



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

## LEHIGH COUNTY AUTHORITY

Published: August 19, 2024

### BOARD MEETING AGENDA – August 26, 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](mailto:LCABoard@lehighcountyauthority.org) in advance of any meeting or view the meeting at a later time by visiting the LCA website. Please visit <https://www.lehighcountyauthority.org/about/lca-board-meeting-videos/> for specific instructions to join the meeting if you are attending virtually. If attending in-person at LCA's Main Office, please follow all safety and sanitation protocols posted.

#### 1. Call to Order

- **NOTICE OF MEETING RECORDINGS**

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

- *Public Participation Sign-In Request*

#### 2. Review of Agenda / Executive Sessions

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

#### 3. Approval of Minutes

- *August 12, 2024 Board Meeting minutes*

#### 4. Public Comments

#### 5. Action / Discussion Items:

#### **FINANCE AND ADMINISTRATION**

- *2025-2029 Capital Plan – Preliminary Plan Presentation, Suburban Division & Administrative Projects (Discussion)*
- *Draft Omnibus Resolution: Delegation of Board Duties (Discussion) (yellow) (digital Board packet, pages 8-18)*

#### **WATER**

- *Lead Service Line Replacement Project Cycle 1 (Approval) (blue) (digital Board packet, pages 19-35)*
- *Lead Service Line Replacement Project Cycle 2 (Approval) (green) (digital Board packet, pages 36-45)*
- *Water Filtration Plant: Fluoride System Upgrades (Approval) (gray) (digital Board packet, pages 46-71)*

#### **WASTEWATER**



6. Monthly Project Updates / Information Items (1<sup>st</sup> Board meeting per month) (digital Board packet, pages)
7. Monthly Financial Review (2<sup>nd</sup> Board meeting per month) (digital Board packet pages 72-84) - **July 2024 report attached**
8. Monthly System Operations Overview (2<sup>nd</sup> Board meeting per month) (digital Board packet, pages 85-94) – **July 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		
September 9, 2024	September 23, 2024	October 14, 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**

### **August 12, 2024**

The Regular Meeting of the Lehigh County Authority Board of Directors was called to order at 12:01 p.m. on Monday, August 12, 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, Norma Cusick, Kevin Baker, Linda Rosenfeld, Sean Ziller, and Marc Grammes were present for Roll Call and remained for the duration of the meeting, except for Sean Ziller who left the meeting at 1:43 p.m. Ted Lyons joined the meeting at 12:10 p.m. and Jeff Morgan joined the meeting at 1:25 p.m.

Attorney Kevin Reid, the Authority's Solicitor, was present along with Authority Staff, Liesel Gross, Ed Klein, Chris Moughan, Andrew Moore, AJ Capuzzi, Chuck Volk, Phil DePoe, Susan Sampson, and Lisa Miller.

Chairman Nagle announced that the Board received their electronic and hard copies of the Board packet in advance. A copy of the packet is also available online.

#### **REVIEW OF AGENDA**

Liesel Gross announced that there are no changes to the agenda; however, there will be an Executive Session after the regular meeting regarding potential litigation and property acquisition.

#### **APPROVAL OF MINUTES**

##### **July 22, 2024 Meeting Minutes**

On a motion by Linda Rosenfeld, seconded by Amir Famili, the Board approved the minutes from the July 22, 2024 meeting as written (7-0).

#### **PUBLIC COMMENTS**

None.

##### **2025-2029 Capital Plan – Preliminary Plan Presentation**

Liesel Gross provided an introduction to the Authority's process for developing the Capital Plan (Plan), which is conducted annually. She noted the various Board approvals and public input process, and explained that today's presentation is focused on the Allentown Division draft Plan for the 2025 to 2029 time period. She then reviewed the timeline for future presentations and public input, and noted that Plan approval will be requested in October. This year's five-year plan includes significant cost increases from the prior five-year plan. Major drivers for the increases include \$75 million for the Lead Service Line Replacement program, \$20 million for the PFAS water treatment upgrades, \$25 million for the escalated inflow and infiltration removal programs, and \$27 million for the wet-weather capacity enhancements at Kline's Island WWTP. She noted that some potential grant funding is included in the financial analysis for this Plan, with the potential for additional grants to offset borrowing. She also explained that the regional Act 537 Plan, when finalized for approval, will include its own financial evaluation and rate projection.

Chuck Volk then presented the Allentown Division water and wastewater project details included in the Plan and detailed PowerPoint presentation. His presentation included a review of annual



projects, smaller repair and rehabilitation projects, large projects, and new projects included for the first time in this year's Capital Plan. The new projects include: WFP HVAC System upgrades and WFP roof replacements, WWTP Facility Improvements, Plastic Media Trickling Filter Rehabilitation, WWTP Solids Process Improvements, Park Pump Station Force Main Extension, Park Pump Station Main Extension, WWTP Wet-Weather Improvements - Phase 2, and KISS Relief Interceptor.

Ed Klein reviewed the financial analysis included in the Plan, noting water projects total \$149 million, the wastewater projects total \$174 million, and the administrative projects total \$1.8 million. To fund the Plan, approximately \$125.5 million will come from operations and reserves, \$1.2 million from the City of Allentown grants and reimbursements, \$44 million is expected in grant funding for the lead service line replacement program, PFAS grant funding, and I&I Source Reduction plan projects. And \$107 million will be funded from new borrowing. He presented a cash flow statement that indicates these funding sources.

Liesel Gross concluded the presentation with a review of the Plan's impact on water and sewer rates in Allentown, which are projected to increase 8 to 10 percent per year over the next five years. The current average residential water and sewer bill is \$915 per year, which may increase to about \$1,397 per year over the Plan period. This is a significant increase, but still within the regional continuum of the communities in the Lehigh Valley.

There was some Board discussion regarding discretionary costs and rate increases.

Liesel Gross provided a recap of the Allentown Division draft Capital Plan. She noted that the Suburban Division draft Capital Plan will be discussed at the next Board meeting at which time the comment period will begin. The final review process will take place before approval in October.

### **2024 Water Meter Replacements**

Chuck Volk gave an overview of the project to replace 1,530 residential water meters throughout the Suburban Division that have reached the end of their useful life or are inoperable. The Authority uses the iPerl model of Sensus brand water meters. The meters will be connected to existing radio read units installed in a previous project. Equipment installation is being procured through COSTARS. Core & Main, LP, an authorized distributor for Sensus and a COSTARS approved service provider, will be acting as general contractor for the project.

Amir Famili asked how the meters are being read through the automated meter reading system. Liesel Gross said that most of the meters are being read with a radio antenna and a handful of meters are still being read manually. Mr. Famili also asked if there is a difference before and after the meters are installed to determine if there is additional revenue being generated. Liesel Gross said this has been studied and spot checked in prior projects, and the Authority has not seen full scale increases in water revenue. She stated the greater benefit relates to meter accuracy and reliability for the customer.

On a motion by Norma Cusick, seconded by Marc Grammes, the Board approved the Capital Project Authorization for Construction Phase of the 2024 Meter Replacement Project in the amount of \$532,524.00 which includes the Contract Award to Core & Main, LP in the amount of \$492,524.00 (8-0).

### **Industrial Pretreatment Plant Master Plan**

Liesel Gross provided a presentation and overview of the Pretreatment Plant (PTP), including the recommendations from the Stakeholder Advisory Panel that was formed in April to support the decision-making process for the PTP. She reviewed the purpose of the PTP and the major



challenges related to aging treatment systems, lack of capacity for new industrial growth, and financial structure for capital improvements at the PTP. Ms. Gross described the financial challenges in more detail, noting that Boston Beer is the only direct customer and the other users of the PTP do not pay rates based on the actual cost to operate or maintain the facility.

Ms. Gross reviewed the stakeholder engagement process, the members of the stakeholder panel, and major topics discussed at each meeting from May through July 2024. She noted that a key topic raised in every stakeholder meeting related to the contributions of the PTP toward the regional economy, in terms of supporting food and beverage manufacturers that have located here and the jobs and economic value they create for the region. However, considering the build-out of the region since the PTP was originally envisioned in the 1970s, it is unclear if there will be adequate new industrial growth to support the region's continued investment in this facility. The five major industrial users of the PTP were participants in the stakeholder panel and provided their views on the importance of the pretreatment services being provided, and the need for cost-effective solutions.

Several options were presented to the stakeholders ranging from a full re-build of the PTP expected to cost \$267 million to a complete shutdown of the facility that would require existing industries to manage their pretreatment requirements independently on-site. There was some discussion about the unique nature of the Authority's PTP, as it is uncommon for pretreatment services to be provided regionally by a municipal utility. Other options reviewed included different approaches to providing service to the existing industries only, or a subset of those industries. Those options are expected to cost between \$32 million and \$171 million, depending on the number of industries included and the amount of additional capacity built into the new facility. Ms. Gross explained that each of the existing industries has the option to remove their flows from the PTP at any time if the regional option is not cost-effective for them. Two of the five current industries are evaluating this option due to the high cost of the Authority's proposed options. Therefore, the decision must be made collaboratively with input from the region, the current industries, the municipalities in the regional sewer service area, and the Authority Board of Directors.

There was some Board discussion regarding the options presented and the technical approaches involved in providing service to some industries, as well as maintaining the waste hauler program.

Ms. Gross reviewed the stakeholder panel's recommendations to the Authority Board, which were focused on developing a solution that provides services only to those industries that currently require it, and developing approaches for expanding the PTP in the future if new customers require service. The panel also recommends optimizing the waste hauler program to ensure operational and financial benefit, and restructuring the rate-setting process, tapping fees, and customer relationships to capture future capital costs.

There was Board discussion regarding the various PTP options and how the project would impact the regional Act 537 Plan that is currently under development. Ms. Gross explained that in any of the options, industrial waste will continue to be pretreated, so the impact to the rest of the regional Act 537 Plan is minimized; however, some projects may be required at the Kline's Island Wastewater Treatment Plant in Allentown to address increased loadings that may result from changes to the pretreatment process.

Ms. Gross stated that the stakeholders who participated in the panel were very helpful and engaged throughout the process, and the Authority will continue to maintain communication with them to seek support for the regional Act 537 Plan that will be rolled out later this year.

#### **Lynn Township WWTP Final Clarifier Project**



Chuck Volk provided background on the project noting that a second clarifier needs to be added to provide the ability to inspect and maintain the existing clarifier. He said that in recent years, influent flows and loads have trended upward and the existing final clarifier appears to be undersized during high loading periods. Matt Dorner provided details of the project noting that the goal of the project is to provide redundancy, improve process control, and improve wet weather treatment for the final clarification process. As part of this project, the two existing return activated sludge (RAS) pumps and discharge piping will be demolished and replaced with three upgraded RAS pumps equipped with VFDs.

There was some discussion about the electrical contract costs and original engineer's estimate, which was significantly higher. Chuck Volk explained the elements of the engineer's estimate which were later excluded from the bid package for the electrical contract.

On a motion by Norma Cusick, seconded by Linda Rosenfeld, the Board approved the Capital Project Authorization for the Construction Phase in the amount of \$1,425,136.00 which includes the General Construction Contract to JEV Construction, LLC in the amount of \$1,241,000.00, the Electrical Contract to Ace Electric, Inc. in the amount of \$47,936.00, and the Professional Services Authorization for the Construction Phase Engineering Services to CHA Consulting Inc. in the amount of \$76,200.00 (8-0).

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

Liesel Gross reviewed the August 2024 report and noted that there are numerous items for the August 26 Board meeting. The Suburban Division draft Capital Plans will be presented. She also noted that work is being done on a draft Omnibus Resolution: Delegation of Board Duties, which intends to combine historical resolutions and will be presented for discussion at the next meeting.

#### **STAFF COMMENTS**

None.

#### **SOLICITOR'S COMMENTS**

None.

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

None.

#### **BOARD MEMBER COMMENTS**

None.

#### **EXECUTIVE SESSION**

There will be an Executive Session after the regular meeting to discuss potential litigation and property acquisition.

#### **ADJOURNMENT**

There being no further business, the Chairman adjourned the meeting at 2:07 p.m.



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Jeffrey J. Morgan  
Secretary



RESOLUTION NO. \_\_\_\_\_

(Duly adopted \_\_\_\_\_)

A RESOLUTION CONFERRING APPROVAL AND SIGNATORY POWERS FOR CERTAIN  
CONTRACTS, AGREEMENTS, FINANCIAL TRANSACTIONS, AUTHORITY  
DOCUMENTS AND AUTHORITY OPERATIONS

WHEREAS, the Lehigh County Authority (“LCA” or “Authority”) has been incorporated and established for the purpose, in part, of providing water and sewer service in the Lehigh Valley; and

WHEREAS, the Pennsylvania Municipality Authorities Act, 53 Pa.C.S. Sec. 5601-5623, as amended (the “Act” or “MAA”), grants Municipal Authorities all powers necessary or convenient for the carrying out of the purposes in the Act, including the power to make contracts of every name and nature and to execute all instruments necessary or convenient for the carrying on of its business, and to appoint agents, employees and servants and prescribe their duties; and

WHEREAS, the Authority has adopted Bylaws for the purpose of managing and regulating its affairs, and subsequently adopted Resolution No. \_\_\_\_\_ on [DATE], which amended and restated the Bylaws of the Authority in their entirety (the current governing Bylaws hereafter referred to as “Bylaws”); and

WHEREAS, the Bylaws state that the members of the Authority’s Board (“Board”) acting collectively shall exercise all powers that may be exercised or performed by the Authority under existing laws; and

WHEREAS the Bylaws state that the Board may delegate any of its powers or duties to any officer, agent or employee upon such terms as the Board shall see fit, and the Board may also determine who shall be authorized on behalf of the Authority to sign bills, notes, receipts, acceptances, endorsements, checks, releases, contracts and other documents; and

WHEREAS, the Authority often requires approval and/or signatures on certain contracts, agreements, reports, and other documents which occur during the normal course of business which may or may not need formal Board approval or must be approved and/or executed prior to a meeting in order to conduct business in an orderly and timely fashion; and

WHEREAS, the Authority has adopted prior resolutions which conferred upon certain management employees the power to approve certain contracts, agreements, reports, financial transactions and other documents, and the powers to sign certain contracts, agreements and other documents on behalf of the Authority, and has adopted various revisions and amendments thereto; and



**\*\* WORKING DRAFT FOR DISCUSSION PURPOSES ONLY \*\***

WHEREAS, the Board, pursuant to its powers, wishes to revise and update the approval and signatory power for certain contracts, agreements, financial transactions, general Authority operations and other documents; and

WHEREAS, to the extent this Resolution conflicts with any prior resolution of the Board, all prior resolutions that are inconsistent, or any part thereof, are hereby repealed; and

WHEREAS, to the extent any prior Resolution, or any part thereof, provides for any delegation of authority not expressly stated or controlled in this Resolution, said prior resolution, or any part thereof, shall remain in full force and effect.

NOW, THEREFORE, BE IT RESOLVED and it is hereby resolved that:

1. The Chief Executive Officer, Chief Financial Officer, their designees, or such titles or similar functions that may be designated by the Board, are hereby authorized to both approve and sign certain contracts, agreements and other documents as listed in this Resolution, on behalf of the Authority, hereinafter called “Approvers.”
2. The Chief Executive Officer, Chief Financial Officer, Accounting Supervisor, Controller, or such titles or similar functions that may be designated by the Board, are hereby authorized to both approve and sign certain financial documents, transactions, communications and other documents or transactions listed in this Resolution with certain financial institutions and banks, on behalf of the Authority, hereinafter called “Authorized Financial Transaction Persons.”
3. The Solicitor, Executive Administrative Support Specialist, Human Resources Manager, Controller, or such titles or similar functions that may be designated by the Board, are hereby authorized to attest, endorse or certify any signature or action indicated or authorized by this Resolution.
4. The aforesaid Approvers are hereby authorized to approve and sign the following contracts, agreements and other documents, and to take actions necessary or convenient thereto, on behalf of the Authority:
  - A. Bond Issue Related Documents Subject to the Requirement that the Authorization of the Issuance of Bonds or Debt Requires Board Approval
    - i. Applications to rating agencies.
    - ii. Acceptance of bond insurance quotations with approval of bond counsel.
    - iii. Any offering documents including, but not limited to, the Preliminary Official Statement and Official Statement.



**\*\* WORKING DRAFT FOR DISCUSSION PURPOSES ONLY \*\***

- iv. Any bond or note purchase agreements and any disclosure documents or contracts including, but not limited to, continuing disclosure agreements, dissemination agent contracts and continuing disclosure postings.
- B. Insurance and Employee Related Matters Including Payroll Within Board-Approved Budgets
  - i. Acquisition of commercial package insurance including automobile, umbrella, and public liability coverage.
  - ii. Acquisition or renewal of, and amendments to health insurance plans, including medical, dental, vision, and prescription drug.
  - iii. Acquisition or renewal of worker's compensation insurance.
  - iv. Acquisition or renewal of short term and long-term disability insurance.
  - v. Acquisition or renewal of life insurance.
  - vi. Acquisition or renewal of any other policies of insurance required by the Authority.
  - vii. Enroll or remove participants and manage documentation for health, dental, vision, disability, and life insurance programs.
  - viii. Wage tax reports.
  - ix. Defined Benefit and Deferred Compensation Pension Plan creation and amendment forms.
  - x. Defined Benefit and Deferred Compensation Pension Plan payments, distributions, and withdrawals.
  - xi. Any other instrument or documentation necessary to implement approved employee benefits.
  - xii. Tax exemption forms.
  - xiii. Establish job descriptions, organization and department structures, compensation structure, and other personnel systems as needed for the effective and efficient operation of the Authority.
  - xiv. Implement pay increases, performance programs, promotions and other personnel actions as required.



- xv. Negotiate collective bargaining agreements, subject to Board approval, and execute various agreements with the collective bargaining unit(s) required for the resolution of employee matters.

C. General purchasing and equipment related matters

- i. Vehicle owner cards and titles to vehicles.
- ii. Authorization to utilize cooperative purchasing programs, including but not limited to COSTARS and health insurance consortiums, consistent with this Resolution.
- iii. The following Operations Approval Thresholds Table is adopted by the Board and includes approval thresholds for purchasing, including approval of purchase orders and agreements for new procurement and existing agreements. Purchases which exceed these thresholds shall require Board approval. The financial thresholds are established separate from the MAA bidding threshold law. The MAA rules must be followed in parallel with the established financial thresholds for approval.

<b>Operations Purchasing Approval Thresholds</b>
Purchase of individual items or contracts for a specific project or service less than \$250,000.
Professional services less than \$100,000.
Construction contracts less than \$250,000.
All other purchasing and contracts less than \$250,000.
Change Orders (COs): Aggregate COs less than 10% of initial contract and less than \$100,000 <u>or</u> COs less than \$50,000.

- iv. The following Capital Expenditures Thresholds Table is adopted by the Board and includes approval thresholds for purchasing, including approval of purchase orders and agreements for new procurement and existing agreements. Purchases which exceed these thresholds shall require Board approval. The financial thresholds are established separate from the MAA bidding threshold law. The MAA rules must be followed in parallel with the established financial thresholds for approval.



<b>Capital Expenditures Approval Thresholds</b>
Upsizings and extensions less than \$250,000
Stand-alone engineering studies less than \$100,000
Construction projects less than \$250,000
For projects budgeted for more than \$250,000, all professional services less than \$100,000 in preliminary design phase only
Other capital expenses, equipment, or other capital purchases less than \$250,000
Change Orders (COs): Aggregate COs less than 10% of initial contract and less than \$100,000 <u>or</u> COs less than \$50,000.

All COs approved by the Chief Executive Officer shall be reported to the Board via monthly Board meeting reports

D. Miscellaneous operational items

- i. Authorization letters for auditor.
- ii. Local, state, and federal surveys and reports.
- iii. Authorization to act as the delegate to vote on matters of interest pursuant to Authority's membership in the worker's compensation trust and health insurance cooperative.
- iv. Join, participate and act as voting members in any and all professional associations, mutual aid networks, cooperative purchasing organizations, trusts and organizations related to water and wastewater.
- v. Prepare, submit, sign and approve permits and any required documentation for any regulatory agency, including, but not limited to DEP, EPA and PennDOT.
- vi. DEP, EPA and any other regulatory agency reports: Reports required under the treatment plant NDPES Permit, including, but not limited to, the Monthly Discharge Monitoring Report, Pretreatment Annual Report, 503 Biosolids Report (letter on file with DEP authorizing signatures), and EPA Industrial Pretreatment Annual Report.
- vii. DEP Laboratory Accreditation applications.
- viii. Any and all matters additional or incidental to ensure the regulatory compliance of the Authority with local, state and federal agencies.



**\*\* WORKING DRAFT FOR DISCUSSION PURPOSES ONLY \*\***

- ix. Inter-municipal operational agreements, including, but not limited to, service contracts, shared services agreements, mutual aid agreements, and joint purchasing contracts not exceeding three (3) years or a total cost of \$100,000 per year. Intermunicipal Water (or Sewer) Service Agreements must be approved by the Board.
- x. Settle claims and lawsuits up to \$50,000, upon consultation with the Solicitor or other legal review provided by an approved third party, and with notification to the Board within 30 days of settlement.

E. Real estate and contract matters

- i. Highway Occupancy Permit applications.
- ii. Professional Services Contracts consistent with this Resolution.
- iii. Construction contracts and related agreements consistent with this Resolution.
- iv. Notice of award of construction contracts and any additional required Notices.
- v. Contract change orders and fee amendments consistent with this Resolution.
- vi. Agreements with developers, grantors or grantees of any kind granting or relinquishing property interests of any kind to or from the Authority, with said Agreements entered into consistent with Authority rules and regulations and policies, including security agreements.
- vii. Acceptance of dedication of property or facilities to the Authority upon developer's satisfaction of all maintenance responsibilities and posting of appropriate bonds.
- viii. Easement agreements and release or relinquishment of easements.
- ix. Negotiating and entering escrow or other acceptable security agreements as authorized by LCA Rules, Regulations or policies.
- x. Requisitions for payment under escrow or related agreements.
- xi. Contracts for the lease of Authority-owned property and land.
- xii. General authority to negotiate, obtain appraisals, settle, make payment for, and perform any other actions essential for the procurement or transfer of real property interests of any nature for LCA projects, both of an operational and capital nature; provided however, that prior to any real property procurements or transfers which may require payment or receipt of



**\*\* WORKING DRAFT FOR DISCUSSION PURPOSES ONLY \*\***

consideration in excess of \$50,000 per parcel, Approvers shall advise the Authority Board prior to obligating the Authority for that amount.

- xiii. File with the appropriate County, Commonwealth and Federal agencies, departments and offices any documents necessary to procure and perfect any real property interests, with the Solicitor having authority to so file.

F. Policies

- i. Develop and execute policies required to properly implement statutory requirements which have a de minimis financial impact to LCA or its customers.
  - ii. Develop and execute other policies and procedures either necessary or convenient for effective and efficient Authority operation which have a de minimis financial impact on LCA or its customers, including, but not limited to, employee policies, security and technology policies and bill collection procedures.
- 5. The aforesaid Authorized Financial Transaction Persons are hereby authorized to approve and sign the following financial documents, transactions, communications and other documents or transactions, and to take actions necessary or convenient thereto, on behalf of the Authority:
  - A. The Chief Executive Officer is authorized and empowered as the primary contact for all accounts and transactions with any financial institution or bank and the Chief Executive Officer may designate specific persons to perform transactions, including signing signature cards and any other transaction deemed necessary or convenient.
  - B. The Authorized Financial Transaction Persons are authorized and empowered to perform any one or more of the following actions for and on behalf of the Authority and on such terms and conditions as such Authorized Financial Transaction Persons may deem advisable in his/her sole discretion, all in accordance with Authority resolutions, actions, policies, guidelines, statements, procedures, etc., with signatures required by two of the Authorized Financial Transaction Persons:
    - i. Open and maintain any safe deposit boxes, lockboxes and escrow, savings, checking, depository, or other accounts with a financial institution, and transfer of same to other financial institutions.
    - ii. Withdraw, transfer or deposit any funds or draw, sign and deliver in the name of the Authority any check or draft against funds of the Authority accounts in such boxes or accounts.



**\*\* WORKING DRAFT FOR DISCUSSION PURPOSES ONLY \*\***

- iii. Implement additional depository and funds transfer services (including, but not limited to, facsimile signature authorizations, wire transfer agreements, night depository agreements, automated clearinghouse agreements, and payroll deposit programs).
- iv. Appoint the Bank as attorney-in-fact for any purpose (including, but not limited to, endorsing any checks, drafts, notes or other instruments payable to the Authority).
- v. Execute any document (including, but not limited to, facsimile signature, authorization agreements, wire transfer agreements, automated clearinghouse agreements, powers of attorney, and waivers) and take any action on behalf of the Authority.
- vi. Designate from time to time the person or persons to receive from the Bank any and all canceled checks and/or statements of account.
- vii. Purchase, hold, finance, pledge, exercise, convert, tender, redeem, exchange, transfer, assign, sell, enter into, write, issue, terminate, amend and otherwise deal and trade, singly or in combination, in the manner and with the types of investments set forth in the Authority's then-current Financial Guideline on Cash & Investment Management.
- viii. Give to and receive from the financial institution oral, written or electronic instructions, confirmations, notices or demands with respect to any account, activity or transaction.
- ix. Bind the Authority to enter into and perform any transaction or agreement, amendment or modification thereof, relating to any account, activity or transaction involving the Authority.
- x. Pay in cash or by check or by credit or debit card or draft drawn upon the funds of the Authority any sums required to be paid in connection with any account, activity or transaction.
- xi. Execute or otherwise assent to or enter into on behalf of the Authority all agreements, confirmations, releases, receipts, acknowledgements, assignments, powers of attorney or other documents in connection with any account, activity or transaction.
- xii. Establish and maintain an asset management account with debit card, check writing and margin privileges, from which account funds are directly spent.
- xiii. Exercise power to open and keep any account or special account with a financial institution as from time to time may be required, or shall be required by resolution or so designated by the Board, and, to the extent such



**\*\* WORKING DRAFT FOR DISCUSSION PURPOSES ONLY \*\***

accounts are not insured, require such security from any financial institution as may be directed by the Board or required by law.

- xiv. Establish and/or transfer employee flexible spending accounts and approving and executing all documents related thereto.
  - xv. Where appropriate, authorize transfers to cover budget overruns.
  - xvi. Authorize budget amendments required for specific capital project budget or line item exceedances.
  - xvii. Transfer budgeted amounts between line items within the budget; however, revisions that alter the total expenses or revenues of any budget shall be approved by the Board.
  - xviii. Establish and maintain petty cash fund with checks for routine cash disbursements.
- C. The Authorized Financial Transaction Persons are authorized and empowered to perform any one or more of the following actions for and on behalf of the Authority and on such terms and conditions as such Authorized Financial Transaction Persons may deem advisable in his/her sole discretion, all in accordance with Authority resolutions, actions, policies, guidelines, statements, procedures, etc., with a signature required by one of the Authorized Financial Transaction Persons:
- i. Assign, negotiate, endorse and deposit in and to such boxes and accounts any checks, drafts, notes, and other instruments and funds payable to or belonging to the Authority.
  - ii. Endorse to the Bank any checks, drafts, notes, or other instruments payable to the Authority.
  - iii. Order the transfer of record of any securities, funds or other property to any name and to accept delivery of any securities, funds or other property or direct the sale or exercise of any rights with respect to any securities or other property.
- D. The endorsement of items for deposit may be by the written or stamped endorsement of the Authority without designation of the person making endorsement.
- E. All books, records and accounts of the Authority shall be kept in the custody and possession of the following designees: CEO, CFO and their designees.
- F. The Executive Administrative Support Specialist, Human Resource Manager and Controller of the Authority, or such titles or similar functions that may be



**\*\* WORKING DRAFT FOR DISCUSSION PURPOSES ONLY \*\***

designated by the Board, are authorized to attest to the signatures of any of the Authorized Financial Transaction Persons.

6. For all Board authorized actions, the CEO and CFO shall be authorized signatories.
7. The Secretary, Assistant Secretary or Solicitor of the Authority is authorized from time to time to certify the adoption of the foregoing Resolution to any interested party, the continuing effect of this Resolution, and the incumbency of the various parties authorized to exercise the rights in this Resolution.
8. To the extent this Resolution conflicts with any prior resolution of the Board, all prior resolutions that are inconsistent, or any part thereof, are hereby repealed.
9. To the extent any prior resolution, or any part thereof, provides for any delegation of authority not expressly stated or controlled in this Resolution, said prior resolution, or any part thereof, shall remain in full force and effect.



**\*\* WORKING DRAFT FOR DISCUSSION PURPOSES ONLY \*\***

This Resolution is effective immediately.

LEHIGH COUNTY AUTHORITY

By: \_\_\_\_\_  
(Vice) Chairman

Attest: \_\_\_\_\_  
(Assistant) Secretary

Adopted: \_\_\_\_\_



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## MEMORANDUM

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**Date:** August 26, 2024

**To:** Lehigh County Authority Board of Directors  
**From:** Charles Volk and Jason Peters  
**Subject:** Allentown Division – Lead Service Line Replacement Program Cycle 1

**MOTIONS / APPROVALS REQUESTED:**

No.	Item	Amount
1	<u>Capital Project Authorization</u> – Lead Services Replacement Program Cycle 1 Construction Phase	\$4,024,857
2 **	<u>Professional Services Authorization:</u> <ul style="list-style-type: none"><li>Construction Engineering and Administration Services – Gannett Fleming, Inc.</li><li>Construction Inspection Services – Keystone Consulting Engineers</li></ul>	\$171,520 \$75,000
3 **	<u>General Construction Contract:</u> <ul style="list-style-type: none"><li>General Construction – Pact One LLC Contractor</li></ul>	\$2,376,445
4 **	<u>Final Paving Restoration Contract:</u> <ul style="list-style-type: none"><li>Cost Sharing Agreement – City of Allentown</li></ul>	\$701,892

*\*\* Included in the Capital Project Authorization*

**PROJECT OVERVIEW:**

In December 2021, the US Environmental Protection Agency (US EPA) issued the final regulatory framework for the Lead and Copper Rule Revisions (LCRR). Among the LCRR mandates is the requirement to replace both public and private Lead Service Lines (LSLs). LCA has taken a proactive approach and is developing an in-depth LSL replacement program. The scope of the Cycle 1 project includes the replacement of approximately 150 LSLs and pot-hole excavation investigation of approximately 450 services in the City of Allentown (COA). Coordination with the COA and its many departments along with other outside agencies and private utilities such as UGI is critical to obtain the necessary approvals for this project. This project will be performed under a single construction contract.

**FUNDING:**

This Project represents a Change of Law, and will be funded by the LCA Allentown Division. PennVEST funding was awarded July 19, 2023, consisting of a \$1,555,508 loan and \$3,383,892 grant. The PennVEST funding amount will be adjusted based on final project costs.

**PROJECT STATUS:**

In November 2023 the Board approved the Design and Bid Phase of this Project. Working closely with the COA and other outside agencies, LCA has obtained all approvals required for the Lead Cycle 1 Construction Phase.

**THIS APPROVAL: LEAD SERVICE LINE REPLACEMENT PROGRAM CYCLE 1 CONSTRUCTION PHASE**



The Allentown Division Lead Service Line Replacement Program Cycle 1 Project includes the replacement of approximately 150 LSLs and pot-holing investigation of approximately 450 services in the City of Allentown (COA).

**BIDDING SUMMARY – CONSTRUCTION CONTRACTS**

The project was advertised for bid on July 12, 2024 and a mandatory pre-bid meeting was held virtually on July 23, 2024, with eight (8) contractors in attendance. Bids were opened on August 12, 2024. The bidding results are as shown in Table 1 below.

<b>Table 1</b>	
<b>General Construction</b>	
<b>Bidder</b>	<b>Amount</b>
<b><i>Pact One LLC</i></b>	<b><i>\$2,376,445.00</i></b>
Michael F. Ronca and Sons Inc.	\$3,221,000.00
Joao & Bradley Construction Co. Inc.	\$3,321,389.00
Pioneer Construction Co.	\$5,851,010.34

PACT ONE, LLC (PACT) from Ringoes, NJ is low bidder for the contract. PACT specializes in site work and installation of water, sanitary sewer and storm sewer systems and has successfully completed numerous municipal utility projects in eastern Pennsylvania. The firm completed the Vera Cruz sanitary sewer project for LCA (in Upper Milford Township) and most recently the Suburban Division Cycle 7 Water Main Replacement Project, and their performance was satisfactory. The bid documents are in order and the firm appears qualified to perform the work for the contract. LCA staff recommend award of the construction contract to PACT ONE.

**FINAL RESTORATION COST SHARING AGREEMENT:**

In 2021, LCA reviewed paving restoration cost data from prior City water main replacement projects and determined that a cooperative arrangement with the City Streets Department would yield significant cost savings, better control over construction schedule, and improved quality control. LCA and the City worked together to develop a Cost Sharing Agreement for final restoration of streets. The Agreement contains clearly outlined procedures and responsibilities for each party, that includes provisions for scheduling, payment, material handling, inspection, and notification of completion. This approach has been applied during the Cycles 5 through 8 Water Main Replacement Projects.

The Agreement for the Lead Line Service Replacement Program Cycle 1 street restoration work includes pavement milling, pavement overlay, and ADA ramp construction within City rights-of-way. Per the terms of the Agreement, LCA's payment to the City is for compensation of labor and paving materials costs for work performed by the COA paving department.

**PROFESSIONAL SERVICES: CONSTRUCTION PHASE CYCLE 1**

**1. Construction Engineering / Management and Pennvest Administration**

Gannett Fleming Inc., the design engineer of record, will provide construction engineering and administration services for the construction phase of the project. The work will generally include:

- Review contractor submitted bonds and insurances.



- Coordinate the award process including preparation of notice of intent to award; notice of award; and notice to proceed.
- Schedule and conduct virtual Pre-Construction and monthly progress Meetings.
- Maintain electronic logs for submittals, Requests-For-Information (RFIs), project records, emails, correspondence and change orders.
- Review all contractor submittals to check that design objectives and requirements of the Contract Documents are met.
- Respond to design-related requests for information (RFIs).
- Prepare, distribute and execute pay estimates based upon unit price item quantities measured and provided by Third Party Inspector.
- Prepare, distribute and execute change orders.
- Process final acceptance and release of final payment.
- Process CAD files of construction record drawings.
- Compile and assemble documentation of project costs and prepare online PENNVEST reimbursement request forms.
- Submit change orders and documentation for pre-approval of change orders over \$25,000 or 2% of construction costs, as required by PENNVEST.
- Submit final change orders and documentation for approval by PADEP.
- Coordinate project closeout, including preparation of final reimbursement request; confirm audit requirements are complete; obtain documentation of final PADEP inspection; confirm change orders were submitted and approved; update continuing education plan, if needed; and submit financial statements that are complete but not previously submitted. Follow-up with any requests or questions until final loan holdback is released and loan amortization begins.

## **2. Construction Inspection**

Keystone Consulting Engineers (KCE) will provide daily construction inspection related services for the project. The work will generally include:

- Provide full-time construction observation and act as the daily field contact person for the project.
- Attend pre-construction & monthly progress meetings.
- On-site project coordination.
- Maintain daily record of project activities, quantities of work performed, site conditions, etc.
- Review documentation for change order requests.
- Review monthly pay estimates.
- Perform substantial and final completion inspections.

### **SCHEDULE:**

Assuming approval of the Construction Phase at the August 26, 2024 Board meeting, all work is anticipated to be completed by June 30, 2025.



2024 CYCLE 1 LEAD SERVICE LINE REPLACEMENT PROGRAM  
COST-SHARING AGREEMENT FOR STREET RESTORATION AND REPAVING

This COST-SHARING AGREEMENT FOR STREET RESTORATION AND REPAVING is made and entered into on the Effective Date defined herein by and between the City of Allentown, a Home Rule Third-Class City organized and existing under the laws of the Commonwealth of Pennsylvania, having a place of business at 641 South 10th Street, Allentown, PA 18103 (the "City"), and the Lehigh County Authority, organized and existing under the Municipal Authorities Act of 1945, as amended, having a place of business at 1053 Spruce Rd, Allentown, PA 18106 ("LCA") (hereinafter referred to as "a/the Party," singularly and the "Parties" collectively.)

WHEREAS, the City owns and has jurisdiction over street rights-of-way within the City's limits, excluding streets designated as State highways and roads, which are under the exclusive jurisdiction and control of the Commonwealth of Pennsylvania, Department of Transportation ("PennDOT").

WHEREAS, LCA maintains public utility facilities, particularly underground water and sewer mains and related lines located within City street rights-of-way, pursuant to Section 5607 (a) (5) and (10) of the Municipal Authorities Act, 53 Pa. C. S. §§ 5607 (a) (5), 5607(a)(10).

WHEREAS, the City has adopted a Street Excavation Ordinance, appearing as Article V11 *Street Excavations* establishing certain requirements for street openings and excavations.

WHEREAS, in connection with LCA's occupancy of City street rights-of-way ("the Streets"), LCA has planned in 2024 certain work in connection with Lead Service Line Replacements (hereinafter referred to as the "Betterment Projects") listed on Exhibit "A" attached hereto, made a material part hereof and incorporated herein by reference.



WHEREAS, LCA, in the usual course, would be obligated to restore and repave the Streets affected by the Betterment Projects pursuant to all the applicable provisions of the Streets Ordinance.

WHEREAS, given that the City has its own program for the restoration and repaving of the Streets, involving a milling, overlay and paving process ("City Restoration Work"), the Parties discussed LCA's Betterment Projects and each Party's desire to coordinate the performance of LCA's Betterment Project work so as to maximize efficiencies and minimize the possibility of LCA performing Betterment Project work on any Streets recently subjected to City Restoration Work. For purposes of this Agreement, "City Restoration Work" shall also include the design and installation of ramps, in compliance with the Americans with Disabilities Act and related regulations (collectively, "ADA") and City Ordinances for the streets that are subject to the Betterment Projects in Exhibit "A" hereto.

WHEREAS, as a result of those discussions, the Parties have reached an understanding regarding the scope, allocation of work and costs for Streets which are the subject of Betterment Projects, including the reimbursement of certain costs associated with the City Restoration Work ("City Street Repair Costs") subject to the terms and conditions as set forth in this Agreement.

NOW, THEREFORE, in consideration of the mutual promises of the Parties and for good and other valuable consideration and agreeing to be legally bound hereby, the Parties agree as follows:

1. Incorporation of Recitals. The Parties do hereby incorporate by reference the terms, definitions and descriptions set forth in the forgoing recitals of this Agreement as though the same were fully set forth at length herein.

2. LCA's Cost-Sharing Payment to the City.

A. It is acknowledged and agreed that, subject to the City's continuing full and timely performance of its duties and obligations under this Agreement, LCA shall pay to the



City the total amount of seven hundred one thousand eight hundred ninety-one and 49/100 (\$701,891.49) dollars toward the City Street Repair Costs (the "Cost-Sharing Payment"), payable as indicated below. It is further agreed the Cost-Sharing Payment consists of \$448,358.00 relating to and associated with costs of labor and paving materials for the milling and overlaying paving work on Streets to be performed by the City as the City Restoration Work hereunder, plus \$253,533.49 toward the cost of materials and for the installation of ramps, in compliance with the American Disabilities Act and related regulations (collectively "ADA") for the roads which are the subject of the Betterment Projects under this Agreement. The Cost-Sharing Payment is allocated between the various Betterment Projects and ADA ramp installation work as indicated in Exhibit "A" hereto. The Cost-Sharing Payment shall also be in lieu of any other City fees that would ordinarily be payable by LCA in connection with the LCA Betterment Projects and LCA Restoration Work.

- B. LCA shall pay to the City the entire Cost-Sharing Payment no later than **XXX #, 2024** (i.e., the tenth day following the LCA Board's first regular meeting in **XXX 2024**), subject to any later potential LCA additional payment in connection with LCA's modification of the Betterment Projects, as discussed in subparagraph C. below. The payment shall be made by check in the applicable amount. There shall be no penalty, assessment of interest, accrued or unaccrued, or any other charge for any prepayments of this obligation.
- C. The agreed amount of the Cost-Sharing Payment shall be subject to adjustment based on modification of the Betterment Projects in the following circumstances. LCA may perform additional work in an area near or adjacent to a Betterment Project street, or otherwise expand the scope of a project, based on operational, financial, convenience, or other considerations. In the event that LCA desires to perform such additional work, the City shall provide a cost analysis for the additional work, using the same methodology for establishing cost as used in Exhibit "A" hereto. LCA will review the costs analysis and



determine whether to include such work as part of the Betterment Projects under this Agreement, at the cost provided by the City. In the event that LCA decides to include such additional work as part of the Betterment Projects under this Agreement, LCA shall pay to the City the additional Cost-Sharing Payment amount within thirty (30) days of LCA giving the City notice of the completion of the LCA Restoration Work (defined below) for a Betterment Project, including its modified or expanded scope. All additional work shall follow procedures set forth in section 3.

3. Procedures to be Followed for Work to be Performed Pursuant to this Agreement. The Parties agree that the following procedures shall apply to LCA's Betterment Project street-opening work ("the LCA Restoration Work") and the City Restoration Work applicable thereto:

A. LCA Obligations.

(1) LCA will submit, in part with the requirements of the lease for Major Capital Project Improvements, the Substantially Complete Design plan submission for the Betterment Projects, which the City will review and, when satisfied with the submission, will issue a conditional approval at the plan review stage in the form of a letter noting that project is approved as designed. As part of the conditional approval, COA will establish an expiration date on the conditional approval covering a yearly construction season for a cycle. Prior to initiating construction in a given road segment, LCA's contractor will then submit for a formal City permit which will be good for 60-days upon issuance.

(2) LCA shall not be required to pay the Permit Fee required under Chapter 545 Streets and Sidewalks, Article VII Street Excavations §545-53.A Permit Fee and the fee required under Chapter 545 Streets and Sidewalks, Article VII Street Excavations §545-53.A Inspection; However, the City may impose this fee onto the associated contractor at the time of formal submission to the City.

(3) LCA will install its facilities by open trench cut in continuing sections along the route or routes of the particular Street which is the subject of each such Project.



~~(4) The existing water main line (which is being replaced) is permitted to be left in place under the street surface.~~

(5) LCA will excavate and install **its new water line public service lines** within the excavated area. LCA will then backfill and compact the excavated area and place "hot mix" temporary paving material on top to match the road surface. Materials must be approved by the City. Final base restoration must be inspected and approved by the City.

(6) LCA shall notify the City's Engineering Bureau, Department of Public Works in writing when LCA has completed the LCA Restoration Work and within thirty (30) days of receiving said notification, weather permitting, the City shall commence performance of the City Restoration Work, to be completed such that the Street involved is improved to its final fully paved condition.

(7) When the Street is ready for the City Restoration Work, LCA will remove the hot mix temporary asphalt paving material and install and compact 25mm Bituminous Concrete Base Course (BCBC) to the final level and height designated for the LCA Restoration Work, at which point the LCA Restoration Work will be completed.

(8) LCA agrees to indemnify and save harmless the City and its officers, employees, and agents from any and all costs, claims, losses, injuries, damages, liabilities, or expense which may accrue or be claimed to accrue by reason of LCA's Restoration Work.

#### B. City Obligations.

(1) The City shall provide appropriate inspection of the LCA Restoration Work;

(2) The City agrees to accept as satisfactory work performed by LCA in connection with any Street openings for Betterment Projects which are the subject of this Agreement, so long as that work has been performed to comply with the applicable standards of PennDOT;

(3) The City will then commence the City Restoration Work, which shall include inspecting the rolling of the 25mm BCBC to ensure proper compaction, following which the City will mill to the depth specified on the approved detail Exhibit "B" and following which it will install, including rolling, the final paving material of hot mix asphalt.



Upon receipt of the Cost-Sharing Payment, the City agrees to indemnify, and save harmless, LCA and its officers, employees and agents, from any and all costs, claims, losses, injuries, damages, liabilities or expense, which may accrue or be claimed to accrue by reason of the City's Restoration Work, including, without limitation, the City's installation of ADA ramps for the streets that are subject to Betterment Projects.

4. Term. It is the intent and agreement of the Parties that the term of this Agreement shall be for the period from **January 1, 2024 through December 31, 2024**, inclusive; provided, however, if any LCA's Betterment Project street-opening work and the City Restoration Work is not yet complete, the agreement shall continue through the completion of such work.

5. No Degradation Fee to be Assessed Against LCA. Notwithstanding any provisions of the Ordinance to the contrary, particularly Chapter 545 Streets and Sidewalks, §53.A Degradation Fee and §56.B. Prerequisites to obtaining excavation permit, and out of recognition for the fact that the Streets which are the subject of this Agreement are being restored partially by LCA, and then completed by the City Restoration Work (following inspection and approval by the City of the LCA Restoration Work) and as a material consideration to this Agreement, the City acknowledges and agrees that it shall at no time attempt to charge or assess a degradation fee against or from LCA in connection with the Betterment Projects which are the subject of this Agreement, and related street openings and excavations.

6. Additional Modifications to Streets Ordinance Provisions. In light of the fact that road restoration work is being performed both by the LCA Restoration Work as well as the City Restoration Work, it is acknowledged and agreed that the following provisions of the Streets and Sidewalks Ordinance shall not apply to LCA and these Betterment Project street openings: Chapter 545 Streets and Sidewalks, §56.B. (relating to permanent surface restoration work being performed by a permittee) and deposits to be paid by any permittee in connection therewith; the requirement of maintaining convenience to the public and temporary approaches to and crossings of intersecting streets to be provided for and kept in good condition where practicable, shall apply to LCA only until the LCA Restoration Work has been



performed (Chapter 545 Streets and Sidewalks, §56.H.), which those responsibilities shall belong to the City;

LCA's obligation to safeguard and maintain in good order the excavation (Chapter 545 Streets and Sidewalks, §56.G) shall apply only until such time as the LCA Restoration Work has been completed and approved by the City and after which it shall be the responsibility of the City; the milling and overlay requirements of Chapter 545 Streets and Sidewalks, §56.O, shall not apply to LCA, but instead shall apply to the City, as being part of the City Restoration Work, and any permittee responsibility set forth therein associated with final restoration shall not be applicable to LCA, nor shall any inspection and repair obligations relating to or associated with any final restoration, and/or milling and overlay; any obligation of LCA to indemnify or hold the City harmless (under Chapter 545 Streets and Sidewalks, §56.P) shall not apply to any of the City Restoration Work, and/or any consequences, claims, damages, or losses to the extent arising or resulting therefrom, LCA shall not be obligated to save and hold harmless the City for any damages or liability (under Chapter 545 Streets and Sidewalks, §56.Q.) for personal injury or property damage to the extent arising directly or indirectly from the City Restoration Work; any indemnification agreement provided previously or to be executed by LCA (pursuant to Chapter 545 Streets and Sidewalks, §56.R.) shall not apply to any of the City Restoration performed; and the guarantee and maintenance requirements (under Chapter 545 Streets and Sidewalks, §56.T. Prerequisites to obtaining excavation permit) shall not apply to any correction of Work to the extent arising or resulting from the City Restoration Work.

7. Notification to Property Owners. It is LCA's practice to send notification letters to property owners along streets on which Betterment Projects are being undertaken to advise that work will be done within each street. With respect to the Betterment Projects which are the subject of this Agreement, it is agreed that LCA may include in any such communications reference to the fact that the City will be performing the final milling and overlay work upon completion of LCA Restoration Work, and that, as such, any inquiries, telephone calls, voice messages, and emails regarding concerns or complaints following completion of the LCA Restoration Work should be directed to the City representatives.



8. Notice. The Parties agree to designate specific representatives to be the principal contact person regarding ongoing street opening and repaving projects set forth on Exhibit “A” attached hereto. All notices are to be given by either Party to the other shall be in writing and delivered personally, by email, sent by Certified Return Receipt First Class United States Mail, postage prepaid or by recognized overnight delivery service providing positive tracking of items (such as Federal Express) as follows:

TO THE CITY:

Mark Shahda, Director of Public Works, City of Allentown  
641 10th Street, Allentown, PA 18103  
610-437-7587  
[Mark.shanda@allentownpa.gov](mailto:Mark.shanda@allentownpa.gov)

TO LCA:

Jason Peters, Project Coordinator, Lehigh County Authority,  
1053 Spruce Rd, Allentown, PA 18106  
610-972-0619,  
[jasonpeters@lehighcountyauthority.org](mailto:jasonpeters@lehighcountyauthority.org)

9. Changes and Modifications Must be in Writing. This Agreement may not be modified, amended, or otherwise changed in any way except in writing signed by both Parties.

10. Binding Upon Successors. This Agreement shall be binding upon and inure to the benefit of the Parties and each one's successors and assigns. The City acknowledges and agrees that this Agreement may extend beyond the time period for the current City administration, but that this Agreement shall nonetheless be binding on any subsequent Administration, meaning both the Mayor and City Council.



11. Execution and Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original and all of which shall constitute one and the same document. A signature transmitted by facsimile or other electronic means shall be considered an original.

12. Entire Agreement: Prior Communications, Agreements Superseded and Extinguished. This Agreement supersedes and terminates any and all prior or contemporaneous oral or written agreements between or among any of the Parties hereto regarding cost sharing relating to City Restoration Work on the Betterment Projects referenced herein, all of which shall be deemed merged herein and extinguished hereby. This Agreement does not impact the Amended and Restated Concession and Lease Agreement between the Parties, or any other existing agreements between the Parties, all of which shall remain in full force and effect, and are not amended or extinguished by this Agreement, and do not merge into this Agreement. This Agreement sets forth the entire understanding and agreement of the Parties with respect to the matters set forth herein and there are no other promises, representations, warranties, agreements, or undertakings (written or verbal) between the Parties hereto, regarding the subject matter hereof.

13. Product of Mutual Negotiation and Draftsmanship. This Agreement is the product of negotiations between the Parties and each Party's counsel, and as a consequence, in construing the provisions of this Agreement, no inference or presumption shall be drawn against any Party on the basis of which party or its attorney may have drafted any portion of this Agreement, and further, the doctrine of contract interpretation relating to ambiguities being interpreted against the drafter of the document shall not be applicable.

14. Adoption by Appropriate Municipal Action and Authority. The City and LCA warrant and represent, recognizing that the Parties are materially relying thereon in entering into this Agreement, that the terms of this Agreement have been authorized and approved by all necessary and appropriate municipal action and authority.



15. Recording. This Agreement shall not be recorded in the Lehigh County Office of Judicial RecordsRecorder of Deeds Division without the express written consent of the City and LCA.

16. Disputes. In the event of a dispute arising under this Agreement, the Parties shall confer and make good faith efforts to resolve any such dispute prior to instituting legal action to enforce the terms of this Agreement. Such good faith efforts shall include, without limitation, written notice of any alleged breach sent to the purported breaching party with reasonable opportunity for the purported breaching party to respond. Notice of alleged breach shall be issued within fifteen (15) days of the non- breaching party learning of such alleged breach and shall be sent to the purported breaching party with a copy to such party's counsel in a method that confirms receipt (i.e., overnight mail, electronic mail with a return receipt confirmation, etc.) Such good faith efforts shall also include reasonable consideration by both parties of mediation and arbitration. in no event shall any party institute legal action until the purported breaching party has had an opportunity to respond to the allegations and engage in meaningful communications with the other party or counsel to try to resolve any concerns. in no event shall litigation be commenced until seven (7) days after receipt of such notice. Nothing in this section shall limit either party from initiating legal action in the event that the good faith efforts described above have not led to a satisfactory resolution of a dispute.

17. Interpretation. This Agreement shall be construed, interpreted, and enforced in accordance with the laws of the Commonwealth of Pennsylvania.

18. Captions. The captions preceding the paragraphs of this Agreement are inserted for the convenience of reference only and shall not constitute, nor shall they in any way affect its meaning, construction and effect a part of this Agreement.

19. Effective Date. The Effective Date if this Agreement shall be the date of the last authorized signature appearing hereon.



20. LCA Reservation of Rights.

A. This agreement, the plans prepared or approved under it, and work performed pursuant to such plans, shall not constitute a precedent as to the level or scope of work required under the City Street Ordinance, or any other City rule or regulation; nor shall it constitute an admission or acceptance by LCA of the City's requirements. LCA and the City are entering into this agreement merely as matter of convenience to them in this instance, and without prejudice to their rights except as may be limited by this agreement. This agreement shall not have any impact or consequence as to any other agreement between LCA and the City, whether currently existing or in the future.

B. This agreement shall not constitute a waiver of any right of LCA under the Concession Lease with the City to receive additional compensation, or to recovery through utility system rate increases, the expense related to a Change of Law applicable to the standards for LCA Restoration Work on Betterment Projects, or other related costs. LCA reserves its right to recover such additional costs due to any Changes of Law.

IN WITNESS WHEREOF, the undersigned, intending to be legally bound, and representing that each has authority to execute this Agreement on behalf of its respective Party, have executed this Agreement effective as of the Effective Date.

By: \_\_\_\_\_  
(Witness)

LEHIGH COUNTY AUTHORITY

Name: Liesel Gross

Title: Chief Executive Officer

Date: \_\_\_\_\_

By: \_\_\_\_\_  
(Witness)

CITY OF ALLENTOWN

Name: Matthew Tuerk

Title: Mayor

Date: \_\_\_\_\_



# CAPITAL PROJECT AUTHORIZATION

PROJECT NO.:	AD-W-24-2	BUDGET FUND:	Allentown Div\Water\Capital
PROJECT TITLE:	Allentown Division -Lead Service Line Replacement Program Cycle 1	PROJECT TYPE:	<input checked="" type="checkbox"/> Construction <input type="checkbox"/> Engineering Study <input type="checkbox"/> Equipment Purchase <input type="checkbox"/> Amendment
THIS AUTHORIZATION:	\$4,024,857		

## DESCRIPTION AND BENEFITS:

Following the US Environmental Protection Agency (US EPA) regulatory framework for the Lead and Copper Rule Revisions (LCRR). Lehigh County Authority (LCA) has developed an in-depth Lead Service Line (LSL) replacement plan program. Cycle 1 of this program is anticipated to replace 150 LSL and include the pot holing investigation of approximately 450 services in the Allentown Division, as per the Pennvest grant application. This work also not only has to be coordinated with the City of Allentown (COA) and its many departments but also with other outside agencies and private utilities such as UGI.

The replacement of these LSLs is critical in meeting the regulatory requirements of the US EPA, and will provide increased reliability of water service for our customers.

Please reference the cover Memo for additional information.

## Authorization Status:

+

REQUESTED THIS AUTHORIZATION	
Construction Phase	
Staff	\$140,000
Professional Services	
Construction Engineering / Management Gannett Fleming, Inc.	\$171,520
Construction Inspection Keystone Consulting Engineers	\$75,000
General Construction Contract Pact One LLC	\$2,376,445
Roadway Paving Cost Sharing Agreement City of Allentown	\$701,892
Contingencies	\$560,000
Total This Authorization	\$4,024,857

## REVIEW AND APPROVALS:

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





**Lehigh County Authority**

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

## PROFESSIONAL SERVICES AUTHORIZATION

**Professional:** GANNETT FLEMING, INC.  
P.O. Box 67100  
Harrisburg, PA 17106

**Date:** August 26, 2024

**Requested By:** Jason Peters

**Approvals**

**Department Head:** \_\_\_\_\_

**Chief Executive**

**Officer:** \_\_\_\_\_

### **Allentown Division – Lead Service Line Replacement Program Cycle 1**

**This Authorization- Construction Phase, Cycle-1: \$171,520**

Gannett Fleming, Inc. will provide the following construction phase services for the City of Allentown Lead Service Line Replacement Program Cycle 1 in accordance with their proposal dated 8/15/24, as outlined within the Pennvest grant and low interest loan approval.

Professional Services
1. Review contractor bonds and insurances
2. Coordinate and process award documents and notice to proceed
3. Conduct preconstruction and monthly progress meetings
4. Review and maintain all submittals, pay requests and correspondence
5. Prepare and submit record drawings
6. Administer Pennvest closeout documentation
7. Coordinate project closeout with necessary agencies

Please reference the cover Memo for additional information.

**Cost Estimate (not to be exceeded without further authorization): \$171,520**

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

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**(For Authority Use Only)**

**Authorization Completion:**

**Approval:** \_\_\_\_\_ **Actual Cost:** \_\_\_\_\_ **Date:** \_\_\_\_\_





**Lehigh County Authority**

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

## PROFESSIONAL SERVICES AUTHORIZATION

**Professional:** KEYSTONE CONSULTING  
ENGINEERS  
5012 Medical Center Circle,  
Suite 1  
Allentown, PA 18106

**Date:** August 26, 2024

**Requested By:** Jason Peters

**Approvals**

**Department Head:** \_\_\_\_\_

**Chief Executive**

**Officer:** \_\_\_\_\_

**Allentown Division – Lead Service Line Replacement Program Cycle 1**

**This Authorization - Construction Phase, Cycle-1: \$75,000**

Keystone Consulting Engineers will provide the following construction phase services for the City of Allentown Lead Service Line Replacement Program Cycle 1 in accordance with their proposal dated 7/10/24, as outlined within the Pennvest grant and low interest loan approval:

Professional Service
1. Provide full-time construction observation and act as daily field contact
2. Attend preconstruction and monthly progress meetings
3. On site project coordination
4. Maintain daily records of activities, quantities, site conditions, etc.
5. Review change orders requests
6. Review monthly pay applications
7. Perform substantial and final completion inspections

Please reference the cover Memo for additional information.

**Cost Estimate (not to be exceeded without further authorization): \$75,000**

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

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**(For Authority Use Only)**

**Authorization Completion:**

**Approval:** \_\_\_\_\_ **Actual Cost:** \_\_\_\_\_ **Date:** \_\_\_\_\_



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## MEMORANDUM

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**Date:** August 26, 2024

**To:** Lehigh County Authority Board of Directors  
**From:** Jason Peters, Linear Project Manager  
**Subject:** Allentown Division – Lead Service Line Replacement Program Cycle 2

**MOTIONS / APPROVALS REQUESTED:**

No.	Item	Amount
1	Professional Services Authorization – Design, Bid and Construction Phase Services Amendment – CDM Smith	\$214,055

**PROJECT BACKGROUND**

In 2021, the US Environmental Protection Agency (US EPA) issued the final regulatory framework for the Lead and Copper Rule Revisions (LCRR). In late 2023, US EPA published the proposed Lead and Copper Rule Improvements (LCRI), which would require replacement of all lead water service lines within 10 years of the final rule. Lehigh County Authority (LCA) has taken a proactive approach and developed a lead service line replacement (LSLR) plan. LCA received funding of \$5M from PennVEST for the Cycle 1 LSLR work, and construction is expected to start in September to replace 150 service lines included in Cycle 1. The Cycle 2 project will center on identifying and replacing approximately 1,000 private lead service lines that meet specific criteria throughout the City. LCA has requested approximately \$12 million in grant funding from PennVEST for this project, with a decision expected in October 2024.

**PROJECT SCOPE AMENDMENT**

**Design:** In February 2024, the LCA Board of Directors approved design and bid phase services to be provided by CDM Smith. The project objective is to replace approximately 1,000 private lead service lines (LSL) currently connected to an existing ductile iron water main with a copper public lateral service line. Given the complex nature of this project, replacing LSL in a densely populated urban area with many underground facilities will require significant coordination with the City of Allentown (COA), private utilities and property owners/residents.

**This Amendment:** The revised and amended project scope encompasses specialized assistance in detailed tasks and activities related to data management, door-to-door customer canvassing, field verification, and inspections. CDM Smith will provide door-to-door canvassing and field inspection services to assist LCA in identifying the properties where the 1,000 replacements will occur for the Cycle 2 LSLR Project. For many areas throughout the City of Allentown, the material type for private service laterals is unknown, and pre-construction inspections are required to determine which service lines require replacement. This is a time-consuming, detailed task requiring a team of qualified individuals to enter homes to identify pipe material. For planning and budgeting purposes, CDM Smith has assumed that four field canvassers working in two-person teams for three months (65 work days) will be able to confirm an adequate number of private-side service line materials to identify the properties where the 1,000 replacements for the Cycle 2 project will occur. In addition to this canvassing work, CDM Smith will provide communications support for the project, focusing on the development of bilingual customer education materials, communications strategies for renters, and instructional videos. Due to the



highly detailed nature of this project and the direct customer involvement required, this additional support was requested by LCA to supplement existing internal capabilities.

**FINANCIAL**

This Project represents Change of Law and will be funded by the City via a combination of federal and state grants and/or loans via the PennVEST program.

**THIS APPROVAL – LEAD SERVICE LINE REPLACEMENT PROGRAM CYCLE 2 DESIGN, BID AND CONSTRUCTION PHASE AMENDMENT:**

**DESIGN, BID AND CONSTRUCTION PHASE SERVICES AMENDMENT:**

LCA intends to retain the services of CDM Smith for the amended Design, Bid and Construction phase scope of services. The following is a summary of additional services requested for authorization. A copy of CDM Smith’s amended proposal is attached with additional details of these services.

<b>Professional Services</b>
1. Data Management Support Services
2. Door to Door Canvassing
3. Field Investigation and Inspection Services

**Consultant Selection:**

LCA’s Board of Directors approved the initial authorization for CDM Smith to perform design and bid phase services in February 2024 following a robust selection process that include review of qualifications from six firms. CDM Smith was selected due to their status as a leader in Lead Service Line Replacement (LSLR) work in the US. They led the successful programs in Newark NJ and Trenton NJ. They have led over 50,000 lead service line replacement in the US. They are currently under contract with DC Water, Chicago, Providence and American Water to support the LSLR work. Because this amendment is directly tied to the initial scope of services approved by the Board, LCA seeks authorization to expand CDM Smith’s professional services authorization to include this additional scope of work.

**PROJECT SCHEDULE**

The Design and Bid phase work was initially authorized and kicked off in March 2024. The services outlined in this amendment are anticipated to begin in September 2024. Bid phase is anticipated to be completed by late Spring 2025. Construction is expected to be completed in a 12-month period by late Spring 2026.

**FUTURE AUTHORIZATIONS**

Construction Phase of the Allentown Division Lead Service Line Replacement Program Cycle 2 including the residential property inspection work.





110 Fieldcrest Avenue, #8  
6<sup>th</sup> Floor  
Edison, New Jersey 08837  
tel: 732 225-7000

August 9, 2024

Mr. AJ Capuzzi  
Director of Engineering and Asset Management  
Lehigh County Authority  
PO Box 3348  
1053 Spruce Road  
Allentown, PA 18106

Subject: Cycle 2 Lead Service Line Replacement Design and Construction Services  
Amendment Proposal for Data Management, Public Communications & Outreach, Field  
Canvassing for Private Service Line Material Confirmation, and Alternative Survey Work

Dear Mr. Capuzzi:

CDM Smith Inc. (CDM Smith) has prepared this amendment proposal to provide additional support to Lehigh County Authority (LCA) with data management, public communications and outreach, and field canvassing for private service line material confirmation. Additionally, we are proposing an alternative approach for the survey work required for the LSLR Design for Cycle 2. We understand LCA is modifying the scope of its Cycle 2 Lead Service Line Replacement Program in the City of Allentown, Pennsylvania and will focus exclusively on replacement of private-side lead and galvanized service lines. To support this effort, LCA is undertaking a significant public communication, outreach, and canvassing effort to identify the properties where the replacements will occur, with the goal of identifying 1,000 properties with lead service lines or galvanized service lines requiring replacement. The scope-of-services outlined in this amendment proposal are for CDM Smith's support of these efforts.

## Scope of Services

### **Task 1 – Project Management, Meetings and Data Management Support**

CDM Smith will continue project management activities including internal scheduling, resource management, invoicing, quality management, and project progress meeting attendance. The overall duration of this project has been extended by an additional five months, from 22 months to 27 months. The additional scope-of-services included in this amendment proposal for project management support is as follows:

- CDM Smith's original contract assumed monthly progress meetings (22) would be held, but to date, project meetings have been occurring weekly. It is expected that over the 27-month duration of the project, an average of three virtual (via MS Teams) progress meetings will be held per month (81). Consequently, our amendment includes time for the project manager and project technical leader to prepare for and participate in these additional project meetings (59).





- General project management costs have been included for the additional five months of project duration, with a tentative end date of May 31, 2026.
- Time for the project technical leader (Brian Lubenow) to attend LCA's monthly lead steering committee meetings (27) has been included in this amendment.

LCA is aware that data management is a critical component to its LSLR program and is seeking additional support from CDM Smith to ensure that its existing data management systems are equipped to effectively manage the significant amounts of data that will be collected during both the canvassing efforts to identify the 1,000 Cycle 2 replacements and during the replacement program itself. The additional services CDM Smith will provide include the following:

- Attending two virtual meetings to review LCA's existing systems and data management processes and an additional virtual meeting with LCA's broader consultant base to ensure all stakeholders are informed and "on the same page" regarding the data management approach
- Developing a strategy & central database that utilizes Esri and leverages LCA's existing GIS
- Leveraging Esri's "Lead Solution" while integrating CDM Smith's tools and developing the data management workflows, processes and data dictionaries.

It is necessary to provide on-going GIS support to field staff throughout the project. CDM Smith's GIS team will assist LCA with the management of its GIS database to track the project progress throughout the Cycle 2 LSLR program, including:

- Tracking the progress of the canvassing effort, including replacement agreements, inspections, and inventory status.
- Results of field verifications and test pits (potholing)
- Tracking of filter distribution and flushing during replacements
- Tracking of LCA's lead sampling program and the status of sample locations
- Development of a public-facing service line inventory map, along with dashboards and live schedule information and a comment section for customers to communicate with LCA

It is expected that the central database would be hosted by LCA's GIS Systems and rolled out to users with appropriate permissions. CDM Smith believes an allowance of \$20,000 is appropriate for the data management services described above.



## **Task 2 – Design (GIS Based Mapping)**

Under the existing Cycle 2 LSLR Project scope, CDM Smith was tasked with preparing conceptual plans to support LCA's application for PENNVEST funding. These plans were intended to be GIS-based maps. With the change in approach to focus on private-side replacements, the effort to prepare these plans was less than budgeted. Consequently, CDM Smith is including a credit in this amendment proposal for 115 hours of Senior GIS and GIS Technician labor combined.

## **Task 2A – Detailed Design**

Based on changes to the LCA replacement approach for Cycle 2 LSLR Project, the following changes to the scope of services have been included:

- CDM Smith has discussed an alternative survey approach with Arthur A. Swallow Associates, LLC (AASA) to reduce the level of survey effort required for the Cycle 2 LSLR project, while still fulfilling the subsurface utility engineering (SUE) requirements of the PA One-Call and providing adequate plans for contractor bidding. Under this revised approach, AASA will survey only the 1,000 properties identified for the service line replacements, focusing exclusively on the private side of the service lateral from the curb stop to the building footprint. A separate 8 ½" by 11" plan would be prepared for each property included in Cycle 2. An example plan is attached as Exhibit A to this letter proposal. This approach results in a significant decrease in the survey costs that is reflected as a credit in the fee section below.
- CDM Smith will provide door-to-door canvassing and field inspection services to assist LCA in identifying the properties where the 1,000 replacements will occur for the Cycle 2 LSLR Project. For planning and budgeting purposes, CDM Smith has assumed that four field canvassers working in two-person teams for three months (65 work days) will be able to confirm an adequate number of private-side service line materials to identify the properties where the 1,000 replacements for the Cycle 2 project will occur. If requested by LCA, CDM Smith can extend the canvassing activities on a time and materials basis if the initial efforts fail to provide the 1,000 replacements or to identify replacements for future lead service line replacement cycles. The QA/QC process for the canvassing includes review of the reports/photos for all identified lead or galvanized services and random checking of 20% of all non-lead services. Results are used to improve individual and/or canvassing team processes and accuracy.

CDM Smith will staff the canvassing efforts through a combination of its own staff and temporary staff hired through Actalent Services (Actalent) as a subcontractor. Actalent will perform background checks and drug tests for all candidates before they are proposed to support the project. CDM Smith will review the results and interview all candidates before they are hired. Preference will be given to candidates who are bilingual and speak Spanish. Actalent has cost effectively and successfully provided staff for similar canvassing work that CDM Smith is completing for New Jersey America Water Company.



- As part of the design process, CDM Smith has or will prepare two technical memoranda for LCA. The first is a summary of our investigations into the engineering plan requirements for PENNVEST, PA One-Call, and PUC compliance to qualify as “biddable plans.” The second is a review of research on the leachability and water quality impacts of corporation stops and curb stops that are not designated as lead-free. Both memoranda will support LCA’s efforts to define the scope and requirements of its Cycle 2 LSLR Project when bid for construction. For each memorandum, both a draft and final memorandum will be provided.

### Task 3 – Communications Support

Under the existing Cycle 2 LSLR Project scope, CDM Smith was tasked with reviewing LCA’s existing public communications materials, including its access agreements, communications plan, and public education materials. The existing agreement also includes a \$10,000 allowance for preparation and/or modifications of communications materials related to the Cycle 2 replacements. However, recently, LCA has expressed interest in having CDM Smith provide additional support for LCA’s public education and outreach efforts. As part of this amendment proposal, we are including an additional allowance of \$40,000 that can be used to support LCA with any of the following:

- Preparing public facing materials in support of LCA’s lead service line replacement program and the pending canvassing (See Task 2 above) efforts to engage customers for the identification of private-side service line materials. This may include multilingual (English and Spanish) materials such as:
  - Lead Service Line Replacement (What to Expect) Flyers
  - Bilingual yard signs and posters for community based organizations (CBOs)
  - Communications targeted at renters/tenants
  - Instructional videos tailored for LCA including customer self-reporting, 5<sup>th</sup> liter sampling, and LSL replacement (what to expect before, during and after)
- Planning and conducting in-person and virtual public meetings and engaging with resident champions, neighborhood watch captains, and church and school officials as part of community events

### Schedule

With the changes in the scope of the Cycle 2 LSLR Project, the delay in the PENNVEST application submittal, and the need for the canvassing and verification support, it is now expected that the construction will begin in May 2025, approximately five months later than originally forecasted. This would result in a completion date of May 2026, assuming one year of construction time.





Mr. AJ Capuzzi  
August 9, 2024  
Page 5

## Fee

CDM Smith proposes to invoice by Tasks as outlined in the table provided below. All work described above will be completed in accordance with our existing Master Services Agreement with LCA and the previously approved task order for the Cycle 2 Lead Service Line Replacement Design and Construction Services. Actalent staff will be billed by CDM Smith at \$57.75/hr for non-college grad staff and \$78.75 for college grad staff. We assumed the Actalent canvassing staff would consist of one college grad and two non-grads. These rates include CDM Smith's 5% sub markup as included in our MSA.

Other direct costs (ODCs), such as copying, field equipment, and printing will be billed at actual cost. Mileage for necessary travel will be billed at the U.S. General Services Administration mileage reimbursement rate (presently \$0.67 per mile). Other direct costs listed for Task 1 and 2A are mileage costs to attend meetings and perform field canvassing, respectively. Other direct costs for Task 3 are an allowance for printing flyers, posters, brochures, etc.

### Amendment Fee Table

Labor Category	Sr. Project Engineer	Sr. Project Engineer	Sr. Project Manager	Sr. GIS Specialist	GIS Technician	Engineer I	Sr. Comms Specialist	Communications Specialist	Graphic Artist	Construction Admin	Project/Contract Admin					
Current Hourly Rate	\$210	\$210	\$200	\$150	\$95	\$105	\$185	\$125	\$175	\$105	\$100					
Key Staff in Category	K. Epstein	B. Lubenow	S. Loughery	J. Angell		J. Thieme	V. Horvath	C. King	E. Hodek	Dan Dupuy						
Task Descriptions	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Labor Hours	Labor Cost	Subs	ODCs	Total Fee
Task 1: Project Management, Meetings and Data Management Support Services	10	208	126	50	70	-	-	-	-	-	20	484	\$88,925	-	\$800	\$89,725
Task 2: Engineering Design (GIS-Based) – Credit for Reduced Labor Costs	-	-	-	(35)	(80)	-	-	-	-	-	-	(115)	(\$12,850)	-	-	(\$12,850)
Task 2A - Detailed Engineering Plans																
Credit for Modified Survey Effort	-	-	-	-	-	-	-	-	-	-	-	-	-	(\$92,500)		(\$92,500)
Canvassing/Field Verification	-	-	20	-	-	520	-	-	-	90	-	630	\$68,050	\$101,010	\$6,000	\$175,060
Technical Memoranda	-	12	8			100	-	-	-	-	-	120	\$14,620	-	-	\$14,620
Task 3 - Communications Support – Allowance for Additional Support	-	-	-	-	-	-	40	204	32	-	-	276	\$39,000	-	\$1,000	\$40,000
<b>AMENDMENT TOTAL (HOURS &amp; FEE)</b>	<b>10</b>	<b>220</b>	<b>154</b>	<b>15</b>	<b>(10)</b>	<b>620</b>	<b>40</b>	<b>204</b>	<b>32</b>	<b>90</b>	<b>20</b>	<b>1,395</b>	<b>\$197,745</b>	<b>\$8,510</b>	<b>\$7,800</b>	<b>\$214,055</b>







Mr. AJ Capuzzi  
August 9, 2024  
Page 6

We look forward to working with LCA on these additional services. If there are any questions or issues, please do not hesitate to contact me by either phone (215) 239-6522 or email [hammelljo@cdmsmith.com](mailto:hammelljo@cdmsmith.com).

Sincerely,

CDM Smith Inc.

A handwritten signature in blue ink that reads "John O. Hammell".

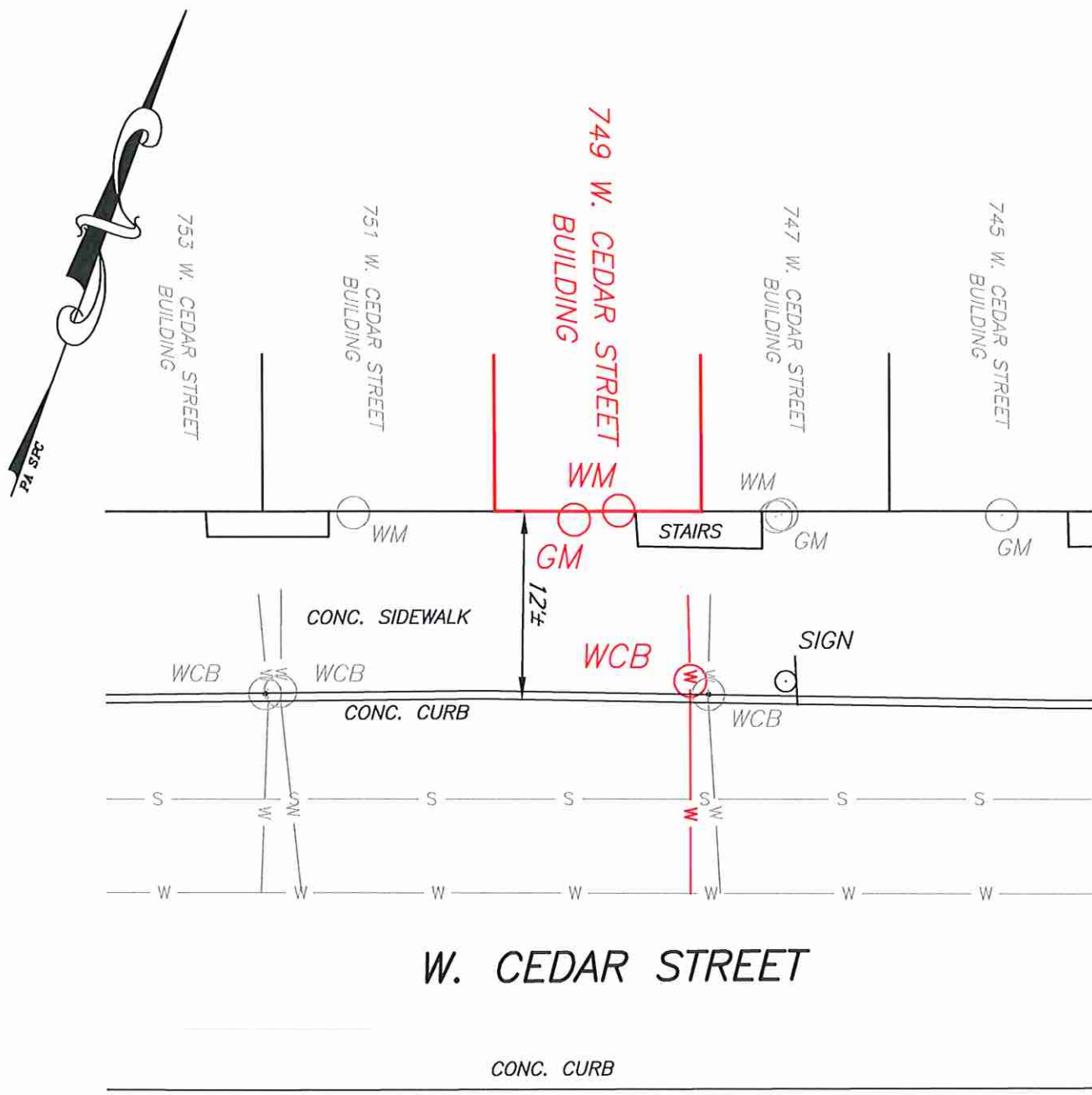
John O. Hammell, PE, PMP  
Principal-in-Charge/Client Service Leader

cc: J. Peters, Lehigh County Authority  
B. Lubenow, CDM Smith  
S. Loughery, CDM Smith





# EXHIBIT A - REVISED SURVEY DETAIL



## LCA CYCLE 2 LEAD SERVICE REPLACEMENT

PLAN DATE	PROJECT 749 W. CEDAR STREET	PA ONECALL #
REVISIONS	OWNER MARCOS ACOSTA REYES	TAX MAP
	MUNICIPALITY CITY OF ALLENTOWN, 11TH WARD	SHT. NO. 1 of 1
	COUNTY LEHIGH COUNTY	SCALE 1"=10'
	STATE PENNSYLVANIA	JOB NO.
<b>AASA</b> Arthur A. Swallow Associates, LLC 1003-1005 North 19th Street Allentown, PA 18104 610-820-6470 · Fax: 610-820-5947 www.aasasurvey.com		Michael A. Houston, PLS Date PA SU075182





**Lehigh County Authority**

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

<p style="text-align: center;"><b>PROFESSIONAL SERVICES AUTHORIZATION AMENDMENT</b></p>
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**Professional:** CDM SMITH  
TWO Penn Center Plaza  
1500 JFK Blvd, Suite 1208  
Philadelphia, PA 19102

**Date:** August 26, 2024

**Requested By:** Albert Capuzzi

**Approvals**

**Department Head:** \_\_\_\_\_

**Chief Executive**

**Officer:** \_\_\_\_\_

**Allentown Division – Lead Service Line Replacement Program Cycle 2**

*Previous Authorization- Design, Bid and Construction Phase Services: \$933,607*

**This Authorization- Design, Bid and Construction Phase Services Amendment: \$214,055**

CDM Smith will provide amended Design, Bid and Construction phase services for the City of Allentown Lead Service Line Replacement Program Cycle 2 in accordance with their proposal dated 8/9/24.

Professional Services
1. Data Management Support Services
2. Door to Door Canvassing
3. Field Investigation and Inspection Services

**Cost Estimate (not to be exceeded without further authorization): \$1,147,662**

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

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**(For Authority Use Only)**

**Authorization Completion:**

**Approval:** \_\_\_\_\_ **Actual Cost:** \_\_\_\_\_ **Date:** \_\_\_\_\_



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## MEMORANDUM

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**Date:** August 26, 2024

**To:** Lehigh County Authority Board of Directors  
**From:** Amy B. Rohrbach, Project Manager  
**Subject:** Allentown Division – Water Filtration Plant Fluoride System Upgrades

**MOTIONS / APPROVALS REQUESTED:**

No.	Item	Amount
1	Capital Project Authorization – Design and Bidding Phase	\$96,769
2 <sup>(1)</sup>	Professional Services Authorization – Design & Bidding Phase – Verdantas	\$86,769

*(1) Included in the Capital Project Authorization*

**PROJECT OVERVIEW**

The purpose of this project is to upgrade the existing fluoride chemical feed system at the Water Filtration Plant. The existing system is past its useful life and in need of replacements. The new system is proposed to have automated filling of the day tank to reduce operator exposure to the corrosive chemical, upgrades to the HVAC system to provide proper ventilation, installation of a roof hatch for access to the tank, installation of new feed pumps, new safety shower/eye wash, electrical improvements, and all necessary ancillary items to complete the upgrade. A conceptual design of the proposed upgrades was completed, and proposals were received for advancing the conceptual design to final design as well as providing bidding phase services.

**FINANCIAL**

The project will be funded from the Allentown Division in the WFP Annual Improvements capital budget category.

**CONSULTANT SELECTION PROCESS**

Two (2) consulting firms, Verdantas and HDR, were invited to submit proposals for detailed design and bidding phase services, based on their similar project experience. The proposals are summarized below:

Consultant	Cost	Hours
Verdantas	\$86,769	564
HDR	\$65,851	418

Proposals were evaluated and ranked by LCA staff based on the applicants' Qualifications, Team, Approach/Scope of Services, Schedule, Fee and Overall Proposal. Proposals from both firms indicated adequate qualifications to perform the work, and based on the staff evaluations, it is recommended that a Professional Services Authorization be awarded to Verdantas. While Verdantas was higher in fee, their proposal presented a better-defined approach with more detail, including automation of the process controls for the fluoride delivery between the proposed new fluoride storage tank and the proposed day tank. Verdantas also proposed a more aggressive



schedule which will allow bidding and award of construction slightly sooner than the schedule HDR proposed, which is important to plant staff due to the aging equipment. Therefore, it is recommended that design and bid phase services be awarded to Verdantas.

**THIS APPROVAL – DESIGN & BIDDING PHASE**

Lehigh County Authority (LCA) intends to utilize the services of Verdantas to provide the detailed design and bidding phase services for this project. The following table summarizes the professional services to be performed under this approval:

<b>Professional Services</b>
1. Project Kickoff Meeting and progress update meetings
2. Perform 90% Design and 90% design review meeting
3. Final Design Preparation
4. Bid Phase Services

**PROJECT SCHEDULE**

Assuming approval of construction phase at the August 26, 2024 Board meeting, it is anticipated the work will be completed with bids received in January 2025. Major construction is expected to commence late in the first quarter of 2025 with final completion anticipated in summer 2025.

**FUTURE AUTHORIZATIONS**

Construction Phase Services authorization anticipated in the first quarter of 2025.





# Water Filtration Plant Fluoride System Upgrades

Submitted to



Lehigh County Authority

Attn: Amy Rohrbach  
amyrohrbach@lehighcountyauthority.org  
Lehigh County Authority - Allentown Division  
1053 Spruce Road, P.O. Box 3348  
Allentown, Pennsylvania 18106-0348

Submitted by

**verdantas**

3897 Adler Place, Bldg C  
Bethlehem, PA 18017

August 2, 2024

REVISED - August 13, 2024



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# 1. Technical Proposal





05.03.2024

**Amy Rohrbach**

Lehigh County Authority – Allentown Division  
1053 Spruce Road, P.O. Box 3348  
Allentown, Pennsylvania 18106-0348  
amyrohrbach@lehighcountyauthority.org

**RE: Water Filtration Plant Fluoride System Upgrades**

Dear Ms. Rohrbach:

Verdantas is pleased to submit for your consideration our Proposal to provide Engineering Services for the Fluoride System Upgrades at the Water Filtration Plant. We understand your need to have a trusted consultant, a partner, to focus and offer a wide range of solutions to your team and are eager to work with you in that capacity.

In December 2022, Borton-Lawson made the strategic decision to join Verdantas and is now part of a company of over 1400+ professionals, including an added bench of water professionals in the greater Midatlantic region. Verdantas understands the importance of having a trusted regional partner with local dedicated resources. We can also now bring additional national expertise to our clients. Our core project team has experience with the Authority, and we have all disciplines required to complete this project in house.

Dave Wieller, PE will be the Technical Lead and point of contact for the project. Dave has worked with the Authority successfully on the Water Filtration VFD Replacement Project and most recently the Spring Creek Pump Station Upgrade Project. Dave will be supported by structural, mechanical, electrical and automation staff from our local offices.

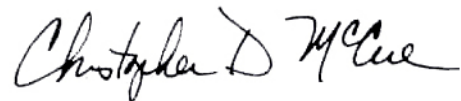
The enclosed Proposal gives a better look into our proposed team and our capabilities and capacity to service the Authority.

We welcome an opportunity to discuss our qualifications in person as part of your review process.

Please do not hesitate to contact me at 570.881.0253 or via email [cmccue@verdantas.com](mailto:cmccue@verdantas.com) should you have any questions.

Sincerely,

**Verdantas**



**Christopher D. McCue, PE**

Associate Vice President



## 1.2 Project Approach & Scope of Services

### PROJECT UNDERSTANDING

The Lehigh County Authority is requesting professional engineering services to upgrade the existing fluoride system, located in the Water Filtration Plant in Allentown, Lehigh County. As documented in the Conceptual Design Memorandum developed by DEI, dated June 26, 2024, it has been determined that the existing fluoride system has reached the end of its useful life and requires replacement.

Key aspects of the project include replacement of the following:

- Four (4) fluoride feed pumps and associated panels;
- One (1) transfer pump and associated panel to be moved outside of the containment area. Transfer pump to be automated;
- 5,000-gallon bulk tank;
- Fluoride feed piping and appurtenances; and
- Emergency eye wash/shower station.

Additional key aspects include the following:

- Installation of an 8' x 8' roof hatch for removal of the existing tank and installation of the new tank;
- Structural modifications to accommodate the new roof hatch;
- Verification of ventilation system requirements; and
- Modifications to exhaust system to accommodate the new roof hatch.

Other ancillary scope items are outlined in the Scope of Services by Discipline included later in this proposal.

The City of Allentown will allow LCA to take the fluoride feed system offline for up to 30 days. The intent of the design is to provide for as much upfront work as possible to minimize the shutdown.

During the project our teams will work with Lehigh County Authority to coordinate equipment selection, attend design review and progress meetings, and review project phasing to minimize downtime while incorporating the new components.

### **Staff Availability**

The Project Team selected for this project as outlined herein will be available for the duration of the project. The core technical team led by Dave Wieller has worked on our recent LCA project engagements are local to the project and have a good understanding of LCA's project requirements and expectations. In the event a key team member needs to be replaced for unforeseen reasons, we will provide a resume of any replacement staff to LCA's project manager for approval prior to assigning to the project.

The following outlines services by design and permitting phase as well as on a discipline level.





## SCOPE OF SERVICES BY PROJECT PHASE

### Project Kickoff to 90% Design

- Meet with LCA to kick off the project.
- Conduct site visit to document existing conditions and equipment.
- Coordinate with LCA regarding the selection of major equipment and proposed location of new facilities.
- Coordinate with vendors regarding design of major components.
- Assist LCA with flood plain coordination required by the City of Allentown.
- Develop and submit 90% design plans and technical specifications to LCA for review.

### Final Design

- Conduct a design workshop to review comments received from LCA.
- Incorporate comments and finalize design drawings and technical specifications.
- Modify LCA standard front-end specifications to be project specific.
- Submit bid-ready documents to LCA.

### Bidding Services

- Provide 2 sets of paper copies and one electronic copy of the final Contract Documents for use by LCA.
- Obtain a prevailing wage determination by the Pennsylvania Department of Labor and Industry and incorporate into bid documents.
- Prepare advertisement in accordance with public bidding laws.
- Setup project on the PennBid platform and administer process for the duration of bidding.
- Respond to questions by prospective bidders and equipment suppliers concerning information in the Contract Documents. Coordinate with LCA as necessary regarding answers to RFIs.
- Schedule and conduct a mandatory Pre-Bid Meeting to discuss the scope of the project and bidding requirements. Include a site visit following the meeting. Prepare and distribute minutes to attendees and other appropriate parties.
- Prepare and issue Addenda as appropriate to interpret, clarify or expand upon the Contract Documents and to memorialize all RFI responses.
- Evaluate the bids received for compliance with the bidding requirements.
- Review qualifications and experience data furnished by bidders and contact project references as needed. Review bid bonds, insurance and other information provided for general conformance with Contract Documents.
- Provide recommendation with respect to acceptance of bids and award of construction contracts to LCA along with a copy of the bid tabulation sheets and supplementary information provided by bidders.
- Issue Notice to Proceed to the Contractors.
- Assumptions/Exclusions:
  - LCA will provide the most up-to-date Front-End documents to be tailored for this project.
  - Advertisement for bid will be placed by and paid for by LCA.
  - The project will require three (3) contracts – General, Electrical, HVAC
  - The Pre-Bid Meeting for all Contracts will be held concurrently.





- LCA will issue Notice of Award, along with a blank agreement, performance and payment bonds to successful Contractors. LCA will review bonds and insurance and coordinate Agreement execution.

## SCOPE OF SERVICES BY DISCIPLINE

### General

- Detailed design drawings.
- Equipment schedules and details.
- Technical specifications.
- Quality Assurance/Quality Control
- An in-person 2-hour kickoff meeting held at LCA.
- A virtual meeting to discuss interim plan review.
- Assumptions/Exclusions:
  - PADEP permitting is not required.
  - The current building is code compliant and will remain code compliant.
  - LCA will assist with Flood Plain coordination.
  - Cost estimates will not be provided.
  - Services necessitated by the enactment or revision of codes, laws, or regulations, including changing or editing previously prepared documents shall be subject to additional services.
  - Services not specifically described/listed herein shall be excluded from our scope/fee and can be added as an additional service should they be required.

### Mechanical

- Develop existing conditions plan.
- Develop demolition plan.
- Select new fluoride metering pumps.
- Design CPVC process piping, valves, fittings, appurtenances.
- Select new automated transfer pump.
- Bulk tank selection.
- Develop new equipment plan.
- Review of existing containment volume and summary of findings.
- Assumptions/Exclusions:
  - Fluoride metering pumps will be of similar design and capacity.
  - Transfer pump will be of similar design and capacity.

### Structural

- Design framing for new roof opening including removal of existing beams as necessary and reinforcement of existing framing to remain.
- Design modifications to existing CMU walls to accommodate new framing members for roof opening.
- Develop structural floor plan and roof framing plan
- Develop details for support of roof mounted HVAC equipment and penetrations
- Develop details for concrete equipment pads and new floor coating
- Assumptions/Exclusions:
  - Specifications will be indicated on the drawings
  - Addressing existing building short-comings or code violations that are not





documented in the scope of work is not included.

### Architectural

- Develop section roof details.
- Detail roof penetrations required for hatch, relocated HVAC equipment, and bulk tank venting.
- Assumptions/Exclusions:
  - The building is exempt from the International Energy Conservation Code.
  - Specifications will be included on the drawings.

### HVAC

- Evaluate the existing HVAC equipment operation and available capacity / airflows
- Check existing capacity against current system needs
- Provide demo plans for equipment, systems, controls, etc. that need to be relocated / removed
- Provide layout and design of new HVAC systems which include unit heaters, exhaust fan(s), and means of intake air (louvers or make-up air unit)
- Coordinate with electrical for equipment power feeds
- Assumptions / Exclusions / Clarifications:
  - Mechanical cooling is not required.
  - No special systems (e.g. smoke control) or required
  - HVAC system will not be required to handle any hazardous chemicals
  - Equipment controls will be manufacturers factory standard. A dedicated Building Automation System is not required.
  - It is acceptable to re-tie into and utilize the existing glycol supply/return piping for the new unit heaters

### Plumbing/Fire Protection

- Develop plans for the relocation of the sprinkler system to accommodate the installation of the roof hatch.
- Specify replacement of the emergency eye wash/shower station
- Assumptions/Exclusions:
  - Specifications will be provided on the drawings.
  - Tempered water with adequate flow is available at the eye wash/shower.
  - The existing eye wash/shower will connect to the existing alarm.
  - Flow and pressure of the sprinkler system is adequate.
  - The eye wash/shower will tie into the existing alarm system.

### Electrical

- Evaluate existing conduit & conductors for potential re-use.
- Develop demolition plan.
- Design of plan drawings showing electrical equipment installation locations.
- Develop lighting control plan to tie into ventilation system.
- Develop power plans for HVAC and plumbing connections.
- Develop single-line diagrams for power distribution.
- Develop panelboard directory.
- Assumptions/Exclusions:
  - Fire alarm system, security, and public address upgrades/additions are not included.
  - New chemical feed pump panel can be facilitated within the existing building while





- maintaining clearance required by code.
- Arc Flash & PD coordination is not included.
- Any client and/or project specifications will be provided at the inception of the project.
- Any existing and proposed site plans, survey documentation, existing electrical system documentation, etc. will be provided at the inception of the project.

### Automation

- Coordinate with the Mechanical/Process Lead to develop a functional specification for controlling the fluoride delivery between the existing fluoride storage tank and fluoride day tank. Task will include review with the Mechanical/Process Lead for proposed instrumentation requirements.
- Preparation of a function specification to outline operating philosophy for automated control of the fluoride storage and day tanks, programming (by others, see Exclusion below).
- Coordinate with Mechanical/Process Lead on Mechanical technical specifications.
- Assumptions/Exclusions:
  - Any Programming will be provided by others and is not included in this scope of work
  - The control strategy and I/O for the chemical feed pumps will remain unchanged.

### PERMITTING

Based on the RFP, this is a replace in-kind project, permits will not be required and are not included in our scope.

### DRAWING LIST

The anticipated drawing list is as follows:

- Cover Sheet
- General Notes
- General Arrangement Plans
- Architectural Plan and Details
- Structural General Notes
- Structural Floor Plan
- Structural Roof Plan
- Structural Details
- HVAC Demolition and Installation Plans
- Plumbing/Fire Protection Plan
- Mechanical Demolition Plans
- Mechanical Installation Plans
- Mechanical Details
- Electrical Demolition Plan
- Electrical floor plans showing equipment locations
- Electrical lighting control plans to tie into building HVAC system
- Electrical single-line diagrams representing power distribution
- Electrical panelboard directory
- Electrical power plans for HVAC & Plumbing connections

### SCHEDULE



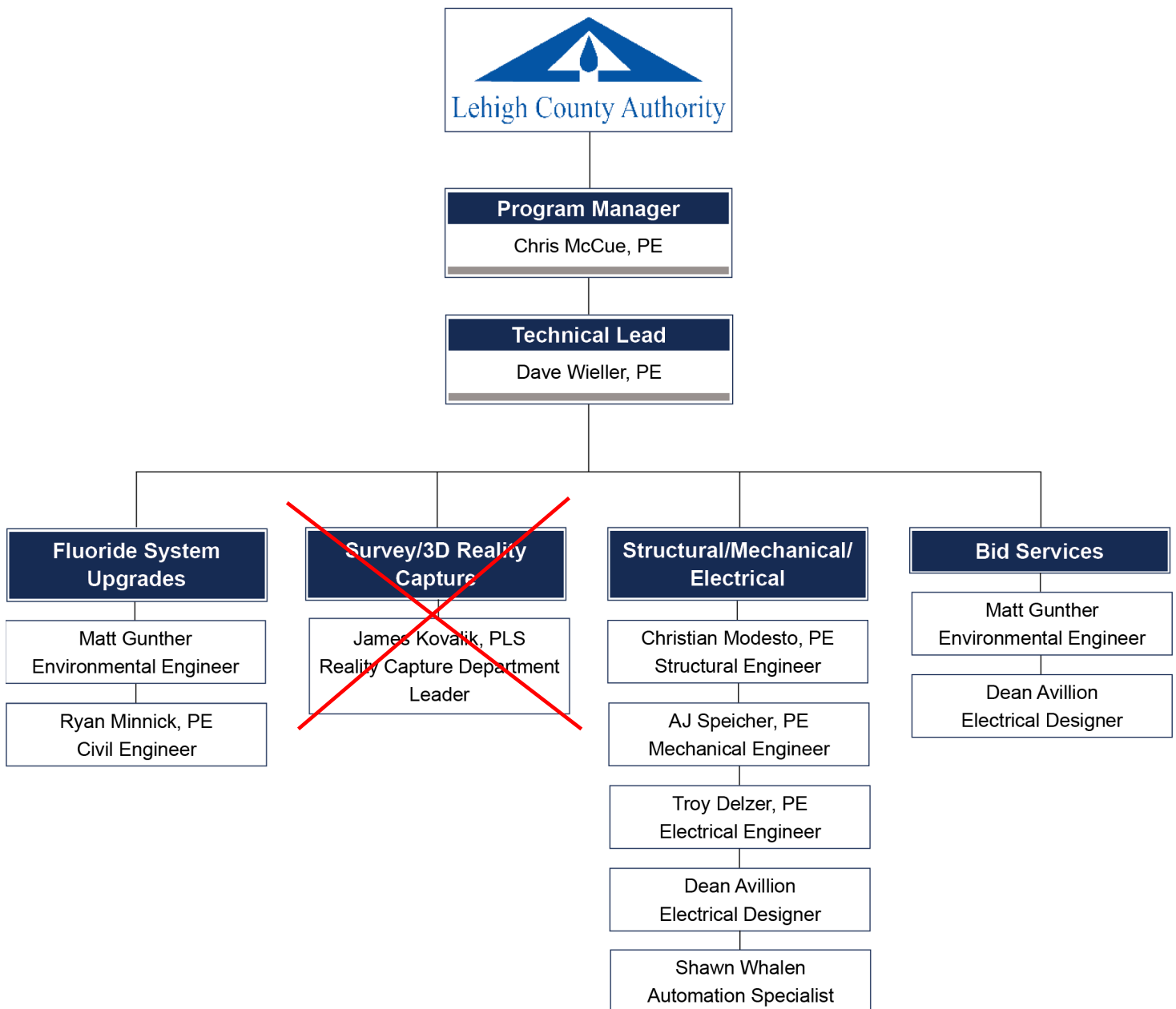


The following schedule assumes that authorization will be provided at the August 26 board meeting with kickoff to begin after Labor Day.

September 9, 2024	Notice to Proceed
September 11, 2024	Kickoff Meeting
September 12, 2024	Site Visit
November 1, 2024	90% Design Submission
December 6, 2024	Bid Ready Documents (accounts for Thanksgiving)



## 1.3 Project Team



NOTE: Resumes of key staff are included in the following pages





# Christopher McCue, PE

## Senior Consultant, Program Manager

### Firm

Verdantas

### Office Location

Wilkes-Barre, PA

### Education

B.S., Civil Engineering, The  
Pennsylvania State University

M.S., Engineering  
Administration/Construction  
Management, The George  
Washington University

### Licenses/Certifications

Professional Engineer, PA  
Professional Engineer, DE  
Professional Engineer, NY  
Professional Engineer, MI  
Professional Engineer, WV

### Qualifications

- ▶ Water & Wastewater Engineering
- ▶ Project Management
- ▶ Land Development & Permitting
- ▶ Construction Management

### Years of Experience

36 Years of Industry Experience  
32 Years at Verdantas

Mr. Christopher McCue, PE, is the Water Resources Program Manager for Verdantas, responsible for oversight of Verdantas' efforts in Water Resources including water and wastewater activities. Mr. McCue is a principal with over 30 years' experience in water/wastewater, civil public works/infrastructure, municipal consultation, land development, natural gas, and environmental consulting. Mr. McCue is responsible for project development, project scheduling, and review of completed designs and studies. In addition to his role, he assumes the role of Project Manager on significant and complex projects where his expertise is best utilized. He has extensive experience in advising sewer and water authorities.

## Project Experience

### Spring Creek Station

Lehigh County Authority, PA  
Project Manager for the replacement of three (3) VFDs, station modifications and all incidental work at the existing Spring Creek station.

### Applebutter Road Sanitary Pump Station Evaluation

City of Bethlehem, PA  
Principal in Charge for this study to evaluate hydraulic capacity of existing pump station which give a major industrial user on the city's system. Scope included wet weather flow monitoring, hydraulic analysis, evaluation of existing pumps and force main and study of the industrial user flows. Deliverable included report of findings, recommendations to reduce wet weather flows, and preliminary design of a new flow wet for the station.

### Meshoppen Borough Water and Sewer Systems

Meshoppen Borough, PA  
Principal in Charge responsible for the development of new Borough wide central sewage and water distribution system for the Borough. The new water system included 20,000 LF of 6 inch and 8 inch distribution system, rehabilitation and upgrade of 2 existing well sources, and a new 90,000 gallon storage tank. The sewage system include approximately 22,000 LF of low-pressure collection system, grinder pumps, and a new 50, 000 GPD sewage treatment plant. Projects included assistance with DCED grant funding, Penn Vest funding, and Rural Utility Service funding; required studies, designs, permitting and bid documents; and oversight of all construction and start up activities







# David Wieller, PE

## Technical Lead

Dave Wieller has more than 20 years of experience as a Technical Lead and Project Manager. Mr. Wieller has served as the primary contact for the Lehigh County Authority Water Filtration VFD Replacement and Spring Creek Pump Station upgrade project.

## Project Experience

### Allentown Water Filtration Plant High Service Pump VFD Replacement

Lehigh County Authority, PA | Date Range | Budget  
Project Manager and local technical liaison for the replacement of two (2) VFDs and one (1) reduced voltage soft starter with three (3) new 1,000hp VFDs. Responsibilities included preparation of contract documents, bidding administration via PennBid, coordination with PADEP and PennVest, and construction administration services. Project included two (2) prime contracts.

### Spring Creek Station Upgrade Project

Lehigh County Authority, PA | Date Range | Budget  
Project Manager for the replacement of three (3) VFDs, station modifications and all incidental work at the existing Spring Creek station.

### West Influent Pump Room Upgrades

City of Bethlehem, PA | Date Range | Budget  
Local technical liaison for the replacement of three (3) 100hp dry pit submersible pumps, associated valves, piping and appurtenances, access stairs, and platform. Design also included the inclusion of three (3) VFDs and new PLC as well as ventilation upgrades. Responsibilities included preparation of contract documents, bidding administration via PennBid, coordination with PADEP, and construction administration services. Project included three (3) prime contracts.

### West Influent Pump Room Upgrades

City of Bethlehem, PA | Date Range | Budget  
Local technical liaison for the replacement of three (3) 100hp dry pit submersible pumps, associated valves, piping and appurtenances, access stairs, and platform. Design also included the inclusion of three (3) VFDs and new PLC as well as ventilation upgrades.

## Firm

Verdantas

## Office Location

Lehigh Valley, PA

## Education

B.S., Environmental  
Engineering, University of  
Delaware

## Licenses/Certifications

Professional Engineer, PA

## Qualifications

- ▶ Water & Wastewater Engineering
- ▶ Public Works Design & Permitting
- ▶ Project Management

## Years of Experience

21 Years of Industry Experience  
12 Years at Verdantas







# Matthew Gunther

## Environmental Engineer

### Firm

Verdantas

### Office Location

Lehigh Valley, PA

### Education

B.S., Environmental  
Engineering, Wilkes University

### Qualifications

- ▶ Environmental Engineering
- ▶ Water & Wastewater Engineering
- ▶ Process Engineering

### Years of Experience

11 Years of Industry Experience  
9 Years at Verdantas

Matthew Gunther has been water and wastewater designer in Borton-Lawson's Bethlehem office for six years. During that time, Matt has worked on a variety of water and wastewater infrastructure projects requiring planning, design, and permitting as well as providing services during bidding and construction.

### Project Experience

#### Allentown Water Filtration Plant High Service Pump VFD Replacement

Lehigh County Authority, PA  
Project Engineer for the replacement of two (2) VFDs and one (1) reduced voltage soft starter with three (3) new 1000 HP VFDs.

#### Spring Creek Pump Station Upgrade Project

Lehigh County Authority, PA  
Project Engineer for the replacement of three (3) VFDs, station modifications and all incidental work at the existing Spring Creek station.

#### Multiple Projects

Borough of Freeland Municipal Authority, PA  
Designer responsible for analyzing sanitary sewer flow data as part of Act 537 Special Study. Developed water system map as basis for asset management program. Assisted in design of 125,000 gallon ground storage tank, booster station, and chemical feed facility. Developed construction drawings and specifications for public bidding. Assisted in construction administration services.

#### Sewage & Water System Design and Permitting

Confidential Client, PA  
Assisted in the design and permitting of approximately 2 miles of water and sanitary force main to serve an industrial campus. Assisted in the design of onsite water and sewer infrastructure including fire water storage tank, water booster pump station and sanitary sewer lift stations.







# Ryan Minnick, PE

## Civil Engineer

### Firm

Verdantas

### Office Location

Philadelphia, PA

### Education

B.S., Civil Engineering, The  
Pennsylvania State University

### Licenses/Certifications

Professional Engineer, PA

### Qualifications

- ▶ Water & Wastewater Engineering
- ▶ Public Works Design & Permitting
- ▶ PFAS
- ▶ Project Management

### Years of Experience

7 Years of Industry Experience  
1 Years at Verdantas

Mr. Ryan Minnick, PE, is a Professional Engineer for Verdantas. Ryan has been a technical lead and project manager on a variety of water and wastewater projects. He has nearly a decade of experience with wastewater authorities and including being an Authority Engineer. He's experienced in wastewater treatment plant upgrades, pump, water main, and structural design. Mr. Minnick is familiar with preparing construction design drawings, contract documents, and DEP permitting.

### Project Experience

#### PFAS/PFOA Carbon Filter Upgrade

Gloucester City, NJ

Prepared construction design drawings and contract documents. Project included the installation of two 12-foot diameter granular activated carbon (GAC) systems for PFOA and PFOS removal. Each GAC system was able to treat 500 gpm.

#### East Whiteland Township 537 Special Study

Frazer, PA

Act 537, enacted by the Pennsylvania Legislature in 1966 requires that every municipality in the Commonwealth develop and maintain a current sewage facilities management plan (Title 25, Pa. Code, Chapter 71). The purpose of this Act 537 Special Study was to provide documentation requested by the Pennsylvania Department of Environmental Protection (PADEP) for the acquisition of the East Whiteland Township sanitary sewer system by Aqua Pennsylvania Wastewater Inc.

#### Sewer Improvements

Milford-Trumbauersville Area Sewer Authority, PA

Performed duties of the appointed Authority Engineer. Attended public meetings. Collaborated with the Authority Manager to perform various capital improvement projects including wastewater treatment plant upgrades, pump station upgrades, collection system maintenance and operational issues. Prepared annual regulatory reports.

#### Glass Street Pump Station

Cumberland County Utilities Authority, PA

Prepared construction design drawings and contract documents. Project included the replacement of three 50-HP dry pit submersible pumps; installation of two 24-inch diameter 531 linear feet horizontal directional drill river crossings; installation of 2,500 linear feet of 20-inch force main; installation new grit screen; installation new bypass and flow monitoring vaults.







# Christian Modesto, PE

Structural Engineer

## Firm

Verdantas

## Office Location

Lehigh Valley, PA

## Education

M.S., Civil Engineering –  
Structural and Construction  
Specialty, New Jersey Institute  
of Technology

B.S., Civil Engineering, Lafayette  
College

## Licenses/Certifications

Professional Engineer, PA

## Qualifications

- Structural Engineering

## Years of Experience

9 Years of Industry Experience  
7 Years at Verdantas

Christian is a Structural Engineer with over nine years in the engineering industry with experience in structural engineering utilizing many types of construction materials. His focus is commercial and industrial projects including shallow and deep foundation design for pre-engineered/conventional buildings & equipment, maintenance & equipment support platforms, new buildings, and building expansion & renovations.

## Project Experience

### Phase 5 Building Addition

#### Benton Foundry, PA

Structural lead responsible for the design of a 71,600 s.f. plant expansion project. The expansion/building addition included a 25,000 s.f. shipping room, 7,300 s.f. sand room storage area with (4)- 49' ft. tall silos, and a 24,500 s.f. core room with 2,800 s.f. being a four-level tower supporting the raw material handling equipment. Due to the client's need for shipping/receiving to continue during construction, the building addition was designed in two phases. First, one bay of the new shipping room would be constructed with a temporary wall allowing the client to use two of the new loading dock doors, and then the remaining building would be constructed.

### Diamond Project – Oxford Glass Mat

#### CertainTeed, NC

Structural lead responsible for the procurement of a 200,000 s.f. pre-engineered metal building housing a new production line, 100,000 s.f. warehousing space, spare parts storage, maintenance shop, office space, and break/locker room. The design aspects of the project included all pre-engineered metal building foundations, a 15,000 s.f. 33ft deep basement, multitude of equipment foundations, 7,500 s.f. of CMU bearing wall ancillary buildings, and a pile support mat slab for a 75,000 sf, 100ft tall, automated roll storage warehouse.

### Allergen Building Addition

#### Barry Callebaut, PA

Structural lead responsible for the design of a 2,600 s.f. allergen production area building addition. The design included a steel conventional framed addition utilizing cGMP practices, shallow spread building foundations and a mat slab for two ingredient mixers and associated dump stations.





### Stonegate – AL/MC Addition

#### Meyer Architects, Inc., DE

Structural lead responsible for the design of a 14 unit, three story, 24,000 s.f assisted living and memory care addition/building. The design included a partial 10ft basement with CMU walls, shallow spread foundations, steel framed structure with composite decks, moment frame lateral system, cold-formed engineered roof truss system and building supported/ independent cantilever green roof.

### Various Building Projects

#### TYAD Army Depot, PA

Structural lead/engineer on multiple projects involving the renovation of existing buildings including reinforcement of roof structure to support both new mechanical units and skylights, addition of windows, addition of front entrance canopy and foundations and framing for interior cranes and lifts.

### DC-1 Building

#### Cumulus Data, PA

Structural engineer responsible for the design of a 230,000 sf greenfield data center building and attached two-story 35,000 sf administration building.





# Alfred Speicher, Jr., PE, PMP, CCP

## Mechanical Engineer

### Firm

Verdantas

### Office Location

Wilkes-Barre, PA

### Education

B.S., Mechanical Engineering,  
The Pennsylvania State  
University

M.S., Mechanical Engineering,  
Villanova University

### Licenses/Certifications

Professional Engineer – PA, NJ,  
VA

U.S. Dept. of Energy Qualified  
Steam Specialist

AEE Certified Energy Manager

LEED Green Associate

Project Management

Professional

Certified Commissioning

Provider

### Qualifications

- ▶ Mechanical Engineering
- ▶ Building Automation
- ▶ Commissioning
- ▶ Project Management

### Years of Experience

24 Years of Industry Experience

16 Years at Verdantas

Mr. A.J. Speicher, P.E., is the Facility Optimization Service Leader with over 20 years of experience Building Automation System controls, commissioning, design and construction. He has managed various aspects of cGMP validated projects, including detailed design specifications, site acceptance tests, HVAC system commissioning, and installation and operational qualifications. Mr. Speicher has designed and created AutoCAD control drawings, sequences of operation, and valve/damper schedules for Building Automation System (BAS) control systems. He has also assisted with the BAS “point-to-point” checkouts and maintained overall project delivery and profitability.

## Project Experience

### Chiller Replacement Design

Confidential Client, PA |

Provided project management and mechanical engineering services for the study and detailed design of the chilled water system replacement in a biotech R&D lab space. The study phase consisted of reviewing design options as related to air cooled and water cooled chiller systems. A.J. also assisted with HSE compliance in calculating energy reduction estimates for the new system. A.J. coordinated a complete 3D laser scan for the project and conducted a fully virtual project pre-bid meeting with the contractors. A.J. will complete the project by performing commissioning services on the new chiller and pumping systems.

### Commissioning of Critical Environments

The Commonwealth Medical College, PA |

Provided LEED fundamental and enhanced commissioning for a new, LEED Silver, \$115 million, new Medical Sciences Building for The Commonwealth Medical College (TCMC). The new medical sciences facility, home of TCMC’s academic and research programs, consists of two wings connected by a 2-story link. The facility includes a 20 table gross anatomy lab, state of the art simulation suites/research labs, a 250 seat auditorium, two 190 seat lecture halls, Library, teaching labs, small group rooms, as well as administration and support. The facility also includes an operative 6,000 SF vivarium.







# Troy Delzer, PE, PMP

## Electrical Engineer

Mr. Troy L. Delzer, P.E., is an Electrical Technical Leader with more than 20 years of experience to include system design, PLC & SCADA programming, vendor coordination, FAT & SAT execution for domestic and international clients, and on-site commissioning.

### Project Experience

#### Spring Creek Pump Station Upgrade Project

Lehigh County Authority, PA | Date Range | Budget

Electrical Engineer for the replacement of three (3) VFDs, station modifications and all incidental work at the existing Spring Creek station.

#### Furnace Rebuild

Confidential Glass Client, CO | Date Range | Budget

Electrical Engineer responsible for the design of complete glass furnace removal and installation including electrical design calculations to complete construction drawings and equipment specifications. Electrical design and construction plans included new low voltage mcc relocation and replacement, low voltage power distribution, facility lighting, and process equipment feeders. Project work included relocation and refurbishment of medium voltage switch line up and new medium voltage vacuum circuit breaker. Work included multiple low voltage feeders to support a new oxygen plant and complete replacement of the pollution abatement system.

#### Furnace Major Repair

Confidential Glass Client, PA | Date Range | Budget

Electrical Engineer responsible for the design of major glass furnace renovations including electrical design calculations to complete construction drawings and equipment specifications. Electrical design and construction plans included new low voltage switchgear, low voltage power distribution, generator back-up, facility lighting, and process equipment feeder sizing.

### Firm

Verdantas

### Office Location

Pittsburgh, PA

### Education

B.S., Power Systems, South Dakota School of Mines & Technology

### Licenses/Certifications

Professional Engineer, PA  
Professional Engineer, IN  
Professional Engineer, SC  
Professional Engineer, WI

### Qualifications

- ▶ Electrical Engineering
- ▶ Project Management
- ▶ PLC & SCADA Programming
- ▶ On-Site Commissioning

### Years of Experience

27 Years of Industry Experience  
7 Years at Verdantas







# Shawn Whalen

## Senior Automation Specialist

### Firm

Verdantas

### Office Location

Wilkes-Barre, PA

### Education

B.S., Electrical Engineering  
Technology, The Pennsylvania  
State University

### Qualifications

- ▶ Automation and Controls Design
- ▶ Power Distribution Design
- ▶ Telecommunications Infrastructure Design
- ▶ Programming of Allen Bradley PLC's & HMI's
- ▶ Commissioning & Start up Support

### Years of Experience

17 Years of Industry Experience  
9 Years at Verdantas

Shawn is an Automation Specialist, is a well-rounded automation professional with over 10 years of electrical experience. He has supported field and on-site project coordination for clients for Automation/Control designs, Main Power Distribution Designs, and Telecommunications Designs. He has also supported clients as an SME within these disciplines. Additional roles he has supported clients with are FAT (Factory Acceptance Testing), SAT (Site Acceptance Testing), Contractor/Vendor Submittal reviews for approval, UL (Underwriter Laboratories) review for conformance, and Construction field assessments.

### Project Experience

#### Pharmaceutical Client - Biomedical Advanced Research and Development Authority (Barda) Project

PA

Responsible for being the client Subject Matter Expert. This project was for new government funded biomedical laboratory for the manufacturing of the influenza vaccine. This project entailed retrofitting three existing buildings, which included labs and main utilities infrastructures, along with the installation/construction of a brand-new facility within the campus that facilitated the for the production of the influenza vaccination. This role required the Electrical SME to support the Automation and Controls SME's, Process and HVAC SME's, IT (Information Technology) SME's, Fire Alarm and Haz-watch SME's on the facilities designs that spanned from basic engineering to detailed engineering. Additional requirements were to coordinate with the awarded Engineering Firm on detailed design with final review and approval of completed design before construction. This role also required the Electrical SME to perform construction administration on behalf of the client which included descope and bid reviews with awarded Construction Management firm, coordination with Construction Management firm for Cost Analysis, and review and approval/disapproval of RFI's and Change Notices on behalf of the client.







## 2. Cost Proposal





Fee

	Dave Wieller, Project Manager	Matt Gunther, Water Designer	Ryan Minnick, Water Engineer	James Kovalik, Reality Capture Leader	Survey Staff	Derek Coombs, Data Processing Specialist	Marjorie Cruz Licera, Structural Engineer	Daniel Saldarriaga, Structural Designer	Christian Modesto, Structural Engineer	Chris Kresge, Senior Architect	A.J. Speicher, Mechanical Engineer	Matt Lesione, Mechanical Engineer	Brandy Flatford, Mechanical Designer	Joe Niznik, Plumbing Design Lead	Greg Zukosky, Electrical Project Manager	Dean Avillion, Senior Electrical Designer	Dan Pfeiffer, Senior Electrical Designer	Shawn Whalen, Automation Specialist	Troy Deltzer, Senior Electrical Engineer	Cost
Rate	\$200.00	\$130.00	\$187.00	\$210.00	\$100.00	\$115.00	\$135.00	\$115.00	\$170.00	\$215.00	\$210.00	\$175.00	\$115.00	\$150.00	\$170.00	\$150.00	\$150.00	\$215.00	\$215.00	
Kickoff Meeting	2						2					2						2		\$1,450.00
Site Visit		4					4					4				10		8		\$4,980.00
Base Plan		32																		\$4,160.00
Mechanical Design/Plans	20	32	8																	\$9,656.00
Structural Design/Plans							32	32	4											\$8,680.00
Architectural Design/Plans										12										\$2,580.00
HVAC Design/Plans											2	40	60							\$14,320.00
Plumbing/Fire Protection											2		8	10						\$2,840.00
Electrical Design/Plans															25	4	64		4	\$15,310.00
Technical Specifications	4	24	4									8			24			16		\$13,588.00
Front End Specifications		8																		\$1,040.00
Review Meetings	2						2			1		2			2			2		\$2,005.00
Bid Services	6	16					4			2				2	4			2		\$5,660.00
Reimbursables (billed at cost)																				\$500.00
TOTALS	34	116	12	0	0	0	44	32	4	15	4	56	68	12	55	14	64	30	4	\$86,769.00





## 5CAPITAL PROJECT AUTHORIZATION

<b>PROJECT NO.:</b>	<u>AD-W-A</u>	<b>BUDGET FUND:</b>	<u>Allentown Div\Water\Capital</u>
<b>PROJECT TITLE:</b>	<u>Allentown Division – WFP – Fluoride System Upgrades</u>	<b>PROJECT TYPE:</b>	<input type="checkbox"/> Construction <input checked="" type="checkbox"/> Engineering Design <input type="checkbox"/> Equipment Purchase <input type="checkbox"/> Amendment No. 1
<b>THIS AUTHORIZATION:</b>	<u>\$96,769</u>		
<b>TO DATE (W/ ABOVE)</b>	<u>\$114,469</u>		

### DESCRIPTION AND BENEFITS:

The purpose of this project is to upgrade the existing fluoride chemical feed system at the Water Filtration Plant. The existing system is past its useful life and in need of replacement. The new system is proposed to have automated filling of the day tank to reduce operator exposure to the corrosive chemical. A conceptual design of the proposed upgrades was prepared, and it is recommended Verdantas advance this design to final design level and provide bidding phase services.

**AUTHORIZATION STATUS:**

Prior Authorizations	
Conceptual Design Phase – D’Huy Engineering, Inc.	\$17,700
Requested This Authorization – Detailed Design & Bidding Phase	
Detailed Design & Bidding Phase: Verdantas	\$86,769
Staff	\$5,000
Contingencies	\$5,000
<b>Total This Authorization</b>	<b>\$96,769</b>

Future Authorizations	
Construction Phase	

<b>Total Estimated Project</b>	<b>\$650,000</b>
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**REVIEW AND APPROVALS:**

<i>Amy Rohrbach</i>	8/26/2024		
Project Manager	Date	Chief Executive Officer	Date
Chief Capital Works Officer	Date	Chairman	Date





**Lehigh County Authority**

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

## PROFESSIONAL SERVICES AUTHORIZATION

**Professional:** VERDANTAS  
3897 ADLER PLACE, BLDG C  
BETHLEHEM, PA 18017

**Date:** August 26, 2024

**Requested By:** Amy Rohrbach

**Approvals**

**Department Head:** \_\_\_\_\_

**Chief Executive** \_\_\_\_\_

**Officer:** \_\_\_\_\_

### **Allentown Division – WFP – Fluoride System Upgrades Design and Bidding Phase Services**

Verdantas will perform a final design and bidding phase services for upgrades to the existing Fluoride System at the Water Filtration Plant. The following professional services are included in this authorization (reference attached proposal dated 8/13/2024):

Professional Services <sup>(1)</sup>
1. Project Kickoff Meeting and progress update meetings
2. Perform 90% Design and 90% design review meeting
3. Final Design Preparation
4. Bid Phase Services

*(1) Refer to Verdantas proposal dated 8/13/2024 for additional information.*

### **Final Design and Bidding Phase:**

**This Authorization: \$86,769**

Prior Authorization (Preliminary Design): \$17,700

**Timetable and Completion Deadline:** Bids anticipated to be received in early January 2025 with a CPA anticipated to be requested in February 2025.

MUNIS Account: 50595

### **(For Authority Use Only)**

**Authorization Completion:**


































**Approval:** \_\_\_\_\_ **Actual Cost:** \_\_\_\_\_ **Date:** \_\_\_\_\_



**LEHIGH COUNTY AUTHORITY  
FINANCIAL STATEMENTS  
JULY 2024**



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

	<b>Sub W</b>	<b>Sub WW</b>	<b>City</b>
YTD Net income >0			
YTD Net income >= FC			
YTD Cash Flow >0			
YTD Cash Flow >= FC			
YTD DSCR >= FC			
YTD DSCR >= 1.20			
YTD Operating Ratio >= 1.00			
YTD Operating Ratio >= Budget Target			
YTD Days Cash on Hand >= 180.0			
YTD Operating Revenues >= FC			
YTD Operating Expenses <= FC			
FY FC Net Income >= Budget			
FY FC Cash Flows >=Budget			
FY FC DSCR >= Budget			
TOTAL GREEN	<u><u>14</u></u>	<u><u>12</u></u>	<u><u>12</u></u>



LEHIGH COUNTY AUTHORITY  
FINANCIAL STATEMENTS - SUMMARY  
For the Period Ended July 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	571,883	548,383	781,051	23,500	(209,168)	1,787,215	1,288,222	2,020,696	498,993	(233,481)	2,348,377	2,019,922	8,266,955	328,455	(5,918,577)
Suburban Wastewater	521,045	(147,287)	(40,427)	668,332	561,472	72,136	(1,006,166)	13,417	1,078,303	58,719	(1,461,583)	(1,632,719)	(334,302)	171,136	(1,127,281)
City Division	2,309,325	2,704,598	4,260,378	(395,273)	(1,951,052)	7,688,037	4,348,114	10,959,493	3,339,923	(3,271,456)	12,050,508	14,844,627	7,787,339	(2,794,119)	4,263,170
Total LCA	3,402,253	3,105,694	5,001,001	296,559	(1,598,748)	9,547,388	4,630,169	12,993,606	4,917,219	(3,446,219)	12,937,303	15,231,830	15,719,991	(2,294,527)	(2,782,688)
Cash Flow Statement															
Suburban Water	(928,902)	(974,407)	195,472	45,505	(1,124,374)	3,980,121	3,574,593	4,336,658	405,528	(356,537)	1,778,377	1,446,849	3,429,573	331,529	(1,651,196)
Suburban Wastewater	(350,906)	(1,096,800)	(1,616,020)	745,894	1,265,114	(1,987,120)	(2,794,425)	2,646,853	807,305	(4,633,973)	349,361	347,045	2,938,224	2,316	(2,588,863)
City Division	2,742,437	2,994,854	6,364,771	(252,417)	(3,622,334)	60,945,146	50,955,842	13,707,808	9,989,304	47,237,338	45,821,438	2,940,507	13,827,652	42,880,931	31,993,786
Total LCA	1,462,628	923,646	4,944,223	538,982	(3,481,594)	62,938,147	51,736,010	20,691,319	11,202,137	42,246,828	47,949,176	4,734,400	20,195,449	43,214,776	27,753,727
Debt Service Coverage Ratio															
Suburban Water	3.36	3.04	4.12	0.32	(0.75)	2.32	1.95	2.34	0.37	(0.02)	2.10	1.96	3.97	0.14	(1.87)
Suburban Wastewater	11.12	4.03	7.97	7.09	3.14	6.00	4.28	8.84	1.71	(2.85)	4.80	4.67	9.02	0.14	(4.21)
City Division	3.15	3.30	5.25	(0.15)	(2.10)	2.05	1.78	2.91	0.27	(0.87)	2.20	2.13	2.38	0.06	(0.19)



LEHIGH COUNTY AUTHORITY  
CONSOLIDATED FINANCIAL STATEMENTS  
For the Period Ended July 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
<b>Operating Revenues:</b>																
User Charges	1,714,060	1,851,538	5,446,966	9,012,564	9,868,849	11,379,453	33,067,441	54,315,743	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	128,455	421,632	351,167	901,255	571,045	1,002,443	1,616,833	3,190,321	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	47,862	15	14,184	62,061	102,002	180	193,290	295,472	176,276	2,618	86,448	265,342	177,724	2,900	89,800	270,424
<b>Total Operating Revenues</b>	<b>1,890,377</b>	<b>2,273,186</b>	<b>5,812,317</b>	<b>9,975,880</b>	<b>10,541,896</b>	<b>12,382,076</b>	<b>34,877,564</b>	<b>57,801,536</b>	<b>18,734,826</b>	<b>20,856,727</b>	<b>59,633,634</b>	<b>99,225,187</b>	<b>18,613,874</b>	<b>20,827,254</b>	<b>59,254,906</b>	<b>98,696,034</b>
<b>Operating Expenses:</b>																
Personnel	379,291	143,019	1,150,485	1,672,795	2,324,227	970,785	6,904,054	10,199,066	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	78,677	29,579	215,140	323,397	495,171	206,762	1,351,250	2,053,184	1,066,844	428,822	2,446,827	3,942,493	1,136,102	456,840	2,545,190	4,138,132
Utilities	42,506	20,504	259,300	322,310	304,027	175,012	1,159,701	1,638,740	531,376	320,045	2,018,931	2,870,352	537,998	313,870	2,063,922	2,915,790
Materials and Supplies	97,492	34,424	434,482	566,398	455,409	205,406	1,920,252	2,581,066	1,086,624	472,867	3,280,826	4,840,316	1,197,810	518,722	3,251,300	4,967,832
Miscellaneous Services	402,345	631,752	284,002	1,318,099	2,662,625	4,072,721	1,046,970	7,782,316	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	-	385,481	-	385,481	-	2,940,836	5,656	2,946,492	-	4,689,486	11,400	4,700,886	-	4,529,540	11,400	4,540,940
Depreciation and Amortization	297,762	575,538	515,561	1,388,861	2,084,503	4,028,764	3,608,927	9,722,193	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	-	-	2,012	2,012	-	-	20,322	20,322	-	-	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
<b>Total Operating Expenses</b>	<b>1,298,073</b>	<b>1,820,298</b>	<b>2,860,982</b>	<b>5,979,353</b>	<b>8,325,962</b>	<b>12,600,286</b>	<b>16,017,132</b>	<b>36,943,380</b>	<b>15,406,973</b>	<b>22,197,362</b>	<b>34,278,590</b>	<b>71,882,925</b>	<b>15,557,242</b>	<b>22,270,263</b>	<b>34,425,410</b>	<b>72,252,915</b>
<b>Net Operating Profit</b>	<b>592,304</b>	<b>452,888</b>	<b>2,951,335</b>	<b>3,996,527</b>	<b>2,215,934</b>	<b>(218,210)</b>	<b>18,860,433</b>	<b>20,858,157</b>	<b>3,327,853</b>	<b>(1,340,635)</b>	<b>25,355,045</b>	<b>27,342,262</b>	<b>3,056,632</b>	<b>(1,443,009)</b>	<b>24,829,496</b>	<b>26,443,119</b>
<b>Non-Operating Income (Expense)</b>																
Interest Income	73,195	63,592	907,315	1,044,102	334,863	348,450	3,099,386	3,782,699	198,236	202,188	1,397,689	1,798,113	130,452	130,271	984,881	1,245,604
Interest (Expense)	(88,990)	(11,878)	(1,549,325)	(1,650,193)	(764,776)	(85,079)	(8,875,635)	(9,725,491)	(1,174,641)	(178,764)	(19,703,642)	(21,057,047)	(1,167,162)	(185,934)	(19,703,642)	(21,056,738)
Other Miscellaneous	(4,626)	16,443	-	11,817	1,194	26,975	(5,396,147)	(5,367,978)	(3,070)	(144,372)	5,001,417	4,853,975	-	(134,047)	8,733,892	8,599,845
<b>Net Non-Operating Income (Expense)</b>	<b>(20,421)</b>	<b>68,157</b>	<b>(642,010)</b>	<b>(594,274)</b>	<b>(428,719)</b>	<b>290,346</b>	<b>(11,172,396)</b>	<b>(11,310,769)</b>	<b>(979,475)</b>	<b>(120,948)</b>	<b>(13,304,536)</b>	<b>(14,404,959)</b>	<b>(1,036,710)</b>	<b>(189,710)</b>	<b>(9,984,869)</b>	<b>(11,211,289)</b>
<b>Net Income (Loss)</b>	<b>571,883</b>	<b>521,045</b>	<b>2,309,325</b>	<b>3,402,253</b>	<b>1,787,215</b>	<b>72,136</b>	<b>7,688,037</b>	<b>9,547,388</b>	<b>2,348,377</b>	<b>(1,461,583)</b>	<b>12,050,508</b>	<b>12,937,303</b>	<b>2,019,922</b>	<b>(1,632,719)</b>	<b>14,844,627</b>	<b>15,231,830</b>
<b>CASH FLOW STATEMENT</b>																
<b>Cash Flows From Operating Activities</b>																
Operating Revenues	1,890,377	2,273,186	5,812,317	9,975,880	10,541,896	12,382,076	34,877,564	57,801,536	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)	(1,000,311)	(1,244,760)	(2,343,409)	(4,588,480)	(6,241,459)	(8,571,522)	(12,387,883)	(27,200,864)	(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	(856,735)	(235,243)	1,797,322	705,345	(1,069,555)	(1,393,855)	(1,864,535)	(4,327,945)	(138,029)	(361,650)	(2,619,904)	(3,119,583)	1	(200,000)	(135,999)	(335,999)
<b>Net Cash Provided by (Used in) Operating Activities</b>	<b>33,332</b>	<b>793,183</b>	<b>5,266,230</b>	<b>6,092,745</b>	<b>3,230,882</b>	<b>2,416,699</b>	<b>20,625,147</b>	<b>26,272,727</b>	<b>6,840,447</b>	<b>5,329,215</b>	<b>32,995,438</b>	<b>45,165,100</b>	<b>6,573,633</b>	<b>5,388,491</b>	<b>34,863,347</b>	<b>46,825,470</b>
<b>Cash Flows From Financing Activities</b>																
Capital Contributions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Proceeds New Borrowing	-	-	-	-	5,241,371	-	55,000,000	60,241,371	5,230,000	7,175,000	56,627,352	69,032,352	5,230,000	7,175,000	8,555,508	20,960,508
Interest Payments	(848)	(11,402)	(1,091)	(13,341)	(382,085)	(81,751)	(4,335,452)	(4,799,288)	(1,167,162)	(185,934)	(13,318,734)	(14,671,830)	(1,167,162)	(185,934)	(13,315,397)	(14,668,493)
Principal Payments	(6,395)	(49,268)	(5,215)	(60,878)	(44,595)	(342,827)	(728,610)	(1,116,032)	(2,254,324)	(1,010,486)	(2,945,000)	(6,209,810)	(2,254,324)	(1,010,486)	(2,945,000)	(6,209,810)
<b>Net Cash Provided by (Used in) Financing Activities</b>	<b>(7,243)</b>	<b>(60,670)</b>	<b>(6,306)</b>	<b>(74,219)</b>	<b>4,814,691</b>	<b>(424,577)</b>	<b>49,935,938</b>	<b>54,326,051</b>	<b>1,808,514</b>	<b>5,978,580</b>	<b>40,363,618</b>	<b>48,150,712</b>	<b>1,808,514</b>	<b>5,978,580</b>	<b>(7,704,889)</b>	<b>82,205</b>
<b>Cash Flows from Capital and Related Activities</b>																
Non-Operating Income (Expenses)	(4,626)	16,443	-	11,817	1,194	26,975	(5,396,147)	(5,367,978)	(3,070)	(144,372)	3,693,193	3,545,751	-	(134,047)	7,425,668	7,291,621
Capital Expenditures, net	(1,023,560)	(1,163,454)	(3,424,802)	(5,611,817)	(4,646,509)	(4,598,666)	(7,319,178)	(16,564,353)	(7,065,750)	(11,516,250)	(32,628,500)	(51,210,500)	(7,065,750)	(11,516,250)	(32,628,500)	(51,210,500)
<b>Net Cash Provided By (Used In) Capital and Related Activities</b>	<b>(1,028,186)</b>	<b>(1,147,011)</b>	<b>(3,424,802)</b>	<b>(5,600,000)</b>	<b>(4,645,315)</b>	<b>(4,571,691)</b>	<b>(12,715,324)</b>	<b>(21,932,330)</b>	<b>(7,068,820)</b>	<b>(11,660,622)</b>	<b>(28,935,307)</b>	<b>(47,664,749)</b>	<b>(7,065,750)</b>	<b>(11,650,297)</b>	<b>(25,202,832)</b>	<b>(43,918,879)</b>
<b>Cash Flows From Investing Activities</b>																
Investments Converting To Cash	245,000	-	-	245,000	735,000	1,673,000	-	2,408,000	490,000	1,673,000	-	2,163,000	-	500,000	-	500,000
Purchased Investments	(245,000)	-	-	(245,000)	(490,000)	(1,429,000)	-	(1,919,000)	(490,000)	(1,173,000)	-	(1,663,000)	-	-	-	-
Interest Income	73,195	63,592	907,315	1,044,102	334,863	348,450	3,099,386	3,782,699	198,236	202,188	1,397,689	1,798,113	130,452	130,271	984,881	1,245,604
<b>Net Cash Provided By (Used In) Investing Activities</b>	<b>73,195</b>	<b>63,592</b>	<b>907,315</b>	<b>1,044,102</b>	<b>579,863</b>	<b>592,450</b>	<b>3,099,386</b>	<b>4,271,699</b>	<b>198,236</b>	<b>702,188</b>	<b>1,397,689</b>	<b>2,298,113</b>	<b>130,452</b>	<b>630,271</b>	<b>984,881</b>	<b>1,745,604</b>
<b>FUND NET CASH FLOWS</b>	<b>(928,902)</b>	<b>(350,906)</b>	<b>2,742,437</b>	<b>1,462,628</b>	<b>3,980,121</b>	<b>(1,987,120)</b>	<b>60,945,146</b>	<b>62,938,147</b>	<b>1,778,377</b>	<b>349,361</b>	<b>45,821,438</b>	<b>47,949,176</b>	<b>1,446,849</b>	<b>347,045</b>	<b>2,940,507</b>	<b>4,734,400</b>
<b>DEBT SERVICE RATIO</b>																
<b>Debt Service Ratio (Indenture Based)</b>																
Total Operating Revenues	1,714,060	1,851,538	5,446,966	9,012,564	9,868,849	11,379,453	33,067,441	54,315,743	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)	(1,000,311)	(1,244,760)	(2,345,421)	(4,590,492)	(6,241,459)	(8,571,522)	(12,408,205)	(27,221,186)	(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	73,195	63,592	907,315	1,044,102	334,863	348,450	3,099,386	3,782,699	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)	-	-	(763,131)	(763,131)	-	-	(1,308,224)	(1,308,224)	-	-	(1,308,224)	(1,308,224)
Total Non-Operating Revenues (Expenses)	171,691	438,091	365,351	975,133	674,241	1,029,598	(3,586,023)	(1,882,185)	1,207,362	1,511,128	3,615,564	6,334,054	1,128,574	1,564,753	3,699,400	6,392,727
<b>Cash Available For Debt Service</b>	<b>958,635</b>	<b>1,108,460</b>	<b>4,265,193</b>	<b>6,332,288</b>	<b>4,636,494</b>	<b>4,185,979</b>	<b>19,409,468</b>	<b>28,231,941</b>	<b>7,173,642</b>	<b>5,748,681</b>	<b>35,704,807</b>	<b>48,627,130</b>	<b>6,704,084</b>	<b>5,584,715</b>	<b>34,676,003</b>	<b>46,964,802</b>
Interest Paid	97,264	15,495	1,109,894	1,222,652	680,845	108,462	7,769,261	8,558,567	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	1,315,022	589,450	1,717,917	3,622,389	2,254,324	1,010,486	2,945,000	6,209,810	2,254,324	1,010,486	2,945,000	6,209,810
<b>Total Debt Service</b>	<b>285,124</b>	<b>99,702</b>	<b>1,355,311</b>	<b>1,740,137</b>	<b>1,995,867</b>	<b>697,912</b>	<b>9,487,178</b>	<b>12,180,957</b>	<b>3,421,486</b>	<b>1,196,420</b>	<b>16,263,734</b>	<b>20,881,640</b>	<b>3,421,486</b>	<b>1,196,420</b>	<b>16,260,397</b>	<b>20,878,303</b>
<b>Debt Service Ratio</b>	<b>3.36</b>	<b>11.12</b>	<b>3.15</b>	<b>3.64</b>	<b>2.32</b>	<b>6.00</b>	<b>2.05</b>	<b>2.32</b>	<b>2.10</b>	<b>4.80</b>	<b>2.20</b>	<b>2.33</b>	<b>1.96</b>	<b>4.67</b>	<b>2.13</b>	<b>2.25</b>



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

STATEMENTS OF ACTIVITIES

Operating Revenues:

User Charges	1,714,060	1,744,669	1,651,731	(30,609)	62,329
Connection & System Charges	128,455	103,960	88,203	24,495	40,252
Other Miscellaneous Revenues	47,862	7,527	3,115	40,335	44,747

Total Operating Revenues

Operating Expenses:

Personnel	379,291	377,734	163,214	(1,558)	(216,077)
Shared Services - General & Administrative	78,677	25,204	16,087	(53,473)	(62,590)
Utilities	42,506	42,629	38,826	123	(3,680)
Materials and Supplies	97,492	162,116	84,894	64,624	(12,598)
Miscellaneous Services	402,345	393,454	339,674	(8,891)	(62,671)
Treatment and Transportation	-	-	-	-	-
Depreciation and Amortization	297,762	233,420	258,527	(64,343)	(39,235)
Major Maintenance Expenses	-	-	-	-	-
Other Miscellaneous	-	-	-	-	-

Total Operating Expenses

Net Operating Profit

Non-Operating Income (Expense)

Interest Income	73,195	11,385	32,198	61,811	40,997
Interest (Expense)	(88,990)	(85,707)	(95,449)	(3,283)	6,459
Other Miscellaneous	(4,626)	1,104	2,475	(5,731)	(7,102)

Net Non-Operating Income (Expense)

Net Income (Loss)

CASH FLOW STATEMENT

Cash Flows From Operating Activities

Operating Revenues	1,890,377	1,856,157	1,743,049	34,221	147,328
Operating Expenses (ex D&A)	(1,000,311)	(1,001,137)	(642,695)	825	(357,616)
Non-Cash Working Capital Changes	(856,735)	(932,000)	(155,444)	75,265	(701,291)

Net Cash Provided by (Used in) Operating Activities

Cash Flows From Financing Activities

Capital Contributions	-	-	-	-	-
Proceeds New Borrowing	-	-	-	-	-
Interest Payments	(848)	(848)	(944)	1	96
Principal Payments	(6,395)	(7,063)	(6,299)	668	(96)

Net Cash Provided by (Used in) Financing Activities

Cash Flows from Capital and Related Activities

Non-Operating Income (Expenses)	(4,626)	1,104	2,475	(5,731)	(7,102)
Capital Expenditures, net	(1,023,560)	(902,005)	(776,869)	(121,555)	(246,691)

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)	(245,000)
Interest Income	73,195	11,385	32,198	61,811	40,997

Net Cash Provided By (Used In) Investing Activities

FUND NET CASH FLOWS

DEBT SERVICE RATIO

Debt Service Ratio (Indenture Based)

User Charges	1,714,060	1,744,669	1,651,731	(30,609)	62,329
Operating Expenses (Cash Based)	(1,000,311)	(1,001,137)	(642,695)	825	(357,616)
Interest Income	73,195	11,385	32,198	61,811	40,997
Annual Lease Payment (City)	-	-	-	-	-
Non-Operating Revenues (Expenses)	171,691	112,591	93,794	59,099	77,897

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

Suburban - Water

Year To Date

Actual	Q2 FC	Prior Year	FC Var	PY Var
9,868,849	9,941,675	9,498,911	(72,826)	369,938
571,045	443,825	293,856	127,220	277,189
102,002	91,828	39,738	10,174	62,263

10,541,896 10,477,328 9,832,505 64,567 709,391

2,324,227	2,812,810	2,212,967	488,583	(111,260)
495,171	570,909	421,718	75,738	(73,453)
304,027	300,414	285,080	(3,613)	(18,947)
455,409	505,713	363,118	50,304	(92,291)
2,662,625	2,570,728	2,228,751	(91,897)	(433,874)
2,084,503	1,827,049	1,801,578	(257,454)	(282,925)
-	-	-	-	-
-	-	-	-	-

8,325,962 8,587,623 7,313,213 261,662 (1,012,749)

2,215,934 1,889,705 2,519,292 326,229 (303,358)

334,863	168,031	181,722	166,832	153,141
(764,776)	(775,303)	(692,796)	10,526	(71,980)
1,194	5,788	12,478	(4,594)	(11,284)

(428,719) (601,483) (498,596) 172,764 69,877

1,787,215 1,288,222 2,020,696 498,993 (233,481)

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)

10,541,896	10,477,328	9,832,505	64,567	709,391
(6,241,459)	(6,760,575)	(5,511,635)	519,116	(729,824)
(1,069,555)	(1,070,028)	(3,220,296)	473	2,150,741

3,230,882 2,646,725 1,100,574 584,157 2,130,308

-	-	-	-	-
5,241,371	5,230,000	6,950,000	11,371	(1,708,629)
(382,085)	(532,565)	(592,320)	150,479	210,234
(44,595)	(47,262)	(43,927)	2,667	(669)

4,814,691 4,650,174 6,313,754 164,517 (1,499,063)

1,194	5,788	12,478	(4,594)	(11,284)
(4,646,509)	(4,141,126)	(3,276,871)	(505,383)	(1,369,639)

(4,645,315) (4,135,337) (3,264,392) (509,977) (1,380,923)

735,000	245,000	739,000	490,000	(4,000)
(490,000)	-	(734,000)	(490,000)	244,000
334,863	168,031	181,722	166,832	153,141

579,863 413,031 186,722 166,832 393,141

3,980,121 3,574,593 4,336,658 405,528 (356,537)

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)

490,000	-	988,000	490,000	(498,000)
(490,000)	-	(979,000)	(490,000)	489,000
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)

9,868,849	9,941,675	9,498,911	(72,826)	369,938
(6,241,459)	(6,760,575)	(5,511,635)	519,116	(729,824)
334,863	168,031	181,722	166,832	153,141
-	-	-	-	-
674,241	541,441	346,073	132,799	328,168

4,636,494 3,890,573 4,515,070 745,921 121,424

680,845	680,845	757,255	-	(76,410)
1,315,022	1,315,022	1,172,815	-	142,207

1,995,867 1,995,867 1,930,070 - 65,797

2.32 1.95 2.34 0.37 (0.02)

17,524,394	17,485,300	16,493,151	39,094	1,031,244
(11,756,350)	(12,040,242)	(9,456,987)	283,892	(2,299,363)
198,236	130,452	339,479	67,784	(141,243)
-	-	-	-	-
1,207,362	1,128,574	5,743,472	78,788	(4,536,111)

7,173,642 6,704,084 13,119,116 469,558 (5,945,473)

1,167,162	1,167,162	1,298,151	-	(130,989)
2,254,324	2,254,324	2,010,541	-	243,783

3,421,486 3,421,486 3,308,691 - 112,795

2.10 1.96 3.97 0.14 (1.87)



LEHIGH COUNTY AUTHORITY  
VARIANCE ANALYSIS - YTD  
For the Period Ended July 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
9,868,849	9,941,675	(72,826)	
571,045	443,825	127,220	
102,002	91,828	10,174	
<b>10,541,896</b>	<b>10,477,328</b>	<b>64,567</b>	Higher tapping fees
2,324,227	2,812,810	488,583	
495,171	570,909	75,738	
304,027	300,414	(3,613)	
455,409	505,713	50,304	
2,662,625	2,570,728	(91,897)	
-	-	-	
2,084,503	1,827,049	(257,454)	
-	-	-	
-	-	-	
<b>8,325,962</b>	<b>8,587,623</b>	<b>261,662</b>	Lower personnel costs
<b>2,215,934</b>	<b>1,889,705</b>	<b>326,229</b>	Higher operating revenues aided by lower operating expenses
334,863	168,031	166,832	
(764,776)	(775,303)	10,526	
1,194	5,788	(4,594)	
<b>(428,719)</b>	<b>(601,483)</b>	<b>172,764</b>	Higher interest income
<b>1,787,215</b>	<b>1,288,222</b>	<b>498,993</b>	Higher net operating income and higher income from financial activity

10,541,896	10,477,328	64,567	
(6,241,459)	(6,760,575)	519,116	
(1,069,555)	(1,070,028)	473	
<b>3,230,882</b>	<b>2,646,725</b>	<b>584,157</b>	Higher net operating income
-	-	-	
5,241,371	5,230,000	11,371	
(382,085)	(532,565)	150,479	
(44,595)	(47,262)	2,667	
<b>4,814,691</b>	<b>4,650,174</b>	<b>164,517</b>	Lower debt service
1,194	5,788	(4,594)	
(4,646,509)	(4,141,126)	(505,383)	
<b>(4,645,315)</b>	<b>(4,135,337)</b>	<b>(509,977)</b>	Higher capex
735,000	245,000	490,000	
(490,000)	-	(490,000)	
334,863	168,031	166,832	
<b>579,863</b>	<b>413,031</b>	<b>166,832</b>	Higher interest income
<b>3,980,121</b>	<b>3,574,593</b>	<b>405,528</b>	Higher cash from ops , lower debt service, and higher interest income offset partly by higher capex



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

Suburban - Wastewater

Year To Date

Actual Q2 FC Prior Year FC Var PY Var

11,379,453 11,401,253 10,519,845 (21,799) 859,608  
1,002,443 717,048 1,016,550 285,395 (14,107)  
180 799 345 (619) (165)

12,382,076 12,119,099 11,536,740 262,977 845,336

970,785 1,103,271 974,742 132,485 3,956  
206,762 225,034 185,723 18,271 (21,039)  
175,012 194,746 146,696 19,734 (28,316)  
205,406 276,292 246,798 70,885 41,392  
4,072,721 4,303,647 4,130,804 230,926 58,083  
2,940,836 3,190,557 2,386,606 249,721 (554,230)  
4,028,764 3,896,503 3,628,557 (132,261) (400,206)  
- 2,435 - 2,435  
- - - -

12,600,286 13,190,048 11,702,361 589,762 (897,925)

(218,210) (1,070,949) (165,621) 852,739 (52,589)

348,450 178,296 236,537 170,154 111,913  
(85,079) (99,432) (92,564) 14,353 7,485  
26,975 (14,081) 35,065 41,056 (8,090)

290,346 64,782 179,038 225,563 111,308

72,136 (1,006,166) 13,417 1,078,303 58,719

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)

2,273,186	1,632,908	1,536,754	640,278	736,431
(1,244,760)	(1,235,627)	(1,102,124)	(9,133)	(142,636)
(235,243)	(235,000)	(1,372,967)	(243)	1,137,725
793,183	162,281	(938,337)	630,902	1,731,520
-	-	-	-	-
(11,402)	(15,451)	(12,262)	4,050	860
(49,268)	(84,291)	(48,076)	35,023	(1,192)
(60,670)	(99,742)	(60,338)	39,072	(332)
16,443	(7,468)	6,795	23,911	9,649
(1,163,454)	(1,163,427)	(171,442)	(27)	(992,012)
(1,147,011)	(1,170,895)	(164,648)	23,884	(982,363)
-	-	-	-	-
-	-	(493,000)	-	493,000
63,592	11,555	40,302	52,036	23,289
63,592	11,555	(452,698)	52,036	516,289
(350,906)	(1,096,800)	(1,616,020)	745,894	1,265,114

12,382,076	12,119,099	11,536,740	262,977	845,336
(8,571,522)	(9,293,546)	(8,071,369)	722,023	(500,153)
(1,393,855)	(1,433,650)	(221,427)	39,795	(1,172,429)
2,416,699	1,391,903	3,243,945	1,024,795	(827,246)
-	-	-	-	-
(81,751)	(98,012)	(87,445)	16,262	5,694
(342,827)	(482,436)	(334,485)	139,610	(8,342)
(424,577)	(580,449)	(421,930)	155,871	(2,648)
26,975	(14,081)	35,065	41,056	(8,090)
(4,598,666)	(3,769,094)	(2,228,939)	(829,572)	(2,369,728)
(4,571,691)	(3,783,176)	(2,193,873)	(788,516)	(2,377,818)
1,673,000	738,000	4,887,174	935,000	(3,214,174)
(1,429,000)	(739,000)	(3,105,000)	(690,000)	1,676,000
348,450	178,296	236,537	170,154	111,913
592,450	177,296	2,018,711	415,154	(1,426,261)
(1,987,120)	(2,794,425)	2,646,853	807,305	(4,633,973)

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)
1,673,000	500,000	6,129,174	1,173,000	(4,456,174)
(1,173,000)	-	(4,092,000)	(1,173,000)	2,919,000
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)

1,851,538	1,564,452	1,480,725	287,087	370,813
(1,244,760)	(1,235,627)	(1,102,878)	(9,133)	(141,882)
63,592	11,555	40,302	52,036	23,289
-	-	-	-	-
438,091	60,989	62,824	377,102	375,267
1,108,460	401,369	480,973	707,092	627,487
15,495	15,495	12,296	-	3,198
84,207	84,207	48,028	-	36,179
99,702	99,702	60,325	-	39,377
11.12	4.03	7.97	7.09	3.14

11,379,453	11,401,253	10,519,845	(21,799)	859,608
(8,571,522)	(9,293,546)	(8,073,804)	722,023	(497,718)
348,450	178,296	236,537	170,154	111,913
-	-	-	-	-
1,029,598	703,765	1,051,961	325,832	(22,363)
5,185,979	2,989,768	3,734,539	1,196,211	451,440
108,462	108,462	86,074	-	22,388
589,450	589,450	336,199	-	253,251
697,912	697,912	422,272	-	275,639
6.00	4.28	8.84	1.71	(2.85)

19,201,227	19,128,454	18,488,050	72,773	713,177
(15,165,862)	(15,238,763)	(14,495,335)	72,901	(670,527)
202,188	130,271	454,362	71,917	(252,174)
-	-	-	-	-
1,511,128	1,564,753	2,079,492	(53,625)	(568,364)
5,748,681	5,584,715	6,526,569	163,966	(777,887)
185,934	185,934	147,555	-	38,379
1,010,486	1,010,486	576,341	-	434,145
1,196,420	1,196,420	723,896	-	472,524
4.80	4.67	9.02	0.14	(4.21)



LEHIGH COUNTY AUTHORITY  
VARIANCE ANALYSIS - YTD  
For the Period Ended July 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
11,379,453	11,401,253	(21,799)	
1,002,443	717,048	285,395	
180	799	(619)	
<b>12,382,076</b>	<b>12,119,099</b>	<b>262,977</b>	Higher tapping fees
970,785	1,103,271	132,485	
206,762	225,034	18,271	
175,012	194,746	19,734	
205,406	276,292	70,885	
4,072,721	4,303,647	230,926	
2,940,836	3,190,557	249,721	
4,028,764	3,896,503	(132,261)	
-	-	-	
-	-	-	
<b>12,600,286</b>	<b>13,190,048</b>	<b>589,762</b>	Lower personnel costs and lower spending on materials and supplies
<b>(218,210)</b>	<b>(1,070,949)</b>	<b>852,739</b>	Higher operating revenues and lower operating expenses
348,450	178,296	170,154	
(85,079)	(99,432)	14,353	
26,975	(14,081)	41,056	
<b>290,346</b>	<b>64,782</b>	<b>225,563</b>	Higher interest income
<b>72,136</b>	<b>(1,006,166)</b>	<b>1,078,303</b>	Higher net operating income and higher interest income
12,382,076	12,119,099	262,977	
(8,571,522)	(9,293,546)	722,023	
(1,393,855)	(1,433,650)	39,795	
<b>2,416,699</b>	<b>1,391,903</b>	<b>1,024,795</b>	Higher net operating income
-	-	-	
-	-	-	
(81,751)	(98,012)	16,262	
(342,827)	(482,436)	139,610	
<b>(424,577)</b>	<b>(580,449)</b>	<b>155,871</b>	Lower debt service
26,975	(14,081)	41,056	
(4,598,666)	(3,769,094)	(829,572)	
<b>(4,571,691)</b>	<b>(3,783,176)</b>	<b>(788,516)</b>	Higher capex
1,673,000	738,000	935,000	
(1,429,000)	(739,000)	(690,000)	
348,450	178,296	170,154	
<b>592,450</b>	<b>177,296</b>	<b>415,154</b>	Higher investing activity and higher interest income
<b>(1,987,120)</b>	<b>(2,794,425)</b>	<b>807,305</b>	Higher cash from operations, lower debt service, and favorable investing activities partly offset by higher capex



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

City Division										Full Year				
Month					Year To Date									
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
33,067,441	33,115,140	31,655,427	(47,699)	1,412,013	56,018,070	55,555,506	52,162,410	462,564	3,855,660					
1,616,833	1,764,255	2,592,052	(147,422)	(975,218)	3,529,115	3,609,600	5,487,746	(80,485)	(1,958,630)					
193,290	51,735	77,862	141,556	115,429	86,448	89,800	182,595	(3,352)	(96,146)					
34,877,564	34,931,129	34,325,341	(53,565)	552,224	59,633,634	59,254,906	57,832,751	378,728	1,800,884					
6,904,054	7,747,001	6,416,112	842,947	(487,942)	13,927,623	13,986,737	11,576,407	59,114	(2,351,216)					
1,351,250	1,350,492	1,188,944	(758)	(162,306)	2,446,827	2,545,190	2,040,469	98,363	(406,358)					
1,159,701	994,675	1,155,404	(165,026)	(4,297)	2,018,931	2,063,922	1,898,483	44,991	(120,447)					
1,920,252	1,758,929	1,710,500	(161,322)	(209,752)	3,280,826	3,251,300	3,218,805	(29,526)	(62,021)					
1,046,970	1,153,334	1,021,530	106,363	(25,440)	2,332,686	2,397,011	2,247,835	64,325	(84,852)					
5,656	5,263	5,220	(393)	(436)	11,400	11,400	11,307	-	(93)					
3,608,927	3,443,604	3,623,209	(165,323)	14,282	6,260,297	6,169,850	6,755,624	(90,447)	495,326					
20,322	12,369	148,838	(7,953)	128,516	4,000,000	4,000,000	-	-	(4,000,000)					
-	-	-	-	-	-	-	5,782,103	-	5,782,103					
16,017,132	16,465,667	15,269,756	448,535	(747,376)	34,278,590	34,425,410	33,531,033	146,820	(747,557)					
18,860,433	18,465,463	19,055,584	394,970	(195,152)	25,355,045	24,829,496	24,301,718	525,549	1,053,327					
3,099,386	1,146,377	1,774,804	1,953,009	1,324,582	1,397,689	984,881	3,466,498	412,808	(2,068,810)					
(8,875,635)	(9,866,643)	(9,870,895)	991,007	995,260	(19,703,642)	(19,703,642)	(19,980,878)	-	277,236					
(5,396,147)	(5,397,083)	-	936	(5,396,147)	5,001,417	8,733,892	-	(3,732,475)	5,001,417					
(11,172,396)	(14,117,349)	(8,096,091)	2,944,952	(3,076,305)	(13,304,536)	(9,984,869)	(16,514,379)	(3,319,667)	3,209,843					
7,688,037	4,348,114	10,959,493	3,339,923	(3,271,456)	12,050,508	14,844,627	7,787,339	(2,794,119)	4,263,170					

5,812,317	6,385,445	7,546,612	(573,128)	(1,734,295)	34,877,564	34,931,129	34,325,341	(53,565)	552,224	59,633,634	59,254,906	57,832,751	378,728	1,800,884
(2,343,409)	(1,893,751)	(1,591,541)	(449,658)	(751,868)	(12,387,883)	(13,009,693)	(11,497,709)	621,811	(890,174)	(24,018,292)	(24,255,560)	(20,993,306)	237,268	(3,024,987)
1,797,322	1,000,000	862,034	797,322	935,288	(1,864,535)	(2,661,630)	(1,924,573)	797,095	60,038	(2,619,904)	(135,999)	(2,201,272)	(2,483,905)	(418,932)
5,266,230	5,491,694	6,817,105	(225,464)	(1,550,875)	20,625,147	19,259,806	20,903,058	1,365,341	(277,912)	32,995,438	34,863,347	34,638,173	(1,867,909)	(1,642,735)
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	55,000,000	55,000,000	1,371,118	-	53,628,882	56,627,352	8,555,508	1,371,118	48,071,844	55,256,234
(1,091)	(4,249)	(3,733)	3,158	2,642	(4,335,452)	(6,540,159)	(5,741,693)	2,204,707	1,406,241	(13,318,734)	(13,315,397)	(11,695,732)	(3,337)	(1,623,002)
(5,215)	(697,395)	(10,326)	692,180	5,111	(728,610)	(3,497,355)	(10,326)	2,768,745	(718,284)	(2,945,000)	(2,945,000)	(2,222,407)	-	(722,593)
(6,306)	(701,644)	(14,059)	695,338	7,753	49,935,938	44,962,486	(4,380,901)	4,973,452	54,316,839	40,363,618	(7,704,889)	(12,547,021)	48,068,507	52,910,639
-	-	-	-	-	(5,396,147)	(6,051,195)	(680,590)	655,048	(4,715,557)	3,693,193	7,425,668	(1,361,180)	(3,732,475)	5,054,373
(3,424,802)	(1,880,694)	(739,206)	(1,544,108)	(2,685,596)	(7,319,178)	(8,361,632)	(3,908,563)	1,042,454	(3,410,615)	(32,628,500)	(32,628,500)	(10,368,819)	(0)	(22,259,681)
(3,424,802)	(1,880,694)	(739,206)	(1,544,108)	(2,685,596)	(12,715,324)	(14,412,826)	(4,589,153)	1,697,502	(8,126,172)	(28,935,307)	(25,202,832)	(11,729,999)	(3,732,475)	(17,205,308)
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
907,315	85,499	300,931	821,816	606,384	3,099,386	1,146,377	1,774,804	1,953,009	1,324,582	1,397,689	984,881	3,466,498	412,808	(2,068,810)
907,315	85,499	300,931	821,816	606,384	3,099,386	1,146,377	1,774,804	1,953,009	1,324,582	1,397,689	984,881	3,466,498	412,808	(2,068,810)
2,742,437	2,994,854	6,364,771	(252,417)	(3,622,334)	60,945,146	50,955,842	13,707,808	9,989,304	47,237,338	45,821,438	2,940,507	13,827,652	42,880,931	31,993,786

5,446,966	5,591,489	6,225,908	(144,523)	(778,942)	33,067,441	33,115,140	31,655,427	(47,699)	1,412,013	56,018,070	55,555,506	52,162,410	462,564	3,855,660
(2,345,421)	(1,893,751)	(1,649,588)	(451,670)	(695,833)	(12,408,205)	(13,022,063)	(11,646,547)	613,858	(761,658)	(24,018,292)	(24,255,560)	(26,775,409)	237,268	2,757,117
907,315	85,499	300,931	821,816	606,384	3,099,386	1,146,377	1,774,804	1,953,009	1,324,582	1,397,689	984,881	3,466,498	412,808	(2,068,810)
(109,019)	(109,019)	(113,432)	-	4,413	(763,131)	(763,131)	(794,022)	-	30,891	(1,308,224)	(1,308,224)	(1,361,180)	-	52,956
365,351	793,956	1,320,704	(428,604)	(955,352)	(3,586,023)	(3,581,093)	2,669,913	(4,930)	(6,255,936)	3,615,564	3,699,400	5,670,340	(83,836)	(2,054,777)
4,265,193	4,468,174	6,084,523	(202,981)	(1,819,331)	19,409,468	16,895,230	23,659,576	2,514,238	(4,250,108)	35,704,807	34,676,003	32,662,660	1,028,804	2,542,147
1,109,894	1,109,894	974,644	-	135,250	7,769,261	7,769,261	6,822,510	-	946,751	13,318,734	13,315,397	11,695,732	3,337	1,623,002
245,417	245,417	185,201	-	60,216	1,717,917	1,717,917	1,296,404	-	421,513	2,945,000	2,945,000	2,222,407	-	722,593
1,355,311	1,355,311	1,159,845	-	195,466	9,487,178	9,487,178	8,118,914	-	1,368,264	16,263,734	16,260,397	13,918,139	3,337	2,345,595
3.15	3.30	5.25	(0.15)	(2.10)	2.05	1.78	2.91	0.27	(0.87)	2.20	2.13	2.38	0.06	(0.19)



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

City Division			
Actual	Q2 FC	FC Var	Comments
33,067,441	33,115,140	(47,699)	Lower residential and commercial volumes
1,616,833	1,764,255	(147,422)	Lower project reimbursement
193,290	51,735	141,556	
<b>34,877,564</b>	<b>34,931,129</b>	<b>(53,565)</b>	<b>Lower user charges, lower system charges, and higher miscellaneous charges to partially offset</b>
6,904,054	7,747,001	842,947	
1,351,250	1,350,492	(758)	
1,159,701	994,675	(165,026)	
1,920,252	1,758,929	(161,322)	
1,046,970	1,153,334	106,363	
5,656	5,263	(393)	
3,608,927	3,443,604	(165,323)	
20,322	12,369	(7,953)	
-	-	-	
<b>16,017,132</b>	<b>16,465,667</b>	<b>448,535</b>	<b>Lower personnel costs offset by higher utilities and higher materials &amp; supplies</b>
<b>18,860,433</b>	<b>18,465,463</b>	<b>394,970</b>	<b>Lower revenues more than offset by lower operating expenses</b>
3,099,386	1,146,377	1,953,009	
(8,875,635)	(9,866,643)	991,007	
(5,396,147)	(5,397,083)	936	
<b>(11,172,396)</b>	<b>(14,117,349)</b>	<b>2,944,952</b>	<b>Higher interest income and lower interest expense</b>
<b>7,688,037</b>	<b>4,348,114</b>	<b>3,339,923</b>	<b>Higher net operating income aided by favorable financial activity</b>
34,877,564	34,931,129	(53,565)	
(12,387,883)	(13,009,693)	621,811	
(1,864,535)	(2,661,630)	797,095	
<b>20,625,147</b>	<b>19,259,806</b>	<b>1,365,341</b>	<b>Higher net operating income and favorable working capital changes</b>
-	-	-	
55,000,000	55,000,000	-	
(4,335,452)	(6,540,159)	2,204,707	
(728,610)	(3,497,355)	2,768,745	
<b>49,935,938</b>	<b>44,962,486</b>	<b>4,973,452</b>	<b>Lower debt service payments</b>
(5,396,147)	(6,051,195)	655,048	
(7,319,178)	(8,361,632)	1,042,454	
<b>(12,715,324)</b>	<b>(14,412,826)</b>	<b>1,697,502</b>	<b>Lower capex</b>
-	-	-	
-	-	-	
3,099,386	1,146,377	1,953,009	
<b>3,099,386</b>	<b>1,146,377</b>	<b>1,953,009</b>	<b>Higher interest income</b>
<b>60,945,146</b>	<b>50,955,842</b>	<b>9,989,304</b>	<b>Higher cash from operations, lower debt service payments, lower capex, and higher interest income</b>



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

	Suburban Water				Suburban Wastewater				City Division				Total			
	7/31/2024 Actual	2024 Forecast	2024 Budget	2023 Actual	7/31/2024 Actual	2024 Forecast	2024 Budget	2023 Actual	7/31/2024 Actual	2024 Forecast	2024 Budget	2023 Actual	7/31/2024 Actual	2024 Forecast	2024 Budget	2023 Actual
Cash																
Operating																
Unrestricted	269,345	10,105,905	13,136,985	8,385,525	(1,604,045)	10,990,647	3,976,076	3,779,293	12,800,725	14,875,600	15,263,906	13,483,582	10,854,972	35,686,241	32,376,967	25,648,400
Restricted	-	-	-	-	-	3,437	317	2,708	25,340,904	25,737,927	25,438,613	33,121,646	25,340,904	25,741,364	25,438,930	33,124,354
Total Operating	269,345	10,105,905	13,136,985	8,385,525	(1,604,045)	10,994,084	3,976,393	3,782,000	38,141,629	40,613,527	40,702,519	46,605,229	36,195,876	61,427,605	57,815,897	58,772,754
Capital																
Unrestricted	12,662,781	321,054	319,718	321,054	10,266,539	-	5,955,385	6,862,722	80,387,855	54,804,198	3,022,601	3,022,601	103,317,174	55,125,252	9,297,704	10,206,378
Restricted	-	-	-	-	343,903	338,677	338,360	338,677	7,530,506	7,531,579	7,500,035	7,500,035	7,874,409	7,870,256	7,838,396	7,838,712
Total Capital	12,662,781	321,054	319,718	321,054	10,610,441	338,677	6,293,745	7,201,399	87,918,361	62,335,777	10,522,636	10,522,636	111,191,583	62,995,508	17,136,099	18,045,090
Other Restricted																
Debt Reserves	1,666,774	1,718,213	1,656,568	1,660,215	-	-	-	-	22,023,002	30,004,516	28,335,482	30,004,516	23,689,776	31,722,729	29,992,050	31,664,731
Escrow - Developer Deposits	214,400	466,386	218,888	466,386	56,688	56,678	252,969	56,678	26,641	32,106	32,090	32,106	297,730	555,169	503,947	555,169
Total Other Restricted	1,881,174	2,184,598	1,875,456	2,126,600	56,688	56,678	252,969	56,678	22,049,643	30,036,622	28,367,571	30,036,622	23,987,505	32,277,898	30,495,996	32,219,900
Total Cash	14,813,300	12,611,557	15,332,159	10,833,179	9,063,085	11,389,438	10,523,107	11,040,077	148,109,633	132,985,926	79,592,726	87,164,487	171,374,965	156,701,011	105,447,992	109,037,744
Investments																
Operating																
Unrestricted	1,718,891	2,022,946	1,945,069	2,022,946	7,254,568	8,138,467	6,584,624	6,965,467	-	-	-	-	8,973,460	10,161,412	8,529,693	8,988,412
Restricted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Operating	1,718,891	2,022,946	1,945,069	2,022,946	7,254,568	8,138,467	6,584,624	6,965,467	-	-	-	-	8,973,460	10,161,412	8,529,693	8,988,412
Capital																
Unrestricted	1,095,087	1,000,184	1,000,000	1,000,184	-	-	-	-	-	-	-	-	1,095,087	1,000,184	1,000,000	1,000,184
Restricted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital	1,095,087	1,000,184	1,000,000	1,000,184	-	-	-	-	-	-	-	-	1,095,087	1,000,184	1,000,000	1,000,184
Other Restricted																
Debt Reserves	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Escrow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Other Restricted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Investments	2,813,978	3,023,129	2,945,069	3,023,129	7,254,568	8,138,467	6,584,624	6,965,467	-	-	-	-	10,068,547	11,161,596	9,529,693	9,988,596
Total Cash and Investments	17,627,278	15,634,686	18,277,228	13,856,308	16,317,653	19,527,905	17,107,731	18,005,544	148,109,633	132,985,926	79,592,726	87,164,487	181,443,511	167,862,607	114,977,685	119,026,340
Summary																
Cash																
Unrestricted	12,932,126	10,426,959	13,456,703	8,706,579	8,662,493	10,990,647	9,931,461	10,642,015	93,188,580	69,679,798	18,286,506	16,506,183	114,172,146	90,811,493	41,674,670	35,568,867
Restricted	1,881,174	2,184,598	1,875,456	2,126,600	400,591	398,792	591,646	398,062	54,921,053	63,306,128	61,306,220	70,658,304	57,202,819	65,889,518	63,773,322	73,182,966
Total Cash	14,813,300	12,611,557	15,332,159	10,833,179	9,063,085	11,389,438	10,523,107	11,040,077	148,109,633	132,985,926	79,592,726	87,164,487	171,374,965	156,701,011	105,447,992	108,751,833
Investments																
Unrestricted	2,813,978	3,023,129	2,945,069	3,023,129	7,254,568	8,138,467	6,584,624	6,965,467	-	-	-	-	10,068,547	11,161,596	9,529,693	9,988,596
Restricted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Investments	2,813,978	3,023,129	2,945,069	3,023,129	7,254,568	8,138,467	6,584,624	6,965,467	-	-	-	-	10,068,547	11,161,596	9,529,693	9,988,596
Total Cash and Investments	17,627,278	15,634,686	18,277,228	13,856,308	16,317,653	19,527,905	17,107,731	18,005,544	148,109,633	132,985,926	79,592,726	87,164,487	181,443,511	167,862,607	114,977,685	118,740,429



CERTIFICATES OF DEPOSIT

JULY 2024

Fund	Bank	Location	Gross Amount	Date of Purchase	Date Due	Net Rate %
Cons Wtr (2)	1st Financial Bank USA	Dakota Dunes, SD	245,000.00	7/19/24	7/20/26	4.700



## 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  
 Fallbrooke Residential Subdivision, 90 sf residential units, 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:

110 PA Route 100, Lehigh Valley West 57, Warehouse, UMT  
 1321 Rising Sun Road, 110 Single family homes, Sewer NWT  
 1470 Brookside Road, 9 Single Family Homes, LMT  
 2024 Elbow lane single home,LMT  
 2619 Grove Street Sewer Main Extension,Washington Township  
 2766 Route 100, Warehouse, Watermain extention, Lowhill 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  
 Transedge Truck Center, Warehouse, UMT  
 Twin Ponds 8739 Hamilton Blvd 22 Apts and 1 Daycare UMT  
 Upper Macungie Community Center UMT commercial lot, water and Main Extension  
 PA Turnpike Lehigh Valley Interchange, UMT, Removal of domestic line.  
 V Parkland 9230 Long Lane, 16 Single family homes, UMT.

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

445-447 North 7th Street	445-447 North 7th Street	Allentown	238
Sauerkraut Lane Extention	Sauerkraut Lane	L Mac	1,561
116 N 5th St	116 N 5th St	Allentown	238



Lehigh County Authority  
System Operations Review - July 2024  
Presented: August 26, 2024

		<u>Jul-24</u>	<u>2024</u> <u>Totals***</u>	<u>2023 Totals</u>	<u>2022 Totals</u>
Recordable Safety Incidents*	Total LCA	0	1	33	7
Non-Recordable Safety Incidents	Total LCA	1	19		
Incident Types **	Injuries	0	8		
	Property Damage	1	11		
	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>
		7	5	2
<u>Current Month Incidents</u>				
<u>Description</u>	<u>Date</u>	<u>Type</u>	<u>Root Cause(s)</u>	<u>Corrective Action(s)</u>
<b>Incident # 83</b> - Boom on hydro excavator hit underpass while traveling	7/13/2024	Vehicle Incident	Tubing removed for inspection, not reinstalled	Added item to checklist, added color indicator on tubing mount for visual verification



Lehigh County Authority

System Operations Review - July 2024

Presented: August 26, 2024

Page 2

Critical Activities	System	Description	Jul-24	2024 Totals	2023 Totals	Permit
			Daily Avg (MGD)	Daily Avg (MGD)	Daily Avg (MGD)	Daily Max (MGD)
Water Production	Allentown	Total	23.50	22.53	22.52	39.0
		Schantz Spring	7.11	7.15	6.93	9.0
		Crystal Spring	3.90	3.87	3.89	4.0
		Little Lehigh Creek	12.42	11.17	11.66	30.0
		Lehigh River	0.06	0.33	0.04	28.0
	Central Lehigh	Total	12.93	11.50	11.27	19.04 MGD Avg
		Feed from Allentown	7.50	6.76	7.28	7.0 MGD Avg 10.5 MGD Max
		Well Production (CLD)	5.43	4.73	3.98	8.54 MGD Avg
		Sum of all (12) other Suburban Water Systems	0.17	0.15	0.13	1.71 Sum of all wells
Wastewater Treatment		Kline's Island	32.22	36.33	32.24	40.0
		Pretreatment Plant	5.22	5.27	4.78	5.75 (design capacity)
		Sum of all (5) other Suburban WW Systems	0.16	0.21	0.19	0.36
			Jul-24	2024 Totals	2023 Totals	2022 Totals
Precipitation Totals (inches)			3.60	28.99	46.38	46.47
Compliance Reports Submitted to Allentown			29	182	280	277
Notices of Violation (NOVs)		(Allentown + Suburban)	1	3	3	4
Sanitary Sewer Overflows (SSOs)/Bypasses		(Allentown + Suburban)	0	16	24	18
Main Breaks Repaired		Allentown	2	19	8	34
		Suburban	0	4	12	15
Customer Service Phone Inquiries		(Allentown + Suburban)	1231	9964	11,221	10,539
Water Shutoffs for Non-Payment		(Allentown + Suburban)	171	1165	1,995	1,975
Injury Accidents		(Allentown + Suburban)	0	8	19	7
Emergency Declarations		Allentown	0	2 @ 228,181.55	2	(3) @ \$386,225.43
		Suburban	0	1 @ 56,662.50	0	(4) @ \$933,077.1
Significant Repairs/Upgrades:						
N/A						
Description of Non-Compliance Events:						
A Notice of Violation (NOV) for the Wynnewood Terrace WWTP was received on July 18, 2024. The NOV and required response are included in this report.						
Other:						
N/A						



	Lehigh County Authority System Operations Review - July 2024 Presented: August 26, 2024				
					Page 3
<u>Critical Activities</u>	<u>System</u>	<u>Description</u>	<u>Jul-24</u>	<u>2024 Totals</u>	<u>2023 Totals</u>
Wastewater Compliance	Allentown	Bypass	0	3	4
		Bypass Volume	0	1,587,414	1,589,466
		Permit Exceedances	0	0	0
		Sanitary Sewer Overflows	0	5	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	0	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	1	20	39
		Sanitary Sewer Overflows	0	0	1
		NOVs	0	1	0
	Wynnewood	Bypass	0	0	0
		Bypass Volume	0	0	0
		Permit Exceedances	1	7	5
		Sanitary Sewer Overflows	0	3	3
		NOVs	0	0	0
Water Compliance	Allentown	Boil Water Advisories	0	0	2
	Central Lehigh	Boil Water Advisories	0	0	1
	Suburban Water Systems	Boil Water Advisories	0	1	3



July 18, 2024

## **NOTICE OF VIOLATION**

### **Delivered via email**

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

Attention: Andrew Moore

RE: Sewage  
Wynnewood Terrace Wastewater Treatment Plant (WWTP)  
NPDES Permit No. PA0036081  
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. PA0036081. The effluent violations are as follows:

<b><u>Monitoring Period</u></b>	<b><u>Parameter</u></b>	<b><u>Permit Limit</u></b>	<b><u>Reported Value</u></b>	<b><u>Concentration Unit</u></b>
November 2021	Ammonia-Nitrogen <i>Average Monthly</i>	2.1	2.5	lbs/day
February 2022	Ammonia-Nitrogen <i>Average Monthly</i>	2.1	3.0	lbs/day
May 2022	Total Nitrogen <i>Average Monthly</i>	10.4	20.1	lbs/day
September 2022	Fecal Coliform <i>Geometric Mean</i>	200	>98	No./100 ml
	Fecal Coliform <i>Instantaneous Maximum</i>	1,000	>9,678	No./100 ml
April 2023	Total Phosphorus <i>Average Monthly</i>	2.1	2.2	lbs/day
July 2023	Fecal Coliform <i>Geometric Mean</i>	200	>49	No./100 ml
	Fecal Coliform <i>Instantaneous Maximum</i>	1,000	>2,420	No./100 ml
October 2023	Fecal Coliform <i>Instantaneous Maximum</i>	10,000	12,100	No./100 ml



December 2023	pH <i>Average Monthly</i>	9.0	9.74	S.U.
February 2024	Total Nitrogen <i>Average Monthly</i>	10.4	10.9	lbs/day
	Ammonia-Nitrogen <i>Average Monthly</i>	20.0	22.1	mg/L
	Ammonia-Nitrogen <i>Average Monthly</i>	2.1	6.0	lbs/day
March 2024	Ammonia-Nitrogen <i>Average Monthly</i>	2.1	3.7	lbs/day

NPDES Permit No. PA0036081, 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>
August 2021	Ammonia-Nitrogen	1/Month	None
	Nitrate-Nitrite as N	1/Month	None
	Total Phosphorus	1/Month	None
	Nitrate as N	1/Month	None
	Total Nitrogen	1/Month	None

Lehigh County Authority has notified The Department of Environmental Protection ("Department") of overflows that have occurred at the Wynnewood Terrace wastewater treatment plant. NPDES Permit No. PA0036081, Part B.I.F. states the permittee shall take all reasonable steps to minimize or prevent any discharge, sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment. According to reports submitted by Lehigh County Authority, the following overflows occurred within the treatment plant:

<u>Date</u>	<u>Location</u>
September 1, 2021	Equalization Tank
December 18, 2023	WWTP Lift Station
January 10, 2024	WWTP Lift Station
January 10, 2024	SBR #2

NPDES Permit No. PA0036081, Part B.I.H. prohibits the overflow of wastewater, or other untreated discharge from a separate sanitary sewer system (which is not a combined sewer system), which results from a flow in excess of the carrying capacity of the system or from some other cause prior to reaching the headworks of the sewage treatment facility. The following Sanitary Sewer Overflows ("SSOs") were reported by Lehigh County Authority:



<u>Date</u>	<u>Location</u>
September 1, 2021	Main Lift Station
February 5, 2023	Manhole #19
February 5, 2023	Amanda Lift Station
January 22, 2024	Amanda Lift Station

The Department sent Lehigh County Authority a previous Notice of Violation on August 10, 2021 for similar violations.

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.

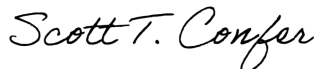
**The Department requests that Lehigh County Authority respond in writing to this Notice within 15 days of its receipt.** Said response should indicate the cause of the above-described non-compliance and the steps that will be or have been taken in order to ensure future compliance.

Please confirm receipt of this Notice by sending an email to [scconfer@pa.gov](mailto: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,



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](mailto:AndrewMoore@lehighcountyauthority.org)  
[www.lehighcountyauthority.org](http://www.lehighcountyauthority.org)

August 1, 2024

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

Re: Wynnewood Terrace Wastewater Treatment Plant (WWTP)  
NPDES Permit No. PA0036081  
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 July 18, 2024. The following is the required response to the permit exceedances that occurred between November 2021 and March 2024.

### **Plant Background**

The Wynnewood Terrace WWTP was originally constructed in 1980 by a developer to serve the Wynnewood Terrace subdivision, located in North Whitehall Township. Sewer service is provided to 217 residential and 2 commercial properties. LCA acquired the system in 2003. At times the plant was having difficulties meeting its permitted limits and was reaching the end of its useful life. In 2017, LCA initiated the design phase to replace the facility. Construction began in 2019 and was completed in October 2020.

The upgraded treatment plant consists of a sequencing batch reactor (SBR) system with a design capacity of 0.060 MGD and 135 lbs/BOD. The SBR system has two reactor tanks that operate in parallel, each with a volume of 21,000 gallons. The plant also has an influent equalization tank, a sludge holding tank, an effluent equalization tank, and an ultraviolet disinfection (UV) system.

### **Ammonia – Nitrogen & Total Nitrogen**

The permit limit for ammonia-nitrogen in the wastewater treatment plant is based on a 30-day average concentration and mass loading, which varies by season. Specifically, the winter season limit (from



October to April) is set at 20 mg/L (with a corresponding mass loading limit of 2.1 lb/d), while the summer season limit (from May to September) is also 20 mg/L but with a lower mass loading limit of 1.5 lb/d. The plant has experienced several exceedances of these ammonia-nitrogen limits in recent years, notably in November 2021, February 2022, February 2024, and March 2024.

A contributing factor to the exceedance in November 2021 was the replacement of an influent valve, which required taking one of its SBRs offline. When operating with only one SBR, the plant must decrease aeration cycle times to maintain adequate flow through the system. This reduction in aeration can significantly impact the nitrification process, which relies on sufficient oxygen levels for the bacteria to convert ammonia to nitrate. Consequently, the decreased aeration time led to higher ammonia concentrations in the effluent.

In February 2022, an abnormally high ammonia concentration was observed in the influent. While the plant was able to remove a high percentage of the ammonia, the effluent levels remained elevated due to the increased loading. The source of this sudden influx of ammonia is believed to be from the overflow of the sludge holding tank. Staff have since increased hauling frequencies of the sludge in order to minimize the impact.

In May 2022, an exceedance of the total nitrogen limit was reported. This exceedance is suspected to be due to a laboratory error. Total nitrogen is determined through a calculation that includes Total Kjeldahl Nitrogen (TKN), nitrate, and nitrite. For the sample in question, the reported TKN was 60.4 mg/L. TKN is the sum of ammonia and organic nitrogen. In this case, the ammonia concentration for the sample was measured at 1.87 mg/L. Given that TKN represents the combined concentration of ammonia and organic nitrogen, the high TKN value in comparison to the relatively low ammonia concentration suggests an anomaly. Specifically, the organic nitrogen would be 58.53 mg/L which is unusually high and not consistent with typical treatment plant effluent characteristics.

In late 2023 and early 2024, the treatment plant experienced significant operational challenges due to an unusual amount of rainfall. This period of heavy precipitation resulted in substantial overflows at both the treatment plant and the contributing pump stations. Specifically, these overflows were reported in December 2023, January 2024, and February 2024, indicating a significant hydraulic load on the system. The excessive hydraulic load overwhelmed the treatment plant, leading to the washout of solids, including the essential biological matter required for effective treatment. The nitrifying bacteria, which play a crucial role in the nitrification process by converting ammonia into nitrate, were particularly affected.



These bacteria are known for their slow growth rates, which is further hindered by colder temperatures typical of the winter months. As a result of the washout, the treatment plant lost its nitrification capability in February 2024. This loss had significant repercussions, as nitrifying bacteria require several weeks to re-establish themselves and repopulate the mixed liquor in the treatment system. The immediate consequence of losing nitrification was an increase in ammonia and nitrogen levels in the effluent.

### **Fecal Coliform**

The five fecal coliform exceedances highlighted in the NOV included three instantaneous exceedances, with two carrying the "greater than" symbol. In September 2022 and July 2023, the greater than symbol affected the geometric mean calculations, suggesting non-compliance even with the geometric mean below the permitted limit. The cause of the instantaneous exceedances is currently unknown. To address this issue and prevent future occurrences, staff has implemented increased cleaning frequency of the UV bulb sleeves.

### **pH**

In December 2023, an instantaneous maximum pH of 9.74 S.U. was recorded. This high pH level resulted from a caustic pump running continuously due to an improperly programmed PLC. Once the issue was identified, staff promptly adjusted the PLC settings to resolve the problem.

### **Total Phosphorus**

In April 2023, a total phosphorus average monthly loading exceedance was reported. The loading reported was 2.2 lbs/day while the permitted limit is 2.1 lbs/day. Upon investigating, staff identified a restriction in the chemical feed line causing improper dosing. Staff rectified the issue and returned to normal dosing allowing the plant to regain compliance.

### **Overflows**

Overflows were reported at the main lift station and equalization tank in September 2021. The overflows were the result of excessive inflow and infiltration produced by tropical storm Ida.

The overflow of manhole #19 in February 2023 was the result of a failed manhole lining. The lining fell into the effluent and clogged the pipe causing the manhole to overflow. Upon discovery, debris was removed from the pipe and flow of the pipe was returned.



**Reporting**

In August 2021, issues with sampling frequencies for ammonia, nitrate, phosphorus, nitrate-nitrite, and total nitrogen were reported. Although the samples were collected as required, they were unfortunately lost by the external laboratory responsible for analysis. This loss resulted in incomplete data and gaps in compliance monitoring. To address this problem and improve our sample handling and result turnaround, we have since changed to a new contract laboratory.

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 610-597-8100.

Sincerely,

A handwritten signature in black ink, appearing to read 'AM', with a long horizontal flourish extending to the right.

Andrew Moore  
Director of Plant Operations