



**LCA Main Office:**  
1053 Spruce Road  
Wescosville, PA 18106  
610-398-2503

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

## LEHIGH COUNTY AUTHORITY

Published: September 15, 2025

### BOARD MEETING AGENDA – September 22, 2025 – 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 the public record. Recordings may be retained or destroyed at LCA's discretion.

- *Public Participation Sign-In Request*

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

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

#### 3. Approval of Minutes

- *September 8, 2025 Board Meeting minutes*

#### 4. Committee Reports

- *None*

#### 5. Public Comments

#### 6. Action / Discussion Items:

#### **FINANCE AND ADMINISTRATION**

- *LCA Pension Plan – Mandatory Municipal Obligation (Information) (digital Board packet, pages 9-10)*
- *2026 Budget: Preliminary Review (Discussion)*

#### **WATER**

#### **WASTEWATER**

- *Suburban Division - Industrial Pretreatment Plant Master Plan (Discussion)*
- *Suburban Division - Pretreatment Plant Critical Upgrades (Approval) (yellow) (digital Board packet, pages 11-17)*
- *Sewer Operations Agreement – Lower Macungie Township Sewer Pump Station & Force Main (Approval) (blue) (digital Board packet, pages 18-28)*

7. Monthly Project Updates / Information Items (1<sup>st</sup> Board meeting per month)
8. Monthly Financial Review (2<sup>nd</sup> Board meeting per month) (digital Board packet, pages) – **August 2025 report will be provided at a later date**
9. Monthly System Operations Overview (2<sup>nd</sup> Board meeting per month) (digital Board packet, pages 29-41) – **August 2025 report attached**
10. Staff Comments
11. Solicitor's Comments
12. Public Comments / Other Comments
13. Board Member Comments
14. Executive Sessions
15. Adjournment

UPCOMING BOARD MEETINGS		
October 13, 2025	October 27, 2025	November 10, 2025

#### PUBLIC PARTICIPATION POLICY

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

## **REGULAR MEETING MINUTES**

### **September 8, 2025**

The Regular Meeting of the Lehigh County Authority Board of Directors was called to order at 12:01 p.m. on Monday, September 8, 2025, Chairman Amir Famili 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. Amir Famili, Jeff Morgan, Ted Lyons, Linda Rosenfeld, Kevin Baker, and Sean Ziller were present for Roll Call and remained for the duration of the meeting.

Liesel Gross announced that Norma Cusick resigned from the Board of Directors effective September 8, 2025.

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

Chairman Famili 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 stated there are no changes to the published agenda and no Executive Session is planned.

#### **APPROVAL OF MINUTES**

##### **August 25, 2025 Meeting Minutes**

Linda Rosenfeld noted a grammatical error. On a motion by Linda Rosenfeld, seconded by Ted Lyons, the Board approved the minutes from the August 25, 2025 meeting as corrected (6-0).

##### **August 11, 2025 Governance Committee Minutes**

Liesel Gross noted that this is a new item added to the agenda. The committee meeting minutes are attached for information only.

#### **PUBLIC COMMENTS**

None.

##### **2026 Preliminary Budget Review**

Liesel Gross noted that today's presentation is focused on reviewing the assumptions and key initiatives that are being incorporated into the 2026 Budget. A preliminary review of the Budget figures will be provided at the next Board meeting and rates will be discussed in October. Board approval of the 2026 Budget is required by November 1, 2025.

A presentation was shared with the Board to review the 2026 Budget assumptions, including a review of key factors by fund, preliminary Budget summary, and next steps.

The new strategic initiatives and budget drivers for 2026 include Regional Leadership, Technology and Data Management, Facilities and Security, and Affordability. Details of the new initiatives and

the budget impacts that each of them will have were reviewed in detail in the presentation. Ms. Gross noted that recommended staffing additions would be presented in detail today and referenced the targeted staffing assessment presentation provided by EMA consultants during the August 25, 2025 meeting.

Efforts within the Regional Leadership initiative will have a budget impact of \$350,000.00 for consultation services to support various studies, advancing communication efforts, and legal fees.

For Technology and Data Management, an information technology (IT) master plan is needed, including an IT governance plan, which is included in the 2026-2030 Capital Plan presented previously. The 2026 Budget also includes hiring a Data Analyst to ensure data quality, provide system integrations, and support improved reporting and analysis of the Authority's data. Amir Famili asked what systems the Data Analyst would be focusing on. Chris Moughan explained the position will look at all systems and oversee all data for better integrations and reporting.

Liesel Gross reviewed the Facilities and Security needs of the Authority, noting the root cause of many current challenges relates to lacking a centralized process to manage these needs. The challenges include inconsistent approaches to security and building maintenance, some employee health and safety concerns, and lack of space of new hires. A building optimization study is being completed by HDR, with results expected next month. The 2026 Budget recommends the addition of a Facilities & Security Manager to centralize this function.

To address Affordability, several recommendations were provided by the EMA study and reviewed at the last meeting, which Ms. Gross summarized for the Board. The 2026 Budget includes \$100,000 for affordability and rate analyses to be conducted. In addition, a Business / Rate Analyst position is recommended to be added in 2026 to support the pursuit of grants, consolidate rate-setting processes, and provide support for various business planning studies that are required.

Next, Ms. Gross provided an overview of the Authority's Lead Pipe Replacement Program, which is required by the U.S. Environmental Protection Agency. Due to the size and scope of this large program, additional internal support is required. She reviewed the current Lead Program team members and outlined the new positions recommended for the 2026 Budget. A Lead Program Administrator, Community Canvasser, and four Utility Technicians are recommended to be added next year to properly sustain the program. There was some Board discussion about the process of finding and replacing lead service lines, liability concerns related to the program, and health risks associated with lead pipes. Amir Famili asked about current overtime expenses being incurred due to workload associated with the lead program. Chris Moughan explained that the overtime data is being reviewed. While some overtime expense is directly attributed to the lead program, another portion of overtime is for unplanned emergencies. Ed Klein acknowledged the current payroll system does not provide an easy way to break out different types of overtime, but the Authority should be able to monitor this to ensure actual reductions in overtime occur as a result of hiring a dedicated lead program field crew.

Ms. Gross then reviewed the Act 537 Plan for the Kline's Island Sewer System that will be submitted to DEP in October, noting that the plan's top priority projects are focused on removing inflow and infiltration (I&I). The Allentown Division's I&I program will cost approximately \$70 million over the next 10 years and includes sanitary sewer evaluation studies, pipeline grouting and lining projects, manhole rehabilitation work, and potential private-side investigations. To address these projects that will continue for many years beyond the Act 537 Plan period, additional internal staffing will be required. In the 2026 Budget, four positions are recommended including an I&I Engineer to develop internal capacity to manage these projects and three Utility Technicians to support field work associated with the program. Ms. Gross reviewed the Authority's cost to add the three-person field crew, along with adding necessary equipment, supplies, and overhead costs, and how that

compares to current contractor costs for similar work. Developing the Authority's capacity to handle some aspects of this work in-house will generate cost savings. There was some additional discussion about overhead costs and how these cost savings can be tracked.

Ms. Gross explained that a temporary position in the Accounting Department would be converted into a permanent position as an Accounting Technician. Ed Klein said that with the implementation of Munis, the workflows have increased internal control processes and an increase in the volume of work due to general project workload as well as new processes for scanning customer receivables.

Ms. Gross provided a summary of the new positions included in the 2026 Budget and also a review of the current vacancies. The 2026 Budget for personnel costs is \$24.8 million which is a 7.7 percent increase from the 2025 forecast. Factors affecting the increase are the timing of the hires, an estimated 10 percent benefit cost increase, and wage increases. A summary of other budget assumptions was reviewed.

Ed Klein reviewed the key factors for the Suburban Water Budget noting that operating expenses will increase 7.3 percent from the 2025 forecast. The capital budget of \$6.3 million will be covered using current rates and reserves. No borrowing will be required. A 4 percent revenue increase will be needed to attain desired financial performance metrics for debt service coverage and cash on hand.

The Suburban Wastewater Budget operating expenses will increase 7.2 percent from the 2025 forecast. The capital budget of \$6.9 million will require \$4.8 million of new borrowing. Signatory rates are under review and will be impacted by capital expenses and pass-through costs from the City Division. A 5 percent rate increase for the Authority's common rate collector systems is planned, which is the first increase since 2013, but likely required annually to support improved cash flows for these small systems.

The City Division operating expenses will increase 6.3 percent from the 2025 forecast. The capital budget of \$50.4 million will be funded by \$5.7 million in borrowed funds, \$6.6 million in grants, and the remainder from current rates and reserves. Cash flow will be negative due to using up previous funds from borrowing.

Mr. Klein provided a preliminary summary of the 2026 Budget including net income, cash flows, and key metrics.

Liesel Gross provided a look ahead for the 2026 Budget process. She asked the Board to send any comments or concerns related to today's presentation to her prior to the next meeting.

Amir Famili commented that one of the Authority's top priorities for 2026 should be to develop actionable and meaningful metrics for project delivery including metrics showing adherence to project budget, schedule and scope. Liesel Gross said this is currently under way and may be presented later this year. Jeff Morgan asked how overtime is budgeted. Ed Klein explained that overtime expenses are budgeted based on historical trends, department by department.

#### **LCA Board of Directors – Governance Committee Charter**

Liesel Gross provided an overview of the Governance Committee Charter outlining the function of the committee. Sean Ziller asked about the attendance expectations and why they differ from the Board Member Expectations. Liesel Gross and Amir Famili explained the difference in the attendance expectations regarding the Board meetings and the committee meetings.

On a motion by Sean Ziller, seconded by Linda Rosenfeld, the Board approved the Governance Committee Charter (6-0).

**LCA Board of Directors – Board Member Expectations**

Liesel Gross commented that the Governance Committee discussed that the document would be signed by each Board member upon approval of the document, one time, and any new Board members would also sign the document. Sean Ziller asked about the in-person attendance consideration. Ms. Gross reported that the document indicates Board members would make their best effort to attend meetings in person when feasible, but no specific minimum requirement was established. Amir Famili commented that the committee would really like to have members attend in-person meetings to get to know Board members and allow for staff interaction.

On a motion by Linda Rosenfeld, seconded by Ted Lyons, the Board approved the Board Member Expectations (6-0).

Sean Ziller left the meeting at 1:29 p.m.

**Resolution 9-2025-1: Kline's Island Sewer System – Act 537 Plan**

Liesel Gross provided background regarding the resolution to adopt the regional Act 537 Plan for the Kline's Island Sewer System (KISS). The Authority is not required to approve the plan. However, the Authority has served as a facilitator in the development of this plan, and approving it formally would show support to the municipalities who have participated in the plan's development. Ms. Gross recognized Phil DePoe for his leadership in developing the plan over the past five years or longer, and for his level of collaboration with the 15 municipalities in the KISS.. She noted that nine municipalities have already approved the plan with several more voting on the plan this week. Ms. Gross noted that Jennifer McKenna and Brian Chamberlain from the City of Allentown have been instrumental in the development of the plan, and noted that City Council has already approved the plan.

Solicitor Kevin Reid read the resolution. On a motion by Linda Rosenfeld, seconded by Ted Lyons, the Board approved Resolution 9-2025-1 (5-0).

**Allentown Division – Kline's Island WWTP – Plastic Media Trickling Filter Rehabilitation**

Amy Rohrbach provided an overview of the project to replace the plastic media in one of the four plastic media trickling filters at the Kline's Island Wastewater Treatment Plant (KIWWTP). The project was identified as a near-term need in the recently completed KIWWTP Master Plan. The project previously received Major Capital Improvement approval from the City of Allentown and Board authorization for advance purchase of the plastic media to ensure timely delivery. The authorization presented today is for the construction phase, which includes removal and disposal of the old plastic media and installation of the new media. The project is scheduled to be completed in the winter due to the more stringent permit limits that are in place in the spring and summer months. Ms. Rohrbach noted that only two bids were received for the construction phase and explained that the bidders expressed concerns about the short deadline for construction. The lowest responsible bidder has performed well on other projects and is recommended for approval of the contract award.

Ted Lyons asked what CHA Consulting will do. Ms. Rohrbach explained the construction administration services work that they will provide for the construction phase of the project. There was some additional discussion about the project timeline and effluent limits.

On a motion by Jeff Morgan, seconded by Kevin Baker, the Board approved the Capital Project Authorization for the Construction Phase in the amount of \$2,528,955.00 which includes the General Construction Contract Award to Allan Myers, L.P. in the amount of \$2,190,555.00 and the

Professional Services Authorization for the Construction Phase to CHA Consulting, Inc. in the amount of \$188,400.00 (5-0).

**Allentown Division – Kline’s Island WWTP – Substation No. 1 and Switchgear Replacement**

Amy Rohrbach provided an overview of the project to replace Substation No. 1 at the Kline’s Island Wastewater Treatment Plant (KIWWTP), and reviewed a brief presentation showing the components of the work. She explained that a change order is requested for the existing Electrical Construction contract with Philips Brothers Electrical Contractors, Inc. The change order is primarily driven by increased charges from PPL. It also includes charges for the net metering associated with the existing bio-generation system and the directional drilling under the existing dike due to changes in pole locations made by PPL. Another component of the change order is to add a new manhole due to the existing manhole being undersized for the cable being pulled. The total increase to Philips Brothers Electrical Contractors, Inc. is \$109,481.89.

On a motion by Ted Lyons, seconded by Linda Rosenfeld, the Board approved the Electrical Construction Change Order to Philips Brothers Electrical Contractors, Inc. in the amount of \$109,481.89 (5-0).

**MONTHLY PROJECT UPDATES / INFORMATION ITEMS**

Liesel Gross provided highlights of items for the next Board meeting in September. She noted that budget discussions will continue in October as well. She also noted that the Open Projects listing in the reports shows several projects in Project Closeout phase, which indicates completion of those projects.

**STAFF COMMENTS**

None.

**SOLICITOR’S COMMENTS**

None.

**PUBLIC COMMENTS / OTHER COMMENTS**

None.

**BOARD MEMBER COMMENTS**

None.

**EXECUTIVE SESSION**

None.

**ADJOURNMENT**

There being no further business, the Chairman adjourned the meeting at 1:55 p.m.

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Linda A. Rosenfeld  
Secretary





1053 SPRUCE ROAD, PO BOX 3348, ALLENTOWN, PA 18106  
Phone: (610-398-2503); FAX (610-351-8363)

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## MEMORANDUM

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**Date Presented:** September 22, 2025  
**To:** Lehigh County Authority Board of Directors  
**From:** Edward Klein, Chief Financial Officer  
**Subject:** 2026 Minimum Municipal Obligation (MMO) for the Lehigh County Authority Pension Plan (39-100-8N)

Act 205 of 1984, as amended, governs the funding requirements for all municipal pension plans. The law requires the Chief Administrative Officer of each pension plan to inform the governing board of the municipality of the plan's expected financial obligation for the coming year. This must be done by the last business day in September.

The calculation of the 2026 MMO required an estimate of the 2025 W-2 wages of the employees covered by the plan. I have indicated on the attached worksheet my best estimate of the same. Questions on the pension cost calculation may be addressed to either myself or the Pennsylvania Municipal Retirement System at (800) 622-7968.

The MMO is the municipality's 2026 bill for this pension plan and must be paid by December 31, 2026. The obligation must be met with general fund monies or with any General State Aid to Municipal Pensions to which we may be entitled to under Act 205.

Edward Klein  
Chief Financial Officer  
[edwardklein@lehighcountyauthority.org](mailto:edwardklein@lehighcountyauthority.org)  
(610) 398-2503, extension 160

Attachment: 2026 MMO Worksheet

**The Minimum Municipal Obligation Worksheet (MMO)  
Lehigh County Authority Pension Plan (39-100-8 N)**

**for Plan Year 2026**

**CHARGES**

Estimated 2025 W-2 Payroll

For Covered Plan Members:

(A) \$13,843,029.39

PMRS Determined Normal Cost

Expressed as a Decimal:

(B) 0.1301

RESULT: (A) \* (B) =

(C) \$1,800,978.12

Administrative Charge (PMRS Determined)

# of Plan Members times \$20:

(D) 5,380.00

Amortization of Unfunded Liability

(PMRS Determined)

(E) 791,898.00

TOTAL CHARGES: (C) + (D) + (E) =

(F) \$2,598,256.12

**CREDITS**

Repeat Estimated 2025 W-2 Payroll

For Covered Plan Members:

(A) \$13,843,029.39

Employee Contribution Rate

Expressed as a Decimal (PMRS Determined)

(G) 0.0100

RESULT: (A) \* (G) =

(H) \$138,430.29

Amortization of the Actuarial Surplus

(PMRS Determined)

(I) 0.00

TOTAL CREDITS: (H) + (I) =

(J) \$138,430.29

**MINIMUM MUNICIPAL OBLIGATION**

(Based on 1/1/2023 Actuarial Valuation)

(MMO) \$2,459,826

Equals TOTAL CHARGES Minus

TOTAL CREDITS (F) - (J) = **(Please round numbers to dollars)**

Prepared By: Mark Mason (Name) Mark Mason (Signature)

Human Resources Manager (Title) (484) 860 - 3017 (Telephone #)

Please complete the above worksheet with your best estimates and return only one copy to the Pennsylvania Municipal Retirement System by October 6, 2025. Forms can be submitted electronically to RA-RSCOMPLETEDFORMS@pa.gov. The official copy must be shared with the plan's governing board by the last business day in September.

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## MEMORANDUM

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**Date:** September 22, 2025

**To:** LCA Board of Directors  
Liesel Gross, C.E.O.  
**From:** A.J. Capuzzi, P.E., Charles Volk, P.E.  
**Subject:** Suburban Division: Pretreatment Plant Critical Facility Upgrades –  
Final Clarifier Rehabilitation: Construction Phase Professional Service  
Amendment

**MOTIONS / APPROVALS REQUESTED:**

No.	Item	Amount
1	Professional Services Authorization Amendment: PTP Final Clarifier Rehabilitation Construction Phase Inspection Services – AECOM	\$147,900

**PROJECT BACKGROUND:**

The Lehigh County Authority (LCA) Pretreatment Plant (PTP) was placed online in 1990. The facility was originally constructed and operated by the County of Lehigh until being transferred to LCA in 2009. The facility treats industrial waste from large users located primarily in Upper Macungie Township before being discharged to the Western Lehigh Interceptor. Flows discharged from the PTP travel to the Kline's Island Wastewater Treatment Plant (KIWWTP) in Allentown for final treatment.

In April 2023, Jacobs (plant operator) completed a Master Plan for the facility to comprehensively assess the plant's near-term and long-term needs. While minor capital upgrades and routine renewal and replacement repairs are performed annually, no major facility upgrades have been undertaken since the construction of the 3-million-gallon Flow Equalization Basin (FEB) in 2010.

In May 2024 the LCA Board approved a Professional Services Authorization (PSA) for AECOM to provide Final Design Phase services for near-term upgrades at the PTP to address the high-risk critical assets. The design scope included Rehabilitation of the Secondary Clarifiers, High Purity Oxygen Facility ("cryo") Upgrades, Aeration Deck Upgrades, and Influent and Effluent Flow Metering Improvements. The cryogenic facility upgrade project was completed in July 2025.

In the interest of expediting the rehabilitation of the high-risk final clarifiers, and taking into account the long equipment lead time, a decision was made to obtain bids via the state procurement program (Costars), as only two manufacturers could satisfy the specifications, and their respective authorized vendors are licensed on Costars. The construction contract was authorized by the LCA Board on 9/23/24. The contractor (Eastern Environmental) is planning to mobilize for the rehabilitation of Final Clarifier No. 1 in late September upon delivery of the major mechanical equipment. At that time

Final Clarifier No. 1 will be taken off-line, drained and cleaned and the rehabilitation work will commence.

**THIS APPROVAL – CONSTRUCTION PHASE PROFESSIONAL SERVICES AMENDMENT:**

A Professional Services Amendment was requested of the design engineer (AECOM) to provide on-site inspection services and maintenance of operations (“MOPO”) coordination during construction of the final clarifiers rehabilitation. These tasks were not originally within the scope of their prior authorizations. The tasks and associated manhours and costs appear in the table below:

<b>Work Task</b>	<b>Number of Hours</b>	<b>Cost</b>
General Project Management & MOPO Coordination	92	\$21,000
On-site inspection services and daily reporting	1,015	\$126,900
<b>TOTALS</b>	<b>1,107</b>	<b>\$147,900</b>

**PROFESSIONAL SERVICES:**

AECOM is providing design phase services on the critical upgrade projects at the Pretreatment Plant, along with preliminary design phase services for the future (long term) PTP improvements. They will provide construction phase engineering and inspection services for the Final Clarifier Rehabilitation Project.

**FINANCIAL:**

Construction phase work will be paid from the Suburban Wastewater Division – Pretreatment Plant capital budget.

**PROJECT STATUS:**

Contractor mobilization is anticipated for late September, to coincide with major equipment delivery from the manufacturer. Final Clarifier No. 1 rehabilitation work is anticipated to be completed by early December, with one month of performance testing prior to taking Final Clarifier No. 2 off line in early January 2026, which is anticipated to be completed by April 2026. The critical upgrades project will conclude in 2026.

**PRIOR AUTHORIZATIONS:** \$586,145 (AECOM for Preliminary + Final Design/Bid + Construction Administration Critical Upgrades Project, in progress)

**THIS AUTHORIZATION:** \$147,900

**FUTURE AUTHORIZATIONS:**

none



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610-398-2503 \* email: service@lehighcountyauthority.org  
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## REQUEST FOR BOARD AUTHORIZATION

Board of Directors Meeting Date: 9/22/25  
Staff Member Requesting Authorization: Charles Volk & AJ Capuzzi  
Department: CAPITAL WORKS  
Short Description / Title of Project / Purchase: PTP Final Clarifier Rehabilitation: Construction Phase  
Engineering Services Amendment  
Project Number (if applicable):

### Capital Expense: (check all that apply)

- ☒ Capital Project >\$250,000  
☐ Construction / Other Contract(s)  
☒ Professional Services Authorization  
☐ Initial Authorization  
☒ Amended Authorization  
☐ Professional Services Authorization >\$100,000  
☐ Equipment Purchase >\$250,000  
☐ Upsizing / Extension >\$250,000  
☒ Aggregate Change Order >10% of contract and >\$100,000  
☐ Stand-Alone Change Order >\$50,000

### Operations Expense:

- ☐ Construction / Other Contract >\$250,000  
☐ Professional Services Authorization >\$100,000  
☐ Equipment / Other Individual Item >\$250,000  
☐ Emergency Authorization >\$50,000  
☐ Aggregate Change Order >10% of contract and >\$100,000  
☐ Stand-Alone Change Order >\$50,000

**LCA Enterprise Fund:** ☐ Allentown Division ☐ Suburban Water ☒ Suburban Wastewater ☐ Internal Service / Admin

**Current Project Phase:** ☐ N/A (skip to Description) ☐ Planning ☐ Conceptual Design ☐ Design / Bid ☒ Construction

### Prior Authorization(s):

Date	Phase	Description	Amount Authorized
11/10/23	Prelim design	Conceptual/Preliminary Design services	\$282,225
5/20/25	Final design	Final Design services	\$219,320
9/23/24	Construction	Construction Administration	\$49,600
9/23/24	Construction	General Construction Contract – Iron Horse Environmental, LLC	\$1,680,000
Total Prior Authorizations:			\$2,231,145

### Current Authorization Requested:

Description	Amount Requested
Construction phase inspection and MOPO coordination	\$147,900
	\$
	\$
	\$
	\$
	\$
	\$
Total Amount Requested (this authorization):	\$147,900

### Future Authorizations:

Phase	Note / Description	Estimated Cost
	None	\$
		\$
Estimated Total Project Cost:		\$2,378,945

**Short Description:** (please attach supporting documentation, cost justification, trade-in values, proposals, memos, etc.)

**See attached AECOM proposal letter dated 9/10/25**

**Purchasing Procedure:** ☐ Formal Bid ☒ Request for Proposal ☐ Cooperative Purchasing Group / CoStars ☐ N/A - Emergency

**Motion:** \_\_\_\_\_ **Second:** \_\_\_\_\_ **Approved?** \_\_\_\_\_ **Certified by:** \_\_\_\_\_



AECOM  
625 West Ridge Pike, Suite E-100  
Conshohocken, PA 19428

610.234.5402 tel

September 10, 2025

Mr. Albert J. Capuzzi, P.E., DBIA  
Director of Engineering & Asset Management  
Mr. Charles Volk, P.E.  
Chief Capital Works Officer  
Lehigh County Authority  
1053 Spruce Street  
Allentown, PA 18106-0348

RE: **Engineering Design Services – Lehigh County Authority Pretreatment Plant**  
AECOM Project No. 60740593  
Change Order No. 1 Request (Rev. 2)  
**Secondary Clarifier Construction Oversight Services and Maintenance for Plant Operations (MOPO) Support**

Dear Mr. Capuzzi and Mr. Volk,

AECOM Technical Services, Inc. (AECOM) appreciates the opportunity to provide this change order request to Lehigh County Authority (the “Authority”, or “LCA”) for engineering services during construction for the Secondary Clarifiers, continued project coordination, and Maintenance of Plant Operations (MOPO) support for improvements to Critical Assets for the LCA Pretreatment Plant (PTP).

AECOM has been assisting LCA in evaluating and prioritizing upgrades to critical assets at the PTP to strategically address immediate needs while considering future Act 537 Planning Needs. AECOM has developed a detailed design package to support construction of the Secondary Clarifier upgrades, provided a detailed specification for the High Purity Oxygen (HPO) System upgrades, and is completing detailed design packages for other selected upgrades including Return Activated Sludge (RAS) pipeline repairs; Aeration Tank (‘Air Deck’) cleaning and repair details; influent flowmeters; and the addition of an effluent flow sensor. AECOM has also been coordinating routine bi-weekly meetings with LCA and their on-site operating firm, Jacobs Solutions, Inc. (Jacobs) to review the status of the design packages and construction activities for the critical asset upgrades. AECOM had originally assumed that bi-weekly meetings would extend over a project duration of approximately 3 months (total of 6 bi-weekly meetings), ending in Spring 2025.

Additionally, AECOM has been assisting LCA with professional Engineering Services During Construction (ESDC) for the construction phase of the secondary clarifiers. AECOM has an existing authorization of **\$49,600** to provide engineering support for the following Secondary Clarifier ESDC activities:

1. Review and make recommendations on Requests for Information (RFIs) and Change Orders (COs).
2. Review shop drawings, schedules, etc. for the Secondary Clarifiers.
3. Coordinate with LCA, Jacobs and the Contractor on the construction schedule.
4. Construction Field Services
  - a. Prepare a video record of site conditions in the work area prior to construction.
  - b. Attend 6 site visits per Clarifier, to include onsite progress meetings (12 total) and on-site inspection for key points of construction.

- c. Facilitate field coordination between General Contractor and LCA / PTP Plant Operator (Jacobs).
- d. Attend start-up and training activities.
- e. Participate in walkthrough and generate an initial punch list.

To date, AECOM has expended approximately \$15,000 of the current authorization associated with Task Items 1-3 above and therefore has approximately \$34,600 in remaining budget.

LCA has requested that AECOM continue to support the coordination meetings with LCA and Jacobs for the duration of the anticipated critical asset upgrade construction period (coverage which was not included under the original authorization), and provide additional support for MOPO while the upgrades are being implemented (also not included under the original authorization). LCA has also requested additional construction oversight services for the Secondary Clarifier upgrades beyond those currently authorized.

The following change order request describes the scope, schedule and estimated fee for AECOM to provide additional support that LCA has requested.

## **1.0 Scope of Work**

### *Task 1: Continuation of Project Coordination Meetings and MOPO Support*

AECOM will continue to support routine check-in meetings with LCA and Jacobs and support the development of strategies with LCA and Jacobs for MOPO to enable successful Plant performance during the proposed construction activities. The MOPO efforts will focus on operational strategies during construction to maintain plant performance throughout construction which will require various process shut-downs to conduct the necessary work. This task will include up to twelve (12) one hour virtual Teams progress meetings to be attended by the Project Manager and Technical Lead. AECOM's budget for this task includes additional time for meeting preparation and follow-up Action Items. This task also includes general Project Management.

### *Task 2: Construction Field Services for Secondary Clarifiers*

The Secondary Clarifier construction activities are expected to begin in September 2025 and be completed in May 2026 and a total of 33 weeks. AECOM's current authorization includes a total of 6 site visits per clarifier by the Technical Lead and project staff engineer for inspection purposes only (4 hours on-site per site visit). LCA has requested that AECOM provide additional construction oversight support services to allow Jacobs to focus on the Pretreatment Plant operation and other maintenance activities during the construction period.

AECOM will provide on-site construction oversight services by a Project Engineer three days per week during the Field Construction activities for the Secondary Clarifiers. During site visits, the Project Engineer will observe the progress of the executed work by the contractor(s) to confirm, in general, if such work is proceeding in accordance with the approved plans and specifications. This will include the following services:

- Prepare "Daily Reports of Construction" for days on-site.
- Record work completed during Site Visits.
- Attend periodic project meetings with LCA and the contractor(s).
- Review and make recommendations on "Work Change Directives".
- Serve as project liaison between LCA, Jacobs and the contractor(s) to respond to Requests for

Information (RFI's) and coordinate written responses to all parties.

- Communicate MOPO considerations between Jacobs, LCA and the Contractor.
- Observe all testing of completed work required by the Contract Documents.

### **Limitation of Authority of Engineer During Construction**

The Project Engineer shall not supervise, direct, or have control over the Contractor's work nor shall the Engineer have authority over or responsibility for the Contractor's means, methods, techniques, sequences or procedures selected by the Contractor, for safety precautions and programs incident to the work of the Contractor, for any failure of the Contractor to comply with laws, rules, regulations, ordinances, codes or orders applicable to performing and finishing the work, or responsibility of construction for Contractor's failure to furnish and perform the work in accordance with the Contract Documents.

## **2.0 Schedule**

AECOM understands that the current schedule assumes construction activities for the PTP Critical Asset Upgrades will be substantially complete by July 2026.

## **3.0 Project Fee**

AECOM proposes to conduct this **additional scope of work** on a Time and Materials basis with a not-to-exceed value of **\$147,900** in accordance with the Master Services Agreement for Professional Services between Lehigh County Authority and AECOM Technical Services, dated April 24, 2023 and extended on February 20, 2025. The proposed cost per task and total resource hours are presented in the following table:

Item	Estimated Hours	ODCs	Labor Budget	Estimated Budget
<b>Task 1 –Project Coordination Meetings and Workshops</b>	92	---	\$21,000	\$21,000
<b>Task 2 – Construction Field Services Sec Clarifiers</b>	1,015	\$10,000	\$116,900	\$126,900
<b>Total</b>	<b>1,107</b>	<b>\$10,000</b>	<b>\$137,900</b>	<b>\$147,900</b>

The current project authorization for the PTP Secondary Clarifier Engineering Services During Construction Project is \$49,600. With this Change Order No. 1 request, total project authorization would be \$197,500.

## **4.0 Assumptions**

AECOM has made the following assumptions when developing the budget for this Change Order request. Should any of these assumptions prove inaccurate, AECOM will provide additional needed services at an additional cost upon request by LCA:

1. Budget can be transferred between tasks without LCA authorization.
2. Funding, permitting, and operation and maintenance support are not included.



3. AECOM is not responsible for performing or coordinating construction testing. This is the responsibility of the Contractor(s).
4. Virtual meetings will be used in lieu of in-person meetings whenever feasible.
5. Full-time site representation onsite during Secondary Clarifier construction is not included (costs include three days per week during the 33-week construction period.)
6. Additional budget will be necessary under separate authorization for other critical improvements construction activities associated with flow metering, RAS pipeline, Bioreactor/HPO improvements, WAS pumping/piping, etc.
7. Meetings beyond those noted above are not included.
8. Obtaining permits of any type is not included.
9. Coordination with PADEP is not included.

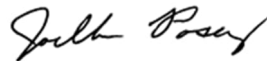
Once again, we appreciate the opportunity to provide this change order request to you and look forward to assisting the Authority with this important project. Please reply that we are authorized to proceed in accordance with this change order request for our records.

If you have any questions concerning this change order request, please do not hesitate to contact AECOM Project Manager, Joella Posey at 610.316.5423 or AECOM Project Director, Chris Curran at 302.379.0267.

Yours sincerely,



Chris Curran, PE  
VP, Project Director  
AECOM  
T: 302-379-0267  
E: chris.curran@aecom.com



Joella Posey, PE  
Associate Vice President  
AECOM  
T: 610-316-5423  
E: Joella.posey@aecom.com

**cc:** file

**SEWER OPERATIONS AGREEMENT  
BETWEEN  
LEHIGH COUNTY AUTHORITY  
AND  
LOWER MACUNGIE TOWNSHIP**

***THIS AGREEMENT*** made this \_\_\_\_ day of \_\_\_\_\_, 2025 between the ***LEHIGH COUNTY AUTHORITY*** (“LCA”), a Municipal Authority organized and existing under the Municipality Authorities Act of 1945, as amended, with its principal address at 1053 Spruce Road, P.O. Box 3348, Allentown, PA 18106 and ***LOWER MACUNGIE TOWNSHIP*** (“Township”), a First Class Township with its principal address at 3400 Brookside Road, Macungie, PA 18062. LCA and the Township are collectively hereinafter referred to as “Parties”.

***WHEREAS***, LCA submitted a proposed Operations & Maintenance Plan dated November 17, 2022, attached as Exhibit “A” (the “Proposal”), to provide ongoing operation and maintenance services related to the Mertztown Pump Station & Force Main (“Site”); and

***WHEREAS***, the Township has taken official action to accept the Proposal and in the mutual interests of all Parties hereto, LCA and Township desire to set forth terms and conditions related to services outlined in the Proposal.

***NOW, THEREFORE***, the Parties hereto, intending to be legally bound, and for the good, sufficient, and valuable consideration herein identified, and the mutual promises and covenants hereinafter set forth, do agree as follows:

1. Term. This Agreement shall be for a term of five (5) years with an effective date of September \_\_, 2025. This Agreement shall be renewable by the parties in writing. Any renewal shall specify the length of the renewed agreement and provide for such updated fees and terms and conditions as agreed upon by the Parties. The Township and LCA agree to review and discuss extending this agreement based upon conditions and needs at that time no later than ninety (90) days prior to expiration of this Agreement. However, should the Township and LCA fail to complete this review, the agreement shall automatically renew for a subsequent period of five (5) years, subject to all terms contained herein.

2. Billing Procedures. LCA shall bill the Township in accordance with its standard general billing procedures. By its execution of this Agreement, the Township acknowledges that it is aware and will abide by LCA's billing procedures.

3. Costs. As set forth in the Proposal, all costs including but not limited to equipment and large repair costs will be billed to the Township.

4. Insurance.

4.1(a) Obligation to Obtain. Township and LCA shall obtain and maintain, at their own expense, the insurance set forth in Sections 4.1(b). Such insurance may be maintained under individual or blanket insurance policies that currently exist.

(b) Coverage. The Parties shall maintain during the term of this Agreement the insurance described below with insurance companies acceptable to the Parties with minimum limits and coverage provisions as set forth below.

(i) General Liability Insurance: Liability insurance on an occurrence basis against claims for personal injury (including bodily injury and death) and property damage – minimum coverage of \$5,000,000.

(ii) Automobile Liability Insurance: Automobile liability insurance against claims for personal injury (including bodily injury and death) or property damage arising out of the use of all owned, leased, non-owned and hired motor vehicles, including loading and unloading, and containing appropriate no-fault insurance provisions where applicable - minimum coverage of \$5,000,000.

(iii) Workers' Compensation Insurance: Workers' compensation insurance as required by applicable laws, including employers

liability insurance for all employees of LCA and the Township—  
minimum coverage of \$1,000,000 each occurrence.

- (iv) **Waiver of Subrogation Language** . Each party agrees with respect to any losses covered by, insurance under the terms of this Agreement, other than those losses caused by either party's gross negligence or intentional acts, to waive and release the other party, its officers, directors, employees and agents, from any claim of liability or responsibility with respect to such losses, including losses arising out of the inability to conduct business. Each party further agrees that its insurance companies shall have no right of subrogation against the other on account of this release.

## 5. Indemnification and Liability.

### 5.1 Indemnification.

5.1(a) Indemnification by LCA. LCA shall indemnify, defend and hold harmless the Township, the members thereof, and their respective officers, directors, employees, agents, affiliates and representatives (the "Township Indemnified Parties"), from and against any and all claims (in whatever form and to the fullest extent permitted by law) arising out of or in any way connected with, but only to the extent of, any gross negligence, fraud or willful misconduct of LCA or anyone acting on LCA's behalf or under its instructions, in connection with this Agreement and LCA's obligations thereunder. Any costs or expenses incurred by LCA pursuant to its indemnity obligations under this Section 5.1(a), including the cost of deductibles with respect to the insurance maintained by LCA or Township pursuant to Article 4.1 or losses in excess of such insurance coverage, shall not constitute a reimbursable cost under this Agreement.

(b) Indemnification by Township. Township shall indemnify, defend and hold harmless LCA, its officers, directors, employees, agents, affiliates and representatives (the "LCA Indemnified Parties") from and against any and all claims (in whatever form and to the fullest extent permitted by law) arising out of or in any way connected with, but

only to the extent of, any gross negligence, fraud or willful misconduct of Township or anyone acting on Township's behalf or under its instructions (other than LCA and its suppliers, subcontractors, vendors, and their subcontractors and vendors and any employee or agent of the foregoing), in connection with this Agreement and Township's obligations thereunder. Any costs or expenses incurred by Township pursuant to its indemnity obligations under this Section 5.1(b), including the cost of deductibles with respect to the insurance maintained by Township or LCA pursuant to Article 4.1 or losses in excess of such insurance coverage, shall not constitute a reimbursable cost under this Agreement.

## 5.2 Environmental Liability.

(a) LCA Liability. LCA shall not be responsible for claims directly or indirectly related to hazardous materials present at the Sites, before the date of this Agreement or transport to the Sites by the Township at any point, except to the extent LCA acted with respect to such materials in a grossly negligent manner. Township shall defend, indemnify and hold LCA harmless against such claims, except to the extent such claims arise from LCA's grossly negligent or intentional acts.

(b) Township Liability. Township shall not be responsible for claims directly related to hazardous materials at the Sites arising out of the grossly negligent or intentional acts of LCA. This provision of the Agreement shall not be construed to require LCA to take corrective action with respect to any hazardous materials at the Sites before the date of this Agreement or arising out of the transport of such material to the Sites by the Township.

(c) Governmental Actions. If action is required at the Sites to comply with any applicable environmental laws during the term of this Agreement, Township shall be solely responsible for the costs of compliance. Costs for such compliance action shall only be incurred by LCA only with Township's prior written consent, unless a governmental authority requires LCA to incur such costs and expenses prior to obtaining such written consent.

### 5.3 Limitations of Liability.

(a) Consequential Damages. Notwithstanding any provision in this Agreement to the contrary, LCA and Township each agree not to assert against the other any claim, demand or suit for consequential, incidental, indirect or special damages arising from any aspect of the performance or non-performance of the other party or any third party engaged by such other party under this Agreement, and each party hereto waives any such claim, demand or suit against the other in connection with this Agreement. Notwithstanding anything to the contrary in this Agreement, this Agreement shall not be construed to waive any rights or privileges of the Parties under the Political Subdivision Torts Claim Act or any other statute providing immunity to the Parties.

## 6. Termination.

6.1 Termination Upon Notice By Township. The Township may terminate this Agreement upon fifteen (15) days prior written notice to LCA in the event (i) that LCA violates, or consents to a violation of, any laws applicable to the services provided under this Agreement, where the violation has or may have a material adverse effect on the maintenance or operation of the Sites or Township's interest, and LCA does not cure such violation within thirty (30) days (or, if not curable within thirty (30) days, within such period of time as is reasonably necessary, but in no event more than ninety (90) days, provided LCA diligently commences and pursues such cure and indemnifies Township for all related costs, of whatever kind), or (ii) of a material breach by LCA in the performance of the services to be provided under this Agreement, if LCA does not cure such breach within thirty (30) days from the date of LCA's receipt of notice from Township demanding cure (or, if not curable within thirty (30) days, within such period of time as is reasonably necessary, but in no event more than ninety (90) days, provided LCA diligently commences and pursues such cure and indemnifies Township for all related costs, of whatever kind). If the Agreement is terminated by Township pursuant to this Section 6.1, LCA shall be compensated for all reimbursable costs incurred by LCA and all unpaid fees due and owing including the date of termination.

6.2 Termination by Township Without Cause. In addition to its rights set forth in this Article 6, Township reserves the right to terminate this Agreement without cause upon ninety (90) days written notice to LCA. If the Agreement is terminated by Township pursuant to this Section 6.2, LCA shall be compensated for all costs incurred by LCA and all unpaid fees to and including the date of such termination under this Section 6.2. Such payments shall be LCA's sole remedy in respect of such termination and shall be made by Township within 30 days of receipt of a final invoice from LCA.

6.3 Termination by LCA for Cause. LCA may terminate this Agreement for cause upon fifteen (15) days prior written notice to Township in the event of Township's failure to perform in a timely manner any of its material obligations under this Agreement and such failure is not cured within 30 days of Township's receipt of a notice from LCA demanding cure (or, if not curable within 30 days, within such period of time as is reasonably necessary, but in no event more than 90 days, provided that Township diligently commences and continues to pursue such cure). If LCA terminates this Agreement for cause, LCA shall be compensated for all costs incurred by LCA and all unpaid fees to and including the date of such termination under this Section 6.3. Such payments shall be LCA's sole remedy in respect of such termination and shall be made by Township within thirty (30) days of receipt of a final invoice from LCA.

6.4 Termination by LCA Without Cause. LCA reserves the right to terminate this Agreement without cause upon ninety (90) days written notice to Township. If LCA terminates this Agreement without cause, LCA shall be compensated for all costs incurred by LCA and all unpaid fees to and including the date of such termination under this Section 6.3. Such payments shall be LCA's sole remedy in respect of such termination and shall be made by Township within thirty (30) days of receipt of a final invoice from LCA.

7. Access/Emergency Response/General Site Maintenance. The Parties agree to develop written procedures with respect to access to the pumps, general site maintenance and emergency response procedures.

8. Miscellaneous Provisions.

8.1 Electronic Signatures. This Agreement may be executed by electronic signature or electronic transmission which shall be regarded for all purposes as an original.

8.2 Force Majeure. If either Township or LCA is rendered wholly or partially unable to perform its obligations under this Agreement (other than payment obligations) due to a Force Majeure Event (as hereinafter defined), the party affected by such Force Majeure Event shall be excused from whatever performance is impaired by such Force Majeure Event, provided that the affected party promptly, upon learning of such Force Majeure Event and ascertaining that it will affect its performance hereunder, (i) promptly gives notice to the other party stating the nature of the Force Majeure Event, its anticipated duration, and any action being taken to avoid or minimize its effect and (ii) uses its reasonable commercial efforts to remedy its inability to perform. The suspension of performance shall be of no greater scope and no longer duration than that which is necessary. No obligations of either party which arose before the occurrence causing the suspension of performance and which could and should have been fully performed before such occurrence shall be excused as a result of such occurrence. The burden of proof shall be on the party asserting excuse from performance due to a Force Majeure Event. Force Majeure Event is defined as:

Natural disasters such as hurricanes, earthquakes, floods, wildfires, and other natural disasters; Political events such as wars, political crises, embargoes, and other political actions; Public health crises such as pandemics, plagues, and other public health crises; Acts of terrorism such as acts of terrorism, sabotage, and other acts of violence; Industrial actions such as strikes, lockouts, work stoppages, and other industrial actions; and Government actions such as new laws, orders, and other government actions.

8.3 Amendments. No amendments or modifications of this Agreement shall be valid unless evidenced in writing and signed by duly authorized representatives of both parties.



8.4 Notices. All notices and other communications (collectively "Notices") required or permitted under this Agreement shall be in writing and shall be given to each party at its address or fax number set forth in this Section 8.4 or at such other address or fax number as hereafter specified as provided in this Section 8.4. All Notices shall be (i) delivered personally or (ii) sent by fax, electronic mail, telegraph, registered or certified mail (return receipt requested and postage prepaid), or (iii) sent by a nationally recognized overnight courier service. Notices shall be deemed to given (A) when transmitted if sent by fax, electronic mail, or telegraph (provided the transmittal is confirmed), or (B) upon receipt by the intended recipient if given by any other means. Notices shall be sent to the following addresses and contacts (or successors):

To LCA:

Lehigh County Authority

1053 Spruce Road

Allentown, PA 18106-0348

ATTN: Liesel Gross, CEO

Telephone: (610) 398-2503

E-Mail: [lieselgross@lehighcountyauthority.org](mailto:lieselgross@lehighcountyauthority.org)

To Township:

Lower Macungie Township

3400 Brookside Road

Macungie, PA 18062

ATTN: Bruce Beitel, Township Manager

Telephone: (610) 966-4343

E-Mail: [BBeitel@lowermac.org](mailto:BBeitel@lowermac.org)

8.5 Counterparts. The parties may execute this Agreement in counterparts, which shall, in the aggregate, when signed by both parties constitute one instrument. Thereafter, each counterpart shall be deemed an original instrument as against any party who has signed it.

8.6 Governing Law and Jurisdiction. This Agreement is executed and intended to be performed in Lehigh County, Pennsylvania and the laws of the Commonwealth of Pennsylvania shall govern its construction, interpretation and effect. Any disputes under this Agreement shall lie in the Court of Common Pleas of Lehigh County.

IN WITNESS WHEREOF, the Parties hereto have hereunder set their hands and seals the day and year first above written.

LOWER MACUNGIE TOWNSHIP

By: \_\_\_\_\_  
Print Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

LEHIGH COUNTY AUTHORITY

By: \_\_\_\_\_  
Print Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

# EXHIBIT A

## Lehigh County Authority Cost Proposal

### *Lower Macungie Township – Mertztown Pump Station & Force Main*

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#### Overview

The following proposal illustrates Lehigh County Authority's operations and maintenance approach for the Mertztown Pump Station and Force Main to be located in Lower Macungie Township. The labor hours listed are estimated based on best practices for conducting preventive maintenance and operational monitoring of facilities of this size. It is expected that the first year of operation will include all hours and services noted below, and subsequent years the operations and maintenance plan may be adjusted based on system needs and station performance.

#### 1. Weekly Checks of Pump Stations

- **Frequency:** Once per week
- **Personnel:** 1 technician
- **Services:** Visual and vibration checks of pumps and equipment while operating
- **2025 Technician Rate (overhead included):** \$93.48 per hour
- **Estimated time per week:** 3 hours per employee
- **Estimated Weekly Cost:** \$280.44
- **Estimated Annual Cost:** \$14,582.88

#### 2. Emergency Callouts

- **Rate per Callout:** \$93.48 per hour
- **Other emergency expenses:** Actual cost

#### 3. Generator Servicing

- **Service Frequency:** 2 times per year for each generator
- **Cost per Service (Estimated):** \$1,200.00 per generator

#### 4. Quarterly & Annual Services

- **Services:** Wet well cleaning, pump oil changes, electrical connection checks, etc.
- **Technician Rate:** \$93.48 per hour
- **Estimated Hours:** 50
- **Annual Cost Estimate:** \$4,674

#### 5. SCADA Costs

- **Estimated Monthly fee:** \$38

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### **Total Annual Expenses**

1. **Estimated Weekly Checks:** \$14,582.88
2. **Estimated Emergency Callouts:** Billed per event
3. **Estimated Generator Servicing:** \$2,400
4. **Quarterly & Annual Services:** \$4,674
5. **SCADA:** \$456

**Total Estimated Annual Cost:** \$22,112.88

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### **Summary**

This proposal has been developed to provide as close to a “hands-free” operation for the Township as possible. In other words, except in extreme unforeseen emergencies, LCA would provide all necessary services to ensure proper 24/7 operation of the facility, providing all certified operators, equipment, and labor necessary for both preventive and corrective maintenance. The estimated annual cost for Lehigh County Authority to operate and maintain the Mertztown Road Pump Station is **\$22,112.88**. All hours will be billed as actual hours worked, ensuring accurate and fair cost allocation. Additional expenses, such as maintenance fees and materials, will be billed directly to the Township. More significant repairs and replacements will be outlined in an annual report to the Township, or more frequently as needed, with a request to proceed with the work. This approach provides transparency in billing and ensures that the Township is only charged for actual services rendered and necessary maintenance costs.

Lehigh County Authority  
System Operations Review - August 2025  
Presented: September 22, 2025

		<u>Aug-25</u>	<u>2025</u> <u>Totals***</u>	<u>2024 Totals</u>	<u>2023 Totals</u>
Recordable Safety Incidents*	Total LCA	1	5	2	33
Non-Recordable Safety Incidents	Total LCA	0	2	25	
Incident Types **	Injuries	0	6	15	
	Property Damage	0	3	11	
	Near Miss	0	0	1	

\*\*\*Numbers adjusted to match current tracking methodology

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

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

<u>Year To Date Safety Incidents</u>	<u>Root Cause Analysis Completed</u>	<u>Corrective Actions Identified</u>	<u>Corrective Actions Completed</u>
	2	4	0

Current Month Incidents

<u>Description</u>	<u>Date</u>	<u>Type</u>	<u>Root Cause(s)</u>	<u>Corrective Action(s)</u>
The employee was assigned the task of replacing a faulty motor. The employee, believing the system was safely de-energized and that the pulley would be "freewheeling" without any significant force, proceeded to manually work the belt off the pulley. However, the residual torque from the motor was sufficient to suddenly and unexpectedly pull the employee's hand forward. The employee's finger was caught between the belt and the pulley, resulting in a significant injury. The employee was able to self-extricate and immediately sought medical attention.	8/27/2025	Recordable, Medical Treatment	The primary root cause of this incident is an inadequate and incomplete Lockout/Tagout (LOTO) procedures that failed to identify and control all forms of hazardous energy.	Develop a new, specific LOTO procedure for this task that includes steps for isolating/venting the vacuum system to eliminate torque before any mechanical work begins.

## Page 2

Other:

	Lehigh County Authority System Operations Review - August 2025 Presented: September 22, 2025				
					Page 3
<b>Critical Activities</b>	<b>System</b>	<b>Description</b>	<b>Aug-25</b>	<b>2025 Totals</b>	<b>2024 Totals</b>
<b>Wastewater Compliance</b>	Allentown	Bypass	0	2	3
		Bypass Volume	0	111,496	1,713,644
		Permit Exceedances	0	0	0
		Sanitary Sewer Overflows	0	4	5
		COA Issued NOVs	0	1	0
		Regulatory Agency issued NOVs	0	2	0
	Arcadia	Bypass	0	0	0
		Bypass Volume	0	0	0
		Permit Exceedances	0	0	1
		Sanitary Sewer Overflows	0	0	0
		NOVs	0	0	1
	Heidelberg Heights	Bypass	0	2	4
		Bypass Volume	0	271,192	2,125,696
		Permit Exceedances	0	1	9
		Sanitary Sewer Overflows	0	0	0
		NOVs	0	0	0
	Lynn	Bypass	0	0	2
		Bypass Volume	0	0	1,010,000
		Permit Exceedances	0	0	2
		Sanitary Sewer Overflows	0	0	0
		NOVs	0	0	0
	Sand Spring	Bypass	0	0	0
		Bypass Volume	0	0	0
		Permit Exceedances	0	16	44
		Sanitary Sewer Overflows	0	0	0
		NOVs	0	0	1
	Wynnewood	Bypass	0	0	0
		Bypass Volume	0	0	0
		Permit Exceedances	0	0	9
		Sanitary Sewer Overflows	0	0	3
		NOVs	0	0	1
<b>Water Compliance</b>	Allentown	Boil Water Advisories	0	1	0
	Central Lehigh	Boil Water Advisories	0	0	0
	Suburban Water Systems	Boil Water Advisories	0	1	1



1053 SPRUCE RD \* P.O. BOX 3348 \* ALLENTOWN, PA 18106-0348  
610-398-2503 \* email: [service@lehighcountyauthority.org](mailto:service@lehighcountyauthority.org)  
[www.lehighcountyauthority.org](http://www.lehighcountyauthority.org)

August 28, 2025

Mr. Brian Chamberlain  
Office of Compliance  
Department of Public Works  
641 South 10<sup>th</sup> Street, 3<sup>rd</sup> Floor  
Allentown, PA 18103

Re: NOTIFICATION OF VIOLATION

Dear Mr. Chamberlain,

Lehigh County Authority (LCA) is in receipt of the Notification of Violation (NOV) issued by the City of Allentown (City) related to the sanitary sewer overflows (SSOs) that occurred at the Kline's Island Wastewater Treatment Plant (KIWWTP) Outfall 003 on April 22, 2025, and June 9, 2025. This letter outlines LCA's response to the NOV, including a review of action steps we will take that align with the corrective actions listed in the NOV.

LCA is committed to maintaining full compliance with all regulatory standards set forth in the Allentown Water & Sewer Concession Lease Agreement and by the Pennsylvania Department of Environmental Protection (DEP). We acknowledge that continued preventable SSOs and activations of Outfall 003 are a serious concern and may result in additional financial or regulatory consequences if they continue without appropriate intervention.

### Incident Overview

The SSOs that occurred on April 22 and June 9, 2025, at KIWWTP were caused by blockages of the climber screen due to failed operation of the bar screen. Our review determined that, during both events, there was sufficient time to respond and prevent SSOs; however, neither were successfully prevented. In the first instance, no operators were in the Operations Control Center to monitor SCADA alarms; in the second, an operator was present but failed to respond promptly. These failures to respond shed light on several deficiencies including mechanical issues, alarm notification, responsiveness, and comprehension of duties as a certified operator.



## **Corrective Actions**

### **Mechanical & Telemetry Improvements**

The initial bar screen inspection, conducted the day after the April bypass, involved draining the wet well and influent side of the failed bar screen for staff to inspect the mechanism and pathway. No mechanical issues or obstructions were found, and sensors monitoring wet well levels were functioning correctly. Later that week, a more thorough inspection was performed on both climbers. It was observed that the gates were not holding water effectively, requiring additional pumps to lower water levels for safe access. Again, no faults or blockages in the screen mechanism were identified. A final detailed inspection focused on sensor alignment to ensure accurate water level monitoring.

The upstream and downstream differential transducers are believed to have contributed to the bar screens stopping operation. When the screens are in automatic mode, they are programmed to be operated when the upstream and downstream meet a specific differential in level. It is believed that inaccurate readings were not triggering the bar screen to operate, as intended. Both transducers for wet well two were replaced, relocated, and reprogrammed to assist with accurate readings and minimize nuisance alarms. Additionally, a shield was installed around both sensors to mitigate false readings from condensation build up. The transducer replacement for wet well one is in progress and has been delayed as a result of wiring complications. The transducer appears to be operating correctly and is only being replaced due to age.

After the second incident, changes to how the operators run the bar screens were made. Currently, both screens are active with one in manual and one in automatic mode. Previously this was only implemented during high flow events, when the screens are more prone to clogging. Screens operating in manual and automatic are rotated each day. Implementing this strategy will eliminate any issue with both screens not operating at the proper intervals and blocking, ultimately leading to a SSO. LCA recognizes that this is not the ideal operation due to wear and tear on the equipment and will discontinue the practice once confidence is restored in the operation.

### **SCADA Alarm Optimization**

In review of the SCADA alarms that occurred during this time period, it was discovered that the levels in the wet well were alarming frequently, with many being false alarms. The SCADA team reviewed the programming and implemented changes to reduce the “noise” and false triggering of wet well alarms. Additionally, a secondary alarm system will be installed once all of the necessary parts are received. This audible alarm system will sound when the bar screens

have not operated in a set time frame. Currently there is no alarm tied to failed operation of the bar screen, unless the screen mechanically faults.

### **Planned System Enhancements**

The plant is currently undergoing a SCADA upgrade, which is scheduled to be operational by the end of 2025. The new capabilities of the SCADA system will allow team members to monitor the plant via electronic devices, such as iPads. This will allow operators to view the status of the plant and alarms while they are away from the control center, given they are connected to plant WIFI. Although full implementation is not expected to occur until the end of the year, we will be able to implement a feature that will allow text messaging of critical alarms to cell phones. Cell phones are provided to on-duty operators and once implemented will be required to carry them when away from the operator control center. This procedure is intended to eliminate missed alarms when operators are conducting rounds outside the control center and will allow for timely response. Additionally, alarm escalation will notify management of critical alarms and those that have not been acknowledged.

### **Operator Training and SOP Review**

LCA recognizes the importance of developing, maintaining, and implementing effective training on Standard Operating Procedures (SOPs) to ensure consistent and reliable plant operations. While the facility maintains a comprehensive catalog of SOPs, we acknowledge that several documents required updates to reflect current operational practices and recent corrective actions related to the SSOs and this Notification of Violation. As part of our corrective action plan, LCA has initiated a comprehensive SOP review and update process, focusing on procedures directly related to climber screen operations, SCADA alarm response, and other critical plant operations. Plant management, in collaboration with operations staff, is actively reviewing each SOP and making necessary revisions to improve clarity, standardization, and compliance. SOPs directly related to the operation of the bar screens were recently reviewed and are included in this response. A full review and update of SOPs is expected to last six months, which will ensure thoroughness.

LCA intends to implement a new staffing strategy, which will assist with SOP review and training efforts. This includes hiring and training of a new position, Lead Operator. This position will assist with the effort of maintaining SOPs and provide yearly training to all operators of critical SOPs. While this position has not been filled yet, the intent is to have this position staffed and operational by the end of the year.

Operators are expected to fully comprehend the responsibilities associated with their roles and recognize the significance of their actions on public health and the environment. Adhering to all relevant rules and regulations is both an essential job function and a requirement under Chapter 302, The Administration of the Water and Wastewater Operators' Certification Program. Noncompliance at KIWWTP presents additional risks, including potential complications with Act 537 planning. The operator ethics and compliance training program is currently being enhanced to address topics such as the consequences of noncompliance. These sessions will emphasize the importance of the Act 537 plan and the necessity of maintaining regulatory compliance. These sessions are scheduled to occur throughout September.

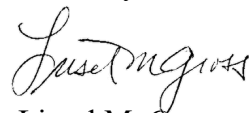
### **Implementation Timeline**

<b>Milestone</b>	<b>Target Date</b>
<b>SCADA Alarm Text Messaging</b>	September 2025
<b>Operator Ethics &amp; Compliance Training</b>	September 2025
<b>Bar Screen Audible Alarm</b>	October 2025
<b>SCADA Text Messaging Capabilities</b>	October 2025
<b>SCADA Transition</b>	December 2025
<b>Lead Operator Staffing</b>	December 2025
<b>Complete SOP Review</b>	February 2026

Lehigh County Authority takes these events seriously and is committed to implementing the measures outlined above to ensure operational reliability and regulatory compliance.

Should you have any questions or require additional information, please contact me directly.

Sincerely,



Liesel M. Gross  
Chief Executive Officer

cc: Andrew Moore, Director of Plant Operations, LCA

**LEHIGH COUNTY AUTHORITY/ALLENTOWN DIVISION  
WASTEWATER TREATMENT PLANT  
INFILCO-DEGREMONT INC (I.D.I.) CLIMBER SCREENS**

**OPERATING PROCEDURE - August 2025**

The screens are modeled for “Severe Duty”.

Climber Rack, Pinion and Screen

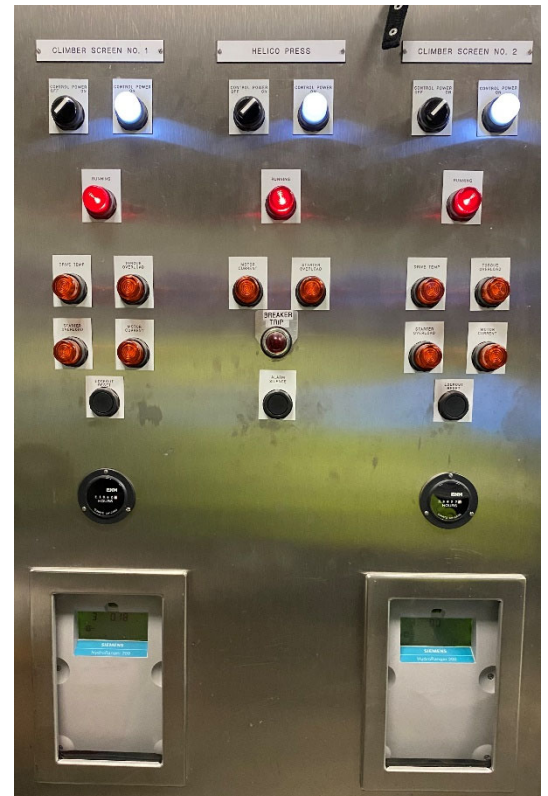
- The design criteria is a flow of 88 MGD through each screen.
- $\frac{3}{4}$ ” gap between the bars to allow more passage of grit and stones.
- The bars are at an 85° angle to the horizontal plane and attached to a flush bottom base plate, providing a smooth transition for the rake to engage and clear the screen.
- The torque overload switch for the climber is sealed.
- The motor is submersible up to 40 ft. of water head pressure. However, it should not be kept like that for over an hour.
- The auger has a removable end piece for easy replacement when the tip wears out.
- The ultrasonic level sensors to make the climber run on differential levels are no longer in PVC tubes. They now hang from a bracket over the wetwells so “flushing the tubes” is no longer required.

Operation

- On the panel in the Ops control room there is a digital readout of the inlet and outlet level of the screen and on a graph in SCADA.
  - Signal 1 – Inlet level of screen
  - Signal 2 – Outlet level of screen
  - Signal 3 – The differential between the inlet and outlet.

In Auto mode, the climber will run when a 9” level differential between the inlet and outlet exists. The climber will continue to run until the differential drops below 6”.

\*By keeping an eye on Signal 1’s depth, it will give you an idea how close you are to an Influent Bypass. **A bypass will occur at ~12’.**



- Daily operation of the climbers includes one in auto and the other in hand. Climbers operations should rotate between auto and hand on a daily basis and be logged in the daily blog.

### Climber not running in Auto

- Turn control power switch on the front of the control panel in the operator's area to the "off" position, wait 10 seconds, turn switch back to the "on" position. If still not running in "Auto", run climber in "Hand" and generate a service request.

### "Lockout Reset" Button

- On the panel in the Ops Control Room for any alarm condition on the panel.

### For Climber Torque Overload

- To reset, turn off the climber in the bar rack area. Push the reset button on the panel in the Ops Control Room.
- Put climber to "Hand" and run it backwards a few seconds to possibly release what is causing the jam/overload condition.
- Run it forward and observe for any abnormal condition such as something that shouldn't go into the auger, teeth to bar screen misalignment, or any other possible cause. Repeat this procedure as necessary and put second climber into service if necessary.

\*All other switches/controls are the same to run the climbers and auger.

### \*\*The Main & Auxiliary Sewage Pump Wetwell Level Controls

#1 Wetwell's level sensor is a submersible pressure transmitter located in a PVC tube after the climber screen

#2 Wetwell's level sensor is a submersible pressure transmitter located in a PVC tube after the climber screen. It is located next to the storm water valve and wall mounted ladder.





**LEHIGH COUNTY AUTHORITY / ALLENTOWN DIVISION**  
**WASTEWATER TREATMENT PLANT**  
**OPERATING PROCEDURE**

**August 2025**

**ALTERNATING CLIMBER SCREENS**

1. Put the climber screen to be in service on **"HAND"** & **"FWD"**.
  2. Crack open influent gate on screen to be in service approximately 6".
  3. Allow time for grease that had accumulated while the screen was offline to be brought up and passed through the Helico screenings press before opening the influent gate further.
  4. Change the **Wet Well Selector Switch** located on the **MAIN PUMP HOUSE** screen to the setting for the wet well that is going online. *When the mode selector switch is in the **"SIMULATE"** position the PLC will use the number entered into the selection box. All appropriate pumps that should be on at the displayed level will stay on and the auxiliary pump speed will be held steady until the switch is changed from **"SIMULATE"** to the desired in-service **WETWELL**.*
- | MPH Wetwell Levels  |            |
|---------------------|------------|
| High Alarm          | 10.25 Feet |
| Low Alarm           | 5.5 Feet   |
| #1 Wetwell Selected |            |
| Wetwell #1          | 6.2 ft     |
| Wetwell #2          | 6.04 ft    |
| Simulated Wetwell   | 6.05 ft    |
5. Once the grease is under control, begin to open the influent gate on the screen to be in service.
  6. Begin to close influent gate on screen being taken out of service.
  7. When the influent gate to climber to be out of service is closed, allow the screen's rake mechanism to make a few more passes (put it on **"HAND"** & **"FWD"** if necessary), once the rake comes up empty, put both controls to the **"OFF"** position.
  8. When the heavy grease accumulation is completely removed from climber screen and screenings press in service, put climber in the automatic mode, (top switch in **"AUTO"** position and bottom switch in **"OFF"** position). The Helico screenings press controls should be set up the same, (top switch in **"AUTO"** position and bottom switch in **"OFF"** position).

**Lehigh County Authority / Allentown Division  
Wastewater Treatment Plant  
Operating Procedure**

**RESOLVING CLIMBER SCREEN MALFUNCTIONS**

August 2025

**INTRODUCTION**

The headworks of this treatment plant has been constructed with two Infilco-Degremont Climber Screens which utilizes a pin rack and cogwheel system to advance the rake mechanisms that



provides for removal of the wastewater debris, such as feminine hygiene products, from the bar screens. At the top of their travel a scrapping arm removes the debris from the rakes for dewatering and disposal. On dry flow days only one influent climber screen is normally operated in the forward direction, in the “Auto” mode as indicated by the Hand/Off/Auto switch located on the wall in front of each climber screen. Under storm conditions two screens are operated in the forward direction, in the “Hand” mode as depicted by the image to the left. Typically the screens run trouble free with little operator intervention with the exception of weekly alternation. However on an infrequent basis heavy debris can cause the rake mechanism to malfunction as a result of high torque or overload conditions. It is critical that treatment plant operators know how

to resolve these conditions in order to restore normal operation to the screens. Presented below are the steps required to reset the rake mechanism’s protective devices.

**TORQUE ALARMS**

The first indication of trouble with the climber system should be an audible alarm from the Climber Screen/Helico Press control panel located in the SCADA room of the MPH. Should this alarm annunciate, press the “Alarm Silence” button on the control panel and immediately investigate the cause of the alarm. On occasion, a large item or a significant amount of stone/grit will enter the screen channel causing the rake to disengage and be forced away from the bars. When this happens the over-torque switch will open and the control panel will indicate “torque alarm”.

Often, the only way to remedy this is to briefly run the rake mechanism in the reverse direction. **Extreme care must be taken to not allow the climber rake mechanism to travel in reverse at the top of the unit. Doing so will cause the rake to impact and crush the debris scrapping arm which would cause severe damage to the unit at a time when it is needed most, i.e. during high flow conditions.** To reverse the screen rake mechanism move the HAND/OFF/AUTO switch to the “HAND” position and move the REV/OFF/FWD switch to the “REV” position. The rake mechanism should immediately begin operating in reverse direction.

**Lehigh County Authority / Allentown Division  
Wastewater Treatment Plant  
Operating Procedure**



The screens have been constructed with proximity switches to prevent the climber rake mechanism from traveling in reverse at the top of the unit. Sporadically the proximity switch gets out of sync and the screen controls will not activate the reverse function when the rake is stuck at the bottom of its travel. If the obstruction cannot be cleared and it has been determined that the rake must be run backwards, the control panel will need to be opened while energized. This will require the small screw to be turned while simultaneously pulling downward on the breaker disconnect handle. If done correctly, you will be able to open the control panel door while keeping the climber system energized. **Use extreme caution while working inside this energized cabinet.**

Once the door is opened you will be able to see two buttons located inside on the lower right side of the cabinet. Each button is labeled and when pressed will allow the specific climber screen to be reversed. Once depressed, go to the remote control panels located in front of the climber screens, move the HOA switch to the “HAND” position. Next, rotate the switch labeled FWD/OFF/REV to the “REV” position to allow the rake to travel backwards. The reverse action will only be available until the climber mechanism trips one of two safety magnetic switches located in the normal travel path of the rake. The pushbutton resynchronizes the proximity switch safety feature. Once the obstruction has been cleared, return the HOA switch to the “HAND” or “AUTO” position and return the FWD/OFF/REV switch to “FWD” position to restore the climber to normal operation.





**Lehigh County Authority / Allentown Division  
Wastewater Treatment Plant  
Operating Procedure**

**STARTER OVERLOAD**



In other instances a mass of debris may enter the wet well and cause the rake mechanism motor to overload. The item may be too heavy to lift or cause the rake mechanism to become entangled. When this happens the “motor overload” alarm will activate on the Screen/Helico Press control panel as a result of the rake mechanism tripping the overload. The motor will stop running until the overload is reset in the control panel and obstruction is removed or the malfunction is repaired. Often after the motor is reset the obstruction can be cleared by reversing the rake mechanism as described above. Should this alarm annunciate, press the “Alarm Silence” button on the control panel and immediately investigate the cause of the alarm. To reset the overload: move the HOA switch to the “OFF” position at the remote control panel in front of the screen;

open the control cabinet as previously described; locate the shock relay switches and depress the reset as depicted in the image on the bottom left. Next, check if the breakers in the image on the bottom right are tripped. If so, reset breaker by pushing the breaker handle down to the full open position and then back up to the closed position.

