



Lehigh County Authority

FINAL 5-YEAR CAPITAL PLAN

ALLENTOWN DIVISION

2025-2029

OCTOBER 2024

**LEHIGH COUNTY AUTHORITY
5-YEAR CAPITAL PLAN
2025-2029**

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2025-2029 Capital Plan

Glossary of Acronyms & Terms

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

LCA Water and/or Wastewater Divisions/Systems

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

Project Type

Project Type	Description
<i>AO</i>	Administrative Order
<i>UW</i>	Uncompleted Work ⁽¹⁾
<i>S-7-MCI</i>	Schedule-7 (<i>Lease Required</i>) Major Capital Improvement ⁽²⁾
<i>LCA-MCI</i>	LCA Developed Major Capital Improvement ⁽²⁾
<i>Regular</i>	A project that does not fit in any of the aforementioned special categories

(1) *Uncompleted Work: City Projects that were supposed to be complete by the time of settlement. The City and LCA have reached an agreement for LCA to execute them.*

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

Project Funding

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

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

Project Category

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

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

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

Approval Stage

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

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION
CAPITAL PLAN
2025–2029**

SUMMARY

The Allentown Division Capital Plan (Plan) is a five-year plan that covers the years 2025 through 2029. The Plan includes water and wastewater projects to ensure facility / infrastructure reliability and to comply with the Allentown Water & Sewer Lease (Lease) required projects. It also includes projects and studies deemed necessary by LCA, where the latter will identify and evaluate upgrades and improvements that will be incorporated in future Capital Plans. The Lease requires that LCA submit a 5-year Capital Plan to the City of Allentown annually for review and approval.

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

TABLE 1 – CAPITAL FUNDING OVERVIEW 2025-2029					
Budget Area	LCA	CITY			TOTALS
		Grants	Reimburse	Sub-Total	
Water	\$148,510,000	\$850,000	\$0	\$850,000	\$149,360,000
Wastewater	\$101,705,000	\$0	\$350,000	\$350,000	\$102,055,000
Totals	\$250,215,000	\$850,000	\$350,000	\$1,200,000	\$251,415,000

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

Wastewater Projects: Projects focus on regulatory compliance, asset management, immediate and future needs at the Wastewater Treatment Plant (WWTP) and addressing the Lease operating standards. Projects of note include the replacement of the solids process boiler and HVAC upgrade project and replacement of electrical substation no. 1. In addition,

annual funding is included in the Plan for the rehabilitation of defective sewer mains and a City-wide manhole rehabilitation program to remove sources of inflow and infiltration.

Regional Sewer Plan (Act 537) Projects: The City and LCA are collaborating on the development of a regional Act 537 Plan, which will provide details for sewage facility plans and significant capital improvements in the Allentown Division to address sanitary sewer overflows and overall capacity challenges of the system. The Act 537 Plan is expected to be submitted to state regulators in 2025 for review and approval and will include a separate detailed financial analysis outlining intermunicipal cost-sharing approaches for these projects as well as financing strategies and an analysis of rate impacts. This financial analysis and full plan overview will be presented later in 2024. However, due to the project timing, including some projects commencing in 2025, LCA has incorporated these projects into this Capital Plan to offer a preliminary view of borrowing and rate impacts. This information will be further refined in the Act 537 Plan and subsequent Capital Plans.

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

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

FINANCIAL JUSTIFICATION

LCA’s draft 2025-2029 Capital Plan is expected to be funded through a mix of operating revenues, project reserves, grants, and new borrowing, as outlined below. A more detailed cash-flow evaluation showing the impact of this funding approach is shown on the next page.

TABLE 2 – 2025-2029 Capital Plan Allentown Division Funding Sources						
	LCA SOURCES				CITY SOURCES (see Table 1)	
Budget Area	Grants	Operating/Capital Reserves	Prior Borrowing	New Borrowing	Grants & Reimb	Total Sources
Water	\$40,000,000	\$60,871,172	\$29,638,828	\$18,000,000	\$850,000	\$149,360,000
Wastewater	\$4,000,000	\$62,605,000	\$17,800,000	\$17,300,000	\$350,000	\$102,055,000
Totals	\$44,000,000	\$123,476,172	\$47,438,828	\$35,300,000	\$1,200,000	\$251,415,000

GRANT REVIEW

LCA has applied for (or will apply for) grants to support this Plan in the following areas:

- I&I Source Reduction Plan – H2O PA grant awarded in January 2024 for \$3,000,000. Additional grant application for \$4,197,000 submitted to the Rep. Wild and Sen. Casey Community Project Funding programs, awaiting decision.
- Lead Service Line Replacement Program – PENNVEST grant of \$3,383,892 awarded in July 2023. Additional grant application for \$11,998,000 submitted in July 2024. Annual grant applications to be submitted until Bipartisan Infrastructure Law funding expires in 2026.
- PFAS Compliance Planning & Treatment Upgrades – Grant funding will be sought for the \$20,000,000 in estimated costs included in this plan.
- Regional Sewer Plan (Act 537 Plan) Projects – This Capital Plan includes \$77,100,000 in upgrades to the Kline’s Island Wastewater Treatment Plant and \$29,450,000 for construction of relief interceptors. LCA will be actively seeing grants and other alternative funding for these projects.

To present a realistic financial outlook, assuming a 100% grant award will not occur, LCA has captured approximately 60% of this potential grant funding source in this analysis. Project costs that are not covered via grants will be incorporated into the additional project financing.

CONDENSED CASH FLOW - CITY DIVISION					
US DOLLARS	2025	2026	2027	2028	2029
User Charges	62,014,031	67,592,522	73,404,324	78,009,148	81,805,691
Other Operating Revenues	373,304	373,304	373,304	373,304	373,304
Non-Operating Revenues	2,218,271	2,068,271	1,968,271	1,968,271	1,968,271
Operating expenses	(25,030,987)	(25,884,917)	(26,702,584)	(27,478,627)	(28,276,782)
Annual Lease & Other Payments		(1,010,070)	(1,037,846)	(1,063,793)	(1,090,387)
Debt Service - Current Debt	(17,679,490)	(18,247,905)	(18,836,405)	(20,197,155)	(20,834,905)
Debt Service - NEW Debt	(86,200)	(86,200)	(2,405,479)	(2,405,479)	(2,405,479)
Investments Converting to Cash	-	-	-	-	-
Grants	15,000,000	12,500,000	17,350,000	-	-
Proceeds From NEW Debt	-	-	35,300,000	-	-
Capex	(50,580,000)	(64,317,500)	(73,077,500)	(33,705,000)	(31,610,000)
NET FUND FLOWS	(13,771,071)	(27,012,495)	6,336,085	(4,499,330)	(70,287)
Lease Rate Increases	6.30%	5.50%	5.25%	5.00%	5.00%
Project Cost Recovery Charges	2.62%	3.59%	3.84%	3.83%	3.20%
Total User Charge Increase	8.92%	9.09%	9.09%	8.83%	8.20%
Unrestricted Cash Balance	48,831,411	21,391,952	27,319,203	22,431,851	21,962,486
Unrestricted Investments	-	-	-	-	-
Total Unrestricted Balances	48,831,411	21,391,952	27,319,203	22,431,851	21,962,486
Days Operating Cash on Hand	186	302	243	220	283
DEBT SERVICE COVERAGE RATIO	2.14	2.35	2.26	2.29	2.36

WATER

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION
2025-2029 CAPITAL PROGRAM
WATER**

Project #	Name or Title of Proposal	Prj. Category	Funding (1)	Approval Stage (1)	This Capital Program						
					2024 Budget Approved	2025 Year 1	2026 Year 2	2027 Year 3	2028 Year 4	2029 Year 5	2025-2029 Total
OPERATING/CAPITAL RESERVE FUNDS											
ANNUAL PROJECTS											
AD-W-A	Annual Projects	AM - Varies	LCA	A	2,715,000	2,555,000	2,180,000	2,285,000	2,205,000	2,150,000	11,375,000
Sub-total Annual					\$ 2,715,000	\$ 2,555,000	\$ 2,180,000	\$ 2,285,000	\$ 2,205,000	\$ 2,150,000	\$ 11,375,000
NON-CCRC PROJECTS											
AD-W-10	Indenture Report Improvements	AM-High	LCA	C	\$ 200,000	\$ 200,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 600,000
AD-W-11	Master Plan Studies	CA/OS	LCA	S	\$ -	\$ -	\$ -	\$ 200,000	\$ -	\$ -	\$ 200,000
AD-W-12	WFP Redundant Power Supply	Regulatory	LCA	D	\$ 80,000	\$ 835,000	\$ -	\$ -	\$ -	\$ -	\$ 835,000
AD-W-13	Tank and Reservoir Rehabilitation	AM-High	LCA	V	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 1,000,000
AD-W-14	Large Diameter Valve Replacement Project	AM-High	LCA	D	\$ 350,000	\$ 300,000	\$ 400,000	\$ 400,000	\$ 300,000	\$ 300,000	\$ 1,700,000
AD-W-15	WFP HVAC Upgrade Project	Efficiency	LCA	C	\$ -	\$ 500,000	\$ 750,000	\$ 500,000	\$ -	\$ -	\$ 1,750,000
AD-W-16	WFP Roof Replacement Project	AM-High	LCA	S	\$ -	\$ -	\$ 50,000	\$ 600,000	\$ -	\$ -	\$ 650,000
TOTAL NON-CCRC PROJECTS					\$ 830,000	\$ 2,035,000	\$ 1,500,000	\$ 2,000,000	\$ 600,000	\$ 600,000	\$ 6,735,000
Large Projects and CCRC Projects (3)											
AD-W-20	Annual Water Main Replacements	CA/OS	CCRC	C	\$ 4,800,000	\$ 5,000,000	\$ 5,000,000	\$ 5,200,000	\$ 5,200,000	\$ 5,200,000	\$ 25,600,000
AD-W-21	PFAS Compliance Planning and Upgrades	Regulatory	CCRC (2)	S	\$ 250,000	\$ 300,000	\$ 5,000,000	\$ 14,700,000	\$ -	\$ -	\$ 20,000,000
AD-W-22	WFP Raw Water Line and Influent Channel Upgrade	Efficiency	CCRC (2)	S	\$ -	\$ 100,000	\$ 500,000	\$ 1,000,000	\$ -	\$ -	\$ 1,600,000
AD-W-23	Water Meter Replacement Project	AM-High	LCA	C	\$ 800,000	\$ 2,000,000	\$ 100,000	\$ -	\$ 750,000	\$ -	\$ 2,850,000
AD-W-24	WFP Filter Upgrades	Master Plan	CCRC/City ARPA	C	\$ 2,350,000	\$ 3,600,000	\$ 1,750,000	\$ -	\$ -	\$ -	\$ 5,350,000
AD-W-25	Big Lehigh Intake & Transmission Upgrades	Master Plan	LCA	S	\$ 200,000	\$ 100,000	\$ 500,000	\$ 250,000	\$ -	\$ -	\$ 850,000
AD-W-26	Lead Service Line Replacement Program	Regulatory	CCRC	C	\$ 5,000,000	\$ 15,000,000	\$ 15,000,000	\$ 15,000,000	\$ 15,000,000	\$ 15,000,000	\$ 75,000,000
TOTAL CCRC PROJECTS					\$ 13,400,000	\$ 26,100,000	\$ 27,850,000	\$ 36,150,000	\$ 20,950,000	\$ 20,200,000	\$131,250,000
GRAND TOTAL					\$ 16,945,000	\$ 30,690,000	\$ 31,530,000	\$ 40,435,000	\$ 23,755,000	\$ 22,950,000	\$149,360,000

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

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	CITY WATER ANNUAL PROJECTS					
Budget Area	Water	Department		Capital Works	Project No.	AD-W-A
Location	Allentown		Prj. Type	Both	Prj. Score	65
Prj Initiator	Volk		Prj Manager	Geissel		

Detailed Project Description
Annual project that consists of smaller projects that are managed by operations and/or capital works, including the following: New and replacement water meters, WFP general improvements, general water system improvements, mobile equipment, other equipment, reservoir rehab/maintenance, various water system studies, distribution mains - development/service connections, distribution mains upsizing, and capital management.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	50	13%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	75	19%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	100	15%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	50	3%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	50	5%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	10	1%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	100	10%

Additional Information

System Location CAC- W CITY WATER **Will this project require Land Rights?**

Project inception Date 1/2/2017 **Anticipated Project Completion Date** 12/31/2029

Project No.	AD-W-A	Project Name	CITY WATER ANNUAL PROJECTS
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Primary Prj Category Asset Management Plan **Secondary Prj Category** System Improvement

Project Drivers and Needs

- | | |
|---|--|
| <input type="checkbox"/> New Facility | <input checked="" type="checkbox"/> End of Useful Life |
| <input checked="" type="checkbox"/> Existing Facility - Upgrade | <input checked="" type="checkbox"/> Obsolescence |
| <input checked="" type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input type="checkbox"/> Regulatory |

Notes

Annual projects and procurements help maintain the operation of the water distribution system and WFP and align with LCA's asset management plan goals.

Capital Funds Requested for Project
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LCA Staff	\$200,000	Project Estimated Level	Planning
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$10,000,000	Grant Eligibility	No
Professional Services	\$1,000,000	Future Spending	\$0
Contingencies	\$175,000		
Total	\$11,375,000		

Current Budget 2024	\$2,715,000	
First Year Budget 2025	\$2,555,000	Construction
Second Year Budget 2026	\$2,180,000	Construction
Third Year Budget 2027	\$2,285,000	Construction
Fourth Year Budget 2028	\$2,205,000	Construction
Fifth Year Budget 2029	\$2,150,000	Construction
Total 2025-2029	\$11,375,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	CITY WATER INDENTURE IMPROVEMENTS				
Budget Area	Water	Department	Capital Works	Project No.	AD-W-10
Location	Allentown	Prj. Type	Vertical	Prj. Score	40
Prj Initiator	DePoe	Prj Manager	Rohrbach		

Detailed Project Description
This project addresses deficiencies that identified in the annual Indenture Report. The project includes general concrete repairs, structure upgrades and repairs, pipe coatings, concrete and steel reservoir coatings, security upgrades, and electrical upgrades.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	25	6%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	50	13%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	75	11%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	0	0%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	25	3%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	0	0%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	75	8%

Additional Information

System Location CAC- W CITY WATER **Will this project require Land Rights?**

Project inception Date 1/2/2015 **Anticipated Project Completion Date** 12/31/2029

Project No.	AD-W-10	Project Name	CITY WATER INDENTURE IMPROVEMENTS
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Primary Prj Category Asset Management Plan **Secondary Prj Category** Concession agreement/Operating Standard

Project Drivers and Needs

- | | |
|---|--|
| <input type="checkbox"/> New Facility | <input type="checkbox"/> End of Useful Life |
| <input checked="" type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input type="checkbox"/> System Improvements | <input type="checkbox"/> Regulatory |

Notes

Annual Indenture project is driven by asset management. 2025 project will focus on South Mountain Reservoir improvements.

Capital Funds Requested for Project
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LCA Staff	\$20,000	Project Estimated Level	Planning
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$450,000	Grant Eligibility	No
Professional Services	\$100,000	Future Spending	\$0
Contingencies	\$30,000		
Total	\$600,000		

Current Budget 2024	\$200,000	
First Year Budget 2025	\$200,000	Construction
Second Year Budget 2026	\$100,000	Construction
Third Year Budget 2027	\$100,000	Construction
Fourth Year Budget 2028	\$100,000	Construction
Fifth Year Budget 2029	\$100,000	Construction
Total 2025-2029	\$600,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	CITY WATER MASTER PLAN STUDIES				
Budget Area	Water	Department	Capital Works	Project No.	AD-W-11
Location	Allentown	Prj. Type	Vertical	Prj. Score	54
Prj Initiator	DePoe	Prj Manager	Boone		

Detailed Project Description
This project consists of water facilities master planning. As infrastructure ages and regulations become more stringent, a periodic comprehensive system study is required to evaluate the need for process changes, upgrades, etc. to maintain level of service, ensure meeting future needs and maintain regulatory compliance. Per the Concession agreement, a Master Plan must be generated on a 5-year basis. The last plan was completed in 2022, therefore a new plan is due in 2027.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	50	13%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	50	13%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	100	15%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	25	1%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	25	3%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	25	3%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	75	8%

Additional Information

System Location CAC- W CITY WATER **Will this project require Land Rights?**

Project inception Date 1/2/2017 **Anticipated Project Completion Date** 12/31/2027

Project No.	AD-W-11	Project Name	CITY WATER MASTER PLAN STUDIES
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Primary Prj Category Concession agreement/Operating standard **Secondary Prj Category** Planning

Project Drivers and Needs

- | | |
|---|--|
| <input type="checkbox"/> New Facility | <input type="checkbox"/> End of Useful Life |
| <input checked="" type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input type="checkbox"/> Regulatory |

Notes

Prior water facilities master plans were completed in 2017 and 2022.
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Capital Funds Requested for Project
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LCA Staff	\$15,000	Project Estimated Level	Planning
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$0	Grant Eligibility	No
Professional Services	\$175,000	Future Spending	\$0
Contingencies	\$10,000		
Total	\$200,000		

Current Budget 2024	\$0	
First Year Budget 2025	\$0	None
Second Year Budget 2026	\$0	None
Third Year Budget 2027	\$200,000	Planning
Fourth Year Budget 2028	\$0	None
Fifth Year Budget 2029	\$0	None
Total 2025-2029	\$200,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	WFP REDUNDANT POWER SUPPLY				
Budget Area	Water	Department	Capital Works	Project No.	AD-W-12
Location	Allentown	Prj. Type	Vertical	Prj. Score	60
Prj Initiator	DePoe	Prj Manager	Rohrbach		

Detailed Project Description
The 2022 Master Plan identified a near term project to provide an auxiliary electrical feed to the Water Filtration Plant (WFP). This was in conjunction with a DEP Chapter 109 ("System Service and Auxiliary Power Requirements") compliance assessment performed by LCA in 2022 that identified the need for a new electrical feed from a separate PPL substation. The WFP is currently provided electrical service from two separate feeds from the same PPL substation.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	50	13%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	50	13%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	100	15%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	25	1%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	75	8%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	10	1%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	100	10%

Additional Information

System Location CAC- W CITY WATER **Will this project require Land Rights?**

Project inception Date 6/1/2022 **Anticipated Project Completion Date** 6/1/2026

Project No.	AD-W-12	Project Name	WFP REDUNDANT POWER SUPPLY
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Primary Prj Category Regulatory **Secondary Prj Category** System Improvement

Project Drivers and Needs

- | | |
|---|--|
| <input type="checkbox"/> New Facility | <input type="checkbox"/> End of Useful Life |
| <input type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input checked="" type="checkbox"/> Regulatory |

Notes

Facility resilience and regulatory compliance are the primary drivers.
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Capital Funds Requested for Project
--

LCA Staff	\$15,000	Project Estimated Level	Design
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$750,000	Grant Eligibility	No
Professional Services	\$20,000	Future Spending	\$0
Contingencies	\$50,000		
Total	\$835,000		

Current Budget 2024	\$80,000	
First Year Budget 2025	\$835,000	Construction
Second Year Budget 2026	\$0	None
Third Year Budget 2027	\$0	None
Fourth Year Budget 2028	\$0	None
Fifth Year Budget 2029	\$0	None
Total 2025-2029	\$835,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	TANK AND RESERVOIR REHABILITATION				
Budget Area	Water	Department	Capital Works		Project No. AD-W-13
Location	Allentown	Prj. Type	Vertical	Prj. Score	60
Prj Initiator	Volk	Prj Manager	Geissel		

Detailed Project Description
This project includes mechanical upgrades, surface coatings, and structure rehabilitation and repair of pumping stations, concrete tanks, and concrete reservoirs. Project locations include the following: Schantz Spring reservoir, Huckleberry Ridge reservoir, South Mountain reservoir, East Side reservoir, Halstead pump station, and WFP wash water tank. The work will be located generally on the tank exteriors, process piping, and mechanical buildings. Improvements include process valve and actuator replacement, painting, HVAC systems, electrical components and mixing systems.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	50	13%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	75	19%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	100	15%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	25	1%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	25	3%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	0	0%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	100	10%

Additional Information

System Location CAC- W CITY WATER **Will this project require Land Rights?**

Project inception Date 1/2/2014 **Anticipated Project Completion Date** 12/31/2029

Project No.	AD-W-13	Project Name	TANK AND RESERVOIR REHABILITATION
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Primary Prj Category Asset Management Plan **Secondary Prj Category** System Improvement

Project Drivers and Needs

- | | |
|---|--|
| <input type="checkbox"/> New Facility | <input type="checkbox"/> End of Useful Life |
| <input checked="" type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input type="checkbox"/> Regulatory |

Notes

The majority of the work is asset management driven to maintain level of service and improve operations and maintenance.
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Capital Funds Requested for Project
--

LCA Staff	\$50,000	Project Estimated Level	Planning
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$750,000	Grant Eligibility	No
Professional Services	\$150,000	Future Spending	\$0
Contingencies	\$50,000		
Total	\$1,000,000		

Current Budget 2024	\$200,000	
First Year Budget 2025	\$200,000	Construction
Second Year Budget 2026	\$200,000	Construction
Third Year Budget 2027	\$200,000	Construction
Fourth Year Budget 2028	\$200,000	Construction
Fifth Year Budget 2029	\$200,000	Construction
Total 2025-2029	\$1,000,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	LARGE DIAMETER VALVE REPLACEMENT PROJECT				
Budget Area	Water	Department	Capital Works	Project No.	AD-W-14
Location	Allentown	Prj. Type	Linear	Prj. Score	58
Prj Initiator	Peters	Prj Manager	Dorner		

Detailed Project Description
This is a multi-year project to identify, prioritize, and replace large diameter valves that are in poor condition &/or inoperable. There are many large diameter valves in the City water system that are critical for isolating reservoirs and major water service areas in event of catastrophic breaks or maintenance needs. The replacement of these valves will allow for the proper isolation of reservoirs and system service areas to enable essential maintenance activities and repairs, in order to reduce potential water loss and service interruptions.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	25	6%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	75	19%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	100	15%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	0	0%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	75	8%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	0	0%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	100	10%

Additional Information

System Location CAC- W CITY WATER **Will this project require Land Rights?**

Project inception Date 1/2/2021 **Anticipated Project Completion Date** 12/31/2029

Project No.	AD-W-14	Project Name	LARGE DIAMETER VALVE REPLACEMENT PROJECT
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Primary Prj Category System Improvement **Secondary Prj Category** Efficiency

Project Drivers and Needs

- | | |
|---|--|
| <input type="checkbox"/> New Facility | <input checked="" type="checkbox"/> End of Useful Life |
| <input type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input checked="" type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input type="checkbox"/> Regulatory |

Notes

The inception of this project is the result of a major water main break in the South Mountain transmission main that occurred in late 2020, during which inoperable valves were encountered.

Capital Funds Requested for Project
--

LCA Staff	\$50,000	Project Estimated Level	Design
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$1,300,000	Grant Eligibility	No
Professional Services	\$300,000	Future Spending	\$0
Contingencies	\$50,000		
Total	\$1,700,000		

Current Budget 2024	\$350,000	
First Year Budget 2025	\$300,000	Construction
Second Year Budget 2026	\$400,000	Construction
Third Year Budget 2027	\$400,000	Construction
Fourth Year Budget 2028	\$300,000	Construction
Fifth Year Budget 2029	\$300,000	Construction
Total 2025-2029	\$1,700,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	WFP HVAC UPGRADE PROJECT				
Budget Area	Water	Department	Capital Works	Project No.	AD-W-15
Location	Allentown	Prj. Type	Vertical	Prj. Score	36
Prj Initiator	Lettko	Prj Manager	Rohrbach		

Detailed Project Description
The WFP currently has an aging HVAC system that requires extensive maintenance and is past its useful life and in need of replacement. Upgrades to the existing HVAC system will be completed in phases with Phase 1 being the 1st floor offices/customer service area. Phase 2 will include the 1st floor lab/operator's area as well as the 2nd floor.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	5	1%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	100	25%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	25	4%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	50	3%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	5	1%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	5	1%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	25	3%

Additional Information

System Location CAC- W CITY WATER **Will this project require Land Rights?**

Project inception Date 1/2/2023 **Anticipated Project Completion Date** 4/30/2025

Project No.	AD-W-15	Project Name	WFP HVAC UPGRADE PROJECT
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Primary Prj Category System Improvement **Secondary Prj Category** Efficiency

Project Drivers and Needs

- | | |
|---|--|
| <input type="checkbox"/> New Facility | <input checked="" type="checkbox"/> End of Useful Life |
| <input checked="" type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input type="checkbox"/> Regulatory |

Notes

Present HVAC system is deficient in several staff work areas at the WFP, and improvements will enhance interior work environment.

Capital Funds Requested for Project
--

LCA Staff	\$50,000	Project Estimated Level	Design
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$1,500,000	Grant Eligibility	No
Professional Services	\$75,000	Future Spending	\$0
Contingencies	\$125,000		
Total	\$1,750,000		

Current Budget 2024	\$0	
First Year Budget 2025	\$500,000	Construction
Second Year Budget 2026	\$750,000	Construction
Third Year Budget 2027	\$500,000	Construction
Fourth Year Budget 2028	\$0	None
Fifth Year Budget 2029	\$0	None
Total 2025-2029	\$1,750,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	WFP ROOF REPLACEMENT PROJECT				
Budget Area	Water	Department	Capital Works	Project No.	AD-W-16
Location	Allentown	Prj. Type	Vertical	Prj. Score	38
Prj Initiator	Geissel	Prj Manager	Rohrbach		

Detailed Project Description
There are various roof structures on the Water Filtration Plant that are in need of replacement due to age and leaks. Once the HVAC upgrades are complete, new roofs will be installed on the administration wing of the WFP which includes the roof over the office/customer service areas, lab/operations areas as well as the High Service Pump areas. Design anticipated to begin in 2027 after the HVAC upgrades are completed.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	1	0%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	75	19%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	75	11%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	1	0%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	1	0%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	1	0%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	75	8%

Additional Information

System Location	CAC- W CITY WATER	Will this project require Land Rights?	<input type="checkbox"/>
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Project inception Date	1/2/2019	Anticipated Project Completion Date	12/31/2028
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Project No.	AD-W-16	Project Name	WFP ROOF REPLACEMENT PROJECT
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Primary Prj Category Asset Management Plan **Secondary Prj Category** Efficiency

Project Drivers and Needs

- | | |
|---|--|
| <input type="checkbox"/> New Facility | <input checked="" type="checkbox"/> End of Useful Life |
| <input checked="" type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input checked="" type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input type="checkbox"/> System Improvements | <input type="checkbox"/> Regulatory |

Notes

The 2022 WFP Master Plan recommends near term roof replacement for the WFP offices, lab area and high lift pump area.

Capital Funds Requested for Project
--

LCA Staff	\$10,000	Project Estimated Level	Preliminary
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$500,000	Grant Eligibility	No
Professional Services	\$100,000	Future Spending	\$0
Contingencies	\$40,000		
Total	\$650,000		

Current Budget 2024	\$0	
First Year Budget 2025	\$0	None
Second Year Budget 2026	\$50,000	Design
Third Year Budget 2027	\$600,000	Construction
Fourth Year Budget 2028	\$0	None
Fifth Year Budget 2029	\$0	None
Total 2025-2029	\$650,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	ANNUAL WATER MAIN REPLACEMENTS				
Budget Area	Water	Department	Capital Works		Project No. AD-W-20
Location	Allentown	Prj. Type	Linear	Prj. Score	69
Prj Initiator	Volk	Prj Manager	Peters		

Detailed Project Description
Through the original Operating Standards of the Lease Concession Agreement, LCA was required to replace 2 miles of aging spun cast or pit cast iron water mains per year. LCA works closely with the City's Office of Compliance and Streets Department to coordinate the annual water main replacement projects, which are prioritized by LCA's engineer. The re-negotiated Lease and settlement with the City requires annual replacement of one mile of water main starting in 2021 up to and including 2024. In 2024, a review of the program (including break history) will be performed by LCA and City to determine if greater than 1 mile, but no more than 2 miles, of water main replacement shall be required annually. The capital budget assumes 2 miles of annual water main replacement starting in 2025.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	50	13%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	75	19%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	100	15%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	0	0%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	100	10%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	25	3%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	100	10%

Additional Information

System Location CAC- W CITY WATER **Will this project require Land Rights?**

Project inception Date 4/30/2013 **Anticipated Project Completion Date** 4/30/2064

Project No.	AD-W-20	Project Name	ANNUAL WATER MAIN REPLACEMENTS
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Primary Prj Category Concession agreement/Operating standard **Secondary Prj Category** Asset Management Plan

Project Drivers and Needs

- | | |
|---|--|
| <input type="checkbox"/> New Facility | <input type="checkbox"/> End of Useful Life |
| <input type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input checked="" type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input type="checkbox"/> Regulatory |

Notes

Primary project drivers are lease requirements and asset management. Replacing cast iron mains will reduce the frequency of breaks in the system which create customer outages and unaccounted for water.

Capital Funds Requested for Project
--

LCA Staff	\$500,000	Project Estimated Level	Design
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$22,600,000	Grant Eligibility	No
Professional Services	\$2,000,000	Future Spending	\$0
Contingencies	\$500,000		
Total	\$25,600,000		

Current Budget 2024	\$4,800,000	
First Year Budget 2025	\$5,000,000	Construction
Second Year Budget 2026	\$5,000,000	Construction
Third Year Budget 2027	\$5,200,000	Construction
Fourth Year Budget 2028	\$5,200,000	Construction
Fifth Year Budget 2029	\$5,200,000	Construction
Total 2025-2029	\$25,600,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	PFAS COMPLIANCE PLANNING AND UPGRADES				
Budget Area	Water	Department	Capital Works	Project No.	AD-W-21
Location	Allentown	Prj. Type	Vertical	Prj. Score	74
Prj Initiator	Moore	Prj Manager	Rohrbach		

Detailed Project Description
Due to regulatory changes in the Maximum Contaminant Level (MCL) for safe levels of PFAS in drinking water, LCA completed a study to determine the source(s) requiring treatment. The next step is to design and implement a treatment facility for Crystal Spring, the only source identified in the City water system to exceed the MCL for PFAS.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	100	25%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	100	25%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	50	8%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	25	1%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	100	10%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	25	3%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	25	3%

Additional Information

System Location CAC- W CITY WATER **Will this project require Land Rights?**

Project inception Date 1/2/2023 **Anticipated Project Completion Date** 12/31/2027

Project No.	AD-W-21	Project Name	PFAS COMPLIANCE PLANNING AND UPGRADES
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Primary Prj Category Regulatory **Secondary Prj Category** Change of Law

Project Drivers and Needs

- | | |
|--|--|
| <input checked="" type="checkbox"/> New Facility | <input type="checkbox"/> End of Useful Life |
| <input type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input type="checkbox"/> System Improvements | <input checked="" type="checkbox"/> Regulatory |

Notes

PFAS compounds, also known as "forever chemicals", are used extensively in industry & consumer products and have been determined to cause health concerns.
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Capital Funds Requested for Project
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LCA Staff	\$250,000	Project Estimated Level	Preliminary
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$18,500,000	Grant Eligibility	Yes
Professional Services	\$500,000	Future Spending	\$0
Contingencies	\$750,000		
Total	\$20,000,000		

Current Budget 2024	\$250,000	
First Year Budget 2025	\$300,000	Design
Second Year Budget 2026	\$5,000,000	Construction
Third Year Budget 2027	\$14,700,000	Construction
Fourth Year Budget 2028	\$0	None
Fifth Year Budget 2029	\$0	None
Total 2025-2029	\$20,000,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	WFP RAW WATER LINE AND INFLUENT CHANNEL UPGRADES				
Budget Area	Water	Department	Capital Works		Project No. AD-W-22
Location	Allentown	Prj. Type	Linear	Prj. Score	72
Prj Initiator	Lettko	Prj Manager	Rohrbach		

Detailed Project Description
The raw water line that connects to the influent channel is a single point of failure that requires periodic maintenance and cleaning. A redundant raw water line is proposed to improve plant resiliency and enable maintenance activities. The existing influent channel to the primary clarifiers (which is connected to the raw water line) experiences sub-optimal flow velocities which cause solids to deposit and accumulate prior to the clarifiers. Near term influent channel modifications are recommended in the 2022 Master Plan to maintain adequate velocity and reduce solids deposition.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	50	13%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	100	25%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	100	15%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	25	1%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	75	8%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	5	1%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	100	10%

Additional Information

System Location CAC- W CITY WATER **Will this project require Land Rights?**

Project inception Date 1/2/2022 **Anticipated Project Completion Date** 12/31/2027

Project No.	AD-W-22	Project Name	WFP RAW WATER LINE AND INFLUENT CHANNEL UPGRADES
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Primary Prj Category Efficiency **Secondary Prj Category** System Improvement

Project Drivers and Needs

- | | |
|---|--|
| <input type="checkbox"/> New Facility | <input type="checkbox"/> End of Useful Life |
| <input type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input type="checkbox"/> Regulatory |

Notes

WFP resiliency, risk mitigation and maintenance improvements are the primary drivers for this project.

Capital Funds Requested for Project

LCA Staff	\$20,000	Project Estimated Level	Planning
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$1,300,000	Grant Eligibility	TBD
Professional Services	\$180,000	Future Spending	\$0
Contingencies	\$100,000		
Total	\$1,600,000		

Current Budget 2024	\$0	
First Year Budget 2025	\$100,000	Design
Second Year Budget 2026	\$500,000	Construction
Third Year Budget 2027	\$1,000,000	Construction
Fourth Year Budget 2028	\$0	None
Fifth Year Budget 2029	\$0	None
Total 2025-2029	\$1,600,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	CITY 2024/2025 WATER METER REPLACEMENT PROJECT				
Budget Area	Water	Department	Capital Works	Project No.	AD-W-23
Location	Allentown	Prj. Type	Linear	Prj. Score	40
Prj Initiator	Kunkel	Prj Manager	Kunkel		

Detailed Project Description
<p>There are approximately 4000 Badger water meters ranging in size from 5/8" to 2" that are currently being used to monitor water consumption in the city. These sites were not part of the original City of Allentown meter replacement project in 2012/2013. The sites also have existing but outdated Encoder Receiver Transmitters (ERTs) which have exceeded their battery life and are now failing. The ERTs are attached to the Badger meters and cannot be replaced without replacing the meter. Should LCA decide to implement a cloud based AMI meter reading system, the outdated 40W/50W/60W ERTs will not be readable on the new system. Radio read capability is included on all meter exchanges, allowing for mobile read application. This meter replacement project began in 2024 and will conclude in 2025. Costs are also included for a future meter/radio replacement project. (Scope to be determined)</p>

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	5	1%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	25	6%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	100	15%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	90	5%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	75	8%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	25	3%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	25	3%

Additional Information

System Location CAC- W CITY WATER Will this project require Land Rights?

Project inception Date 1/1/2024 Anticipated Project Completion Date 12/31/2026

Project No.	AD-W-23	Project Name	CITY 2024/2025 WATER METER REPLACEMENT PROJECT
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Primary Prj Category Revenue Opportunity **Secondary Prj Category** Efficiency

Project Drivers and Needs

- | | |
|---|--|
| <input type="checkbox"/> New Facility | <input checked="" type="checkbox"/> End of Useful Life |
| <input type="checkbox"/> Existing Facility - Upgrade | <input checked="" type="checkbox"/> Obsolescence |
| <input checked="" type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input type="checkbox"/> Regulatory |

Notes

The Badger meters have an outdated style radio that is incorporated into the meter and cannot be replaced separately. The old-style radio does not include data logging or tamper alarms.

Capital Funds Requested for Project

LCA Staff	\$40,000	Project Estimated Level	Construction
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$2,710,000	Grant Eligibility	No
Professional Services	\$0	Future Spending	\$0
Contingencies	\$100,000		
Total	\$2,850,000		

Current Budget 2024	\$800,000	
First Year Budget 2025	\$2,000,000	Construction
Second Year Budget 2026	\$100,000	Construction
Third Year Budget 2027	\$0	None
Fourth Year Budget 2028	\$750,000	None
Fifth Year Budget 2029	\$0	None
Total 2025-2029	\$2,850,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	WFP FILTER UPGRADES					
Budget Area	Water	Department		Capital Works	Project No.	AD-W-24
Location	Allentown		Prj. Type	Vertical	Prj. Score	74
Prj Initiator	DePoe		Prj Manager	Rohrbach		

Detailed Project Description
The initial filter evaluation was completed in 2017 as part of the Water Filtration Plant Master Plan, and a follow-up detailed filter condition assessment and study was completed in 2020. The Capital Plan budget is based on performing a comprehensive rehabilitation of the filters recommended by the filter study. Upgrade work is to include replacement of the clay filter underdrains, replacement of filter media, installation of an air scour system, new control system with SCADA integration, and associated work. Design of the filter upgrade project was completed in 2023, and the project was bid. Construction contracts were executed in early 2024 and physical construction began on site in June of 2024. Final construction completion is expected in late summer 2026.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	75	19%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	90	23%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	100	15%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	50	3%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	75	8%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	25	3%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	50	5%

Additional Information

System Location CAC- W CITY WATER **Will this project require Land Rights?**

Project inception Date 12/31/2017 **Anticipated Project Completion Date** 8/11/2026

Project No.	AD-W-24	Project Name	WFP FILTER UPGRADES
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Primary Prj Category System Improvement **Secondary Prj Category** Regulatory

Project Drivers and Needs

- | | |
|---|--|
| <input type="checkbox"/> New Facility | <input checked="" type="checkbox"/> End of Useful Life |
| <input checked="" type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input type="checkbox"/> Regulatory |

Notes

This project is indicated as a near term capital project in the 2017 and 2022 Master Plan.
--

Capital Funds Requested for Project
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LCA Staff	\$75,000	Project Estimated Level	Construction
Land Acquisition	\$0	Project Funding	City Grant
Construction/Equipment	\$4,805,000	Grant Eligibility	Yes
Professional Services	\$390,000	Future Spending	\$0
Contingencies	\$80,000		
Total	\$5,350,000		

Current Budget 2024	\$2,350,000	
First Year Budget 2025	\$3,600,000	Construction
Second Year Budget 2026	\$1,750,000	Construction
Third Year Budget 2027	\$0	None
Fourth Year Budget 2028	\$0	None
Fifth Year Budget 2029	\$0	None
Total 2025-2029	\$5,350,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	BIG LEHIGH INTAKE AND TRANSMISSION UPGRADES				
Budget Area	Water	Department	Capital Works	Project No.	AD-W-25
Location	Allentown	Prj. Type	Vertical	Prj. Score	69
Prj Initiator	DePoe	Prj Manager	Rohrbach		

Detailed Project Description
This project consists of improvements to the pumping, intake and addition of a chemical feed system for taste & odor control. This project was identified in the Master Plan and improvements are necessary for the Big Lehigh to be a more reliable source and allow for more frequent operation and use when the Little Lehigh must be taken out of service to repair.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	50	13%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	75	19%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	100	15%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	25	1%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	100	10%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	25	3%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	90	9%

Additional Information

System Location CAC- W CITY WATER **Will this project require Land Rights?**

Project inception Date 8/1/2017 **Anticipated Project Completion Date** 12/31/2027

Project No.	AD-W-25	Project Name	BIG LEHIGH INTAKE AND TRANSMISSION UPGRADES
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Primary Prj Category System Improvement **Secondary Prj Category** N/A

Project Drivers and Needs

- | | |
|---|--|
| <input type="checkbox"/> New Facility | <input type="checkbox"/> End of Useful Life |
| <input checked="" type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input type="checkbox"/> Regulatory |

Notes

Preliminary engineering was completed in 2024. Primary project drivers are resiliency and system improvement.

Capital Funds Requested for Project
--

LCA Staff	\$50,000	Project Estimated Level	Preliminary
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$600,000	Grant Eligibility	TBD
Professional Services	\$150,000	Future Spending	\$0
Contingencies	\$50,000		
Total	\$850,000		

Current Budget 2024	\$200,000	
First Year Budget 2025	\$100,000	Design
Second Year Budget 2026	\$500,000	Construction
Third Year Budget 2027	\$250,000	Construction
Fourth Year Budget 2028	\$0	None
Fifth Year Budget 2029	\$0	None
Total 2025-2029	\$850,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	LEAD SERVICE LINE REPLACEMENT PROGRAM				
Budget Area	Water	Department	Capital Works	Project No.	AD-W-26
Location	Allentown	Prj. Type	Linear	Prj. Score	80
Prj Initiator	Moore	Prj Manager	Peters		

Detailed Project Description
This is a multi-year program to replace public and private lead water service lines in the city. This program starts with a comprehensive system-wide inventory of service lines and is followed by an annual replacement project which is prioritized based on concentration of lead services per neighborhood and other factors. PennVEST grant money is being pursued to fund this program.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	100	25%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	100	25%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	100	15%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	0	0%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	100	10%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	0	0%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	50	5%

Additional Information

System Location CAC- W CITY WATER **Will this project require Land Rights?**

Project inception Date 1/2/2023 **Anticipated Project Completion Date** 12/31/2030

Project No.	AD-W-26	Project Name	LEAD SERVICE LINE REPLACEMENT PROGRAM
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Primary Prj Category Regulatory **Secondary Prj Category** Change of Law

Project Drivers and Needs

- | | |
|---|--|
| <input type="checkbox"/> New Facility | <input type="checkbox"/> End of Useful Life |
| <input type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input checked="" type="checkbox"/> Regulatory |

Notes

The primary driver is EPA's Lead and Copper Rule Revisions, which requires an initial inventory of public and private water service lines be performed by 10/16/2024, followed by replacement of all lead services within 10 years.

Capital Funds Requested for Project

LCA Staff	\$1,000,000	Project Estimated Level	Planning
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$54,500,000	Grant Eligibility	Yes
Professional Services	\$17,000,000	Future Spending	\$0
Contingencies	\$2,500,000		
Total	\$75,000,000		

Current Budget 2024	\$5,000,000	
First Year Budget 2025	\$15,000,000	Construction
Second Year Budget 2026	\$15,000,000	Construction
Third Year Budget 2027	\$15,000,000	Construction
Fourth Year Budget 2028	\$15,000,000	Construction
Fifth Year Budget 2029	\$15,000,000	Construction
Total 2025-2029	\$75,000,000	

WASTEWATER

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION
2025-2029 CAPITAL PROGRAM
WASTEWATER**

Project #	Name or Title of Proposal	Prj. Category	(1) Funding	Approval Stage (1)	This Capital Program						
					2024 Budget Approved	2025 Year 1	2026 Year 2	2027 Year 3	2028 Year 4	2029 Year 5	2025-2029 Total
Operating/Capital Reserve Funds											
<u>ANNUAL PROJECTS</u>											
AD-S-A	Annual Projects	AM - Varies	LCA	A	\$ 2,706,000	\$ 2,715,000	\$ 2,065,000	\$ 2,035,000	\$ 2,165,000	\$ 1,975,000	\$ 10,955,000
Sub-total Annual					\$ 2,706,000	\$ 2,715,000	\$ 2,065,000	\$ 2,035,000	\$ 2,165,000	\$ 1,975,000	\$ 10,955,000
<u>Non-CCRC Projects</u>											
AD-S-10	Indenture Report Improvements	AM - Varies	LCA	C	\$ 300,000	\$ 250,000	\$ 200,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 900,000
AD-S-11	WWTP Master Plan	CA/OS	LCA	S	\$ 160,000	\$ -				\$ 250,000	\$ 250,000
AD-S-12	Manhole Inspection and Sealing Program	Regulatory	LCA	S	\$ 2,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 5,000,000
AD-S-13	WWTP Redundant Power Supply	Efficiency	LCA	S	\$ -	\$ -	\$ 50,000	\$ 850,000	\$ 100,000	\$ -	\$ 1,000,000
AD-S-14	WWTP Facilities Improvements	Efficiency	LCA	S	\$ -	\$ 100,000	\$ 700,000	\$ -	\$ -	\$ -	\$ 800,000
Sub-total Allentown Division Wastewater Capital Funded by LCA					\$ 2,460,000	\$ 1,350,000	\$ 1,950,000	\$ 2,000,000	\$ 1,250,000	\$ 1,400,000	\$ 7,950,000
<u>Large Projects and CCRC Projects</u>											
AD-S-20	WWTP Electrical Substation Replacement Phase 2	AM - High	CCRC	C	\$ 2,200,000	\$ 5,250,000	\$ 750,000	\$ -	\$ -	\$ -	\$ 6,000,000
AD-S-21	WWTP Final Clarifier 1-4 Rehabilitation	AM - High	CCRC	D	\$ 900,000	\$ 2,500,000	\$ 3,000,000	\$ -	\$ -	\$ -	\$ 5,500,000
AD-S-22	WWTP Primary Sludge Digester Feed Line Replacement	System Improvement	CCRC	D	\$ 600,000	\$ 2,700,000	\$ -	\$ -	\$ -	\$ -	\$ 2,700,000
AD-S-23	WWTP Wet Weather Improvements Project - Phase 1	Regulatory	CCRC	D	\$ 700,000	\$ 750,000	\$ 10,900,000	\$ 15,750,000	\$ -	\$ -	\$ 27,400,000
AD-S-24	WWTP Plastic Media Trickling Filter Rehabilitation Project	AM - High	CCRC (3)	S	\$ -	\$ 200,000	\$ 5,200,000	\$ -	\$ -	\$ -	\$ 5,400,000
AD-S-25	I/I Reduction Plan	Regulatory	CCRC (2)	V	\$ 3,000,000	\$ 3,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,250,000	\$ 5,250,000	\$ 23,500,000
AD-S-26	WWTP Solids Process Improvements	Regulatory	CCRC (3)	S	\$ -	\$ 500,000	\$ 2,500,000	\$ 7,000,000	\$ 2,000,000	\$ -	\$ 12,000,000
Sub-total Allentown Division Wastewater Large & CCRC Projects					\$ 7,400,000	\$ 14,900,000	\$ 27,350,000	\$ 27,750,000	\$ 7,250,000	\$ 5,250,000	\$ 82,500,000
<u>Act 537 Plan Development Projects</u>											
AD-S-40	Act 537 Alternative Analyses	Regulatory	City	S	\$ 600,000	\$ 250,000	\$ 100,000	\$ -	\$ -	\$ -	\$ 350,000
AD-S-41	Miscellaneous Act 537 Planning, Financial and Legal Reviews	Regulatory	LCA	V	\$ 200,000	\$ 200,000	\$ 100,000				\$ 300,000
Sub-total Allentown Division Wastewater Capital Funded by the City					\$ 800,000	\$ 450,000	\$ 200,000	\$ -	\$ -	\$ -	\$ 650,000
GRAND TOTAL					\$ 13,366,000	\$ 19,415,000	\$ 31,565,000	\$ 31,785,000	\$ 10,665,000	\$ 8,625,000	\$ 102,055,000

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

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	CITY WASTEWATER ANNUAL PROJECTS				
Budget Area	Wastewater	Department	Operations	Project No.	AD-S-A
Location	Allentown	Prj. Type	Both	Prj. Score	65
Prj Initiator	Volk	Prj Manager	Geissel		

Detailed Project Description
This annual project consists of a number of small projects and procurements including WWTP general improvements, WWTP other equipment, sanitary sewer main replacements and rehabilitation, mobile equipment, SCADA upgrades, and collection system service connections.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	50	13%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	75	19%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	100	15%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	50	3%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	50	5%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	10	1%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	100	10%

Additional Information

System Location CAC-S ALLENTOWN SEWER **Will this project require Land Rights?**

Project inception Date 1/2/2017 **Anticipated Project Completion Date** 12/31/2029

Project No.	AD-S-A	Project Name	CITY WASTEWATER ANNUAL PROJECTS
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Primary Prj Category Asset Management Plan **Secondary Prj Category** System Improvement

Project Drivers and Needs

- | | |
|---|--|
| <input type="checkbox"/> New Facility | <input checked="" type="checkbox"/> End of Useful Life |
| <input type="checkbox"/> Existing Facility - Upgrade | <input checked="" type="checkbox"/> Obsolescence |
| <input checked="" type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input type="checkbox"/> Regulatory |

Notes

Annual projects and equipment procurements help maintain the level of service for operation of the wastewater collection/conveyance/treatment systems.
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Capital Funds Requested for Project
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LCA Staff	\$200,000	Project Estimated Level	Planning
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$10,000,000	Grant Eligibility	No
Professional Services	\$500,000	Future Spending	\$0
Contingencies	\$255,000		
Total	\$10,955,000		

Current Budget 2024	\$2,706,000	
First Year Budget 2025	\$2,715,000	Construction
Second Year Budget 2026	\$2,065,000	Construction
Third Year Budget 2027	\$2,035,000	Construction
Fourth Year Budget 2028	\$2,165,000	Construction
Fifth Year Budget 2029	\$1,975,000	None
Total	\$10,955,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	CITY WASTEWATER INDENTURE REPORT IMPROVEMENTS				
Budget Area	Wastewater	Department	Capital Works	Project No.	AD-S-10
Location	Allentown	Prj. Type	Vertical	Prj. Score	40
Prj Initiator	DePoe	Prj Manager	Rohrbach		

Detailed Project Description
This project addresses deficiencies that identified in the Annual Trust Indenture Report. The project includes general concrete repairs, structure upgrades and repairs, pipe coatings, concrete tank repairs/upgrades, security upgrades (fencing, lighting, etc.), and electrical upgrades.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	25	6%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	50	13%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	75	11%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	0	0%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	25	3%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	0	0%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	75	8%

Additional Information

System Location CAC-S ALLENTOWN SEWER **Will this project require Land Rights?**

Project inception Date 1/2/2015 **Anticipated Project Completion Date** 12/31/2029

Project No.	AD-S-10	Project Name	CITY WASTEWATER INDENTURE REPORT IMPROVEMENTS
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Primary Prj Category Asset Management Plan **Secondary Prj Category** System Improvement

Project Drivers and Needs

- | | |
|---|--|
| <input type="checkbox"/> New Facility | <input type="checkbox"/> End of Useful Life |
| <input checked="" type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input type="checkbox"/> Regulatory |

Notes

Capital Funds Requested for Project
--

LCA Staff	\$25,000	Project Estimated Level	Preliminary
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$725,000	Grant Eligibility	No
Professional Services	\$100,000	Future Spending	\$0
Contingencies	\$50,000		
Total	\$900,000		

Current Budget 2024	\$300,000	
First Year Budget 2025	\$250,000	Construction
Second Year Budget 2026	\$200,000	Construction
Third Year Budget 2027	\$150,000	Construction
Fourth Year Budget 2028	\$150,000	Construction
Fifth Year Budget 2029	\$150,000	Construction
Total	\$900,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	WWTP MASTER PLAN				
Budget Area	Wastewater	Department	Capital Works	Project No.	AD-S-11
Location	Allentown	Prj. Type	Vertical	Prj. Score	54
Prj Initiator	DePoe	Prj Manager	Boone		

Detailed Project Description
This project consists of wastewater facilities master planning. As infrastructure ages and regulations become more stringent, a periodic comprehensive system study is required to evaluate the need for process changes, upgrades, etc. to maintain level of service, ensure meeting future needs and maintain regulatory compliance. Per the Concession agreement, a Master Plan must be generated on a 5-year basis. The last plan was completed in 2024; therefore, a new plan is due in 2029.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	50	13%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	50	13%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	100	15%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	25	1%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	25	3%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	25	3%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	75	8%

Additional Information

System Location CAC-S ALLENTOWN SEWER **Will this project require Land Rights?**

Project inception Date 1/2/2017 **Anticipated Project Completion Date** 12/31/2029

Project No.	AD-S-11	Project Name	WWTP MASTER PLAN
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Primary Prj Category Concession agreement/Operating standard **Secondary Prj Category** Planning

Project Drivers and Needs

- | | |
|---|--|
| <input type="checkbox"/> New Facility | <input type="checkbox"/> End of Useful Life |
| <input checked="" type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input type="checkbox"/> Regulatory |

Notes

The first KIWWTP Master Plan was completed in 2018; the second cycle was delayed one year by the City to 2024.
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Capital Funds Requested for Project
--

LCA Staff	\$25,000	Project Estimated Level	Planning
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$0	Grant Eligibility	No
Professional Services	\$200,000	Future Spending	\$0
Contingencies	\$25,000		
Total	\$250,000		

Current Budget 2024	\$160,000	
First Year Budget 2025	\$0	None
Second Year Budget 2026	\$0	None
Third Year Budget 2027	\$0	None
Fourth Year Budget 2028	\$0	None
Fifth Year Budget 2029	\$250,000	Planning
Total	\$250,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	MANHOLE INSPECTION AND SEALING PROGRAM				
Budget Area	Wastewater	Department	Capital Works	Project No.	AD-S-12
Location	Allentown	Prj. Type	Linear	Prj. Score	65
Prj Initiator	DePoe	Prj Manager	Dorner		

Detailed Project Description
Approximately 1800 manholes are being inspected in Allentown to identify structures that are a source of wet weather inflow leakage into the sanitary sewer system. The first cycle (2024/2025) of the manhole repairs will include a range of work including sealing, caulking, and watertight inserts for approximately about 200 manholes. The following project cycles are anticipated to include a similar range of repairs, with a focus on assessing the effectiveness of prior cycle repairs. This will be an annual program with inspection and rehab each year.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	100	25%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	50	13%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	100	15%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	25	1%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	50	5%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	10	1%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	50	5%

Additional Information

System Location CAC-S ALLENTOWN SEWER **Will this project require Land Rights?**

Project inception Date 8/14/2023 **Anticipated Project Completion Date** 12/31/2029

Project No.	AD-S-12	Project Name	MANHOLE INSPECTION AND SEALING PROGRAM
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Primary Prj Category Regulatory **Secondary Prj Category** System Improvement

Project Drivers and Needs

- | | |
|---|--|
| <input type="checkbox"/> New Facility | <input type="checkbox"/> End of Useful Life |
| <input type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input checked="" type="checkbox"/> Regulatory |

Notes

This project is regulatory driven, specifically by Act 537 planning and sewer system capacity issues.

Capital Funds Requested for Project
--

LCA Staff	\$150,000	Project Estimated Level	Planning
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$3,000,000	Grant Eligibility	TBD
Professional Services	\$1,650,000	Future Spending	\$5,000,000
Contingencies	\$200,000		
Total	\$5,000,000		

Current Budget 2024	\$2,000,000	
First Year Budget 2025	\$1,000,000	Construction
Second Year Budget 2026	\$1,000,000	Construction
Third Year Budget 2027	\$1,000,000	Construction
Fourth Year Budget 2028	\$1,000,000	Construction
Fifth Year Budget 2029	\$1,000,000	Construction
Total	\$5,000,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	WWTP REDUNDANT POWER SUPPLY				
Budget Area	Wastewater	Department	Capital Works	Project No.	AD-S-13
Location	Allentown	Prj. Type	Vertical	Prj. Score	77
Prj Initiator	DePoe	Prj Manager	Rohrbach		

Detailed Project Description
Kline's Island Wastewater Treatment Plant (KWWTP) is provided electrical service from two 12.4 KV power transmission line feeds from a single PPL substation, located about 1/2 mile north of the plant. In order to improve facility resilience and avoid plant overflows and compliance violations due to extended power outages, a third electrical feed from a separate PPL substation is needed.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	100	25%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	75	19%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	100	15%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	50	3%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	50	5%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	5	1%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	100	10%

Additional Information

System Location CAC-S ALLENTOWN SEWER **Will this project require Land Rights?**

Project inception Date 1/2/2023 **Anticipated Project Completion Date** 12/31/2028

Project No.	AD-S-13	Project Name	WWTP REDUNDANT POWER SUPPLY
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Primary Prj Category Efficiency **Secondary Prj Category** Regulatory

Project Drivers and Needs

- | | |
|---|--|
| <input type="checkbox"/> New Facility | <input type="checkbox"/> End of Useful Life |
| <input checked="" type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input checked="" type="checkbox"/> Regulatory |

Notes

This work will follow the Substation No. 1 Upgrade project.

Capital Funds Requested for Project
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LCA Staff	\$25,000	Project Estimated Level	
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$850,000	Grant Eligibility	TBD
Professional Services	\$75,000	Future Spending	\$0
Contingencies	\$50,000		
Total	\$1,000,000		

Current Budget 2024	\$0	
First Year Budget 2025	\$0	None
Second Year Budget 2026	\$50,000	Design
Third Year Budget 2027	\$850,000	Construction
Fourth Year Budget 2028	\$100,000	Construction
Fifth Year Budget 2029	\$0	None
Total	\$1,000,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	WWTP FACILITIES IMPROVEMENTS				
Budget Area	Wastewater	Department	Capital Works	Project No.	AD-S-14
Location	Allentown	Prj. Type	Vertical	Prj. Score	33
Prj Initiator	Saunders	Prj Manager	Rohrbach		

Detailed Project Description
The offices, meeting space, locker rooms, lab, and break room space at the KIWWTP are in need of evaluation, space optimization and upgrades/renovations. As part of the 2024 KIWWTP Master Plan, LCA' consultant is evaluating the space needs and proposing recommendations that will include modifications to existing buildings and new building(s). These improvements will allow for better utilization of existing spaces as well as create a multi-use space. The scope of the improvements is not defined at this point.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	0	0%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	90	23%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	50	8%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	10	1%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	10	1%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	5	1%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	10	1%

Additional Information

System Location CAC-S ALLENTOWN SEWER **Will this project require Land Rights?**

Project inception Date 1/1/2024 **Anticipated Project Completion Date** 12/31/2027

Project No.	AD-S-14	Project Name	WWTP FACILITIES IMPROVEMENTS
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Primary Prj Category Efficiency **Secondary Prj Category** System Improvement

Project Drivers and Needs

- | | |
|---|--|
| <input checked="" type="checkbox"/> New Facility | <input type="checkbox"/> End of Useful Life |
| <input checked="" type="checkbox"/> Existing Facility - Upgrade | <input checked="" type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input type="checkbox"/> Regulatory |

Notes

The primary driver of this project is efficiency - to improve the function of existing spaces and provide a multi-use space.
--

Capital Funds Requested for Project
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LCA Staff	\$50,000	Project Estimated Level	Preliminary
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$500,000	Grant Eligibility	No
Professional Services	\$150,000	Future Spending	\$0
Contingencies	\$100,000		
Total	\$800,000		

Current Budget 2024	\$0	
First Year Budget 2025	\$100,000	Design
Second Year Budget 2026	\$700,000	Construction
Third Year Budget 2027	\$0	None
Fourth Year Budget 2028	\$0	None
Fifth Year Budget 2029	\$0	None
Total	\$800,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	WWTP ELECTRICAL SUBSTATION REPLACEMENT PHASE 2				
Budget Area	Wastewater	Department	Capital Works	Project No.	AD-S-20
Location	Allentown	Prj. Type	Vertical	Prj. Score	60
Prj Initiator	DePoe	Prj Manager	Rohrbach		

Detailed Project Description
Substation 1 is approximately 50 years old and has reached the end of its useful life. A condition assessment study was performed in 2016 that recommended both substations be replaced. Substation No. 2 was replaced in 2019. This project will replace existing Substation No. 1 with updated and increased capacity equipment to accommodate future equipment loads from planned capacity improvement projects that include upgrades to the Main and Auxiliary pump stations.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	50	13%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	50	13%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	100	15%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	50	3%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	50	5%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	25	3%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	100	10%

Additional Information

System Location	CAC-S ALLENTOWN SEWER	Will this project require Land Rights?	<input type="checkbox"/>
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Project inception Date 2/1/2019	Anticipated Project Completion Date 3/31/2026
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Project No.	AD-S-20	Project Name	WWTP ELECTRICAL SUBSTATION REPLACEMENT PHASE 2
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Primary Prj Category System Improvement **Secondary Prj Category** Efficiency

Project Drivers and Needs

- | | |
|---|---|
| <input type="checkbox"/> New Facility | <input type="checkbox"/> End of Useful Life |
| <input checked="" type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input checked="" type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input type="checkbox"/> Regulatory |

Notes

Asset management, resiliency, and regulatory compliance are the primary drivers for the replacement of this critical electrical equipment.
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Capital Funds Requested for Project
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LCA Staff	\$80,000	Project Estimated Level	Construction
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$5,150,000	Grant Eligibility	No
Professional Services	\$210,000	Future Spending	\$0
Contingencies	\$560,000		
Total	\$6,000,000		

Current Budget 2024	\$2,200,000	
First Year Budget 2025	\$5,250,000	Construction
Second Year Budget 2026	\$750,000	Construction
Third Year Budget 2027	\$0	None
Fourth Year Budget 2028	\$0	None
Fifth Year Budget 2029	\$0	None
Total	\$6,000,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	WWTP FINAL CLARIFIER 1-4 REHABILITATION				
Budget Area	Wastewater	Department	Capital Works	Project No.	AD-S-21
Location	Allentown	Prj. Type	Vertical	Prj. Score	50
Prj Initiator	Volk	Prj Manager	Rohrbach		

Detailed Project Description
This project involves upgrades to the four (4) oldest final settling tanks (FST #1-4) to replace existing mechanisms, drive units, and electrical main controls center (MCC). The work also includes modifications to FST #3 for leachate receiving. The final settling tank upgrades were identified as a near term upgrade in the 2019 WWTP Master Plan.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	50	13%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	25	6%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	100	15%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	50	3%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	25	3%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	10	1%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	100	10%

Additional Information	
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System Location	CAC-S ALLENTOWN SEWER	Will this project require Land Rights?	<input type="checkbox"/>
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Project inception Date	2/1/2019	Anticipated Project Completion Date	12/31/2026
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Project No.	AD-S-21	Project Name	WWTP FINAL CLARIFIER 1-4 REHABILITATION
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Primary Prj Category System Improvement **Secondary Prj Category** Asset Management Plan

Project Drivers and Needs

- | | |
|---|--|
| <input type="checkbox"/> New Facility | <input checked="" type="checkbox"/> End of Useful Life |
| <input checked="" type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input type="checkbox"/> Regulatory |

Notes

Primary project drivers are asset management, Master Plan, and efficiency.
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Capital Funds Requested for Project
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LCA Staff	\$50,000	Project Estimated Level	Design
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$5,000,000	Grant Eligibility	No
Professional Services	\$200,000	Future Spending	\$0
Contingencies	\$250,000		
Total	\$5,500,000		

Current Budget 2024	\$900,000	
First Year Budget 2025	\$2,500,000	Construction
Second Year Budget 2026	\$3,000,000	Construction
Third Year Budget 2027	\$0	None
Fourth Year Budget 2028	\$0	None
Fifth Year Budget 2029	\$0	None
Total	\$5,500,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	WWTP PRIMARY SLUDGE DIGESTER FEED LINE REPLACEMENT				
Budget Area	Wastewater	Department	Capital Works	Project No.	AD-S-22
Location	Allentown	Prj. Type	Vertical	Prj. Score	56
Prj Initiator	DePoe	Prj Manager	Rohrbach		

Detailed Project Description
The existing 6-inch unlined primary sludge piping limits the percentage of solids that can be conveyed from the primary clarifiers and clogging and periodic flushing is required to restore level of service. This project will replace the existing primary sludge feed lines between the primary clarifiers and the digesters from 6" DIP to 8" glass lined DIP. Improvements in the primary sludge pumping station will include replacement of unlined DIP to Glass lined DIP and the addition of valves and cleanouts. Improvements at the Digester Control Building will include new valving, metering, and cleanouts. The new glass lined pipe will reduce maintenance activities and facilitate pumping a higher solids content to the digesters, thereby optimizing digester capacity.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	50	13%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	50	13%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	100	15%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	75	4%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	25	3%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	25	3%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	75	8%

Additional Information

System Location CAC-S ALLENTOWN SEWER **Will this project require Land Rights?**

Project inception Date 2/1/2019 **Anticipated Project Completion Date** 12/31/2025

Project No.	AD-S-22	Project Name	WWTP PRIMARY SLUDGE DIGESTER FEED LINE REPLACEMENT
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Primary Prj Category System Improvement **Secondary Prj Category** Efficiency

Project Drivers and Needs

- | | |
|---|--|
| <input type="checkbox"/> New Facility | <input type="checkbox"/> End of Useful Life |
| <input checked="" type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input type="checkbox"/> Regulatory |

Notes

Primay drivers are efficiency and system improvement.

Capital Funds Requested for Project

LCA Staff	\$25,000	Project Estimated Level	Design
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$2,500,000	Grant Eligibility	No
Professional Services	\$100,000	Future Spending	\$0
Contingencies	\$75,000		
Total	\$2,700,000		

Current Budget 2024	\$600,000	
First Year Budget 2025	\$2,700,000	Construction
Second Year Budget 2026	\$0	None
Third Year Budget 2027	\$0	None
Fourth Year Budget 2028	\$0	None
Fifth Year Budget 2029	\$0	None
Total	\$2,700,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	WWTP WET WEATHER IMPROVEMENTS PROJECT - PHASE 1				
Budget Area	Wastewater	Department	Capital Works	Project No.	AD-S-23
Location	Allentown	Prj. Type	Vertical	Prj. Score	71
Prj Initiator	DePoe	Prj Manager	Rohrbach		

Detailed Project Description
The purpose of this project is to increase the wet weather capacity of the KIWWTP from approximately 87 MGD to 100 MGD and reduce the frequency of 003 bypass operations. The project consists of 3 components as follows: improvements to the Main Pump Station (MPS) & Auxiliary Pump Station (APS) pumps/VFDs/piping/wet wells, improvements to the Intermediate Pump Station (IPS) Primary Effluent pumps/VFDs, and installation of a tertiary bypass to divert a portion of the biologically treated flow from the plastic media trickling filters, that would normally go through the Intermediate Settling Tanks (ISTs) and Rock Media Trickling Filters (RMTFs), directly to the Final Settling Tanks (FSTs) during peak wet weather flow events.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	100	25%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	50	13%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	100	15%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	25	1%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	50	5%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	25	3%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	100	10%

Additional Information

System Location CAC-S ALLENTOWN SEWER **Will this project require Land Rights?**

Project inception Date 1/2/2021 **Anticipated Project Completion Date** 12/31/2027

Project No.	AD-S-23	Project Name	WWTP WET WEATHER IMPROVEMENTS PROJECT - PHASE 1
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Primary Prj Category Regulatory **Secondary Prj Category** System Improvement

Project Drivers and Needs

- | | |
|---|---|
| <input type="checkbox"/> New Facility | <input type="checkbox"/> End of Useful Life |
| <input checked="" type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input checked="" type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input checked="" type="checkbox"/> Regulatory |

Notes

Drivers for this project include regulatory, Master Plan, and asset management. An increase in wet weather plant capacity is needed to eliminate use of Outfall 003, per PaDEP.

Capital Funds Requested for Project

LCA Staff	\$150,000	Project Estimated Level	Planning
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$25,200,000	Grant Eligibility	TBD
Professional Services	\$1,300,000	Future Spending	\$0
Contingencies	\$750,000		
Total	\$27,400,000		

Current Budget 2024	\$700,000	
First Year Budget 2025	\$750,000	Design
Second Year Budget 2026	\$10,900,000	Construction
Third Year Budget 2027	\$15,750,000	Construction
Fourth Year Budget 2028	\$0	None
Fifth Year Budget 2029	\$0	None
Total	\$27,400,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	WWTP PLASTIC MEDIA TRICKLING FILTER REHABILITATION PROJECT				
Budget Area	Wastewater	Department	Capital Works	Project No.	AD-S-24
Location	Allentown	Prj. Type	Vertical	Prj. Score	48
Prj Initiator	Saunders	Prj Manager	Rohrbach		

Detailed Project Description
The plastic media in the four trickling filter towers is over 50 years old and is believed to have reached the end of its service life. A detailed condition assessment of all layers of plastic media has not been performed to date. This project involves a comprehensive condition assessment of the trickling filters and a multi-year rehabilitation effort. Interior structural and piping rehabilitation work is also included, although the scope of work is not defined at this point. This capital plan includes a condition assessment and rehabilitation of one of the trickling filters, which requires removal of all plastic media, cleaning of the tank interior, interior structural and piping rehabilitation, and replacement with new media. The scope of rehabilitation work for the other three tanks will then be quantified and future rehabilitation work will be reflected in next year's Capital Plan.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	25	6%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	50	13%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	100	15%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	10	1%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	25	3%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	25	3%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	90	9%

Additional Information

System Location CAC-S ALLENTOWN SEWER **Will this project require Land Rights?**

Project inception Date 2/1/2019 **Anticipated Project Completion Date** 12/31/2026

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	I/I REDUCTION PLAN				
Budget Area	Wastewater	Department	Capital Works	Project No.	AD-S-25
Location	Allentown	Prj. Type	Linear	Prj. Score	67
Prj Initiator	DePoe	Prj Manager	Peters		

Detailed Project Description

As part of the current Act 537 planning effort, each Signatory was asked to prepare an inflow and infiltration plan, i.e., Source Reduction Plan (SRP). Using the 2021 flow characterization study data, the City prepared a 10-year SRP in late 2022. The City's prior I/i commitment to EPA concluded in late 2023. Design of the "Year 1" SRF commenced in Spring 2023 and construction commenced in a year later. SRP projects consist of a combination of internal pipe lining, internal pipe grouting, and dig-up repairs as needed. This pattern of design and construction phases will continue through 10 years of construction cycles.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	100	25%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	75	19%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	100	15%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	10	1%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	25	3%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	25	3%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	25	3%

Additional Information

System Location CAC-S ALLENTOWN SEWER **Will this project require Land Rights?**

Project inception Date 4/1/2023 **Anticipated Project Completion Date** 4/1/2034

Project No.	AD-S-25	Project Name	I/I REDUCTION PLAN
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Primary Prj Category Regulatory **Secondary Prj Category** Concession agreement/Operating Standard

Project Drivers and Needs

- | | |
|---|---|
| <input type="checkbox"/> New Facility | <input type="checkbox"/> End of Useful Life |
| <input type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input checked="" type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input type="checkbox"/> Regulatory |

Notes

As part of the Lease Agreement, LCA will contribute \$650,000 for each cycle/project of this program. The remainder of the project costs will be recaptured via the CCRC mechanism of the Lease.

Capital Funds Requested for Project

LCA Staff	\$350,000	Project Estimated Level	Planning
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$19,150,000	Grant Eligibility	
Professional Services	\$3,000,000	Future Spending	\$0
Contingencies	\$1,000,000		
Total	\$23,500,000		

Current Budget 2024	\$3,000,000	
First Year Budget 2025	\$3,000,000	Preliminary,Design
Second Year Budget 2026	\$5,000,000	Planning
Third Year Budget 2027	\$5,000,000	None
Fourth Year Budget 2028	\$5,250,000	None
Fifth Year Budget 2029	\$5,250,000	None
Total 2025-2029	\$23,500,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	WWTP SOLIDS PROCESS IMPROVMENTS				
Budget Area	Wastewater	Department	Capital Works	Project No.	AD-S-26
Location	Allentown	Prj. Type	Vertical	Prj. Score	72
Prj Initiator	Capuzzi	Prj Manager	Volk		

Detailed Project Description
<p>Various KIWWTP projects are proposed to bring the Plant's solids handling capabilities back up its 70,000 lbs/day BOD capacity. Currently there are a few internal bottlenecks that limit the Plant's ability to handle up to 70,000 lbs/day of BOD. With the proposed changes upcoming at Pretreatment Plant (i.e. load shift to KIWWTP), KIWWTP must be ready to handle this additional BOD and TSS load. The proposed solids handling projects include installation of CEPT (chemically enhanced primary treatment), construction of a sludge holding tank and associated pumps/piping, Digester mixing improvements, and dewatering capacity improvements. CEPT, Primary Digester Mixing Improvements, additional Dewatering capacity improvements will be completed in 2028. The Sludge Holding Tank and other Digester improvements will be completed by 2032.</p>

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	50	13%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	75	19%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	80	12%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	25	1%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	90	9%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	90	9%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	90	9%

Additional Information

System Location CAC-S ALLENTOWN SEWER Will this project require Land Rights?

Project inception Date 8/1/2024 Anticipated Project Completion Date 6/1/2032

Project No.	AD-S-26	Project Name	WWTP SOLIDS PROCESS IMPROVMENTS
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Primary Prj Category System Improvement **Secondary Prj Category** Regulatory

Project Drivers and Needs

- | | |
|---|---|
| <input checked="" type="checkbox"/> New Facility | <input checked="" type="checkbox"/> End of Useful Life |
| <input checked="" type="checkbox"/> Existing Facility - Upgrade | <input type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input checked="" type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input checked="" type="checkbox"/> Regulatory |

Notes

Capital Funds Requested for Project
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LCA Staff	\$100,000	Project Estimated Level	Preliminary
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$10,000,000	Grant Eligibility	TBD
Professional Services	\$1,000,000	Future Spending	\$5,000,000
Contingencies	\$900,000		
Total	\$12,000,000		

Current Budget 2024	\$0	
First Year Budget 2025	\$500,000	Design
Second Year Budget 2026	\$2,500,000	Construction
Third Year Budget 2027	\$7,000,000	Construction
Fourth Year Budget 2028	\$2,000,000	Construction
Fifth Year Budget 2029	\$0	None
Total 2025-2029	\$12,000,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	ACT 537 ALTERNATIVE ANALYSES				
Budget Area	Wastewater	Department	Capital Works		Project No. AD-S-40
Location	Allentown	Prj. Type	Both		Prj. Score 87
Prj Initiator	DePoe	Prj Manager	DePoe		

Detailed Project Description
<p>This project consisted of the Flow Characterization Study (FCS) in 2021 (consists of ~70 temporary meters, ~25 permanent sewer billing meters, and ~11 permanent/non sewer billings). The FCS also consisted of QA/QC of the meter data and initial development of the Regional KISS sewer model. 2022 consisted of finalizing the development of the Regional KISS sewer model and beginning scenario planning and alternative analyses (i.e. the "Preliminary Screening of Alternatives" (PSOA). The PSOA concluded in Q2 of 2023 and the Final Alternatives Analysis (FAA) concluded in Q3 of 2023. 2024 involved the "Selection of Solution" phase and finalization of the Act 537 Plan. 2025 will involve the Final Plan submission. Also included in this project is the Act 537 "Section 7" financial analysis.</p>

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	100	25%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	80	20%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	80	12%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	50	3%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	90	9%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	100	10%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	80	8%

Additional Information

System Location	CAC-S ALLENTOWN SEWER	Will this project require Land Rights?	<input checked="" type="checkbox"/>
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Project inception Date 1/1/2020	Anticipated Project Completion Date 12/31/2035
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Project No.	AD-S-40	Project Name	ACT 537 ALTERNATIVE ANALYSES
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Primary Prj Category Regulatory **Secondary Prj Category** System Improvement

Project Drivers and Needs

- | | |
|---|---|
| <input checked="" type="checkbox"/> New Facility | <input checked="" type="checkbox"/> End of Useful Life |
| <input checked="" type="checkbox"/> Existing Facility - Upgrade | <input checked="" type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input checked="" type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input checked="" type="checkbox"/> Regulatory |

Notes

Capital Funds Requested for Project
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LCA Staff	\$20,000	Project Estimated Level	Planning
Land Acquisition	\$0	Project Funding	City
Construction/Equipment	\$0	Grant Eligibility	No
Professional Services	\$250,000	Future Spending	\$0
Contingencies	\$80,000		
Total	\$350,000		

Current Budget 2024	\$600,000	
First Year Budget 2025	\$250,000	Planning
Second Year Budget 2026	\$100,000	Planning
Third Year Budget 2027	\$0	None
Fourth Year Budget 2028	\$0	None
Fifth Year Budget 2029	\$0	None
Total	\$350,000	

**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION-CAPITAL IMPROVEMENT PLAN
PROJECT DETAIL SHEET**

Project Name	MISCELLANEOUS ACT 537 PLANNING, FINANCIAL AND LEGAL REVIEW				
Budget Area	Wastewater	Department	Capital Works	Project No.	AD-S-41
Location	Allentown	Prj. Type	Both	Prj. Score	85
Prj Initiator	DePoe	Prj Manager	DePoe		

Detailed Project Description
This project is related to miscellaneous Act 537 planning items funded by the LCA Allentown Division. Miscellaneous engineering items not paid by the City's AO fund will be captured here.

Category	Definition	LCA Weight	Prj Score	Weighted Score
Environmental				
Regulatory Requirement	Project will address a local, state and/or federal regulatory requirement.	25%	100	25%
Social				
Health/Safety Improvement	Project provides a human health and/or safety enhancement that may or may not be a regulatory requirement.	25%	80	20%
Level of Service	Project will increase level or quality of service to the community, including addressing increased customer expectations for service, improved response time, reliability, quality, taste, etc.	15%	80	12%
Innovation and Automation Enhancements	Project will enhance achievement of LCA's goals for innovation and/or automation.	5%	50	3%
Community Impact	Project will benefit Community and/or external stakeholders.	10%	100	10%
Economic				
Economic Development	Project is required to meet projected future capacity needs to address economic growth in the service area or provides other economic development benefit to the region.	10%	100	10%
Risk Mitigation	Project addresses asset risk by mitigating likelihood of failure, consequence of failure, and/or resiliency.	10%	50	5%

Additional Information

System Location CAC-S ALLENTOWN SEWER **Will this project require Land Rights?**

Project inception Date 1/1/2020 **Anticipated Project Completion Date** 12/31/2035

Project No.	AD-S-41	Project Name	MISCELLANEOUS ACT 537 PLANNING, FINANCIAL AND LEGAL REVIEW
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Primary Prj Category Regulatory **Secondary Prj Category** System Improvement

Project Drivers and Needs

- | | |
|---|---|
| <input checked="" type="checkbox"/> New Facility | <input checked="" type="checkbox"/> End of Useful Life |
| <input checked="" type="checkbox"/> Existing Facility - Upgrade | <input checked="" type="checkbox"/> Obsolescence |
| <input type="checkbox"/> Scheduled Replacement | <input checked="" type="checkbox"/> Inadequate Capacity |
| <input checked="" type="checkbox"/> System Improvements | <input checked="" type="checkbox"/> Regulatory |

Notes

Capital Funds Requested for Project

LCA Staff	\$20,000	Project Estimated Level	Planning
Land Acquisition	\$0	Project Funding	LCA
Construction/Equipment	\$0	Grant Eligibility	No
Professional Services	\$200,000	Future Spending	\$0
Contingencies	\$80,000		
Total	\$300,000		

Current Budget 2024	\$200,000	
First Year Budget 2025	\$200,000	Planning
Second Year Budget 2026	\$100,000	Planning
Third Year Budget 2027	\$0	None
Fourth Year Budget 2028	\$0	None
Fifth Year Budget 2029	\$0	None
Total	\$300,000	