



LCA Main Office:
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Agendas & Minutes Posted:
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LEHIGH COUNTY AUTHORITY

Published: June 17, 2024

BOARD MEETING AGENDA – June 24, 2024 – 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

- *June 10, 2024 Board Meeting minutes*

4. Public Comments

5. Action / Discussion Items:

FINANCE AND ADMINISTRATION

- *2024 Staffing Additions (Discussion & Approval) (digital Board packet, pages 8-11)*

WATER

WASTEWATER

- *Suburban Division – Spring Creek Pump Station Upgrades (Approval) (blue) (digital Board packet, pages 12-16)*
- *Allentown Division – Emergency Declaration: Kline's Island Digester Gas Line Repair (Approval) (green) (digital Board packet, page 17)*

6. Monthly Project Updates / Information Items (1st Board meeting per month) (digital Board packet, pages)

7. Monthly Financial Review (2nd Board meeting per month) (digital Board packet pages 18-30) – **May 2024 report attached**

8. Monthly System Operations Overview (2nd Board meeting per month) (digital Board packet, pages 31-40) – **May 2024 report attached**
9. Staff Comments
10. Solicitor's Comments
11. Public Comments / Other Comments
12. Board Member Comments
13. Executive Sessions
14. Adjournment

UPCOMING BOARD MEETINGS		
July 8, 2024	July 22, 2024	August 12, 2024

PUBLIC PARTICIPATION POLICY

In accordance with Authority policy, members of the public shall record their name, address, and discussion item on the sign-in sheet at the start of each meeting; this information shall also be stated when addressing the meeting. During the Public Comment portions of the meeting, members of the public will be allowed 5 minutes to make comments/ask questions regarding non-agenda items, but time may be extended at the discretion of the Chair; comments/questions regarding agenda items may be addressed after the presentation of the agenda item. Members of the public may not request that specific items or language be included in the meeting minutes.

REGULAR MEETING MINUTES

June 10, 2024

The Regular Meeting of the Lehigh County Authority Board of Directors was called to order at 12:00 p.m. on Monday, June 10, 2024, 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, Ted Lyons, Norma Cusick, Kevin Baker, Linda Rosenfeld, Sean Ziller, and Marc Grammes were present for Roll Call, and remained for the duration of the meeting. Jeff Morgan joined the meeting at 12:48 p.m.

Attorney Kevin Reid, the Authority's Solicitor, was present along with Authority Staff, Liesel Gross, Ed Klein, Chris Moughan, AJ Capuzzi, Phil DePoe, Chuck Volk, Susan Sampson, 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 announced that there are no changes to the agenda but there will be an Executive Session after the close of the regular session to discuss a personnel matter.

APPROVAL OF MINUTES

May 20, 2024 Meeting Minutes

On a motion by Linda Rosenfeld, seconded by Amir Famili, the Board approved the minutes from the May 20, 2024 meeting as written (7-0). Ted Lyons abstained.

PUBLIC COMMENTS

None.

Disposition of Real Property

Chuck Volk provided an overview of the request of sale of Authority property at 4475 Far View Court, the prior location of an Authority groundwater supply well and pump station that was abandoned following the 2021 construction of a new pump station in the vicinity. The abandoned pump station building, underground storage tanks, and piping were demolished and removed, along with the abandonment of the wellheads. The property has been restored, served no other Authority purpose, and is ready for sale. Amir Famili asked if soil remediation is required for this site. Mr. Volk said that remediation is not required.

On a motion by Amir Famili, seconded by Linda Rosenfeld, the Board authorized the CEO to take all steps necessary and convenient to sell, transfer, and dispose of real property owned by the Authority located at 4475 Far View Ct., Emmaus, PA 18049, Parcel ID #548396196984-1, including a listing agreement with a licensed realtor, entering an Agreement of Sale, and executing a deed conveying the property (8-0).

Sanitary Sewer Collection System: City of Allentown Interceptor Inspections

Phil DePoe gave an overview of the Allentown Division 2024 Interceptor Inspection project, which is the next major data collection effort to continue the assessment of the condition of the existing interceptors. The proposed 2024 inspection will focus on four of the Allentown Division's main sewer interceptors, approximately 32,000 feet, all located on the eastern side of the Allentown sewer system. The inspections will utilize multi-sensor inspection (MSI) platforms, using closed-circuit television (CCTV), sound navigation and ranging (SONAR), and light detection and ranging (LiDAR) to detect interceptor size, geometry, and defects. A report of the interceptor condition assessment will be provided using various post-processing data techniques. The project is necessary to find the sources of groundwater infiltration into the sewer system and also to understand the overall condition and remaining useful life of the interceptors.

There was some discussion regarding alternative bids. There was also some discussion on the different approaches proposed by the two consulting firms that proposed on the project.

On a motion by Sean Ziller, seconded by Marc Grammes, the Board approved the Capital Project Authorization – Allentown Division – City of Allentown 2024 Interceptor Inspections in the amount of \$615,400.00 which includes the Professional Services Authorization to AECOM for the 2024 Interceptor Inspections in the amount of \$535,400.00 (8-0).

KISS Act 537 Planning: Financial & Institutional Evaluation Phase 3

Liesel Gross provided an overview and background of the Kline's Island Sewer System (KISS) Act 537 Financial & Institutional Planning and explained the phased approach to developing the financial analysis. The Act 537 Plan will be comprehensive, covering future service needs for all 15 KISS municipalities. The total cost of the projects included in the plan is currently estimated to be \$600 million, and this requires careful review of how the municipalities will share these costs and how sewer rates in each community will be affected. Phases 1 and 2 of the financial analysis have been completed; however, the KISS municipalities have not reached agreement on the future cost-sharing approach that would be acceptable to all parties. Therefore, the financial analysis work was paused in January 2024 to allow for additional discussion and exploration.

Raftelis has been engaged since 2022 to develop the financial model and work with the KISS municipalities on the cost-sharing alternatives analysis. The Authority is recommending the engagement with Raftelis be extended to Phase 3 work. The tasks in Phase 3 of the project include: refresh of the financial model with most current data; update cost allocation alternative results with a revised capital plan; additional analysis to support negotiations of the cost sharing approach; develop Act 537 long-term financial and financing plan; develop annual KISS system revenue requirements for KISS municipalities; other implementation considerations and analysis; and prepare financial sections of the Act 537 Plan.

There was some Board discussion regarding the municipal agreements and cost-sharing, and flow and rate projections. There was also some discussion regarding the pretreatment plant upgrade costs. Liesel Gross explained that the pretreatment plant has been at the center of some of the KISS discussions since January 2024, due to the high cost of that project and the uncertainty around how those costs will be shared with users. More work has been done since January to analyze cost-sharing options with the industrial customers of the pretreatment plant, which will be incorporated into this next phase of financial analysis.

On a motion by Sean Ziller, seconded by Norma Cusick, the Board approved the Capital Project Authorization - KISS Act 537 Plan Financial & Institutional Evaluation – Phase 3 Consultant Services in the amount of \$238,000.00, which includes the Professional Services Authorization – Financial & Institutional Evaluation Services – Raftelis in the amount of \$193,000.00 (8-0)

Upper Western Lehigh Pump Station & Force Main

Chuck Volk provided an overview of the project that is part of the KISS Interim Act 537 plan to temporarily resolve the interceptor capacity deficiencies known as the “Trexlerstown bottleneck.” The project consists of a 2.5 million gallon per day capacity pump station located near the pretreatment plant and 1.52 miles of 18-inch diameter force main connecting to the Upper Macungie Trunk Line. The pump station and force main will divert dry day flow from the Western Lehigh Interceptor to a sanitary trunk line owned by Upper Macungie Township. The Township is in agreement with this approach and construction of the force main is already under way in accordance with prior Board authorization. The authorization requested today relates to the construction of the pump station, and Mr. Volk reviewed the bidding process and results.

On a motion by Ted Lyons, seconded by Linda Rosenfeld, the Board approved the Capital Project Authorization for the Construction Phase in the amount of \$2,429,212.00 which includes the Construction Contract 1 – General/Process Mechanical to Blooming Glen Contractors Inc. in the amount of \$1,953,607.00, the Construction Contract 2 – Electrical to Ace Electric, Inc. in the amount of \$169,400.00, the Construction Contract 3 – Mechanical/HVAC to Johnston Construction Company in the amount of \$38,655.00, Professional Services Authorization – Construction Phase Engineering to Entech Engineering in the amount of \$109,000.00, and a Professional Services Authorization – Construction Phase Inspection Services to Cowan Associates, Inc. in the amount of \$38,550.00 (8-0).

Kline’s Island WWTP: Wet Weather Improvements – Phase 1

Chuck Volk provided the background information for the project noting that the goal for the project is to increase wet-weather treatment capacity from approximately 87 million gallons per day (mgd) to 100 mgd to reduce the frequency of plant bypasses using Outfall 003 during extreme wet-weather events. Amy Rohrbach gave a presentation and explained the three components of the project: the main and auxiliary pump stations, the intermediate pump stations, and the tertiary bypass. These three projects were previously listed as separate projects; however, upon review and also discussion with the City of Allentown, it was determined that the project would be constructed more efficiently if managed in a consolidated manner. The total project cost is estimated to be \$27 million.

Phil DePoe commented that Pa. Department of Environmental Protection does not require this project to be included in the regional Act 537 Plan that is under development and can move forward through a normal permitting process. Liesel Gross added that these projects were previously identified in the Master Plan for the Kline’s Island WWTP due to the age of the pumps. Due to the complexity of the project, a facility tour will be scheduled for interested Board members later in the design process.

Amir Famili asked about the impact of inflow and infiltration (I&I) on the need for this project and other future plant upgrades. Staff members reviewed the requirements for the municipalities to focus on removing I&I from their sewer collection systems. In addition, some projects are needed to remove bottlenecks in the interceptor system that prevent sewage flows from entering the treatment plant. Addressing those interceptor bottlenecks will also increase wet-weather flows at the plant. There are additional projects planned to further increase the wet-weather capacity at the treatment plant to 132 mgd, and those improvements will be included in the Act 537 Plan.

Marc Grammes asked about the pump configurations and impact to operations and maintenance. Amy Rohrbach reviewed the hydraulic modeling process that was completed in prior phases of conceptual design for this project. Additional improvements were added to the project scope to address issues identified through this modeling work. She also noted the recommendation for a

third-party QA/QC to be conducted on the electrical design work to ensure power loadings and safety were properly addressed within the final project design.

On a motion by Norma Cusick, seconded by Amir Famili, the Board approved the Capital Project Authorization for Final Design and Bidding Phase in the amount of \$1,181,575.00 which includes the Professional Services Authorization to Kleinfelder, Inc. in the amount of \$994,450.00, and a Professional Services Authorization to Current Solutions in the amount of \$97,125.00 (9-0).

MONTHLY PROJECT UPDATES / INFORMATION ITEMS

Liesel Gross noted that there are numerous items for the June 24 meeting and also reminded the Board that there will be an additional discussion regarding staffing needs primarily related to addressing the Authority's expanding capital project load. Staff will also present the Suburban Water and Wastewater tapping fees for Board approval.

STAFF COMMENTS

Liesel Gross updated the Board on the June 5 stakeholder meeting held with regional representatives to discuss the Authority's Industrial Pretreatment Plant. The meeting was well attended and there was a healthy dialogue with the industries regarding upgrade options for the plant. The next meeting is June 26 to continue the conversations. Ted Lyons commented that it was a good session and he was impressed by the concern of everyone serving on the panel to work together to keep existing industries in the Lehigh Valley.

SOLICITOR'S COMMENTS

None.

PUBLIC COMMENTS / OTHER COMMENTS

None.

BOARD MEMBER COMMENTS

Chairman Nagle announced that the Authority received the Area Wide Optimization Program (AWOP) award at the Water Filtration Plant for its 17th year in a row. The award is presented to participants that meet the stringent American Water Works Association Partnership program's water quality standards. The Authority also received the award for Excellence in Financial Reporting, presented to Lehigh County Authority and the Chief Financial Officer, Edward Klein, by the Government Finance Officers Association (GFOA). The Authority has received this award for its annual comprehensive financial report every year since 1984.

EXECUTIVE SESSION

There will be an Executive Session after the regular meeting to discuss personnel matters.

ADJOURNMENT

There being no further business, the Chairman adjourned the meeting at 1:19 p.m.

Jeffrey J. Morgan
Secretary

MEMORANDUM

TO: LCA Board of Directors
FROM: Liesel Gross, CEO
DATE: June 17, 2024
RE: 2024 Staffing Additions

Approval Requested: Four New LCA Staff Positions (described below)

Background

Since 2013, when Lehigh County Authority (LCA) entered into the 50-year Water & Sewer Lease with the City of Allentown, the organization has undergone significant transformation and growth. It has been through a process of discovery and thoughtful planning that LCA has evolved to create internal and external capacity to achieve its mission of protecting public health and the environment through the provision of high-quality, safe, and reliable water and wastewater services.

For much of the 11 years that have passed since entering into the Allentown lease, staff development has focused on enhancing internal capacity to manage core competencies of a high-performing utility. Staff additions have focused on building upon historically underserved areas of the organization, as illustrated in the summary of positions added during this timeframe:

<u>Staffing Category</u>	<u>Staff Additions</u>
Operations & Maintenance	8
Customer Service & Billing	5
Administration & Finance	3
Compliance	2
Human Resources	2
Planning	1
Inspection Services	1
Technology	1
Total Staff Additions	23

In late 2021, the LCA Board of Directors adopted a new strategic plan that provided vision and direction for the organization, and specific goals in several key areas, including:

- Operational Excellence
- Financial Stewardship
- Customer Engagement & Support
- Regional Collaboration & Leadership
- System Capacity & Reliability
- Employee Engagement & Safety

Tied to these strategic priorities, LCA's annual strategic goals since 2021 have focused on process improvement through technology advancements, asset management, sewer capacity development,

operational compliance enhancements, and employee safety. While some of the new staff positions have generated internal capacity to address these strategic priorities, it has become clear that more support is needed. This memo seeks to outline near-term staffing requirements and a look ahead at some future needs identified to support continued achievement of LCA's critical goals.

Key Drivers – 2024 Staffing Additions

In addition to the goals LCA has set out for the organization through the 2022-2027 Strategic Plan, several high-priority challenges have emerged in recent years that will require significant investment. These investments will include capital funding, of course, but will also greatly expand upon staff responsibilities.

Removing Lead Service Lines – Recent new regulations by the U.S. Environmental Protection Agency (EPA) have focused on new ways to manage lead in drinking water systems across the nation. LCA faces the daunting requirement of replacing up to 14,000 public-side lead (or unknown) service lines and up to 15,000 private-side lead (or unknown) service lines over the next decade. The expense will be huge – estimated to cost approximately \$200 million during this time period. In addition to the cost burden, the project itself will be complex and challenging to implement due to the high volume of variables such as direct customer coordination, private property restorations, permitting, risk-mitigation requirements, post-construction water sampling, and much more.

Kline's Island Sewer System (KISS) – As the process of developing a long-term KISS Act 537 Plan draws toward its conclusion in 2024, LCA has already begun to shift its focus toward project implementation. The projects included in the KISS Act 537 Plan are estimated to cost \$600 million to implement, and are focused on a broad array of project types: treatment plant upgrades, construction of major new relief interceptors, potential upgrade of industrial pretreatment facilities, and a renewed focus on sewer collection system rehabilitation projects throughout the region. LCA's leadership in implementing these projects will be critical to ensuring long-term success of the program, and to ensure future environmental compliance is achieved.

Expanding Capital Requirements – While the two items listed above relate to distinct (albeit very large) programs, the overarching need to develop internal capacity to manage an expanding capital program extends beyond the lead program and the regional Act 537 Plan. New regulatory requirements for water and wastewater treatment of PFAS compounds is another example of the pressures LCA will face in the years ahead. Several critical success factors have been identified to support LCA during a time when capital programs are rapidly expanding, including:

Asset Management: Fully developing a program to prioritize maintenance and capital programs based on asset management principles, which will ensure the lowest life-cycle cost and highest service level over the life of LCA's assets.

Mitigating Rate Impacts: Achieving the expanded workload described in this memo will also require LCA to pay close attention to customer rate impacts, which may be mitigated by more focused attention on the pursuit of grants and development of more robust customer assistance programs.

Building Public Trust: Successful implementation of these expanded capital programs will require broader engagement with the communities LCA serves, building direct relationships with affected customers and developing partnerships with other community organizations that can support LCA's efforts to explain how important these programs are to protecting public health and the environment.

A utility benchmarking study was conducted in late 2023, with a summary of results shared with the Board in May 2024. A survey was conducted among peer utilities of a similar size addressing similar challenges. One of the key takeaways from the study was that LCA's current staffing levels and approaches for the areas described above do not match well with the data provided by peer utilities. In other words, at least on the basis of comparison to other utilities, LCA does not appear to be well positioned to achieve its goals in these critical areas.

LCA Staffing Recommendations:

To address the key drivers discussed above, the following staff additions are recommended:

1. *Lead Project Manager* – Stationed in LCA's Capital Works department, this position would be primarily responsible for managing all aspects of the lead service line replacement program over the next decade or longer. It is expected that broad cross-organizational teamwork and the use of external consultants will also be required to manage the complexities of this important program.
2. *Program Manager, KISS Act 537 Plan* – As the development of the KISS Act 537 Plan draws to a close, this new position will be responsible for managing the program's implementation and will report to the Director of Engineering & Asset Management. The wide variety of project types, as described above, and regulatory oversight of the program will require a dedicated in-house program manager along with broad cross-organizational teamwork and the use of external consultants to implement the program over the next 10-15 years.
3. *Asset Management Engineer* – While LCA's strategic asset management plan (SAMP) was developed in 2023, which provides broad direction for the organization's transformation in this area, there are currently no staff positions dedicated to advancing the program. The creation of an Asset Management Engineer position, reporting to the Director of Engineering & Asset Management, will be important to ensuring the roadmap outlined in the SAMP is achieved and that capital programs are prioritized and planned through a new lens focused on asset management.
4. *Director of Communications & Strategic Partnerships* – Reporting to the Chief Executive Officer, this position will provide dedicated services to advance LCA's strategic initiatives. Initially, the position will focus on the pursuit of grants, development of enhanced customer assistance programs, and enhancing community and stakeholder engagement efforts to support the expanded capital programs described in this memo. Moving forward, the role will expand to other areas of LCA's communications program to grow existing internal and external engagement programs and focus on building public trust and support as rates necessarily increase to support the requirements LCA faces now and in the future.

Financial Review:

No Budget Amendment is required to accommodate these staff additions in 2024. This is due to the positive budget impact of existing vacancies and the expected hiring timeline for these positions in the third quarter of the year or later.

Estimating salaries, benefits and other personnel overhead expenses, the addition of these four positions is expected to increase LCA's personnel budget by approximately \$600,000 in 2025.

Looking Ahead

The recommendations outlined in this memo are focused on developing internal capacity for LCA to manage critical programs now and in the future. Additional internal capacity will be developed through the implementation of other programs and process improvements in 2024 such as the implementation of a new project management system (ProCore) and re-implementation of LCA's enterprise resource planning system (Tyler EERP).

It is important to note that these staff additions recommended for 2024 will be critical in laying the framework for how these large programs will be implemented. Whether sourced internally or externally, it is expected that additional resources will be required to properly manage the expanded project workload that LCA faces over the next 10-15 years, especially in the following areas:

- Lead Replacement Program – field coordination, customer communication & compliance
- Inflow & Infiltration Program Management – municipal coordination & sewer flow monitoring
- Treatment Plant Project Management – large projects at both water and wastewater facilities
- Industrial Pretreatment – managing expanded and/or modified approaches to pretreatment
- Asset Management – advancing programs in asset management & maintenance
- Data & Technology – support to help LCA keep pace with rapidly changing technology
- Process Optimization – engineering support for small systems & environmental compliance
- Communications Support – tactical support for employee, customer, and youth outreach efforts

Staff evaluation of needs will occur annually during the budget development process and presented to the Board of Directors for review and discussion.

MEMORANDUM

Date: June 24, 2024

To: Lehigh County Authority Board of Directors
From: Amy Kunkel, P.E., Project Manager
Subject: Suburban Division - Spring Creek Pump Station Upgrade Project: Construction Phase

MOTIONS / APPROVALS REQUESTED:

No.	Item	Amount
1	Capital Project Authorization – Construction Phase	\$1,120,323.02
2	Construction Contract 1 – General*: Blooming Glen Contractors, Inc.	\$170,723.00
3	Construction Contract 2 – Electrical*: Orlando Diefenderfer Electrical Contractors, Inc.	\$824,600.02
4	Professional Services Authorization – Construction Engineering: Verdantas*	\$55,000

**Included in the Capital Project Authorization.*

PROJECT OVERVIEW:

The Spring Creek Pump Station (SCPS) is a wastewater pumping station with a rated capacity of seven (7) million gallons per day (mgd). The station was constructed in 1996 as a relief facility to eliminate downstream sanitary sewer overflows in a section of the Western Lehigh Interceptor (WLI) through Lower Macungie Township. The station pumps excess flows from the WLI to a tie-in point with the WLI just downstream of Meter Station No. 5 (Keck's Bridge area). The station consists of a masonry control building housing the main control center (MCC), variable frequency drives (VFDs), instrumentation controls, SCADA system and a generator. The control building is located adjacent to the Lehigh Commons Assisted Living Community approximately 750' northeast of the mechanical facilities. The SCPS mechanical station is located near the intersection of Spring Creek Road and Mill Creek Road, within the floodplain of the Little Lehigh Creek in Lower Macungie Township. Wastewater flow from the upstream interceptor channel is diverted into the wet well by two adjustable side by side 30" x 48" weir gates. Three submersible pumps discharge to the Spring Creek Interceptor.

A mechanical improvements project was completed in 2018 which included the installation of a comminutor at the downstream gate into the wet well, replacement of the downstream weir gate, installation of two actuators to motorize the gates through an ultrasonic level detector, and replacement of the Programmable Logic Controllers (PLCs).

As a result of electrical concerns raised by LCA Operations, an Electrical Condition Assessment of the SCPS was performed by Keystone Engineering Group in 2022. The basis of design for this project addresses the near-term recommendations of the Keystone study, to address critical electrical components with a high risk of failure.

Upgrades to the SCPS include the following items:

1. Replace the three VFDs (including wiring between control building and mechanical station), the isolation transformers, and the mini power center. Each of these items were identified in the Electrical Condition Assessment as being in poor condition and/or obsolete.
2. Upgrade the pump station dry well to meet NFPA 820 and PA DEP requirements for ventilation. This was another recommendation from the Electrical Condition Assessment.
3. Modifications to the nine access hatches to make the hatches submergible. The station is adjacent to Spring Creek and is subject to flooding.
4. Two (2) weir gates allow flow to enter the pump station from the Western Lehigh Interceptor. The downstream gate was replaced in 2018. The upstream gate and actuator will be replaced with this project.
5. Install a new manual gate in the interceptor channel to allow all flow to be diverted from the WLI into the pump station, to enable access to the downstream portion of the interceptor for maintenance and emergency repairs.
6. Miscellaneous repairs to the concrete and conduit in the dry well to make watertight.

FUNDING:

This Project will be funded by the LCA Suburban Division

PROJECT STATUS:

Construction Phase of the improvements will begin upon Board approval.

THIS APPROVAL- CONSTRUCTION PHASE

BIDDING SUMMARY

The project consists of two contracts. The project was advertised for bid on May 13, 2024. A pre-bid meeting was held on May 23, 2024. Bids were received via PennBid on June 11, 2024, the results of which are as follows:

Contract 1 – General	
Bidder	Bid Amount
Blooming Glen Contractors, Inc.	\$170,723.00
Iron Hills Construction	\$ 376,000.00

Contract 2 – Electrical	
Bidder	Bid Amount
Orlando Diefenderfer Electrical Contractors, Inc.	\$824,600.02
Albarell Electric Inc.	\$992,555.00

The lowest bid for the General Contract is Blooming Glen Contractors, Inc. (Blooming Glen). Blooming Glen, located in Skippack PA, has completed numerous mechanical water and wastewater projects for LCA, including the Park Pump Station Phase 1 Upgrade and Buss Acres Pump Station Upgrade. Blooming Glen also completed the 2018 SCPS Mechanical Upgrade

Project, and as such they are familiar with the facility. The bid documents are in order and the firm is qualified to perform the work.

The lowest bid for the Electrical Contract is Orlando Diefenderfer Electrical Contractors, Inc. (Diefenderfer). Diefenderfer, located in Allentown PA, has completed numerous water and wastewater electrical contracts for LCA, including the KIWWTP Hypochlorite Conversion Project and KIWWTP Solids Process Boiler and HVAC Upgrade. The bid documents are in order and the firm is qualified to perform the work.

The total construction cost based on the sum of the GC contract and EC contract low bid amounts is \$995,323. The Engineer's final design construction cost estimate was \$1,431,060.

PROFESSIONAL SERVICES:

Construction engineering and part-time inspection services are to be performed by Verdantas (formerly Borton Lawson Engineering). Verdantas is the design engineer for the project and the project team is well qualified to perform construction phase engineering.

PROJECT SCHEDULE:

Assuming construction phase approval at the June 24, 2024, LCA Board meeting, it is anticipated that the project will be completed in the summer of 2025.

FUTURE AUTHORIZATIONS:

None anticipated.

CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	SD-S-23-1	BUDGET FUND:	Suburban Div\Wastewater\Capital
PROJECT TITLE:	Spring Creek Pump Station Upgrade Project	PROJECT TYPE:	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input type="checkbox"/> Amendment
THIS AUTHORIZATION:	\$1,120,323.02		
TO DATE (W/ ABOVE)	\$1,310,907.02		

DESCRIPTION AND BENEFITS:

This Capital Project Authorization is for construction phase of the Spring Creek Pump Station Upgrade Project. This project consists of the replacement of the three VFDs and mini power system, upgrades to the dry well to meet ventilation requirements, upgrades to access hatches for submergence, replacement of the upstream weir gate and actuator and installation of a new channel gate, and repairs to concrete and conduits to make watertight.

Reference the attached Board Memorandum for additional information.

Previous Authorizations	
Planning Phase	\$14,100
Design Phase	\$176,484

REQUESTED THIS AUTHORIZATION	
Construction Phase	
Contract 1 – General – Blooming Glen Contractors	\$170,723.00
Contract 2 – Electrical – Diefenderfer Electric	\$824,600.02
Professional Services:	
Construction Engineering and Inspection – Verdantas	\$55,000
Staff	\$20,000
Contingency	\$50,000
Total This Authorization	\$1,120,323.02

Total Estimated Project	\$1,310,907.02
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REVIEW AND APPROVALS:

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



Lehigh County Authority

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

PROFESSIONAL SERVICES AUTHORIZATION Construction Phase

Professional: Verdantas
3897 Adler Place
Bethlehem, PA 18017

Date: June 24, 2024

Requested By: Amy Kunkel

Approvals

Department Head: _____

Chief Executive

Officer: _____

Suburban Division- Spring Creek Pump Station Upgrades

Previous Authorizations - Design Phase: \$119,484.00

This Authorization – Construction Phase: \$55,000

Verdantas (formerly Borton-Lawson Engineering LLC) will provide construction engineering and inspection services for the aforementioned project.

Professional Services
1. Attend Pre-construction and Progress meetings and prepare/distribute minutes.
2. Respond to design related requests for information (RFIs).
3. Log, review, and process shop drawing submittals.
4. Provide Part-Time Inspection Services, including inspection reports.
5. Review proposed changes to the plans with LCA.
6. Review contractor applications for payment; recommend applications for payment.
7. Attend Substantial and Final Completion Inspections and prepare punch lists.
8. Compile and review as-built drawings and O&M manuals from Contractors.

Cost Estimate (not to be exceeded without further authorization): **\$ 174,484**

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

(For Authority Use Only)

Authorization Completion:

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

MEMORANDUM

Date: June 24, 2024

To: LCA Board of Directors
Liesel Gross, CEO

From: Andrew Moore, Director of Plant Operations

Re: Allentown Division - Emergency Declaration: Kline's Island Digester Gas Line Repair

On April 1, 2024, the secondary digester at Kline's Island was taken offline for routine cleaning. The process requires a contractor to remove and dewater the solids within the digester. The process of emptying the digester takes several weeks and was completed in early June. Once the tank is empty and can safely be entered, valves and internal pipes are thoroughly inspected for damage and proper operation.









































On June 5, 2024, the gas retrieval line within the secondary digester was inspected. It was discovered that a brace supporting the gas withdraw line had failed causing the line to misalign. The line is designed to withdraw gas produced by the digestion process from a collection chamber within the digester roof. When the brace failed and the line misaligned, it was damaged by the routine movements of the digester lid.

A catastrophic failure of this line posed a significant risk, potentially allowing sludge to enter the withdraw line and causing extensive damage to downstream equipment. Given the severity of the situation and the tight timeline to bring the digester back online by June 14, 2024, immediate action was necessary. An emergency declaration was administratively approved on June 6, 2024. The repairs were completed by Blooming Glen Contractors Inc. on June 13, 2024, and the digester was able to begin filling on June 14, 2024.

The total cost for the emergency work is estimated to be \$50,000. The LCA Board of Directors is asked to approve this declaration retroactively to June 6, 2024, to cover the expenses already incurred and waive standard purchasing guidelines as a result of acting as expeditiously as possible to address the emergency.

**LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS
MAY 2024**

**LEHIGH COUNTY AUTHORITY
YTD SUMMARY SCORESHEET
APRIL 2024**

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

LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS - SUMMARY
For the Period Ended May 31, 2024

	Consolidated Financial Statements														
	Month					Year To Date					FULL YEAR				
	Actual	Q2 FC	Prior Year	FC Var	PY Var	Actual	Q2 FC	Prior Year	FC Var	PY Var	Q2 FC	Budget	Prior Year	Bud Var	PY Var
Income Statement															
Suburban Water	(19,760)	(128,434)	115,271	108,675	(135,031)	826,706	604,587	1,047,958	222,119	(221,252)	2,348,377	2,019,922	8,266,955	328,455	(5,918,577)
Suburban Wastewater	(196,203)	(122,684)	33,293	(73,519)	(229,496)	(266,209)	(264,907)	502,548	(1,303)	(768,757)	(1,461,583)	(1,632,719)	(334,302)	171,136	(1,127,281)
City Division	(3,522,617)	(4,424,312)	1,525,054	901,694	(5,047,671)	1,859,219	946,568	5,877,391	912,650	(4,018,172)	10,385,586	14,844,627	7,787,339	(4,459,041)	2,598,248
Total LCA	(3,738,580)	(4,675,430)	1,673,618	936,850	(5,412,198)	2,419,715	1,286,248	7,427,897	1,133,467	(5,008,181)	11,272,381	15,231,830	15,719,991	(3,959,449)	(4,447,610)
Cash Flow Statement															
Suburban Water	4,536,087	4,477,466	287,552	58,621	4,248,536	4,665,658	4,476,815	5,000,708	188,842	(335,050)	1,778,377	1,446,849	3,429,573	331,529	(1,651,196)
Suburban Wastewater	3,491,550	2,897,736	1,255,474	593,814	2,236,076	2,076,685	1,435,665	4,737,491	641,020	(2,660,806)	349,361	347,045	2,938,224	2,316	(2,588,863)
City Division	51,122,598	47,816,706	3,236,959	3,305,892	47,885,639	60,635,443	55,256,589	10,429,647	5,378,854	50,205,796	42,821,438	2,940,507	13,827,652	39,880,931	28,993,786
Total LCA	59,150,235	55,191,908	4,779,985	3,958,327	54,370,251	67,377,786	61,169,070	20,167,846	6,208,716	47,209,940	44,949,176	4,734,400	20,195,449	40,214,776	24,753,727
Debt Service Coverage Ratio															
Suburban Water	1.29	0.75	1.80	0.54	(0.51)	2.04	1.80	2.06	0.23	(0.02)	2.10	1.96	3.97	0.14	(1.87)
Suburban Wastewater	3.93	4.40	9.40	(0.48)	(5.47)	5.36	5.26	10.51	0.10	(5.14)	4.80	4.67	9.02	0.14	(4.21)
City Division	(1.24)	(1.97)	2.88	0.73	(4.12)	1.63	1.47	2.58	0.16	(0.94)	2.20	2.13	2.38	0.06	(0.19)

LEHIGH COUNTY AUTHORITY
CONSOLIDATED FINANCIAL STATEMENTS
For the Period Ended May 31, 2024

STATEMENTS OF ACTIVITIES	Consolidated Financial Statements															
	Month				Year To Date				Q2 FULL YEAR FORECAST				Full Year Budget			
	Sub W	Sub WW	City	LCA	Sub W	Sub WW	City	LCA	Sub W	Sub WW	City	LCA	Sub W	Sub WW	City	LCA
Operating Revenues:																
User Charges	1,323,923	1,613,617	4,940,824	7,878,365	6,742,021	8,071,580	22,649,705	37,463,306	17,524,394	19,201,227	56,018,070	92,743,692	17,485,300	19,128,454	55,555,506	92,169,260
Connection & System Charges	63,797	86,018	273,264	423,080	402,545	502,170	1,055,549	1,960,264	1,034,156	1,652,882	3,529,115	6,216,153	950,850	1,695,900	3,609,600	6,256,350
Other Miscellaneous Revenues	36,195	30	82,801	119,026	52,070	135	169,256	221,461	176,276	2,618	86,448	265,342	177,724	2,900	89,800	270,424
Total Operating Revenues	1,423,915	1,699,665	5,296,890	8,420,470	7,196,636	8,573,885	23,874,510	39,645,031	18,734,826	20,856,727	59,633,634	99,225,187	18,613,874	20,827,254	59,254,906	98,696,034
Operating Expenses:																
Personnel	422,542	221,176	1,174,668	1,818,386	1,787,143	795,955	4,890,814	7,473,912	4,271,437	1,740,118	13,927,623	19,939,178	4,269,081	1,766,601	13,986,737	20,022,419
Shared Services - General & Administrative	155,241	52,585	201,769	409,596	398,814	155,153	939,025	1,492,993	1,066,844	428,822	2,446,827	3,942,493	1,136,102	456,840	2,545,190	4,138,132
Utilities	47,153	27,651	136,525	211,330	221,878	132,768	783,201	1,137,847	531,376	320,045	2,018,931	2,870,352	537,998	313,870	2,063,922	2,915,790
Materials and Supplies	90,332	51,439	309,730	451,501	292,298	150,846	1,253,967	1,697,112	1,086,624	472,867	3,280,826	4,840,316	1,197,810	518,722	3,251,300	4,967,832
Miscellaneous Services	382,361	645,219	194,956	1,222,537	1,801,962	2,900,502	625,545	5,328,008	4,706,969	7,492,424	2,332,686	14,532,079	4,806,151	7,631,090	2,397,011	14,834,252
Treatment and Transportation	-	354,278	5,656	359,934	-	1,995,832	5,656	2,001,488	-	4,689,486	11,400	4,700,886	-	4,529,540	11,400	4,540,940
Depreciation and Amortization	297,790	575,538	515,561	1,388,889	1,488,951	2,877,688	2,577,805	6,944,444	3,650,624	7,031,500	6,260,297	16,942,421	3,517,000	7,031,500	6,169,850	16,718,350
Major Maintenance Expenses	-	-	2,952	2,952	-	-	17,462	17,462	-	-	4,000,000	4,000,000	-	-	4,000,000	4,000,000
Other Miscellaneous	-	-	-	-	-	-	-	-	93,100	22,100	-	115,200	93,100	22,100	-	115,200
Total Operating Expenses	1,395,421	1,927,886	2,541,817	5,865,125	5,991,045	9,008,744	11,093,476	26,093,266	15,406,973	22,197,362	34,278,590	71,882,925	15,557,242	22,270,263	34,425,410	72,252,915
Net Operating Profit	28,495	(228,221)	2,755,072	2,555,346	1,205,591	(434,860)	12,781,034	13,551,765	3,327,853	(1,340,635)	25,355,045	27,342,262	3,056,632	(1,443,009)	24,829,496	26,443,119
Non-Operating Income (Expense)																
Interest Income	41,061	49,384	553,531	643,976	204,493	231,506	1,643,493	2,079,492	198,236	202,188	1,397,689	1,798,113	130,452	130,271	984,881	1,245,604
Interest (Expense)	(89,007)	(12,118)	(1,433,824)	(1,534,949)	(586,788)	(61,343)	(7,169,161)	(7,817,292)	(1,174,641)	(178,764)	(19,703,642)	(21,057,047)	(1,167,162)	(185,934)	(19,703,642)	(21,056,738)
Other Miscellaneous	(308)	(5,248)	(5,397,397)	(5,402,953)	3,410	(1,513)	(5,396,147)	(5,394,250)	(3,070)	(144,372)	3,336,495	3,189,053	-	(134,047)	8,733,892	8,599,845
Net Non-Operating Income (Expense)	(48,254)	32,018	(6,277,690)	(6,293,926)	(378,885)	168,650	(10,921,815)	(11,132,050)	(979,475)	(120,948)	(14,969,458)	(16,069,881)	(1,036,710)	(189,710)	(9,984,869)	(11,211,289)
Net Income (Loss)	(19,760)	(196,203)	(3,522,617)	(3,738,580)	826,706	(266,209)	1,859,219	2,419,715	2,348,377	(1,461,583)	10,385,586	11,272,381	2,019,922	(1,632,719)	14,844,627	15,231,830
CASH FLOW STATEMENT																
Cash Flows From Operating Activities																
Operating Revenues	1,423,915	1,699,665	5,296,890	8,420,470	7,196,636	8,573,885	23,874,510	39,645,031	18,734,826	20,856,727	59,633,634	99,225,187	18,613,874	20,827,254	59,254,906	98,696,034
Operating Expenses (ex D&A)	(1,097,631)	(1,352,349)	(2,023,304)	(4,473,284)	(4,502,095)	(6,131,056)	(8,498,209)	(19,131,360)	(11,756,350)	(15,165,862)	(24,018,292)	(50,940,504)	(12,040,242)	(15,238,763)	(24,255,560)	(51,534,565)
Non-Cash Working Capital Changes	(67,357)	3,136,157	(1,527,133)	1,541,667	(199,905)	758,567	(2,381,165)	(1,822,503)	(138,029)	(361,650)	(2,327,630)	(2,827,309)	1	(200,000)	(135,999)	(335,999)
Net Cash Provided by (Used in) Operating Activities	258,927	3,483,474	1,746,453	5,488,854	2,494,637	3,201,396	12,995,136	18,691,169	6,840,447	5,329,215	33,287,712	45,457,374	6,573,633	5,388,491	34,863,347	46,825,470
Cash Flows From Financing Activities																
Capital Contributions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Proceeds New Borrowing	5,241,371	-	55,000,000	60,241,371	5,241,371	-	55,000,000	60,241,371	5,230,000	7,175,000	55,000,000	67,405,000	5,230,000	7,175,000	8,555,508	20,960,508
Interest Payments	(235,171)	(11,643)	(1,099)	(247,913)	(380,382)	(58,966)	(5,540)	(444,887)	(1,167,162)	(185,934)	(13,318,734)	(14,671,830)	(1,167,162)	(185,934)	(13,315,397)	(14,668,493)
Principal Payments	(6,379)	-	(5,206)	(11,585)	(31,813)	(195,325)	(718,185)	(945,323)	(2,254,324)	(1,010,486)	(2,945,000)	(6,209,810)	(2,254,324)	(1,010,486)	(2,945,000)	(6,209,810)
Net Cash Provided by (Used in) Financing Activities	4,999,822	(11,643)	54,993,694	59,981,873	4,829,176	(254,290)	54,276,275	58,851,161	1,808,514	5,978,580	38,736,266	46,523,360	1,808,514	5,978,580	(7,704,889)	82,205
Cash Flows from Capital and Related Activities																
Non-Operating Income (Expenses)	(308)	(5,248)	(5,397,397)	(5,402,953)	3,410	(1,513)	(5,396,147)	(5,394,250)	(3,070)	(144,372)	2,028,271	1,880,829	-	(134,047)	7,425,668	7,291,621
Capital Expenditures, net	(763,414)	(269,417)	(773,683)	(1,806,515)	(2,866,057)	(1,589,414)	(2,883,315)	(7,338,786)	(7,065,750)	(11,516,250)	(32,628,500)	(51,210,500)	(7,065,750)	(11,516,250)	(32,628,500)	(51,210,500)
Net Cash Provided By (Used In) Capital and Related Activities	(763,722)	(274,665)	(6,171,080)	(7,209,468)	(2,862,648)	(1,590,926)	(8,279,462)	(12,733,036)	(7,068,820)	(11,660,622)	(30,600,229)	(49,329,671)	(7,065,750)	(11,650,297)	(25,202,832)	(43,918,879)
Cash Flows From Investing Activities																
Investments Converting To Cash	245,000	735,000	-	980,000	245,000	1,428,000	-	1,673,000	-	749,000	-	749,000	-	500,000	-	500,000
Purchased Investments	(245,000)	(490,000)	-	(735,000)	(245,000)	(939,000)	-	(1,184,000)	-	(249,000)	-	(249,000)	-	-	-	-
Interest Income	41,061	49,384	553,531	643,976	204,493	231,506	1,643,493	2,079,492	198,236	202,188	1,397,689	1,798,113	130,452	130,271	984,881	1,245,604
Net Cash Provided By (Used In) Investing Activities	41,061	294,384	553,531	888,976	204,493	720,506	1,643,493	2,568,492	198,236	702,188	1,397,689	2,298,113	130,452	630,271	984,881	1,745,604
FUND NET CASH FLOWS	4,536,087	3,491,550	51,122,598	59,150,235	4,665,658	2,076,685	60,635,443	67,377,786	1,778,377	349,361	42,821,438	44,949,176	1,446,849	347,045	2,940,507	4,734,400
DEBT SERVICE RATIO																
Debt Service Ratio (Indenture Based)																
Total Operating Revenues	1,323,923	1,613,617	4,940,824	7,878,365	6,742,021	8,071,580	22,649,705	37,463,306	17,524,394	19,201,227	56,018,070	92,743,692	17,485,300	19,128,454	55,555,506	92,169,260
Total Operating Expenses (Cash Based)	(1,097,631)	(1,352,349)	(2,026,256)	(4,476,236)	(4,502,095)	(6,131,056)	(8,515,672)	(19,148,822)	(11,756,350)	(15,165,862)	(24,018,292)	(50,940,504)	(12,040,242)	(15,238,763)	(24,255,560)	(51,534,565)
Interest Income	41,061	49,384	553,531	643,976	204,493	231,506	1,643,493	2,079,492	198,236	202,188	1,397,689	1,798,113	130,452	130,271	984,881	1,245,604
Annual Lease Payment (City)	-	-	(109,019)	(109,019)	-	-	(545,093)	(545,093)	-	-	(1,308,224)	(1,308,224)	-	-	(1,308,224)	(1,308,224)
Total Non-Operating Revenues (Expenses)	99,684	80,800	(5,041,332)	(4,860,847)	458,025	500,792	(4,171,342)	(3,212,524)	1,207,362	1,511,128	3,615,564	6,334,054	1,128,574	1,564,753	3,699,400	6,392,727
Cash Available For Debt Service	367,037	391,452	(1,682,251)	(923,761)	2,902,444	2,672,822	11,061,092	16,636,358	7,173,642	5,748,681	35,704,807	48,627,130	6,704,084	5,584,715	34,676,003	46,964,802
Interest Paid	97,264	15,495	1,109,894	1,222,652	486,318	77,473	5,549,472	6,113,262	1,167,162	185,934	13,318,734	14,671,830	1,167,162	185,934	13,315,397	14,668,493
Debt Retirement (Principal Payments)	187,860	84,207	245,417	517,484	939,302	421,036	1,227,083	2,587,421	2,254,324	1,010,486	2,945,000	6,209,810	2,254,324	1,010,486	2,945,000	6,209,810
Total Debt Service	285,124	99,702	1,355,311	1,740,137	1,425,619	498,508	6,776,556	8,700,683	3,421,486	1,196,420	16,263,734	20,881,640	3,421,486	1,196,420	16,260,397	20,878,303
Debt Service Ratio	1.29	3.93	(1.24)	(0.53)	2.04	5.36	1.63	1.91	2.10	4.80	2.20	2.33	1.96	4.67	2.13	2.25

LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS - SUBURBAN WATER
For the Period Ended May 31, 2024

STATEMENTS OF ACTIVITIES

Operating Revenues:

User Charges	1,323,923	1,248,191	1,164,846	75,732	159,077
Connection & System Charges	63,797	402	437	63,395	63,360
Other Miscellaneous Revenues	36,195	1,951	808	34,244	35,387

Total Operating Revenues

Operating Expenses:

Personnel	422,542	441,340	220,493	18,798	(202,049)
Shared Services - General & Administrative	155,241	96,703	61,723	(58,538)	(93,519)
Utilities	47,153	53,892	49,084	6,739	1,931
Materials and Supplies	90,332	88,831	50,609	(1,501)	(39,724)
Miscellaneous Services	382,361	365,354	315,580	(17,008)	(66,782)
Treatment and Transportation	-	-	-	-	-
Depreciation and Amortization	297,790	233,420	258,527	(64,371)	(39,263)
Major Maintenance Expenses	-	-	-	-	-
Other Miscellaneous	-	-	-	-	-

Total Operating Expenses

Net Operating Profit

Non-Operating Income (Expense)

Interest Income	41,061	10,598	29,973	30,463	11,088
Interest (Expense)	(89,007)	(109,060)	(121,457)	20,053	32,450
Other Miscellaneous	(308)	(976)	(3,320)	668	3,012

Net Non-Operating Income (Expense)

Net Income (Loss)

CASH FLOW STATEMENT

Cash Flows From Operating Activities

Operating Revenues	1,423,915	1,250,544	1,166,090	173,371	257,825
Operating Expenses (ex D&A)	(1,097,631)	(1,046,121)	(697,488)	(51,510)	(400,143)
Non-Cash Working Capital Changes	(67,357)	-	879,634	(67,357)	(946,992)

Net Cash Provided by (Used in) Operating Activities

Cash Flows From Financing Activities

Capital Contributions	-	-	-	-	-
Proceeds New Borrowing	5,241,371	5,230,000	-	11,371	5,241,371
Interest Payments	(235,171)	(385,327)	(586,508)	150,156	351,338
Principal Payments	(6,379)	(7,045)	(6,283)	666	(96)

Net Cash Provided by (Used in) Financing Activities

Cash Flows from Capital and Related Activities

Non-Operating Income (Expenses)	(308)	(976)	(3,320)	668	3,012
Capital Expenditures, net	(763,414)	(574,207)	(494,547)	(189,207)	(268,867)

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

Cash Flows From Investing Activities

Investments Converting To Cash	245,000	-	-	245,000	245,000
Purchased Investments	(245,000)	-	-	(245,000)	244,000
Interest Income	41,061	10,598	29,973	30,463	11,088

Net Cash Provided By (Used In) Investing Activities

FUND NET CASH FLOWS

DEBT SERVICE RATIO

Debt Service Ratio (Indenture Based)

User Charges	1,323,923	1,248,191	1,164,846	75,732	159,077
Operating Expenses (Cash Based)	(1,097,631)	(1,046,121)	(697,488)	(51,510)	(400,143)
Interest Income	41,061	10,598	29,973	30,463	11,088
Annual Lease Payment (City)	-	-	-	-	-
Non-Operating Revenues (Expenses)	99,684	1,377	(2,075)	98,307	101,759

Cash Available For Debt Service

Interest Paid	97,264	97,264	108,179	-	(10,916)
Debt Retirement (Principal Payments)	187,860	187,860	167,545	-	20,315

Total Debt Service

Debt Service Ratio

Month					
Actual	Q2 FC	Prior Year	FC Var	PY Var	
1,323,923	1,248,191	1,164,846	75,732	159,077	
63,797	402	437	63,395	63,360	
36,195	1,951	808	34,244	35,387	
1,423,915	1,250,544	1,166,090	173,371	257,825	
422,542	441,340	220,493	18,798	(202,049)	
155,241	96,703	61,723	(58,538)	(93,519)	
47,153	53,892	49,084	6,739	1,931	
90,332	88,831	50,609	(1,501)	(39,724)	
382,361	365,354	315,580	(17,008)	(66,782)	
-	-	-	-	-	
297,790	233,420	258,527	(64,371)	(39,263)	
-	-	-	-	-	
-	-	-	-	-	
1,395,421	1,279,541	956,015	(115,880)	(439,405)	
28,495	(28,996)	210,075	57,491	(181,580)	
41,061	10,598	29,973	30,463	11,088	
(89,007)	(109,060)	(121,457)	20,053	32,450	
(308)	(976)	(3,320)	668	3,012	
(48,254)	(99,438)	(94,804)	51,184	46,549	
(19,760)	(128,434)	115,271	108,675	(135,031)	

Suburban - Water Year To Date					
Actual	Q2 FC	Prior Year	FC Var	PY Var	
6,742,021	6,659,666	6,387,898	82,355	354,123	
402,545	276,223	170,546	126,322	231,999	
52,070	79,591	34,674	(27,521)	17,396	
7,196,636	7,015,480	6,593,118	181,157	603,518	
1,787,143	1,822,410	1,497,222	35,268	(289,921)	
398,814	393,030	308,184	(5,784)	(90,630)	
221,878	234,519	225,065	12,642	3,187	
292,298	318,569	260,692	26,271	(31,606)	
1,801,962	1,828,869	1,598,040	26,907	(203,922)	
-	-	-	-	-	
1,488,951	1,360,210	1,284,523	(128,741)	(204,427)	
-	-	-	-	-	
-	-	-	-	-	
5,991,045	5,957,608	5,173,726	(33,437)	(817,319)	
1,205,591	1,057,872	1,419,392	147,719	(213,801)	
204,493	146,220	120,034	58,273	84,458	
(586,788)	(603,879)	(501,886)	17,091	(84,901)	
3,410	4,374	10,418	(964)	(7,008)	
(378,885)	(453,285)	(371,434)	74,400	(7,452)	
826,706	604,587	1,047,958	222,119	(221,252)	

Full Year					
Q2 FC	Budget	Prior Year	Bud Var	PY Var	
17,524,394	17,485,300	16,493,151	39,094	1,031,244	
1,034,156	950,850	730,402	83,306	303,754	
176,276	177,724	207,520	(1,448)	(31,245)	
18,734,826	18,613,874	17,431,073	120,952	1,303,753	
4,271,437	4,269,081	3,475,597	(2,356)	(795,840)	
1,066,844	1,136,102	725,136	69,258	(341,708)	
531,376	537,998	489,997	6,622	(41,379)	
1,086,624	1,197,810	688,942	111,186	(397,681)	
4,706,969	4,806,151	4,077,315	99,182	(629,654)	
-	-	-	-	-	
3,650,624	3,517,000	3,898,085	(133,624)	247,462	
-	-	-	-	-	
93,100	93,100	-	-	(93,100)	
15,406,973	15,557,242	13,355,072	150,269	(2,051,901)	
3,327,853	3,056,632	4,076,001	271,221	(748,148)	
198,236	130,452	339,479	67,784	(141,243)	
(1,174,641)	(1,167,162)	(954,076)	(7,479)	(220,566)	
(3,070)	-	4,805,551	(3,070)	(4,808,620)	
(979,475)	(1,036,710)	4,190,954	57,235	(5,170,429)	
2,348,377	2,019,922	8,266,955	328,455	(5,918,577)	

1,423,915	1,250,544	1,166,090	173,371	257,825	
(1,097,631)	(1,046,121)	(697,488)	(51,510)	(400,143)	
(67,357)	-	879,634	(67,357)	(946,992)	
258,927	204,423	1,348,236	54,504	(1,089,309)	
-	-	-	-	-	
5,241,371	5,230,000	-	11,371	5,241,371	
(235,171)	(385,327)	(586,508)	150,156	351,338	
(6,379)	(7,045)	(6,283)	666	(96)	
4,999,822	4,837,628	(592,791)	162,194	5,592,613	
-	-	-	-	-	
5,241,371	5,230,000	6,950,000	11,371	(1,708,629)	
(380,382)	(530,861)	(590,425)	150,479	210,043	
(31,813)	(33,145)	(31,337)	1,332	(477)	
4,829,176	4,665,994	6,328,239	163,182	(1,499,063)	
3,410	4,374	10,418	(964)	(7,008)	
(2,866,057)	(2,619,826)	(1,966,622)	(246,232)	(899,436)	
(2,862,648)	(2,615,452)	(1,956,203)	(247,196)	(906,444)	
245,000	-	494,000	245,000	(249,000)	
(245,000)	-	(489,000)	(245,000)	244,000	
204,493	146,220	120,034	58,273	84,458	
204,493	146,220	125,034	58,273	79,458	
4,536,087	4,477,466	287,552	58,621	4,248,536	

7,196,636	7,015,480	6,593,118	181,157	603,518	
(4,502,095)	(4,597,398)	(3,889,203)	95,304	(612,892)	
(199,905)	(138,028)	(2,200,278)	(61,877)	2,000,373	
2,494,637	2,280,053	503,638	214,583	1,990,999	
-	-	-	-	-	
5,241,371	5,230,000	6,950,000	11,371	(1,708,629)	
(380,382)	(530,861)	(590,425)	150,479	210,043	
(31,813)	(33,145)	(31,337)	1,332	(477)	
4,829,176	4,665,994	6,328,239	163,182	(1,499,063)	
3,410	4,374	10,418	(964)	(7,008)	
(2,866,057)	(2,619,826)	(1,966,622)	(246,232)	(899,436)	
(2,862,648)	(2,615,452)	(1,956,203)	(247,196)	(906,444)	
245,000	-	494,000	245,000	(249,000)	
(245,000)	-	(489,000)	(245,000)	244,000	
204,493	146,220	120,034	58,273	84,458	
204,493	146,220	125,034	58,273	79,458	
4,665,658	4,476,815	5,000,708	188,842	(335,050)	

18,734,826	18,613,874	17,431,073	120,952	1,303,753	
(11,756,350)	(12,040,242)	(9,456,987)	283,892	(2,299,363)	
(138,029)	1	(2,364,689)	(138,030)	2,226,660	
6,840,447	6,573,633	5,609,397	266,815	1,231,050	
-	-	-	-	-	
5,230,000	5,230,000	6,950,000	-	(1,720,000)	
(1,167,162)	(1,167,162)	(1,298,151)	-	130,989	
(2,254,324)	(2,254,324)	(2,010,541)	-	(243,783)	
1,808,514	1,808,514	3,641,309	-	(1,832,795)	
(3,070)	-	(84,098)	(3,070)	81,029	
(7,065,750)	(7,065,750)	(6,085,513)	-	(980,237)	
(7,068,820)	(7,065,750)	(6,169,612)	(3,070)	(899,208)	
-	-	988,000	-	(988,000)	
-	-	(979,000)	-	979,000	
198,236	130,452	339,479	67,784	(141,243)	
198,236	130,452	348,479	67,784	(150,243)	
1,778,377	1,446,849	3,429,573	331,529	(1,651,196)	

1,323,923	1,248,191	1,164,846	75,732	159,077	
(1,097,631)	(1,046,121)	(697,488)	(51,510)	(400,143)	
41,061	10,598	29,973	30,463	11,088	
-	-	-	-	-	
99,684	1,377	(2,075)	98,307	101,759	
367,037	214,045	495,256	152,992	(128,218)	
97,264	97,264	108,179	-	(10,916)	
187,860	187,860	167,545	-	20,315	
285,124	285,124	275,724	-	9,400	
1.29	0.75	1.80	0.54	(0.51)	

6,742,021	6,659,666	6,387,898	82,355	354,123
(4,502,095)	(4,597,398)	(3,889,203)	95,304	(612,892)
204,493	146,220	120,034	58,273	84,458
		-		
458,025	360,188	215,638	97,837	242,387
2,902,444	2,568,675	2,834,368	333,769	68,076
486,318	486,318	540,896	-	(54,579)
939,302	939,302	837,725	-	101,576
1,425,619	1,425,619	1,378,621	-	46,998
2.04	1.80	2.06	0.23	(0.02)

LEHIGH COUNTY AUTHORITY
VARIANCE ANALYSIS - YTD
For the Period Ended May 31, 2024

STATEMENTS OF ACTIVITIES

Operating Revenues:

User Charges
Connection & System Charges
Other Miscellaneous Revenues

Total Operating Revenues

Operating Expenses:

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

Total Operating Expenses

Net Operating Profit

Non-Operating Income (Expense)

Interest Income
Interest (Expense)
Other Miscellaneous

Net Non-Operating Income (Expense)

Net Income (Loss)

CASH FLOW STATEMENT

Cash Flows From Operating Activities

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

Net Cash Provided by (Used in) Operating Activities

Cash Flows From Financing Activities

Capital Contributions
Proceeds New Borrowing
Interest Payments
Principal Payments

Net Cash Provided by (Used in) Financing Activities

Cash Flows from Capital and Related Activities

Non-Operating Income (Expenses)
Capital Expenditures, net

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

Cash Flows From Investing Activities

Investments Converting To Cash
Purchased Investments
Interest Income

Net Cash Provided By (Used In) Investing Activities

FUND NET CASH FLOWS

Suburban - Water			
Actual	Q2 FC	FC Var	Comments
6,742,021	6,659,666	82,355	Higher industrial/Commercial
402,545	276,223	126,322	Higher tapping fees, higher meter sales, and higher inspection/review fees
52,070	79,591	(27,521)	
7,196,636	7,015,480	181,157	Higher user charges and higher system fees
1,787,143	1,822,410	35,268	
398,814	393,030	(5,784)	
221,878	234,519	12,642	
292,298	318,569	26,271	
1,801,962	1,828,869	26,907	
-	-	-	
1,488,951	1,360,210	(128,741)	
-	-	-	
-	-	-	
5,991,045	5,957,608	(33,437)	Lower discretionary spending more than offset by higher D&A
1,205,591	1,057,872	147,719	Higher operating revenues with a partial offset by higher operating expenses
204,493	146,220	58,273	
(586,788)	(603,879)	17,091	
3,410	4,374	(964)	
(378,885)	(453,285)	74,400	Higher interest income
826,706	604,587	222,119	Higher net operating income aided by higher interest income

7,196,636	7,015,480	181,157	
(4,502,095)	(4,597,398)	95,304	
(199,905)	(138,028)	(61,877)	
2,494,637	2,280,053	214,583	Higher net operating income
-	-	-	
5,241,371	5,230,000	11,371	
(380,382)	(530,861)	150,479	
(31,813)	(33,145)	1,332	
4,829,176	4,665,994	163,182	Lower debt service
3,410	4,374	(964)	
(2,866,057)	(2,619,826)	(246,232)	
(2,862,648)	(2,615,452)	(247,196)	Higher capex
245,000	-	245,000	
(245,000)	-	(245,000)	
204,493	146,220	58,273	
204,493	146,220	58,273	Higher interest income
4,665,658	4,476,815	188,842	Higher cash from operations and lower debt service partially offset by higher capex

LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS - SUBURBAN WASTEWATER
For the Period Ended May 31, 2024

STATEMENTS OF ACTIVITIES

Operating Revenues:

User Charges	1,613,617	1,605,294	1,522,473	8,323	91,144
Connection & System Charges	86,018	119,960	96,471	(33,942)	(10,453)
Other Miscellaneous Revenues	30	(273)	(55)	303	85

Total Operating Revenues

Operating Expenses:

Personnel	221,176	230,028	113,372	8,853	(107,804)
Shared Services - General & Administrative	52,585	41,217	30,440	(11,368)	(22,145)
Utilities	27,651	46,849	35,565	19,198	7,913
Materials and Supplies	51,439	40,423	31,904	(11,017)	(19,535)
Miscellaneous Services	645,219	663,512	612,081	18,292	(33,138)
Treatment and Transportation	354,278	291,405	251,140	(62,873)	(103,138)
Depreciation and Amortization	575,538	545,875	520,529	(29,663)	(55,008)
Major Maintenance Expenses	-	-	(117)	-	(117)
Other Miscellaneous	-	-	-	-	-

Total Operating Expenses

Net Operating Profit

Non-Operating Income (Expense)

Interest Income	49,384	10,780	37,598	38,604	11,786
Interest (Expense)	(12,118)	(15,711)	(13,169)	3,593	1,051
Other Miscellaneous	(5,248)	16,575	(15,111)	(21,822)	9,864

Net Non-Operating Income (Expense)

Net Income (Loss)

CASH FLOW STATEMENT

Cash Flows From Operating Activities

Operating Revenues	1,699,665	1,724,981	1,618,890	(25,316)	80,775
Operating Expenses (ex D&A)	(1,352,349)	(1,313,434)	(1,074,502)	(38,915)	(277,847)
Non-Cash Working Capital Changes	3,136,157	3,136,000	1,215,797	157	1,920,361

Net Cash Provided by (Used in) Operating Activities

Cash Flows From Financing Activities

Capital Contributions	-	-	-	-	-
Proceeds New Borrowing	-	-	-	-	-
Interest Payments	(11,643)	(15,746)	(12,496)	4,104	854
Principal Payments	-	(83,948)	(47,881)	83,948	47,881

Net Cash Provided by (Used in) Financing Activities

Cash Flows from Capital and Related Activities

Non-Operating Income (Expenses)	(5,248)	16,575	(15,111)	(21,822)	9,864
Capital Expenditures, net	(269,417)	(577,472)	(224,821)	308,054	(44,596)

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

Cash Flows From Investing Activities

Investments Converting To Cash	735,000	-	248,000	735,000	487,000
Purchased Investments	(490,000)	-	(490,000)	(490,000)	-
Interest Income	49,384	10,780	37,598	38,604	11,786

Net Cash Provided By (Used In) Investing Activities

FUND NET CASH FLOWS

DEBT SERVICE RATIO

Debt Service Ratio (Indenture Based)

User Charges	1,613,617	1,605,294	1,522,473	8,323	91,144
Operating Expenses (Cash Based)	(1,352,349)	(1,313,434)	(1,074,385)	(38,915)	(277,964)
Interest Income	49,384	10,780	37,598	38,604	11,786
Annual Lease Payment (City)	-	-	-	-	-
Non-Operating Revenues (Expenses)	80,800	136,261	81,305	(55,461)	(505)

Cash Available For Debt Service

Interest Paid	15,495	15,495	12,296	-	3,198
Debt Retirement (Principal Payments)	84,207	84,207	48,028	-	36,179

Total Debt Service

Debt Service Ratio

Month					
Actual	Q2 FC	Prior Year	FC Var	PY Var	
1,613,617	1,605,294	1,522,473	8,323	91,144	
86,018	119,960	96,471	(33,942)	(10,453)	
30	(273)	(55)	303	85	
1,699,665	1,724,981	1,618,890	(25,316)	80,775	
221,176	230,028	113,372	8,853	(107,804)	
52,585	41,217	30,440	(11,368)	(22,145)	
27,651	46,849	35,565	19,198	7,913	
51,439	40,423	31,904	(11,017)	(19,535)	
645,219	663,512	612,081	18,292	(33,138)	
354,278	291,405	251,140	(62,873)	(103,138)	
575,538	545,875	520,529	(29,663)	(55,008)	
-	-	(117)	-	(117)	
-	-	-	-	-	
1,927,886	1,859,308	1,594,914	(68,578)	(332,972)	
(228,221)	(134,327)	23,975	(93,894)	(252,197)	
49,384	10,780	37,598	38,604	11,786	
(12,118)	(15,711)	(13,169)	3,593	1,051	
(5,248)	16,575	(15,111)	(21,822)	9,864	
32,018	11,643	9,318	20,375	22,701	
(196,203)	(122,684)	33,293	(73,519)	(229,496)	

1,699,665	1,724,981	1,618,890	(25,316)	80,775	
(1,352,349)	(1,313,434)	(1,074,502)	(38,915)	(277,847)	
3,136,157	3,136,000	1,215,797	157	1,920,361	
3,483,474	3,547,547	1,760,185	(64,074)	1,723,289	
-	-	-	-	-	
(11,643)	(15,746)	(12,496)	4,104	854	
-	(83,948)	(47,881)	83,948	47,881	
(11,643)	(99,694)	(60,377)	88,052	48,734	
(5,248)	16,575	(15,111)	(21,822)	9,864	
(269,417)	(577,472)	(224,821)	308,054	(44,596)	
(274,665)	(560,897)	(239,932)	286,232	(34,733)	
735,000	-	248,000	735,000	487,000	
(490,000)	-	(490,000)	(490,000)	-	
49,384	10,780	37,598	38,604	11,786	
294,384	10,780	(204,402)	283,604	498,786	
3,491,550	2,897,736	1,255,474	593,814	2,236,076	

1,613,617	1,605,294	1,522,473	8,323	91,144	
(1,352,349)	(1,313,434)	(1,074,385)	(38,915)	(277,964)	
49,384	10,780	37,598	38,604	11,786	
-	-	-	-	-	
80,800	136,261	81,305	(55,461)	(505)	
391,452	438,902	566,991	(47,449)	(175,539)	
15,495	15,495	12,296	-	3,198	
84,207	84,207	48,028	-	36,179	
99,702	99,702	60,325	-	39,377	
3.93	4.40	9.40	(0.48)	(5.47)	

Suburban - Wastewater Year To Date					
Actual	Q2 FC	Prior Year	FC Var	PY Var	
8,071,580	8,062,458	7,363,913	9,122	707,667	
502,170	531,269	865,945	(29,099)	(363,775)	
135	(93)	165	228	(30)	
8,573,885	8,593,633	8,230,023	(19,749)	343,862	
795,955	797,495	669,709	1,540	(126,246)	
155,153	160,150	137,804	4,997	(17,349)	
132,768	149,208	112,127	16,440	(20,641)	
150,846	169,351	165,707	18,505	14,860	
2,900,502	2,977,297	2,900,056	76,795	(445)	
1,995,832	1,875,961	1,253,656	(119,871)	(742,176)	
2,877,688	2,817,405	2,599,563	(60,284)	(278,126)	
-	-	2,468	-	2,468	
-	-	-	-	-	
9,008,744	8,946,867	7,841,091	(61,878)	(1,167,654)	
(434,860)	(353,234)	388,932	(81,626)	(823,792)	
231,506	156,036	158,899	75,470	72,607	
(61,343)	(68,603)	(66,724)	7,260	5,381	
(1,513)	894	21,440	(2,406)	(22,953)	
168,650	88,327	113,616	80,324	55,035	
(266,209)	(264,907)	502,548	(1,303)	(768,757)	

8,573,885	8,593,633	8,230,023	(19,749)	343,862	
(6,131,056)	(6,129,462)	(5,239,060)	(1,594)	(891,996)	
758,567	758,350	715,655	218	42,912	
3,201,396	3,222,521	3,706,618	(21,125)	(505,222)	
-	-	-	-	-	
(58,966)	(67,147)	(62,951)	8,181	3,985	
(195,325)	(314,026)	(238,430)	118,702	43,106	
(254,290)	(381,173)	(301,381)	126,883	47,091	
(1,513)	894	21,440	(2,406)	(22,953)	
(1,589,414)	(1,806,612)	(630,259)	217,198	(959,155)	
(1,590,926)	(1,805,718)	(608,819)	214,792	(982,108)	
1,428,000	493,000	4,394,174	935,000	(2,966,174)	
(939,000)	(249,000)	(2,612,000)	(690,000)	1,673,000	
231,506	156,036	158,899	75,470	72,607	
720,506	400,036	1,941,073	320,470	(1,220,567)	
2,076,685	1,435,665	4,737,491	641,020	(2,660,806)	

8,071,580	8,062,458	7,363,913	9,122	707,667	
(6,131,056)	(6,129,462)	(5,241,528)	(1,594)	(889,528)	
231,506	156,036	158,899	75,470	72,607	
-	-	-	-	-	
500,792	532,069	887,550	(31,277)	(386,758)	
2,672,822	2,621,101	3,168,834	51,721	(496,012)	
77,473	77,473	61,481	-	15,991	
421,036	421,036	240,142	-	180,894	
498,508	498,508	301,623	-	196,885	
5.36	5.26	10.51	0.10	(5.14)	

Full Year					
Q2 FC	Budget	Prior Year	Bud Var	PY Var	
19,201,227	19,128,454	18,488,050	72,773	713,177	
1,652,882	1,695,900	1,371,193	(43,018)	281,689	
2,618	2,900	585	(282)	2,033	
20,856,727	20,827,254	19,859,828	29,473	996,899	
1,740,118	1,766,601	1,811,893	26,483	71,775	
428,822	456,840	337,395	28,018	(91,427)	
320,045	313,870	238,267	(6,175)	(81,779)	
472,867	518,722	391,409	45,855	(81,457)	
7,492,424	7,631,090	7,678,739	138,666	186,315	
4,689,486	4,529,540	3,903,664	(159,946)	(785,822)	
7,031,500	7,031,500	6,705,023	-	(326,477)	
-	-	-	-	-	
22,100	22,100	133,968	-	111,868	
22,197,362	22,270,263	21,200,358	72,901	(997,004)	
(1,340,635)	(1,443,009)	(1,340,530)	102,374	(105)	
202,188	130,271	454,362	71,917	(252,174)	
(178,764)	(185,934)	(155,847)	7,170	(22,917)	
(144,372)	(134,047)	707,714	(10,325)	(852,086)	
(120,948)	(189,710)	1,006,228	68,762	(1,127,176)	
(1,461,583)	(1,632,719)	(334,302)	171,136	(1,127,281)	

20,856,727	20,827,254	19,859,828	29,473	996,899	
(15,165,862)	(15,238,763)	(14,495,335)	72,901	(670,527)	
(361,650)	(200,000)	170,233	(161,650)	(531,883)	
5,329,215	5,388,491	5,534,726	(59,276)	(205,511)	
-	-	-	-	-	
7,175,000	7,175,000	-	-	7,175,000	
(185,934)	(185,934)	(147,555)	-	(38,379)	
(1,010,486)	(1,010,486)	(576,341)	-	(434,145)	
5,978,580	5,978,580	(723,896)	-	6,702,476	
(144,372)	(134,047)	121,966	(10,325)	(266,338)	
(11,516,250)	(11,516,250)	(4,486,108)	-	(7,030,142)	
(11,660,622)	(11,650,297)	(4,364,142)	(10,325)	(7,296,480)	
749,000	500,000	6,129,174	249,000	(5,380,174)	
(249,000)	-	(4,092,000)	(249,000)	3,843,000	
202,188	130,271	454,362	71,917	(252,174)	
702,188	630,271	2,491,536	71,917	(1,789,348)	
349,361	347,045	2,938,224	2,316	(2,588,863)	

19,201,227	19,128,454	1
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LEHIGH COUNTY AUTHORITY
VARIANCE ANALYSIS - YTD
For the Period Ended May 31, 2024

STATEMENTS OF ACTIVITIES

Operating Revenues:

User Charges
Connection & System Charges
Other Miscellaneous Revenues

Total Operating Revenues

Operating Expenses:

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

Total Operating Expenses

Net Operating Profit

Non-Operating Income (Expense)

Interest Income
Interest (Expense)
Other Miscellaneous

Net Non-Operating Income (Expense)

Net Income (Loss)

CASH FLOW STATEMENT

Cash Flows From Operating Activities

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

Net Cash Provided by (Used in) Operating Activities

Cash Flows From Financing Activities

Capital Contributions
Proceeds New Borrowing
Interest Payments
Principal Payments

Net Cash Provided by (Used in) Financing Activities

Cash Flows from Capital and Related Activities

Non-Operating Income (Expenses)
Capital Expenditures, net

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

Cash Flows From Investing Activities

Investments Converting To Cash
Purchased Investments
Interest Income

Net Cash Provided By (Used In) Investing Activities

FUND NET CASH FLOWS

Suburban - Wastewater			
Actual	Q2 FC	FC Var	Comments
8,071,580	8,062,458	9,122	
502,170	531,269	(29,099)	
135	(93)	228	
8,573,885	8,593,633	(19,749)	Lower system charges
795,955	797,495	1,540	
155,153	160,150	4,997	
132,768	149,208	16,440	
150,846	169,351	18,505	
2,900,502	2,977,297	76,795	
1,995,832	1,875,961	(119,871)	
2,877,688	2,817,405	(60,284)	
-	-	-	
-	-	-	
9,008,744	8,946,867	(61,878)	Higher T&T costs
(434,860)	(353,234)	(81,626)	Lower operating revenues and higher operating expenses
231,506	156,036	75,470	
(61,343)	(68,603)	7,260	
(1,513)	894	(2,406)	
168,650	88,327	80,324	Higher interest income
(266,209)	(264,907)	(1,303)	Lower operating income almost offset by favorable financial activity
8,573,885	8,593,633	(19,749)	
(6,131,056)	(6,129,462)	(1,594)	
758,567	758,350	218	
3,201,396	3,222,521	(21,125)	Lowr net operating income
-	-	-	
-	-	-	
(58,966)	(67,147)	8,181	
(195,325)	(314,026)	118,702	
(254,290)	(381,173)	126,883	Lower debt service
(1,513)	894	(2,406)	
(1,589,414)	(1,806,612)	217,198	
(1,590,926)	(1,805,718)	214,792	Lower capex
1,428,000	493,000	935,000	
(939,000)	(249,000)	(690,000)	
231,506	156,036	75,470	
720,506	400,036	320,470	Favorable investment activity
2,076,685	1,435,665	641,020	Lower capex and favorable investment activity

LEHIGH COUNTY AUTHORITY
FINANCIAL STATEMENTS - CITY DIVISION
For the Period Ended May 31, 2024

STATEMENTS OF ACTIVITIES

Operating Revenues:

User Charges
Connection & System Charges
Other Miscellaneous Revenues

Total Operating Revenues

Operating Expenses:

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

Total Operating Expenses

Net Operating Profit

Non-Operating Income (Expense)

Interest Income
Interest (Expense)
Other Miscellaneous

Net Non-Operating Income (Expense)

Net Income (Loss)

CASH FLOW STATEMENT

Cash Flows From Operating Activities

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

Net Cash Provided by (Used in) Operating Activities

Cash Flows From Financing Activities

Capital Contributions
Proceeds New Borrowing
Interest Payments
Principal Payments

Net Cash Provided by (Used in) Financing Activities

Cash Flows from Capital and Related Activities

Non-Operating Income (Expenses)
Capital Expenditures, net

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

Cash Flows From Investing Activities

Investments Converting To Cash
Purchased Investments
Interest Income

Net Cash Provided By (Used In) Investing Activities

FUND NET CASH FLOWS

DEBT SERVICE RATIO

Debt Service Ratio (Indenture Based)

User Charges
Operating Expenses (Cash Based)
Interest Income
Annual Lease Payment (City)
Non-Operating Revenues (Expenses)

Cash Available For Debt Service

Interest Paid
Debt Retirement (Principal Payments)

Total Debt Service

Debt Service Ratio

	Month				
	Actual	Q2 FC	Prior Year	FC Var	PY Var
Operating Revenues:					
User Charges	4,940,824	4,464,618	4,202,501	476,207	738,323
Connection & System Charges	273,264	276,157	375,447	(2,893)	(102,182)
Other Miscellaneous Revenues	82,801	5,114	10,398	77,687	72,403
Total Operating Revenues	5,296,890	4,745,889	4,588,346	551,001	708,544
Operating Expenses:					
Personnel	1,174,668	1,136,046	616,935	(38,622)	(557,733)
Shared Services - General & Administrative	201,769	225,186	180,530	23,416	(21,239)
Utilities	136,525	225,588	207,505	89,062	70,980
Materials and Supplies	309,730	268,576	258,282	(41,154)	(51,448)
Miscellaneous Services	194,956	133,709	134,463	(61,247)	(60,493)
Treatment and Transportation	5,656	-	-	(5,656)	(5,656)
Depreciation and Amortization	515,561	473,410	518,356	(42,151)	2,795
Major Maintenance Expenses	2,952	-	18,652	(2,952)	15,700
Other Miscellaneous	-	-	-	-	-
Total Operating Expenses	2,541,817	2,462,514	1,934,724	(79,304)	(607,093)
Net Operating Profit	2,755,072	2,283,375	2,653,621	471,698	101,451
Non-Operating Income (Expense)					
Interest Income	553,531	79,883	281,165	473,648	272,366
Interest (Expense)	(1,433,824)	(1,390,172)	(1,409,732)	(43,651)	(24,091)
Other Miscellaneous	(5,397,397)	(5,397,397)	-	0	(5,397,397)
Net Non-Operating Income (Expense)	(6,277,690)	(6,707,686)	(1,128,568)	429,997	(5,149,122)
Net Income (Loss)	(3,522,617)	(4,424,312)	1,525,054	901,694	(5,047,671)

Operating Revenues	5,296,890	4,745,889	4,588,346	551,001	708,544
Operating Expenses (ex D&A)	(2,023,304)	(1,989,104)	(1,397,716)	(34,200)	(625,588)
Non-Cash Working Capital Changes	(1,527,133)	(1,528,000)	(719,082)	867	(808,051)
Net Cash Provided by (Used in) Operating Activities	1,746,453	1,228,785	2,471,548	517,668	(725,095)
Cash Flows From Financing Activities					
Capital Contributions	-	-	-	-	-
Proceeds New Borrowing	55,000,000	55,000,000	1,371,118	-	53,628,882
Interest Payments	(1,099)	-	-	(1,099)	(1,099)
Principal Payments	(5,206)	(697,395)	-	692,188	(5,206)
Net Cash Provided by (Used in) Financing Activities	54,993,694	54,302,605	1,371,118	691,089	53,622,576
Cash Flows from Capital and Related Activities					
Non-Operating Income (Expenses)	(5,397,397)	(5,397,397)	-	0	(5,397,397)
Capital Expenditures, net	(773,683)	(2,397,170)	(886,872)	1,623,486	113,188
Net Cash Provided By (Used In) Capital and Related Activities	(6,171,080)	(7,794,567)	(886,872)	1,623,487	(5,284,209)
Cash Flows From Investing Activities					
Investments Converting To Cash	-	-	-	-	-
Purchased Investments	-	-	-	-	-
Interest Income	553,531	79,883	281,165	473,648	272,366
Net Cash Provided By (Used In) Investing Activities	553,531	79,883	281,165	473,648	272,366
FUND NET CASH FLOWS	51,122,598	47,816,706	3,236,959	3,305,892	47,885,639

User Charges	4,940,824	4,464,618	4,202,501	476,207	738,323
Operating Expenses (Cash Based)	(2,026,256)	(1,989,104)	(1,416,368)	(37,153)	(609,888)
Interest Income	553,531	79,883	281,165	473,648	272,366
Annual Lease Payment (City)	(109,019)	(109,019)	(113,432)	-	4,413
Non-Operating Revenues (Expenses)	(5,041,332)	(5,116,126)	385,845	74,794	(5,427,176)
Cash Available For Debt Service	(1,682,251)	(2,669,748)	3,339,711	987,497	(5,021,962)
Interest Paid	1,109,894	1,109,894	974,644	-	135,250
Debt Retirement (Principal Payments)	245,417	245,417	185,201	-	60,216
Total Debt Service	1,355,311	1,355,311	1,159,845	-	195,466
Debt Service Ratio	(1.24)	(1.97)	2.88	0.73	(4.12)

	City Division Year To Date				
	Actual	Q2 FC	Prior Year	FC Var	PY Var
Operating Revenues:					
User Charges	22,649,705	22,533,750	20,741,447	115,955	1,908,258
Connection & System Charges	1,055,549	1,015,691	1,403,799	39,858	(348,250)
Other Miscellaneous Revenues	169,256	42,634	59,357	126,623	109,900
Total Operating Revenues	23,874,510	23,592,075	22,204,602	282,435	1,669,909
Operating Expenses:					
Personnel	4,890,814	5,081,480	4,213,192	190,666	(677,622)
Shared Services - General & Administrative	939,025	955,530	872,303	16,504	(66,722)
Utilities	783,201	796,054	972,704	12,852	189,502
Materials and Supplies	1,253,967	1,229,899	1,185,381	(24,068)	(68,587)
Miscellaneous Services	625,545	582,374	572,307	(43,170)	(53,238)
Treatment and Transportation	5,656	-	-	(5,656)	(5,656)
Depreciation and Amortization	2,577,805	2,492,456	2,581,759	(85,348)	3,954
Major Maintenance Expenses	17,462	12,369	83,891	(5,093)	66,428
Other Miscellaneous	-	-	-	-	-
Total Operating Expenses	11,093,476	11,150,163	10,481,536	56,686	(611,940)
Net Operating Profit	12,781,034	12,441,912	11,723,066	339,122	1,057,968
Non-Operating Income (Expense)					
Interest Income	1,643,493	983,352	1,201,005	660,141	442,488
Interest (Expense)	(7,169,161)	(7,081,613)	(7,046,680)	(87,548)	(122,482)
Other Miscellaneous	(5,396,147)	(5,397,083)	-	936	(5,396,147)
Net Non-Operating Income (Expense)	(10,921,815)	(11,495,344)	(5,845,675)	573,529	(5,076,140)
Net Income (Loss)	1,859,219	946,568	5,877,391	912,650	(4,018,172)

Operating Revenues	23,874,510	23,592,075	22,204,602	282,435	1,669,909
Operating Expenses (ex D&A)	(8,498,209)	(8,645,337)	(7,815,887)	147,128	(682,323)
Non-Cash Working Capital Changes	(2,381,165)	(2,327,630)	(3,156,147)	(53,535)	774,982
Net Cash Provided by (Used in) Operating Activities	12,995,136	12,619,108	11,232,568	376,028	1,762,568
Cash Flows From Financing Activities					
Capital Contributions	-	-	-	-	-
Proceeds New Borrowing	55,000,000	55,000,000	1,371,118	-	53,628,882
Interest Payments	(5,540)	(3,337)	-	(2,203)	(5,540)
Principal Payments	(718,185)	(2,102,566)	-	1,384,381	(718,185)
Net Cash Provided by (Used in) Financing Activities	54,276,275	52,894,097	1,371,118	1,382,178	52,905,157
Cash Flows from Capital and Related Activities					
Non-Operating Income (Expenses)	(5,396,147)	(6,051,195)	(680,590)	655,048	(4,715,557)
Capital Expenditures, net	(2,883,315)	(5,188,774)	(2,694,454)	2,305,459	(188,861)
Net Cash Provided By (Used In) Capital and Related Activities	(8,279,462)	(11,239,969)	(3,375,044)	2,960,507	(4,904,418)
Cash Flows From Investing Activities					
Investments Converting To Cash	-	-	-	-	-
Purchased Investments	-	-	-	-	-
Interest Income	1,643,493	983,352	1,201,005	660,141	442,488
Net Cash Provided By (Used In) Investing Activities	1,643,493	983,352	1,201,005	660,141	442,488
FUND NET CASH FLOWS	60,635,443	55,256,589	10,429,647	5,378,854	50,205,796

User Charges	22,649,705	22,533,750	20,741,447	115,955	1,908,258
Operating Expenses (Cash Based)	(8,515,672)	(8,657,706)	(7,899,777)	142,035	(615,894)
Interest Income	1,643,493	983,352	1,201,005	660,141	442,488
Annual Lease Payment (City)	(545,093)	(545,093)	(567,158)	-	22,065
Non-Operating Revenues (Expenses)	(4,171,342)	(4,338,758)	1,463,155	167,417	(5,634,497)
Cash Available For Debt Service	11,061,092	9,975,545	14,938,671	1,085,547	(3,877,579)
Interest Paid	5,549,472	5,549,472	4,873,222	-	676,251
Debt Retirement (Principal Payments)	1,227,083	1,227,083	926,003	-	301,080
Total Debt Service	6,776,556	6,776,556	5,799,224	-	977,331
Debt Service Ratio	1.63	1.47	2.58	0.16	(0.94)

	Full Year				
	Q2 FC	Budget	Prior Year	Bud Var	PY Var
Operating Revenues:					
User Charges	56,018,070	55,555,506	52,162,410	462,564	3,855,660
Connection & System Charges	3,529,115	3,609,600	5,487,746	(80,485)	(1,958,630)
Other Miscellaneous Revenues	86,448	89,800	182,595	(3,352)	(96,146)
Total Operating Revenues	59,633,634	59,254,906	57,832,751	378,728	1,800,884
Operating Expenses:					
Personnel	13,927,623	13,986,737	11,576,407	59,114	(2,351,216)
Shared Services - General & Administrative	2,446,827	2,545,190	2,040,469	98,363	(406,358)
Utilities	2,018,931	2,063,922	1,898,483	44,991	(120,447)
Materials and Supplies	3,280,826	3,251,300	3,218,805	(29,526)	(62,021)
Miscellaneous Services	2,332,686	2,397,011	2,247,835	64,325	(84,852)
Treatment and Transportation	11,400	11,400	11,307	-	(93)
Depreciation and Amortization	6,260,297	6,169,850	6,755,624	(90,447)	495,326
Major Maintenance Expenses	4,000,000	4,000,000	-	-	(4,000,000)
Other Miscellaneous	-	-	5,782,103	-	5,782,103
Total Operating Expenses	34,278,590	34,425,410	33,531,033	146,820	(747,557)
Net Operating Profit	25,355,045	24,829,496	24,301,718	525,549	1,053,327
Non-Operating Income (Expense)					
Interest Income	1,397,689	984,881	3,466,498	412,808	(2,068,810)
Interest (Expense)	(19,703,642)	(19,703,642)	(19,980,878)	-	277,236
Other Miscellaneous	3,336,495	8,733,892	-	(5,397,397)	3,336,495
Net Non-Operating Income (Expense)	(14,969,458)	(9,984,869)	(16,514,379)	(4,984,589)	1,544,921
Net Income (Loss)	10,385,586	14,844,627	7,787,339	(4,459,041)	2,598,248

Operating Revenues	59,633,634	59,254,906	57,832,751	378,728	1,800,884
Operating Expenses (ex D&A)	(24,018,292)	(24,255,560)	(20,993,306)	237,268	(3,024,987)
Non-Cash Working Capital Changes	(2,327,630)	(135,999)	(2,201,272)	(2,191,631)	(126,358)
Net Cash Provided by (Used in) Operating Activities	33,287,712	34,863,347	34,638,173	(1,575,635)	(1,350,461)
Cash Flows From Financing Activities					
Capital Contributions	-	-	-	-	-
Proceeds New Borrowing	55,000,000	8,555,508	1,371,118	46,444,492	53,628,882
Interest Payments	(13,318,734)	(13,315,397)	(11,695,732)	(3,337)	(1,623,002)
Principal Payments	(2,945,000)	(2,945,000)	(2,222,407)	-	(722,593)
Net Cash Provided by (Used in) Financing Activities	38,736,266	(7,704,889)	(12,547,021)	46,441,155	51,283,287
Cash Flows from Capital and Related Activities					
Non-Operating Income (Expenses)	2,028,271	7,425,668	(1,361,180)	(5,397,397)	3,389,451
Capital Expenditures, net	(32,628,500)	(32,628,500)	(10,368,819)	(0)	(22,259,681)
Net Cash Provided By (Used In) Capital and Related Activities	(30,600,229)	(25,202,832)	(11,729,999)	(5,397,397)	(18,870,230)
Cash Flows From Investing Activities					
Investments Converting To Cash	-	-	-	-	-
Purchased Investments	-	-	-	-	-
Interest Income	1,397,689	984,881	3,466,498	412,808	(2,068,810)
Net Cash Provided By (Used In) Investing Activities	1,397,689	984,881	3,466,498	412,808	(2,068,810)
FUND NET CASH FLOWS	42,821,438	2,940,507	13,827,652	39,880,931	28,993,786

56,018,070	55,555,506	52,162,410	462,564	3,855,660
(24,018,292)	(24,555,506)	(26,775,409)	237,268	2,757,117
1,397,689	984,881	3,466,498	412,808	(2,068,810)
(1,308,224)	(1,308,224)	(1,361,180)		52,956
3,615,564	3,699,400	5,670,340	(83,836)	(2,054,777)
35,704,807	34,676,003	33,162,660	1,028,804	2,542,147
13,318,734	13,315,397	11,695,732	3,337	1,623,002
2,945,000	2,945,000	2,222,407	-	722,593
16,263,734	16,260,397	13,918,139	3,337	2,345,595
2.20	2.13	2.38	0.06	(0.19)

LEHIGH COUNTY AUTHORITY
VARIANCE ANALYSIS - YTD
For the Period Ended May 31, 2024

STATEMENTS OF ACTIVITIES

Operating Revenues:

User Charges	22,649,705	22,533,750	115,955
Connection & System Charges	1,055,549	1,015,691	39,858
Other Miscellaneous Revenues	169,256	42,634	126,623

Total Operating Revenues **23,874,510** **23,592,075** **282,435**

Operating Expenses:

Personnel	4,890,814	5,081,480	190,666
Shared Services - General & Administrative	939,025	955,530	16,504
Utilities	783,201	796,054	12,852
Materials and Supplies	1,253,967	1,229,899	(24,068)
Miscellaneous Services	625,545	582,374	(43,170)
Treatment and Transportation	5,656	-	(5,656)
Depreciation and Amortization	2,577,805	2,492,456	(85,348)
Major Maintenance Expenses	17,462	12,369	(5,093)
Other Miscellaneous	-	-	-

Total Operating Expenses **11,093,476** **11,150,163** **56,686**

Net Operating Profit

12,781,034 **12,441,912** **339,122**

Non-Operating Income (Expense)

Interest Income	1,643,493	983,352	660,141
Interest (Expense)	(7,169,161)	(7,081,613)	(87,548)
Other Miscellaneous	(5,396,147)	(5,397,083)	936

Net Non-Operating Income (Expense) **(10,921,815)** **(11,495,344)** **573,529**

Net Income (Loss)

1,859,219 **946,568** **912,650**

CASH FLOW STATEMENT

Cash Flows From Operating Activities

Operating Revenues	23,874,510	23,592,075	282,435
Operating Expenses (ex D&A)	(8,498,209)	(8,645,337)	147,128
Non-Cash Working Capital Changes	(2,381,165)	(2,327,630)	(53,535)

Net Cash Provided by (Used in) Operating Activities **12,995,136** **12,619,108** **376,028**

Cash Flows From Financing Activities

Capital Contributions	-	-	-
Proceeds New Borrowing	55,000,000	55,000,000	-
Interest Payments	(5,540)	(3,337)	(2,203)
Principal Payments	(718,185)	(2,102,566)	1,384,381

Net Cash Provided by (Used in) Financing Activities **54,276,275** **52,894,097** **1,382,178**

Cash Flows from Capital and Related Activities

Non-Operating Income (Expenses)	(5,396,147)	(6,051,195)	655,048
Capital Expenditures, net	(2,883,315)	(5,188,774)	2,305,459

Net Cash Provided By (Used In) Capital and Related Activities **(8,279,462)** **(11,239,969)** **2,960,507**

Cash Flows From Investing Activities

Investments Converting To Cash	-	-	-
Purchased Investments	-	-	-
Interest Income	1,643,493	983,352	660,141

Net Cash Provided By (Used In) Investing Activities **1,643,493** **983,352** **660,141**

FUND NET CASH FLOWS

60,635,443 **55,256,589** **5,378,854**

City Division			
Actual	Q2 FC	FC Var	Comments
Operating Revenues:			
User Charges	22,649,705	22,533,750	115,955
Connection & System Charges	1,055,549	1,015,691	39,858
Other Miscellaneous Revenues	169,256	42,634	126,623
Total Operating Revenues	23,874,510	23,592,075	282,435 Higher user charges, higher system charges, and higher other
Operating Expenses:			
Personnel	4,890,814	5,081,480	190,666
Shared Services - General & Administrative	939,025	955,530	16,504
Utilities	783,201	796,054	12,852
Materials and Supplies	1,253,967	1,229,899	(24,068)
Miscellaneous Services	625,545	582,374	(43,170)
Treatment and Transportation	5,656	-	(5,656)
Depreciation and Amortization	2,577,805	2,492,456	(85,348)
Major Maintenance Expenses	17,462	12,369	(5,093)
Other Miscellaneous	-	-	-
Total Operating Expenses	11,093,476	11,150,163	56,686 Lower discretionary spending partially offset by higher D&A
Net Operating Profit	12,781,034	12,441,912	339,122 Higher operating revenues along with lower operating expenses
Non-Operating Income (Expense)			
Interest Income	1,643,493	983,352	660,141
Interest (Expense)	(7,169,161)	(7,081,613)	(87,548)
Other Miscellaneous	(5,396,147)	(5,397,083)	936
Net Non-Operating Income (Expense)	(10,921,815)	(11,495,344)	573,529 Higher interest income
Net Income (Loss)	1,859,219	946,568	912,650 Higher net operating income aided by higher interest income
CASH FLOW STATEMENT			
Cash Flows From Operating Activities			
Operating Revenues	23,874,510	23,592,075	282,435
Operating Expenses (ex D&A)	(8,498,209)	(8,645,337)	147,128
Non-Cash Working Capital Changes	(2,381,165)	(2,327,630)	(53,535)
Net Cash Provided by (Used in) Operating Activities	12,995,136	12,619,108	376,028 Higher net operating income
Cash Flows From Financing Activities			
Capital Contributions	-	-	-
Proceeds New Borrowing	55,000,000	55,000,000	-
Interest Payments	(5,540)	(3,337)	(2,203)
Principal Payments	(718,185)	(2,102,566)	1,384,381
Net Cash Provided by (Used in) Financing Activities	54,276,275	52,894,097	1,382,178 Favorable debt service
Cash Flows from Capital and Related Activities			
Non-Operating Income (Expenses)	(5,396,147)	(6,051,195)	655,048
Capital Expenditures, net	(2,883,315)	(5,188,774)	2,305,459
Net Cash Provided By (Used In) Capital and Related Activities	(8,279,462)	(11,239,969)	2,960,507 Lower capex
Cash Flows From Investing Activities			
Investments Converting To Cash	-	-	-
Purchased Investments	-	-	-
Interest Income	1,643,493	983,352	660,141
Net Cash Provided By (Used In) Investing Activities	1,643,493	983,352	660,141 Higher interest income
FUND NET CASH FLOWS	60,635,443	55,256,589	5,378,854 Higher cash from operations, lower debt service, lower capex, and higher interest income

LEHIGH COUNTY AUTHORITY
CASH & INVESTMENT SUMMARY
For the Period Ended May 31, 2024

	Suburban Water				Suburban Wastewater				City Division				Total			
	5/31/2024 Actual	2024 Forecast	2024 Budget	2023 Actual	5/31/2024 Actual	2024 Forecast	2024 Budget	2023 Actual	5/31/2024 Actual	2024 Forecast	2024 Budget	2023 Actual	5/31/2024 Actual	2024 Forecast	2024 Budget	2023 Actual
Cash																
Operating																
Unrestricted	486,358	10,105,905	13,136,985	8,385,525	2,807,319	10,990,647	3,976,076	3,779,293	15,630,898	11,875,600	15,263,906	13,483,582	18,204,414	32,686,241	32,376,967	25,648,400
Restricted	-	-	-	-	-	3,437	317	2,708	21,723,957	25,737,927	25,438,613	33,121,646	21,723,957	25,741,364	25,438,930	33,124,354
Total Operating	486,358	10,105,905	13,136,985	8,385,525	2,807,319	10,994,084	3,976,393	3,782,000	37,354,855	37,613,527	40,702,519	46,605,229	39,928,371	58,427,605	57,815,897	58,772,754
Capital																
Unrestricted	12,612,783	321,054	319,718	321,054	9,861,240	-	5,955,385	6,862,722	79,711,560	54,804,198	3,022,601	3,022,601	102,185,583	55,125,252	9,297,704	10,206,378
Restricted	-	-	-	-	342,591	338,677	338,360	338,677	7,530,535	7,531,579	7,500,035	7,500,035	7,873,127	7,870,256	7,838,396	7,838,712
Total Capital	12,612,783	321,054	319,718	321,054	10,203,831	338,677	6,293,745	7,201,399	87,242,095	62,335,777	10,522,636	10,522,636	110,058,710	62,995,508	17,136,099	18,045,090
Other Restricted																
Debt Reserves	1,653,725	1,718,213	1,656,568	1,660,215	-	-	-	-	23,176,338	30,004,516	28,335,482	30,004,516	24,830,063	31,722,729	29,992,050	31,664,731
Escrow - Developer Deposits	745,971	466,386	218,888	466,386	105,613	56,678	252,969	56,678	26,641	32,106	32,090	32,106	878,225	555,169	503,947	555,169
Total Other Restricted	2,399,695	2,184,598	1,875,456	2,126,600	105,613	56,678	252,969	56,678	23,202,979	30,036,622	28,367,571	30,036,622	25,708,287	32,277,898	30,495,996	32,219,900
Total Cash	15,498,837	12,611,557	15,332,159	10,833,179	13,116,763	11,389,438	10,523,107	11,040,077	147,799,930	129,985,926	79,592,726	87,164,487	175,695,369	153,701,011	105,447,992	109,037,744
Investments																
Operating																
Unrestricted	1,955,715	2,022,946	1,945,069	2,022,946	6,970,954	7,214,467	6,584,624	6,965,467	-	-	-	-	8,926,669	9,237,412	8,529,693	8,988,412
Restricted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Operating	1,955,715	2,022,946	1,945,069	2,022,946	6,970,954	7,214,467	6,584,624	6,965,467	-	-	-	-	8,926,669	9,237,412	8,529,693	8,988,412
Capital																
Unrestricted	1,090,412	1,000,184	1,000,000	1,000,184	-	-	-	-	-	-	-	-	1,090,412	1,000,184	1,000,000	1,000,184
Restricted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital	1,090,412	1,000,184	1,000,000	1,000,184	-	-	-	-	-	-	-	-	1,090,412	1,000,184	1,000,000	1,000,184
Other Restricted																
Debt Reserves	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Escrow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Other Restricted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Investments	3,046,128	3,023,129	2,945,069	3,023,129	6,970,954	7,214,467	6,584,624	6,965,467	-	-	-	-	10,017,082	10,237,596	9,529,693	9,988,596
Total Cash and Investments	18,544,965	15,634,686	18,277,228	13,856,308	20,087,717	18,603,905	17,107,731	18,005,544	147,799,930	129,985,926	79,592,726	87,164,487	185,712,450	163,938,607	114,977,685	119,026,340
Summary																
Cash																
Unrestricted	13,099,141	10,426,959	13,456,703	8,706,579	12,668,559	10,990,647	9,931,461	10,642,015	95,342,458	66,679,798	18,286,506	16,506,183	120,389,997	87,811,493	41,674,670	35,568,867
Restricted	2,399,695	2,184,598	1,875,456	2,126,600	448,204	398,792	591,646	398,062	52,457,472	63,306,128	61,306,220	70,658,304	55,305,371	65,889,518	63,773,322	73,182,966
Total Cash	15,498,837	12,611,557	15,332,159	10,833,179	13,116,763	11,389,438	10,523,107	11,040,077	147,799,930	129,985,926	79,592,726	87,164,487	175,695,369	153,701,011	105,447,992	108,751,833
Investments																
Unrestricted	3,046,128	3,023,129	2,945,069	3,023,129	6,970,954	7,214,467	6,584,624	6,965,467	-	-	-	-	10,017,082	10,237,596	9,529,693	9,988,596
Restricted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Investments	3,046,128	3,023,129	2,945,069	3,023,129	6,970,954	7,214,467	6,584,624	6,965,467	-	-	-	-	10,017,082	10,237,596	9,529,693	9,988,596
Total Cash and Investments	18,544,965	15,634,686	18,277,228	13,856,308	20,087,717	18,603,905	17,107,731	18,005,544	147,799,930	129,985,926	79,592,726	87,164,487	185,712,450	163,938,607	114,977,685	118,740,429

CERTIFICATES OF DEPOSIT

MAY 2024

Fund	Bank	Location	Gross Amount	Date of Purchase	Date Due	Net Rate %
LLRI CR	Valley National Bank	Passaic, NJ	245,000.00	5/29/24	5/29/26	4.950
LLRI CR	Bank of America, National Assn	Charlotte, NC	245,000.00	5/30/24	6/1/26	5.000
Cons Wtr (2)	Bank Hapoalim B.M.	New York, NY	245,000.00	5/31/24	5/29/26	5.050

DEVELOPMENT ACTIVITY

Water system construction is occurring in the following developments:

4002 Chestnut Street water main extension,Umilford
 7649 Penn Drive, Warehouse expansion, water, UMT
 8323/8449 Congdon Hill Drive, 2 industrial lots with warehouses, LMT
 Estates at Maple Ridge, Water main extension-UMiIT
 Glenlivet Drive West Main extension and subdivision UMT
 Fields at Indian Creek, Phases 4 & 5, 86 residential units (sfd), water and sewer, UMiIT & Emmaus
 Kohler Tract, 123 residential lots (sfa), water and sewer, UMiIT
 Laurel Fields Phase 5 25 townhouses (sfd) UMT
 Lehigh Hills, Lot 5 Phase 2, 240 residential units (sfd.), UMT
 Lehigh Hills Townhouses, 24 townhouse units (sfa), UMT
 Madison Village at Penn's View, 66 manufactured homes, 1 lot, water and sewer, LynnT
 Mertztown Residential Subdivision, 264 sf units & 136 townhouse units, LMT
 Mosser Road 10 Townhouses,UMT
 Mountain View Estates, 27 residential units (sfd), LMT
 Parkland Crossings Main Extension 144 Town homes UMT
 Raising Canes 1 commercial lot LMT water
 Sauerkraut Lane Extension, Roadway & water line extension, LMT
 Spring Creek Properties, Lot 12, 1 lot, warehouse, LMT
 Towneplace Suites by Marriott, 91-room hotel, UMT
 Trexler Point (Towns at Schaefer Run) 128 Townhouses UMT
 Trexler Center Unit 5-Wawa water,-LMT
 Woodmont Valley 2, 129 apartment units (former Allen Organ Co.) LMT
 Wrenfield Townhouses 98 Townhomes UMT
 7150 Ambassador Drive 1 lot, Warehouse expansion, UMT
 7991 Quarry Road 1 lot, Warehouse,LMT

Water system plans are being reviewed for the following developments:

1321 Rising Sun Road, 110 Single family homes, Sewer NWT
 2024 Elbow lane single home,LMT
 2619 Grove Street Sewer Main Extension,Washington Township
 3400 Brookside Road, Indian Creek- 26 Single family homes-Main extension, LMT
 3952 Independence Drive,NW
 4054 Chestnut Street Single connection,Umilford
 6045 Reppert Lane 24 Town Homes, UMT
 Valley at Indian Creek 3510 Macungie Road 22 Single family homes-LMT
 5329-5347-5357 Hamilton Blvd., 1 commercial lot, LMT
 Advanced Health Care of Allentown, 1 commercial lot, LMT
 Air Products & Chemicals-Cetronia Road, 1 commercial lot, UMT
 ATAS International, 1 industrial lot, UMT
 Bandit Truck Stop Sewer Main Extension, WT
 Carriage East Residential Development, 11 residential units, (sfd), UMT
 Fallbrooke Residential Subdivision, 90 sf residential units, UMT
 Fields at Emmaus 78 Town Homes, UMT
 Grant Street Townes, 18 Townhouse, WT
 Grant Way Building Expansion,UMT
 Heidelberg Heights 10 Townhouses water ext on lot septic, HH
 Hidden Meadows - Phase 3, 20 townhouse units, UMT
 Krocks Road Mixed use development
 Lehigh Valley Town Center, Mixed use development, UMT
 Ridings at Parkland Phase 2, 44 Single Homes. NWT
 Schoeneck Road, Lot 1, 1 lot, warehouse, LMT
 Spring Creek Estates 2022 LMT 2 lots, 2 6 unit Apt, 8 single family homes, water
 Spring Creek Lot 12 1 Commercial Lot,LMT
 The Annex at Fields at Indian Creek, 22 sf residential units, Emmaus Borough
 Towns At Schaefer Run, 128 townhouse unit (sfa), UMT
 Twin Ponds 8739 Hamilton Blvd 22 Apts and 1 Daycare UMT
 Upper Macungie Community Center UMT commercial lot, water and Main Extension
 V Parkland 9230 Long Lane, 16 Single family homes, UMT.

Sewage Facilities Planning Modules Reviewed in Prior Month:

714 & 718 Greenleaf Land Development	714 - 718 W Greanleaf St	Allentown	476
3434 N Front St Apartments	3434 N Front St	CWSA	860
1028 S Lumber	1028 S Lumber	Allentown	952
6130 Sauerkraut Lane	6130 Sauerkraut Lane	L Mac	892
18th Amendment Brewery	1045 Trexliertown Rd	U Mac	640

Lehigh County Authority
System Operations Review - May 2024
Presented: June 24, 2024

		<u>May-24</u>	<u>2024</u> <u>Totals***</u>	<u>2023 Totals</u>	<u>2022 Totals</u>
Recordable Safety Incidents*	Total LCA	0	0	33	7
Non-Recordable Safety Incidents	Total LCA	6	13		
Incident Types **	Injuries	2	7		
	Property Damage	0	8		
	Near Miss	0	0		

***Numbers adjusted to match current tracking methodology

* Recordable Safety Incidents are those that result in death, days away from work, restricted duty, medical treatment beyond first aid.

** Safety incidents may be categorized in more than one incident type.

<u>Year To Date Safety Incidents</u>		<u>Root Cause Analysis Completed</u>	<u>Corrective Actions Identified</u>	<u>Corrective Actions Completed</u>
		2	2	0
<u>Current Month Incidents</u>				
<u>Description</u>	<u>Date</u>	<u>Type</u>	<u>Root Cause(s)</u>	<u>Corrective Action(s)</u>
<u>Incident # 78</u> - Employee twisted his ankle walking on uneven ground at a well station	5/1/2024	Injury	Uneven ground	N/A
<u>Incident # 79</u> - Employee sprained his knee walking around a customer's landscaping while flushing hydrants	5/13/2024	Injury	Uneven ground	N/A

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Critical Activities	System	Description	May-24	2024 Totals	2023 Totals	Permit
			Daily Avg (MGD)	Daily Avg (MGD)	Daily Avg (MGD)	Daily Max (MGD)
Water Production	Allentown	Total	23.52	22.14	22.52	39.0
		Schantz Spring	7.87	7.15	6.93	9.0
		Crystal Spring	3.91	3.87	3.89	4.0
		Little Lehigh Creek	11.74	10.67	11.66	30.0
		Lehigh River	0.00	0.45	0.04	28.0
	Central Lehigh	Total	11.84	10.90	11.27	19.04 MGD Avg
		Feed from Allentown	7.46	6.47	7.28	7.0 MGD Avg 10.5 MGD Max
		Well Production (CLD)	4.39	4.42	3.98	8.54 MGD Avg
		Sum of all (12) other Suburban Water Systems	0.16	0.15	0.13	1.71 Sum of all wells
Wastewater Treatment		Kline's Island	34.33	37.98	32.24	40.0
		Pretreatment Plant	5.12	5.35	4.78	5.75 (design capacity)
		Sum of all (5) other Suburban WW Systems	0.19	0.24	0.19	0.36
			May-24	2024 Totals	2023 Totals	2022 Totals
Precipitation Totals (inches)			3.77	23.12	46.38	46.47
Compliance Reports Submitted to Allentown			17	136	280	277
Notices of Violation (NOVs)		(Allentown + Suburban)	1	2	3	4
Sanitary Sewer Overflows (SSOs)/Bypasses		(Allentown + Suburban)	0	15	24	18
Main Breaks Repaired		Allentown	3	16	8	34
		Suburban	0	3	12	15
Customer Service Phone Inquiries		(Allentown + Suburban)	1484	7312	11,221	10,539
Water Shutoffs for Non-Payment		(Allentown + Suburban)	163	807	1,995	1,975
Injury Accidents		(Allentown + Suburban)	2	7	19	7
Emergency Declarations		Allentown	0	0	2	(3) @ \$386,225.43
		Suburban	0	1	0	(4) @ \$933,077.1
Significant Repairs/Upgrades:						
N/A						
Description of Non-Compliance Events:						
A Notice of Violation (NOV) was issued by the Pennsylvania Department of Environmental Protection for permit exceedances at the Sand Spring WWTP on May 9, 2024. A written response was submitted on May 20,2023. The NOV and response are included in the report.						
Other:						
N/A						

Lehigh County Authority
System Operations Review - May 2024
Presented: June 24, 2024

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<u>System</u>	<u>Description</u>	<u>May-24</u>	<u>2024 Totals</u>	<u>2023 Totals</u>
Allentown	Bypass	0	2	4
	Bypass Volume	0	1,587,414	1,589,466
	Permit Exceedances	0	0	0
	Sanitary Sewer Overflows	0	4	6
	COA Issued NOVs	0	0	1
	Regulatory Agency issued NOVs	0	0	0
Arcadia	Bypass	0	0	0
	Bypass Volume	0	0	0
	Permit Exceedances	0	0	3
	Sanitary Sewer Overflows	0	0	0
	NOVs	0	1	0
Heidelberg Heights	Bypass	0	4	8
	Bypass Volume	0	2,125,696	1,872,796
	Permit Exceedances	1	9	14
	Sanitary Sewer Overflows	0	0	0
	NOVs	0	0	0
Lynn	Bypass	0	2	1
	Bypass Volume	0	1,010,000	350,000
	Permit Exceedances	0	2	1
	Sanitary Sewer Overflows	0	0	0
	NOVs	0	0	0
Sand Spring	Bypass	0	0	0
	Bypass Volume	0	0	0
	Permit Exceedances	5	16	39
	Sanitary Sewer Overflows	0	0	1
	NOVs	1	1	0
Wynnewood	Bypass	0	0	0
	Bypass Volume	0	0	0
	Permit Exceedances	0	4	5
	Sanitary Sewer Overflows	0	3	3
	NOVs	0	0	0
Allentown	Boil Water Advisories	0	0	2
Central Lehigh	Boil Water Advisories	0	0	1
Suburban Water Systems	Boil Water Advisories	0	1	3

May 9, 2024

NOTICE OF VIOLATION

Delivered via email

Lehigh County Authority
PO Box 3348
1053 Spruce Street
Allentown, PA 18106

Attention: Andrew Moore

RE: Sewage
Sand Spring Wastewater Treatment Plant (WWTP)
NPDES Permit No. PA0034029
North Whitehall Township, Lehigh County

Dear Andrew Moore:

A review of Lehigh County Authority's Discharge Monitoring Reports ("DMRs") has indicated a pattern of effluent violations with respect to the limitations set forth in NPDES Permit No. PA0034029. The effluent violations are as follows:

<u>Monitoring Period</u>	<u>Parameter</u>	<u>Permit Limit</u>	<u>Reported Value</u>	<u>Concentration Unit</u>
November 2022	Ammonia-Nitrogen <i>Average Monthly</i>	1.1	1.9	lbs/day
December 2022	Ammonia-Nitrogen <i>Average Monthly</i>	9.0	13.6	mg/L
	Ammonia-Nitrogen <i>Average Monthly</i>	1.1	3.2	lbs/day
January 2023	Ammonia-Nitrogen <i>Average Monthly</i>	9.0	31.21	mg/L
	Ammonia-Nitrogen <i>Average Monthly</i>	1.1	9.0	lbs/day
	Total Nitrogen <i>Average Monthly</i>	5.4	9.0	lbs/day
	Total Phosphorus <i>Average Monthly</i>	.57	0.60	lbs/day
February 2023	Total Nitrogen <i>Average Monthly</i>	5.4	11.8	lbs/day
March 2023	Ammonia-Nitrogen <i>Average Monthly</i>	1.1	11.1	lbs/day
	Ammonia-Nitrogen	9.0	37.2	mg/L

	<i>Average Monthly</i>			
	Total Nitrogen	5.4	12.0	lbs/day
	<i>Average Monthly</i>			
April 2023	Ammonia-Nitrogen	1.1	10.3	lbs/day
	<i>Average Monthly</i>			
	Ammonia-Nitrogen	9.0	36.0	mg/L
	<i>Average Monthly</i>			
	Total Nitrogen	5.4	12.4	lbs/day
	<i>Average Monthly</i>			
May 2023	Ammonia-Nitrogen	3.0	28.9	mg/L
	<i>Average Monthly</i>			
	Ammonia-Nitrogen	0.36	8.50	lbs/day
	<i>Average Monthly</i>			
May 17, 2023	Fecal Coliform	1,000	1,986.0	No./100 ml
	<i>Instantaneous Maximum</i>			
May 25, 2023	Fecal Coliform	1,000	5,170	No./100 ml
	<i>Instantaneous Maximum</i>			
	Total Nitrogen	5.4	13.5	lbs/day
	<i>Average Monthly</i>			
	Zinc, Total	0.130	< 0.134	mg/L
	<i>Average Monthly</i>			
	Zinc, Total	0.151	0.217	mg/L
	<i>Daily Maximum</i>			
June 2023	Ammonia-Nitrogen	3.0	16.0	mg/L
	<i>Average Monthly</i>			
	Ammonia-Nitrogen	0.36	4.10	lbs/day
	<i>Average Monthly</i>			
	Total Nitrogen	5.4	7.3	lbs/day
	<i>Average Monthly</i>			
July 2023	Ammonia-Nitrogen	3.0	17.8	mg/L
	<i>Average Monthly</i>			
	Ammonia-Nitrogen	0.36	5.30	lbs/day
	<i>Average Monthly</i>			
August 2023	Ammonia-Nitrogen	0.36	2.40	lbs/day
	<i>Average Monthly</i>			
	Ammonia-Nitrogen	3.0	7.9	mg/L
	<i>Average Monthly</i>			
	Fecal Coliform	1,000	1,986	No./100 ml
	<i>Instantaneous Maximum</i>			
September 2023	Ammonia-Nitrogen	3.0	15.8	mg/L
	<i>Average Monthly</i>			
	Ammonia-Nitrogen	0.36	4.20	lbs/day
	<i>Average Monthly</i>			
October 2023	Ammonia-Nitrogen	3.0	29.4	mg/L
	<i>Average Monthly</i>			
	Ammonia-Nitrogen	0.36	8.10	lbs/day
	<i>Average Monthly</i>			
	Total Nitrogen	5.4	10.9	lbs/day
	<i>Average Monthly</i>			
November 2023	Ammonia-Nitrogen	9.0	17.4	mg/L
	<i>Average Monthly</i>			
	Ammonia-Nitrogen	1.1	5.4	lbs/day

	<i>Average Monthly</i>			
	Total Nitrogen	5.4	6.2	lbs/day
	<i>Average Monthly</i>			
December 2023	Ammonia-Nitrogen	9.0	10.83	mg/L
	<i>Average Monthly</i>			
	Ammonia-Nitrogen	1.1	3.2	lbs/day
	<i>Average Monthly</i>			
	Total Nitrogen	5.4	6.5	lbs/day
	<i>Average Monthly</i>			
January 2024	Ammonia-Nitrogen	9.0	18.5	mg/L
	<i>Average Monthly</i>			
	Ammonia-Nitrogen	1.1	6.8	lbs/day
	<i>Average Monthly</i>			
	Total Nitrogen	5.4	10.6	lbs/day
	<i>Average Monthly</i>			
February 2024	Ammonia-Nitrogen	9.0	24.7	mg/L
	<i>Average Monthly</i>			
	Ammonia-Nitrogen	1.1	8.1	lbs/day
	<i>Average Monthly</i>			
	Total Nitrogen	5.4	10.7	lbs/day
	<i>Average Monthly</i>			
March 2024	Ammonia-Nitrogen	9.0	19.1	mg/L
	<i>Average Monthly</i>			
	Ammonia-Nitrogen	1.1	7.5	lbs/day
	<i>Average Monthly</i>			
	Total Nitrogen	5.4	9.3	lbs/day
	<i>Average Monthly</i>			

NPDES Permit No. PA0034029, Part A.I.A. establishes the minimum frequency at which monitoring is to be conducted. Review of Lehigh County Authority's DMRs indicated that the following samples were not collected as required:

<u>Monitoring Period</u>	<u>Parameter</u>	<u>Required Frequency</u>	<u>Reported Frequency</u>
April 2023	Zinc	1/Week	3/month
May 2023	Zinc	1/Week	3/month

Please be advised that failure to comply with the terms and conditions of your NPDES Permit is a violation of said Permit and the Clean Streams Law of Pennsylvania, Act of June 22, 1937, P.L. 1987, as amended, 35 P.S. Section 691.1 et seq. ("The Clean Streams Law") and subjects Lehigh County Authority to appropriate enforcement action including, but not limited to, civil penalty assessment.

The Department requests that Lehigh County Authority respond in writing to this notice within 15 days of its receipt. Said response should indicate the cause of the above-described non-compliance and the steps that will be or have been taken in order to ensure future compliance.

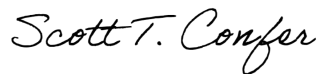
The Department requests that Lehigh County Authority update the Compliance Plan previously submitted on April 14, 2023 within 90 days of the date of this Notice. Said Plan should contain an implementation schedule with timeframes.

Please confirm receipt of this Notice by sending an email to scconfer@pa.gov.

This Notice of Violation is neither an order nor any other final action of the Department. It neither imposes nor waives any enforcement action available to the Department under any of its statutes. If the Department determines that an enforcement action is appropriate, you will be notified of the action.

If you have any questions concerning this correspondence, you may contact me at 610-861-2135.

Sincerely,

A handwritten signature in cursive script that reads "Scott T. Confer".

Scott T. Confer
Water Quality Specialist
Clean Water Program

cc: North Whitehall Township



1053 SPRUCE RD * P.O. BOX 3348 * ALLENTOWN, PA 18106-0348
610-398-2503 * email: AndrewMoore@lehighcountyauthority.org
www.lehighcountyauthority.org

May 22, 2024

Mr. Scott Confer
Water Quality Specialist
Pennsylvania Department of Environmental Protection
Bethlehem District Office
4530 Bath Pike
Bethlehem, PA 18017-9044

Re: Sand Spring Wastewater Treatment Plant (WWTP)
NPDES Permit No. PA0034029
North Whitehall Township, Lehigh County

Dear Mr. Confer:

The Lehigh County Authority (LCA) is in receipt of the Notice of Violation (NOV) issued electronically by the Pennsylvania Department of Environmental Protection (DEP) on May 9, 2024. The following is the required response to the permit exceedances that occurred between November 2022 and March 2024.

Plant Background

The Sand Spring WWTP was constructed in 1972 by a developer to serve the Sand Spring development, located in the Schnecksville area in North Whitehall Township. Sewer service is provided to approximately 248 apartment units, 9 commercial properties, and an elementary school. Lehigh County Authority acquired the system in 2005. At times, the plant was having difficulties meeting its permitted limits and was reaching the end of its useful life. The design of a new WWTP was authorized in February 2017, with DEP approval of the Water Quality Management Permit in late 2018. Construction was initiated in late 2020 and the plant was completed and brought online in May 2021. The plant operates under NPDES Permit No. PA0034029.

The treatment process consists of a sequencing batch reactor (SBR) system with a design capacity of 0.035 MGD and 85 lbs/BOD. The SBR system has two reactor tanks that operate in parallel, each with a volume of 8,000 gallons. The plant also has an influent equalization tank, a tertiary cloth filter, an effluent storage tank, and an ultraviolet disinfection (UV) system.

Ammonia – Nitrogen & Total Nitrogen

The permit limit for ammonia-nitrogen is based on a 30-day average concentration and mass loading that varies by season. The winter season limit (November to April) is 3 mg/L (1.1 lb/d), and the summer season limit (May to October) is 9 mg/L (0.36 lb/d). The plant has been facing difficulties in meeting these limits, totaling 31 ammonia-based exceedances between November 2022 and March 2024.

The plant has struggled with an organic overload condition since the plant's construction, which has been the main contributor to the ammonia-based exceedances. When a plant is organically overloaded, the concentration of biodegradable organic matter exceeds the system's capacity to treat it efficiently. This can ultimately result in increased oxygen demands as heterotrophic bacteria (which degrade organic matter) outcompete nitrifying bacteria for oxygen. Since nitrifying bacteria are slower-growing and require more stable conditions, they can be severely hampered when dissolved oxygen levels drop. An effective way to treat high organic loadings and sustain nitrification is to maintain a higher than designed Solids Retention Time (SRT), which has been attempted at the plant. However, organic overloading can lead to poor sludge settling characteristics and increased sludge volume index (SVI). Poor settling sludge combined with a high solids inventory creates unfavorable conditions that can quickly deteriorate the effectiveness of the settling phase in the SBR cycle, ultimately leading to higher solids carryover and reduced treatment efficiency in subsequent cycles. Consequently, the plant has not been able consistently maintain an adequate solids inventory; therefore, the ammonia removal efficiency is low.

Similarly, the Total Nitrogen limit, which consists of the sum of total kjeldahl nitrogen (ammonia and organic ammonia), nitrate, and nitrite, has not been met by the plant. Due to the insufficient conversion of ammonia to nitrate and nitrite via nitrification, the effluent ammonia remains high, resulting in elevated levels of total nitrogen.

To address these challenges, the plant conducted a demonstration study to assess the feasibility and performance of an Integrated Fixed Film Activated Sludge (IFAS) process into the existing SBR system. The heavy carrier IFAS is a hybrid process that combines suspended growth and attached growth systems, using plastic media with high surface area to support the growth of nitrifying bacteria. The media provides additional biomass and increases the effective SRT of the system, enhancing the nitrification capacity and resilience. The media also reduces sludge production and improves the settleability of mixed liquor. A Water Quality Management permit was received on April 9, 2024, authorizing the plant modifications. Construction began on April 30, 2024. We expect to have the upgraded plant operational by mid-December 2024.

Fecal Coliform

Three fecal coliform exceedances were noted in the NOV. The cause of these exceedances was a malfunction of the UV system. A faulty part in the UV control panel prevented the UV bulbs from activating at the correct times during discharge, even though the system indicated that it was operating normally. Since the replacement of the faulty part, the UV system has been operating as designed and no further fecal coliform exceedances have been observed.

Reporting

Zinc sampling frequencies did not comply with the permit requirements in April and May 2023. A weekly sample is required, but one week was missed in each month. Insufficient sampling containers were utilized during each event. Staff have been retrained on how to adhere to the correct procedure and the significance of proper sampling frequencies and submittals.

Summary

Upon completion of the IFAS installation, we expect the plant to achieve and maintain compliance with all permitted limits. The IFAS process is expected to enhance the biological treatment capacity and improve the effluent quality. The Compliance Plan, which was originally submitted in 2023, will be updated to reflect the short- and long-term approaches to achieve compliance.

Lehigh County Authority is committed to our regulatory responsibilities, and we always strive for full compliance. If you have any questions, please do not hesitate to call me at 610-437-7681.

Sincerely,



Andrew Moore
Director of Plant Operations