mr. Swartz highlighted key schedules included in the report, such as the long-term debt and debt service requirements, and the defined benefit pension plan and pension liability.

There were some comments regarding PMRS and the improvements to their financial reporting schedule.

On a motion by Amir Famili, seconded by Jeff Morgan, the Board accepted the 2021 & 2022 Audit & Financial Statements (8-0).

Chairman Nagle stated that he will be establishing a new Finance Committee in the upcoming weeks. The Finance Committee will provide additional support and review of the financial statements and audit next year.

2024 Budget: Preliminary Review

Liesel Gross reminded the Board that the Budget must be approved by the end of October noting that today's presentation is focused on reviewing the assumptions and key items that are being incorporated into the 2024 Budget. A preliminary review of the Budget figures will be provided at the next Board meeting and rates will be discussed at the first October meeting.

A presentation was shared with the Board to review the 2024 Budget assumptions, including a review of key factors by fund, preliminary Budget summary, and next steps.

Ms. Gross presented a summary of the 2023 strategic initiatives and progress to date. She noted several items are on schedule for completion in accordance with the plan, including work related to the Kline's Island Sewer System (KISS) Act 537 Plan and the Strategic Asset Management Plan (SAMP). In 2023 there have been some improvements in achieving compliance with the Authority's small systems, and three new grants have been awarded. She also noted increases in safety program activity and several enhancements to employee engagement. A more detailed review of the strategic plan progress will be provided in October.

There was some discussion regarding staff turnover in the prior 12 months.

Ms. Gross reviewed the strategic initiatives that staff have developed for 2024, and the required budgetary resources to achieve the Authority's goals related to Water & Sewer Capacity, Process Improvement, Operational Excellence, Safety, Asset Management, and Employee Engagement. Board discussion followed regarding the need for additional employees to support the maintenance program within the Asset Management strategy. The Board also discussed the need for the requested budget resources related to the proposed internship program and increased in-house inspection services. Sean Ziller and Marc Grammes asked for information on grant funding included in the capital plan and any potential need for staff support related to pursuing grant applications.

Ed Klein reviewed the personnel budget, which is expected to increase 14.17% compared to the 2023 forecast. A large portion of that increase is to fill the seven vacant positions within the Authority's existing employee base and the addition of seven new positions and the proposed internship program. This budget also supports wage increases by the union contracts and an assumed 5 percent health insurance cost increase. The Board suggested the personnel budget information should include a review of offsets to the personnel costs such as reductions in overtime or reimbursements by developers.

Ed Klein reviewed the list of other assumptions noting that the inflationary impact on expenses is approximately 4 percent. In the Internal Services area, efforts continue to departmentalize the budget. This will be completed with the Munis re-implementation project.

Mr. Klein then reviewed the Suburban Water fund and key factors expected to impact the 2024 Budget. He noted that the operating expenses will increase approximately 15.9 percent proportionately between personnel, internal services, and inflation. In the Suburban Wastewater

fund, operating expenses are increasing by 5 percent. For the City Division, operating expenses are expected to increase by 6.9 percent. He also reviewed projected rate increases for each fund.

Mr. Klein reviewed the budget figures in summary form, noting that all three funds are positive, including cash flow and debt service coverage ratios for 2024.

The next steps include finalizing the preliminary budget numbers, completing the Suburban water calculations and the Suburban Wastewater signatory user charge report. Coming up at the next Board meeting, staff will review the 2024 cash flows.

Ms. Gross noted that there is a webpage on the Authority's website that is dedicated to the Budget for public review of the Board presentations and other budget information.

MONTHLY PROJECT UPDATES / INFORMATION ITEMS

Liesel Gross noted that the next Board meeting is September 18th and there are a few additions and changes to the September Project Updates report, including an emergency declaration that will be presented at the next meeting.

STAFF COMMENTS

Liesel Gross commented that due to the meeting schedule in September, the Monthly Financial report and the Monthly Operations report for August 2023 will be sent at a later date and not included in the September 18 Board meeting packet.

SOLICITOR'S COMMENTS

None.

PUBLIC COMMENTS / OTHER COMMENTS

None.

BOARD MEMBER COMMENTS

Chairman Nagle noted that he has asked Ms. Gross to provide more detail of the Safety program at the October Board meeting to give the Board more opportunity to ask questions.

Marc Grammes thanked Liesel Gross for addressing his questions in a timely manner regarding the Slatington and Washington Township water and sewer systems.

EXECUTIVE SESSION

Chairman Nagle announced an Executive Session to discuss legal matters with the Solicitor would commence immediately following adjournment of the regular meeting.

ADJOURNMENT

There being no further business, the Chairman adjourned the meeting at 1:14 p.m.

Linda A. Rosenfeld
Secretary

REGULAR MEETING MINUTES

September 18, 2023

The Regular Meeting of the Lehigh County Authority Board of Directors was called to order at 12:00 p.m. on Monday, September 18, 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, Amir Famili, Linda Rosenfeld, Norma Cusick, Jeff Morgan, Sean Ziller, and Marc Grammes were present for Roll Call, and remained for the duration of the meeting.

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

Chairman Nagle announced that the Board received their electronic and hard copies of the Board packet in advance. 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 noted that there is no Executive Session planned; however, there will be an information item provided under Staff Comments.

APPROVAL OF MINUTES

There were no minutes for approval.

PUBLIC COMMENTS

None.

2024 Budget: Preliminary Review

Liesel Gross noted that today's presentation is focused on reviewing the Budget figures that are being incorporated into the 2024 Budget. A printed copy of the preliminary 2024 Budget was provided to all Board members and posted on the Authority's website along with the presentation from today's meeting.

A presentation was shared with the Board to review the 2024 Budget assumptions, including a review of fund financials, and next steps.

Ms. Gross reviewed major drivers for the 2024 Budget proposal related to the Authority's strategic initiatives. These were presented in more detail at the prior Board meeting. An overview of the maintenance program was provided, showing that the Authority staff is currently unable to achieve the targeted goal of 66 percent preventative maintenance hours, which is the industry benchmark. The requested addition of two maintenance technicians in 2024 is focused on assisting the Authority with achieving this goal. In response to Board discussion at the prior meeting, Ms. Gross gave an overview of the personnel budget offsets, showing approximately \$1.6 million in offsets for personnel expenses that are reimbursable to the Authority through major capital projects or development activity. There was some discussion and clarification regarding the personnel budget increase of 14 percent. Ms. Gross explained that this increase is calculated from the 2023 forecast to the 2024 Budget proposal. The 2023 forecast includes a reduction in personnel costs due to extended staff

vacancies, which the Authority has had difficulty filling this year. The 2024 Budget proposal includes full funding for those vacancies as well as the new staff additions requested.

Ed Klein reviewed the list of other assumptions noting that the inflationary impact on expenses is approximately 4 percent. There was some Board discussion regarding rate increases and growth, noting that the Suburban Water budget includes continued modest customer growth.

Mr. Klein then reviewed the Suburban Water fund and noted that the operating expenses will increase approximately 15.9 percent proportionately between personnel, internal services, and inflation. The capital budget will require \$7.1 million with a draw of \$5.2 million from new borrowing. He then explained how the revenue requirements for 2024 are calculated, which results in a 5 percent estimated revenue impact for next year. Liesel Gross reviewed a graph showing historical trends of revenues and expenses. She noted that the positive effect of rate increases implemented in recent years to cover capital expenses has been eroded somewhat due to increased operating expenses.

In the Suburban Wastewater fund, operating expenses are increasing by 5 percent proportionately between personnel, internal services, and inflation. The capital budget will require \$11.2 million with a draw of \$6.4 million from new borrowing. The Signatory rate impact will vary by group. The historical revenue and expense trend shows a strong trend of revenues covering expenses, which is due to the Signatory agreements which include full-cost recovery rates. The Authority has not been required to borrow for capital improvements in many years, but this will change in 2024 with the proposed \$6.4 million borrowing.

For the City Division, operating expenses are expected to increase by 6.9 percent proportionately between personnel, internal services, and inflation. The capital budget will require \$32.6 million with \$8.6 million in new borrowing planned. The City rates are expected to increase by an average of 10.9 percent. The historical trend of revenues and expenses shows the positive impact of the amended Lease Agreement that was executed in 2020, which allowed rates to increase to support capital improvements. However, as capital requirements are increasing, more borrowing will be required.

Mr. Klein reviewed the budget figures in summary form, noting that all three funds are positive, including cash flow and debt service coverage ratios for 2024.

The next steps include finalizing budget requests, completing the Suburban Water and City Division rate calculations and finalizing the Suburban Wastewater signatory user charge report. Coming up at the next Board meeting, staff will have a more refined review and rate review with final budget adoption at the October 23rd meeting. Rate adoption is scheduled for the first meeting in November.

There was some discussion regarding the capital projects, staff capacity for the increased workload, and prioritization of those projects.

Resolution No. 9-2023-1: Destruction of Authority Documents

Liesel Gross explained that the Resolution is a standard process whereby the Authority Board must formally approve the disposition of certain records in accordance with the Pennsylvania Municipal Records Act.

On a motion by Linda Rosenfeld, seconded by Amir Famili, the Board approved Resolution No. 9-2023-1 (7-0).

Allentown Division – Emergency Declaration: Union Boulevard & Dauphin Street Main Break

Chris Moughan provided an overview of the main break at Union Boulevard and Dauphin Street that occurred on August 25th. Due to the magnitude of the break and the location of the pipe, Gannett Fleming ran a hydraulic model analysis to determine possible system issues and repair options. To allow the engineering work to continue quickly, an emergency declaration was needed. The total estimated cost for the emergency work is \$238,271.46.

On a motion by the Sean Ziller, seconded by Jeff Morgan, the Board approved the emergency declaration retroactive to August 25, 2023 (7-0).

Allentown Division – Emergency Declaration: Kline’s Island WWTP Primary Settling Tank Sludge Removal

Andrew Moore provided an overview of the solids buildup at the Kline’s Island WWTP due to a mechanical failure at the Pretreatment Plant. This situation places the plant at risk for not meeting the NPDES permit limits for ammonia. In order to aggressively remove the solids, an emergency declaration was approved to contract with Mobile Solids Solutions to remove the solids from the primary settling tanks and dewater the material utilizing a mobile belt press. The total estimated cost for the emergency work is \$374,633.

There was some Board discussion regarding the emergency declarations and the need for exact costs. Liesel Gross explained that the emergency declaration is focused on providing authorization to the staff to act quickly, which may require waiving purchasing requirements to secure services or materials on a timely basis. The exact cost associated with the emergency will be reported in a future monthly operations report, after the emergency situation has been fully resolved.

On a motion by Amir Famili, seconded by Linda Rosenfeld, the Board approved the emergency declaration retroactive to September 8, 2023 (7-0).

Kline’s Island WWTP: Main and Auxiliary Pump Station Improvements

Chuck Volk introduced the project manager for this project, Amy Rohrback, who presented the details with a brief presentation. Ms. Rohrback described the project to increase wet-weather pumping capacity at the Kline’s Island Wastewater Treatment Plant from 87 million gallons per day (MGD) to 100 MGD. The upgrade will reduce the frequency of Outfall 003 activations during extreme wet-weather events, replace outdated pumps, and eliminate the need for the current vacuum prime system. The project will include physical modeling to verify the design of the new pumps due to the size and criticality of the pumping system. It is recommended that Kleinfelder perform the modeling since they were previously retained for the wet-weather improvements and have experience with this type of design. Chuck Volk added that the modeling will also predict how the pumps will interact with each other and determine the type of baffling is needed.

There was some Board discussion regarding the physical modeling and scalability of the model to the full size of the pump station. Mr. Volk noted the Authority has not completed this type of physical modeling in the past due to the smaller size of its other pump stations. However, for a 100 MGD pump station, the Hydraulic Institute recommends physical modeling to validate the design, in addition to the computer modeling already completed.

On a motion by Sean Ziller, seconded by Marc Grammes, the Board approved the Capital Project Authorization for Preliminary Design and Physical Modeling in the amount of \$286,060.00 which includes the Professional Services Authorization to Kleinfelder, Inc. in the amount of \$266,060.00 (7-0).

MONTHLY FINANCIAL REVIEW

The August 2023 report will be provided later in the month of September.

MONTHLY SYSTEM OPERATIONS OVERVIEW

The August 2023 report will be provided later in the month of September.

STAFF COMMENTS

Liesel Gross provided an overview of the 2024 Minimum Municipal Obligation (MMO) memorandum and worksheet for the Authority's pension plan, which is required to be provided to the Board annually. No action is required.

Ms. Gross also provided details regarding the funding status of the pension plan, noting that the plan is currently fully funded.

Ms. Gross noted that refinements will be made to the Budget and provided at the October 9 Board meeting. The Board should contact Ms. Gross with any questions or comments so staff can prepare any adjustments for the Board meeting.

SOLICITOR'S COMMENTS

None.

PUBLIC COMMENTS / OTHER COMMENTS

None.

BOARD MEMBER COMMENTS

Chairman Nagle announced that the Authority has received the 2023 Municipal Authority Communications Award by the Pa. Municipal Authorities Association (PMAA) for the team's work on digital communications and technology integrations in the Authority's customer communications program, including the development of an interactive "outage map" on the Authority's website. The 2023 Municipal Authority Communications Award will be presented to Communications Manager, Sue Sampson, at an upcoming PMAA awards dinner.

Chairman Nagle also announced that the Allentown Division Water Filtration Plant has recently earned the prestigious Area Wide Optimization Award (AWOP Award) for the sixteenth year in a row. The AWOP Award is earned by achieving strict treatment parameters set through our participation in the American Water Works Association's Partnership for Safe Water program. This achievement is made possible by the teamwork of the plant operations staff, led by Plant Manager Steve Lettko, Assistant Plant Manager Chris Emig, and the team of treatment plant operators who manage this important facility.

EXECUTIVE SESSION

None.

ADJOURNMENT

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

Linda A. Rosenfeld
Secretary

MEMORANDUM

TO: LCA Board of Directors
FROM: Liesel Gross, CEO
DATE: October 2, 2023
RE: Final Draft Capital Plan (2024-2028) – All Divisions

Attached: Public Comments & LCA Response
Capital Plan Financial Justification & Plan Summary Sheets – All

In August 2023, Lehigh County Authority staff presented the draft Capital Plan for the years 2024 to 2028 for Suburban and Allentown Divisions. The plans were also distributed to various external stakeholders including municipalities within LCA's service area, the Lehigh County Board of Commissioners, Lehigh Valley Planning Commission, and the City of Allentown. This memo provides an overview of the Final Draft Capital Plan and summarizes the comments received for Board consideration for approval at the October 9, 2023 meeting.

It is important to note that approval of the Plan by LCA's Board does not indicate authorization for Plan funding. Such authorization occurs through several other mechanisms including:

Annual Budget – The LCA Board approves the capital budget for the upcoming calendar year as part of the annual budget process that is completed in October each year. This approval provides authorization for routine/recurring capital expenses that fall within LCA's purchasing guidelines.

Project Authorizations – The LCA Board approves individual capital projects and expenditures at the time they are more concretely developed with a full project scope, project budget, cost justification and alternatives analysis if required.

Project Financing – The LCA Board approves all new debt issuances including new loans or grant applications that may be secured to fund the capital program.

At each of these approval stages, the LCA staff and Board may discuss and adjust project scope and prioritization. However, this Capital Plan should be viewed as the guiding document for moving forward on system improvements that are required for the provision of safe and reliable service to the communities we serve.

The 2024-2028 Capital Plan also includes financial analysis of the impacts to revenue requirements that will drive annual rate-making decisions. This analysis includes a review of funding sources for all projects, movement toward self-funding annual and recurring asset rehabilitation via operating revenues, expected inflation of operating expenses, and achievement of key financial metrics including debt service coverage ratio and operating cash reserve requirements.

Final Draft Capital Plan (2024-2028) – All Divisions

Board members should refer to the draft Plan documents presented previously. However, the Financial Justification sections and Summary sheets are attached to this memo as a supplement to the prior Plan distribution. Changes to the Plan since the initial Board presentations in August include:

- Allentown Division – Water – Annual Projects (AS-W-A): Added \$370,000 in year 2024 to reflect smaller planned projects originally omitted from the draft Plan.
- Central Lehigh County WW Capacity Planning & Expansion (SD-S-3): Additional \$150,000 added in year 2024 to reflect planned activity related to regional Act 537 Plan development work.
- WLI Major Rehabilitation & Repairs (SD-S-7): Minor reduction of \$25,000 in 2024 expenses to reflect refinement in expected project cost.
- Spring Creek Pump Station Upgrades (SD-S-12): No change in overall project cost. Phasing adjusted to reflect more project cost being deferred to 2025 to reflect concerns regarding delivery lead times for certain equipment.
- Financial Justification Sections: Each section was reviewed and updated to reflect minor adjustments in planned borrowing to achieve financial targets, and reflecting updated revenues and expenses developed as part of the 2024 Budget process.

Plan Summary:

While the presentation and publication of the LCA Capital Plan is divided into budgetary categories of Administrative, Suburban Water, Suburban Wastewater and Allentown Division, implementation is viewed holistically in the summary below to illustrate the categories and breadth of investment required to maintain and enhance the large regional water and sewer system that LCA operates.

<u>Project Category</u>	<u>2024-2028 Investment</u>
Technology Upgrades	\$ 1,745,000
Small Systems Upgrades	2,060,000
System Planning & Studies	6,085,000
Water Metering Upgrades	8,800,000
Major Water Facility Upgrades	14,250,000
Major Wastewater Facility Upgrades	24,550,000
Water Main Replacements	36,700,000
Annual Maintenance & Rehab Projects	44,387,000
NEW Sewer Wet-Weather Projects	57,275,000
NEW Programs / Regulatory Driven Projects	65,250,000
TOTAL	\$261,102,000
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Prior 5-Year Plan Total (2023-2027 Plan)	\$123,639,000

This information reflects a significant increase in capital requirements when compared to the prior five-year plan presented in 2022. Drivers for this change relate to new programs and projects associated

with addressing wet-weather challenges within LCA's sewer system and addressing new regulatory requirements. These are described in the project highlights below.

Project Highlights:

System Planning and Studies → The primary cost driver in this category relates to work required over the next few years to finalize the regional Act 537 Plan for the Kline's Island Sewer System. Other projects in this category include water capacity studies and a sewage facility study in North Whitehall Township.

Small Systems Upgrades → Seven important projects to upgrade smaller wastewater systems that LCA has acquired over the past several decades. These are important upgrades to address environmental and regulatory compliance issues in these under-served areas of the County.

Major Water Facility Upgrades → Projects in this category are larger upgrades that will have broad system benefit to LCA water customers. Examples include complete filter system upgrade and developing a redundant power supply at the Allentown Water Filtration Plant, and water supply capacity to increase reliability within the northern portions of LCA's Central Lehigh Division.

Major Wastewater Facility Upgrades → Projects in this category are larger wastewater system upgrades that will have broad system benefit to LCA, focusing primarily on repairing or replacing aging systems. Examples include replacing aging electrical equipment and rehabilitating clarifiers at the Allentown Kline's Island Wastewater Treatment Plant, and completing important upgrades at the Spring Creek and Park Pump Stations. Also included in this category is an important project to address a hydraulic bottleneck in the Western Lehigh Interceptor in the Trexlertown area.

Annual Projects, Metering Upgrades & Water Main Replacements → Combined, projects in these categories make up 34 percent of the LCA's planned capital investment over the next five years. This work represents the ongoing system rehabilitation and maintenance work that is required to maintain an aging system.

NEW Sewer Wet-Weather Projects → This new category of projects includes eight major programs or projects to address the impact of wet weather on LCA's sewer system. These projects fall into two major categories: A) addressing inflow and infiltration (I&I) in the sewer collection systems (\$37 million); and B) completing major projects to increase capacity at the Allentown Kline's Island Wastewater Treatment Plant to address peak wet-weather flows (\$20 million).

NEW Programs / Regulatory-Driven Projects → Two new programs have been added to the Plan to address new regulatory requirements. In the years ahead, including the years captured by this Plan, LCA will be required to address per-/poly-fluoroalkyl substances (PFAS) in drinking water and wastewater. In addition, the removal of all lead service lines from the water system will become a new requirement. These new programs will be the focus of LCA's efforts to seek grant funding over the next five years.

Capital Financing:

Over the past several years, LCA made an important adjustment to its capital financing strategy to reflect the realities of an aging utility with significant ongoing system rehabilitation work that will be required for the foreseeable future. The updated strategy included a series of rate increases to boost

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2024-2028 Capital Plan
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LCA's capacity to fund its ongoing capital program, and limiting borrowing for selected projects based on economic or other factors.

It is particularly noteworthy that LCA's 2024-2028 Capital Plan excludes large-scale system upgrades that will be further outlined in the regional Act 537 Plan currently under development. These projects will include additional wet-weather capacity upgrades at the Kline's Island Wastewater Treatment Plant, major interceptor projects to add dry-day and wet-weather conveyance capacity, and significant upgrades at LCA's Industrial Pretreatment Plant in Fogelsville.

While these upgrades and their cost impact are currently undefined, it is important to consider how they will be funded in light of the increasing requirements for more routine upgrades that are outlined in LCA's 2024-2028 Capital Plan. Some modest borrowing within the Plan period will allow rate adjustments to be phased in over time and preserve existing project reserves, which work to create future capacity for larger projects that will be defined in the future through the Act 537 Plan development. In addition, LCA will proactively seek out grant opportunities to fund specific programs, focusing on regulatory-driven projects such as those to address PFAS and lead service line replacements.

Sources of funding planned to support the 2024-2028 Capital Plan are:

Operating Revenues / Current Cash Flows	\$ 130,557,600	50%
New Borrowing	\$ 90,960,508	35%
Grants*	\$ 39,583,892	15%
TOTAL	\$ 261,102,000	

* Grants include:

- \$6.2 million from City of Allentown American Rescue Plant Act (ARPA) allocation to specific Allentown Division projects
- \$3.4 million from PENNVEST awarded in 2023 for the planned 2024 lead service line replacement project
- \$30 million in estimated future PENNVEST grants for additional lead service line replacements

NOTE: Grant opportunities will be pursued proactively for other projects throughout the Plan period. In addition, if grants are not awarded, LCA staff may recommend scaling projects differently, or adjustment implementation schedules to lessen customer rate burden of these projects.

To complete the projects included in the Plan in accordance with the financial strategy described above, the following annual revenue increases will be required:

LCA's Suburban Water systems → 3.5% to 5.0% per year
LCA's Suburban Wastewater systems → 3.8% per year, calculated via intermunicipal agreement
LCA's Allentown Division water and sewer systems → Current lease rates increase by inflation (CPI-U) plus 2.5%, with additional rate increases for capital cost recovery for selected projects.

Public Comments Received

LCA's 2024-2028 Capital Plan was presented to the Board of Directors in August 2023 and sent to municipalities served by LCA water and/or sewer systems. The Plan was also posted on LCA's website

with a 30-day window available for public comment. The Plan was sent to various other organizations and agencies who were expected to have an interest in LCA's upcoming plans and programs.

Lehigh County Board of Commissioners: The Plan was presented to the County Commissioners in summary form at a meeting on August 23, 2023. No formal comments were provided, although the Commissioners were appreciative of the presentation.

Lehigh Valley Planning Commission: The planning commission reviews LCA's Capital Plan annually and provides comment. The Commission's letter for LCA's draft 2024-2028 Capital Plan is attached noting that the new projects included in the plan are consistent with the regional comprehensive plan.

City of Allentown: City officials review the Allentown Division Capital Plan annually and provide comments, primarily on upcoming projects that may have an impact on user rates. The City's letter for LCA's draft 2024-2028 Capital Plan is attached.



Lehigh Valley Planning Commission

STEVEN GLICKMAN
Chair

CHRISTOPHER AMATO
Vice Chair

KEVIN SCHMIDT
Treasurer

BECKY A. BRADLEY, AICP
Executive Director

September 29, 2023

Mr. Charles Volk, PE
Chief Capital Works Officer
Lehigh County Authority
P.O. Box 3348
Allentown, Pennsylvania 18106-0348

Re: LCA Preliminary Capital Plans - Allentown and Suburban Divisions 2024-2028

Dear Mr. Volk:

The Lehigh Valley Planning Commission (LVPC), at its regular monthly meeting on September 28, 2023, reviewed the above-referenced plans and offer the following comments. The comments, as shown on the attached page, are provided for both water and wastewater projects appearing for the first time and significantly modified projects from previous Capital Plans. The Allentown Division Plan includes eight new projects and three significantly modified projects, and the Suburban Division Plan includes five new projects for which comments are provided.

Please call me if you have any questions.

Sincerely,

Susan L. Rockwell
Senior Environmental Planner

Attachment

cc: Lehigh County Commissioners

LCA NEW AND SIGNIFICANTLY MODIFIED PROJECTS 2024-2028

Project	Municipality	Brief Description	LVPC Comment
Lehigh County Authority - Preliminary Capital Plan (2024-2028)	ALLENTOWN DIVISION	<ul style="list-style-type: none"> Water PFAS Compliance Planning and Upgrades: Includes water quality studies and facilities upgrade work for Crystal Spring to comply with EPA's proposed Per- and Polyfluoroalkyl regulation for drinking water. Influent Channel Modifications: Modifications to existing influent channel at water filtration plant to reduce solids settling prior to reaching primary clarifiers. Big Lehigh Intake & Transmission Upgrades: Upgrade Big Lehigh intake facility with new pump #2, conduct assessment & rehabilitation of raw water transmission main. Redundant Power Supply: Addition of a new electrical feed to the current dual feed system at the water filtration plant to comply with regulations. Lead Service Line Replacement Program: Multi-year project to replace public and private lead service lines in the City to comply with EPA regulations. Wastewater Manhole Inspection and Sealing Program: Infiltration/inflow (I&I) reduction efforts to inspect and seal every manhole in the City sewer system over a 10-year period. Act 537 Alternative Analyses: Includes final alternatives analysis for the Kline's Island Act 537 Plan, which will include financial analysis, solution selection and finalization of the plan. Primary Sludge Digester Feed Line Replacement: Replacement of 2 parallel 6-in diameter cast iron primary sludge lines in poor condition with 2 parallel 8-in glass lined ductile iron pipes. Source Reduction Plan - I/I Elimination Program: Consists of internal pipe lining and grouting, and potential dig-up repairs to eliminate I/I in sewer system. Redundant Power Supply: Addition of a third feed from a separate PPL substation to avoid wastewater treatment plant overflows and compliance violations due to extended power outages. Wet Weather Capacity Enhancement Project - Tertiary Bypass: Increase wet weather capacity of the plastic media trickling filter effluent pump station at the wastewater treatment plant, resolving a hydraulic bottleneck at the plant. 	<p>Evaluating/providing system improvements to provide safe, reliable and efficient service supports FutureLV actions to 'improve the utility and mobility infrastructure of the region' and 'integrate efficiency measures and emerging technologies' (of Policy 1.1) and 'protect the quality and quantity of surface water and groundwater' (of Policy 3.2). LVPC will provide comments on draft Kline's Island Act 537 Plan upon completion, per Act 537 requirements.</p>

LCA NEW AND SIGNIFICANTLY MODIFIED PROJECTS 2024-2028

Project	Municipality	Brief Description	LVPC Comment
Lehigh County Authority - Preliminary Capital Plan (2024-2028)	SUBURBAN DIVISION	<p>Water</p> <ul style="list-style-type: none"> Water Quality Studies & Upgrades: Conduct water quality studies and rehabilitation work at various LCA satellite system locations to comply with evolving state and federal water quality standards and regulations. <p>Wastewater</p> <ul style="list-style-type: none"> North Whitehall Township Act 537 Sewage Facilities Planning: Coordinate with North Whitehall Township to develop an up-to-date Act 537 Sewage Facilities Plan for the township. Spring Creek Pump Station Upgrades: Upgrade system components determined to be in poor condition to improve and maintain level of service. Spring Creek Force Main Relocation: Relocation of approximately 2,200 linear feet of Spring Creek force main due to the Turnpike widening project and needed relocation of the Lower Macungie Road bridge. Sand Spring Wastewater Treatment Plant Improvements: Equipment improvements at the plant located in North Whitehall Township to comply with PA Department of Environmental Protection discharge permit. 	<p>Evaluating/providing system improvements to provide safe, reliable and efficient service supports FutureLV actions to 'improve the utility and mobility infrastructure of the region' and 'integrate efficiency measures and emerging technologies' (of Policy 1.1) and 'protect the quality and quantity of surface water and groundwater' (of Policy 3.2). LVPC will provide comments on draft North Whitehall Township Act 537 Plan upon completion, per Act 537 requirements.</p>



Mark Shahda
Director of Public Works

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Allentown PA 18103
610.437.7583 x2278

Mark.Shahda@allentownPA.gov
www.AllentownPA.gov

September 29, 2023

Charles Volk, P.E.
Chief Capital Works Officer
Lehigh County Authority
P.O. Box 3348
1053 Spruce Street
Allentown, PA 18106-0348

RE: Draft 5-Year Capital Plan, Allentown Division, 2024-2028

Dear Mr. Volk,

Pursuant to Article 4 of the *Allentown Water and Sewer Utility System Amended and Restated Concession and Lease Agreement* (Lease), the City of Allentown (City) is responding to your *Draft 5-Year Capital Plan, Allentown Division, 2024-2028 (Plan)* received August 15, 2023.

General note: In the glossary of Acronyms and Terms under project funding there is no designation for Change of Law.

WATER

AD-W-7 Water Main Replacements

The financial information in both the Water Spreadsheet and in the Project Detail does not reflect the contribution of \$6,300,000 from the 2021 ARPA grant. The funding has been applied to Cycle 6 (2022-2023) and the balance will be applied to the combined program for Cycles 7 & 8.

AD-W-12 PFAS Compliance Planning and Upgrades

The City notes that initial funding for this project was contributed from the Event Driven Capital Improvement Fund (Lease section 4.17).

AD-W-16- Meter Replacement Program

The Water Master spreadsheet indicates this is a CCRC, but the individual project sheet shows it being funded by LCA. This program does not qualify as a Major Capital Improvement Project (MCIP). The Lease definition of MCIP allows, "Full Scale addition or replacement of Customer Metering Devices when such work is completed as a single project." The project detail sheet reflects that this work is ongoing. Further, the Lease definition of a MCIP means "(2) Full-scale addition or replacement of Customer Metering Devices (or "CMDs") when such work is completed as part of a single project. For replacement projects, the Concessionaire's determination of the need for replacements will be based on testing of meter accuracies" The Project Detail does not indicate there has been testing to validate that the CMDs "have reached their life expectancy as determined by the CMD manufacturer."

AD-W-22 Filter Upgrades

The financial information in both the "Water" spreadsheet and in the Project Detail is missing the grant contribution. It should be noted that there is a contribution of \$7,200,000 from the 2021 ARPA grant.

AD-W-23 Intake Upgrades

The total project cost is listed as \$1,120,000; the current (2023) MCIP threshold is \$1,209,963 which would disqualify this project for cost-recovery under the CCRC.

Also of concern is that the project as described does not include installation of traveling screens as was written in the 2023-2027 CP. An advisory statement in the 2022 WFP Master Plan (MP), Section 3.1.1, Water Filtration Plant, notes "The failure of the existing traveling screen is a concern until a new facility will be constructed. Design will commence in 0-5 years with construction in years 6-10."

It is noted that there has been an increase in raw water withdrawals of over 1 MGD over the past four-years, and per future planning figures (Act 537), the forecast is that the region will need more water.

AD-W-27 Lead Service Line Replacement Program

This project is part of the Lead and Copper Rule Change of Law. The Funding coding should match. On the project detail sheet, the project funding is coded as "Allentown" while the spreadsheet indicates the funding as "Change of Law". Refer to general note above.

WASTEWATER

AD-S-22 Final Clarifiers 1-4

The project is identified in both the KIWWTP Master Plan and the Plan. Although the scopes appear to be the same, the estimated budgets differ by \$1.5M. What is the difference in the cost?

AD-S-23 Primary Digester Feed Line Replacement

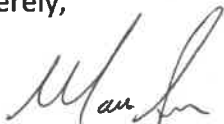
The City notes that the estimated project budget is close to the MCIP threshold.

AD-S-26 Source Reduction Plan- I/I Elimination Plan

Consider replacing "Elimination" with "Reduction" in the title of the project, so it reads: "I&I Reduction Plan". Also, consider including notation of additional funding from Sewer Collection Capital Improvement Fund (Lease section: 4.18).

As prior practice, the City will anticipate LCA's response to these comments and after receipt of which the City may request a meeting to review the comments and positions of LCA and the City. Thank you for providing your proposed program and for your continued cooperation.

Sincerely,



Mark Shahda
Director of Public Works

CC: Liesel Gross, LCA
Ed Klein, LCA
Daniel Koplisch, COA
Office of Compliance, COA

LEHIGH COUNTY AUTHORITY
ADMINISTRATION
2024-2028 CAPITAL PROGRAM

Project #	Name or Title of Proposal	Prj. Category	(1) Prj. Funding	Approvals 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
CON-A-1*	Computer System Hardware & Software Upgrades	AM - High	LCA	A	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 25,000	\$ 25,000	\$ 200,000
CON-A-2*	GIS Upgrades & Application Development	Efficiency	LCA	V	\$ 75,000	\$ 35,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 235,000
CON-A-3*	Information Technology Master Plan Update	Planning	LCA	A	\$ 50,000	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ 50,000
CON-A-4*	Document Management	Efficiency	LCA	V	\$ 5,000	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ 50,000
CON-A-5*	Disaster Recovery/Security Upgrades	Efficiency	LCA	A	\$ 25,000	\$ 75,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 175,000
CON-A-6*	CMMS Upgrades	Efficiency	LCA	A	\$ 75,000	\$ 185,000	\$ 25,000	\$ 25,000	\$ -	\$ -	\$ 235,000
CON-A-7*	New Munis Implementation	Efficiency	LCA	P	\$ 750,000	\$ 800,000	\$ -	\$ -	\$ -	\$ -	\$ 800,000
CON-A-8*	Main Office Improvements	Efficiency	LCA	P	\$ -	\$ 550,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 1,150,000
GRAND TOTAL					\$ 1,030,000	\$ 1,795,000	\$ 300,000	\$ 300,000	\$ 250,000	\$ 250,000	\$ 2,895,000

(*) CON = a Project that benefits both the Allentown and Suburban Divisions. All projects are LCA funded.

(1) Reference Glossary of Acronyms & Terms found immediately after the Table of Contents

(2) If blank project cost is not applicable (annual project) or to be determined

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	\$ 200,000	\$ 800,000	\$ 1,100,000	\$ -	\$ 2,150,000
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	\$ 5,483,500	\$ 8,816,500	\$ 6,975,500	\$ 5,795,500	\$ 33,688,000

(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
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
	Subtotal				\$ 332,500	\$ 912,500	\$ 747,500	\$ 732,500	\$ 482,500	\$ 597,500	\$ 3,472,500
	<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
	Subtotal				\$ 750,000	\$ 1,000,000	\$ 1,100,000	\$ 1,200,000	\$ 1,300,000	\$ 1,400,000	\$ 6,000,000
	<u>Western Lehigh Interceptor</u>										
SD-S-3	Central Lehigh County WW Capacity Planning & Expansion	New Cust	LCA	V	\$ 325,000	\$ 500,000	\$ 250,000	\$ 50,000	\$ -	\$ -	\$ 800,000
SD-S-7	WLI Major Rehabilitation and Repairs	Regulatory	LCA	P	\$ 200,000	\$ 225,000	\$ 3,750,000	\$ 3,000,000	\$ -	\$ -	\$ 6,975,000
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	\$ 700,000	\$ 730,000	\$ -	\$ -	\$ -	\$ 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
	Subtotal				\$ 2,725,000	\$ 6,175,000	\$ 10,330,000	\$ 3,300,000	\$ -	\$ -	\$ 19,805,000
	<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
	Subtotal				\$ 785,000	\$ 1,180,000	\$ 705,000	\$ 255,000	\$ 50,000	\$ 50,000	\$ 2,240,000
<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
Subtotal					\$ 1,500,000	\$ 1,800,000	\$ 300,000	\$ -	\$ -	\$ -	\$ 2,100,000
	GRAND TOTAL WASTEWATER PROJECTS				\$ 6,092,500	\$ 11,067,500	\$ 13,182,500	\$ 5,487,500	\$ 1,832,500	\$ 2,047,500	\$ 33,617,500

(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
ALLENTOWN DIVISION
2024-2028 CAPITAL PROGRAM
WATER

Project #	Name or Title of Proposal	Pjt. Category	Funding (1)	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
	OPERATING/CAPITAL RESERVE FUNDS										
	ANNUAL PROJECTS										
AD-W-A	Annual Projects	AM - Varies	LCA	A	1,295,000	2,735,000	1,811,000	1,544,000	1,672,000	1,740,000	9,502,000
	Sub-total Annual				\$ 1,295,000	\$ 2,735,000	\$ 1,811,000	\$ 1,544,000	\$ 1,672,000	\$ 1,740,000	\$ 9,502,000
	NON-CCRC PROJECTS										
AD-W-1	Indenture Report Improvements	AM-high	LCA	C	\$ 200,000	\$ 200,000	\$ 150,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 650,000
AD-W-9	Master Plan Studies	CA/OS	LCA	S	\$ 10,000	\$ -	\$ -	\$ -	\$ 170,000	\$ -	\$ 170,000
AD-W-24	WFP Redundant Power Supply	Regulatory	LCA	S	\$ -	\$ 80,000	\$ 250,000	\$ 400,000	\$ -	\$ -	\$ 730,000
AD-W-25	Tank and Reservoir Rehabilitation	AM-high	LCA	V	\$ 300,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 1,000,000
AD-W-26	Large Diameter Valve Replacement Project	AM-high	LCA	V	\$ 250,000	\$ 350,000	\$ 500,000	\$ 500,000	\$ 300,000	\$ 300,000	\$ 1,950,000
	TOTAL NON-CCRC PROJECTS				\$ 760,000	\$ 830,000	\$ 1,100,000	\$ 1,200,000	\$ 770,000	\$ 600,000	\$ 4,500,000
	Large Projects and CCRC Projects (3)										
AD-W-7	Annual Water Main Replacements	CA/OS	CCRC	C	\$ 3,200,000	\$ 4,800,000	\$ 4,800,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 24,600,000
AD-W-12	PFAS Compliance Planning and Upgrades	Regulatory	Change of Law	S	\$ -	\$ 250,000	\$ 1,000,000	\$ 8,500,000	\$ 500,000	\$ -	\$ 10,250,000
AD-W-15	WFP Influent Channel Modifications	Master Plan	CCRC (2)	P	\$ -	\$ -	\$ -	\$ 100,000	\$ 1,000,000	\$ 2,000,000	\$ 3,100,000
AD-W-16	Meter Replacement Program	AM-High	CCRC (2)	C	\$ 525,000	\$ 800,000	\$ 1,500,000	\$ 100,000	\$ -	\$ -	\$ 2,400,000
AD-W-21	Fixed-Base Meter Reading System	Efficiency	CCRC (2)	S	\$ -	\$ -	\$ -	\$ -	\$ 850,000	\$ 850,000	\$ 1,700,000
AD-W-22	WFP Filter Upgrades	Master Plan	CCRC/City ARPA	D	\$ 500,000	\$ 2,350,000	\$ 3,150,000	\$ -	\$ -	\$ -	\$ 5,500,000
AD-W-23	Big Lehigh Intake & Transmission Upgrades	Master Plan	CCRC (2)	S	\$ -	\$ 200,000	\$ 400,000	\$ 400,000	\$ 120,000	\$ -	\$ 1,120,000
AD-W-27	Lead Service Line Replacement Program	AM-high	Change of Law	S	\$ -	\$ 5,000,000	\$ 15,000,000	\$ 15,000,000	\$ 15,000,000	\$ 5,000,000	\$ 55,000,000
	TOTAL CCRC PROJECTS				\$ 4,225,000	\$ 13,400,000	\$ 25,850,000	\$ 29,100,000	\$ 22,470,000	\$ 12,850,000	\$103,670,000
	GRAND TOTAL				\$ 6,280,000	\$ 16,965,000	\$ 28,761,000	\$ 31,844,000	\$ 24,912,000	\$ 15,190,000	\$117,672,000

(1) Reference Glossary of Acronyms and Terms found after Table of Contents
(2) Project to be reviewed by the City for Major Capital Improvement/CCRC approval
(3) Includes projects that have not been reviewed by the City for MCI/CCRC approval

LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION
2024-2028 CAPITAL PROGRAM
WASTEWATER

Project #	Name or Title of Proposal	Pri. Category	(1) Funding	Approval Stage (1)	2023 Budget Approved	This Capital Program					
						2024 Year 1	2025 Year 2	2026 Year 3	2027 Year 4	2028 Year 5	2024-2028 Total
	Operating/Capital Reserve Funds										
	<u>ANNUAL PROJECTS</u>										
AD-S-A	Annual Projects	AM - Varies	LCA	A	\$ 1,729,000	\$ 2,706,000	\$ 2,147,500	\$ 2,067,000	\$ 1,726,000	\$ 1,553,000	\$ 10,199,500
	Sub-total Annual				\$ 1,729,000	\$ 2,706,000	\$ 2,147,500	\$ 2,067,000	\$ 1,726,000	\$ 1,553,000	\$ 10,199,500
	<u>Non-CCRC Projects</u>										
AD-S-I	Indenture Report Improvements	AM - Varies	LCA	C	\$ 300,000	\$ 300,000	\$ 200,000	\$ 200,000	\$ 150,000	\$ 150,000	\$ 1,000,000
AD-S-9	KIWWTP Master Plan	CA/OS	LCA	S	\$ -	\$ 160,000	\$ -	\$ -	\$ -	\$ -	\$ 160,000
AD-S-11	Manhole Inspection and Sealing Program	Regulatory	LCA	S	\$ 300,000	\$ 2,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 6,000,000
AD-S-27	KIWWTP Redundant Power Supply	Efficiency	LCA	S	\$ -	\$ -	\$ 120,000	\$ 500,000	\$ 150,000	\$ -	\$ 770,000
	Sub-total Allentown Division Wastewater Capital Funded by LCA				\$ 600,000	\$ 2,460,000	\$ 1,320,000	\$ 1,700,000	\$ 1,300,000	\$ 1,150,000	\$ 7,930,000
	<u>Large Projects and CCRC Projects</u>										
AD-S-5	WWTP Electrical Substation No. 1 Replacement	AM - High	CCRC	D	\$ 200,000	\$ 2,200,000	\$ 4,000,000	\$ 600,000	\$ -	\$ -	\$ 6,800,000
AD-S-19	WWTP Wet Weather Capacity Enhancement - Main & Auxiliary Pump Station Improvements	AM - Varies; Master Plan	CCRC (3)	D	\$ 100,000	\$ 400,000	\$ 6,000,000	\$ 6,000,000	\$ 200,000	\$ -	\$ 12,600,000
AD-S-20	WWTP Boiler Replacement & Solids Process HVAC Upgrade Project	AM - Varies; Master Plan	CCRC	C	\$ 2,800,000	\$ 1,400,000		\$ -	\$ -	\$ -	\$ 1,400,000
AD-S-21	WWTP Wet Weather Capacity Enhancement - IPS Pump Station Upgrade & 480v MCC Replacement	AM - Varies; Master Plan	CCRC (3)	D	\$ 100,000	\$ 200,000	\$ 1,700,000	\$ 4,000,000	\$ -	\$ -	\$ 5,900,000
AD-S-22	WWTP Final Clarifier 1-4 Rehabilitation	AM - Varies	LCA	C	\$ -	\$ 900,000	\$ 900,000	\$ -	\$ -	\$ -	\$ 1,800,000
AD-S-23	WWTP Primary Sludge Digester Feed Line Replacement	AM - Varies	CCRC (3)	S	\$ -	\$ 600,000	\$ 700,000	\$ -	\$ -	\$ -	\$ 1,300,000
AD-S-26	Source Reduction Plan - I/I Elimination Program	Regulatory	CCRC (2)	V	\$ 800,000	\$ 3,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 23,000,000
AD-S-28	WWTP Wet Weather Capacity Enhancement Project - Tertiary Bypass	AM - Varies	CCRC (3)	D	\$ -	\$ 100,000	\$ 1,100,000	\$ 100,000	\$ -	\$ -	\$ 1,300,000
	Sub-total Allentown Division Wastewater Large & CCRC Projects				\$ 4,000,000	\$ 8,800,000	\$ 19,400,000	\$ 15,700,000	\$ 5,200,000	\$ 5,000,000	\$ 54,100,000
	<u>Act 537 Plan Development Projects</u>										
AD-S-12	Act 537 Alternative Analyses	Regulatory	Allentown	S	\$ 700,000	\$ 600,000	\$ 100,000	\$ -	\$ -	\$ -	\$ 700,000
AD-S-29	Miscellaneous Act 537 Planning, Financial and Legal Reviews	Regulatory	LCA	V	\$ 1,250,000	\$ 200,000	\$ 100,000	\$ -	\$ -	\$ -	\$ 300,000
	Sub-total Allentown Division Wastewater Capital Funded by the City				\$ 1,950,000	\$ 800,000	\$ 200,000	\$ -	\$ -	\$ -	\$ 1,000,000
	GRAND TOTAL				\$ 8,279,000	\$ 14,766,000	\$ 23,067,500	\$ 19,467,000	\$ 8,226,000	\$ 7,703,000	\$ 73,229,500

(1) Reference Glossary of Acronyms and Terms found after the Table of Contents
(2) Per 2020 Lease Amendment related to sewer collection rehabilitation projects
(3) Project to be reviewed by the City for Major Capital Improvement/CCRC approval

**ADMINISTRATION
5-YEAR CAPITAL PLAN
2024-2028**

CAPITAL FINANCING JUSTIFICATION

The Administrative projects of the Authority are funded through charge-backs to the various operating and capital budgets.

The Administrative projects are either a strictly Suburban Division (SD) project or a project which benefits both the City and Suburban Division (CON). In the case of the multi-division projects in the plan period, the total costs have been apportioned 50% to the Suburban Division and 50% to the Allentown Division.

Project SD-A-1 is an Information Technology (IT) project to upgrade the Suburban SCADA capabilities. Water fund operating reserves will be used to finance the projects with partial recovery through charge-backs to Authority wastewater funds.

Project CON-A-1 is an organization-wide project related to the annual upgrades of computer hardware and software.

Project CON-A-2 is an organizational-wide upgrade to the Geographic Information System (GIS).

Project CON-A-3 is an organization-wide update and implementation of the LCA IT Master Plan.

Project CON-A-4 is an organization-wide project to develop an electronic document management system.

Project CON-A-5 is an organization-wide project to add additional security and disaster recovery tools to the existing IT system.

Project CON-A-6 is an organization-wide project to upgrade the existing CMMS system.

Project CON-A-7 is for the new implementation of the MUNIS ERP.

Project CON-A-8 is for an office additional and for main office improvements.

Funding Sources for each project are shown below.

ADMINISTRATION	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>TOTAL</u>
Project Costs	<u>\$1,795,000</u>	<u>\$300,000</u>	<u>\$300,000</u>	<u>\$250,000</u>	<u>\$250,000</u>	<u>\$2,895,000</u>
Funding Sources:						
Operating/Capital Reserves	<u>\$1,795,000</u>	<u>\$300,000</u>	<u>\$300,000</u>	<u>\$250,000</u>	<u>\$250,000</u>	<u>\$2,895,000</u>
New Borrowing	-	-	-	-	-	-
Total Funding	<u>\$1,795,000</u>	<u>\$300,000</u>	<u>\$300,000</u>	<u>\$250,000</u>	<u>\$250,000</u>	<u>\$2,895,000</u>

**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:

CAPITAL FINANCING SOURCES						
	2024	2025	2026	2027	2028	TOTAL
Project Costs	\$6,617,000	\$5,483,500	\$8,816,500	\$6,975,500	\$5,795,500	\$33,688,000
<i>Sources of Funding:</i>						
Current Cash Flows	\$1,154,184	\$2,833,500	\$3,016,500	\$3,075,500	\$3,495,500	\$13,575,184
Cash Reserves	-	-	-	-	-	-
New Borrowing	\$5,462,816	\$2,650,000	\$5,800,000	\$3,900,000	\$2,300,000	\$20,112,816
TOTAL FUNDING	\$6,617,000	\$5,483,500	\$8,816,500	\$6,975,500	\$5,795,500	\$33,688,000

Total spending on capital projects for the five-year period totals \$33,688,000. Current cash flows and cash reserves over the period will provide \$13,575,184 for capital projects. New borrowing for plan period projects will be in the amount of \$19,880,000 over the five years for specific projects being executed each year with a borrowing balance forward of \$232,816 from year 2023.

The \$19,880,000 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					
US DOLLARS	2024	2025	2026	2027	2028
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)	(428,446)	(743,800)	(955,848)	(1,080,902)
Investments Converting to Cash	-	-	-	-	-
Proceeds From NEW Debt	5,230,000	2,650,000	5,800,000	3,900,000	2,300,000
Capex	(7,065,750)	(5,558,500)	(8,891,500)	(7,038,000)	(5,858,000)
NET FUND FLOWS	801,043	65,477	367,608	331,484	281,837
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	9,342,690	9,710,298	10,041,782	10,323,619
Unrestricted Investments	2,945,069	2,945,069	2,945,069	2,945,069	2,945,069
Total Unrestricted Balances	12,222,282	12,287,759	12,655,367	12,986,851	13,268,688
Days on Hand	300	293	295	296	295
DEBT SERVICE COVERAGE RATIO	1.77	1.83	1.96	1.86	1.93

**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:

CAPITAL FINANCING SOURCES						
	2024	2025	2026	2027	2028	TOTAL
Project Costs	\$11,067,500	\$13,182,500	\$5,487,500	\$1,832,500	\$2,047,500	\$33,617,500
<i>Sources of Funding:</i>						
Current Cash Flows	\$3,892,500	\$5,432,500	\$5,487,500	\$1,832,500	\$2,047,500	\$18,692,500
Cash Reserves	-	-	-	-	-	-
New Borrowing	\$7,175,000	\$7,750,000	-	-	-	\$14,925,000
TOTAL FUNDING	\$11,067,500	\$13,182,500	\$5,487,500	\$1,832,500	\$2,047,500	\$33,617,500

Total spending on capital projects for the five-year period totals \$33,617,500. Current cash flows and cash reserves over the period will provide \$18,692,500 for capital projects. New borrowing will provide \$14,925,000 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 2024	4.3%
Year 2025	9.7%
Year 2026	0.5%
Year 2027	1.9%
Year 2028	1.9%

CONDENSED CASH FLOW - SUBURBAN WASTEWATER

Dollars	2024	2025	2026	2027	2028
User Charges	19,695,941	21,596,738	21,702,286	22,117,000	22,541,156
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	(466,744)	(970,893)	(970,893)	(970,893)	(970,893)
Investments Converting to Cash	-	-	-	-	-
Proceeds From NEW Debt	7,175,000	7,750,000	-	-	-
Capex	(11,516,250)	(13,257,500)	(5,562,500)	(1,895,000)	(2,110,000)
NET FUND FLOWS	1,820,308	1,620,307	1,227,544	4,853,148	4,591,997
User Charge Revenue Increase %	4.3%	9.7%	0.5%	1.9%	1.9%
Unrestricted Cash Balance	11,838,735	13,459,042	14,686,585	19,539,734	24,131,731
Unrestricted Investments	7,084,095	7,084,095	7,084,095	7,084,095	7,084,095
Total Unrestricted Balances	18,922,830	20,543,137	21,770,680	26,623,829	31,215,826
Unrestricted Cash - Days on Hand	301	332	352	455	545
DEBT SERVICE COVERAGE RATIO	6.16	5.20	5.00	4.97	4.95

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

BY SYSTEM	PROJECTS	TOTAL	CURRENT CASH FLOWS	RESERVES	NEW DEBT
Annual Projects	SA	\$3,472,500	\$3,472,500	-	-
Western Lehigh Interceptor	S3, S7, S9, S12, S13, S24, S28	\$19,805,000	\$5,880,000	-	\$13,925,000
LCA Wastewater Treatment Plant	S22	\$6,000,000	\$5,000,000	-	\$1,000,000
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	-	-
TOTAL		\$33,617,500	\$18,692,500	-	\$14,925,000

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION
CAPITAL PLAN
2024–2028**

SUMMARY

The Allentown Division Capital Plan (Plan) is a five-year plan that covers the years 2024 through 2028. The Plan includes water and wastewater projects to ensure facility / infrastructure reliability and to comply with the Allentown Water & Sewer Lease (Lease) required projects. It also includes projects and studies deemed necessary by LCA, where the latter will identify and evaluate upgrades and improvements that will be incorporated in future Capital Plans. The Lease requires that LCA submit a 5-year Capital Plan to the City annually for review and approval.

The projects identified in the Plan fall into two primary categories, those funded by LCA and those funded by the City in the form of grants or reimbursements. For this Plan, reimbursements from the City are restricted to those expenses related to developing the regional Act 537 Plan for the Kline’s Island Sewer System, which is a requirement of the Pa. Department of Environmental Protection stemming from a prior Chapter 94 violation. Grants from the City are expected contributions provided from the City’s allocation of American Rescue Plan Act funding, which the City has agreed to use a portion to offset ratepayer impacts of water system capital costs.

CAPITAL FUNDING 2024-2028					
Budget Area	LCA	CITY			TOTALS
		Grants	Reimburse	Sub-Total	
Water	\$111,472,000	\$6,200,000	\$0	\$6,200,000	\$117,672,000
Wastewater	\$72,629,500	\$0	\$600,000	\$600,000	\$73,229,500
Totals	\$184,101,500	\$6,200,000	\$600,000	\$6,800,000	\$190,901,500

Water Projects: Focus on regulatory compliance, asset management, immediate and future needs at the Water Filtration Plant (WFP) and addressing the Lease operating standards. The recently completed WFP Master Plan identified capital improvements to address future regulatory requirements and/or operational needs. Lease requirements include the annual replacement of 1 mile of water mains through 2024, followed by a study and/or increase to 2 miles of water main replacement per year thereafter.

Wastewater Projects: Projects focus on regulatory compliance, asset management, immediate and future needs at the Wastewater Treatment Plant (WWTP) and addressing the Lease operating standards. Projects of note include the replacement of the solids process boiler and HVAC upgrade project and replacement of electrical substation no. 1. In addition, annual funding is included in the Plan for the rehabilitation of defective sewer mains and a City-wide manhole rehabilitation program to remove sources of inflow and infiltration.

Additional information regarding these and other projects can be found in the Plan's individual Project Detail Sheets.

Supplemental Revenues: Under the Concession Agreement, LCA is able to recover certain capital expenses through Capital Recovery Fees (Tapping Fees) applied to new customers and Capital Cost Recovery Charges applied to ratepayers. These charges will be applied to all Major Capital Improvements (MCI), which are defined as projects exceeding \$1 million (indexed for inflation in the future) within the proposed Plan. Additional charges may be applied to recover costs for project driven by regulatory changes or other changes in law. The designation of certain projects for cost recovery through these mechanisms is noted in the Plan's individual Project Detail Sheets and on the summary sheets for each section of the Plan.

FINANCIAL JUSTIFICATION

LCA draft 2024-2028 Capital Plan is expected to be funded through a mix of operating revenues, project reserves, grants, and new borrowing, as outlined below. A more detailed cash-flow evaluation showing the impact of this funding approach is shown on the next page.

2024-2028 Capital Plan Allentown Division Funding Sources						
	LCA SOURCES			CITY SOURCES		
Budget Area	Grants	Operating/Capital Reserves	New Borrowing	Grants	Reimb	Total Sources
Water	\$33,383,892	\$40,412,600	\$38,355,508	\$6,200,000	\$0	\$118,352,000
Wastewater	\$0	\$54,149,500	\$17,800,000	\$0	\$600,000	\$72,549,500
Totals	\$33,383,892	\$94,562,100	\$56,155,508	\$6,200,000	\$600,000	\$190,901,500

SPECIAL NOTES

1. As noted above, the City and LCA are collaborating on the development of a regional Act 537 Plan, which will provide details for sewage facility plans and significant capital improvements in the Allentown Division to address sanitary sewer overflows and overall capacity challenges of the system. 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.
2. LCA has applied for (or will apply for) grants to support this Plan in the following areas:
 - I&I Source Reduction Plan – Grant application for \$10,395,080 submitted in December 2022, awaiting decision.

- Lead Service Line Replacement Program – Grant of \$3,383,892 awarded in July 2023. Additional grant applications of approximately \$55,000,000 expected.
- PFAS Compliance Planning & Treatment Upgrades – Grant funding will be sought for the \$10,250,000 in estimated costs included in this plan.

To present a realistic financial outlook, assuming a 100% grant award will not occur, LCA has captured approximately 42% of this potential grant funding source in this analysis. Project costs that are not covered via grants will be incorporated into the new project financing or eliminated.

CONDENSED CASH FLOW - CITY DIVISION					
US DOLLARS	2024	2025	2026	2027	2028
User Charges	52,849,383	56,649,247	61,774,801	65,884,080	69,457,041
Other Operating Revenues	355,139	355,139	355,139	355,139	355,139
Non-Operating Revenues	2,725,365	2,125,365	2,125,365	2,125,365	2,125,365
Operating expenses	(22,052,042)	(22,713,604)	(23,395,012)	(24,096,862)	(24,819,767)
Annual Lease & Other Payments	(1,308,224)	(1,002,224)	(1,024,273)	(1,046,807)	(1,069,837)
Debt Service - Current Debt	(15,664,816)	(16,217,696)	(16,786,111)	(17,374,611)	(17,985,361)
Debt Service - NEW Debt	(595,581)	(2,169,826)	(3,613,968)	(3,692,029)	(3,692,029)
Investments Converting to Cash	-	-	-	-	-
Grants	8,733,892	10,850,000	10,000,000	10,000,000	-
Proceeds From NEW Debt	8,555,508	24,200,000	22,200,000	1,200,000	-
Capex	(32,628,500)	(51,978,500)	(51,461,000)	(33,263,000)	(23,018,000)
NET FUND FLOWS	970,123	97,901	174,942	91,275	1,352,550
Plan Volume Increase	0.00%	0.00%	0.00%	0.00%	0.00%
User Charge Revenue Increase %	4.70%	4.70%	4.70%	4.70%	4.70%
Total User Charge Revenue Increase	4.70%	4.70%	4.70%	4.70%	4.70%
Unrestricted Cash Balance	15,375,341	15,142,461	14,976,699	14,717,049	15,708,146
Unrestricted Investments	-	-	-	-	-
Total Unrestricted Balances	15,375,341	15,142,461	14,976,699	14,717,049	15,708,146
Days Cash on Hand	254	243	234	223	231
DEBT SERVICE COVERAGE RATIO	1.93	1.89	1.92	2.02	2.10



LEHIGH COUNTY AUTHORITY

2024 BUDGET

DRAFT: October 9, 2023

Executive Summary

Operating Activities

Lehigh County Authority

2024 Budget

Operating Budgets Overview

The funds of the Authority are grouped in the financial statements as Enterprise funds, which are used to account for business-like activities provided to the general public. These activities are financed primarily by user charges, and the measurement of financial activity focuses on net income measurement like the private sector, in addition to cash flows used more traditionally by the public utility sector. The following enterprise funds are reported as major funds:

- A. Suburban Water Division** – Used to account for the operations of the Suburban Water system’s supply, storage, pumping and treatment facilities and distribution system. The Suburban Water system is a public utility service, which is intended to be maintained on a self-supporting basis.
- B. Suburban Wastewater Division** – Used to account for the operations of the Suburban Wastewater system’s interceptors, collector systems, pump stations, and treatment facilities. The suburban wastewater system is a public utility service, which intends to be maintained on a self-supporting basis.
- C. City Division** – Used to account for the operations of the City of Allentown water and sewer system. The City Division fund is a public utility service, which intends to be maintained on a self-supporting basis. This fund was added in 2013 because of the Authority entering into a 50-year Concession Lease Agreement with the City.

A. Suburban Water Division:

The Authority currently owns and operates water systems in three areas of Lehigh County - the Western Lehigh (WLSA), the Northern Lehigh (NLSA) and the Southern Lehigh (SLSA) Service Areas. In addition, the Authority owns and operates one system in Northampton County. Within each service area, separate systems are further designated as divisions. The Authority is funding all expenses in most of the divisions through a common rate. By municipal agreement, there are 35 customers within the Washington Township Division that are not part of the common rate structure.

Responsibilities for water service include monitoring water quality, operating and maintaining the various supply sources, reservoirs, transmission and distribution pipe networks and customer metering, billing, and response to other related customer service needs.

Each division is affected to varying degrees by the Federal and Pennsylvania Safe Drinking Water Act requirements. Depending on the source (groundwater or purchased surface water), differing analyses are required for water quality monitoring.

Major Budget activities continue to place an emphasis on providing customers with outstanding service. Maintenance programs intended to prolong the useful life of existing facilities, including preventive maintenance, leakage monitoring and repairs, exercising of system valves and fire hydrants, and station improvements and repairs, are on-going.

B. Suburban Wastewater Division:

The Authority is responsible for providing a variety of wastewater services. Current operation and maintenance responsibilities include: the Western Lehigh Interceptor (WLI), Little Lehigh Relief Interceptor (LLRI), the LCA Pre-Treatment Plant (formerly the County of Lehigh Pre-Treatment Plant), collection and treatment in Heidelberg Township, North Whitehall Township, Weisenberg Township and Lynn Township and collector systems within Lowhill Township, Upper Milford Township, Weisenberg Township and Washington Township.

Lehigh County Authority 2024 Budget Operating Budgets Overview

Western Lehigh Interceptor system:

This budget addresses transportation and City treatment services provided to various municipalities and assumes an average daily flow of 8 million gallons per day (MGD) not including Emmaus, and 8.5 million gallons per day (MGD) including Emmaus, from the communities served including the Boroughs of Alburtis and Macungie, and the Townships of Lower Macungie, Upper Macungie, Upper Milford, Weisenberg, Lowhill and the LCA Pre-Treatment Plant (the "Municipalities"). The Municipalities are billed based upon wastewater strength, flow, and reserved capacity. The budget (including the LLRI, described below) includes an estimated .1 percent rate increase for the typical residential customer. In addition, the Borough of Emmaus discharges a portion of its flow through the WLI and is billed in accordance with a service agreement.

Personnel time is included for the operation and maintenance of the gravity interceptors and the Spring Creek Pump Station (SCPS) and force main. The budget anticipates that the SCPS will operate daily to meet the demand of volume as well as in response to wet weather events according to current wet weather operating protocols.

As part of a comprehensive Infiltration and Inflow (I/I) removal program, flow monitoring of the Authority and Signatory collector system connections has been completed on an ongoing basis over many years, beginning in 2007. The results of the flow monitoring are used to plan I/I removal programs conducted by all Municipalities to lower wet-weather flows and ensure future capacity is available for new system users. In 2020, the Authority and Municipalities developed an Interim Act 537 Plan to address the capacity requirements for the period of 2021 to 2025. The 2024 Budget includes implementation of planning activities outlined in this regional Interim Act 537 Plan.

Sampling and analysis for billing purposes of the LCA Pre-Treatment Plant and Municipality industrial/commercial users, and flow entering the City system and that from Emmaus are included.

Little Lehigh Relief Interceptor (LLRI) system

Phase 1

This system phase, including the Park Pump Station (PPS) and Force Main, serves the Municipalities and the Townships of Salisbury and South Whitehall. The PPS, which has been in service since 1983, provides 20 MGD of relief pumping capacity to bypass a critical portion of the City of Allentown's interceptor system. The Phase 2 Upgrade Project will be constructed in 2023 following the Phase 1 Upgrade Project that was completed in 2021. The Phase 2 Upgrade consists of replacement of the original emergency generator, which is at the end of its service life and is undersized for station conveyance design capacity. In 2022, the Authority awarded the Electrical Contract for the Phase 2 project, and in late 2023 the Authority will award the General Contract for the Phase 2 Project. Project completion was delayed due to the long lead time for the new generator.

Phase 2

This system phase includes the gravity relief line from Keck's Bridge to the PPS and serves the Municipalities and the Borough of Emmaus and Salisbury Township. The 2024 Budget anticipates the continuation of increased maintenance costs for cleaning due to 4 siphon chambers, a meter station, high H₂S (Hydrogen sulfide) and other work on this system.

Common Rate Collector System:

Upper Milford system

As the wastewater service agency for Upper Milford Township (UMiT), Lehigh County Authority (LCA) currently provides all wastewater-related services for the 1,122 residential and 48 commercial customers in the township. Except for significant matters requiring inter-municipal negotiations or consultations, LCA provides general representation for UMiT on wastewater issues.

Lehigh County Authority

2024 Budget

Operating Budgets Overview

Weisenberg system

In 2002, LCA finalized an agreement with Weisenberg Township, which designates LCA as the provider of public wastewater service within specific areas of the township. Currently LCA provides collection system service to 146 residential and 3 commercial customers in the Pointe West subdivision and surrounding areas.

Heidelberg Heights system

This system, serving 145 customers in Heidelberg Township was purchased by LCA in September 1998. The system includes approximately 6,500 linear feet of collector sewers and a 60,000 GPD Sequencing Batch Reactor (SBR) Activated Sludge Wastewater Treatment Plant, which was placed in operation in 2000. The budget includes maintenance activities related to the collection system, emphasizing identification and removal of extraneous flow into the system. The Authority operates the system using LCA personnel and outside operators.

Wynnewood Terrace system

The budget includes the operation and maintenance of the Wynnewood Terrace wastewater system in North Whitehall Township. The Authority took over ownership and operational responsibilities in July of 2003. The system includes a new 60,000 GPD SBR(s) treatment plant constructed in 2020, three pump stations and collection system currently serving 217 residential and 2 commercial customers. The budget includes maintenance activities related to the collection system, emphasizing identification and removal of extraneous flow into the system. The Authority operates the system using LCA personnel and outside operators.

Sand Spring system

The budget includes the operation and maintenance of the Sand Spring wastewater system in North Whitehall Township, which was acquired at the end of 2004. The system includes a new 35,000 GPD SBR(s) treatment plant constructed in 2021 and collection system currently serving 248 residential apartment units and 11 commercial customers. The Authority operates the system using LCA personnel and outside operators.

Lowhill Township system

LCA acquired the Lowhill Township sewer collection system effective April 1, 2016. The system serves 43 residential customers and is comprised of approximately 3,500 feet of 8" PVC sewer.

Western Weisenberg system

The Authority owns and operates a 40,000 GPD wastewater treatment plant at the Arcadia West Industrial Park (AWIP). The new plant serves the AWIP and other properties in the New Smithville area of Weisenberg Township. Currently there are 17 commercial customers and 1 institutional customer in this system.

Lynn Township system

The budget includes the operation and maintenance of the Lynn Township wastewater system in Lynn Township. The system includes an 80,000 GPD cast in place extended air plant and collection system currently serving approximately 365 residential properties, 21 commercial customers and the Northwestern Lehigh School District Complex.

Lehigh County Authority

2024 Budget

Operating Budgets Overview

Washington Township system

LCA provides operating and preventive maintenance services for this system that serves approximately 594 residential and commercial customers in the Slatedale and Emerald areas of Washington Township. Approximately 130,000 PD of wastewater is conveyed to and treated at the Borough of Slatington's wastewater treatment plant. Ownership of the system remains with Washington Township.

LCA Pre-Treatment Plant (PTP)

LCA took over the operation in May 2006 and ownership in October 2009 of this 5.75 MGD facility built by the County of Lehigh in 1990. Currently the facility provides pre-treatment of high strength waste, predominantly generated by food and beverage industrial customers, along with domestic-strength waste generated by upstream commercial and residential properties located in Lowhill, Weisenberg and Upper Macungie Townships. The PTP also treats hauled waste, which is a significant revenue source for this plant. The plant is operated through a professional services contract with Jacobs. A 10-year operations contract was negotiated in 2017 with Jacobs (formerly CH2M) to provide significant savings in the operational costs, which will be reinvested in plant capital that is reaching the end of its useful life.

Boston Beer Company (BBC) started brewing operations at the former Pabst Brewery in April 2008. The brewery waste has become a very significant source of both waste and income for the PTP. BBC is the plant's largest customer and continues to increase production annually.

Over the past five years, major capital projects have included replacement of the "Bmac" compressor for the cryogenic plant, anaerobic digesters cleaning and mechanical rehabilitation, construction of a dedicated grease receiving station, re-build of a belt filter press, process modifications for the Waste Receiving Station to enable thickening of the waste prior to conveyance to the digesters, replacement sodium hypochlorite tank for solids building odor removal system, installation of plant-wide SCADA system, annual pavement reconstruction projects, and replacement of mechanical screens (2 each) at the plant headworks. Near term future projects include final clarifiers rehabilitation, rehabilitation of aeration deck mixers, and replacement of electrical controls in the cryogenic plant.

C. City Division

Water System

The Authority operates the water system for the City of Allentown under a long-term lease/concession agreement. The water system consists of a 30 MGD water treatment plant, (2) water intake structures, (10) storage tanks and reservoirs and (5) pump stations. There are two Water System budgets – Treatment Plant budget and Distribution budget. Separate budgets are presented for each division to track and maintain expenses.

Responsibilities for services include monitoring water quality, operating and maintaining the supply sources for the treatment facility, reservoirs, tanks, transmission and distribution pipe networks, customer metering, billing, and response to customer service needs.

The consumer base is located throughout the City of Allentown. Water is also provided to surrounding municipalities using system interconnections. Sources of supply include two groundwater sources, namely Schantz Spring and Crystal Spring. In addition, two surface water sources include the Little Lehigh Creek and the Lehigh River. Customer growth in the Allentown Division is expected to be minimal.

Major budget activities place an emphasis on providing consumers with outstanding quality water and service. A Preventive Maintenance Program continues to prolong the useful life of existing facilities and equipment. Programs for valve exercising, leak detection, fire hydrant repair/replacement will continue.

Lehigh County Authority 2024 Budget Operating Budgets Overview

Maintenance programs for the treatment plant processes such as filter evaluations, plant equipment repair/replacement will continue to meet the stringent regulations mandated by EPA and DEP. Continued membership with the Partnership for Safe Water Program for the Treatment Plant and Distribution System will provide a means and method for improvement to the overall performance of the system and water quality. Significant activities include:

- Cost effective use of all 4 water sources
- Optimization of the Treatment Process through the Partnership for Safe Water
- Preventative maintenance programs, utilizing the CMMS
- Aggressive leak detection program
- Use/Upgrade of the SCADA system to allow for more cost-effective operations
- Long term service contract for reservoir/tank maintenance program
- Enhanced CMMS to maintain cost control
- Fleet management to control/maintain vehicle expenses
- Upgrade/replace aging/ineffective equipment that is beyond its useful life

Wastewater System:

LCA's operation and maintenance responsibilities include the operation of the Kline's Island Wastewater Treatment Plant and the portion of the collection system that resides in the geographic boundaries of the City of Allentown. There are two Wastewater System budgets – the Treatment Plant budget and Collection System budget. Separate budgets are presented to track and maintain expenses for improved cost control as well as to implement cost-sharing rates with the 15 municipalities that utilize the system outside the City of Allentown. Rate setting for the municipalities is established via service contracts that specify how operating, maintenance and capital costs are distributed.

The 2024 Budget was developed to provide compliance with applicable regulatory requirements utilizing recognized operational, maintenance and industrial pretreatment procedures to effectively convey and process the wastewater generated in the service area of the treatment facility. Compliance with the Standards of Practice established as part of the concession and lease agreement with the City of Allentown will be an on-going and essential focus for the wastewater staff of the city division.

Consolidated Statements

LEHIGH COUNTY AUTHORITY
2024 PRELIMINARY BUDGET RESULTS
2024 Budget (as of 10-09-23)

	Budget 2024	Forecast 2023	Budget 2023	Actual 2022
NET INCOME				
Suburban Water	2,019,921	2,970,991	2,169,036	4,140,698
Suburban Wastewater	(1,632,719)	(807,779)	2,150,192	(455,127)
City Division	14,844,627	4,336,857	4,780,898	6,545,431
Total LCA	<u>15,231,829</u>	<u>6,500,069</u>	<u>9,100,126</u>	<u>10,231,002</u>
CASH FLOWS				
Suburban Water	1,446,849	4,449,955	46,653	543,740
Suburban Wastewater	347,044	1,835,199	762,612	1,362,181
City Division	2,940,506	3,347,473	2,671,275	2,809,215
Total LCA	<u>4,734,399</u>	<u>9,632,627</u>	<u>3,480,540</u>	<u>4,715,137</u>
DEBT SERVICE COVERAGE RATIO				
Suburban Water	1.96	2.24	1.82	2.69
Suburban Wastewater	4.67	8.61	11.69	9.69
City Division	2.67	2.19	2.10	2.22
CAPITAL SPENDING				
Suburban Water	7,065,750	6,717,184	6,751,000	8,001,758
Suburban Wastewater	11,516,250	5,518,355	7,033,500	3,673,467
City Division	32,628,500	15,185,750	15,191,000	12,705,520
Total LCA	<u>51,210,500</u>	<u>27,421,289</u>	<u>28,975,500</u>	<u>24,380,744</u>

LEHIGH COUNTY AUTHORITY
STATEMENTS OF NET POSITION
2024 Budget (as of 10-09-23)

	Suburban Water				Suburban Wastewater				City Division				Total LCA			
	Budget 2024	Forecast 2023	Budget 2023	Actual 2022	Budget 2024	Forecast 2023	Budget 2023	Actual 2022	Budget 2024	Forecast 2023	Budget 2023	Actual 2022	Budget 2024	Forecast 2023	Budget 2023	Actual 2022
Current Assets:																
Cash and Cash Equivalents	11,424,954	9,978,105	7,395,653	5,528,150	9,945,420	9,598,375	10,919,845	7,763,176	18,318,596	15,378,089	26,682,628	12,030,616	39,688,970	34,954,569	44,998,126	25,321,942
Certificates of Deposit	2,945,069	2,945,069	2,975,123	2,945,069	6,584,624	7,084,624	6,977,548	8,866,269	-	-	-	-	9,529,693	10,029,693	9,952,671	11,811,338
Accounts Receivable:																
Customers (Net of Allowance)	2,803,370	2,803,370	2,183,368	2,803,370	2,867,326	2,867,326	2,977,621	2,867,326	7,935,029	7,935,029	7,094,069	7,935,029	13,605,725	13,605,725	12,255,058	13,605,725
Financing Contracts	-	-	-	-	959,924	959,924	1,202,376	959,924	-	-	-	-	959,924	959,924	1,202,376	959,924
Others	321,073	321,073	1,018,309	321,073	651,186	651,186	601,161	651,186	7,485,033	7,485,033	2,768,144	7,485,033	8,457,292	8,457,292	4,387,613	8,457,292
Due from (to) Other Funds	1,578,252	1,578,252	1,561,764	1,578,252	(1,577,519)	(1,577,519)	(1,561,764)	(1,577,519)	-	-	-	-	733	733	-	733
Inventory	92,542	92,542	23,050	92,542	8,210	8,210	6,927	8,210	-	-	-	-	92,542	92,542	23,050	92,542
Accrued Interest Receivable	6,766	6,766	923	6,766	61,205	61,205	65,328	61,205	211,856	211,856	410	211,856	226,832	226,832	8,260	226,832
Prepaid Expenses	17,604	17,604	16,926	17,604	-	-	-	-	440,290	440,290	302,956	440,290	519,099	519,099	385,210	519,099
Total Current Assets	19,189,631	17,742,781	15,175,116	13,292,826	19,500,376	19,653,332	21,189,041	19,599,778	34,390,804	31,450,297	36,848,208	28,102,824	73,080,811	68,846,410	73,212,365	60,995,428
Noncurrent Assets:																
Restricted:																
Restricted Cash and Cash Equivalents	-	-	-	-	338,677	338,677	338,360	338,677	32,938,649	32,938,649	26,416,191	32,938,649	33,277,326	33,277,326	26,754,551	33,277,326
Restricted for Debt Service	1,656,568	1,656,568	1,648,569	1,656,568	-	-	-	-	28,335,482	28,335,482	28,976,677	28,335,482	29,992,050	29,992,050	30,625,246	29,992,050
Restricted Certificates of Deposit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Investment U.S. Treasury Obligations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Developer Escrow Deposit	218,888	218,888	295,372	218,888	-	-	-	-	32,090	32,090	-	32,090	250,978	250,978	295,372	250,978
Total Restricted Assets	1,875,456	1,875,456	1,943,942	1,875,456	338,677	338,677	338,360	338,677	61,306,220	61,306,220	55,392,868	61,306,220	63,520,353	63,520,353	57,675,170	63,520,353
Capital Assets																
Non-depreciable Assets:																
Land	3,334,473	3,334,473	3,295,901	3,334,473	1,896,050	1,896,050	1,896,050	1,896,050	-	-	-	-	5,230,523	5,230,523	5,191,951	5,230,523
Construction in Progress	18,497,239	11,431,489	11,408,565	4,714,305	18,456,193	6,939,943	10,672,562	1,421,588	47,814,250	15,185,750	22,098,215	-	84,767,681	33,557,181	44,179,342	6,135,892
Total Capital Assets Not Being Depreciated	21,831,712	14,765,962	14,704,466	8,048,778	20,352,243	8,835,993	12,568,612	3,317,638	47,814,250	15,185,750	22,098,215	-	89,998,205	38,787,705	49,371,294	11,366,416
Depreciable Assets:																
Wells & Reservoirs	11,702,311	11,702,311	11,069,710	11,702,311	3,494,643	3,494,643	3,494,643	3,494,643	-	-	-	-	15,196,954	15,196,954	14,564,353	15,196,954
Transmission & Distribution Mains	88,676,537	88,676,537	88,175,419	88,676,537	-	-	-	-	-	-	-	-	88,676,537	88,676,537	88,175,419	88,676,537
Services & Hydrants	18,511,665	18,511,665	18,461,760	18,511,665	-	-	-	-	-	-	-	-	18,511,665	18,511,665	18,461,760	18,511,665
Interceptor & Collector Systems	-	-	-	-	39,577,399	39,577,399	39,317,989	39,577,399	-	-	-	-	39,577,399	39,577,399	39,317,989	39,577,399
Building Structure & Appurtenances	30,594,219	30,594,219	30,305,224	30,594,219	71,828,459	71,828,459	70,896,935	71,828,459	13,630	13,630	398,597	13,630	102,436,308	102,436,308	101,600,756	102,436,308
Metering System	14,109,805	14,109,805	13,988,178	14,109,805	429,778	429,778	429,778	429,778	-	-	-	-	14,539,583	14,539,583	14,417,957	14,539,583
Equipment and Furnishings	10,235,448	10,235,448	9,152,520	10,235,448	23,949,087	23,949,087	23,708,233	23,949,087	3,770,712	3,770,712	3,333,172	3,770,712	37,955,248	37,955,248	36,193,924	37,955,248
Right-To-Use Leased Assets	416,229	416,229	106,045	416,229	1,109,723	1,109,723	992,068	1,109,723	994,315	994,315	392,386	994,315	2,520,267	2,520,267	1,490,499	2,520,267
Capacity	1,207,901	1,207,901	1,207,901	1,207,901	248,561	248,561	579,587	248,561	-	-	-	-	1,456,462	1,456,462	1,787,488	1,456,462
Total Capital Assets Being Depreciated	175,454,115	175,454,115	172,466,757	175,454,115	140,637,650	140,637,650	139,419,233	140,637,650	4,778,657	4,778,657	4,124,154	4,778,657	320,870,421	320,870,421	316,010,144	320,870,421
Less accumulated depreciation																
Wells & Reservoirs	(3,949,796)	(3,949,796)	(3,739,968)	(3,949,796)	(793,837)	(793,837)	(730,298)	(793,837)	-	-	-	-	(4,743,633)	(4,743,633)	(4,470,266)	(4,743,633)
Transmission & Distribution Mains	(16,292,404)	(16,292,404)	(15,417,409)	(16,292,404)	-	-	-	-	-	-	-	-	(16,292,404)	(16,292,404)	(15,417,409)	(16,292,404)
Services & Hydrants	(5,463,253)	(5,463,253)	(5,162,213)	(5,463,253)	-	-	-	-	-	-	-	-	(5,463,253)	(5,463,253)	(5,162,213)	(5,463,253)
Interceptor & Collector Systems	-	-	-	-	(12,389,290)	(12,389,290)	(12,025,414)	(12,389,290)	-	-	-	-	(12,389,290)	(12,389,290)	(12,025,414)	(12,389,290)
Building Structure & Appurtenances	(11,462,087)	(11,462,087)	(10,686,179)	(11,462,087)	(26,361,857)	(26,361,857)	(24,095,296)	(26,361,857)	(13,630)	(13,630)	(54,637)	(13,630)	(37,837,574)	(37,837,574)	(34,836,112)	(37,837,574)
Metering System	(6,947,290)	(6,947,290)	(6,339,176)	(6,947,290)	(297,376)	(297,376)	(286,539)	(297,376)	-	-	-	-	(7,244,666)	(7,244,666)	(6,625,715)	(7,244,666)
Equipment and Furnishings	(13,960,286)	(10,443,286)	(12,451,301)	(6,962,752)	(35,080,740)	(28,049,240)	(33,073,905)	(21,093,922)	(3,215,337)	(2,980,124)	(3,181,963)	(2,529,937)	(52,256,363)	(41,472,650)	(48,707,169)	(30,586,611)
Right-To-Use Leased Assets - Amortization	(57,727)	(57,727)	(15,465)	(57,727)	(743,586)	(743,586)	(538,273)	(743,586)	(247,887)	(247,887)	(145,986)	(247,887)	(1,049,199)	(1,049,199)	(699,723)	(1,049,199)
Capacity	(846,545)	(846,545)	(814,711)	(846,545)	-	-	-	-	-	-	-	-	(846,545)	(846,545)	(814,711)	(846,545)
Total Accumulated Depreciation	(58,979,387) (6,997,534)	(55,462,387)	(54,626,422)	(51,981,853)	(75,666,686)	(68,635,186)	(70,749,725)	(61,679,869)	(3,476,853)	(3,241,640)	(3,382,586)	(2,791,453)	(138,122,926)	(127,339,214)	(128,758,734)	(116,453,175)
Total Capital Assets	138,306,440	134,757,690	132,544,801	131,521,039	85,323,206	80,838,456	81,238,120	82,275,419	49,116,054	16,722,766	22,839,784	1,987,204	272,745,700	232,318,912	236,622,705	215,783,662
Other Assets:																
Long-Term Portion of Receivables - Financing Contracts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Intangible Service Concession Arrangement	-	-	-	-	-	-	-	-	241,364,578	247,299,215	248,315,585	299,649,968	241,364,578	247,299,215	248,315,585	299,649,968
Less Accumulated Amortization	-	-	-	-	-	-	-	-	(5,934,637)	(5,934,637)	(5,934,637)	(52,350,753)	(5,934,637)	(5,934,637)	(5,934,637)	(52,350,753)
Net Pension Asset	885,694	885,694	-	885,694	445,851	445,851	-	445,851	3,288,666	3,288,666	-	3,288,666	4,620,211	4,620,211	-	4,620,211
OPEB Asset	1,164,309	1,164,309	1,389,099	1,164,309	-	-	-	-	-	-	-	-	1,164,309	1,164,309	1,389,099	1,164,309
Other Assets	-	-	-	-	-	-	-	-	5,221,469	5,221,469	4,079,011	5,221,469	5,221,469	5,221,469	4,079,011	5,221,469
Facilities Planning Costs (Net of Accumulated Amortization)	232,891	232,891	362,835	232,891	5,005,479	5,005,479	7,729,615	5,005,479	-	-	-	-	5,238,370	5,238,370	8,092,450	5,238,370
Total Other Assets	2,282,894	2,282,894	1,751,934	2,282,894	5,451,330	5,451,330	7,729,615	5,451,330	243,940,076	249,874,713	246,459,959	255,809,350	251,674,300	257,608,937	255,941,509	263,543,574
Total Noncurrent Assets	142,464,789	138,916,039	136,240,677	135,679,389	91,113,213	86,628,463	89,306,095	88,065,426	354,362,350	327,903,699	324,692,611	319,102,774	587,940,352	553,448,202	550,239,383	542,847,589
Total Assets	161,654,420	156,658,820	151,415,793	148,972,215	110,613,590	106,281,795	110,495,136	107,665,204	388,753,154	359,353,997	361,540,819	347,205,598	661,021,163	622,294,612	623,451,748	603,843,017
Deferred Outflows of Resources																
Pensions	535,658	535,658	555,569	535,658	269,644	269,644	268,506	269,644	1,988,936	1,988,936	2,969,800	1,988,936	2,794,238	2,794,238	3,793,875	2,794,238
OPEB	433,636	433,636	1	433,636	-	-	-	-	601,462	601,462	(1)	601,462	1,035,098	1,035,098	-	1,035,098
Refunding Loss on Bonds	-	-	-	-	-	-	-	-	25,412,905	25,412,905	26,397,970	25,412,905	25,412,905	25,412,905	26,397,970	25,412,905
Total Deferred Outflows	969,294	969,294	5													

LEHIGH COUNTY AUTHORITY
STATEMENTS OF NET POSITION
2024 Budget (as of 10-09-23)

	Suburban Water				Suburban Wastewater				City Division				Total LCA			
	Budget	Forecast	Budget	Actual	Budget	Forecast	Budget	Actual	Budget	Forecast	Budget	Actual	Budget	Forecast	Budget	Actual
	2024	2023	2023	2022	2024	2023	2023	2022	2024	2023	2023	2022	2024	2023	2023	2022
Current Liabilities:																
Accounts Payable - Trade	3,113,456	3,113,456	874,663	2,874,616	1,499,627	1,499,627	1,498,819	1,499,627	2,901,212	2,901,212	4,274,346	2,701,212	7,514,295	7,514,295	6,647,828	7,075,455
Accounts Payable - Capital	215,964	215,964	277,831	215,964	46,218	46,218	93,955	46,218	247,358	247,358	195,097	247,358	509,539	509,539	566,883	509,539
Accrued Interest Payable	186,518	186,518	200,039	186,518	-	-	3,346	-	974,111	974,111	959,251	974,111	1,160,629	1,160,629	1,162,636	1,160,629
Notes Payable	7,100,541	7,100,541	7,100,541	75,541	473,347	463,248	463,248	453,376	1,320,000	1,200,000	1,200,000	-	8,893,888	8,763,789	8,763,789	528,917
Revenue Bonds Payable	2,005,000	2,005,000	2,005,000	1,935,000	131,560	127,003	127,003	241,714	2,851,749	2,543,183	2,421,819	3,441,583	4,988,309	4,675,186	4,553,822	5,618,297
Developer Deposits and Other	246,282	246,282	-	246,282	2,950	2,950	-	2,950	81,682	81,682	-	81,682	330,914	330,914	-	330,914
Accrued Payroll & Other	-	-	90	-	-	-	-	-	374,264	374,264	268,854	374,264	374,264	374,264	268,944	374,264
Leased Liabilities GASB - 87 - ST	67,711	67,711	20,468	67,711	130,725	130,725	202,687	130,725	166,514	166,514	78,715	166,514	364,950	364,950	301,870	364,950
Total Current Liabilities	12,935,472	12,935,472	10,478,632	5,601,632	2,284,426	2,269,770	2,389,059	2,374,609	8,916,890	8,488,324	9,398,083	7,986,724	24,136,789	23,693,566	22,265,773	15,962,965
Noncurrent Liabilities:																
Developer Deposits and Other	128,019	128,019	519,723	128,019	24,389	24,389	22,014	24,389	-	-	47,852	-	152,408	152,408	589,589	152,408
Service Concession Arrangement Payable	-	-	-	-	-	-	-	-	83,783,947	69,657,984	59,260,404	67,864,290	83,783,947	69,657,984	59,260,404	67,864,290
Leased Liabilities GASB - 87 - LT	234,993	234,993	70,709	234,993	233,387	233,387	263,627	233,387	452,776	452,776	173,760	452,776	921,156	921,156	508,095	921,156
Notes Payable	635,264	635,264	635,264	775,583	3,333,987	3,807,335	3,807,335	4,270,580	-	-	-	-	3,969,251	4,442,599	4,442,599	5,046,163
OPEB Liability	-	-	-	-	-	-	-	-	3,199,323	3,199,323	3,825,143	3,199,323	3,199,323	3,199,323	3,825,143	3,199,323
Net Pension Liability	-	-	187,303	-	-	-	94,286	-	-	-	695,473	-	-	-	977,062	-
Revenue Bonds Payable(Net of Premium/Discount)	31,620,810	28,645,131	28,645,131	31,123,039	7,307,737	884,531	884,531	892,077	349,901,530	349,901,530	358,480,630	344,385,282	388,830,077	379,431,192	388,010,292	376,400,397
Total Noncurrent Liabilities	32,619,086	29,643,407	30,058,130	32,261,633	10,899,500	4,949,642	5,071,793	5,420,433	437,337,576	423,211,613	422,483,262	415,901,671	480,856,162	457,804,662	457,613,185	453,583,737
Total Liabilities	45,554,558	42,578,879	40,536,762	37,863,265	13,183,927	7,219,413	7,460,851	7,795,042	446,254,466	431,699,936	431,881,344	423,888,395	504,992,950	481,498,228	479,878,957	469,546,702
Deferred Inflows of Resources																
Pensions	1,067,188	1,067,188	-	1,067,188	-	-	-	-	3,962,567	3,962,567	-	3,962,567	5,029,755	5,029,755	-	5,029,755
OPEB	34,710	34,710	653,881	34,710	537,212	537,212	274,730	537,212	849,467	849,467	2,026,453	849,467	1,421,389	1,421,389	2,955,064	1,421,389
Total Deferred Inflows	1,101,898	1,101,898	653,881	1,101,898	537,212	537,212	274,730	537,212	4,812,034	4,812,034	2,026,453	4,812,034	6,451,144	6,451,144	2,955,064	6,451,144
Net Position:																
Net Investment in Capital Assets	96,642,121	96,069,049	94,067,688	97,309,173	73,712,463	75,192,227	75,489,689	76,053,561	47,176,764	14,903,476	21,387,309	1,367,914	217,531,348	186,164,753	190,944,686	174,730,647
Restricted for Debt Service	1,579,403	1,579,403	1,579,403	1,579,403	-	-	-	-	-	-	-	-	1,579,403	1,579,403	1,579,403	1,579,403
Restricted for Net Pension Asset	885,694	885,694	-	885,694	445,851	445,851	-	445,851	3,288,666	3,288,666	-	3,288,666	4,620,211	4,620,211	-	4,620,211
Restricted for Net OPEB Asset	1,164,309	1,164,309	1,389,099	1,164,309	-	-	-	-	-	-	-	-	1,164,309	1,164,309	1,389,099	1,164,309
Unrestricted	15,695,732	14,248,882	13,744,530	10,037,767	23,003,781	23,156,736	27,538,372	23,103,182	(84,775,473)	(67,346,813)	(64,386,518)	(58,148,108)	(46,075,961)	(29,941,195)	(23,103,616)	(25,007,158)
Total Net Position	115,967,258	113,947,337	110,780,720	110,976,346	97,162,095	98,794,814	103,028,061	99,602,594	(34,310,043)	(49,154,671)	(42,999,209)	(53,491,528)	178,819,310	163,587,481	170,809,572	157,087,412
Total Liabilities, Deferred Inflows of Resources and Net Position	162,623,714	157,628,114	151,971,363	149,941,509	110,883,234	106,551,439	110,763,642	107,934,848	416,756,457	387,357,300	390,908,588	375,208,901	690,263,404	651,536,853	653,643,594	633,085,258

LEHIGH COUNTY AUTHORITY
CASH & INVESTMENT SUMMARY
2024 Budget (as of 10-09-23)

	Suburban Water				Suburban Wastewater				City Division				Total LCA			
	Budget 2024	Forecast 2023	Budget 2023	Actual 2022	Budget 2024	Forecast 2023	Budget 2023	Actual 2022	Budget 2024	Forecast 2023	Budget 2023	Actual 2022	Budget 2024	Forecast 2023	Budget 2023	Actual 2022
Cash																
Operating																
Unrestricted	11,105,237	9,658,387	5,353,196	5,208,432	3,990,035	3,642,990	3,247,826	1,807,792	15,295,995	12,355,488	23,660,027	9,008,015	30,391,267	25,656,866	32,261,049	16,024,239
Restricted	-	-	-	-	317	317	428	317	25,438,613	25,438,613	18,916,156	25,438,613	-	-	-	-
Total Operating	11,105,237	9,658,387	5,353,196	5,208,432	3,990,352	3,643,307	3,248,254	1,808,108	40,734,608	37,794,101	42,576,183	34,446,628	30,391,267	25,656,866	32,261,049	16,024,239
Capital																
Unrestricted	319,718	319,718	2,042,457	319,718	5,955,385	5,955,385	7,672,019	5,955,385	3,022,601	3,022,601	3,022,601	3,022,601	9,297,704	9,297,704	12,737,077	9,297,704
Restricted	-	-	-	-	338,360	338,360	337,932	338,360	7,500,035	7,500,035	7,500,035	7,500,035	7,838,396	7,838,396	7,837,967	7,838,396
Total Capital	319,718	319,718	2,042,457	319,718	6,293,745	6,293,745	8,009,951	6,293,745	10,522,636	10,522,636	10,522,636	10,522,636	17,136,099	17,136,099	20,575,045	17,136,099
Other Restricted																
Debt Reserves	1,656,568	1,656,568	1,648,569	1,656,568	-	-	-	-	28,335,482	28,335,482	28,976,677	28,335,482	29,992,050	29,992,050	30,625,246	29,992,050
Escrow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Other Restricted	1,656,568	1,656,568	1,648,569	1,656,568	-	-	-	-	28,335,482	28,335,482	28,976,677	28,335,482	29,992,050	29,992,050	30,625,246	29,992,050
Total Cash	13,081,522	11,634,672	9,044,222	7,184,718	10,284,097	9,937,052	11,258,205	8,101,853	79,592,726	76,652,220	82,075,496	73,304,746	77,519,415	72,785,014	83,461,340	63,152,388
Investments																
Operating																
Unrestricted	1,945,069	1,944,885	1,975,123	1,944,885	6,584,624	7,084,624	6,977,548	8,866,269	-	-	-	-	8,529,693	9,029,509	8,952,671	10,811,154
Restricted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Operating	1,945,069	1,944,885	1,975,123	1,944,885	6,584,624	7,084,624	6,977,548	8,866,269	-	-	-	-	8,529,693	9,029,509	8,952,671	10,811,154
Capital																
Unrestricted	1,000,000	1,000,184	1,000,000	1,000,184	-	-	-	-	-	-	-	-	1,000,000	1,000,184	1,000,000	1,000,184
Restricted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital	1,000,000	1,000,184	1,000,000	1,000,184	-	-	-	-	-	-	-	-	1,000,000	1,000,184	1,000,000	1,000,184
Other Restricted																
Debt Reserves	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Escrow	218,888	218,888	295,372	218,888	-	-	-	-	32,090	32,090	-	32,090	250,978	250,978	295,372	250,978
Total Other Restricted	218,888	218,888	295,372	218,888	-	-	-	-	32,090	32,090	-	32,090	250,978	250,978	295,372	250,978
Total Investments	3,163,957	3,163,957	3,270,496	3,163,957	6,584,624	7,084,624	6,977,548	8,866,269	32,090	32,090	-	32,090	9,780,671	10,280,671	10,248,043	12,062,316
Total Cash and Investments	16,245,479	14,798,630	12,314,718	10,348,675	16,868,721	17,021,676	18,235,753	16,968,122	79,624,816	76,684,309	82,075,496	73,336,836	87,300,086	83,065,685	93,709,383	75,214,703
Summary																
Cash																
Unrestricted	11,424,954	9,978,105	7,395,653	5,528,150	9,945,420	9,598,375	10,919,845	7,763,176	18,318,596	15,378,089	26,682,628	12,030,616	39,688,970	34,954,569	44,998,126	25,321,942
Restricted	1,656,568	1,656,568	1,648,569	1,656,568	338,677	338,677	338,360	338,677	61,274,130	61,274,130	55,392,868	61,274,130	63,269,375	63,269,375	57,379,797	63,269,375
Total Cash	13,081,522	11,634,672	9,044,222	7,184,718	10,284,097	9,937,052	11,258,205	8,101,853	79,592,726	76,652,220	82,075,496	73,304,746	102,958,345	98,223,944	102,377,924	88,591,318
Investments																
Unrestricted	2,945,069	2,945,069	2,975,123	2,945,069	6,584,624	7,084,624	6,977,548	8,866,269	-	-	-	-	9,529,693	10,029,693	9,952,671	11,811,338
Restricted	218,888	218,888	295,372	218,888	-	-	-	-	32,090	32,090	-	32,090	250,978	250,978	295,372	250,978
Total Investments	3,163,957	3,163,957	3,270,496	3,163,957	6,584,624	7,084,624	6,977,548	8,866,269	32,090	32,090	-	32,090	9,780,671	10,280,671	10,248,043	12,062,316
Total Cash and Investments	16,245,479	14,798,630	12,314,718	10,348,675	16,868,721	17,021,676	18,235,753	16,968,122	79,624,816	76,684,309	82,075,496	73,336,836	112,739,016	108,504,615	112,625,967	100,653,633

LEHIGH COUNTY AUTHORITY
STATEMENTS OF CASH FLOWS - SUMMARY
2024 Budget (as of 10-09-23)

	Suburban Water				Suburban Wastewater				City Division				Total LCA			
	Budget 2024	Forecast 2023	Budget 2023	Actual 2022	Budget 2024	Forecast 2023	Budget 2023	Actual 2022	Budget 2024	Forecast 2023	Budget 2023	Actual 2022	Budget 2024	Forecast 2023	Budget 2023	Actual 2022
Cash Flows From Operating Activities																
Cash Received From Customers	17,082,935	16,275,394	16,000,000	15,720,766	18,651,054	18,029,012	21,640,013	14,987,786	58,955,206	51,440,321	50,374,860	42,039,999	94,689,195	85,744,726	88,014,873	72,748,551
Cash Payments To Suppliers For Goods And Services	(6,541,959)	(5,512,544)	(6,014,449)	(3,066,412)	(12,993,222)	(11,875,087)	(12,142,438)	(10,116,994)	(7,723,634)	(7,303,150)	(5,423,009)	(5,738,093)	(27,258,815)	(24,690,781)	(23,579,896)	(18,921,499)
Cash Payments To Employees For Services	(5,405,184)	(4,468,738)	(4,686,213)	(4,081,477)	(2,223,441)	(1,856,674)	(2,092,669)	(1,696,088)	(16,531,926)	(14,301,299)	(15,016,035)	(12,725,808)	(24,160,551)	(20,626,711)	(21,794,917)	(18,503,373)
Other Operating Cash Receipts	402,365	314,821	287,500	675,134	277,400	251,596	182,500	336,915	344,300	355,139	306,000	464,040	1,024,065	921,556	776,000	1,476,089
Net Cash Provided By Operating Activities	5,538,157	6,608,934	5,586,838	9,248,011	3,711,791	4,548,846	7,587,406	3,511,619	35,043,946	30,191,010	30,241,816	24,040,138	44,293,894	41,348,790	43,416,060	36,799,768
Cash Flows From Noncapital Financing Activities																
Interest Paid on Revenue Bonds and Notes	-	-	-	-	-	-	-	-	(16,260,397)	(13,292,101)	(12,643,502)	(15,910,897)	(16,260,397)	(13,292,101)	(12,643,502)	(15,910,897)
Facility Improvement Payments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Payments to the City of Allentown	-	-	-	-	-	-	-	-	(1,308,224)	(1,361,180)	(1,230,600)	(1,243,524)	(1,308,224)	(1,361,180)	(1,230,600)	(1,243,524)
Transfers To/From Other Funds	-	-	-	(16,487)	-	-	-	15,754	-	-	-	-	-	-	-	(733)
Net Cash Provided By (Used in) Noncapital Financing Activities	-	-	-	(16,487)	-	-	-	15,754	(17,568,621)	(14,653,281)	(13,874,102)	(17,154,421)	(17,568,621)	(14,653,281)	(13,874,102)	(17,155,154)
Cash Flows From Capital And Related Financing Activities																
Receipts/(Release) of Developer Deposits	-	-	-	(218,888)	-	-	-	-	-	-	-	-	-	-	-	(218,888)
Payments of Developer Deposits	-	-	-	(145,421)	-	-	-	5,325	-	-	-	33,830	-	-	-	(106,266)
Payments of Facilities Planning Costs	-	-	-	129,944	-	-	-	2,724,136	-	-	-	-	-	-	-	2,854,080
Acquisition and Construction of Property and Equipment	(7,065,750)	(6,717,184)	(6,751,000)	(6,262,415)	(11,516,250)	(5,518,355)	(7,033,500)	(5,435,648)	(32,628,500)	(15,185,750)	(15,191,000)	(6,564,795)	(51,210,500)	(27,421,289)	(28,975,500)	(18,262,858)
Cash Received from Tapping and Capital Recovery Fees	392,300	330,866	356,400	279,250	1,638,200	1,489,031	843,700	3,236,640	2,036,700	1,999,293	1,979,700	2,491,962	4,067,200	3,819,190	3,179,800	6,007,852
Cash Received from Meter Sales	116,700	91,598	71,300	140,444	400	359	-	-	32,300	30,407	24,600	36,231	149,400	122,364	95,900	176,675
Cash Received from Inspection, Plan Reviews, & Proj. Reimbursemen	441,850	373,955	253,000	233,338	57,300	51,703	31,900	82,529	10,274,492	2,391,999	2,092,300	5,806,628	10,773,642	2,817,657	2,377,200	6,122,495
Other Capital Cash Receipts	177,724	64,026	31,800	426,920	2,900	2,450	2,300	1,585	89,800	121,197	69,300	214,812	270,424	187,673	103,400	643,317
Other Capital Cash Payments	(93,100)	(41,600)	(41,600)	(218,567)	(22,100)	(21,003)	(25,200)	(134,263)	(4,000,000)	(4,000,000)	(4,000,000)	(6,798,405)	(4,115,200)	(4,062,603)	(4,066,800)	(7,151,235)
Revenue Bond and Note Issuance Proceeds	5,230,000	6,950,000	3,950,000	-	7,175,000	-	-	-	8,555,508	1,400,000	1,200,000	-	20,960,508	8,350,000	5,150,000	-
Principal Paid On Revenue Bonds	(2,254,323)	(2,234,386)	(2,267,694)	(2,196,528)	(547,237)	(122,785)	(122,605)	(118,707)	-	-	-	-	(2,801,560)	(2,357,171)	(2,390,299)	(2,315,235)
Notes Payable	-	-	(76,689)	(10,781)	(463,249)	(453,373)	(453,375)	(443,725)	120,000	-	-	-	(343,249)	(453,373)	(530,064)	(454,506)
Interest Paid on Revenue Bonds and Notes	(1,167,163)	(1,161,335)	(1,130,484)	(860,654)	(185,934)	(155,495)	(153,143)	(189,281)	-	-	-	-	(1,353,097)	(1,316,830)	(1,283,627)	(1,049,935)
Net Cash Provided by (Used in) Capital & Related Financing Activities	(4,221,761)	(2,344,060)	(5,604,967)	(8,703,358)	(3,860,970)	(4,727,467)	(6,909,923)	(271,409)	(15,519,700)	(13,242,855)	(13,825,100)	(4,779,737)	(23,602,432)	(20,314,382)	(26,339,990)	(13,754,504)
Cash Flows From investing Activities																
Maturities of Certificates Of Deposit	-	-	-	30,055	500,000	1,782,174	-	(1,888,722)	-	-	-	-	500,000	1,782,174	-	(1,858,667)
Purchase of Certificates Of Deposit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Purchase of U.S. Treasury Obligations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maturities of U.S. Treasury Obligations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest Received On Investments	130,453	185,081	64,782	(14,481)	(3,776)	231,646	85,128	(5,060)	984,881	1,052,599	128,661	703,235	1,111,558	1,469,325	278,572	683,694
Net Cash Provided by (Used in) Investing Activities	130,453	185,081	64,782	15,573	496,224	2,013,820	85,128	(1,893,782)	984,881	1,052,599	128,661	703,235	1,611,558	3,251,499	278,572	(1,174,974)
Net Increase (Decrease) in Cash	1,446,848	4,449,955	46,653	543,740	347,045	1,835,199	762,612	1,362,181	2,940,506	3,347,473	2,671,275	2,809,215	4,734,399	9,632,627	3,480,540	4,715,136
Cash:																
Beginning	11,634,672	7,184,718	8,997,569	6,640,978	9,937,052	8,101,853	10,495,593	6,739,672	76,652,219	73,304,746	79,404,222	70,495,531	98,223,944	88,591,317	98,897,384	83,876,181
Ending	13,081,521	11,634,673	9,044,222	7,184,718	10,284,097	9,937,052	11,258,205	8,101,853	79,592,725	76,652,219	82,075,496	73,304,746	102,958,343	98,223,944	102,377,924	88,591,317
Cash Consisted of the Following:																
Cash and Cash Equivalents	11,424,954	9,978,105	7,395,653	5,528,150	9,945,420	9,598,375	10,919,845	7,763,176	18,286,506	15,345,999	26,682,628	11,998,526	39,656,880	34,922,479	44,998,126	25,289,852
Restricted Cash and Cash Equivalents	1,656,568	1,656,568	1,648,569	1,656,568	338,677	338,677	338,360	338,677	61,306,220	61,306,220	55,392,868	61,306,220	63,301,465	63,301,465	57,379,797	63,301,465
Total Cash and Cash Equivalents	13,081,522	11,634,672	9,044,222	7,184,718	10,284,097	9,937,052	11,258,205	8,101,853	79,592,726	76,652,219	82,075,496	73,304,746	102,958,345	98,223,944	102,377,924	88,591,317

LEHIGH COUNTY AUTHORITY
STATEMENTS OF ACTIVITIES AND CHANGES IN NET POSITION
2024 Budget (as of 10-09-23)

	Suburban Water				Suburban Wastewater				City Division				Total LCA			
	Budget 2024	Forecast 2023	Budget 2023	Actual 2022	Budget 2024	Forecast 2023	Budget 2023	Actual 2022	Budget 2024	Forecast 2023	Budget 2023	Actual 2022	Budget 2024	Forecast 2023	Budget 2023	Actual 2022
Operating Revenues:																
User Charges																
Charges for Services	17,082,935	16,275,394	16,000,000	15,642,798	18,851,054	18,029,012	21,640,013	14,684,737	55,211,206	50,279,141	50,374,860	46,293,205	91,145,195	84,583,546	88,014,873	76,620,740
Other Income	402,365	314,821	287,500	675,134	277,400	251,596	182,500	336,915	344,300	355,139	306,000	464,040	1,024,065	921,556	776,000	1,476,089
Total Charges for Services	17,485,300	16,590,215	16,287,500	16,317,932	19,128,454	18,280,608	21,822,513	15,021,652	55,555,506	50,634,280	50,680,860	46,757,245	92,169,260	85,505,102	88,790,873	78,096,829
Connection & System Charges																
Tapping and Capital Recovery Fees	321,900	267,566	244,000	256,134	1,638,200	1,489,031	843,700	3,236,640	419,900	419,065	535,400	845,135	2,380,000	2,175,662	1,623,100	4,337,909
Capital Cost Recovery	-	-	-	-	-	-	-	-	1,614,700	1,578,324	1,441,800	1,643,409	1,614,700	1,578,324	1,441,800	1,643,409
Distribution Tapping Fees	70,400	63,300	112,400	23,116	-	-	-	-	2,100	1,904	2,500	3,418	72,500	65,204	114,900	26,534
Meter Sales	116,700	91,598	71,300	140,444	400	359	-	-	32,300	30,407	24,600	36,231	149,400	122,364	95,900	176,675
Inspection and Plan Reviews	135,350	114,825	86,800	138,990	56,800	51,258	31,900	45,724	15,100	16,710	21,000	3,330	207,250	182,793	139,700	188,045
Project Reimbursements	306,500	259,130	166,200	94,348	500	445	-	36,805	10,259,392	2,375,289	2,071,300	5,803,298	10,566,392	2,634,864	2,237,500	5,934,450
Total Connection & System Charges	950,850	796,419	680,700	653,032	1,695,900	1,541,094	875,600	3,319,169	12,343,492	4,421,699	4,096,600	8,334,821	14,990,242	6,759,211	5,652,900	12,307,022
Other Miscellaneous Income	177,724	64,026	31,800	173,318	2,900	2,450	2,300	1,585	89,800	121,197	69,300	214,812	270,424	187,673	103,400	389,715
Total Operating Revenues	18,613,874	17,450,661	17,000,000	17,144,282	20,827,254	19,824,151	22,700,413	18,342,406	67,988,798	55,177,175	54,846,760	55,306,878	107,429,926	92,451,987	94,547,173	90,793,566
Operating Expenses:																
Personnel	4,269,082	3,763,942	3,838,376	3,020,805	1,766,601	1,565,021	1,739,145	1,245,134	13,986,736	11,992,187	12,818,583	10,317,613	20,022,419	17,321,150	18,396,104	14,583,552
General & Administrative	1,136,102	704,796	847,837	551,451	456,840	291,654	353,525	225,034	2,545,190	2,309,112	2,197,452	1,605,142	4,138,132	3,305,561	3,398,813	2,381,627
Utilities	537,998	447,491	516,389	481,997	313,870	287,233	312,787	271,866	2,063,923	2,135,769	2,018,173	1,802,290	2,915,791	2,870,493	2,847,348	2,556,153
Materials and Supplies	1,197,810	961,564	887,370	860,080	518,722	435,313	324,100	339,120	3,251,300	3,159,541	2,621,000	2,227,856	4,967,832	4,556,417	3,832,470	3,427,056
Miscellaneous Services	4,806,151	4,103,489	4,610,690	3,664,554	7,631,089	7,287,795	7,212,206	6,503,137	2,397,011	2,193,511	2,112,700	1,807,716	14,834,251	13,584,795	13,935,596	11,975,407
Treatment and Transportation	-	-	-	-	4,529,542	3,864,746	4,293,345	2,846,176	11,400	14,330	14,318	11,594	4,540,942	3,879,076	4,307,663	2,857,770
Depreciation and Amortization	3,517,000	3,480,534	3,023,000	3,665,828	7,031,500	6,955,318	6,221,900	7,090,828	6,169,850	6,384,824	6,160,000	6,492,067	16,718,350	16,820,676	15,404,900	17,248,723
Major Maintenance Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Miscellaneous	93,100	41,600	41,600	156,699	22,100	21,003	25,200	86,525	4,000,000	4,000,000	4,000,000	5,708,208	4,115,200	4,062,603	4,066,800	5,951,432
Total Operating Expenses	15,557,243	13,503,415	13,765,262	12,401,414	22,270,263	20,708,082	20,482,207	18,607,820	34,425,409	32,189,274	31,942,225	29,972,486	72,252,916	66,400,771	66,189,694	60,981,720
Net Operating Profit (Loss)	3,056,631	3,947,246	3,234,738	4,742,867	(1,443,009)	(883,931)	2,218,206	(265,414)	33,563,388	22,987,901	22,904,535	25,334,392	35,177,010	26,051,216	28,357,479	29,811,845
Non-Operating Income (Expense)																
Interest Income	120,034	173,004	64,782	103,451	130,271	195,541	85,128	130,269	984,881	1,052,599	128,661	914,681	1,235,186	1,421,144	278,572	1,148,400
Interest (Expense)	(1,167,163)	(1,161,335)	(1,130,484)	(847,133)	(185,934)	(155,495)	(153,143)	(185,935)	(19,703,642)	(19,703,643)	(18,252,298)	(19,703,642)	(21,056,739)	(21,020,473)	(19,535,925)	(20,736,710)
Unrealized Gain on Investment	-	-	-	-	-	31	-	-	-	-	-	-	-	31	-	-
Unrealized (Loss) on Investment	10,418	12,076	-	(39,064)	(134,047)	36,074	-	(134,047)	-	-	-	-	(123,629)	48,150	-	(173,110)
Capital Contributed	-	-	-	253,602	-	-	-	-	-	-	-	-	-	-	-	253,602
Other Miscellaneous	-	-	-	(73,026)	-	-	-	-	-	-	-	-	-	-	-	(73,026)
Net Non-Operating Income (Expense)	(1,036,710)	(976,255)	(1,065,702)	(602,170)	(189,710)	76,151	(68,015)	(189,713)	(18,718,761)	(18,651,044)	(18,123,637)	(18,788,961)	(19,945,181)	(19,551,147)	(19,257,353)	(19,580,844)
Net Income (Loss)	2,019,921	2,970,991	2,169,036	4,140,698	(1,632,719)	(807,779)	2,150,192	(455,127)	14,844,627	4,336,857	4,780,898	6,545,431	15,231,829	6,500,069	9,100,126	10,231,002
Net Position at Beginning of Year (As Restated)	113,947,337	110,976,346	108,611,684	106,835,648	98,794,814	99,602,594	100,877,869	100,057,721	(49,154,671)	(53,491,528)	(47,780,107)	(60,036,959)	163,587,481	157,087,412	161,709,446	146,856,410
Cumulative Effect of Change in Accounting principle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Position at Beginning of Year	113,947,337	110,976,346	108,611,684	106,835,648	98,794,814	99,602,594	100,877,869	100,057,721	(49,154,671)	(53,491,528)	(47,780,107)	(60,036,959)	163,587,481	157,087,412	161,709,446	146,856,410
Net Position at End of Year	115,967,258	113,947,337	110,780,720	110,976,346	97,162,095	98,794,814	103,028,061	99,602,594	(34,310,043)	(49,154,671)	(42,999,209)	(53,491,528)	178,819,310	163,587,481	170,809,572	157,087,412
CAPITAL EXPENSES																
Capital Water	6,617,000	6,717,184	6,751,000	8,001,758	-	-	-	-	16,965,000	8,371,904	6,912,000	6,923,778	23,582,000	15,089,088	13,663,000	14,925,536
Capital WasteWater	-	-	-	-	11,067,500	5,518,355	7,033,500	3,673,467	14,766,000	6,813,846	8,279,000	5,781,742	25,833,500	12,332,201	15,312,500	9,455,208
Administration (Allocated)	448,750	-	-	-	448,750	-	-	-	897,500	-	-	-	1,795,000	-	-	-
	7,065,750	6,717,184	6,751,000	8,001,758	11,516,250	5,518,355	7,033,500	3,673,467	32,628,500	15,185,750	15,191,000	12,705,520	51,210,500	27,421,289	28,975,500	24,380,744

LEHIGH COUNTY AUTHORITY
 STATEMENTS OF ACTIVITIES AND CHANGES IN NET POSITION - AUDIT FORMAT
 2024 Budget (as of 10-09-23)

	Suburban Water				Suburban Wastewater				City Division				Total LCA			
	Budget 2024	Forecast 2023	Budget 2023	Actual 2022	Budget 2024	Forecast 2023	Budget 2023	Actual 2022	Budget 2024	Forecast 2023	Budget 2023	Actual 2022	Budget 2024	Forecast 2023	Budget 2023	Actual 2022
Operating Revenues:																
User Charges																
Charges for Services	17,082,935	16,275,394	16,000,000	15,642,798	18,851,054	18,029,012	21,640,013	14,684,737	55,211,206	50,279,141	50,374,860	46,293,205	91,145,195	84,583,546	88,014,873	76,620,740
Other Income	402,365	314,821	287,500	675,134	277,400	251,596	182,500	336,915	344,300	355,139	306,000	464,040	1,024,065	921,556	776,000	1,476,089
Total Charges for Services	17,485,300	16,590,215	16,287,500	16,317,932	19,128,454	18,280,608	21,822,513	15,021,652	55,555,506	50,634,280	50,680,860	46,757,245	92,169,260	85,505,102	88,790,873	78,096,829
Operating Expenses:																
Personnel	4,269,082	3,763,942	3,838,376	3,020,805	1,766,601	1,565,021	1,739,145	1,245,134	13,986,736	11,992,187	12,818,583	10,317,613	20,022,419	17,321,150	18,396,104	14,583,552
General & Administrative	1,136,102	704,796	847,837	551,451	456,840	291,654	353,525	225,034	2,545,190	2,309,112	2,197,452	1,605,142	4,138,132	3,305,561	3,398,813	2,381,627
Utilities	537,998	447,491	516,389	481,997	313,870	287,233	312,787	271,866	2,063,923	2,135,769	2,018,173	1,802,290	2,915,791	2,870,493	2,847,348	2,556,153
Materials and Supplies	1,197,810	961,564	887,370	860,080	518,722	435,313	324,100	339,120	3,251,300	3,159,541	2,621,000	2,227,856	4,967,832	4,556,417	3,832,470	3,427,056
Miscellaneous Services	4,806,151	4,103,489	4,610,690	3,664,554	7,631,089	7,287,795	7,212,206	6,503,137	2,397,011	2,193,511	2,112,700	1,807,716	14,834,251	13,584,795	13,935,596	11,975,407
Treatment and Transportation	-	-	-	-	4,529,542	3,864,746	4,293,345	2,846,176	11,400	14,330	14,318	11,594	4,540,942	3,879,076	4,307,663	2,857,770
Depreciation and Amortization	3,517,000	3,480,534	3,023,000	3,665,828	7,031,500	6,955,318	6,221,900	7,090,828	6,169,850	6,384,824	6,160,000	6,492,067	16,718,350	16,820,676	15,404,900	17,248,723
Total Operating Expenses	15,464,143	13,461,815	13,723,662	12,244,715	22,248,163	20,687,079	20,457,007	18,521,295	30,425,409	28,189,274	27,942,225	24,264,278	68,137,716	62,338,168	62,122,894	55,030,288
Total Operating Income (Loss)	2,021,157	3,128,400	2,563,838	4,073,217	(3,119,709)	(2,406,471)	1,365,506	(3,499,643)	25,130,096	22,445,006	22,738,635	22,492,967	24,031,544	23,166,935	26,667,979	23,066,541
NonOperating Revenues (Expenses):																
Tapping and Capital Recovery Fees	392,300	330,866	356,400	279,250	1,638,200	1,489,031	843,700	3,236,640	2,036,700	1,999,293	1,979,700	2,491,962	4,067,200	3,819,190	3,179,800	6,007,852
Meter Sales	116,700	91,598	71,300	140,444	400	359	-	-	32,300	30,407	24,600	36,231	149,400	122,364	95,900	176,675
Inspection, Plan Reviews, and Project Reimbursements	441,850	373,955	253,000	233,338	57,300	51,703	31,900	82,529	1,540,600	2,391,999	2,092,300	5,806,628	2,039,750	2,817,657	2,377,200	6,122,495
Investment Earnings	130,453	185,081	64,782	64,387	(3,776)	231,646	85,128	(3,778)	984,881	1,052,599	128,661	914,681	1,111,558	1,469,325	278,572	975,290
Interest Expense	(1,167,163)	(1,161,335)	(1,130,484)	(847,133)	(185,934)	(155,495)	(153,143)	(185,935)	(19,703,642)	(19,703,643)	(18,252,298)	(19,703,642)	(21,056,739)	(21,020,473)	(19,535,925)	(20,736,710)
Other Expense	(93,100)	(41,600)	(41,600)	(229,725)	(22,100)	(21,003)	(25,200)	(86,525)	4,733,892	(4,000,000)	(4,000,000)	(5,708,208)	4,618,692	(4,062,603)	(4,066,800)	(6,024,458)
Other Miscellaneous Income	177,724	64,026	31,800	173,318	2,900	2,450	2,300	1,585	89,800	121,197	69,300	214,812	270,424	187,673	103,400	389,715
Total Nonoperating Revenues/(Expenses)	(1,236)	(157,409)	(394,802)	(186,121)	1,486,990	1,598,692	784,685	3,044,516	(10,285,469)	(18,108,149)	(17,957,737)	(15,947,536)	(8,799,715)	(16,666,866)	(17,567,853)	(13,089,141)
Increase (Decrease) in net position before capital contributions	2,019,921	2,970,991	2,169,036	3,887,096	(1,632,719)	(807,779)	2,150,192	(455,127)	14,844,627	4,336,857	4,780,898	6,545,431	15,231,829	6,500,069	9,100,126	9,977,400
Capital Contributions:																
Capital Grant	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Capital Assets Provided by Developers and Others	-	-	-	253,602	-	-	-	-	-	-	-	-	-	-	-	253,602
Total Capital Contributions	-	-	-	253,602	-	-	-	-	-	-	-	-	-	-	-	253,602
Increase (Decrease) in net position	2,019,921	2,970,991	2,169,036	4,140,698	(1,632,719)	(807,779)	2,150,192	(455,127)	14,844,627	4,336,857	4,780,898	6,545,431	15,231,829	6,500,069	9,100,126	10,231,002
Net Position at Beginning of Year	113,947,337	110,976,346	108,611,684	106,835,648	98,794,814	99,602,594	100,877,869	100,057,721	(49,154,671)	(53,491,528)	(47,780,107)	(60,036,959)	163,587,481	157,087,412	161,709,446	146,856,410
Net Position at End of Year	115,967,258	113,947,337	110,780,720	110,976,346	97,162,095	98,794,814	103,028,061	99,602,594	(34,310,043)	(49,154,671)	(42,999,209)	(53,491,528)	178,819,310	163,587,481	170,809,572	157,087,412

System Statements

LEHIGH COUNTY AUTHORITY
STATEMENTS OF ACTIVITIES - SUBURBAN - WATER FUND
2024 Budget (as of 10-09-23)

	Suburban - Water Systems													Total			
	Int Serv 100	Undesignated 200	Western Lehigh Service Area			S. Lehigh Beverly Hills 207	Northern Lehigh Service Area					Northampton CFE 208	Buss Acres 210	Budget 2024	Forecast 2023	Budget 2023	Actual 2022
			Central Lehigh 201	Arcadia West 211	Emmaus 209		North Whitehall 202	Washington 203	Mill Creek 204	Heidelberg 205	PL of Lynn 206	Madison North 221					
Operating Revenues:																	
User Charges																	
Large Industrial	-	-	1,938,158	-	-	-	-	-	-	-	-	-	-	1,938,158	1,845,865	1,977,800	1,759,028
Other Industrial/Commercial	-	-	6,230,644	38,800	3,584	-	94,067	4,442	-	-	-	-	323	6,371,861	6,068,830	5,982,100	5,832,406
Residential	-	-	6,326,182	-	132,104	13,570	329,453	104,015	11,326	56,142	16,522	34,104	32,414	7,075,844	6,741,671	6,202,700	6,438,205
Penalties	-	-	185,575	1,269	1,354	168	4,212	3,225	234	976	174	530	287	198,262	188,867	138,000	152,027
Private Fire Service	-	-	743,967	199,383	-	-	7,938	1,554	-	-	-	-	-	952,841	909,294	1,051,800	902,957
Public Fire Service	-	-	454,165	-	-	-	21,546	9,990	-	-	-	-	-	485,702	462,573	554,400	458,593
User Charges - Municipal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
User Charges - Residential & Commercial	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
User Charges - Hauler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hauler Fees	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Industrial Charges	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Industrial Pretreatment Revenues	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Municipal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leachate Program Revenues	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Income	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Water Sales	-	-	97,995	-	-	-	-	-	-	-	-	-	-	97,995	94,226	93,200	63,650
Provision for Doubtful Debts	-	-	(11,964)	(1,204)	140	(0)	(18,697)	(5,995)	-	155	-	(56)	(109)	(37,728)	(35,932)	-	35,932
Total Charges for Services	-	-	15,964,724	238,247	137,183	13,738	438,518	117,231	11,560	57,273	16,696	34,578	20,301	17,082,935	16,275,394	16,000,000	15,642,798
Miscellaneous	-	-	385,030	-	625	313	6,456	6,143	-	-	313	625	2,860	402,365	314,821	287,500	675,134
Total User Charges	-	-	16,349,754	238,247	137,808	14,051	444,974	123,374	11,560	57,273	17,009	35,203	23,161	17,485,300	16,590,215	16,287,500	16,317,932
Connection & System Charges																	
Supply/Tapping Fees	-	-	253,420	67,078	-	-	-	1,402	-	-	-	-	-	321,900	267,566	244,000	256,134
Capital Cost Recovery	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Distribution Tapping Fees	-	-	70,400	-	-	-	-	-	-	-	-	-	-	70,400	63,300	112,400	23,116
Meter Sales	-	-	112,996	3,050	-	-	-	654	-	-	-	-	-	116,700	91,598	71,300	140,444
Inspection & Review Fees	-	-	113,203	22,147	-	-	-	-	-	-	-	-	-	135,350	114,825	86,800	138,990
Developer Reimbursement	-	-	293,445	-	-	-	2,940	3,940	-	6,175	-	-	-	306,500	259,130	166,200	94,348
Total Connection & System Charges	-	-	843,464	92,275	-	-	2,940	5,996	-	6,175	-	-	-	950,850	796,419	680,700	653,032
Other Miscellaneous Revenues																	
Other Income	-	-	175,722	519	151	50	654	276	-	126	-	201	-	177,724	64,026	31,800	173,318
Total Other Miscellaneous Revenues	-	-	175,722	519	151	50	654	276	-	126	-	201	-	177,724	64,026	31,800	173,318
Total Operating Revenues	-	-	17,368,940	331,041	137,959	14,101	448,568	129,646	11,560	63,574	17,009	35,404	23,161	18,613,874	17,450,661	17,000,000	17,144,282
Operating Expenses:																	
Personnel																	
Salaries and Wages	511,152	-	1,728,825	45,476	12,650	5,844	84,101	22,558	6,457	24,165	29,810	21,936	82,674	2,605,695	2,250,538	2,178,481	2,096,181
Overtime	7,774	-	144,227	5,247	1,502	1,060	14,178	2,903	991	4,613	5,834	2,928	2,651	199,617	181,023	161,493	177,277
Taxes	41,399	-	142,774	3,910	1,088	533	7,619	1,951	571	2,231	2,757	1,918	6,328	215,841	184,186	192,768	168,016
Fringe Benefits	-	-	1,021,393	27,762	7,742	3,797	54,105	13,963	4,092	15,864	19,652	13,624	46,238	1,247,928	1,148,195	1,305,634	579,331
Other Personnel Related	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Personnel	560,326	-	3,037,219	82,395	22,982	11,234	160,003	41,375	12,111	46,873	58,053	40,406	137,891	4,269,082	3,763,942	3,838,376	3,020,805
Purchase of Services																	
Shared Services - General & Administrative	-	-	937,733	24,667	6,861	3,170	45,617	12,236	3,502	13,107	16,169	11,898	44,843	1,136,102	704,796	847,837	551,451
Utilities	33,498	-	436,500	10,900	700	3,600	11,100	1,700	4,000	13,400	3,100	5,100	5,500	537,998	447,491	516,389	481,997
Compliance	-	-	29,500	3,800	3,600	600	4,300	2,400	400	2,000	600	600	600	49,000	45,154	50,000	42,058
Contract Operating Svcs	-	-	12,000	2,100	-	1,500	3,700	-	2,100	6,800	2,700	2,100	2,300	39,400	37,730	39,420	32,425
Engineering	-	-	55,500	-	-	-	-	-	-	-	-	-	-	55,500	50,923	40,000	53,024
Exceptional Strength Analysis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Extraordinary Expenditures	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fleet Management Services	-	-	47,100	-	-	-	-	-	-	-	-	-	-	47,100	44,856	40,000	98,637
General Analyses	-	-	44,737	2,360	2,075	3,392	5,868	2,679	1,582	4,897	3,199	3,199	3,199	80,505	84,899	77,420	35,100
Planning Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Industrial Meter Testing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maintenance Services	-	-	621,400	22,600	3,700	12,000	8,600	6,800	36,400	22,000	29,200	31,300	5,100	808,100	765,269	628,750	454,757
Miscellaneous Services	-	-	100,700	-	100	-	100	400	-	-	400	400	2,500	104,600	98,954	99,500	157,204
Leased Equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rental	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Residuals	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Water Purchases	-	-	3,049,307	-	18,841	-	458,477	95,322	-	-	-	-	-	3,621,946	2,975,704	3,635,600	2,791,349
System Planning / Capital Management	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LCA WWTP Treatment/Removals	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Treatment and Transportation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Purchase of Services	33,498	-	5,334,477	66,427	35,877	24,262	537,762	121,536	47,984	62,205	55,368	54,597	61,542	6,480,252	5,255,776	5,974,916	4,698,002

LEHIGH COUNTY AUTHORITY
 STATEMENTS OF ACTIVITIES - SUBURBAN - WATER FUND
 2024 Budget (as of 10-09-23)

	Suburban - Water Systems													Total				
	Int Serv 100	Undesignated 200	Western Lehigh Service Area			S. Lehigh	Northern Lehigh Service Area					Northampton	Buss Acres 210	Budget 2024	Forecast 2023	Budget 2023	Actual 2022	
			Central Lehigh 201	Arcadia West 211	Emmaus 209	Beverly Hills 207	North Whitehall 202	Washington 203	Mill Creek 204	Heidelberg 205	PL of Lynn 206	Madison North 221						CFE 208
Materials & Supplies																		
Purification Chemicals	-	-	229,500	5,200	-	500	100	-	500	800	500	500	500	3,700	241,800	232,804	69,750	57,126
Purification Supplies	-	-	37,300	2,900	-	1,100	400	2,300	4,200	3,500	2,400	2,500	1,200	12,400	70,200	66,272	60,300	30,670
Pump Supplies	-	-	56,100	14,800	-	7,100	23,000	-	3,000	3,700	8,300	8,400	3,700	800	128,900	116,444	110,000	109,758
Misc. Materials & Supplies	-	-	91,180	1,800	-	3,700	1,000	1,800	3,000	2,200	800	700	1,400	1,700	109,280	89,131	57,800	63,360
Fuel & Mileage	-	-	69,200	1,200	1,800	1,300	2,100	1,700	1,200	1,500	1,300	1,300	1,400	1,400	85,400	81,471	81,320	72,528
Fleet Management Supplies	-	-	9,850	-	-	-	-	-	-	-	-	-	-	-	9,850	5,294	3,000	10,931
Equipment	-	-	151,480	7,500	3,200	3,300	2,500	6,400	3,200	6,400	3,300	4,400	5,200	3,300	200,180	160,259	158,100	150,771
Distribution & Transmission Supplies	-	-	286,800	5,400	2,100	2,600	16,400	4,600	2,000	8,300	1,000	10,500	5,000	7,500	352,200	209,889	347,100	364,937
Collection System Supplies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Materials & Supplies	-	-	931,410	38,800	7,100	19,600	45,500	16,800	17,100	26,400	17,600	28,300	18,400	30,800	1,197,810	961,564	887,370	860,080
Depreciation and Amortization	-	-	3,517,000	-	-	-	-	-	-	-	-	-	-	-	3,517,000	3,480,534	3,023,000	3,665,828
Other Expenses																		
Major Maintenance Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Miscellaneous	-	-	93,100	-	-	-	-	-	-	-	-	-	-	-	93,100	41,600	41,600	156,699
Total Other Expenses	-	-	93,100	-	-	-	-	-	-	-	-	-	-	-	93,100	41,600	41,600	156,699
Total Operating Expenses	593,824	-	12,913,206	187,622	65,959	55,096	743,265	179,711	77,195	135,478	131,021	123,303	217,833	133,729	15,557,243	13,503,415	13,765,262	12,401,414
Net Operating Profit (Loss)	(593,824)	-	4,455,734	143,420	72,000	(40,995)	(294,697)	(50,066)	(65,636)	(71,904)	(114,012)	(87,899)	(194,673)	(100,818)	3,056,631	3,947,246	3,234,738	4,742,867
Non-Operating Income (Expense)																		
Interest Income	-	102,829	17,205	-	-	-	-	-	-	-	-	-	-	-	120,034	173,004	64,782	103,451
Interest (Expense)	-	(5,827)	(1,161,335)	-	-	-	-	-	-	-	-	-	-	-	(1,167,163)	(1,161,335)	(1,130,484)	(847,133)
Unrealized Gain on Investment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unrealized (Loss) on Investment	-	10,418	-	-	-	-	-	-	-	-	-	-	-	-	10,418	12,076	-	(39,064)
Capital Contributed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	253,602
Other Miscellaneous	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(73,026)
Net Non-Operating Income (Expense)	-	107,420	(1,144,130)	-	-	-	-	-	-	-	-	-	-	-	(1,036,710)	(976,255)	(1,065,702)	(602,170)
Net Income (Loss)	(593,824)	107,420	3,311,604	143,420	72,000	(40,995)	(294,697)	(50,066)	(65,636)	(71,904)	(114,012)	(87,899)	(194,673)	(100,818)	2,019,921	2,970,991	2,169,036	4,140,698

LEHIGH COUNTY AUTHORITY
STATEMENTS OF ACTIVITIES - SUBURBAN - WASTEWATER FUND
2024 Budget (as of 10-09-23)

	Suburban - Wastewater Systems															Total			
	Int Serv 100	Interceptor Group			CRCS						W.Weisenberg				Budget 2024	Forecast 2023	Budget 2023	Actual 2022	
	WLI 312	LLRI 1 313	LLRI 2 314	Heidelberg 305	Upper Milford 315	Wynnewood 316	Weisenberg 317	Sand Spring 319	Lowhill Twp. 323	NLSA 318	Washington 303	Lynn Twp. 322	WWTP 320	Arcadia West 311					
Operating Revenues:																			
User Charges																			
Large Industrial	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other Industrial/Commercial	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45,223	45,223	40,559	31,395	
Residential	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Penalties	-	-	-	-	1,012	5,705	821	411	654	95	-	0	6,988	7,931	2,841	26,458	25,290	784,700	62,612
Private Fire Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Public Fire Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
User Charges - Municipal	-	9,674,646	516,407	37,537	-	22	-	-	-	-	-	-	-	-	-	10,228,612	9,518,685	11,891,626	7,052,133
User Charges - Residential & Commercial	-	-	-	-	72,854	498,262	135,464	66,094	172,315	14,854	-	0	382,643	3,319,210	473,857	5,135,555	5,381,512	5,965,687	4,762,129
User Charges - Hauler	-	-	-	-	-	-	-	-	-	-	-	-	-	3,265,423	-	3,265,423	2,928,631	2,788,900	2,666,946
Hauler Fees	-	-	-	-	-	-	-	-	-	-	-	-	-	8,474	-	8,474	7,600	6,900	49,400
Industrial Charges	-	-	-	-	-	-	-	-	-	-	-	-	-	226,980	-	226,980	203,570	167,300	136,956
Industrial Pretreatment Revenues	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Municipal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leachate Program Revenues	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Income	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Water Sales	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Provision for Doubtful Debts	-	-	-	-	(11)	(1,405)	(2)	0	(11)	0	-	(2,061)	(2,739)	(79,497)	52	(85,671)	(76,835)	-	(76,835)
Total Charges for Services	-	9,674,646	516,407	37,537	73,856	502,585	136,283	66,506	172,959	14,950	-	(2,061)	386,892	6,748,522	521,974	18,851,054	18,029,012	21,640,013	14,684,737
Miscellaneous	-	78,437	290	-	-	8,691	-	342	-	-	45,321	101,940	4	42,375	-	277,400	251,596	182,500	336,915
Total User Charges	-	9,753,083	516,697	37,537	73,856	511,276	136,283	66,848	172,959	14,950	45,321	99,879	386,896	6,790,897	521,974	19,128,454	18,280,608	21,822,513	15,021,652
Connection & System Charges																			
Supply/Tapping Fees	-	1,411,800	-	176,500	-	18,000	26,500	-	5,400	-	-	-	-	-	-	1,638,200	1,489,031	843,700	3,236,640
Capital Cost Recovery	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Distribution Tapping Fees	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Meter Sales	-	-	-	-	-	-	400	-	-	-	-	-	-	-	-	400	359	-	-
Inspection & Review Fees	-	35,200	-	-	-	8,800	600	-	-	-	-	-	-	-	12,200	56,800	51,258	31,900	45,724
Developer Reimbursement	-	-	-	-	-	-	-	-	-	-	-	500	-	-	-	500	445	-	36,805
Total Connection & System Charges	-	1,447,000	-	176,500	-	26,800	27,500	-	5,400	-	-	500	-	-	12,200	1,695,900	1,541,094	875,600	3,319,169
Other Miscellaneous Revenues																			
Other Income	-	2,100	-	-	-	100	100	-	-	-	-	500	100	-	-	2,900	2,450	2,300	1,585
Total Other Miscellaneous Revenues	-	2,100	-	-	-	100	100	-	-	-	-	500	100	-	-	2,900	2,450	2,300	1,585
Total Operating Revenues	-	11,202,183	516,697	214,037	73,856	538,176	163,883	66,848	178,359	14,950	45,321	100,879	386,996	6,790,897	534,174	20,827,254	19,824,151	22,700,413	18,342,406
Operating Expenses:																			
Personnel																			
Salaries and Wages	205,540	338,127	40,266	5,391	51,740	23,349	43,650	6,253	90,941	21	3,730	68,083	76,080	25,343	69,266	1,047,780	907,147	1,001,941	846,074
Overtime	3,126	21,811	6,243	323	14,113	497	8,712	275	14,763	-	14	687	13,858	93	10,172	94,687	85,902	83,143	84,199
Taxes	16,647	27,646	3,613	442	5,196	1,793	4,103	503	8,192	1	277	5,268	7,045	1,893	6,214	88,833	75,971	85,261	69,399
Fringe Benefits	-	205,234	27,174	3,370	39,221	13,502	30,824	3,669	60,099	14	2,022	37,351	52,426	14,614	45,781	535,301	496,001	568,799	245,462
Other Personnel Related	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Personnel	225,313	592,818	77,296	9,526	110,270	39,141	87,289	10,700	173,995	36	6,043	111,389	149,409	41,943	131,433	1,766,601	1,565,021	1,739,145	1,245,134
Purchase of Services																			
Shared Services - General & Administrative	-	181,468	21,610	2,893	28,064	12,665	25,612	3,622	49,358	11	2,023	36,929	41,412	13,601	37,571	456,840	291,654	353,525	225,034
Utilities	13,470	83,700	118,000	400	11,700	1,400	21,200	300	13,400	100	500	800	26,800	800	21,300	313,870	287,233	312,787	271,866
Compliance	-	-	400	-	8,700	-	3,600	-	4,000	-	-	100	3,900	200	1,100	22,000	20,238	16,160	14,994
Contract Operating Svcs	-	-	-	-	9,800	-	14,100	-	11,100	-	-	-	6,617,400	-	-	6,652,400	6,427,350	6,437,200	5,570,768
Engineering	-	9,600	3,100	-	-	200	200	-	-	-	20,900	-	-	4,000	1,300	39,300	37,502	35,946	11,278
Exceptional Strength Analysis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Extraordinary Expenditures	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fleet Management Services	-	21,500	-	-	-	-	-	-	-	-	-	-	-	-	-	21,500	22,236	20,000	40,894
General Analyses	-	72,204	-	-	15,618	-	8,024	-	19,354	-	-	-	7,285	-	9,405	131,889	76,440	75,700	83,507
Planning Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Industrial Meter Testing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maintenance Services	-	189,850	67,500	20,500	22,400	7,600	28,500	-	12,700	3,800	-	26,100	54,700	-	60,900	494,550	456,393	397,000	527,000
Miscellaneous Services	-	16,850	600	-	2,100	900	700	-	800	-	5,200	1,300	6,900	86,500	700	122,550	116,016	106,200	120,741
Leased Equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rental	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Residuals	-	-	-	-	10,600	-	13,100	-	80,400	-	-	-	21,400	-	21,400	146,900	131,620	124,000	133,956
Water Purchases	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
System Planning / Capital Management	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LCA WWTP Treatment/Removals	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Treatment and Transportation	-	4,487,110	-	-	-	33,429	-	5,587	-	3,414	-	-	-	-	-	4,529,542	3,864,746	4,293,345	2,846,176
Total Purchase of Services	13,470	5,062,282	211,210	23,793	108,982	56,194	115,036	9,510	191,112	7,326	28,623	65,229	162,396	6,722,501	153,676	12,931,340	11,731,428	12,171,862	9,846,213

LEHIGH COUNTY AUTHORITY
STATEMENTS OF ACTIVITIES - SUBURBAN - WASTEWATER FUND
2024 Budget (as of 10-09-23)

	Int Serv 100	Interceptor Group			Suburban - Wastewater Systems						Suburban - Wastewater Systems				W.Weisenberg Arcadia West 311	Total			
		WLI 312	LLRI 1 313	LLRI 2 314	Heidelberg 305	Upper Milford 315	Wynnewood 316	Weisenberg 317	Sand Spring 319	Lowhill Twp. 323	NLSA 318	Washington 303	Lynn Twp. 322	WWTP 320		Budget 2024	Forecast 2023	Budget 2023	Actual 2022
Materials & Supplies																			
Purification Chemicals	-	-	-	-	10,900	-	9,200	-	25,500	-	-	-	136,800	-	14,700	197,100	189,514	103,000	75,395
Purification Supplies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pump Supplies	-	1,200	300	-	2,100	-	1,100	-	500	-	-	-	1,300	-	4,300	10,800	8,772	7,500	21,718
Misc. Materials & Supplies	-	55,022	6,900	6,500	18,800	2,600	12,100	2,300	18,600	500	-	6,200	10,500	-	9,300	149,322	112,543	89,000	106,630
Fuel & Mileage	-	18,800	2,800	700	1,900	1,100	2,700	600	2,000	-	-	900	2,700	100	1,500	35,800	33,380	32,400	32,176
Fleet Management Supplies	-	9,600	-	-	-	-	-	-	-	-	-	-	-	-	-	9,600	10,965	12,200	9,901
Equipment	-	33,400	19,600	8,200	2,700	4,500	6,500	200	6,500	900	-	900	16,900	-	15,800	116,100	80,137	80,000	93,300
Distribution & Transmission Supplies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Collection System Supplies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Materials & Supplies	-	118,022	29,600	15,400	36,400	8,200	31,600	3,100	53,100	1,400	-	8,000	168,200	100	45,600	518,722	435,313	324,100	339,120
Depreciation and Amortization	-	3,580,000	211,800	44,600	407,000	94,500	176,600	10,300	152,000	-	-	-	117,900	2,099,200	137,600	7,031,500	6,955,318	6,221,900	7,090,828
Other Expenses																			
Major Maintenance Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Miscellaneous	-	17,300	1,300	300	-	500	-	-	-	-	-	200	2,100	400	-	22,100	21,003	25,200	86,525
Total Other Expenses	-	17,300	1,300	300	-	500	-	-	-	-	-	200	2,100	400	-	22,100	21,003	25,200	86,525
Total Operating Expenses	238,783	9,370,422	531,206	93,619	662,652	198,535	410,525	33,610	570,207	8,762	34,666	184,818	600,005	8,864,144	468,309	22,270,263	20,708,082	20,482,207	18,607,820
Net Operating Profit (Loss)	(238,783)	1,831,761	(14,509)	120,418	(588,797)	339,641	(246,642)	33,238	(391,848)	6,188	10,655	(83,939)	(213,010)	(2,073,247)	65,865	(1,443,009)	(883,931)	2,218,206	(265,414)
Non-Operating Income (Expense)																			
Interest Income	-	71,766	2,353	55,835	-	-	-	-	-	-	-	-	-	-	317	130,271	195,541	85,128	130,269
Interest (Expense)	-	(74,424)	-	-	(6,213)	(38,318)	(20,567)	-	(3,780)	-	-	(15,136)	-	-	(27,496)	(185,934)	(155,495)	(153,143)	(185,935)
Unrealized Gain on Investment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31	-	-
Unrealized Loss on Investment	-	(76,175)	-	(57,872)	-	-	-	-	-	-	-	-	-	-	-	(134,047)	36,074	-	(134,047)
Capital Contributed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Miscellaneous	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Non-Operating Income (Expense)	-	(78,832)	2,353	(2,037)	(6,213)	(38,318)	(20,567)	-	(3,780)	-	-	(15,136)	-	-	(27,179)	(189,710)	76,151	(68,015)	(189,713)
Net Income (Loss)	(238,783)	1,752,929	(12,157)	118,381	(595,010)	301,323	(267,209)	33,238	(395,628)	6,188	10,655	(99,075)	(213,010)	(2,073,247)	38,686	(1,632,719)	(807,779)	2,150,192	(455,127)

LEHIGH COUNTY AUTHORITY
STATEMENTS OF ACTIVITIES - CITY - DIVISION FUND
2024 Budget (as of 10-09-23)

	City Division - Systems							Total			
	Undesignated	Int Serv	WFP	DIST	WWTP	WWCOLL	LAB	Budget	Forecast	Budget	Actual
	400	490	491	492	493	494	495	2024	2023	2023	2022
Operating Revenues:											
User Charges											
Large Industrial	-	-	-	-	-	-	-	-	-	-	-
Other Industrial/Commercial	-	-	-	5,385,592	-	-	-	5,385,592	4,895,061	4,853,400	4,576,562
Residential	-	-	-	19,643,731	-	-	-	19,643,731	17,713,013	17,636,400	16,600,947
Penalties	-	-	-	444,298	-	258,733	-	703,031	671,472	756,900	587,844
Private Fire Service	-	-	-	70,895	-	-	-	70,895	67,712	66,700	61,637
Public Fire Service	-	-	-	2,722	-	-	-	2,722	2,600	725	1,700
User Charges - Municipal	-	-	-	-	-	8,736,471	-	8,736,471	10,356,384	8,038,935	7,012,486
User Charges - Residential & Commercial	-	-	-	-	-	14,150,156	-	14,150,156	12,928,268	12,314,200	11,821,720
User Charges - Hauler	-	-	-	-	137,267	-	-	137,267	131,105	132,300	121,580
Hauler Fees	-	-	-	-	-	-	-	-	-	-	-
Industrial Charges	-	-	-	-	-	-	-	-	-	-	-
Industrial Pretreatment Revenues	-	-	-	-	107,828	-	-	107,828	102,988	161,700	128,466
Municipal	-	-	-	-	-	-	-	-	-	-	-
Leachate Program Revenues	-	-	-	-	445,867	-	-	445,867	425,852	600,900	534,270
Other Income	-	-	-	-	-	-	-	-	-	-	-
Other Water Sales	-	-	-	5,827,646	-	-	-	5,827,646	5,075,644	5,812,700	4,980,672
Provision for Doubtful Debts	-	-	-	-	-	-	-	-	-	-	(134,680)
Total Charges for Services	-	-	-	31,374,885	690,962	23,145,359	-	55,211,206	52,370,098	50,374,860	46,293,205
Miscellaneous	-	-	1,000	296,700	4,600	42,000	-	344,300	355,139	306,000	464,040
Total User Charges	-	-	1,000	31,671,585	695,562	23,187,359	-	55,555,506	52,725,237	50,680,860	46,757,245
Connection & System Charges											
Supply/Tapping Fees	-	-	-	238,000	-	181,900	-	419,900	419,065	535,400	845,135
Capital Cost Recovery	-	-	-	1,127,200	-	487,500	-	1,614,700	1,578,324	1,441,800	1,643,409
Distribution Tapping Fees	-	-	-	1,400	-	700	-	2,100	1,904	2,500	3,418
Meter Sales	-	-	-	32,300	-	-	-	32,300	30,407	24,600	36,231
Inspection & Review Fees	-	-	-	9,900	-	5,200	-	15,100	16,710	21,000	3,330
Developer Reimbursement	-	-	-	405,000	1,111,000	9,500	-	1,525,500	2,375,289	2,071,300	5,803,298
Total Connection & System Charges	-	-	-	1,813,800	1,111,000	684,800	-	3,609,600	4,421,699	4,096,600	8,334,821
Other Miscellaneous Revenues											
Other Income	-	-	39,900	49,900	-	-	-	89,800	121,197	69,300	214,812
Total Other Miscellaneous Revenues	-	-	39,900	49,900	-	-	-	89,800	121,197	69,300	214,812
Total Operating Revenues	-	-	40,900	33,535,285	1,806,562	23,872,159	-	59,254,906	57,268,132	54,846,760	55,306,878
Operating Expenses:											
Personnel											
Salaries and Wages	-	1,038,177	1,443,948	1,656,036	2,646,728	1,051,041	463,063	8,298,993	7,108,120	8,021,419	6,741,094
Overtime	-	6,161	298,149	287,979	415,626	74,559	27,725	1,110,199	1,017,873	825,284	997,517
Taxes	-	83,209	134,643	148,513	236,929	85,229	37,634	726,157	620,163	685,575	580,604
Fringe Benefits	-	-	806,512	897,025	1,410,756	513,501	223,594	3,851,388	3,246,031	3,286,305	1,998,398
Other Personnel Related	-	-	-	-	-	-	-	-	-	-	-
Total Personnel	-	1,127,546	2,683,252	2,989,553	4,710,039	1,724,330	752,016	13,986,736	11,992,187	12,818,583	10,317,613
Purchase of Services											
Shared Services - General & Administrative	-	-	506,158	586,182	927,778	362,750	162,321	2,545,190	2,309,112	2,197,452	1,605,142
Utilities	-	116,123	844,600	57,800	990,600	49,600	5,200	2,063,923	2,135,769	2,018,173	1,802,290
Compliance	-	-	40,000	-	11,700	-	-	51,700	80,000	40,000	11,245
Contract Operating Svcs	-	-	-	2,500	-	134,500	64,800	201,800	130,105	166,500	126,863
Engineering	-	-	45,000	30,400	15,700	2,100	-	93,200	70,326	45,000	31,802
Exceptional Strength Analysis	-	-	-	-	-	-	-	-	-	-	-
Extraordinary Expenditures	-	-	-	84,000	-	47,400	-	131,400	125,010	125,000	43,228
Fleet Management Services	-	-	42,100	50,000	61,000	63,900	-	217,000	185,621	165,000	237,188
General Analyses	-	-	-	-	6,100	-	37,070	43,170	39,955	41,200	20,763
Planning Expenses	-	-	-	-	-	-	-	-	-	-	-
Industrial Meter Testing	-	-	2,500	5,300	-	-	-	7,800	5,500	5,500	300
Maintenance Services	-	-	252,500	294,700	306,400	74,600	15,200	943,400	927,070	914,800	750,977
Miscellaneous Services	-	-	67,000	51,600	97,600	75,700	3,450	295,350	229,740	222,300	263,966
Leased Equipment	-	-	-	-	-	-	-	-	-	-	-
Rental	-	-	-	-	-	-	-	-	-	-	-
Residuals	-	-	12,000	-	400,000	-	-	412,000	400,000	387,000	321,206
Water Purchases	-	-	191	-	-	-	-	191	185	400	178
System Planning / Capital Management	-	-	-	-	-	-	-	-	-	-	-
LCA WWTP Treatment/Removals	-	-	-	-	-	-	-	-	-	-	-
Treatment and Transportation	-	-	-	-	-	11,400	-	11,400	14,330	14,318	11,594
Total Purchase of Services	-	116,123	1,812,049	1,162,482	2,816,878	821,950	288,041	7,017,524	6,652,722	6,342,642	5,226,742

LEHIGH COUNTY AUTHORITY
STATEMENTS OF ACTIVITIES - CITY - DIVISION FUND
2024 Budget (as of 10-09-23)

	City Division - Systems							Total			
	Undesignated 400	Int Serv 490	WFP 491	DIST 492	WWTP 493	WWCOLL 494	LAB 495	Budget 2024	Forecast 2023	Budget 2023	Actual 2022
Materials & Supplies											
Purification Chemicals	-	-	561,400	-	922,000	-	-	1,483,400	1,350,430	935,000	807,446
Purification Supplies	-	-	14,000	-	-	-	-	14,000	13,492	12,000	11,808
Pump Supplies	-	-	10,000	-	34,400	-	-	44,400	25,201	47,000	42,542
Misc. Materials & Supplies	-	-	82,000	38,800	239,700	148,700	82,500	591,700	589,107	600,900	489,164
Fuel & Mileage	-	-	9,300	46,300	57,500	46,300	-	159,400	156,316	152,100	167,509
Fleet Management Supplies	-	-	1,500	7,000	28,500	5,500	-	42,500	37,185	36,300	30,468
Equipment	-	-	60,500	77,700	91,500	44,000	29,500	303,200	322,728	288,700	251,234
Distribution & Transmission Supplies	-	-	-	612,700	-	-	-	612,700	665,082	549,000	427,684
Collection System Supplies	-	-	-	-	-	-	-	-	-	-	-
Total Materials & Supplies	-	-	738,700	782,500	1,373,600	244,500	112,000	3,251,300	3,159,541	2,621,000	2,227,856
Depreciation and Amortization	5,944,350	-	43,500	18,100	107,600	56,300	-	6,169,850	6,384,824	6,160,000	6,492,067
Other Expenses											
Major Maintenance Expenses	-	-	-	-	-	-	-	-	-	-	-
Other Miscellaneous	4,000,000	-	-	-	-	-	-	4,000,000	4,000,000	4,000,000	5,708,208
Total Other Expenses	4,000,000	-	-	-	-	-	-	4,000,000	4,000,000	4,000,000	5,708,208
Total Operating Expenses	9,944,350	1,243,669	5,277,501	4,952,635	9,008,117	2,847,080	1,152,057	34,425,409	32,189,274	31,942,225	29,972,486
Net Operating Profit (Loss)	(9,944,350)	(1,243,669)	(5,236,601)	28,582,649	(7,201,555)	21,025,079	(1,152,057)	24,829,496	25,078,858	22,904,535	25,334,392
Non-Operating Income (Expense)											
Interest Income	984,881	-	-	-	-	-	-	984,881	1,052,599	128,661	914,681
Interest (Expense)	(19,703,642)	-	-	-	-	-	-	(19,703,642)	(19,703,643)	(18,252,298)	(19,703,642)
Unrealized Gain on Investment	-	-	-	-	-	-	-	-	-	-	-
Unrealized Loss on Investment	-	-	-	-	-	-	-	-	-	-	-
Capital Contributed	-	-	-	-	-	-	-	-	-	-	-
Other Miscellaneous	8,733,892	-	-	-	-	-	-	8,733,892	-	-	-
Net Non-Operating Income (Expense)	(9,984,869)	-	-	-	-	-	-	(9,984,869)	(18,651,044)	(18,123,637)	(18,788,961)
Net Income (Loss)	(19,929,219)	(1,243,669)	(5,236,601)	28,582,649	(7,201,555)	21,025,079	(1,152,057)	14,844,627	6,427,814	4,780,898	6,545,431

Internal Service

Lehigh County Authority
2024 Budget – Draft 10-09-2023
Internal Service Budgets Overview

Lehigh County Authority's Internal Service budget serves as a pass-through mechanism to move shared expenses appropriately to the enterprise funds they support.

The Internal Services budget captures expenses in two different categories:

1. **Enterprise Fund Specific** – Internal Service expenses that are specific to the Suburban or City Divisions are shared with those specific enterprise funds based on the services provided to each fund.
2. **Global (Organizational)** – Internal Service expenses that are not specific to one of the Authority's enterprise funds, but which support the organization, are captured separately in the Global Internal Service budget and allocated to the funds based on a pro-rata share of salaries.

These Internal Service budgets capture expenses related to the following functions: Executive, Human Resources, Risk Management, Planning, Finance, Information Technology, Customer Care and Billing, Capital Works, and General and Administration. The Internal Service expenses outlined in this section of the Authority's 2023 Budget are also captured within the enterprise fund budgets detailed in previous sections of this publication, allocated to those funds based on the methodology described above.

LEHIGH COUNTY AUTHORITY
INTERNAL SERVICE BREAKDOWN (WITH ALLOCATIONS)
2024 Budget (as of 10-09-23)

	Internal Service (Pro-rata share of salary)							Full Year			
	Internal Service 1	Water 2	Wastewater 3	Internal Service 490	Division 4	Compliance 495	9	Budget 2024	Forecast 2023	Budget 2023	Actual 2022
Operating Expenses:											
Personnel											
Salaries and Wages	468,303	2,094,543	842,240	458,602	6,797,753	463,063	827,964	11,952,468	10,265,805	11,201,841	9,683,349
Overtime	10,092	191,843	91,561	4,274	1,076,313	27,725	2,695	1,404,503	1,284,798	1,069,921	1,258,993
Taxes	42,303	174,442	72,186	46,474	605,314	37,634	52,478	1,030,831	880,320	963,605	818,018
Fringe Benefits	-	1,247,928	535,301	-	3,627,794	223,594	-	5,634,617	4,890,227	5,160,738	2,823,192
Allocation to Systems	(520,698)	560,326	223,313	(509,350)	1,055,636	71,910	(883,137)	-	-	-	-
Total Personnel	-	4,269,082	1,766,601	-	13,162,810	823,926	-	20,022,419	17,321,150	18,396,104	14,583,552
Purchase of Services											
General & Administrative:											
Temporary Contract Service	25,893	-	-	10,369	-	-	-	36,262	34,535	35,000	21,901
Compliance	2,447	-	-	-	-	-	13,645	16,092	15,325	15,600	2,330
Office Related	96,439	-	-	110,933	-	-	152,226	359,598	352,447	326,590	325,447
Computer Software / Hardware	50,094	-	-	13,004	-	-	494,131	557,229	553,859	414,500	445,583
Audit	-	-	-	-	-	-	60,643	60,643	57,994	62,400	50,470
Bank and Credit Card Fees	116,824	-	-	214,255	-	-	9,474	340,553	324,336	314,300	325,805
Dues and Subscriptions	2,490	-	-	7,560	-	-	41,081	51,131	48,696	49,200	44,641
Travel and Entertainmnet	3,734	-	-	1,361	-	-	13,581	18,676	17,787	18,000	11,850
Education & Training	239,675	-	-	89,550	-	-	117,250	446,475	243,855	234,709	135,750
Insurance & Risk Management	403,650	-	-	628,780	-	-	229,873	1,262,303	1,126,645	1,119,450	869,922
Human Resources and Related	-	-	-	1,245	-	-	348,401	349,646	175,853	186,400	146,589
Professional Consulting & Legal	28,308	-	-	15,677	-	-	438,739	482,724	268,109	474,875	141,804
Public Relations	-	-	-	-	-	-	113,523	113,523	47,999	128,589	46,115
Contributions & Sponsorships	1,245	-	-	788	-	-	1,244	3,277	3,122	3,600	271
Employee Engagement	-	-	-	-	-	-	40,000	40,000	35,000	15,600	14,282
Allocation to Systems	(970,799)	1,136,102	456,840	(1,093,522)	2,382,869	162,321	(2,073,811)	-	-	-	(201,132)
Total General & Administrative:	-	1,136,102	456,840	-	2,382,869	162,321	-	4,138,132	3,305,561	3,398,813	2,381,627
Utilities											
Utilities	14,962	504,500	300,400	3,000	1,942,600	5,200	145,129	2,915,791	2,870,493	2,847,348	2,556,153
Allocation to Systems	(14,962)	33,498	13,470	(3,000)	108,717	7,406	(145,129)	-	-	-	-
Total Utilities:	-	537,998	313,870	-	2,051,317	12,606	-	2,915,791	2,870,493	2,847,348	2,556,153
Compliance	-	49,000	22,000	-	51,700	-	-	122,700	145,392	106,160	68,297
Contract Operating Svcs	-	39,400	6,652,400	-	137,000	64,800	-	6,893,600	6,595,185	6,643,120	5,730,056
Engineering	-	55,500	39,300	-	93,200	-	-	188,000	158,751	120,946	96,105
Exceptional Strength Analysis	-	-	-	-	-	-	-	-	-	-	-
Extraordinary Expenditures	-	-	-	-	131,400	-	-	131,400	125,010	125,000	43,228
Fleet Management Services	-	47,100	21,500	-	217,000	-	-	285,600	252,713	225,000	376,719
General Analyses	-	80,505	131,889	-	6,100	37,070	-	255,563	201,294	194,320	139,370
Planning Expenses	-	-	-	-	-	-	-	-	-	-	-
Industrial Meter Testing	-	-	-	-	7,800	-	-	7,800	5,500	5,500	300
Maintenance Services	-	808,100	494,550	-	928,200	15,200	-	2,246,050	2,148,732	1,940,550	1,732,734
Miscellaneous Services	-	104,600	122,550	-	291,900	3,450	-	522,500	444,710	428,000	541,911
Leased Equipment	-	-	-	-	-	-	-	-	-	-	-
Rental	-	-	-	-	-	-	-	-	-	-	-
Residuals	-	-	146,900	-	412,000	-	-	558,900	531,620	511,000	455,161
Water Purchases	-	3,621,946	-	-	191	-	-	3,622,137	2,975,889	3,636,000	2,791,527
System Planning / Capital Management	-	-	-	-	-	-	-	-	-	-	-
LCA WWTP Treatment/Removals	-	-	-	-	-	-	-	-	-	-	-
Treatment and Transportation	-	-	4,529,542	-	11,400	-	-	4,540,942	3,879,076	4,307,663	2,857,770
Total Purchase of Services	-	5,344,149	12,474,500	-	4,339,208	133,126	-	22,290,983	20,334,364	21,090,607	17,389,330
Materials & Supplies											
Purification Chemicals	-	241,800	197,100	-	1,483,400	-	-	1,922,300	1,772,748	1,107,750	939,966
Purification Supplies	-	70,200	-	-	14,000	-	-	84,200	79,764	72,300	42,478
Pump Supplies	-	128,900	10,800	-	44,400	-	-	184,100	150,417	164,500	174,019
Misc. Materials & Supplies	-	109,280	149,322	-	509,200	82,500	-	850,302	790,782	747,700	659,154
Fuel & Mileage	-	85,400	35,800	-	159,400	-	-	280,600	271,168	265,820	272,213
Fleet Management Supplies	-	9,850	9,600	-	42,500	-	-	61,950	53,445	51,500	51,299
Equipment	-	200,180	116,100	-	273,700	29,500	-	619,480	563,123	526,800	495,306
Distribution & Transmission Supplies	-	352,200	-	-	612,700	-	-	964,900	874,970	896,100	792,621
Collection System Supplies	-	-	-	-	-	-	-	-	-	-	-
Total Materials & Supplies	-	1,197,810	518,722	-	3,139,300	112,000	-	4,967,832	4,556,417	3,832,470	3,427,056
Depreciation and Amortization	-	3,517,000	7,031,500	-	6,169,850	-	-	16,718,350	16,820,676	15,404,900	17,248,723
Other Expenses											
Major Maintenance Expenses	-	-	-	-	-	-	-	-	-	-	-
Other Miscellaneous	-	93,100	22,100	-	4,000,000	-	-	4,115,200	4,062,603	4,066,800	5,951,432
Total Other Expenses	-	93,100	22,100	-	4,000,000	-	-	4,115,200	4,062,603	4,066,800	5,951,432
Total Operating Expenses	-	15,557,243	22,270,263	-	33,194,037	1,231,373	-	72,252,916	66,400,771	66,189,694	60,981,720

Capital Spending

Lehigh County Authority
2024 Budget
Capital Budgets Overview

Suburban Water Division:

The Suburban Water Division Capital Budget includes projects that provide or lead to long-term improvements and reliability to the system and the uninterrupted supply of safe drinking water. The following table provides information regarding significant water projects:

Project	2024 Budget	2024 Project Stage
Fixed Base Advanced Metering Infrastructure	\$50,000	Planning
Central Lehigh System Supply Improvements	150,000	Master Plan Study
Upper System Pump Station & Main Extension	50,000	Final Design & Permitting
Water Quality Studies & Upgrades	100,000	Planning
Water Systems Master Planning	100,000	Planning
North Whitehall Division Water System Supply Study & Improvements	100,000	Planning and Preliminary Design
Water Meter Replacement Program	800,000	Construction
Water Main Replacement Project	2,900,000	Design & Construction

Annual Projects

These projects are part of recurring annual capital work that includes the following: 1) water main extensions; 2) distribution main development and service connections; 3) distribution mains upsizing; 4) reservoir rehabilitation and maintenance; 5) general water system improvements; 6) water company acquisitions; 7) SCADA upgrades; 8) mobile equipment; 9) water facilities asset management improvements; 10) other equipment; 11) capital management; and 12) capital works miscellaneous expenses. Includes staff and consultant work. (2024 Cap Ex \$2,367,000)

Fixed Base Advanced Metering Infrastructure

Development of a fixed base meter reading system for the Suburban Water Division has been an objective for several years as part of optimizing meter reading and monitoring. The new system will allow for more efficient meter reading, consistent billing, and faster dispute resolution.

Communication studies were performed by Sensus (meter manufacturer) and an engineer in 2019 - 2021 to evaluate the number and location of antenna towers to provide Suburban Central Lehigh Division (CLD) area coverage. Four to five existing communication tower locations were identified as potential sites to provide adequate coverage of the Suburban system in a 2021 feasibility study. Permitting and procurement of the equipment and procurement of leases to utilize existing towers will follow completion of a detailed cost evaluation, to be performed in 2024. (2024 Capex Ex. \$50,000)

Central Lehigh System Supply Improvements

There are several inactive wells in the Central Lehigh Division (CLD) that were taken off-line for various reasons over the years and reactivating these wells would require extensive improvements

Lehigh County Authority
2024 Budget
Capital Budgets Overview

and/or permitting. There is concern that the current production capacity of the active wells in CLD does not provide 100% redundancy with the City of Allentown interconnection. Also, the Upper System, located north of I-78 in the Fogelsville area, has been experiencing rapid development and it is anticipated that additional water demands from a potential large industrial user(s) will require additional water storage to enhance system resiliency and redundancy. A multi-year Suburban Division CLD Master Plan commenced in 2022 to identify the following: 1) CLD system demand projections; 2) CLD system supply evaluation; 3) CLD distribution system capacity evaluation; 4) alternatives evaluation; and 5) prioritized capital improvement plan. (2024 Cap Ex \$150,000)

Upper System Pump Station and Water Main Extension

The objective of this project is to supplement Central Lehigh Upper System supply and pressure to meet the water needs of a proposed large industrial development in the area west of the village of Fogelsville and provide adequate capacity to serve future industrial and residential customers in the area. The recently installed water main extension under I-78 and proposed regional pump station will also enhance system resilience and redundancy, in the event of operational issues with the CLD Auxiliary Pump Station or with the Upper System wells. Based on the most recent planning module data, zoning mapping and growth projections provided by Upper Macungie Township, the proposed pump station will have a design capacity of 1,000 gpm (1.44 million gallons per day). The timeline for construction of the pump station will be dependent upon the construction schedule for a proposed large industrial development. The 2024 budget includes final design and permitting costs. (2024 Cap Ex \$50,000)

Water Quality Studies and Upgrades

This project consists of water quality studies and rehabilitation work to comply with evolving state and federal water quality regulations. The primary project locations are LCA's satellite systems, which are small developer-built systems acquired by LCA and upgraded over the years. This initiative includes investigation for the presence of PFAS chemicals, which have been proposed by EPA and DEP for drinking water limits. Planning/Study efforts are budgeted for 2024. (2024 Cap Ex \$100,000)

Water Systems Master Planning

This project involves the preparation of water supply studies for two major Suburban water systems – Central Lehigh Division (CLD) and North Whitehall Division (NWD). The study will review supply requirements to meet current and future demands, and evaluate water sources, storage, and interconnections to ensure long-term supply needs can be met. Planning/Study efforts are budgeted for 2024. (2024 Cap Ex \$100,000)

North Whitehall Division Water System Supply Study and Improvements

This project focuses on developing and implementing improvements to provide an additional supply interconnection for the North Whitehall Division, which is presently served by a single connection with the Northampton Borough Municipal Authority (NBMA). This will enhance NWD system resiliency and provide redundancy with the existing single connection and potential source of failure. The project will also ensure meeting long-term supply needs by including the looping of dead-end

Lehigh County Authority
2024 Budget
Capital Budgets Overview

mains in the NWD system. Planning/Study and preliminary design efforts are budgeted for 2024. (2024 Cap Ex \$100,000)

Water Meter Replacement Program

The program consists of annual projects to replace aging and inoperable water meters. The meter replacement program will prioritize the replacements according to operable status and age, and all new meters will have radio read capability, which will be compliant with a future fixed base meter reading system. (2024 Cap Ex \$800,000)

Water Main Replacement Projects

This is an on-going project to replace aging water mains that have a history of high pipe break rates (# of breaks per mile) &/or exhibit a high risk of failure through condition assessment investigations. These projects enhance system resiliency and reduce service interruptions and water loss. The 2024 water main replacement project is scope is for approximately one mile of main replacement. (2024 Cap Ex \$2,900,000)

Suburban Wastewater Division:

The major activities included in the Suburban Wastewater Division Capital Budget are a continuation of the on-going work associated with LCA Pretreatment Plant, Western Lehigh Interceptor (WLI) Signatory Inflow & Infiltration (I/I) Investigation & Remediation program and the implementation of improvements required to address system bottlenecks and sanitary sewer overflows. Other projects include the Upper WLI Pump Station and Force Main, Spring Creek Pump Station Upgrade, WLI Major Rehabilitation and Repairs, Spring Creek Pump Station Force Main Relocation, Lynn Township WWTP Improvements, and continuing construction on the Phase 2 Park Pump Station Improvements. The following table provides information regarding significant wastewater projects:

Project	2024 Budget	2024 Project Stage
Pretreatment Plant Improvements	\$1,000,000	Annual Construction
Central Lehigh County Wastewater Capacity Planning & Expansion	500,000	Planning
Signatory I/I Investigation & Remediation Program	1,000,000	Design & Construction
Upper WLI Pump Station and Force Main	\$3,500,000	Construction
Park Pump Station Improvements	\$1,800,000	Construction
Spring Creek Pump Station Upgrade	\$700,000	Construction
Spring Creek Pump Station Force Main Relocation	\$100,000	Planning & Design
Lynn Township WWTP Improvements	\$500,000	Construction

Lehigh County Authority

2024 Budget

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Annual Projects

These projects are part of recurring annual capital work that includes the following: 1) mobile equipment; 2) sewer company acquisitions; 3) other equipment; 4) wastewater facility asset management upgrades; 5) capital management; 6) sewer main connections; 7) general sewer system improvements; and SCADA upgrades. (2024 Cap Ex. \$912,500)

Wastewater Pretreatment Plant - General Improvements

This is an on-going multi-year program to upgrade processes and replace equipment in accordance with asset management planning and risk prioritization, in order to ensure reliability and maintaining a high level of service for LCA's industrial pretreatment plant. Near-term needs include HVAC upgrades in the solids processing buildings, final clarifiers rehabilitation, dewatering system improvements, aeration deck mixer refurbishments/replacements, replacement of outdated cryogenic plant control system, and grease station screening system installation. (2024 Cap Ex \$1,000,000)

Central Lehigh County Wastewater Capacity Planning & Expansion

This project is related to DEP mandated Act 537 sewer planning for the entire Kline's Island Sanitary Sewer System and is intended to provide a long-term solution in the form of a regional DEP Act 537 Sewage Facilities Plan. In 2020 and 2021, the alternative to upgrade the Pretreatment Plant and extend a force main to the Lehigh River was closely studied again. In addition, the updated Western Lehigh sewer model was used to update the downstream conveyance needs through the Park Pump Station area. In 2022, further analysis was performed on these topics to maintain the March 2025 Act 537 submission deadline. In addition, a Sewer System Evaluation Survey (SSES) was performed to further identify what methods will be used in the future to reduce I/I. (2024 Cap Ex. \$500,000)

Signatory I/I Investigation & Remediation Program

This on-going inflow and infiltration (I/I) reduction project has involved flow monitoring in LCA and Signatory sewage collection systems tributary to the Western Lehigh Interceptor (WLI). Level of Service Modeling, Flow Metering, recalibration of the 2014 KISS model, and many other tasks for determining and prioritizing the physical work necessary to facilitate the removal of excess wet weather flow in segments of systems that have been identified with unacceptable levels of I/I. The 2024 budget includes a second consecutive project to perform the grouting and sealing of leaky lateral taps in Upper and Lower Macungie Townships. (2024 Cap Ex \$1,000,000)

Upper WLI Pump Station and Force Main

A conveyance capacity "bottleneck" has long been identified in the Trexlertown area of the Western Lehigh Interceptor, and this area was assigned a high priority to address due to occurrence of sanitary sewer overflows and basement backups in the vicinity during wet weather events. A parallel interceptor was originally conceived to run approximately from Cetronia Road to Spring Creek Road. The concept was modified to focus on providing an interim solution to address local impacts of the system bottleneck, and the selected alternative in the Interim Act 537 Plan is the construction of a pump station adjacent to the LCA Pretreatment Plant (PTP) connected to a force main to convey approximately 2.5 million gallons per day of flow to a connection with the Upper Macungie sewer

Lehigh County Authority
2024 Budget
Capital Budgets Overview

system in the township park area off Grange Road. This will allow a portion of the PTP flow to bypass the Trexlertown area, thereby providing a short-term solution to eliminate dry weather sanitary sewer overflows downstream. Design phase was completed in 2023 and the force main will be constructed in 2024, with the pump station to be completed in 2025. (2024 Cap Ex \$3,500,000)

Park Pump Station Rehabilitation & Improvements (Phase 2)

Phase 1 of this multi-year project included replacement of the existing pumps, pump speed controllers (replaced with variable frequency drives), motor control center (MCC) panel, SCADA system, HVAC system, level control system, discharge surge valve and related mechanical improvements to maintain the level of service, prolong station life and restore station to its design capacity. Construction work for Phase 1 was completed in 2020. Phase 2 consists of the replacement of the backup power system generator and associated equipment. Construction phase commenced in 2022 and will finish in 2024. (2024 Cap Ex \$1,800,000)

Spring Creek Pump Station Upgrade

This project involves replacing aging equipment and addressing electrical deficiencies at the Spring Creek Pump Station. The Spring Creek Pump Station was constructed in 1996 as a wet weather bypass station and has since become an integral part of the Western Lehigh collection system. This project includes various upgrades to maintain the integrity and reliability of the station including replacement of the three pump variable frequency drives (VFDs), replacement of two motorized gates for station control, replacement of access hatches due to frequent and sustained flooding of the station, and other miscellaneous station improvements. Design phase will be substantially completed in 2023, with construction anticipated for completion in 2025. (2024 Cap Ex \$700,000)

Spring Creek Pump Station Force Main Relocation

A section of the Spring Creek Pump Station Force Main along Lower Macungie Road is to be relocated as part of the PA Turnpike widening project. Approximately 2,200 feet of 24-inch force main will be relocated as part of this project, which will also include a new boring under the Turnpike. LCA will bear a 50% share of the project costs, which is anticipated for completion in 2025. (2024 Cap Ex \$100,000)

Lynn Township WWTP Improvements

This project consists of the addition of another final clarifier to supplement the existing final clarifier, which is undersized based on current plant loadings. The existing 20-foot diameter final clarifier has been in 24/7 service since the plant was put online in the late 1970s and needs rehabilitation. The addition of another final clarifier will enhance plant resiliency and regulatory compliance and provide redundancy for maintenance of the existing unit. The project is anticipated for completion in 2025. (2024 Cap Ex \$500,000)

Lehigh County Authority
2024 Budget
Capital Budgets Overview

City Division - Water System:

Water projects in the 2024 budget focus on regulatory compliance, immediate and future needs at the Water Filtration Plant (WFP) and addressing the Lease operating standards. Annual projects remain in the 2024 budget as well, and include but are not limited to equipment purchases, general water system replacements, general WFP improvements, PennDOT relocations, reservoir rehabilitation and maintenance, SCADA upgrades, and East Side transmission main repairs.

The following table provides information regarding significant water projects:

Project	2023 Budget	2023 Project Stage
Annual Water Main Replacement – Cycle 7/8	\$3,200,000	Construction
Tank and Reservoir Rehabilitation	\$300,000	Construction
WFP Redundant Power Supply	\$80,000	Design
Large Diameter Valve Replacement Project	\$350,000	Design & Construction
PFAS Compliance Planning & Upgrades	\$250,000	Study & Design
Water Meter Replacement Program	\$800,000	Construction
WFP Filter Upgrade Project	\$2,350,000	Construction
Lead Service Line Replacement Program	\$5,000,000	Construction

Annual Projects

The annual projects include general water system replacements, mobile equipment, new and replacement meter installations, other equipment, routine reservoir rehab/maintenance, mobile equipment, WFP general improvements, general system replacements, SCADA upgrades, East Side transmission main repairs, and Bethlehem interconnection. Also included is a portion of the Administration Capital Expenses that directly benefit the Allentown Division. (2024 Cap Ex \$2,735,000)

Annual Water Main Replacement – Cycle 7/8

The replacement of 4 miles of water main by the end of 2024 is a Lease requirement per the amended Lease language, with the objective of replacing aging spun-cast and pit cast iron pipe in the system. The project areas are prioritized based on breakage and leak history. Cycles 7 and 8 water main replacements will be consolidated into one two-mile project in 2024. (2024 Cap Ex \$4,800,000)

Tank and Reservoir Rehabilitation

This project involves mechanical upgrades, coatings, and miscellaneous rehabilitation of concrete tanks and reservoirs. The multi-year project includes replacement of process valves, HVAC and building rehabilitation, electrical upgrades, and mixing system replacements. (2024 Cap Ex \$200,000)

Lehigh County Authority
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Capital Budgets Overview

WFP Redundant Power Project

The 2022 Master Plan identified an auxiliary electrical feed as near-term project at the WFP. The recommended alternative to comply with DEP Chapter 109 (“System Service and Auxiliary Power Requirements”) is a new electrical feed from a separate electrical substation. Design and permitting are budgeted for 2024. (2024 Cap Ex \$80,000)

Large Diameter Valve Replacement Project

The objective of this multi-year project is to replace critical aging/inoperable large diameter valves in the distribution system. There are many critical large diameter valves that control supply throughout the system that are inoperable or do not seal properly. It is essential that these large diameter valves operate as designed to facilitate isolating key areas of the system during emergency events and maintenance operation. (2024 Cap Ex \$350,000)

PFAS Compliance Planning and Upgrades

This project consists of water quality studies and facilities upgrades to comply with evolving state and federal water quality standards regarding PFAS chemicals removal from drinking water. Project costs reflect design and construction of plant modifications to treat the Crystal Spring source. Design and permitting are budgeted for 2024. (2024 Cap Ex \$250,000)

Water Meter Replacement Program

This annual project consists of replacement of residential and commercial meters that are at the end of their expected life span and have either failed or are showing signs of failure. (2024 Cap Ex \$800,000)

WFP Filter Upgrade Project

This multi-year project consists of rehabilitation of the existing eight dual-bay gravity filters, including underdrain replacements, media replacements, valve replacements, air scour system installation, and related electrical upgrades. The filtration system operation is critical to maintaining regulatory compliance, and the project is cited as a near term, high priority project in the WFP Master Plan (Arcadis; 2017), as the existing equipment has reached the end of its service life. Construction will commence in 2024. (2024 Cap Ex \$2,350,000)

Lead Service Line Replacement Program

This is a multi-year project to replace public and private lead water services in the City. The program commenced in 2023 the inventory phase, to be followed by annual lead service line replacements prioritized according to number/concentration of services per neighborhood and other ranking factors. (2024 Cap Ex \$5,000,000)

Lehigh County Authority
2024 Budget
Capital Budgets Overview

City Division - Wastewater System:

Wastewater projects in 2024 will focus on regulatory compliance, immediate and future needs at the Kline's Island Wastewater Treatment Plant (WWTP) and addressing the Lease operating standards. Projects at the WWTP including Boiler and Solids Process HVAC Upgrade, Main and Auxiliary Pump Station Improvements, Intermediate Pump Station Upgrade, Electrical Substation No. 1 Replacement, Final Clarifier Rehabilitation, and Primary Sludge Line Replacement, and other work related to wet weather flow issues.

Project	2024 Budget	2024 Project Stage
WWTP Solids Process Boiler Replacement & HVAC Upgrade Project	\$1,400,000	Construction
WWTP Main & Auxiliary Pump Station Improvements	\$400,000	Design & permitting
WWTP Intermediate Pump Station Upgrade	\$200,000	Design & permitting
WWTP Electrical Substation No. 1 Replacement	\$2,200,000	Construction
WWTP Final Clarifier 1 – 4 Rehabilitation	\$900,000	Construction
WWTP Primary Sludge Digester Feed Line Replacement	\$600,000	Design, permitting, & construction
Manhole Inspection & Sealing Program	\$2,000,000	Study & construction
Source Reduction Plan – I/I Elimination Program	\$3,000,000	Study & construction
Act 537 Alternatives Analysis	\$600,000	Planning

Annual Projects

The annual projects include mobile equipment, other equipment, sanitary sewer main replacements and rehabilitation, WWTP general improvements, and SCADA upgrades. The Lease-required cyclical cleaning and rehabilitation of the anaerobic digesters is included within the annual projects. Also included is a portion of the Administration Capital Expenses that directly benefit the Allentown Division. (2024 Cap Ex \$2,706,000)

Boiler Replacement and Solids Process HVAC Upgrade Project

This project consists of replacement of the three boilers used to heat the digesters, the digester building, and sludge dewatering areas. The project scope also includes replacement of related solids process HVAC equipment in the digester building and sludge dewatering areas. Construction phase commenced in late 2022 and be completed in early 2024. This project was approved by the City as a Major Capital Improvement. (2024 Cap Ex \$1,400,000)

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WWTP Main & Auxiliary Pump Station Improvements Project

This multi-year project is the combination of two near-term projects from the WWTP Master Plan (Kleinfelder, 2019). The project consists of the mechanical upgrade of the Main Pump Station and Auxiliary Pump Station to increase the capacity of the combined station pumping system to 100 million gallons per day, in accordance with the DEP mandate to phase out activation of the high-flow plant bypass at Outfall No. 003. The four existing pumps in the Main Pump Station (MPS) are to be replaced along with new variable frequency drives (VFDs) and associated valve replacements. Improvements to the Auxiliary Pump Station include replacement of the existing motors with upsized motors, replacement of pump impellers, replacement of VFDs, elimination of a force main bottleneck that creates excessive head loss, and replacement of associated valves. Preliminary design phase commenced in 2022 and physical modeling of the MPS and final design will be performed in 2024. (2024 Cap Ex \$400,000)

WWTP Intermediate Pump Station Upgrade Project

This multi-year project consists of the mechanical and electrical upgrade of the Intermediate Pump Station primary effluent pump system. The primary effluent pumps have been identified in the WWTP report entitled, “Evaluation of Increase in Peak Flow Capacity” (Kleinfelder, 2020) as a capacity bottleneck for the conveyance and treatment of 100 million gallons per day peak flow, and the WWTP Master Plan recommends replacement of the primary effluent pumps. The project consists of the replacement of five primary effluent pumps, replacement and upsizing of existing motors, replacement of the VFDs, and electrical upgrades. Preliminary design phase began in 2022 and final design will be performed in 2024. (2024 Cap Ex \$200,000)

Electrical Substation No. 1 Replacement Project

This is Phase 2 of a multi-year project to replace the aging electrical substations at KIWWTP. Substation No. 2 was replaced in 2019. This phase consists of the replacement of Substation No. 1 along with the primary switchgear. Design of the replacement for Substation No. 1 will enable powering future projects to increase plant capacity. Design work commenced in 2022 and construction is anticipated to be completed in 2024. (2023 Cap Ex \$200,000)

Final Clarifier 1 -4 Rehabilitation

This multi-year project consists of the mechanical and structural rehabilitation of final clarifier nos. 1 – 4 and includes replacement of scraper mechanisms and drives on all four units, as well as miscellaneous steel repairs, new coatings on all exposed steel, and concrete repairs. Two tanks are scheduled for rehabilitation in 2024, and two tank repairs will follow in 2025. (2024 Cap Ex \$900,000)

Primary Sludge Digester Feed Line Replacement

This project involves the replacement of two parallel 6-inch diameter cast iron primary sludge lines, each 1,500 feet in length, with new 8-inch diameter glass lined ductile iron pipes. The existing lines are in poor condition and at the end of their service life. The larger glass lined pipes will facilitate

Lehigh County Authority
2024 Budget
Capital Budgets Overview

conveying a thicker sludge to optimize digester performance and eliminate problematic line clogging. Construction will commence in 2024. (2024 Cap Ex \$600,000)

Manhole Inspection and Sealing Program

This project is driven by the Act 537 Plan and is a program to eliminate inflow and infiltration into City manholes. This annual program will inspect and seal approximately 700 sanitary sewer manhole every year for 10 years. The project is part of the City's Source Reduction Plan for the upcoming Act 537 Plan. Construction will commence in 2024. (2024 Cap Ex \$2,000,000)

Source Reduction Plan – I/I Elimination Program

As part of the DEP mandated Act 537 planning effort, the City prepared a 10-year Source Reduction Plan (SRP) that commits the City to reducing I/I into the sewage collection system. This annual program consists of internal pipeline sealing, grouting, and lining, along with isolated dig-up repairs. This program is anticipated to continue for 10 years. Annual project costs more than \$650,000 will be recaptured via the CCRC mechanism in the Lease. Design phase for Cycle 1 SRP commenced in 2023 with construction to follow in 2024. (2024 Cap Ex \$3,000,000)

Act 537 Alternatives Analyses

This project consists of on-going regional Act 537 sewer plan development efforts, per the DEP mandated Act 537 sewer planning for the Kline's Island Sanitary Sewer System. Extensive flow monitoring was completed in 2021 and used to build a hydraulic model for the entire regional system. The model was calibrated in 2022 and preliminary and final screening of alternatives followed in 2023. Final selection of alternatives will be performed in 2024. (2024 Cap Ex \$600,000)

LEHIGH COUNTY AUTHORITY
CAPITAL EXPENDITURES - SUBURBAN - WATER FUND
2024 Budget (as of 10-09-23)

Project	Primary Project Category	2023 Budget	Cap Plan Costs 2024-2028	Cap Plan 2024	2024 Budget
<u>Annual Projects</u>					
Annual Projects	AM - Varies	\$ 2,425,000	\$ 10,613,000	\$ 2,367,000	\$ 2,367,000
<u>Multi-Year Projects</u>					
Water Main Replacement Projects	AM - Varies	\$ 2,900,000	\$ 12,100,000	\$ 2,900,000	\$ 2,900,000
Water Quality Studies and Upgrades	Sys Imp	\$ -	\$ 275,000	\$ 100,000	\$ 100,000
Fixed Base Meter Reading System	Sys Imp	\$ 100,000	\$ 550,000	\$ 50,000	\$ 50,000
North Whitehall Division Water System Supply Study & Improvements	Sys Imp	\$ -	\$ 2,000,000	\$ 100,000	\$ 100,000
Water Systems Master Planning	Sys Imp	\$ -	\$ 200,000	\$ 100,000	\$ 100,000
Upper System Pump Station & Water Main Extension	Sys Imp	\$ 75,000	\$ 2,150,000	\$ 50,000	\$ 50,000
Water Meter Replacement Program	AM-Rev Opprt	\$ 350,000	\$ 4,150,000	\$ 800,000	\$ 800,000
Central Lehigh System Supply Improvements	Sys Imp	\$ 100,000	\$ 1,650,000	\$ 150,000	\$ 150,000
Residential Svc Conn & Water Svc Inquiry	Sys Imp	\$ 10,000	\$ -	\$ -	\$ -
Upper System New Reservoir	Sys Imp	\$ 100,000	\$ -	\$ -	\$ -
Total Suburban Division Water Capital Expenditures		\$ 6,060,000	\$ 33,688,000	\$ 6,617,000	\$ 6,617,000

LEHIGH COUNTY AUTHORITY
CAPITAL EXPENDITURES - SUBURBAN - WASTEWATER FUND
2024 Budget (as of 10-09-23)

Project	Primary Project Category	2023 Budget	Cap Plan Costs 2024 - 2028	Cap Plan 2024	2024 Budget
<u>Annual Projects</u>					
Annual Projects	AM - Varies	\$ 325,000	\$ 3,472,500	\$ 912,500	\$ 912,500
<u>LCA Wastewater Treatment Plant</u>					
Pretreatment Plant Improvements	AM - Varies	\$ 800,000	\$ 6,000,000	\$ 1,000,000	\$ 1,000,000
<u>Western Lehigh Interceptor System:</u>					
Central Lehigh County WW Capacity Planning & Expansion	New Cust	\$ 325,000	\$ 800,000	\$ 500,000	\$ 500,000
WLI Major Rehabilitation and Repairs	Regulatory	\$ -	\$ 6,975,000	\$ 225,000	\$ 225,000
Spring Creek Pump Station Force Main Condition Assessment	AM-High	\$ 100,000	\$ 150,000	\$ 150,000	\$ 150,000
Spring Creek Pump Station Upgrades	AM-High	\$ 100,000	\$ 1,430,000	\$ 700,000	\$ 700,000
Spring Creek Pump Station Force Main Relocation	Regulatory	\$ 50,000	\$ 1,200,000	\$ 100,000	\$ 100,000
Signatory I & I Investigation & Remediation Program	Regulatory	\$ 1,700,000	\$ 1,500,000	\$ 1,000,000	\$ 1,000,000
Upper Western Lehigh Interceptor Pump Station & Force Main	Regulatory	\$ 250,000	\$ 7,750,000	\$ 3,500,000	\$ 3,500,000
PTP Study	Sys Imp	\$ 200,000	\$ -	\$ -	\$ -
Subtotal		\$ 2,725,000	\$ 19,805,000	\$ 6,175,000	\$ 6,175,000
<u>Satellite Systems</u>					
Wynnewood I & I Investigation & Remediation Program	AM - Varies	\$ 25,000	\$ 150,000	\$ 125,000	\$ 125,000
Arcadia West WWTP Mechanical Screen	Efficiency	\$ 100,000	\$ 350,000	\$ 75,000	\$ 75,000
North Whitehall Township Act 537 Sewage Facilities Planning	Regulatory	\$ -	\$ 180,000	\$ 70,000	\$ 70,000
Heidelberg Heights I & I Investigation & Remediation Program	Regulatory	\$ 350,000	\$ 300,000	\$ 100,000	\$ 100,000
Heidelberg Heights WWTP Rehabilitation	AM - High	\$ 250,000	\$ 160,000	\$ 160,000	\$ 160,000
Sand Spring WWTP Improvements	Regulatory	\$ -	\$ 250,000	\$ 100,000	\$ 100,000
Lynn Township WWTP Improvements	AM - High	\$ 10,000	\$ 700,000	\$ 500,000	\$ 500,000
Lynn Township I & I Investigation & Remediation Program	AM - High	\$ 50,000	\$ 150,000	\$ 50,000	\$ 50,000
SSES (Weisenberg, UMiT, Lowhill)	AM - High	\$ 200,000	\$ -	\$ -	\$ -
Plan Review & Inspections	AM - Varies	\$ 7,500	\$ -	\$ -	\$ -
Subtotal		\$ 992,500	\$ 2,240,000	\$ 1,180,000	\$ 1,180,000
<u>Little Lehigh Relief Interceptor System:</u>					
Park Pump Station Upgrade - Phase 2	AM - High	\$ 1,500,000	\$ 2,100,000	\$ 1,800,000	\$ 1,800,000
Total Suburban Wastewater Division Capital Expenditures:		\$ 6,342,500	\$ 33,617,500	\$ 11,067,500	\$ 11,067,500

LEHIGH COUNTY AUTHORITY
CAPITAL EXPENDITURES - CITY - WATER DIVISION FUND
2024 Budget (as of 10-09-23)

Project	Primary Project Category	2023 Budget	Cap Plan Costs 2024 - 2028	Cap Plan 2024	2024 Budget
Annual Projects					
Annual Projects	AM - Varies	\$ 1,295,000	\$ 9,502,000	\$ 2,735,000	\$ 2,735,000
Non-CCRC Projects					
Indenture Improvements	AM - High	\$ 200,000	\$ 650,000	\$ 200,000	\$ 200,000
Master Plan Studies	CA/OS	\$ 10,000	\$ 170,000	\$ -	\$ -
WFP Redundant Power Supply	Regulatory	\$ -	\$ 730,000	\$ 80,000	\$ 80,000
Tank and Reservoir Rehabilitation	AM - High	\$ 300,000	\$ 1,000,000	\$ 200,000	\$ 200,000
Large Diameter Valve Replacement Project	AM - High	\$ 250,000	\$ 1,950,000	\$ 350,000	\$ 350,000
Subtotal		\$ 760,000	\$ 4,500,000	\$ 830,000	\$ 830,000
Large Projects & CCRC Projects					
Annual Water Main Replacements	CA/OS	\$ 3,200,000	\$ 24,600,000	\$ 4,800,000	\$ 4,800,000
PFAS Compliance Planning and Upgrades	Regulatory	\$ -	\$ 10,250,000	\$ 250,000	\$ 250,000
WFP Influent Channel Modifications	Master Plan	\$ -	\$ 3,100,000	\$ -	\$ -
Water Meter Replacement Program	AM - High	\$ 525,000	\$ 2,400,000	\$ 800,000	\$ 800,000
Fixed Base Meter Reading System	Efficiency	\$ -	\$ 1,700,000	\$ -	\$ -
Filter Upgrades	Master Plan	\$ 500,000	\$ 5,500,000	\$ 2,350,000	\$ 2,350,000
Big Lehigh Intake and Transmission Upgrades	Master Plan	\$ -	\$ 1,120,000	\$ 200,000	\$ 200,000
Lead Service Line Replacement Program	Regulatory	\$ -	\$ 55,000,000	\$ 5,000,000	\$ 5,000,000
Subtotal		\$ 4,225,000	\$ 103,670,000	\$ 13,400,000	\$ 13,400,000
Total Allentown Division Water Capital Expenditures:					
		\$ 6,280,000	\$ 117,672,000	\$ 16,965,000	\$ 16,965,000

LEHIGH COUNTY AUTHORITY
CAPITAL EXPENDITURES - CITY - WASTEWATER DIVISION FUND
2024 Budget (as of 10-09-23)

Project	Primary Project Category	2023 Budget	Cap Plan Costs 2024 - 2028	Cap Plan 2024	2024 Budget
<u>Annual Projects</u>					
Annual Projects	AM - High	\$ 1,729,000	\$ 10,199,500	\$ 2,706,000	\$ 2,706,000
<u>Non-CCRC Projects</u>					
Indenture Report Improvements	AM - Varies	\$ 300,000	\$ 1,000,000	\$ 300,000	\$ 300,000
KIWWTP Master Plan	CA/OS	\$ -	\$ 160,000	\$ 160,000	\$ 160,000
Manhole Inspection and Sealing Program	Regulatory	\$ 300,000	\$ 6,000,000	\$ 2,000,000	\$ 2,000,000
KIWWTP Redundant Power Supply	Efficiency	\$ -	\$ 770,000		
Subtotal		\$ 600,000	\$ 7,930,000	\$ 2,460,000	\$ 2,460,000
<u>Large Projects & CCRC Projects</u>					
WWTP Electrical Substation Replacement Phase 2	AM - High	\$ 200,000	\$ 6,800,000	\$ 2,200,000	\$ 2,200,000
WWTP Wet Weather Capacity - Main & Auxiliary Pump Station Improvements	AM - Varies	\$ 100,000	\$ 12,600,000	\$ 400,000	\$ 400,000
Boiler Replacement & Solids Process HVAC Upgrade Project	AM - Varies	\$ 2,800,000	\$ 1,400,000	\$ 1,400,000	\$ 1,400,000
WWTP Wet Weather Capacity - IPS Pump Station Upgrade & 480v MCC Replacement	AM - Varies	\$ 100,000	\$ 5,900,000	\$ 200,000	\$ 200,000
WWTP Final Clarifier 1-4 Rehabilitation	AM - Varies	\$ -	\$ 1,800,000	\$ 900,000	\$ 900,000
WWTP Primary Sludge Digester Feed Line Replacement	AM-Varies	\$ -	\$ 1,300,000	\$ 600,000	\$ 600,000
Source Reduction Plan - I/I Elimination Program	Regulatory	\$ 800,000	\$ 23,000,000	\$ 3,000,000	\$ 3,000,000
WWTP Wet Weather Capacity - Tertiary Bypass	AM - Varies	\$ -	\$ 1,300,000	\$ 100,000	\$ 100,000
Subtotal		\$ 4,000,000	\$ 54,100,000	\$ 8,800,000	\$ 8,800,000
<u>Regional Act 537 Projects</u>					
Act 537 Alternatives Analyses	Regulatory	\$ 700,000	\$ 700,000	\$ 600,000	\$ 600,000
Miscellaneous Act 537 Planning, Financial and Legal Reviews	Regulatory	\$ 1,250,000	\$ 300,000	\$ 200,000	\$ 200,000
Subtotal		\$ 1,950,000	\$ 1,000,000	\$ 800,000	\$ 800,000
Total Allentown Division Wastewater Capital Expenditures		\$ 8,279,000	\$ 73,229,500	\$ 14,766,000	\$ 14,766,000

LEHIGH COUNTY AUTHORITY
CAPITAL EXPENDITURES - ADMINISTRATION
2024 Budget (as of 10-09-23)

Project	Primary Project Category	2023 Budget	Cap Plan Costs 2024 - 2028	Cap Plan 2024	2024 Budget
<u>LCA Funded Projects</u>					
SCADA Programming, Hardware Upgrades, Software & Training	AM - Varies	\$ 750,000	\$ -	\$ -	\$ -
Computer System Hardware & Software Upgrades	AM - High	\$ 50,000	\$ 200,000	\$ 50,000	\$ 50,000
GIS Upgrades & Application Development	Efficiency	\$ 75,000	\$ 235,000	\$ 35,000	\$ 35,000
Information Technology Master Plan Update	Planning	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000
Document Management	Efficiency	\$ 5,000	\$ 50,000	\$ 50,000	\$ 50,000
Disaster Recovery/Security Upgrades	Efficiency	\$ 25,000	\$ 175,000	\$ 75,000	\$ 75,000
CMMS Upgrades	Efficiency	\$ 75,000	\$ 235,000	\$ 185,000	\$ 185,000
New Munis Implementation	Efficiency	\$ 984,000	\$ 800,000	\$ 800,000	\$ 800,000
Main Office Improvements	Efficiency	\$ -	\$ 1,150,000	\$ 550,000	\$ 550,000
Total Administration Capital Funded by LCA		\$ 2,014,000	\$ 2,895,000	\$ 1,795,000	\$ 1,795,000

LEHIGH COUNTY AUTHORITY
CAPITAL EXPENDITURES - SUBURBAN - WATER FUND
2024 Budget (as of 10-09-23)

SUBURBAN WATER CAPEX	Suburban - Water Systems													YTD			
	Undesignated	Western Lehigh Service Area			S. Lehigh	Northern Lehigh Service Area					Northampton	Buss Acres	Budget	Forecast	Budget	Actual	
	200	Central Lehigh	Arcadia West	Emmaus	Beverly Hills	North Whitehall	Washington	Mill Creek	Heidelberg	PL of Lynn	Madison North		CFE	2024	2023	2023	2022
Annual Projects	201	211	209	207	202	203	204	205	206	221	208	210					
10003 UNC-W-DIST SYS IMPROVE 3RD PTY	10,000	-	-	-	-	-	-	-	-	-	-	-	10,000	-	10,000	-	
10004 UNC-W-EQUIPMENT-MOBILE	-	-	-	-	-	-	-	-	-	-	-	-	-	88,350	-	-	
10005 UNC-W-EQUIPMENT-OTHER	619,000	-	-	-	-	-	-	-	-	-	-	-	619,000	90,945	775,000	85,365	
10010 UNC-W-RESERVOIR REHAB CONTR	400,000	-	-	-	-	-	-	-	-	-	-	-	400,000	548,729	400,000	585,863	
10011 UNC-W-WTR CAPITAL MANGEMENT	25,000	-	-	-	-	-	-	-	-	-	-	-	25,000	33,530	25,000	44,859	
10023 UNC-W-MXU-NON-RES-MTR REPL UP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	97	
11016 UNC-W-OPERATIONS CNTR IMPR	200,000	-	-	-	-	-	-	-	-	-	-	-	200,000	41,650	200,000	105,839	
11020 UNC-W-W & WW BLD COND ASSMT	25,000	-	-	-	-	-	-	-	-	-	-	-	25,000	-	25,000	122,800	
11023 UNC-W-CW MISCELLANEOUS EXPENSES	5,000	-	-	-	-	-	-	-	-	-	-	-	5,000	2,250	5,000	2,245	
20003 CLC-W-EX CUST MTR/BF/MXU INST	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	188	
20004 CLC-W-NEW CUST MTR/BF/MXU INST	-	-	-	-	-	-	-	-	-	-	-	-	-	198,175	300,000	-	
20074 UCC-W-EX CUST MTR/BF/MXU INST	-	458,000	-	-	-	-	-	-	-	-	-	-	458,000	-	-	871	
30019 UNC-W-WTR SYS ACQ GENERAL	5,000	-	-	-	-	-	-	-	-	-	-	-	5,000	-	5,000	-	
30452 CLC-W-GEN SYSTEM IMPROVEMENTS	-	300,000	-	-	-	-	-	-	-	-	-	-	300,000	124,876	300,000	14,092	
30536 CLC-W-WATER SYSTEM MASTER PLA	-	100,000	-	-	-	-	-	-	-	-	-	-	100,000	51,437	-	78,038	
30789 CLC-W-YOURWAY FACILITY EXPAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	55	
30790 CLC-W-READINGTON FARMS OFFSITE - Developer backed out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	282	
30795 CLC-W-FAR VIEW PUMP STN DEMO	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	134,275	
30836 CLC-W-RESERVOIR 1 REPAIR	-	-	-	-	-	-	-	-	-	-	-	-	-	43,069	-	665,906	
Distribution Mains & Service Connections	-	200,000	-	-	-	-	-	-	-	-	-	-	200,000	389,483	-	230,867	
Distribution Mains Upsizings	-	120,000	-	-	-	-	-	-	-	-	-	-	120,000	204,894	180,000	391,157	
	1,289,000	1,178,000	-	-	-	-	-	-	-	-	-	-	2,467,000	1,817,390	2,225,000	2,462,799	
Multi-Year Projects																	
10025 UNC-W-ADTL WTR SUP-SM SAT DIV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	129	
10026 UNC-W-BACKFLOW & METER REVIEW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	290	
10027 UNC-W-2022 COMM MTR REPL	-	-	-	-	-	-	-	-	-	-	-	-	-	333,199	350,000	159,196	
11026 UNC-W-2019 WTR MTR READING EQUIP	-	-	-	-	-	-	-	-	-	-	-	-	-	9,124	-	1,343	
11029 UNC-W-WTR EPA AWIA ACT - 2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
11030 UNC-W-FIXED BASE MTR RDG SYST	-	50,000	-	-	-	-	-	-	-	-	-	-	50,000	21,694	100,000	36,258	
20000 CLC-W-RES SVC CONN	-	-	-	-	-	-	-	-	-	-	-	-	-	67,055	210,000	9,587	
20015 WTC-W-RES SVC CONN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	97	
30255 UCC-W-WATER SYS IMPROVE	-	-	-	-	-	-	-	-	-	-	-	-	-	757	-	3,191	
30363 AWC-W-ARCADIA WEST W SYS IMPROVE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,343	
30654 CLC-W-CLD TO UMD-PUMP STATION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,750	
30676 UCC-W-BUSS ACRES PS REPLACEMT	-	-	-	-	-	-	-	-	-	-	-	-	-	1,124	-	141,629	
30701 CLC-W-WATERSHED MONITORING	-	-	-	-	-	-	-	-	-	-	-	-	-	113	-	847	
30711 CLC-W-CLD UPPER SYS EVALUATION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	677	
30717 CLC-W-CLD LOWER SYS MODEL EVAL	-	-	-	-	-	-	-	-	-	-	-	-	-	108	-	-	
30721 CLC-W-CLD WELL IMPROVEMENTS	-	150,000	-	-	-	-	-	-	-	-	-	-	150,000	56,955	100,000	54,625	
30723 CLC-W-MAIN REPLACEMENT CYCLE 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,090	
30748 AWC-W-WATER TANK REPLACEMENT	-	-	-	-	-	-	-	-	-	-	-	-	-	223	-	232,628	
30749 NWC-W-NWD SYSTEM IMPROVEMENTS	-	-	-	-	100,000	-	-	-	-	-	-	-	100,000	352	-	10,702	
30783 CLC-W-SAUERKRAUT LN WAT EXTEN	-	-	-	-	-	-	-	-	-	-	-	-	-	14,105	-	1,680	
30786 CLC-W-UPPER SYSTEM PUMPING STATION	-	50,000	-	-	-	-	-	-	-	-	-	-	50,000	68,349	75,000	32,495	
30804 CLC-W-CYCLE 6-WTR MAIN REPLACEMENT	-	2,900,000	-	-	-	-	-	-	-	-	-	-	2,900,000	2,426,299	2,900,000	1,484,189	
30825 CLC-W-2022 SWT INTERCONNECT	-	-	-	-	-	-	-	-	-	-	-	-	-	444	-	257,390	
30833 CLC-W-UPPER SYS NEW RESERVOIR	-	-	-	-	-	-	-	-	-	-	-	-	-	7,808	100,000	7,227	
30858 CLC-W-MAIN REPLACEMENT CYC-7	-	-	-	-	-	-	-	-	-	-	-	-	-	15,427	-	-	
30859 CLC-W-MAIN REPLACEMENT CYC-8	-	-	-	-	-	-	-	-	-	-	-	-	-	1,237	-	-	
Water Meter Replacement Projects	-	800,000	-	-	-	-	-	-	-	-	-	-	800,000	3,632	-	-	
Water Quality Studies & Upgrades	-	100,000	-	-	-	-	-	-	-	-	-	-	100,000	-	-	-	
	-	4,050,000	-	-	-	100,000	-	-	-	-	-	-	4,150,000	3,028,004	3,835,000	2,449,364	
Administrative Projects																	
11001 UNC-W-COMPUTER SYS IMPROV	12,500	-	-	-	-	-	-	-	-	-	-	-	12,500	32,370	50,000	29,192	
11003 UNC-W-GIS CONV/UPDATES	8,750	-	-	-	-	-	-	-	-	-	-	-	8,750	90,991	75,000	74,584	
11008 UNC-W-DOCUMENT MANAGEMENT SYS	12,500	-	-	-	-	-	-	-	-	-	-	-	12,500	44,049	5,000	-	
11009 UNC-W-INFO TECH M-PLAN UPDATE	12,500	-	-	-	-	-	-	-	-	-	-	-	12,500	56,537	50,000	115,712	
11017 UNC-W-GIS WEB MAP UPDATE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,494	
11018 UNC-W-CMMS UPGRADE & EXPAN	46,250	-	-	-	-	-	-	-	-	-	-	-	46,250	4,953	75,000	35,767	
11027 UNC-W-DISASTER RECOVERY/SECURITY	18,750	-	-	-	-	-	-	-	-	-	-	-	18,750	28,840	25,000	51,083	
11033 UNC-W-MUNIS ERP RE-IMPLEMENT	200,000	-	-	-	-	-	-	-	-	-	-	-	200,000	306,631	-	96,743	
11034 UNC-W-TWO STORY BUILDING EXPANSION	137,500	-	-	-	-	-	-	-	-	-	-	-	137,500	2,760	-	1,000,000	
30030 CLC-W-SCADA ON-GOING UPGRADE	-	-	-	-	-	-	-	-	-	-	-	-	-	1,304,660	411,000	1,684,019	
	448,750	-	-	-	-	-	-	-	-	-	-	-	448,750	1,871,791	691,000	3,089,594	
Total Suburban Water Capex	1,737,750	5,228,000	-	-	-	100,000	-	-	-	-	-	-	7,065,750	6,717,184	6,751,000	8,001,758	

LEHIGH COUNTY AUTHORITY
CAPITAL EXPENDITURES - SUBURBAN - WASTEWATER FUND
2024 Budget (as of 10-09-23)

	Suburban - Wastewater Systems													YTD				
	Interceptor Group			CRCS						W.Weisenberg								
	WLI 312	LLRI 1 313	LLRI 2 314	Heidelberg 305	Upper Milford 315	Wynnewood 316	Weisenberg 317	Sand Spring 319	Lowhill Twp. 323	NLSA 318	Washington 303	Lynn Twp. 322	WWTP 320	Arcadia West 311	Budget 2024	Forecast 2023	Budget 2023	Actual 2022
CAPITAL WASTEWATER CAPEX																		
Annual Projects																		
12001 - WLC-S-EQUIPMENT-MOBILE	65,000	-	-	-	-	-	-	-	-	-	-	-	-	-	65,000	-	-	-
12002 - WLC-S-EQUIPMENT- OTHER	50,000	-	-	-	-	-	-	-	-	-	-	-	-	-	50,000	178,903	50,000	174,812
12003 - UNC-S-SEWER CO ACQ - GENERAL	-	-	-	-	-	-	-	-	-	25,000	-	-	-	-	25,000	32,316	25,000	7,221
12006 - LTC-S-EQUIPMENT & CAPITAL IMPROVE	-	-	-	-	-	-	-	-	-	-	-	50,000	-	-	50,000	-	-	-
12007 - HHC-S-EQUIPMENT & CAPITAL IMPROVE	-	-	-	50,000	-	-	-	-	-	-	-	-	-	-	50,000	-	-	-
12008 - WWVC-S-EQUIPMENT & CAPITAL IMPROVE	-	-	-	-	-	25,000	-	-	-	-	-	-	-	-	25,000	-	-	-
12009 - AWC-S-EQUIPMENT & CAPITAL IMPROVE	-	-	-	-	-	-	-	-	-	-	-	-	-	25,000	25,000	-	-	-
12010 - LIC-S-EQUIPMENT & CAPITAL IMPROVE	-	-	-	-	-	-	-	-	-	-	-	-	-	25,000	-	-	-	-
12011 - SSC-S-EQUIPMENT & CAPITAL IMPROVE	-	-	-	-	-	-	-	50,000	-	-	-	-	-	-	50,000	-	-	-
20079 - WLC-S-SYSTEM PLANING	5,000	-	-	-	-	-	-	-	-	-	-	-	-	-	5,000	2,917	5,000	-
20081 - LIC-S-SYSTEM PLANNING	-	5,000	-	-	-	-	-	-	-	-	-	-	-	-	5,000	2,917	5,000	-
20086 - UMC-S-RES SVC CONN	-	-	-	-	5,000	-	-	-	-	-	-	-	-	-	5,000	-	5,000	-
20094 - WEC-S-RES SVC CONN	7,500	-	-	-	-	-	-	-	-	-	-	-	-	-	7,500	4,375	7,500	-
30305 - WLC-S-CAPITAL MANAGEMT	25,000	-	-	-	-	-	-	-	-	-	-	-	-	-	25,000	10,064	10,000	12,057
30666 - UNC-S-ASSET MGMT WW UPGRADE	-	-	-	-	-	-	-	-	-	100,000	-	-	-	-	100,000	14,583	25,000	45,600
30777 - NLC-S-GENERAL SEWER SYSTEM IMPROVE	25,000	-	-	-	-	-	-	-	-	-	-	-	-	-	25,000	116,667	200,000	-
Distribution Mains & Service Connections	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,049	-	-
SCADA UPGRADES	400,000	-	-	-	-	-	-	-	-	-	-	-	-	-	400,000	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	577,500	5,000	-	50,000	5,000	25,000	-	50,000	-	125,000	-	50,000	-	25,000	912,500	363,791	332,500	239,689
LCA Wastewater Treatment Plant																		
30367 - TPC-S-WTP IMPROVEMENTS	-	-	-	-	-	-	-	-	-	-	-	-	1,000,000	-	1,000,000	751,060	750,000	798,254
	-	-	-	-	-	-	-	-	-	-	-	-	1,000,000	-	1,000,000	751,060	750,000	798,254
Western Lehigh Interceptor System:																		
30301 - WLC-S-SPRING CREEK FM	150,000	-	-	-	-	-	-	-	-	-	-	-	-	-	150,000	59,214	100,000	-
30438 - WLC-S-WLI-WW CAPACITY PRG DEV	350,000	-	-	-	-	-	-	-	-	-	-	-	-	-	350,000	392,863	325,000	444,747
30443 - WLC-S-SIGNATORY I&I PROGRAM	1,150,000	-	-	-	-	-	-	-	-	-	-	-	-	-	1,150,000	1,177,139	1,700,000	85,036
30531 - WLC-S-SPRING CREEK PS IMPROVE	700,000	-	-	-	-	-	-	-	-	-	-	-	-	-	700,000	79,986	100,000	7,751
30662 - WLC-S-WLI TREXLRTN INTERCEPTOR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,392	-	127,123
30742 - WLC-S-WLI REHAB CYCLE 1	225,000	-	-	-	-	-	-	-	-	-	-	-	-	-	225,000	-	-	-
30806 - WLC-S-PTP MASTER PLAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	167,893	200,000	438,511
30815 - WLC-S-SPRING CRK FM RELOC-PTC	100,000	-	-	-	-	-	-	-	-	-	-	-	-	-	100,000	31,136	50,000	37,486
30816 - WLC-S-UPPER WL PS & FM	3,500,000	-	-	-	-	-	-	-	-	-	-	-	-	-	3,500,000	249,262	250,000	452,974
30821 - WLC-S-2022 WLSP NIGHT WEIRING	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	272,569
30840 - WLC-S-2023 WLSP LTC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,030	-	45,353
30850 - WLC-S-SPRING CK FM COND ASSES	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,112	-	586
	6,175,000	-	-	-	-	-	-	-	-	-	-	-	-	-	6,175,000	2,174,027	2,725,000	1,912,137
Satellite Systems																		
30347 - HHC-S-I&I REMOVAL PROJECT	-	-	-	100,000	-	-	-	-	-	-	-	-	-	-	100,000	210,927	350,000	249,630
30364 - WWVC-S-WYNNWOOD I AND I PROJECT	-	-	-	-	-	125,000	-	-	-	-	-	-	-	-	125,000	14,583	25,000	-
30607 - WWVC-S-WWTP IMPROVEMENTS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29,393	50,000	28,579
30608 - SSC-S-WWTP IMPROVEMENTS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16,141	-	59,882
30629 - LTC-S-LYNN TWP WTP CAPACITY EX	-	-	-	-	-	-	-	-	-	-	-	500,000	-	-	500,000	7,189	10,000	(3,115)
30656 - HHC-S-HH-WWTP-UPGRADES	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26,630	-	38,704
30661 - LTC-S-LT I/I STUDY & REPAIR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,224	-	31,910
30700 - UMC-S-CHESTNUT ST BRIDGE REPL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20,480
30782 - SSC-S-SAND SPRING WWTP TRE	-	-	-	-	-	-	-	100,000	-	-	-	-	-	-	100,000	20,334	-	5,348
30805 - AWC-S-WWTP MECH SCREEN	-	-	-	-	-	-	-	-	-	-	-	-	-	75,000	75,000	58,333	100,000	-
30805 - AWC-S-WWTP MECH SCREEN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36,509
Heidelberg Heights WWTP Rehabilitation	-	-	-	160,000	-	-	-	-	-	-	-	-	-	-	160,000	145,833	-	-
Lynn Township I & I Investigation & Remediation Program	-	-	-	-	-	-	-	-	-	-	-	50,000	-	-	50,000	29,167	50,000	-
North Whitehall Township Act 537 Sewage Facilities Planning	-	-	-	-	70,000	-	-	-	-	-	-	-	-	-	70,000	-	-	-
Plan Review & Inspection, Development & Svc Connections	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20,615	-	42,932
SSes (Weisenberg, UMIT, Lowhill)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	116,667	200,000	-
	-	-	-	260,000	70,000	125,000	-	100,000	-	-	-	550,000	-	75,000	1,180,000	700,037	785,000	510,860
Little Lehigh Relief Interceptor System:																		
30314 - Park Pump Station Rehabilitation/Improvements	-	1,800,000	-	-	-	-	-	-	-	-	-	-	-	-	1,800,000	1,529,440	1,500,000	210,698
30494 - LIC-S-PARK PS SCADA - GEN FUEL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,828
	-	1,800,000	-	-	-	-	-	-	-	-	-	-	-	-	1,800,000	1,529,440	1,500,000	212,526
Administrative Projects																		
11001 UNC-W-COMPUTER SYS IMPROV	12,500	-	-	-	-	-	-	-	-	-	-	-	-	-	12,500	-	-	-
11003 UNC-W-GIS CONV/UPDATES	8,750	-	-	-	-	-	-	-	-	-	-	-	-	-	8,750	-	-	-
11008 UNC-W-DOCUMENT MANAGEMENT SYS	12,500	-	-	-	-	-	-	-	-	-	-	-	-	-	12,500	-	-	-
11009 UNC-W-INFO TECH M-PLAN UPDATE	12,500	-	-	-	-	-	-	-	-	-	-	-	-	-	12,500	-	-	-
11018 UNC-W-CMMS UPGRADE & EXPAN	46,250	-	-	-	-	-	-	-	-	-	-	-	-	-	46,250	-	-	-
11027 UNC-W-DISASTER RECOVERY/SECURITY	18,750	-	-	-	-	-	-	-	-	-	-	-	-	-	18,750	-	-	-
11033 UNC-W-MUNIS ERP RE-IMPLEMENT	200,000	-	-	-	-	-	-	-	-	-	-	-	-	-	200,000	-	941,000	-
11034 UNC-W-TWO STORY BUILDING EXPANSION	137,500	-	-	-	-	-	-	-	-	-	-	-	-	-	137,500	-	-	-
	448,750	-	-	-	-	-	-	-	-	-	-	-	-	-	448,750	-	941,000	-
Total Suburban Wastewater Capex	7,201,250	1,805,000	-	310,000	75,000	150,000	-	150,000	-	125,000	-	600,000	1,000,000	100,000	11,516,250	5,518,355	7,033,500	3,673,467

LEHIGH COUNTY AUTHORITY
CAPITAL EXPENDITURES - CITY - DIVISION FUND
2024 Budget (as of 10-09-23)

CITY WATER CAPEX:

Annual Projects

	Undesignated 400	Int Serv 490	WFP 491	DIST 492	WWTP 493	WWCOLL 494	LAB 495	Budget 2024	Forecast 2023	Budget 2023	Actual 2022
50001 - CAC-W-COA WATER CAPITAL MGMT	-	-	-	10,000	-	-	-	10,000	14,093	10,000	140,576
50006 - CAC-W-COA RES SVC CONN	-	-	-	-	-	-	-	-	36,649	5,000	288,667
50010 - CAC-W-NEW CUST MTR/ERT INSTALL	-	-	-	100,000	-	-	-	100,000	137,251	75,000	166,711
50011 - CAC-W-COA EQUIPMENT-OTHER	-	-	-	470,000	-	-	-	470,000	315,451	200,000	163,911
50013 - CAC-W-WFP-GENERAL IMPROVEMENTS	-	-	-	1,075,000	-	-	-	1,075,000	249,108	250,000	196,282
50014 - CAC-W-STEEL RESERVOIR REHAB CO	-	-	-	250,000	-	-	-	250,000	306,206	300,000	425,178
50115- CAC-W-WFP-MASTER PLAN	-	-	-	-	-	-	-	-	-	-	-
50102 - CAC-W-GEN WATER SYSTEM IMPROVE	-	-	-	630,000	-	-	-	630,000	246,667	370,000	-
50109 - CAC-W-EQUIPMENT-MOBILE	-	-	-	180,000	-	-	-	180,000	10,342	-	113,624
50153- CAC-W-BACKFLOW & METER REVIEW	-	-	-	-	-	-	-	-	-	-	144
50238 - CAC-W-SR145 BRIDGE PROJECT-WAT	-	-	-	-	-	-	-	-	271	-	8,684
50521 - CAC-W-EAST SIDE 36 TRANS MAIN	-	-	-	-	-	-	-	-	-	-	22,666
50522 - CAC-W-LEHIGH & MLK 36 REPAIR	-	-	-	-	-	-	-	-	-	-	60,589
50524 - CAC-W-LEAK SURVEY EAST SIDE TRANS	-	-	-	-	-	-	-	-	-	-	111,807
50532 - CAC-W-EMMAUS INTERCONNECTION	-	-	-	-	-	-	-	-	540	-	12,064
50550 - CAC-W-MOSSER & LEH LEAK REPAIR	-	-	-	-	-	-	-	-	111,231	75,000	144,555
50558 - CAC-W-WFP EMER POWER STUDY	-	-	-	-	-	-	-	-	4,096	-	-
50559 - CAC-W-LRG METER CH REPL	-	-	-	-	-	-	-	-	111,813	-	-
Misc Concrete Repair	-	-	-	-	-	-	-	-	6,667	10,000	-

Non-CCRC Projects

50128 - CAC-W-D&C-CAP-REPLACEMENTS	-	-	-	2,715,000	-	-	-	2,735,000	1,550,384	1,295,000	1,855,459
50332 - CAC-W-HUCK RIDGE MAIN BREAK	-	-	-	-	-	-	-	-	149,070	-	135,703
50359 - CAC-W-WFP INDENTURE UPGRADES	-	-	200,000	-	-	-	-	-	-	-	965
50395 - CAC-W-DEVONSHIRE MAIN BREAK	-	-	-	-	-	-	-	200,000	117,545	200,000	35,179
50464 - CAC-W-AD LARGE DIA VALVE REPLC	-	-	350,000	-	-	-	-	350,000	252,662	250,000	8,150
50465 - CAC-W-AD TANK RESERVOIR REHAB	-	-	200,000	-	-	-	-	200,000	321,508	300,000	304,520
Various Water System Related Studies	-	-	-	-	-	-	-	-	6,667	10,000	-
WFP Redundant Power Supply	-	-	80,000	-	-	-	-	80,000	-	-	-

Large Projects & CCRC Projects

50023 - CAC-W-AMR METER REPLACE PROJ	-	-	800,000	-	-	-	-	800,000	350,000	525,000	-
50235 - CAC-W-WFP HS PUMPS AND VFDS	-	-	-	-	-	-	-	-	90,979	-	1,116,189
50365 - CAC-W-WFP FILTER EVALUATIONS	-	-	2,350,000	-	-	-	-	2,350,000	394,483	500,000	97,673
50455 - CAC-W-CYCLE 6 -WTR MAIN REPLACEMENT	-	-	-	4,800,000	-	-	-	4,800,000	3,136,427	3,200,000	3,323,499
Big Lehigh Intake & Transmission Upgrades	-	-	200,000	-	-	-	-	200,000	-	-	-
Lead Service Line Replacement Program	-	-	5,000,000	-	-	-	-	5,000,000	-	-	-
PFAS Compliance Planning and Upgrades	-	-	250,000	-	-	-	-	250,000	-	-	-

City Funded Projects

Itron/AMR Meter Project (1)	-	-	-	-	-	-	-	-	-	-	-
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Administrative Projects

11001 UNC-W-COMPUTER SYS IMPROV	25,000	-	-	-	-	-	-	25,000	-	-	-
11003 UNC-W-GIS CONV/UPDATES	17,500	-	-	-	-	-	-	17,500	-	-	-
11008 UNC-W-DOCUMENT MANAGEMENT SYS	25,000	-	-	-	-	-	-	25,000	-	-	-
11009 UNC-W-INFO TECH M-PLAN UPDATE	25,000	-	-	-	-	-	-	25,000	-	-	-
11018 UNC-W-CMMS UPGRADE & EXPAN	92,500	-	-	-	-	-	-	92,500	-	-	-
11027 UNC-W-DISASTER RECOVERY/SECURITY	37,500	-	-	-	-	-	-	37,500	-	-	-
11033 UNC-W-MUNIS ERP RE-IMPLEMENT	400,000	-	-	-	-	-	-	400,000	-	-	-
11034 UNC-W-TWO STORY BUILDING EXPANSION	275,000	-	-	-	-	-	-	275,000	-	-	-
	897,500	-	-	-	-	-	-	897,500	-	-	-

Total City Water Capex

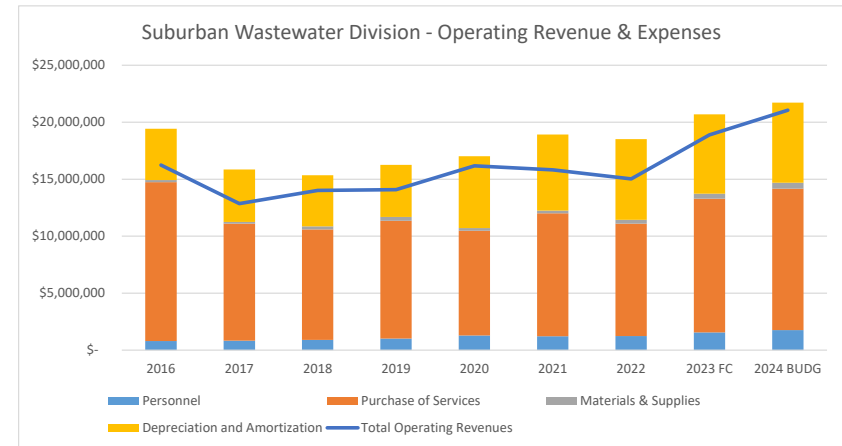
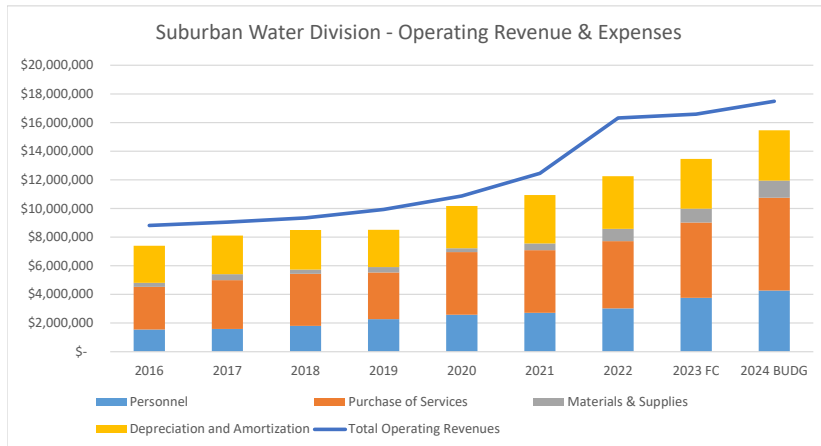
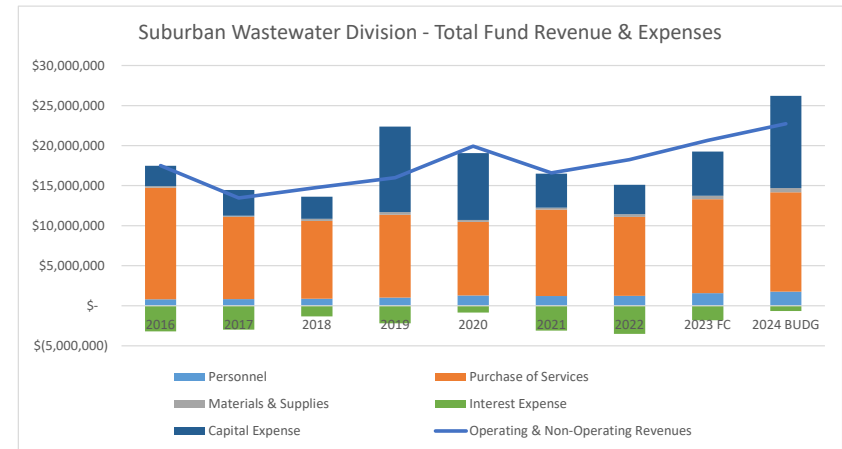
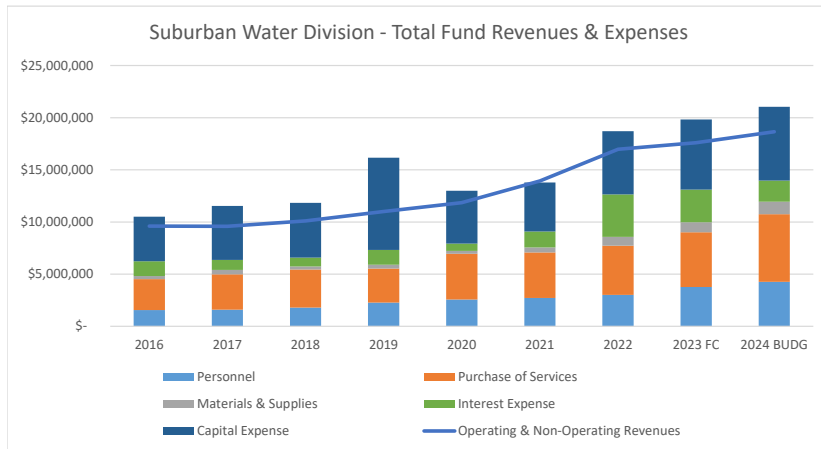
	897,500	-	9,430,000	7,515,000	-	-	-	17,862,500	6,369,724	6,280,000	6,923,778
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LEHIGH COUNTY AUTHORITY
CAPITAL EXPENDITURES - CITY - DIVISION FUND
2024 Budget (as of 10-09-23)

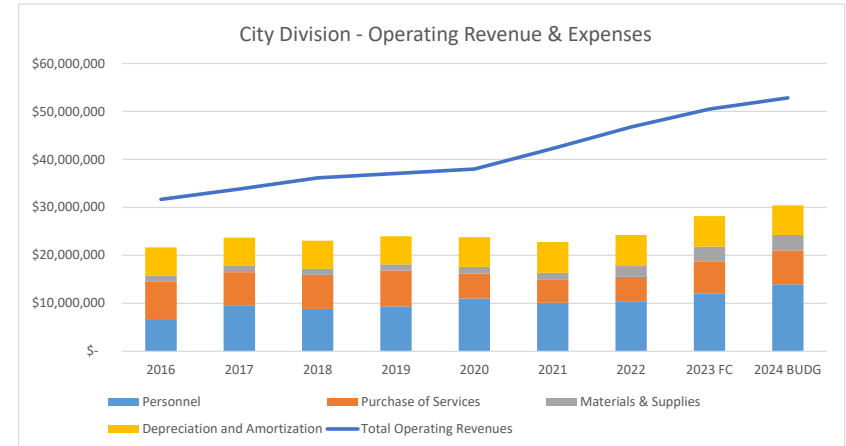
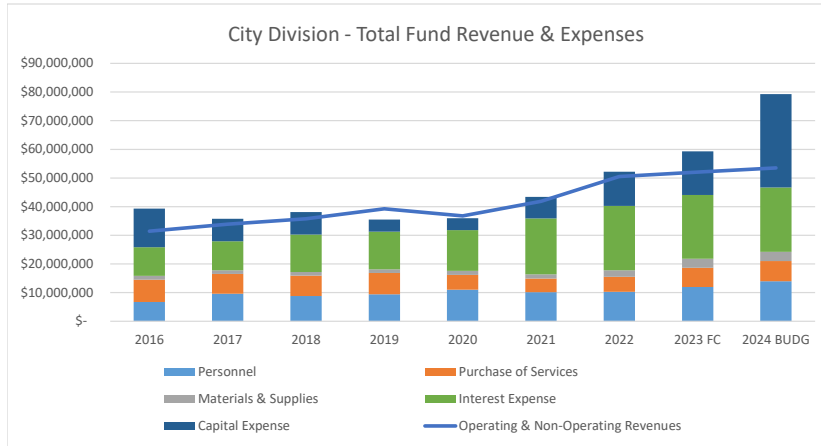
	City Division - Systems							Total			
	Undesignated	Int Serv	WFP	DIST	WWTP	WWCOLL	LAB	Budget	Forecast	Budget	Actual
	400	490	491	492	493	494	495	2024	2023	2023	2022
CITY WASTEWATER CAPEX:											
Annual Projects											
50024 - CAC-S-SWR CAPITAL MANAGEMENT	-	-	-	-	18,000	2,000	-	20,000	8,348	10,000	8,322
50032 - CAC-S-EQUIPMENT - OTHER	-	-	-	-	350,000	-	-	350,000	345,525	350,000	426,790
50033 - CAC-S-WWTP-GENERAL IMPROVEMENT	-	-	-	-	900,000	-	-	900,000	936,987	900,000	525,939
50034 - CAC-S-SEWER MAIN REPLACEMENTS	-	-	-	-	-	170,000	-	170,000	82,516	150,000	31,700
50043 - CAC-S-WWTP-SECURITY SYS UPGRAD	-	-	-	-	-	-	-	-	669	-	-
50059 - CAC-S-EQUIPMENT-MOBILE	-	-	-	-	821,000	-	-	821,000	102,040	319,000	725,617
50100 - CAC-W-WFP SCADA UPGRADES	-	-	-	-	225,000	-	-	225,000	-	-	-
50142 - CAC-S-VARIOUS WW SYST STUDIES	-	-	-	-	150,000	-	-	150,000	-	-	206
50236 - CAC-S-SR145 BRIDGE PROJECT-SEW	-	-	-	-	-	-	-	-	108	-	13,361
50268 - CAC-S-WWTP SODIUM HYPO	-	-	-	-	-	-	-	-	-	-	113,456
50302 - CAC-S-WWTP THICKENER TANK 3	-	-	-	-	-	-	-	-	36,128	-	501,532
50474 - CAC-S-WWTP DECHLOR SYSTEM	-	-	-	-	-	-	-	-	221,863	-	465,296
50510 - CAC-S-WWTP DIGESTER CLEANING	-	-	-	-	-	-	-	-	44,144	-	43,855
50511 - CAC-S-2022 COA NIGHT WEIRING	-	-	-	-	-	-	-	-	-	-	194,952
50523 - CAC-S-WWTP CAPACITY UPGRADES	-	-	-	-	-	-	-	-	332	-	1,373
50525 - CAC-S-537 CAPACITY PROBLEM	-	-	-	-	-	-	-	-	-	-	180,642
50542 - CAC-S-537 CITY SRP PROJECTS	-	-	-	-	-	-	-	-	7,370	-	599
50543 - CAC-S-537 CITY INTERCEPTORS	-	-	-	-	-	-	-	-	35,109	-	599
Collection System - Development & Service Connection	-	-	-	-	-	-	-	-	22,671	-	69,168
PennDOT relocations	-	-	-	-	-	70,000	-	70,000	-	-	-
	-	-	-	-	2,464,000	242,000	-	2,706,000	1,843,810	1,729,000	3,303,408
Non-CCRC Projects											
50176 - CAC-S-KIWWTP MASTER PLAN	-	-	-	-	160,000	-	-	160,000	-	-	218
50347 - CAC-S-KIWWTP DIGESTER STUDY	-	-	-	-	-	-	-	-	676	-	1,416
50383 - CAC-S-KIWWTP INDENTURE UPGRADE	-	-	-	-	300,000	-	-	300,000	278,627	300,000	397,819
50541 - CAC-S-537 CITY MH INSPECTIONS	-	-	-	-	-	2,000,000	-	2,000,000	218,685	300,000	3,886
	-	-	-	-	460,000	2,000,000	-	2,460,000	497,988	600,000	403,339
Major Capital Improvements											
50154 - CAC-S-WWTP-ELEC SUBSTATIONS	-	-	-	-	2,200,000	-	-	2,200,000	216,599	200,000	39,337
50169 - CAC-S-WWTP CLARIFIER MECH IMP	-	-	-	-	900,000	-	-	900,000	-	-	-
50286 - CAC-S-18I SOURCE REDUCTION	-	-	-	-	-	3,000,000	-	3,000,000	845,614	800,000	851,815
50303 - CAC-S-WWTP BOILER REPLACE	-	-	-	-	1,400,000	-	-	1,400,000	2,078,974	2,800,000	187,323
50462 - CAC-S-WWTP MAIN & AUX PS IMP	-	-	-	-	400,000	-	-	400,000	74,811	100,000	97,103
50463 - CAC-S-WWTP ISP PS & 480V MCC	-	-	-	-	200,000	-	-	200,000	59,232	100,000	41,590
50581 - CAC-S-WWTP PRIMARY SLUDGE LINES	-	-	-	-	600,000	-	-	600,000	-	-	-
WWTP Wet Weather Capacity Enhancement Project - Tertiary By	-	-	-	-	100,000	-	-	100,000	-	-	-
	-	-	-	-	5,800,000	3,000,000	-	8,800,000	3,275,229	4,000,000	1,217,168
Regional Act 537 Projects											
50295 - CAC-S-KIWWTP MAX MONTH STUDY	-	-	-	-	-	-	-	-	-	-	113
50329 - CAC-S-KIWWTP PEAK FLOW STUDY	-	-	-	-	-	-	-	-	-	-	113
50331 - CAC-S-2020 SBM DATA CAPTURE	-	-	-	-	-	-	-	-	-	-	1,462
50366 - CAC-S-2021 FCS METERING	-	-	-	-	600,000	-	-	600,000	143,920	700,000	1,950
50374 - CAC-S-2021 FCS METERING QA/QC	-	-	-	-	-	-	-	-	-	-	1,990
50405 - CAC-S-2021 KISS MODEL EXPAN	-	-	-	-	-	-	-	-	-	-	560,686
50406 - CAC-S-2022 CITY RDII ANALYSIS	-	-	-	-	-	-	-	-	-	-	49,422
50425 - CAC-S-WET WEATHER BIOACTIFLO	-	-	-	-	-	-	-	-	21,619	-	5,299
50426 - CAC-S-WET WEATHER BLEND HYBRID	-	-	-	-	-	-	-	-	2,178	-	19,873
50466 - CAC-S-2022 SIG RDII ANALYSIS	-	-	-	-	-	-	-	-	-	-	71,030
50516 - CAC-S-KIWWTP FINAL ACT 537	-	-	-	-	-	-	-	-	5,800	-	12,140
50539- CAC-S-KISS ACT 537 PSOA	-	-	-	-	-	-	-	-	152,433	-	130,428
50543 - CAC-S-537 CITY INTERCEPTORS	-	-	-	-	-	-	-	-	466,667	700,000	-
50551 - CAC-S-KISS ACT 537 SECTION 7	-	-	-	-	-	-	-	-	37,537	-	3,322
537 Financial & Legal Review (3)	-	-	-	-	-	-	-	-	200,000	300,000	-
Miscellaneous Act 537 Planning (3)	-	-	-	-	200,000	-	-	200,000	166,667	250,000	-
	-	-	-	-	800,000	-	-	800,000	1,196,820	1,950,000	857,827
	-	-	-	-	9,524,000	5,242,000	-	14,766,000	8,816,026	8,911,000	5,781,742
Total City WasteWater Capex											
	-	-	-	-	9,524,000	5,242,000	-	14,766,000	8,816,026	8,911,000	5,781,742
TOTAL CITY CAPEX	897,500	-	9,430,000	7,515,000	9,524,000	5,242,000	-	32,628,500	15,185,750	15,191,000	12,705,520

Supplemental Information

LEHIGH COUNTY AUTHORITY
Revenue And Expense Trend Analysis
2024 Budget (Draft 10-09-23)



LEHIGH COUNTY AUTHORITY
Revenue And Expense Trend Analysis
2024 Budget (Draft 10-09-23)



LEHIGH COUNTY AUTHORITY
KEY METRICS
2024 Budget (as of 10-09-23)

	Suburban Water				Suburban Wastewater				City Division				Total LCA			
	Budget	Forecast	Budget	Actual	Budget	Forecast	Budget	Actual	Budget	Forecast	Budget	Actual	Budget	Forecast	Budget	Actual
	2024	2023	2023	2022	2024	2023	2023	2022	2024	2023	2023	2022	2024	2023	2023	2022
Condensed Cash Flows																
Operating Revenues	18,613,874	17,450,661	17,000,000	17,144,282	20,827,254	19,824,151	22,700,413	18,342,406	67,988,798	55,177,175	54,846,760	55,306,878	107,429,926	92,451,987	94,547,173	90,793,566
Operating Expenses (ex. D&A)	(12,040,243)	(10,022,881)	(10,742,262)	(8,735,586)	(15,238,763)	(13,752,764)	(14,260,307)	(11,516,992)	(25,563,784)	(23,165,630)	(23,182,225)	(24,767,070)	(52,842,790)	(46,941,275)	(48,184,794)	(45,019,648)
Non-Operating Revenues (Expenses)	130,453	185,081	64,782	(8,639)	(3,776)	231,646	85,128	(3,778)	984,881	1,052,599	128,661	914,681	1,111,558	1,469,325	278,572	902,264
Net Available for Debt Service	6,704,084	7,612,860	6,322,520	8,400,057	5,584,715	6,303,033	8,525,235	6,821,636	43,409,895	33,064,144	31,793,196	31,454,489	55,698,694	46,980,037	46,640,951	46,676,182
Debt Service	(3,421,486)	(3,395,721)	(3,474,867)	(3,125,367)	(1,196,420)	(731,653)	(729,123)	(703,701)	(16,260,397)	(15,130,921)	(15,130,921)	(14,185,003)	(20,878,303)	(19,258,295)	(19,334,911)	(18,014,071)
Non-Cash Working Capital Changes	-	-	-	3,270,808	(200,001)	-	-	909,713	(136,000)	(800,000)	-	(1,754,751)	(336,001)	(800,000)	-	2,425,770
Net Available for Capex	3,282,598	4,217,139	2,847,653	8,545,498	4,188,294	5,571,380	7,796,112	7,027,648	27,013,498	17,133,223	16,662,275	15,514,735	34,484,390	26,921,742	27,306,040	31,087,881
Investing	-	-	-	-	-	1,782,174	-	(1,992,000)	-	-	-	-	-	1,782,174	-	(1,992,000)
Other Payments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Borrowing	5,230,000	6,950,000	3,950,000	-	7,175,000	-	-	-	8,555,508	1,400,000	1,200,000	-	20,960,508	8,350,000	5,150,000	-
Capex	(7,065,750)	(6,717,184)	(6,751,000)	(8,001,758)	(11,516,250)	(5,518,355)	(7,033,500)	(3,673,467)	(32,628,500)	(15,185,750)	(15,191,000)	(12,705,520)	(51,210,500)	(27,421,289)	(28,975,500)	(24,380,745)
Net Cash Flows	1,446,848	4,449,955	46,653	543,740	(152,956)	1,835,199	762,612	1,362,181	2,940,506	3,347,473	2,671,275	2,809,215	4,234,398	9,632,627	3,480,540	4,715,136
Debt Service Ratio (Indenture Based)																
Total Operating Revenues	17,485,300	16,590,215	16,287,500	16,317,932	19,128,454	18,280,608	21,822,513	15,021,652	55,555,506	50,634,280	50,680,860	46,757,245	92,169,260	85,505,102	88,790,873	78,096,829
Total Operating Expenses (Cash Based)	(12,040,243)	(10,022,881)	(10,742,262)	(8,735,586)	(15,238,763)	(13,752,764)	(14,260,307)	(11,516,992)	(24,255,560)	(21,804,450)	(21,951,625)	(23,523,546)	(51,534,566)	(45,580,095)	(46,954,194)	(43,776,124)
Interest Income	130,453	185,081	64,782	(8,639)	(3,776)	231,646	85,128	(3,778)	984,881	1,052,599	128,661	914,681	1,111,558	1,469,325	278,572	902,264
Annual Lease Payment (City)	-	-	-	-	-	-	-	-	(1,308,224)	(1,361,180)	(1,230,600)	(1,243,524)	(1,308,224)	(1,361,180)	(1,230,600)	(1,243,524)
Total Non-Operating Revenues (Expenses)	1,128,574	860,445	712,500	826,350	1,698,800	1,543,544	877,900	3,320,754	12,433,292	4,542,895	4,165,900	8,549,633	15,260,666	6,946,884	5,756,300	12,696,737
Cash Available For Debt Service	6,704,084	7,612,860	6,322,520	8,400,057	5,584,715	6,303,033	8,525,235	6,821,636	43,409,895	33,064,144	31,793,196	31,454,489	55,698,694	46,980,037	46,640,951	46,676,182
Interest and Fees Paid	1,167,163	1,161,335	1,130,484	847,133	185,934	155,495	153,143	185,935	16,260,397	15,130,921	15,130,921	14,185,003	17,613,494	16,447,751	16,414,548	15,218,071
Principal Paid	2,254,323	2,234,386	2,344,383	2,278,234	1,010,486	576,158	575,980	517,766	-	-	-	-	3,264,809	2,810,544	2,920,363	2,796,000
Total Debt Service	3,421,486	3,395,721	3,474,867	3,125,367	1,196,420	731,653	729,123	703,701	16,260,397	15,130,921	15,130,921	14,185,003	20,878,303	19,258,295	19,334,911	18,014,071
Debt Service Ratio	1.96	2.24	1.82	2.69	4.67	8.61	11.69	9.69	2.67	2.19	2.10	2.22	2.67	2.44	2.41	2.59
Capital Coverage Ratio																
Net Cash Available After Debt Service	2,154,024	3,356,693	2,135,153	7,719,148	2,489,494	4,027,836	6,918,212	3,706,894	13,180,206	11,359,728	11,265,775	5,721,578	17,823,724	18,744,257	20,319,140	17,147,620
Total Non-Operating Revenues	1,128,574	860,445	712,500	826,350	1,698,800	1,543,544	877,900	3,320,754	12,433,292	4,542,895	4,165,900	8,549,633	15,260,666	6,946,884	5,756,300	12,696,737
Net Cash Available For Capital	3,282,598	4,217,139	2,847,653	8,545,498	4,188,294	5,571,380	7,796,112	7,027,648	25,613,498	15,902,623	15,431,675	14,271,211	33,084,390	25,691,142	26,075,440	29,844,357
Net Capital Spending	7,065,750	6,717,184	6,751,000	8,001,758	11,516,250	5,518,355	7,033,500	3,673,467	32,628,500	15,185,750	15,191,000	12,705,520	51,210,500	27,421,289	28,975,500	24,380,745
Expensed Capex	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital Spending	7,065,750	6,717,184	6,751,000	8,001,758	11,516,250	5,518,355	7,033,500	3,673,467	32,628,500	15,185,750	15,191,000	12,705,520	51,210,500	27,421,289	28,975,500	24,380,745
Capital Coverage Ratio	0.46	0.63	0.42	1.07	0.36	1.01	1.11	1.91	0.79	1.05	1.02	1.12	0.65	0.94	0.90	1.22

LEHIGH COUNTY AUTHORITY
SUMMARY OF LONG TERM DEBT
2024 Budget

	Long Term Debt for 2023									Long Term Debt for 2024								
	December 31, 2022						December 31, 2023			December 31, 2023						December 31, 2024		
	Short Term Portion	Long Term Potion	Total Debt	Additions Accretions	Retirements		Short Term Portion	Long Term Potion	Total Debt	Short Term Portion	Long Term Potion	Total Debt	Additions Accretions	Retirements		Short Term Portion	Long Term Potion	Total Debt
Suburban Water Fund																		
Bonds																		
Water Revenue Bonds Series of 2017	350,000	13,560,000	13,910,000	-	(350,000)		360,000	13,200,000	13,560,000	360,000	13,200,000	13,560,000	-	(360,000)		380,000	12,820,000	13,200,000
Water Revenue Bonds Series of 2021	1,585,000	14,415,000	16,000,000	-	(1,585,000)		1,645,000	12,770,000	14,415,000	1,645,000	12,770,000	14,415,000	-	(1,645,000)		1,710,000	11,060,000	12,770,000
Subtotal	1,935,000	27,975,000	29,910,000	-	(1,935,000)		2,005,000	25,970,000	27,975,000	2,005,000	25,970,000	27,975,000	-	(2,005,000)		2,090,000	23,880,000	25,970,000
Bond Premium / Discount	-	3,148,039	3,148,039	-	(345,761)		-	2,802,278	2,802,278	-	2,802,278	2,802,278	-	(345,761)		-	2,456,517	2,456,517
Total Suburban Water Fund Bonds	1,935,000	31,123,039	33,058,039	-	(2,280,761)		2,005,000	28,772,278	30,777,278	2,005,000	28,772,278	30,777,278	-	(2,350,761)		2,090,000	26,336,517	28,426,517
Notes From Direct Borrowings																		
2011 Pennsylvania Infrastructure Investment Authority Note	75,541	711,953	787,494	-	(75,541)		76,689	635,264	711,953	76,689	635,264	711,953	-	(76,689)		77,856	557,408	635,264
Water Revenue Bonds Series of 2022	-	63,629	63,629	-	-		-	63,629	63,629	-	63,629	63,629	-	-		80,241	(16,612)	63,629
Total Suburban Water Fund Direct Borrowings	75,541	775,582	851,123	-	(75,541)		76,689	698,893	775,582	76,689	698,893	775,582	-	(76,689)		158,097	540,796	698,893
Net Suburban Water Fund Long-Term Debt	2,010,541	31,898,621	33,909,162	-	(2,356,302)		2,081,689	29,471,171	31,552,860	2,081,689	29,471,171	31,552,860	-	(2,427,450)		2,248,097	26,877,313	29,125,410
Suburban Wastewater Fund																		
Bonds																		
2011 Sewer Revenue Bonds Series A	122,965	1,010,826	1,133,791	-	(122,965)		127,003	883,823	1,010,826	127,003	883,823	1,010,826	-	(127,003)		131,560	752,263	883,823
Subtotal	122,965	1,010,826	1,133,791	-	(122,965)		127,003	883,823	1,010,826	127,003	883,823	1,010,826	-	(127,003)		131,560	752,263	883,823
Total Suburban WasteWater Fund Bonds	122,965	1,010,826	1,133,791	-	(122,965)		127,003	883,823	1,010,826	127,003	883,823	1,010,826	-	(127,003)		131,560	752,263	883,823
Notes From Direct Borrowings																		
2009 Pennsylvania Infrastructure Investment Authority Note	273,567	2,150,460	2,424,027	-	(273,567)		280,617	1,869,843	2,150,460	280,617	1,869,843	2,150,460	-	(280,617)		287,848	1,581,995	1,869,843
2013 Pennsylvania Infrastructure Investment Authority Note	142,238	1,602,608	1,744,846	-	(142,238)		144,400	1,458,208	1,602,608	144,400	1,458,208	1,602,608	-	(144,400)		146,596	1,311,612	1,458,208
2015 Pennsylvania Infrastructure Investment Authority Note	37,571	517,512	555,083	-	(37,571)		38,231	479,281	517,512	38,231	479,281	517,512	-	(38,231)		38,903	440,378	479,281
Total Suburban WasteWater Fund Direct Borrowings	453,376	4,270,580	4,723,956	-	(453,376)		463,248	3,807,332	4,270,580	463,248	3,807,332	4,270,580	-	(463,248)		473,347	3,333,985	3,807,332
Net Suburban Wastewater Fund Long-Term Debt	576,341	5,281,406	5,857,747	-	(576,341)		590,251	4,691,155	5,281,406	590,251	4,691,155	5,281,406	-	(590,251)		604,907	4,086,248	4,691,155
City Division Fund																		
Bonds																		
2013 Water and Sewer Revenue Bonds, Series A	-	107,615,000	107,615,000	-	-		-	107,615,000	107,615,000	-	107,615,000	107,615,000	-	-		-	107,615,000	107,615,000
2013 Water and Sewer Capital Appreciation Revenue Bonds, Series 2013	2,196,583	66,474,980	68,671,563	4,053,453	(2,196,583)		2,670,628	67,857,805	70,528,433	2,670,628	67,857,805	70,528,433	4,177,460	(2,945,000)		3,000,505	68,760,388	71,760,894
2020 Water and Sewer Revenue Bonds, Series 2020	-	161,035,000	161,035,000	-	-		-	161,035,000	161,035,000	-	161,035,000	161,035,000	-	-		-	161,035,000	161,035,000
Subtotal	2,196,583	335,124,980	337,321,563	4,053,453	(2,196,583)		2,670,628	336,507,805	339,178,433	2,670,628	336,507,805	339,178,433	4,177,460	(2,945,000)		3,000,505	337,410,388	340,410,894
Bond Premium / Discount	-	(4,134,698)	(4,134,698)	-	165,941		-	(3,968,757)	(3,968,757)	-	(3,968,757)	(3,968,757)	-	165,941		-	(3,802,816)	(3,802,816)
Total City Division Fund Bonds	2,196,583	330,990,282	333,186,865	4,053,453	(2,030,642)		2,670,628	332,539,048	335,209,676	2,670,628	332,539,048	335,209,676	4,177,460	(2,779,059)		3,000,505	333,607,572	336,608,078
Notes From Direct Borrowings																		
2020 Water and Sewer Revenue Bonds (Federally Taxable) Series 2020	1,245,000	13,395,000	14,640,000	-	(1,245,000)		1,280,000	12,115,000	13,395,000	1,280,000	12,115,000	13,395,000	-	(1,280,000)		1,320,000	10,795,000	12,115,000
Total Suburban City Division Fund Direct Borrowings	1,245,000	13,395,000	14,640,000	-	(1,245,000)		1,280,000	12,115,000	13,395,000	1,280,000	12,115,000	13,395,000	-	(1,280,000)		1,320,000	10,795,000	12,115,000
Net City Division Fund Long-Term Debt	3,441,583	344,385,282	347,826,865	4,053,453	(3,275,642)		3,950,628	344,654,048	348,604,676	3,950,628	344,654,048	348,604,676	4,177,460	(4,059,059)		4,320,505	344,402,572	348,723,078
Total Net Long-Term Debt	6,028,465	381,565,309	387,593,774	4,053,453	(6,208,285)		6,622,568	378,816,374	385,438,942	6,622,568	378,816,374	385,438,942	4,177,460	(7,076,760)		7,173,509	375,366,133	382,539,642

LEHIGH COUNTY AUTHORITY
SCHEDULE OF PRINCIPAL MATURITY AND DEBT SERVICE
2024 Budget

	Suburban Water					Suburban Wastewater					City Division					Total LCA				
	Bonds		Direct Borrowings		Total Debt Service	Bonds		Direct Borrowings		Total Debt Service	Bonds		Direct Borrowings		Total Debt Service	Bonds		Direct Borrowings		Total Debt Service
	Principle Amount	Total Interest	Principle Amount	Total Interest		Principle Amount	Total Interest	Principle Amount	Total Interest		Principle Amount	Total Interest	Principle Amount	Total Interest		Principle Amount	Total Interest	Principle Amount	Total Interest	
2023	1,935,000	1,119,114	75,541	13,941	3,143,596	122,965	59,840	453,374	93,303	729,482	2,300,810	11,160,551	1,245,000	424,560	15,130,921	4,358,775	12,339,505	1,773,915	531,804	19,003,999
2024 - Budget	2,005,000	1,045,214	76,689	12,792	3,139,695	127,003	52,987	463,248	83,431	726,669	2,670,628	11,325,733	1,280,000	388,456	15,664,817	4,802,631	12,423,934	1,819,937	484,679	19,531,181
2025	2,090,000	961,414	77,856	11,626	3,140,896	131,560	45,888	473,347	73,332	724,127	3,000,505	11,545,856	1,320,000	351,336	16,217,697	5,222,065	12,553,158	1,871,203	436,294	20,082,720
2026	1,890,000	874,014	79,039	10,442	2,853,495	136,280	38,534	483,677	63,002	721,493	3,292,378	11,823,983	1,130,000	539,750	16,786,111	5,318,658	12,736,531	1,692,716	613,194	20,361,099
2027	2,200,000	794,414	80,241	9,241	3,083,896	141,169	30,916	494,243	52,434	718,762	3,550,688	12,155,673	1,185,000	483,250	17,374,611	5,891,857	12,981,003	1,759,484	544,925	21,177,269
2028-2032	10,125,000	2,611,020	461,757	18,181	13,215,958	474,814	44,495	1,986,734	110,049	2,616,092	20,564,138	67,567,668	6,885,000	1,465,000	96,481,806	31,163,952	70,223,183	9,333,491	1,593,230	112,313,856
2033-2037	2,710,000	1,438,492	-	-	4,148,492	-	-	369,333	6,717	376,050	26,878,823	88,042,983	1,595,000	79,750	116,596,556	29,588,823	89,481,475	1,964,333	86,467	121,121,098
2038-2042	3,185,000	965,924	-	-	4,150,924	-	-	-	-	-	53,293,592	61,784,964	-	-	115,078,556	56,478,592	62,750,888	-	-	119,229,480
2043-2047	3,770,000	390,149	-	-	4,160,149	-	-	-	-	-	60,735,000	37,207,056	-	-	97,942,056	64,505,000	37,597,205	-	-	102,102,205
2048-2052	-	-	-	-	-	-	-	-	-	-	59,235,000	24,329,231	-	-	83,564,231	59,235,000	24,329,231	-	-	83,564,231
20453-2057	-	-	-	-	-	-	-	-	-	-	70,115,000	13,446,290	-	-	83,561,290	70,115,000	13,446,290	-	-	83,561,290
20458-2059	-	-	-	-	-	-	-	-	-	-	31,685,000	1,736,459	-	-	33,421,459	31,685,000	1,736,459	-	-	33,421,459
TOTAL PRINCIPAL MATURITY AND DEBT SERVICE	29,910,000	10,199,755	851,123	76,223	41,037,101	1,133,791	272,660	4,723,956	482,268	6,612,675	337,321,563	352,126,447	14,640,000	3,732,102	707,820,112	368,365,354	362,598,862	20,215,079	4,290,593	755,469,888

Lehigh County Authority
2024 Budget
Definitions and Explanations of Accounts

OPERATING REVENUES:

Large Industrial – This classification includes water revenue from utility billing customers classified as Large Industrial.

Other Industrial/Commercial – This classification includes water revenue from utility billing customers classified as Other Industrial and Commercial.

Residential – This classification includes water revenue from utility billing customers classified as Residential. The category includes apartments, mobile homes, single family attached and single-family detached dwellings.

Penalties – Late fees assessed to past due accounts.

Private Fire Service – This classification includes charges for private fire protection for those industrial/commercial customers who have either a sprinkler system or private fire hydrants

Public Fire Service – This classification includes charges for public fire hydrants billed to municipalities in our service area.

User Charges – Municipal - The City is party to Municipal Sewer Service Agreements under which the Sewer Utility System provides sewer services to seven municipalities or municipal authorities: the Borough of Emmaus, Hanover Township, Salisbury Township, South Whitehall Township, Coplay-Whitehall Authority, Existing LCA System, and Lower Macungie Township. Pursuant to these agreements, LCA will act as the agent of the City and will perform all of the contractual obligations of the City under each Municipal Agreement, including the billing and collection of the revenues.

The Suburban division provides sewer service to Lower Macungie Township, Upper Macungie Township, Borough of Emmaus, Borough of Alburtis, and Borough of Macungie through the Western Lehigh Interceptor. Through the Little Lehigh Relief Interceptor, sewer service is provided to Lower Macungie, Upper Macungie, Salisbury and South Whitehall Townships and the Boroughs of Alburtis and Macungie.

User Charges - Residential & Commercial – This classification includes revenue from sewer service to residential and commercial customers in the Suburban and City Division.

User Charges – Hauler – This classification includes revenues from haulers based on strength and volume of waste brought to the wastewater treatment plants.

Hauler Fees – This classification includes revenue from annual permit fees.

Industrial Charges – This classification includes revenue from industrial strength surcharges to the Suburban Division Pretreatment Plant.

Industrial Pretreatment Revenues - This classification includes charges for the operation of the EPA approved Pretreatment Program, as described in 40 CFR 403.

Wastewater Analysis Reimbursement – This classification includes reimbursements for lab testing costs.

Leachate Program Revenues - This classification includes charges for the processing and treatment of hauled leachate to the Allentown WWTP.

Lehigh County Authority

2024 Budget

Definitions and Explanations of Accounts

Other Income – This classification includes reimbursement of Lehigh County Authority expenses by other entities.

Other Water Sales – This classification includes revenues from water sold to Municipal Signatories and for bulk water drawn from hydrants.

Provision for Doubtful Debts - The provision for doubtful debts is the estimated amount of bad debt that will arise from accounts receivable that have been issued but not yet collected.

Rental Income – This classification includes the annual reimbursement from the various funds for a portion of the Authority Operations Center costs and expansion.

Miscellaneous – This classification includes revenue from other miscellaneous categories not part of other revenue classifications.

CONNECTION & SYSTEM CHARGES:

Supply/Tapping Fees – This classification includes charges to new customers which are based on connection size. These revenues offset costs related to construction of storage and supply facilities.

Capital Cost Recovery – This classification includes the portion of major capital project costs being reimbursed by customers.

Distribution Tapping Fees – This classification includes charges to new customers which are based on connection size. These revenues offset costs related to construction of transmission and distribution facilities. These charges are generally not applicable to customers connecting within a developer-installed distribution system.

Meter Sales – This classification includes charges to new customers for initial meter and backflow prevention device costs and installation.

Inspection & Review Fees – This classification includes the deposits made by developers for LCA construction inspection and plan review costs.

Developer Reimbursement - This classification includes the reimbursement from developers for LCA inspection and plan review costs.

NON-OPERATING REVENUES:

Other Non-Operating Income - This classification includes revenue from other non-operating miscellaneous categories not part of other revenue classifications.

OPERATING EXPENSES:

Personnel:

Salaries and Wages - Salary is a consistent payment to an employee based on working a full-time position. Wages are hourly or daily payments for work done during the working day.

Overtime - Overtime refers to any hours worked by an employee that exceed their normally scheduled working hours.

Taxes – Comprised of Employer portion of FICA, Social Security and Medicare contributions.

Lehigh County Authority
2024 Budget
Definitions and Explanations of Accounts

Fringe Benefits - Comprised of medical coverage, defined benefit pension, long-term and short-term disability, flexible spending and unemployment insurance.

Purchase of Services:

Shared Services - General & Administrative - Overhead costs, which are not easily assignable to specific funds, are allocated based on a pro rate share of Salary and Wages and include the following types of expenses:

Postage - Represents cost to mail correspondence and customer billings.

Computer Services - Nominal services for computer services.

Advertising - Includes costs for advertising bid and meeting notices.

Building & Equipment Maintenance - Represents Operations Center costs, such as site and building maintenance and equipment maintenance.

Dues & Subscriptions - Organization membership fees and contributions and periodical subscriptions.

Travel and Mileage - Includes reimbursement to employees at prevailing IRS rate for personal vehicle use for business purposes.

Education and Training - Budget includes specifically identified training for employees, whether through participation in seminars or classes.

Workers Compensation - Workplace injury coverage.

Property & Liability Insurance – Insurance premiums for all properties, with the exception of the Wastewater Treatment Plant in Upper Macungie which is charged directly to that fund.

Legal/Litigation - Represents costs associated with labor relations, part-time Solicitor and other global legal issues.

Miscellaneous - Comprised of banking costs, printing services, contributions, employee activities and other miscellaneous expenses.

Risk Management - Includes safety equipment, training and miscellaneous expenses.

Public Relations - Represents costs associated with reaching out to stakeholders with educational programs and a host of interactive agendas.

Human Resources - Comprised of human resource projects.

Special Studies - Includes costs for conducting a customer survey, compensation study, strategic planning, and process improvement.

Utilities - This account includes electric costs, natural gas service, telephone and garbage hauling.

Compliance - This budget includes permit fees and renewals for the water and wastewater treatment plants

Lehigh County Authority

2024 Budget

Definitions and Explanations of Accounts

Contract Operating Svcs - Budget includes such services as root control program, Farland Development Dump Site, system check support services and Trenchless spot repairs.

Engineering - This budget line item is for miscellaneous consultant assistance with reporting to the Pa DEP on RDII removal efforts and unanticipated situations at facilities requiring engineering services.

Exceptional Strength Analysis - This account provides for external laboratory analysis of samples containing higher strength concentrations.

Extraordinary Expenditures - This budget line maintains the same level of insurance against an extraordinary leak repair and restoration in all systems. It includes items such as well and booster pump replacements, piping re-configurations and other services utilized in various systems.

Fleet Management Services - This budget includes maintenance services for vehicles and mobile equipment

General Analyses - This account provides for external laboratory analysis of samples to support the biosolids disposal and the residuals disposal programs.

Industrial Meter Testing – This budget includes cost to test large commercial meters for accuracy.

Maintenance Services - This budget includes expenses required for site and building maintenance, transmission and distribution maintenance services, equipment maintenance and rental, janitorial services, and other miscellaneous maintenance services.

Miscellaneous Services - This budget includes property self-insured, Enterprise fleet program lease, traffic control, after hours dispatching service, communication center, PA One Call system, easement brush & tree cleaning, radio repairs, Trimble software maintenance, TV truck Win Can, railroad easement fees, miscellaneous services and miscellaneous shipping.

Rental - Allocation of expenses related to the Authority Operations Center renovations and expansion are being allocated over 30 years.

Residuals - This budget includes residuals disposal costs.

Water Purchases - This budget includes the purchase of water from the Northampton Borough Municipal Authority for customers in the North Whitehall Division, the purchase of water from the Borough of Slatington for customers in the Washington Township Division, the purchase of water from the Borough of Emmaus for the LCA Out-of-Borough customers in Lower Macungie, Salisbury and Upper Milford Townships and the purchase of water from the City Division for customers in the Central Lehigh Division.

System Planning / Capital Management – This budget includes allocation of certain capital management costs to the operating budgets.

Treatment and Transportation - Represents charges to the Upper Milford, Weisenberg Township, and Lowhill Collector Systems for flow and strength based on sample strength or normal strength levels for non-sampled customers. This category also includes costs associated with the Western Lehigh Interceptor, the Little Lehigh Interceptors and Emmaus transportation charges.

Lehigh County Authority
2024 Budget
Definitions and Explanations of Accounts

Materials & Supplies:

Purification Chemicals - The treatment plant chemical budget includes: LOX, sodium hypochlorite, chlorine, polymer, larvicide, potassium permanganate and other chemicals.

Purification Supplies - This budget includes reagent sets, injectors and repair parts, analyzer supplies, and miscellaneous parts and supplies.

Pump Supplies - This budget includes pump supplies, well supplies and reservoir supplies.

Misc. Materials & Supplies - This budget includes SCADA / TELOG supplies, uniform costs, lab supplies, and miscellaneous supplies.

Fuel & Mileage – This budget includes the cost of unleaded and diesel fuels.

Fleet Management Supplies - This budget provides for mobile equipment supplies and lubricating oils.

Equipment - Funding to replace / update equipment used to maintain the distribution and collection systems. This budget includes line locators/metal and leak detector equipment, Perma loggers, magnetic locators, curb/valve keys chemical pumps, valve replacement, sump pumps, prominent CI2 analyzers, well depth probes, VFD purchase, dehumidifiers, booster pumps, TELOG equipment, pipe saws, trash pumps, hypo tanks, reservoir #5 mixer, submersible level transmitters, miscellaneous lab equipment, and miscellaneous tools & other minor equipment.

Leased Equipment – This budget includes costs to lease mobile and other equipment.

Distribution & Transmission Supplies - This item includes repair clamps, fittings, and pipes, “No-Lead” brass and copper, crushed stone and blacktop, valve and curb boxes, miscellaneous supplies, and hydrant supplies.

Collection System Supplies - This budget includes degreaser, inspection dye & deodorizer, concrete, manhole frames and covers, risers rings, ferncos & couplings / wrapid seal, SDR Pipe, hose lines paving material, salt, and topsoil, crushed clean stone, lubricating oils & grease, misc. supplies/gaskets/seals, and maintenance & construction materials.

Depreciation and Amortization - This expense is calculated by the straight-line method using standard depreciation periods. Annual amortization over the life of the financing is included.

Other Expenses:

Major Maintenance Expenses – Includes the City Capex charged to expense.

Other Miscellaneous – This expense includes financing costs related to new debt and annual fees from the Trustees overseeing the various bond series, cost of goods sold, and allocation of GIS capital costs to wastewater operating funds.

NON-OPERATING INCOME (EXPENSE):

Investment Earnings – Interest earned on Authority investments and deposit accounts.

Interest Expense – Interest paid on Authority bonds and Pennvest loans.

Capital Contributed – This includes infrastructure contributed by developers.



LEHIGH COUNTY AUTHORITY

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MEMORANDUM

Date: September 29, 2023

To: Board of Directors & Management Staff

From: Jennifer Montero, Contracts Administrator

Re: Proposed 2024 WLI, LLRI-Phase 1 and LLRI-Phase 2
Wastewater User Charges

Attached is a copy of the *2024 Report on Wastewater User Charges*. This is the annual report that explains the derivation of the various billing rates that are charged to the users of the Western Lehigh Interceptor, Little Lehigh Relief Interceptor Phase 1, and Little Lehigh Relief Interceptor Phase 2.

As you will read in the Executive Summary on page 3, **costs to an average residential user associated with the use of the WLI, LLRI-I and LLRI-2 are expected to increase overall by only .1%.** This is primarily due to the reduction of costs for the second phase of the Park Pump Station Rehabilitation and Improvement project from \$1,500,000 in 2023 to \$300,000, included in the Little Lehigh Relief Interceptor operating and maintenance costs as “pay-go” capital. The reduction in this flow-based rate offsets the increases in the WLI flow and loadings rates. One factor behind the increase in the WLI rates is higher O&M costs at Kline’s Island which are passed through to the WLI rates. For example, purification chemicals alone have increased 76% from 2023. Another factor is a 24% increase in WLI O&M costs because of higher personnel, general services, and maintenance costs along with an increase in the amount of “pay-go” capital, mostly associated with the Spring Creek Upgrade project.

We request that the Board give preliminary approval of the rates.

LEHIGH COUNTY AUTHORITY

2024 REPORT ON WASTEWATER USER CHARGES

September 29, 2023



Lehigh County Authority

LEHIGH COUNTY AUTHORITY

2024 REPORT ON WASTEWATER USER CHARGES

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EXECUTIVE SUMMARY

This summary provides an overview of the various assumptions included in the Lehigh County Authority (LCA) *2024 Report on Wastewater User Charges*. Further detailed information can be found in the report.

1. Waste Strength

The assumed wastewater concentration for all non-exceptional strength Western Lehigh Interceptor (WLI) users is 250 ppm for BOD, 275 ppm for TSS, and 35 ppm for TKN. Exceptional strength charges are applied to users with waste samples having concentrations greater than 300 ppm for BOD, 360 ppm for TSS, and 85 ppm for TKN. Many commercial WLI users have strengths above these limits. LCA assists its WLI Signatories in sampling these users to identify those that are subject to exceptional strength charges (see Appendix A).

By comparison, the estimated concentration for LCA's Western Lehigh Interceptor (WLI) Signatory combined discharge to the City of Allentown's Kline's Island Wastewater Treatment Plant (City Plant) is well below the assumed wastewater concentrations, averaging 118 ppm for BOD, 146 ppm for TSS, and 37 ppm for TKN based on sampling data from the last 2 quarters of 2022 and first two quarters of 2023. These lower strengths are attributed to the operation of the LCA-owned Wastewater Treatment Plant (PTP) which significantly reduces all upstream waste strength, including high strength waste discharged from brewing operations at Boston Beer.

2. Payments to the LCA Wastewater Pretreatment Plant (PTP)

The PTP produces effluent that is near direct discharge quality. Because it does the work of the City Plant in this regard, the WLI Signatories (Signatories) pay their proportionate share of these treatment costs through excess removal credits (Credits). Credits will be paid to the PTP fund, at City unit rates, for pounds of BOD and TSS removed beyond or "in excess" of City Plant allowable loadings. These Credits are calculated according to the terms of an agreement between LCA, the LCA Signatories, and the County, which was the owner of the PTP at the time of the agreement's execution.

3. User Rates

The following rates are proposed for 2024 as shown in comparison to the approved 2023 rates. When applied to the typical residential usage of 80,300 GPY and non-exceptional strength loadings, the 2024 proposed rates represent a .1% increase to the average residential user's bill, keeping the overall cost level as compared to 2023.

LCA SIGNATORIES

Western Lehigh Interceptor

FLOW (per 1,000 gals)	\$1.17	1.36
BOD (per pound)	\$0.33	0.37
TSS (per pound)	\$0.30	0.31
TKN (per pound)	\$0.43	0.50
ALLOCATION (per 1,000 gals per day	\$0.21	0.27

Little Lehigh Relief Interceptor

PHASE 1 (per 1,000 gals)	\$0.57	0.18
PHASE 2 (per 1,000 gals)	\$0.013	0.017

EMMAUS

Western Lehigh Interceptor

FLOW (per 1,000 gals)	\$0.39	0.40
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OTHER USERS – L. Macungie, Salisbury, &

S. Whitehall - Little Lehigh Relief Interceptor

– Phase 1

FLOW (per 1,000 gals)	\$0.51	0.21
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3. User Rates (continued)

Western Lehigh Interceptor (WLI): For 2024, capital projects with a 2024 budget of \$1,000,000 or less will be added to the Operating and Maintenance (O&M) costs and included in the cost basis for the WLI flow rate. The budgeted \$3,500,000 million cost of the Upper Western Lehigh Pump Station and Force Main will be financed, with its annual debt service added to the existing debt service for the FEB. An itemization of these projects can be found at Table 2a on page 15. Started in 2023, this approach ends the previous practice of including a reserve amount in the O&M costs to build cash reserves for capital expenses expected in the future. The change was made to provide cash flow for Interim 537 Plan project execution planned for 2024, such as the Signatory I&I Investigation and Remediation Program and the WLI capacity program, and to align the budget more closely with actual costs. This allows the possibility of preserving existing cash reserves for use in defraying part of the cost of larger capital projects expected to be included in the final regional 537 plan, due to DEP in March 2025. Capital Recovery Fees collected from new connections will also be applied to regulatory and system improvement capital projects costs.

Little Lehigh Relief Interceptor – PHASE 1: With the majority of the Phase 2 Park Pump Station upgrade cost included in the 2023 rate, only the balance of the \$1,800,000 projected cost of the project (\$300,000) is included in the 2024 rates, allowing for a significant decrease from 2023. See Table 8 on page 23.

Little Lehigh Relief Interceptor – PHASE 2: The rate for 2024 will increase from the 2023 rate of .013/1,000 gallon to \$.017/1,000 gallons and reflects an increase in the proposed 2024 operating and maintenance costs budget.

4. User Payments

Quarterly Estimated Payments: To improve the WLI operating fund cash flow, Signatories receive a quarterly bill that contains estimated flows and loads. Estimating the quarterly bills provides consistent Signatory payments and results in having payments arriving prior to LCA's payment to its City Division Fund for treatment and transportation costs incurred on the Signatory's behalf. Submission of the actual Signatory flow and load data is still required for the annual reconciliation of the rates, but the timing of the submission is no longer as critical. The estimated quarterly billing procedure is described and attached to this report, "Estimated Quarterly Bill Procedures" as Appendix B.

I. INTRODUCTION

This report is intended to demonstrate how the user rates for 2024 were developed. It also reports comparative historical data. The wastewater facilities owned by LCA - the Western Lehigh Interceptor (WLI) and the Little Lehigh Relief Interceptor, Phases 1 and 2 (LLRI-P1 and LLRI-P2) - are legally and financially independent of each other.

Background – WLI

In 1971, LCA constructed the WLI to serve four municipalities: Upper and Lower Macungie Townships and the Boroughs of Alburtis and Macungie. Since then, Upper Milford, Lowhill and Weisenberg Township service areas have been added. Collectively, the municipalities are referred to as the “Signatories” (or “Signatory”). LCA also provides transportation service through the WLI to a portion of the Borough of Emmaus (“Emmaus”).

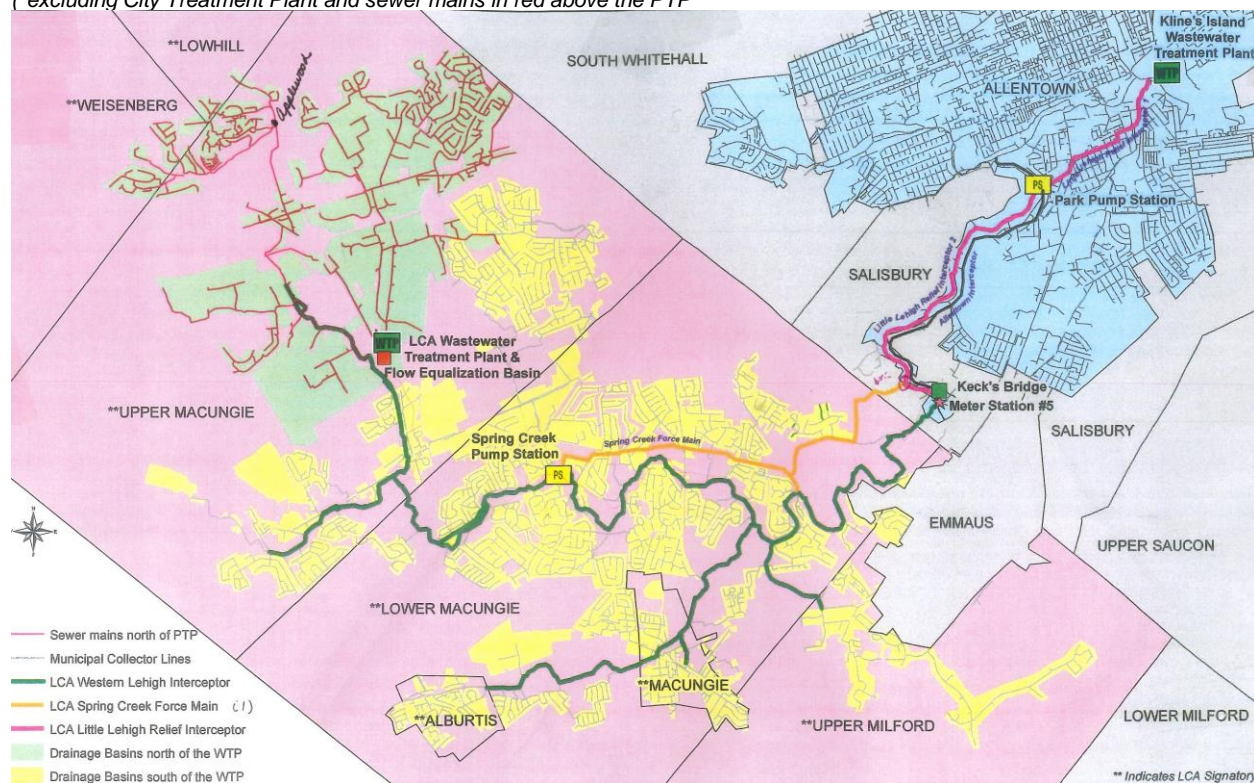
LCA, serving as agent for the Signatories, contracts with the City of Allentown (City) for the transportation, treatment, and disposal of wastewater from the Signatory area (see “Existing Billing Practices -City of Allentown Concession Lease” on page 7).

Currently, the WLI system consists of approximately 18 miles of gravity sewer interceptors ranging from 8 inches to 36 inches in diameter. It starts near the Pretreatment Plant (PTP) in Upper Macungie Township and follows the Little Lehigh Creek to an area known as “Keck’s Bridge.” This is where the WLI ends, and the City-owned Allentown/Emmaus Interceptor begins. It is also where meter station 5 is located and where LCA sewage discharges to the City undergo constant flow measurements and periodic sampling and analyses to determine discharge strength. These loadings provide the basis for the LCA City Division Fund’s billing (“City Costs”) to the Signatories. The 2024 estimation for the daily flow and waste strength into the City is noted on page 11 under “City Cost Assumptions”.

In 1998, the Spring Creek Pump Station (SCPS) began operation. This relief pumping system includes roughly 2,500 feet of 20-inch diameter force main and 11,900 feet of 24-inch diameter force main, allowing the bypass of approximately 24,000 linear feet of the WLI in Lower Macungie Township. In 2005, the SCPS force main was extended by approximately 10,000 feet to relieve further hydraulic bottlenecks in the downstream portion of the WLI. SCPS temporarily mitigated WLI capacity issues, however, recent sanitary sewer overflows necessitate additional improvements in anticipation of increased flows through 2050. This is part of the focus of current regional Act 537 planning efforts.

In 2010, the 3-million-gallon Flow Equalization Basin (FEB) was constructed at the PTP to be utilized for storing wet weather flows. The FEB is used during times of wet weather and helps reduce the risk of sanitary sewer overflows within the WLI system.

Figure 1: *LCA-Owned Wastewater Assets
 (*excluding City Treatment Plant and sewer mains in red above the PTP)



Background – LLRI

Under the provisions of municipal service agreements with the City, Municipal Signatories are required to construct relief facilities whenever jointly used City-owned sewer lines become overloaded. In 1973, the City notified four of its Municipal Signatories—LCA, Lower Macungie Township-Phase II and Brookside Diversion; a small part of Lower Macungie Township located east of the turnpike that bypasses the WLI ("LMT Phase II & Brookside"), Salisbury Township (Salisbury), and South Whitehall Township (South Whitehall)--that the City-owned Little Lehigh Interceptor required relief.

Under an agreement dated February 10, 1981, LCA was authorized to plan and construct the required facilities. The agreement contemplated two financially independent sets of facilities. The first, known as Phase 1, relieves the City's Little Lehigh Interceptor and serves the Signatories, LMT Phase II & Brookside, Salisbury, and South Whitehall. It consists of the Park Pump Station and a large diameter force main, extending from the Park Pump Station to the Allentown Interceptor, just upstream of the City treatment plant. The second, known as Phase 2, relieves the City's Emmaus Interceptor from Keck's Bridge to the Park Pump Station and serves the Signatories.

Existing Billing Practices – WLI

Costs attributable to the WLI and the use of the City facilities are allocated through user rates among the Signatories based on three criteria: (1) flow, (2) strength, and (3) treatment allocation. Costs attributable to the operation of the WLI and a portion of the City treatment plant and collections department operational costs are allocated based on flow. The balance of the

City treatment plant operational and the LCA PTP excess removal credits are allocated to the three waste strength parameters of BOD, TSS and TKN. Distribution of the City Costs to the Signatories are based on the City's user charge methodology, developed in 1979. All City and LCA debt service costs are assigned to each Signatory based on its proportionate share of LCA's 10.79 MGD of purchased wastewater treatment capacity in the city treatment plant.

Emmaus, because it contracted directly with the City for its treatment and transportation needs and has made a capital contribution to LCA in lieu of paying future WLI debt service, pays user charges based only on WLI operating costs.

Billing practices used herein were established in the April 1, 1983 Service Agreement. Billable flows and strengths to each Signatory are based on a summation of the individual customer discharges within each Signatory service area. Inflow and infiltration (I/I) attributable to the WLI service area is shared proportionately by all Signatories.

Existing Billing Practices – LLRI

Costs attributable to LLRI-P1 are allocated among the Signatories, LMT Phase II & Brookside, Salisbury, and South Whitehall in proportion to metered wastewater flows tributary to the City's Little Lehigh Interceptor. South Whitehall flows are reduced by 500,000 gallons per day (gpd), based on a City commitment to transmit that wastewater on South Whitehall's behalf.

Costs attributable to LLRI-P2 are shared only with the Signatories (LMT Phase II & Brookside, Salisbury and South Whitehall do not share in these costs) based on WLI billable wastewater flow.

Existing Billing Practices - City of Allentown Concession Lease

In August 2013, through the Concession and Lease Agreement (Lease), LCA assumed responsibility for the operation of the City of Allentown water and wastewater systems (City System), now referred to as the LCA City Division. As part of this 50-year Lease, LCA is responsible for calculating annual Municipal Signatory wastewater rates under existing Municipal Service Agreements. City Municipal Signatories include LCA as agent for its Signatories for their wastewater treatment usage, therefore City treatment and transportation costs are passed on to the LCA Signatories and included in the WLI rates. Other Municipal Signatories discharging to the City Plant include the townships of South Whitehall and Salisbury, Lower Macungie Phase II & Brookside, the Borough of Emmaus, and Coplay Whitehall Sewer Authority. City Municipal Signatories remain responsible for their share of the pre-lease debt service incurred by the City prior to LCA's operation. Since 2016, additional debt service is also being paid for ongoing capital improvements completed by LCA as operator of the City System. The City System is legally and financially independent of the LCA-owned systems, identified in the WLI and LLRI Background sections above.

II. BILLING BASIS DETERMINATION

The term “billing basis” refers to the discharge from each residential, commercial, or industrial user. It is estimated and summed within each Signatory service area.

Flow Determination

Flows are determined based on one of the following methods:

- Commercial and industrial customers
 - Where a sewer meter is available, periodic readings are used.
 - If a sewer meter is not available, periodic readings of the water meter are used.
- Residential customers
 - Those receiving water service as of 1 January: the first quarter’s metered water usage is used.
 - Those connecting after 1 January or for users not having a water meter: 220 gpd is used.

Strength Determination

Assumed Average Strength and Exceptional Strength Limits remain at their historical parameters for 2024:

<u>Discharge Type</u>	<u>Parameter</u>	
	<u>Assumed Average Strength</u>	<u>Exceptional Strength</u>
BOD	250 ppm	300 ppm
TSS	275 ppm	360 ppm
TKN	35 ppm	85 ppm

As in previous years, all industrial and certain commercial users with discharges greater than 25,000 gallons of sewage per billing period will be sampled and tested at least once per year to determine the strength of their wastewater. Any user with BOD, TSS or TKN discharge in excess of the Exceptional Strength Limit shown in the above chart will be billed based on those test results. All users with discharge below the Exceptional Strength Limit will be billed at the Average Strength level.

Sampling and testing frequency, duration and other related guidelines are described in the “User Charge Sampling & Analysis Procedures and Billing Computations,” attached to this report as Appendix A.

The LCA Pretreatment Plant (PTP) is required to treat Boston Beer industrial discharges to 210 ppm for BOD and 230 ppm for TSS, designated by the City Plant as its allowable loadings. Waste hauler discharges are required to be treated to 250 ppm for BOD and 275 ppm for TSS. Through the operation of the PTP, those industrial discharges, together with other customer discharges located upstream of the PTP, will be significantly reduced below those required levels. The terms of an agreement between the Signatories, LCA and the County (prior PTP owner) specifies how billings, and credits for those additional removals, will be calculated. Those terms have been used in calculating total system billables and the credits for this report.

Emmaus Billing Basis

The Emmaus Service Agreement (7/1/86) provides that Emmaus will participate in WLI operating and maintenance costs, including administrative costs, but excluding debt service.

administrative costs are allocated based on the ratio of salaries applicable to WLI operation and maintenance to total WLI salaries. The minimum and maximum limits for allocation of administrative costs are 32% and 52% respectively. Only a portion of Emmaus' sewage is transported through the WLI and discharged to the Allentown-Emmaus Interceptor at Keck's Bridge. The remainder of Emmaus' wastewater is discharged at the very beginning of the Allentown Emmaus Interceptor at the connection point with the Emmaus collection system.

III. CAPITAL RECOVERY FEES

Background

Since 1985, capital recovery fees (CRFs) have been charged to property owners located in Signatory municipalities for new sewer connections. CRFs include three separately calculated fees and recover the purchase cost of City Plant capacity through the treatment allocation fee and the construction costs of major capital improvements to the WLI and LLRI-1&2 through the WLI and LLRI fees.

A review of all fees is conducted annually with proposed changes made effective when finalized, typically in July. All fees are calculated in accordance with Pennsylvania law (Act 57 of 2003).

Use of Capital Recovery Fees

The WLI and LLRI fees collected for new user connections to the WLI and LLRI are currently held in a reserve account to retire additional WLI and LLRI debt, fund WLI and LLRI capital projects, and pay for unexpected expenses to those funds.

As the service area continues to undergo new development and the need for treatment capacity grows, the treatment fees collected are also placed in a reserve fund to either purchase additional capacity or to fund additional capacity options.

IV. WLI USER CHARGE DEVELOPMENT

This section describes the methods used to calculate WLI User Charges. Four general steps are followed:

1. Estimated 2024 operating and maintenance (O&M) costs are based on prior years' costs and annual inflation. In 2024, O&M costs include certain capital costs, taking the place of prior years' practice of charging a reserve amount earmarked for future capital costs.
2. Costs have been allocated to five billing parameters – FLOW, BOD, TSS, TKN and ALLOCATION.
3. A billing basis (the sum of each Signatory's actual prior four quarters' flow, loadings, and share of purchased treatment allocation) has been estimated for each billing parameter.
4. Unit costs are determined for each parameter by dividing the total costs by the billing basis.

Two types of costs are incurred – City and LCA. City charges include three types of costs – debt service, interceptor use, and operation and maintenance. City O&M costs include annual and Act 537 planning capital project costs. LCA charges include three types of costs – debt service, operation and maintenance, and treatment costs for PTP excess strength removals at or well below City Plant allowable loading limits.

City Cost Assumptions

For estimating City Costs, the following assumptions have been made for LCA total discharge to the City:

	<u>2023</u>	<u>2024</u>
LCA Total Allocation in City Plant	10.79 MGD	10.79 MGD
Average Daily Flow	9.3 MGD	9.1 MGD
Average BOD Concentration	126 ppm	118 ppm
Average TSS Concentration	136 ppm	146 ppm
Average TKN Concentration	33 ppm	37 ppm

City Debt Service

LCA is required to pay its proportionate share of pre-Lease debt service on the bonds that were purchased to finance improvements and upgrades when the City operated the Plant. LCA's share of these total debt service costs is \$116,546 for 2024. This pre-Lease debt will be completely paid off by the end of 2026. An additional debt service amount of \$242,551 is also being charged for projects which LCA has executed since it began operating the Plant in 2013. These projects include the replacement of the belt filter press, motor control center, substation #2 rehabilitation, boiler replacement, and digester cover replacement at the Plant and roof replacements at both the Plant and the Distribution and Collections Building. Also included in total City debt service is an annual payment of \$150,852 for financed Regional Flow Management Strategy (formerly called Administrative Order) projects, bringing total City Debt Service for 2023 to \$509,948.

City Interceptor Use

LCA pays a fixed rate of \$0.01 per 1,000 gallons for the use of the City interceptors. For 2024, the estimated cost is \$33,193.

City Operation and Maintenance

Part of the revenue that LCA collects from Signatory WLI billings is used to pay the City wastewater fund for O&M costs. The Signatories are responsible for City O&M costs in proportion to all flow and pounds they collectively discharge. The following City Division Municipal Signatory usage rates are shown below in comparison to the previous year's estimated rates:

City Rates	2023 rates - estimated	2024 rates - estimated
FLOW (per 1,000 gals)	0.246	0.289
BOD (per pound)	0.321	0.381
TSS (per pound)	0.280	0.314
TKN (per pound)	0.411	0.469

The components of the City Costs are summarized in Table1 - Allentown Estimated Costs, below. For 2024, we have estimated the City Division's Municipal Signatory unit O&M rates ("City Rates") using a 2023 estimate for total hydraulic and organic loadings based on actual Signatory flows and loads into the City Plant from the prior four quarters. The total cost basis used to calculate the City rates is about \$1.5 million higher than those in 2023, therefore the 2024 estimated rates are higher than those estimated in 2023. The main driver of the 2024 cost basis increase is wages, benefits, and purification chemicals.

Table 1: City of Allentown Estimated Costs

	2023 Est Budget	2024 Estimate
DEBT SERVICE:		
Summary	\$ 443,476	\$ 509,948
Other Interceptor	34,023	33,193
DEBT SERVICE SUBTOTAL	\$ 477,499	\$ 543,140
OPERATION AND MAINTENANCE:		
Flow	\$ 835,764	\$ 958,616
BOD	1,142,828	1,244,697
TSS	1,082,152	1,264,214
TKN	388,747	476,443
OPERATION AND MAINTENANCE SUBTOTAL	\$ 3,449,491	\$ 3,943,970
TOTAL ALLENTOWN COSTS	\$ 3,926,990	\$ 4,487,110

LCA Debt Service - WLI

2024 debt service is estimated at \$626,235. The amount of \$398,555 covers the annual principal and interest payment for the Penn Vest loan approved to fund the FEB project mentioned in the Introduction. In addition, a new debt service amount of \$227,680 represents the annual principal and interest payment for the financing of the \$3,500,000 2024 cost of the construction of the Upper Western Lehigh Interceptor and Pump Station Force Main required to address a bottleneck in the WLI in the Trexlertown area.

LCA Operation and Maintenance

WLI O&M costs are shown in Table 2 – WLI Operation & Maintenance Costs, page 14. As mentioned previously, since Emmaus does not participate in all operation and maintenance costs, separate costs that Emmaus and the Signatories share in are shown in Table 3 - O&M Costs Shared by Signatories and Emmaus, page 16.

Billing Basis

To estimate the 2024 billable discharges, the prior four quarters' actual billed flows and loadings were reviewed. A summary of this information may be found in the Table 4- Billing Basis O&M, page 17.

Table 2 - Western Lehigh Interceptor: Operating and Maintenance Costs

ITEM	2023 BUDGETED LCA COSTS	2024 ESTIMATED LCA COSTS
DEBT SERVICE:		
Financing and Bond Issues	\$ 398,555 ▼	\$ 626,235
OPERATING & MAINTENANCE CHARGES:		
Personnel		
Personnel Subtotal	\$ 259,964	\$ 359,938
Purchase of Services		
General Services	\$ 130,371	\$ 181,468
Employee Benefits	\$ 225,813	\$ 232,880
Utilities	\$ 77,875	\$ 83,700
Engineering	\$ 15,846	\$ 9,600
Exc. Str. Analyses (External)	\$ -	\$ -
General Analyses (External)	\$ 25,900	\$ 72,204
Fleet Management Services	\$ 20,000	\$ 21,500
Maintenance	\$ 143,200 ▼	\$ 189,850
Misc. Purchase of Services	\$ 8,800	\$ 16,850
Rental Charges	\$ -	\$ -
Purchase of Services Subtotal	\$ 647,805	\$ 808,051
Materials and Supplies		
Fuel	\$ 15,900	\$ 18,800
Misc. Materials & Supplies	\$ 58,900 ▼	\$ 83,522
Equipment	\$ 21,000	\$ 33,400
Materials & Supplies Subtotal	\$ 95,800	\$ 135,722
Capital Funding (Sig. + Emmaus)		
*Pay-Go Capital Projects	1,485,000 ▼	\$ 1,775,000
Capital Funding Subtotal	\$ 1,485,000	\$ 1,775,000
TOTAL OPERATING & MAINTENANCE	\$ 2,488,569 ▼	\$ 3,078,711
Reserve Amount for Future Projects	\$ -	\$ -
TOTAL LCA EXPENSES	\$ 2,488,569	\$ 3,078,711
Less: Miscellaneous Revenue	\$ -	\$ -
TOTAL LCA CHARGES (includes debt service)	\$ 2,887,124	\$ 3,704,947

Table 2a – Breakdown of Capital Costs Included in WLI O&M Costs

*Pay-Go Capex		
	2023	2024
ANNUAL PROJECTS		
*****-WLC-S-General Sewer System Imp.	\$ 100,000	\$ 25,000
30305 WLC-S-CAPITAL MANAGEMT	\$ 10,000	\$ 25,000
12002 WLC-S-EQUIPMENT- OTHER	\$ 50,000	\$ 50,000
Subtotal	\$ 160,000	\$ 100,000
OPERATING FUND PROJECTS		
30443 WLC-S-SIGNATORY I&I PROG		\$ 150,000
Costs	\$ 20,000.00	
30742 WLC-S-WLI REHAB CYCLE 1	\$ 280,000.00	\$ 225,000
WLI Manhole inspection program	\$ 150,000.00	
Misc items (flow metering of WLI, etc)	\$ 50,000.00	
Subtotal	\$ 500,000.00	\$ 375,000
30815 WLC-S-SPRING CRK FM RELO	\$ 50,000	\$ 100,000
30665 WLC-S-SPRING CK FM ARV R	\$ -	
30301 WLC-S-SPRING CREEK FM	\$ 100,000	\$ 150,000
30850 WLC-S-SPRING CK FM COND ASSES		
30816 WLC-S-UPPER WL PS & FM	\$ 250,000	\$ -
30531 WLC-S-SPRING CREEK PS IMPROVEMENTS	\$ 100,000	
30838 - WLC-S_SPRING CK PD UPGR		\$ 700,000
30438 WLC-S-WLI-WW CAPACITY PROGRAM		\$ 350,000
AECOM	\$ 220,000	
Kleinfelter	\$ 30,000	
Arcadis	\$ 50,000	
LCA	\$ 25,000	
Subtotal	\$ 325,000	\$ 350,000
TOTAL	\$ 1,485,000	\$ 1,775,000

Table 3 - Western Lehigh Interceptor: O&M Costs Shared by Signatories and Emmaus

ITEM	2024 ESTIMATED LCA COSTS	PERCENT ALLOCABLE TO EMMAUS	PORTION SHARED BY SIGNATORIES AND EMMAUS
DEBT SERVICE:			
Financing & Bond Issue	\$ 626,235	0.0%	\$ -
OPERATING & MAINTENANCE CHARGES:			
Personnel	359,938		
Personnel Subtotal	\$ 359,938	52.0%	\$ 187,168
Purchase of Services			
General Services	\$ 181,468	52.0%	\$ 94,363
Employee Benefits	232,880	52.0%	121,098
Utilities	83,700	100.0%	83,700
Engineering	9,600	100.0%	9,600
Exc. Str. Analyses (External)	-	0.0%	-
General Analyses (External)	72,204	0.0%	-
Fleet Managent Services	21,500	100.0%	21,500
Maintenance	189,850	100.0%	189,850
Misc. Purchase of Services	16,850	100.0%	16,850
Rental Charges	-	52.0%	-
Purchase of Services Subtotal	\$ 808,051		\$ 536,961
Materials and Supplies			
Fuel	\$ 18,800	100.0%	\$ 18,800
Misc. Materials & Supplies	83,522	100.0%	83,522
Materials & Supplies Subtotal	\$ 102,322		\$ 102,322
Equipment	\$ 33,400	100.0%	\$ 33,400
Amortized Equipment		100.0%	\$ -
Equipment Subtotal	\$ 33,400		33,400
Capital Funding			
Capital Management	25,000	100.0%	\$ 25,000
VI Investigation and Remediation	375,000	100.0%	375,000
Other WLI capital projects	\$ 1,375,000	0.0%	\$ -
Capital Funding Subtotal	\$ 1,775,000		\$ 400,000
TOTAL OPERATING & MAINTENANCE	\$ 3,078,711		1,259,851
Reserve Fund Allocation	\$ -	0.0%	0
TOTAL LCA EXPENSES	3,078,711		\$ 1,259,851
Less: Miscellaneous Revenue	\$ -		0
TOTAL LCA CHARGES	\$ 3,704,947		\$ 1,259,851

Table 4 - Billing Basis O&M

	Flow gpd	BOD lb/day	TSS lb/day	TKN lb/day
<u>Signatory Area</u>				
Alburtis	140,113	355	395	63
Macungie	175,840	405	423	55
Lower Macungie	1,537,474	3,661	3,639	472
Upper Macungie *	5,700,514	24,180	13,876	1,852
Weisenberg	26,683	56	63	8
Upper Milford	200,899	490	485	64
Lowhill	6,388	13	15	2
Pretreatment Plant & Haulers	<u>211,557</u>	<u>441</u>	<u>485</u>	<u>62</u>
LCA SYSTEM SUBTOTAL	7,999,468	29,601	19,381	2,578
Emmaus	<u>520,170</u>			
TOTAL	<u>8,519,638</u>	<u>29,601</u>	<u>19,381</u>	<u>2,578</u>

* Includes UMT and LCA direct customers Boston Beer & Hilton Homewood Suites

Rate Design

Although rate calculation options are almost limitless, several legal requirements eliminate many of the options. First, federal law and regulations provide that “each recipient of the wastewater treatment services within the applicant’s service area will pay its proportionate share of the cost of operation (including replacement) of all waste treatment service provided by the applicant.”

Second, Pennsylvania’s Municipality Authorities Act requires that rates be “uniform and reasonable.”

Finally, the Service Agreements require that a rate methodology substantially identical to that adopted by the City be used and that debt service costs attributable to the City facilities and to the WLI be allocated in proportion to each Signatory’s purchased City Plant treatment capacity.

Based on the aggregate of these restrictions, unit costs for FLOW, BOD, TSS, TKN, and ALLOCATION are calculated using the Billing Basis divided into the total cost for each parameter. City and LCA debt service and other costs are only allocated to the Signatories and not Emmaus. LCA operation and maintenance costs related to the WLI are allocated to both the Signatories and Emmaus.

User Rate Adequacy

Using the proposed unit rates shown on Table 7, multiplied by the various individual Signatory flows and loads (shown in Table 4), and purchased treatment plant allocation, a total expected revenue of \$11,894,384 is estimated. Comparing this revenue to the expense of \$11,894,384 shown on Table 5 - Total System Costs –City and LCA and Table 6 -Total System Cost Allocation Summary, indicates an overall coverage of 0%.

Table 5 - Total System Costs: City of Allentown and LCA

	2023 Budget	2024 Estimate
DEBT SERVICE:		
Allentown	\$ 477,499	\$ 543,140
LCA	398,555	626,235
DEBT SERVICE SUBTOTAL	\$ 876,054	\$ 1,169,376
OPERATION AND MAINTENANCE:		
Allentown	\$ 3,449,491	\$ 3,943,970
LCA	2,488,569	3,078,711
OPERATION AND MAINTENANCE SUBTOTAL	\$ 5,938,060	\$ 7,022,681
COUNTY CREDITS		
BOD	\$ 2,219,848	\$ 2,750,862
TSS	911,849	951,465
TOTAL COUNTY CREDITS SUBTOTAL	\$ 3,131,697	\$ 3,702,327
TOTAL SYSTEM COST	\$ 9,945,811	\$ 11,894,384

Table 6 – Total System Cost Allocation Summary

	Total Cost	ALLOCATION PARAMETER				
		Flow	Allocation	BOD	TSS	TKN
O&M						
Allentown O&M	\$ 3,943,970	\$ 958,616	\$ -	\$ 1,244,697	\$ 1,264,214	\$ 476,443
LCA O&M	3,078,711	3,078,711		-	-	-
Total O&M	\$ 7,022,681	\$ 4,037,327	\$ -	\$ 1,244,697	\$ 1,264,214	\$ 476,443
LCA WTP CREDITS *	\$ 3,702,327	\$ -	\$ -	\$ 2,750,862	\$ 951,465	\$ -
DEBT SERVICE						
Allentown Interceptor	\$ 33,193	\$ 33,193	\$ -	\$ -	\$ -	\$ -
Summary of Allentown Debt	509,948	-	509,948	-	-	-
LCA	626,235	-	626,235	-	-	-
Total Debt Service	\$ 1,169,376	\$ 33,193	\$ 1,136,183	\$ -	\$ -	\$ -
TOTAL COSTS	\$ 11,894,384	\$ 4,070,520	\$ 1,136,183	\$ 3,995,559	\$ 2,215,679	\$ 476,443

* Credits to the LCA WTP are paid at City unit rates for non-required removals

Table 7 - Unit Cost Summary

Item	Annual Cost	Billing Basis (gpd or lb/day)	Unit Cost (\$/1000 gal or \$/lb)
FLOW - Allentown Costs	\$ 991,809	7,999,468	\$0.3388
- Interceptor Costs/ Signatories	\$ 1,818,861	7,999,468	\$0.6212
- Interceptor Costs/ Signatories & Emmaus	\$ 1,259,851	8,519,639	\$0.4040
			<hr/> \$1.3640
BOD (lb)	\$ 3,995,559	29,601	\$0.3688
TSS (lb)	\$ 2,215,679	19,381	\$0.3124
TKN (lb)	\$ 476,443	2,578	\$0.5049
ALLOCATION	\$ 1,136,183	11,461,422	\$0.2708

V. RELIEF INTERCEPTOR USER CHARGE DEVELOPMENT

This section describes the methods used to calculate user rates for the Little Lehigh Relief Interceptor System.

For both Phases, the total costs are divided by the billable flow. Phase 1 provides service to the Signatories, Salisbury, South Whitehall, and Lower Macungie Phase II & Brookside. Billable flows differ for Phase I between the Signatories and the other users per contract terms. Phase 2 provides service only to the WLI Signatories.

Costs for both Phases are shown in Table 8 - Phase 1-Operation & Maintenance Costs and Table 9 - Phase 2-Operation & Maintenance Costs).

Debt Service - Phase 1

In January 1993, the bonds issued for construction of Phase 1 were retired. No additional projects that required bond issues are ongoing and no debt service is included in the O&M cost tables for 2024. However, the capital cost of \$300,000 for the balance of the second phase of the park pump station rehabilitation/improvement project is included in O&M costs. This project replaces the original generator from the 1980's to provide the required 24/7 service to this critical facility. The generator construction is expected to be completed in 2024.

User Rate Adequacy

For Phase 1, using the rates proposed, multiplied by the flows estimated in Table 10--Billing Basis—Little Lehigh Relief Interceptor Phase 1, total revenue of \$641,053 is estimated. Comparing this revenue to the total expense of \$620,106, as shown on Table 8 indicates an overall coverage of 3.5%. The extra revenue collected from the rate that applies to the non-WLI signatories is being used to pay-off its capital cost contribution for the first phase of the park pump station rehabilitation. This charge does not apply to the LCA WLI Signatories because its portion of the project was paid for by funds available to them via reserves paid from WLI rates and capital recovery fees.

For Phase 2, using the rate proposed, multiplied by the billing basis derived in Table 12, total revenue of \$49,119 is estimated. Comparing this revenue to the total expense of \$49,119 as shown on Table 9, shows an overall coverage of 0%.

Table 8 – Little Lehigh Relief Interceptor- Phase 1 – Operating and Maintenance Costs

ITEM	2023 BUDGETED LCA COSTS	2024 ESTIMATED LCA COSTS
DEBT SERVICE & FINANCING EXPENSES:	-	-
OPERATING AND MAINTENANCE CHARGES:		
Personnel	44,979	46,509
Personnel Subtotal	44,979	46,509
Purchase of Services		
General Services	23,179	21,610
Employee Benefits	39,894	30,787
Utilities	122,175	118,000
Maintenance Services	64,000	67,500
Miscellaneous Services	800	600
Engineering	5,000	3,100
Rental Charges	-	-
Compliance - PA DEP Tank Registration	200	400
Purchases of Services Subtotal	255,248 -	241,997
Materials and Supplies		
Fuel	2,800	2,800
Misc. Materials & Supplies	1,700	9,200
Misc. Equipment	34,200	19,600
Materials and Supplies Subtotal	38,700	31,600
TOTAL OPERATING & MAINTENANCE COSTS	338,927 -	320,106
*Pay-as-you-go Capital Project Funding	1,500,000	300,000
Reserve Amount for Future Projects	-	-
TOTAL LCA EXPENSES	1,838,927	620,106
Less: Miscellaneous Revenue	-	
TOTAL LCA CHARGES	1,838,927	620,106
* LLRI-1 Pay-as-you-go capex	2023	2024
ANNUAL PROJECTS	\$ -	\$ -
None		
OPERATING FUND PROJECTS		
30314 Park Pump Station Rehabilitation/Improvements	\$ 1,500,000	\$ 300,000
TOTAL	\$ 1,500,000	\$ 300,000

Table 9 - Little Lehigh Relief Interceptor – Phase 2: Operation and Maintenance Costs

<u>ITEM</u>	<u>2023 BUDGETED LCA COSTS</u>	<u>2024 ESTIMATED LCA COSTS</u>
DEBT SERVICE & FINANCING EXPENSES:	-	-
OPERATING AND MAINTENANCE CHARGES:		
Personnel	7,560	5,714
Personnel Subtotal	7,560	5,714
Purchase of Services		
General Services	3,753	2,893
Employee Benefits	6,338	3,812
Maintenance Services & Misc. Services	8,000	20,500
Utilities	200	400
Rental Charges	-	-
Purchases of Services Subtotal	18,291	27,605
Materials and Supplies		
Fuel	700	700
Misc. Materials & Supplies	4,400	6,900
Equipment	6,700	8,200
Materials and Supplies Subtotal	11,800	15,800
TOTAL OPERATING & MAINTENANCE COSTS	37,651	49,119
TOTAL LCA EXPENSES	37,651	49,119
Less: Miscellaneous Revenue	-	-
TOTAL LCA CHARGES	37,651	49,119

Table 10- Billing Basis – Little Lehigh Relief Interceptor

<u>Municipality</u>	<u>Flow (gpd)</u>	<u>% Share</u>
Salisbury	470,144	4.48
South Whitehall	685,086	6.53
Lower Macungie-Phase II & Brookside	266,652	2.54
LCA Signatories	9,069,019	86.45
Total	10,490,902	100.00

**LCA SIGNATORY BREAKDOWN
BILLING BASIS
(For Phase 1 and Phase 2)**

<u>Signatory</u>	<u>Billable Flow (gpd)</u>	<u>% Share</u>
Alburtis	140,113	1.75
Lower Macungie	1,537,474	19.22
Macungie	175,840	2.20
Upper Macungie	5,700,514	71.26
Upper Milford	200,899	2.51
Weisenberg	26,683	0.33
Lowhill	6,388	0.08
LCA PTP	211,557	2.64
Subtotal	7,999,468	100.00
Infiltration/Inflow	1,069,551	
Total	9,069,019	

Table 11 - LLRI-Phase1: Cost Allocation

AMONG ALL USERS		
Municipality	Flow % Share	Costs
Salisbury	4.48	\$ 27,790
South Whitehall	6.53	40,495
Lower Macungie - Phase II & Brookside	2.54	15,762
LCA Signatories	86.45	536,060
Total	100.00	\$ 620,106
Annual Cost	Billing Basis (gpd)	Unit Costs \$/1000 gals.
\$620,106	10,490,902	\$0.1615
(See Table "Phase I- Operation and Maintenance Costs")		
\$167,510	10,490,902	\$0.0437
(\$3.35M amortized over 20 years at 0% for Park Pump Station Rehabilitation)		
Total costs		Total Rate
\$787,616	10,490,902	\$0.2051
Note: To determine unit cost: Divide total annual cost by converted billing basis (Converted billing basis = ((10,490,902/1000)*366)		
AMONG LCA SIGNATORIES		
Signatory	Flow % Share	Costs
Alburtis	1.75	\$ 9,389
Lower Macungie	19.22	103,029
Macungie	2.20	11,783
Upper Macungie	71.26	382,003
Upper Milford	2.51	13,463
Weisenberg	0.33	1,788
Lowhill	0.08	428
LCA PTP	2.64	14,177
Total	100.00	\$ 536,060
Annual Cost	Billing Basis (gpd)	Unit Costs \$/1000 gals.
\$ 536,060	7,999,468	\$ 0.1831

WLSP pays 86% of LLRI-1 Cost;
proportionate to its total flow

Table 12 - LLRI-Phase 2: Cost Allocation

<u>Signatory</u>	<u>Flow % Share</u>	<u>Costs</u>
Alburtis	1.75	\$ 860
Lower Macungie	19.22	9,441
Macungie	2.20	1,080
Upper Macungie	71.26	35,003
Upper Milford	2.51	1,234
Weisenberg	0.33	164
Lowhill	0.08	39
LCA PTP	2.64	1,299
Total	100.00	\$ 49,119

<u>Annual Cost</u>	<u>Billing Basis (gpd)</u>	<u>Unit Costs \$/1000 gals.</u>
\$ 49,119	7,999,468	\$ 0.017

Note: To determine unit cost, divide annual cost by billing basis times number of days divided by 1,000.

APPENDIX A: USER CHARGE SAMPLING AND ANALYSIS PROCEDURES

The purpose of this document is to assist signatory municipalities using the Western Lehigh Interceptor (WLI) regarding sampling and analysis of non-residential users of their respective wastewater collection system. This document also describes the billing process and how test results are applied to the process.

LCA'S ROLE AS THE AGENT FOR THE MUNICIPALITIES

As the agent of the requesting municipality, Lehigh County Authority (LCA) will provide sampling and coordinate analysis of all designated users. Results reports with calculated averages used for billing ("Monitoring Data") and if applicable, additional sampling/analysis costs will be sent to the municipalities the month following sample collection. Difficulties encountered with an appropriate sampling site location, customer service or other inquiries will be directed to the municipality. LCA will be available to assist in addressing concerns.

MUNICIPALITIES' ROLE

Using Monitoring Data provided by LCA and flow data (provided by LCA or municipality), the municipality will prepare monthly and/or quarterly reports for billing purposes, depending on user flow and monitoring frequency. Prepared reports will be submitted to LCA by the end of the month following the previous quarter. Agreed upon summary figures will be used for final billing to the municipality.

WLI USERS—LIST OF CUSTOMER TYPES

1. Residential Users
2. Non-residential Users
 - a. Non-sampled Users
 - b. Sampled Users
 - i. Sampled-low flow
 - c. Restaurant
 - i. Restaurant-low flow

NON-RESIDENTIAL TYPES TABLE

Non-Residential Type	Abbreviation	Description
Non-Sampled User	N	Industrial/commercial user assumed to have residential (flow) strength, such as banks and office buildings.
Sampled User	S	Industrial/commercial user whose flow strength has the potential to surpass the Extra Strength Limit (ESL) (based on technical literature on type of operation at facility, spot tests, and experience of other wastewater utilities).
Sampled-Low Flow User	S-LF	Used when a typically sampled site has quarterly flow less than 25,000 per annual average.
Restaurant	R	Commercial user whose facility processes food--has direct service connection to the municipal sewer system. Does not include facilities where food is served but prepared elsewhere.
Restaurant-Low Flow	R-LF	Used when a typically sampled restaurant site has an annual average flow of less than 25,000 gallons per billing period.

Parameter	Average Strength Limit (ASL) (ppm)	Extra Strength Limit (ESL) (ppm)
BOD (Biochemical oxygen demand)	250	300
TSS (Total suspended solids)	275	360
TKN (Total Kjeldahl nitrogen)	35	85
FOG (Fats, oils & grease)	N/A	50

WASTEWATER STRENGTH TABLE BY PARAMETER

INITIAL DESIGNATION DETERMINATION

The initial sample type designation of a non-residential user is based on the probability of high strength discharge, as determined from technical literature, spot tests, experience of other utilities, or from the information provided by the user.

Types of businesses to sample:

Restaurants

Manufacturing

Brewing and distilling operations

Water Bottlers

Food processing

Soft drink/juice processing/bottling

Grocery stores that process meat or other food preparation

The municipality shall have a process in place where-by they identify new users and notify LCA of any new non-residential users and add them to the monthly/quarterly billing report in the appropriate section of the report—Sampled/Restaurants or Non-sampled (non-residential users). LCA may contact the municipality to discuss and arrange initial monitoring of facilities not listed on the billing report or listed as non-sampled when it appears as though they have the potential for producing extra strength waste.

During the municipal review process for a new Sampled User or new Restaurant, a sampling location will be required to be shown on the drawings and approved by the municipality. The municipality will also make the determination if a grease interceptor/grease trap is required. For existing buildings, LCA will review the proposed sampling location and determine if the installation of a sampling manhole and/or a grease interceptor is necessary.

The municipality shall furnish LCA with the following information for all Sampled and Restaurant Users and of the interceptor prior to the selection of the sample site:

1. User designation—Sampled User (S) or Restaurant (R)
2. Name of company
3. Property address
4. Municipal building identification code (if applicable) or account number
5. Business contact information—responsible person and phone number
6. Number of normal working days or days of operation
7. Description of business operations
8. Sampling location

This information will be used for scheduling and reporting. Please promptly provide updates to LCA to ensure proper scheduling and correct information for reports.

ANNUAL DESIGNATION

By December 15 of each year, the municipality shall furnish LCA with an annual average flow report for non-residential users. For this calculation, average the prior year QTR 4, the current year QTRs 1, 2, and 3 flows. This is an example of a basic report design:

SITE ID	BUSINESS NAME	2015 QTR 4	2016 QTR 1	2016 QTR 2	2016 QTR 3	ANNUAL AVG FLOW
4	Company X	200,000	200,000	200,000	200,000	200,000

Notes: Unless the site has flow >1,000,000 in a billing period, the annual average flow calculated in December of the prior monitoring year sets the monitoring frequency for the non-residential user for the next monitoring year. Do not change the monitoring frequency of sites based on the flow of one billing period or at any other time throughout the year.

Low Flow Sites: All industrial/commercial sites that were previously sampled but now have an annual average flow per billing period <25,000 gallons will be excluded from monitoring. These sites will be listed as either S-LF or R-LF indicating low flow. LF sites will be placed back on the schedule for monitoring if the annual average flow per billing period exceeds 25,000 gallons. Low flow sites should be moved to the non-sampled portion of your quarterly billing report with LF added to the site type and ID number to make them easier to track. Use Average Strength billing parameters for LF sites regardless of previously reported test results. Treat LF sites like any other non-sampled site while the flow remains low (less than 25,000 annual average).

SAMPLING FREQUENCY

SAMPLING FREQUENCY BASED ON ANNUAL AVERAGE FLOW

Annual Average Flow per Billing Cycle	Sample Frequency-Sampled User	Sample Frequency-Restaurant
<25,000 gals	Not sampled	Not sampled
25,000 to 99,999 gals	One day per year	3-days per year (Wed, Thurs, Fri or Thurs, Fri, Sat) plus FOG for 1 day
100,000 to 999,999 gals	Work week per year	
> 999,999 gals	Work week per billing period	3-days per billing period (Wed, Thurs, Fri or Thurs, Fri, Sat) plus FOG for 1 day
Notes: Any new Sampled User will initially be sampled for a work week. Scheduling will be required per billing period, if a site has a flow >1,000,000 gallons per billing period and has exceeded one of the extra strength limits.		

The discharge from each Sampled User will be analyzed at least once per year. Each sample will be analyzed for pH, BOD (biochemical oxygen demand), TSS (total suspended solids), and TKN (total Kjeldahl nitrogen). Fats-Oils-Grease (FOG)

concentration will be analyzed if food products are produced at the facility or at the request of the municipality.

LCA may sample the non-residential location at any time during the calendar year but will try to schedule sampling in the same quarter each year.

Initial sampling for any new Sampled User will be for a work week (providing flow is greater than 25,000 gallons per billing period). The Table for sampling frequency by annual flow does not apply for initial monitoring. This also does not apply to Restaurant Users, which are sampled for 3 consecutive days with quarterly flow >25,000 gallons.

The discharge from each Restaurant will be analyzed at least 3 consecutive days annually, either Wednesday-Thursday-Friday or Thursday-Friday-Saturday. Each daily sample will be analyzed, at a minimum, for pH, BOD, TSS, and TKN. FOG concentration will be analyzed at least one day during the sampling period.

REQUESTED ADDITIONAL SAMPLING AND ANALYSIS

A municipality may request additional sampling and analysis of any Sampled or Restaurant User. Sample collection and analysis costs will be noted on the results reports to the municipality. Billing for additional Monitoring Data will be addressed in the final bill of the year.

The Monitoring Data will be used for billing purposes for that billing period and all successive billing periods until new Monitoring Data become available after the completion of the next monitoring event.

NON-SAMPLED USER SAMPLING AND ANALYSIS

A municipality may request sampling and analysis of any non-residential user not included in the Sampled or Restaurant User definition. Test costs and sample collection costs will be billed to the municipality with the results reports.

While the municipality may use the results of the sampling and analysis for billing, LCA will not use the results for purposes of billing the municipality. However, results greater than the extra strength limits may indicate that the user should be added to the municipality's Sampled list.

BILLING COMPUTATION

With the exception of pH, results for each parameter will be averaged and used for billing purposes. The acceptable pH range is 6.5-10.5 pH units upstream of the LCA Wastewater Pretreatment Plant, or 5.0-12.0 pH units below the plant. The municipality will be notified if any result is out of range so that they can determine the cause and initiate corrective action.

To calculate pounds:

If all average results—other than pH—are less than the ESL (BOD-300ppm, TSS-360ppm, and TKN-85ppm), the ASL (BOD-250ppm, TSS-275ppm, and TKN-35ppm) will be used for billing calculations. If any average result is greater than the ESL, the result will be used for billing that parameter and ASL will be used for any parameter average result less than the ESL. The calculation for pounds is $\text{flow} \times 8.34 \times \text{ppm}$.

Example: Average results are BOD-400, TSS-300, and TKN-100. The BOD result is greater than the ESL of 300--calculate using 400. TSS is less than the ESL of 360--calculate using the ASL of 275. The TKN is greater than the ESL of 85--calculate using the result of 100.

SAMPLING AND ANALYSIS CHARGES

If a user in the Sampled User or Restaurant category is sampled and found to discharge flow with strength below the ESL, sampling and analysis charges will be waived.

If a user is found to discharge greater than the ESL (a result greater than any one of the billing parameters not including FOG), sampling and analysis charges will be billed to the municipality for annual sampling, or any repeated sampling found to exceed any extra strength limit.

The limit for FOG (fats-oils-grease) analysis is 50 ppm. If result is greater than this limit, the municipality will be billed for sample collection and analysis.

APPENDIX B: ESTIMATED QUARTERLY BILL PROCEDURES

Estimated Quarterly Bills

- The estimated quarterly bill amount for the upcoming year will be calculated and shared with LCA WLI Signatories prior to the presentation of the User Charge Report to the LCA Board of Directors. Any feedback received from the Signatories will be shared.
- The estimated quarterly bill will be based on the information contained in the User Charge Report.
- Quarterly estimated bills will be issued on or about the first of the following months: April, July, November, and January.
- Quarterly estimated bill payments will be due 30 days after the billing date.
- LCA will enforce a 5% penalty for overdue payment. The penalty shall be 5% of the payment due if not paid within 30 days from the billing date and an additional 5% of the payment due if not paid within 60 days, and thereafter an additional 1% per month or fraction thereof.
- Signatories must provide actual quarterly flow and load data in a timely manner.
- Actual quarterly flow, load, O&M and capital cost data will be tracked throughout the year and actual bills calculated no later than July. The timing can be adjusted due to the availability of audited costs and actual flows and loads.
- Adjustments (increase or decrease) for reconciliation of the prior year's quarterly estimated bills will be applied to the current year's second quarter estimated bill.

MEMORANDUM

Date: October 9, 2023

To: LCA Board of Directors

From: Jason Peters, Capital Works Linear Asset Project Manager

Subject: Allentown Water System – 30” and 36” East Side Transmission Main Repair Project – Design Phase

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization	\$104,300
2	Professional Services Authorization – Gannett Fleming (*)	\$89,300

**Included in the Capital Project Authorization*

PROJECT OVERVIEW:

The LCA Board authorized the 30” and 36” East Side Transmission Main leak detection study at the 6/13/22 Board meeting, to be performed by Pure Technologies as part of LCA’s on-going asset management strategy. The goal of the asset study was to perform a leak condition assessment of 30” and 36” East Side Transmission Main to identify the need for spot repairs and/or pipe section replacements of detected leak sites. Preventative maintenance of the East Side Transmission Main is critical in order to maintain uninterrupted system-wide service and fire flows throughout the City, by reducing reactive/emergency repairs that result in service interruptions and can lead to boil water notices and regulatory issues.

The results of the Pure Technologies study will be used as the basis of design for this rehabilitation project. The design phase scope includes all six (6) leak locations identified in report. The locations of these spot repairs or pipe section replacements are found at various locations along the East Side Transmission main and each site will require a specific approach and repair technique.

FINANCIAL:

This project will be funded by the Allentown Division and is listed in the 2023 Allentown Division capital budget.

PROJECT STATUS:

Design phase commencement pending board approval.

THIS APPROVAL:

This authorization is for design and bid phase engineering services for the rehabilitation project. The scope of services for this phase of work includes the following tasks:

Professional Services	
1.	Review Pure Technologies Smart Ball Inspection Report to determine general location and extent of repair needs.
2.	Conduct site visit with LCA operations staff to confirm exact location of repair locations in the field.
3.	Perform topographic survey of the six (6) leak location areas.
4.	Perform hydraulic impact study using the existing Allentown Division water system model to assess the operation of the system when shutting down existing mains for repair. The results of the study will be reviewed with LCA and used to identify necessary design and/or operational changes to maintain adequate operations during construction.
5.	Prepare final design plans and specifications
6.	Provide bid phase services including: Prepare bid documents and upload to PennBid, respond to RFIs from bidders, attend pre-bid meeting, issue addenda, review bids, prepare bid recommendation, issue notice of award

LCA intends to retain the services of Gannett Fleming (Gannett) to provide design phase engineering. Gannett serves as LCA's engineer for the annual water main replacement programs for both the Suburban and Allentown divisions (including prioritization, design, and construction phase services). Gannett also developed the detailed hydraulic model of the Allentown water system that is actively used to this date. Gannett has comprehensive knowledge of the City's water system, and the quality of their work is consistently excellent.

PROJECT SCHEDULE:

Pending Board approval, design phase is anticipated to begin immediately with bid-ready documents prepared by end of 2023.

FUTURE AUTHORIZATIONS:

Construction phase.

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	<u>AD-W-23-3</u>	BUDGET FUND:	<u>Allentown Water</u>
PROJECT TITLE:	<u>Allentown Division- 30" and 36" East Side Transmission Main Repair Project – Design Phase</u>	PROJECT TYPE:	<input type="checkbox"/> Construction <input checked="" type="checkbox"/> Engineering Design <input type="checkbox"/> Engineering Study <input type="checkbox"/> Amendment
THIS AUTHORIZATION:	<u>\$ 104,300</u>		
TO DATE (W/ ABOVE)	<u>\$ 174,800</u>		
DESCRIPTION AND BENEFITS:			

The 2022 Leak Detection Study of the 30" & 36" East Side Transmission Main identified six (6) detected leak sites and resulted in the development of a repair/replacement project for proactive maintenance of this critical main. The results of the Pure Technologies study will be used as the basis of design for the rehabilitation project. This authorization is for design and bid services for the project. LCA intends to retain Gannett Fleming to provide engineering services.

Previous Authorizations	
Study Phase	\$70,500

REQUESTED THIS AUTHORIZATION	
Design + Bid Phase	
Staff	\$10,000
Professional Services – Design and Bid Phase:	
Gannett Fleming, Inc.	\$89,300
Contingency	\$5,000
Total This Authorization	\$104,300

Future Authorization	
Construction - Phase	TBD

REVIEW AND APPROVALS:

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



Lehigh County Authority

1053 Spruce Road * P.O. Box 3348 * Allentown, PA 18106-0348
(610)398-2503 * FAX (610)398-8413 * Email: service@lehighcountyauthority.org

PROFESSIONAL SERVICES AUTHORIZATION

Professional: GANNETT FLEMING, INC.
207 Senate Ave
Camp Hill, PA 17011

Date: October 9, 2023

Requested By: Jason Peters

Approvals

Department Head: _____

Chief Executive Officer: _____

Allentown – 30” and 36” East Side Transmission Main Repair Project: Design Phase

This Authorization – Design and Bid Phase

Gannett Fleming, Inc. will provide design and bid phase services including the tasks in the following table:

Professional Services
1. Review Pure Technologies Smart Ball Inspection Report to determine general location and extent of repair needs.
2. Conduct site visit with LCA operations staff to confirm exact location of repair locations in the field.
3. Perform topographic survey of the six (6) leak location areas.
4. Perform hydraulic impact study using the existing Allentown Division water system model to assess the operation of the system when shutting down existing mains for repair. The results of the study will be reviewed with LCA and used to identify necessary design and/or operational changes to maintain adequate operations during construction.
5. Prepare final design plans and specifications
6. Provide bid phase services: Prepare bid documents and upload to PennBid, respond to RFIs from bidders, attend pre-bid meeting, issue addenda, review bids, prepare bid recommendation, issue notice of award

Cost Estimate (not to be exceeded without further authorization): \$89,300

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

(For Authority Use Only)

Authorization Completion:

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

MEMORANDUM

Date: October 3, 2023

To: LCA Board of Directors
Liesel Gross, C.E.O.
From: Albert J. Capuzzi, Director of Engineering & Asset Management
Subject: Suburban Division: Sand Spring WWTP: Treatment Process Modification

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization – Construction Phase	\$370,000
1A*	General Contract – Construction & Support Services – Blooming Glen Contractors, Inc.	\$350,000

**Included in the Capital Project Authorization*

BACKGROUND:

The existing Sand Spring Wastewater Treatment Plant (WWTP) receives flows and organic loads substantially higher than it was originally designed to treat. As a result, since the plant went into service in May 2021, it has incurred numerous permit violations. Tetra Tech Inc. completed a study in April 2023 for Lehigh County Authority (LCA) that identified the underlying causes for non-compliance and provided recommended short-term and long-term measures to help improve the performance. Some of Tetra Tech's recommendations were included in the compliance plan that LCA submitted to the Pennsylvania Department of Environmental Protection (DEP) for their review in April 2023. LCA staff also met with DEP to discuss long-term concerns regarding the high flows received at the Sand Spring WWTP, which may need to be addressed via an Act 537 Plan. LCA and North Whitehall Township have agreed to partner together to complete the Act 537 Plan, which will address the Sand Spring service area as well as all other sewer service needs in the Township. DEP has expressed support for the Act 537 planning approach, but no official response has been received to date regarding the Sand Spring WWTP compliance plan.

While the Act 537 planning process will address long-term needs of the system, LCA plans to implement the short-term treatment modifications outlined in the Tetra Tech study. These short-term measures are intended to reduce the number of permit violations. Additionally, Tetra Tech believes that the short-term measures may improve treatment performance sufficiently well to obviate the need for plant expansion, which would be a significant cost savings.

In July 2023, the LCA Board of Directors authorized design and construction phase engineering services to be completed by Tetra Tech. Since that time, Tetra Tech has completed required system modeling to confirm design specifications, engineering and final design work, and construction details have been developed. To enable construction to be completed in time for

the winter period, which is critical for the demonstration of the system's effectiveness in enhancing settling and nitrification processes, construction services must begin immediately.

PROJECT OVERVIEW:

The plant modifications to be implemented in this project will serve to intensify the treatment process and allow for enhanced plant performance without expanding the footprint of the facility or adding additional tanks. The recommended treatment methodology, integrated fixed film activated sludge (IFAS), involves adding a new carrier media to the existing treatment process to permit biological growth that quickly settles to the bottom of the reactors. The carrier is depicted in the photo at right. This improved settling process will result in enhanced nitrification, which will greatly increase the plant's performance and permit compliance related to ammonia. The work includes the installation of new mixers, media, supports, instrumentation, electrical and instrumentation and controls.



The IFAS process adds High Density Polyethylene media, as depicted here to the process basins.

THIS APPROVAL – CONSTRUCTION RELATED WORK:

Blooming Glen Inc. is approved to complete this work via the Co-Stars program, so no bidding process was completed. This contractor has worked on several projects with LCA in the past and have performed to a high degree of satisfaction by LCA staff.

The following work is planned in this Construction Phase of this project:

- Procurement and installation of 40 cubic meters of carrier media
- Procurement and installation of two mixers, mixer supports, diffuser supports, chemical piping, and goosenecks
- Fabrication and installation of stainless-steel screens for two waste activated sludge pumps
- Installation of electrical conduit, wiring, and terminations
- Upgrade all blower drives and motors

Ammonia and mixed liquor suspended solids probes will be installed by Hach (probe supplier) as part of this project as well, with integration into LCA's existing supervisory control and data acquisition (SCADA) system.

FINANCIAL:

The costs for the work in 2023 will be paid for from General Sewer System Improvements project budget.

PROJECT STATUS:

Engineering design is complete. Construction is pending Board approval of this work.

PRIOR AUTHORIZATIONS:

Design and construction support services were authorized in July 2023. Authorizations to date including preliminary study completed in early 2023 total \$232,881.

TOTAL AUTHORIZATIONS (INCLUDING THIS AUTHORIZATION): \$602,881

FUTURE AUTHORIZATIONS:

None

PROJECT SCHEDULE:

Assuming Board approval at the October 9, 2023 meeting, construction is expected to be completed by January 2023. Thereafter, the demonstration period will run for approximately eight months, with a report of results to be issued by Tetra Tech in September 2024.

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	<u>SD-S-19</u>	BUDGET FUND:	<u>Suburban Div\Wastewater\Capital</u>
PROJECT TITLE:	<u>Suburban Division – Sand Spring WWTP – Process Intensification Study</u>	PROJECT TYPE:	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input type="checkbox"/> Amendment
THIS AUTHORIZATION:	<u>\$370,000</u>		
TO DATE (W/ ABOVE)	<u>\$602,881</u>		

DESCRIPTION AND BENEFITS:

Suburban Division – Study and Demonstration Testing to improve the performance of the Sand Spring WWTP.

The plant modifications to be implemented in this project will serve to intensify the treatment process and allow for enhanced plant performance without expanding the footprint of the facility or adding additional tanks. The recommended treatment methodology, integrated fixed film activated sludge (IFAS), involves adding a new media to the existing treatment process to permit biological growth that quickly settles to the bottom of the reactors. This improved settling process will result in enhanced nitrification, which will greatly increase the plant's performance and permit compliance related to ammonia.

See attached Board Memo for further project details.

Authorization Status:

Requested This Authorization	
Staff	\$20,000
Construction Services - Blooming Glen Inc.	\$243,000
Instrumentation & SCADA Programming	\$50,000
Contingency	\$57,000
Total This Authorization	\$370,000

Prior Authorizations	\$232,881
Future Authorizations (estimated)	0
Total Estimated Project	\$602,881

REVIEW AND APPROVALS:

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

Lehigh County Authority – Monthly Report to Board of Directors

Upcoming Board Agenda Items & Project Updates – October 2023

Published: October 2, 2023

PART 1 – Upcoming Agenda Items – Action & Discussion Items

FINANCE & ADMINISTRATION

Project Title: 2024-2028 Capital Plan

Division / Funding: All Divisions

Status or Action Desired: Approval

Board Action Date: 10/9/2023

Project Phase: n/a

Project Notes: The preliminary 2024-2028 Allentown Division, Administration, and Suburban Division Capital Plans were presented to the Board for review and comment in August. Following these Board presentations, the draft Capital Plans have been distributed for a public comment period through the end of September, and Board approval will be requested at the October 9, 2023 meeting. Staff Responsibility: Chuck Volk & Ed Klein

Project Title: 2024 Budget

Division / Funding: All Divisions

Status or Action Desired: Approval

Board Action Date: 10/9/2023 & 10/23/2023

Project Phase: n/a

Project Notes: The Board will receive a second presentation on the proposed 2024 Budget and preliminary rates, and review the schedule for the remainder of the budget process including seeking approval at the last meeting in October. Staff Responsibility: Liesel Gross & Ed Klein

Project Title: WLI User Charge Report

Division / Funding: Suburban Division

Status or Action Desired: Approval

Board Action Date: 10/9/2023

Project Phase: n/a

Project Notes: The Western Lehigh Interceptor (WLI) User Rates will be presented to the Board for review and preliminary approval. The rates will be presented to the municipal signatories for comment, and final rates incorporated into the 2024 Budget. Staff Responsibility: Jennifer Montero

Project Title: LCA Munis ERP System Planning & Re-ImplementationDivision / Funding: All DivisionsStatus or Action Desired: ApprovalBoard Action Date: 10/23/2023Project Phase: Planning Phase

Project Notes: Within the 2022-2027 Strategic Plan, LCA has identified the need to improve its administrative and financial processes to eliminate paper-based and spreadsheet-based processes, improve reporting accuracy and efficiency, and provide greater opportunity for self-service access for employees and customers. A key component of this initiative is to evaluate the configuration and use of the Enterprise Resource Planning (ERP) system currently in place, Munis, to determine if the system can meet LCA's needs. At the April 11, 2022 Board meeting, approval was granted for a professional services authorization for Raftelis to assist with this evaluation and needs analysis. The needs analysis was completed in July 2022, with a recommendation presented to LCA for several next steps leading to a full re-implementation of Munis. At the September 12, 2022 Board meeting, authorization was granted for Raftelis to move forward with planning tasks, detailed business process review steps, and Munis re-implementation program support. Over the past year, significant additional work has been completed internally, and with Raftelis support, to prepare for this project. A contract with Tyler Technologies for implementation support services for the project to re-implement the Munis system with new modules and integrations, has been prepared and will be presented to the Board for approval in October 2023. Staff Responsibility: Chris Moughan & Brooke Neve

Project Title: Monthly Financial ReviewDivision / Funding: n/aStatus or Action Desired: DiscussionBoard Action Date: 10/23/2023Project Phase: n/a

Project Notes: The September 2023 monthly financial report will be presented. Staff Responsibility: Ed Klein

Project Title: LCA Strategic Plan - 2023 Quarterly Progress ReportingDivision / Funding: All DivisionsStatus or Action Desired: DiscussionBoard Action Date: 11/13/2023Project Phase: n/a

Project Notes: A quarterly report of staff progress on key initiatives outlined in LCA's Strategic Plan will be presented for Board review and discussion. Staff Responsibility: Liesel Gross

SYSTEM OPERATIONS

Project Title: Monthly Operations ReportDivision / Funding: n/aStatus or Action Desired: DiscussionBoard Action Date: 10/23/2023Project Phase: n/a

Project Notes: The September 2023 monthly operations report will be presented. Staff Responsibility: Andrew Moore & Chris Moughan

WATER PROJECTS – ALLENTOWN DIVISION

Project Title: 30" & 36" East Side Transmission Main Repair Project

Division / Funding: Allentown Division

Board Action Date: 10/9/2023

Status or Action Desired: Approval

Project Phase: Design Phase

Project Notes: The LCA Board authorized the 30" and 36" East Side Transmission Main leak detection study phase on 6/13/2022 to identify the condition of this critical asset and determine the need for repairs and or spot replacements. Six leak sites were identified in the study, and repair work must be planned carefully to ensure customers remain in service during the project construction. Design phase authorization to address all six identified leak sites will be requested at the 10/9/2023 LCA Board meeting. Staff Responsibility: Jason Peters

WASTEWATER PROJECTS – SUBURBAN DIVISION

Project Title: Western Lehigh Manhole Rehabilitation Project - Phase 4

Division / Funding: Suburban Division

Board Action Date: 10/23/2023

Status or Action Desired: Approval

Project Phase: Construction Phase

Project Notes: This project involves the rehabilitation of key manholes in the Western Lehigh Interceptor Service Area. The project includes flood-proofing and exterior concrete work and sealing of manholes, particularly those manholes in close proximity to the floodway, which experience floodwater inundation. The purpose of the project is to eliminate floodwater inflow into the system. The project scope for Phases 1 - 3 included approximately 150 manholes that were rehabilitated over the past three years. Design of Phase 4 of this project includes approximately 180 additional manholes to be rehabilitated by late spring 2024. This project will be funded in part by a \$200,000 grant awarded to LCA through the Local Share Account program administered by the Commonwealth Financing Authority. Construction phase authorization will be requested at the 10/23/2023 LCA Board meeting. Staff Responsibility: Jason Peters

Project Title: Park Pump Station Phase 2 Upgrade

Division / Funding: Suburban Division

Board Action Date: 10/23/2023

Status or Action Desired: Approval

Project Phase: Construction Phase

Project Notes: The Park Pump Station Phase 1 Upgrade was completed in early 2020, and consisted of new pumps, new pump control center with variable frequency drives, new automatic transfer switch, new wet well level control system, upgraded HVAC system, roof replacement, and related mechanical improvements. The existing 40-year-old generator does not have the capacity to handle the full loads of the upgraded station at 100% design flow and is at the end of its useful life. The Phase 2 Upgrade project consists of replacement of the original station backup generator system. Authorization for Phase 2 design phase was granted at the 3/22/2021 Board meeting. Design was completed in early 2022 and the project was advertised for bid in May 2022 and bids were opened in June. No bid was received for the General Contract. Construction phase authorization for the Electrical Contract was granted at the 6/27/2022 LCA Board meeting. Delivery of the new natural gas generator is anticipated for March 2024. The General Contract was re-advertised for bid in September 2023. Construction phase authorization for the GC contract will be requested at the 10/23/2023 Board meeting. Staff Responsibility: Amy Kunkel

Project Title: LCA-Upper Macungie Township Sewage Transportation AgreementDivision / Funding: Suburban DivisionBoard Action Date: 10/23/2023 or
11/13/2023Status or Action Desired: ApprovalProject Phase: n/a

Project Notes: The Upper Western Lehigh Pump Station and Force Main project is in the final design and permitting stage and is anticipated to be bid later this year. The project is an interim solution to relieve the flow-restricted areas of the Western Lehigh Interceptor located in Trexlertown. A dry-weather pump station will be constructed at LCA's Pretreatment Plant in Fogelsville, and flows pumped through a force main to discharge into an Upper Macungie Township sewer trunkline, which carries flows from both Upper Macungie and Lower Macungie Townships. A sewage transportation agreement between LCA and the Townships has been developed to document this arrangement, which will continue for a limited time period until a long-term solution is constructed, as will be detailed in the regional Act 537 Plan currently under development. At the October 23, 2023 meeting, LCA's Board will be asked to consider the sewage transportation agreement for approval. Staff Responsibility: Liesel Gross

WASTEWATER PROJECTS – ALLENTOWN DIVISION**Project Title: Kline's Island WWTP: 2023-2024 Architectural and Structural Upgrades**Division / Funding: Allentown DivisionBoard Action Date: 10/23/2023Status or Action Desired: ApprovalProject Phase: Construction Phase

Project Notes: As a condition of the financing of LCA's up-front concession payment to the City, LCA entered into a Trust Indenture that requires the preparation of an annual Consulting Engineer's Report. The report identifies physical plant repairs and upgrades required, and reflects progress made in addressing deficiencies. This is an annual project that consists of addressing structural deficiencies at KIWWTP. Authorization is to be requested at the 10/23/2023 LCA Board meeting for a construction contract. Staff Responsibility: Amy Rohrbach

WASTEWATER PROJECTS – SUBURBAN DIVISION

Project Title: North Whitehall Township Act 537 Plan

Division / Funding: Suburban Division

Status or Action Desired: Updated

Board Action Date: n/a

Project Phase: Planning Phase

Project Notes: North Whitehall Township and LCA officials have been discussing the need for an updated Act 537 Plan to address long-term sewer service needs in the Township. Sewer service is currently provided via several small developer-built systems, many of which are aging and facing significant performance challenges. LCA owns and operates two of these facilities (Sand Spring and Wynnewood Terrace). The Township and LCA would like to pursue a partnership approach to completing the Act 537 Plan. At the June 12, 2023 meeting, a cost-sharing agreement to initiate and pay for the Act 537 Plan development work was approved by the Board. At the September 11, 2023 Township Board of Supervisors meeting, Barry Isett & Associates was granted approval to complete this work. Planning is under way with an expected completion date of late 2024 or early 2025. Staff Responsibility: Phil DePoe

PART 3 – Open Project List – No Updates

Project Category	Project Title	Division / Funding	Project Phase	Staff Responsibility
Finance & Administration	Asset Management Roadmap & Strategic Asset Management Plan (SAMP)	All Divisions	Planning Phase	Albert Capuzzi
System Operations	Suburban Water Facilities - SCADA System Upgrade	Suburban Division	Construction Phase	Chris Moughan
System Operations	Watershed Monitoring Program	Suburban Division	Ongoing	Andrew Moore
Water - Suburban	Central Lehigh and North Whitehall Systems – Water Supply Study	Suburban Division	Planning Phase	Phil DePoe
Water - Suburban	2022 Commercial Meter Replacement Project	Suburban Division	Construction Phase	Amy Kunkel
Water - Suburban	Water Main Replacement Program Cycle 6	Suburban Division	Construction Phase	Jason Peters
Water - Suburban	Fixed Base Meter Reading Stations	Suburban Division	Planning Phase	Amy Kunkel
Water - Suburban	Upper System Pump Station and Main Extension	Suburban Division	Design Phase	Amy Kunkel
Water - Suburban	North Whitehall Meter Replacement	Suburban Division	Construction Phase	Amy Kunkel
Water - Suburban	Water Main Replacement Program Cycle 7 & 8	Suburban Division	Design Phase	Jason Peters
Water - Allentown	Large Meter Chamber Replacement	Allentown Division	Construction Phase	Amy Kunkel
Water - Allentown	Water Filtration Plant: PFAS Compliance Study	Allentown Division	Planning Phase	Albert Capuzzi
Water - Allentown	Water Main Replacement Program Cycles 7 & 8	Allentown Division	Design Phase	Jason Peters
Water - Allentown	Large Diameter Valve Rehabilitation & Replacement Program	Allentown Division	Design Phase	Chuck Volk
Water - Allentown	Lead Service Line Replacement Program Planning	Allentown Division	Planning Phase	Andrew Moore

Project Category	Project Title	Division / Funding	Project Phase	Staff Responsibility
Water - Allentown	Water Main Replacement Program Cycle 6	Allentown Division	Construction Phase	Jason Peters
Water - Allentown	Water Filtration Plant: Filter Upgrade Project	Allentown Division	Design Phase	Chuck Volk
Water - Allentown	Water Filtration Plant: 2022-2023 Indenture Upgrades	Allentown Division	Construction Phase	Chuck Volk
Sewer - Act 537	Kline's Island WWTP - High-Rate Wet-Weather Treatment Pilot Study	Allentown Division	Planning Phase	Phil DePoe
Sewer - Act 537	Sanitary Sewer Collection System: City of Allentown Manhole Inspections	Allentown Division	Planning Phase	Phil DePoe
Sewer - Act 537	Sanitary Sewer Collection System: City of Allentown Interceptor Inspections	City of Allentown (AO)	Planning Phase	Phil DePoe
Sewer - Act 537	Regional Sewer Capacity & Wet-Weather Planning - Regional Act 537 Plan Preparation	City of Allentown (AO)	Planning Phase	Phil DePoe
Sewer - Act 537	KISS System Modeling - Final Alternatives Analysis (FAA)	City of Allentown (AO)	Planning Phase	Phil DePoe
Sewer - Act 537	KISS Act 537 Planning - Financial & Institutional Evaluation, Phase 2	City of Allentown (AO)	Planning Phase	Liesel Gross
Sewer - Act 537	KISS System Modeling - Preliminary Screening of Alternatives (PSOA)	City of Allentown (AO)	Planning Phase	Phil DePoe
Sewer - Act 537	Kline's Island WWTP: Phase 1 AO Design Improvements	City of Allentown (AO)	On Hold	Phil DePoe
Sewer - Act 537	KISS System Modeling - Sewage Billing Meter QA/QC Data Analytics and 2021 Flow Metering Preparation	City of Allentown (AO)	Planning Phase	Phil DePoe
Sewer - Act 537	Regional Sewer Capacity & Wet-Weather Planning: Engineering & Program Support	Suburban Division	Planning Phase	Phil DePoe
Sewer - Act 537	Industrial Pretreatment Plant Master Plan	Suburban Division	Planning Phase	Phil DePoe
Sewer - Act 537	Western Lehigh Interceptor Municipalities Test & Seal Lateral Grouting Project	Suburban Division	Construction Phase	Jason Peters
Sewer - Act 537	Upper Western Lehigh Pump Station & Force Main	Suburban Division	Design Phase	Amy Kunkel

Project Category	Project Title	Division / Funding	Project Phase	Staff Responsibility
Sewer - Act 537	Western Lehigh Service Area - Engineering & Program Support	Suburban Division	Planning Phase	Phil DePoe
Sewer - Suburban	Lynn Township WWTP Final Clarifier Project	Suburban Division	Design Phase	Chuck Volk
Sewer - Suburban	Heidelberg Heights Sanitary Sewer Consent Order & Agreement	Suburban Division	Construction Phase	Jason Peters
Sewer - Suburban	Spring Creek Pump Station Upgrades	Suburban Division	Design Phase	Amy Kunkel
Sewer - Suburban	Pretreatment Plant (PTP) Electrical Study	Suburban Division	Planning Phase	Albert Capuzzi
Sewer - Suburban	Heidelberg Heights Wastewater Treatment Plant - Mechanical Screen Project	Suburban Division	Construction Phase	Chuck Volk
Sewer - Suburban	Spring Creek Force Main Relocation - PA Turnpike Commission	Suburban Division	Design Phase	Amy Kunkel
Sewer - Suburban	Lynn Township Corrective Action Plan	Suburban Division	Ongoing	Jason Peters
Sewer - Allentown	Kline's Island WWTP: Substation No. 1 and Switchgear Replacement	Allentown Division	Design Phase	Amy Rohrbach
Sewer - Allentown	Kline's Island WWTP: Main and Auxiliary Pump Station Improvements	Allentown Division	Preliminary Design	Amy Rohrbach
Sewer - Allentown	Kline's Island WWTP: Primary Digester No. 2 Cleaning and Rehabilitation Project	Allentown Division	Construction Phase	Chuck Volk
Sewer - Allentown	Sanitary Sewer Collection System: I&I Source Reduction Program (LCA Year 1)	Allentown Division	Design Phase	Albert Capuzzi
Sewer - Allentown	Kline's Island WWTP: Effluent Disinfection and Dechlorination System Improvements	Allentown Division	Construction Phase	Chuck Volk
Sewer - Allentown	Kline's Island WWTP: Solids Process Boiler and HVAC System Upgrade Project	Allentown Division	Construction Phase	Chuck Volk
Sewer - Allentown	Kline's Island WWTP: Wet Weather Capacity Enhancements - Tertiary Bypass	Allentown Division	Preliminary Design	Chuck Volk
Sewer - Allentown	Kline's Island WWTP: Intermediate Pump Station Improvements	Allentown Division	Preliminary Design	Chuck Volk

Project Category	Project Title	Division / Funding	Project Phase	Staff Responsibility
Sewer - Allentown	Lehigh Street (Rte. 145) Water and Sewer Main Relocation Project	Allentown Division	Construction Phase	Jason Peters
Sewer - Allentown	Sanitary Sewer Collection System: I&I Source Reduction Program (City Year 4)	City of Allentown (AO)	Construction Phase	Phil DePoe