

Lehigh County  
Authority  
2025-2029  
Allentown Division  
Capital Plan

**Draft Plan** Board Presentation  
August 12, 2024

# Planning Process & Board Reviews / Approvals



**Five-Year Capital Plan** → Conceptual approval of planned capital program



**Annual Budget** → One-year funding for upcoming projects



**Project Approval** → Authorization to complete a specific project



**Financing** → Funding for specific project or group of projects

# 2025-2029 Capital Plan Review Process

## Review Timeline:

- May-July 2024 – Staff preparation of plan
- 8/12/2024 – Allentown Div. Draft Plan presentation
- 8/26/2024 – Suburban Div. Draft Plan presentation and begin public comment period
- 9/30/2024 – Public comment period ends
- 10/14/2024 – Final review & approval request
- Sept-Oct 2024 – 2024 Budget review process

## Public Reviews:

- Lehigh Valley Planning Commission
- Lehigh County Board of Commissioners
- City of Allentown
- Municipalities
- Public (website)

# 2025-2029 Allentown Division Capital Plan Highlights

## Significant increase from prior 5-year plan

- 2024-2028 Allentown Division Plan Total = **\$192,349,000**
- 2025-2029 Draft Allentown Division Plan Total = **\$325,440,000**

## Key drivers for increase in capital requirements

- Lead service line replacement program - \$75 million
- Water treatment upgrades for PFAS - \$20 million
- Escalated inflow & infiltration removal programs - \$28 million
- Wet-weather enhancements at Kline's Island WWTP (KIWWTP) - \$57 million
- KIWWTP Solids Process Improvements - \$12 million
- Kline's Island Sewer System (KISS) Relief Interceptor - \$26 million

## Unknown potential for grant funding

- Draft plan includes estimated 14% of plan supported by grant funding
- Additional grants possible to offset borrowing

## What about Regional Sewer Plan (Act 537) projects?

- Act 537 Plan to be finalized in 2025, will include detailed financial analysis
- First wave of planned projects captured in this capital plan, more to follow
- Future capital plans to be revised based on final Act 537 Plan, and reflecting updated cost-sharing approaches with customers and municipalities

# Allentown Division Water – Annual & Recurring Projects

CP#	Project	Prior \$	2024 \$	2025-2029 \$	Major Drivers	Responsibility
AD-W-A	<b>ANNUAL PROJECTS</b> <i>(breakdown of projects on following slide)</i>	N/A	<b>\$2,715,000</b>	<b>\$11,375,000</b>	Required rehab, Asset management, Efficiency	Operations, Volk
AD-W-10	<b>INDENTURE IMPROVEMENTS</b>	N/A	<b>\$200,000</b>	<b>\$600,000</b>	Required rehab, Asset Management	Rohrbach
AD-W-11	<b>MASTER PLAN STUDIES</b>	\$160,000	<b>\$0</b>	<b>\$200,000</b>	Lease requirement	Boone
AD-W-14	<b>TANK AND RESERVOIR REHABILITATION</b>	\$300,000	<b>\$200,000</b>	<b>\$1,000,000</b>	Asset Management	Geissel
AD-W-15	<b>LARGE DIAMETER VALVE REPLACEMENT PROJECT</b>	\$0	<b>\$350,000</b>	<b>\$1,750,000</b>	Asset Management, System improvement	Peters
AD-W-20	<b>ANNUAL WATER MAIN REPLACEMENTS</b>	N/A	<b>\$4,800,000</b>	<b>\$25,600,000</b>	Lease Requirement, Asset Management	Peters

# Allentown Division Annual Water Projects

Distribution Mains  
– Development &  
Upsizing

WFP General  
Improvements

General Water  
System  
Improvements  
(D&C)

Mobile Equipment

New &  
Replacement  
Meter Installation

Other Equipment

Reservoir  
Rehabilitation &  
Maintenance

PennDOT  
Relocations

Capital  
Management

SCADA Upgrades



# Allentown Division Water – Large Projects

CP#	Project	Prior \$	Budget Approved 2024 \$	2025-2029 \$	Major Drivers	Responsibility
AD-W-12	<b>CLOUD BASED AMR METER READING SYSTEM (former “fixed base meter reading system”)</b>	\$0	<b>\$0</b>	<b>\$750,000</b>	System Improvement, Efficiency	Kunkel
AD-W-13	<b>WFP REDUNDANT POWER SUPPLY</b>	\$0	<b>\$80,000</b>	<b>\$835,000</b>	Master Plan, Regulatory	Rohrbach
AD-W-21	<b>PFAS COMPLIANCE PLANNING &amp; UPGRADES</b>	\$0	<b>\$250,000</b>	<b>\$20,500,000</b>	Regulatory	Rohrbach
AD-W-22	<b>WFP RAW WATER LINE AND INFLUENT CHANNEL MODIFICATIONS</b>	\$0	<b>\$0</b>	<b>\$1,600,000</b>	Master Plan, Efficiency	Rohrbach

## Allentown Division Water – Additional Large Projects

CP#	Project	Prior \$	2024 \$	2025-2029 \$	Major Drivers	Responsibility
AD-W-23	<b>WATER METER REPLACEMENT PROJECT (2024/2025)</b>	\$525,000	<b>\$800,000</b>	<b>\$2,100,000</b>	System Improvement, Efficiency	Kunkel
AD-W-24	<b>WFP FILTER UPGRADES</b>	\$500,000	<b>\$2,350,000</b>	<b>\$5,350,000</b>	Asset Management, Master Plan	Volk
AD-W-25	<b>BIG LEHIGH INTAKE UPGRADES</b>	\$0	<b>\$200,000</b>	<b>\$850,000</b>	System Improvement, Master Plan	Rohrbach
AD-W-26	<b>LEAD SERVICE LINE REPLACEMENT PROGRAM</b>	\$0	<b>\$5,000,000</b>	<b>\$75,000,000</b>	Regulatory	Peters, Dorner



# Big Lehigh Pump Station Improvements



# WFP Filter Upgrade Project

**Filter #1 Drained for Rehabilitation**

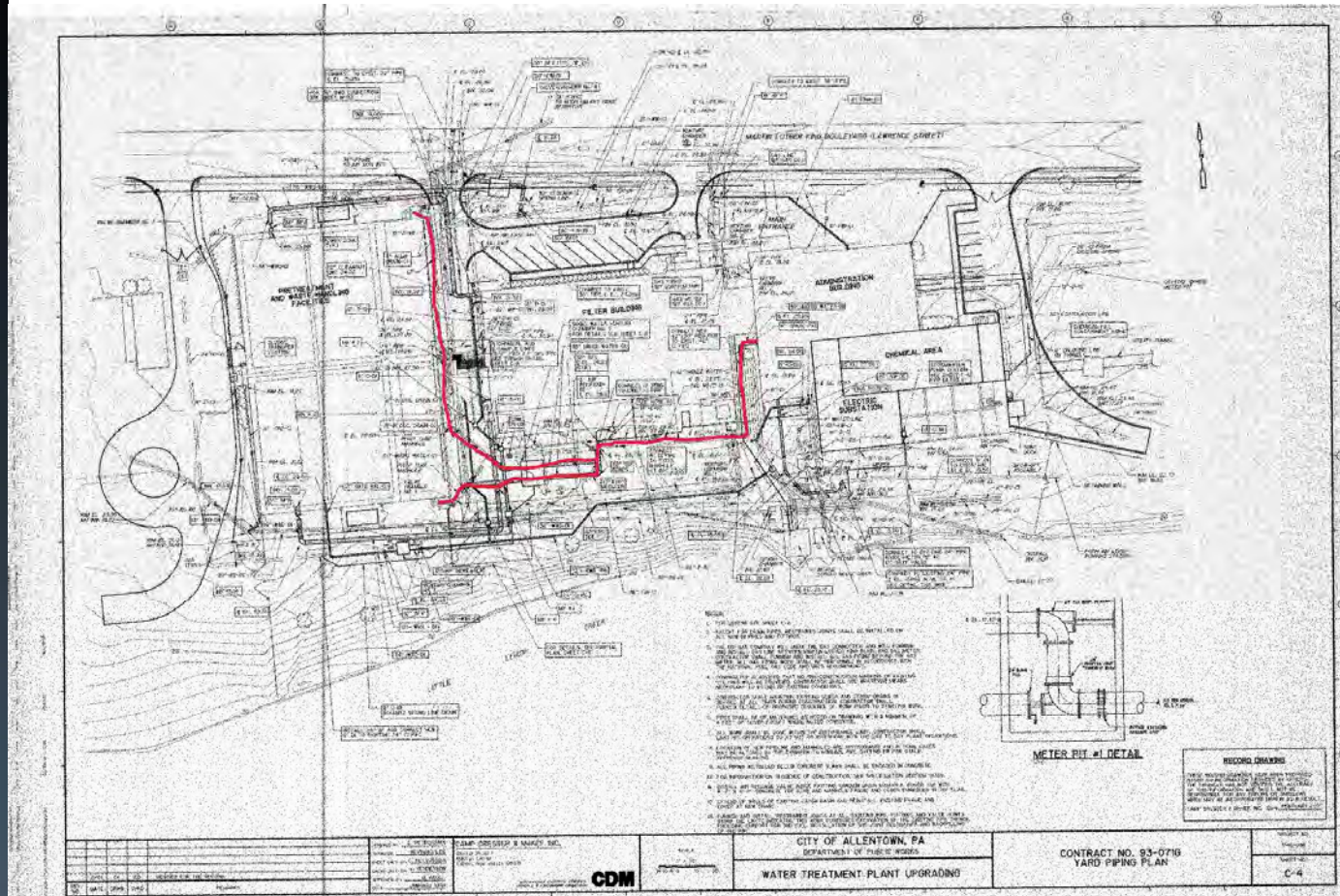


**Filter #1 Media and Underdrain Demolished**





# WFP Influent Channel & Raw Water Line Upgrades



# Allentown Division Water – New Projects 2025-2029 Capital Plan

CP#	Project	Prior \$	2024 \$	2025-2029 \$	Major Drivers	Responsibility
AD-W-16	WFP HVAC SYSTEM UPGRADES	\$0	\$0	\$1,750,000	Asset Mgmt, System Improvement	Rohrbach
AD-W-17	WFP ROOF REPLACEMENTS	\$0	\$0	\$650,000	Asset Management	Rohrbach

# Water Filtration Plant Roof Replacement Project



- 1 – Offices
- 2 - Lab/Lab Offices
- 3 - High Service Pump



# Wastewater Projects AD 2025-2029 Capital Plan



# Allentown Division Wastewater Annual & City Funded Projects

CP#	Project	Prior \$	2024 \$	2025-2029 \$	Major Drivers	Responsibility
AD-S-A	<b>ANNUAL PROJECTS</b> <i>(breakdown of projects on following slide)</i>	N/A	<b>\$2,706,000</b>	<b>\$10,955,000</b>	Required rehab, asset management	Operations, Volk
AD-S-10	<b>INDENTURE REPORT IMPROVEMENTS</b>	N/A	<b>\$300,000</b>	<b>\$900,000</b>	Required rehab, Asset Management	Rohrbach
AD-S-11	<b>MASTER PLAN STUDIES</b>	\$160,000	<b>\$160,000</b>	<b>\$250,000</b>	Lease requirement	DePoe
AD-S-12	<b>MANHOLE INSPECTION AND SEALING PROGRAM</b>	\$300,000	<b>\$2,000,000</b>	<b>\$5,000,000</b>	Regulatory	Dorner
AD-S-40	<b>ACT 537 ALTERNATIVE ANALYSIS - City funded</b>	\$700,000	<b>\$600,000</b>	<b>\$350,000</b>	Regulatory	DePoe
AD-S-41	<b>MISCELLANEOUS ACT 537 PLANNING, FINANCIAL, &amp; LEGAL REVIEWS - LCA funded</b>	\$1,205,000	<b>\$200,000</b>	<b>\$300,000</b>	Regulatory	DePoe



# Allentown Division Annual Wastewater Projects

Mobile  
Equipment

Other Equipment

Collection System  
- Development

Capital  
Management

Sanitary Sewer  
Main  
Replacements &  
Rehab

WWTP General  
Improvements

PennDOT  
Relocations

SCADA Upgrades

# Allentown Division Wastewater – Large Projects

CP#	Project	Prior \$	2024 \$	2025-2029 \$	Major Drivers	Responsibility
AD-S-13	WWTP REDUNDANT POWER SUPPLY	\$0	\$0	\$1,000,000	Regulatory	Rohrbach
AD-S-20	WWTP ELECTRICAL SUBSTATION NO. 1 REPLACEMENT	\$200,000	\$2,200,000	\$6,000,000	Asset Management, Master Plan	Rohrbach
AD-S-21	WWTP FINAL SETTLING TANK REHABILITATION	\$100,000	\$900,000	\$5,500,000	Asset Management, Master Plan	Rohrbach
AD-S-22	WWTP PRIMARY DIGESTER SLUDGE FEED LINE REPLACEMENT	\$0	\$600,000	\$2,700,000	Master Plan, Efficiency	Rohrbach
AD-S-23	WWTP WET WEATHER IMPROVEMENTS – PHASE 1 (consolidated & retitled)	\$300,000	\$700,000	\$27,400,000	Master Plan, Regulatory	Rohrbach
AD-S-25	I&I SOURCE REDUCTION PLAN	\$800,000	\$8,000,000	\$28,500,000	Regulatory	Peters, DePoe

# KIWWTP Electrical Substation Replacement Phase 2 Project

**Substation No. 1 & Switchgear**



**Substation No. 1**





# KIWWTP Wet Weather Capacity Enhancement Project

**Main Pumps**



**Auxiliary Pumps**



# KIWWTP Final Settling Tanks Nos. 1-4 Rehab





## Allentown Division Wastewater – New Projects 2025-2029 Capital Plan

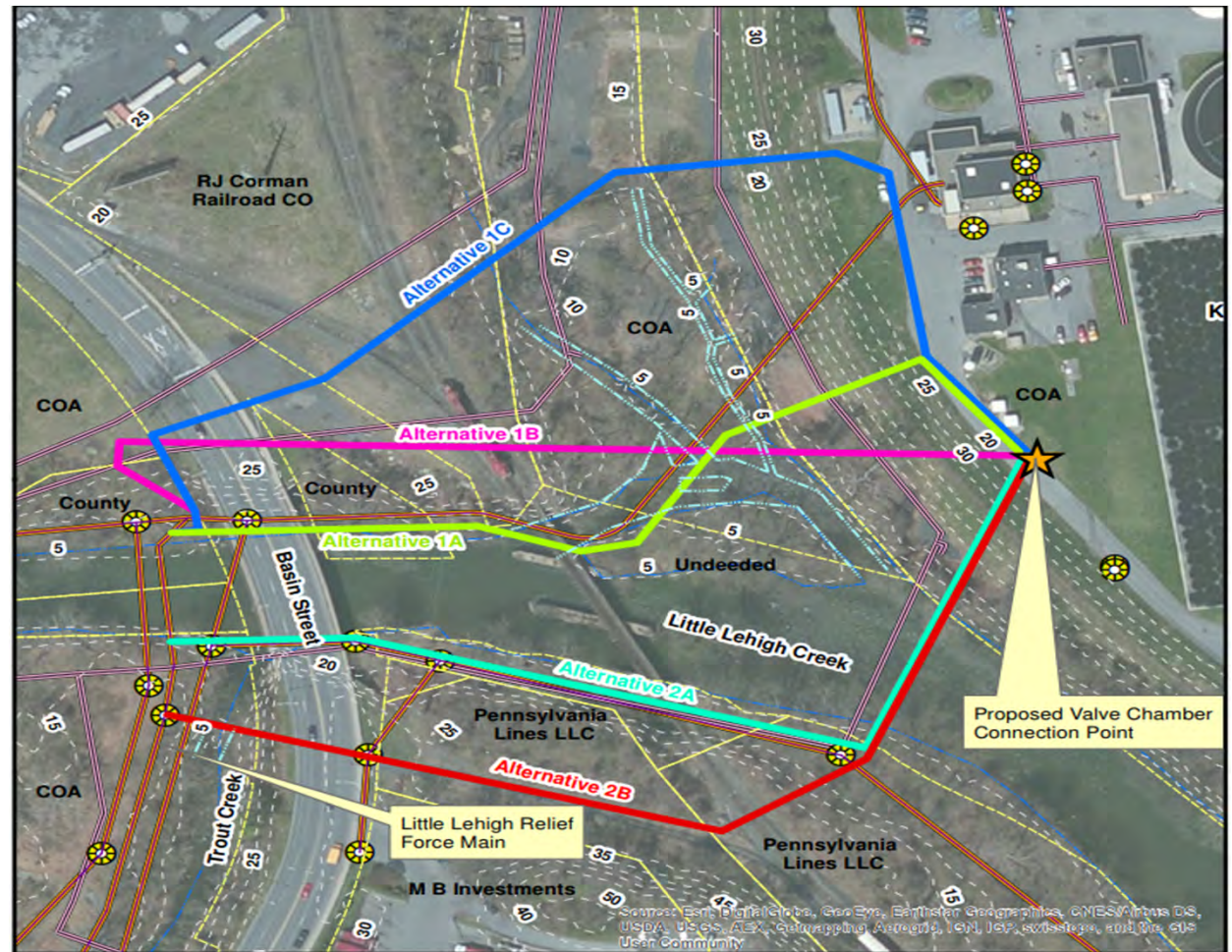
CP#	Project	Prior \$	2024 \$	2025-2029 \$	Major Drivers	Responsibility
AD-S-14	WWTP FACILITIES IMPROVEMENTS	\$0	\$0	\$800,000	Efficiency, Health & Safety	Rohrbach
AD-S-24	WWTP PLASTIC MEDIA TRICKLING FILTER REHAB.	\$0	\$0	\$5,400,000	Asset Management	Rohrbach
AD-S-26	WWTP SOLIDS PROCESS IMPROVEMENTS	\$0	\$0	\$12,000,000	System Improvement	Rohrbach
AD-S-27	PARK PUMP STATION FORCE MAIN EXT. – WWTP IMPRVMT	\$0	\$0	\$8,200,000	Regulatory	Rohrbach
AD-S-28	PARK PUMP STATION FORCE MAIN EXTENSION	\$0	\$0	\$3,700,000	Regulatory	Kunkel
AD-S-29	WWTP WET WEATHER IMPROVEMENTS - PHASE 2	\$0	\$0	\$29,500,000	Regulatory	Rohrbach
AD-S-30	KISS RELIEF INTERCEPTOR	\$0	\$879,000	\$25,750,000	Regulatory	DePoe

# KIWWTP Plastic Media Trickling Filters Rehabilitation





# PARK PUMP STATION FORCE MAIN EXTENSION



## Allentown Division Wastewater – Removed Project 2025-2029 Capital Plan

Reason	Project	2025 Budget \$	Major Drivers	Responsibility
Project to be complete in 2024	<b>WWTP BOILER REPLACEMENT &amp; SOLIDS PROCESS HVAC UPGRADES</b>	\$0	Master Plan, Asset Management	Rohrbach

## LCA Allentown Division – 2025-2029 Capital Plan SUMMARY

SYSTEMS	
Water	\$149,360,000
Wastewater	\$174,205,000
Allocated Administrative Projects	\$1,875,000
<b>PLAN TOTAL</b>	<b>\$325,440,000</b>

## LCA Allentown Division – 2025-2029 Capital Plan FUNDING SOURCES

SOURCES	
Cash from Operations & Reserves	\$125,500,172
City of Allentown American Rescue Plan Act Grants	\$850,000
City of Allentown Reimbursements (Act 537 Plan Development)	\$350,000
Grants – Lead Service Line Replacement Program	\$30,000,000
Grants – PFAS Compliance Upgrade Project	\$10,000,000
Grants – I&I Source Reduction Plan Projects	\$4,000,000
Borrowed funds – 2024 Bond Issue	\$47,439,828
Borrowed funds – NEW Borrowing	\$107,300,000
<b>PLAN TOTAL</b>	<b>\$325,440,000</b>

# LCA Allentown Division – 2025-2029 Capital Plan From NEW Borrowed Funds

PROJECTS	
Lead Service Line Replacement (non-grant portion) *	\$45,000,000
Water Filtration Plant PFAS Compliance Upgrades *	\$10,000,000
Kline’s Island WWTP & Wet-Weather Capacity Enhancement projects	\$52,300,000
<b>TOTAL USE OF BORROWED FUNDS</b>	<b>\$107,300,000</b>

*\* Borrowing may be reduced or increased based on availability of grants to cover Lead Service Line Replacements and/or PFAS Compliance Upgrades*

CONDENSED CASH FLOW - CITY DIVISION					
US DOLLARS	2025	2026	2027	2028	2029
User Charges	62,384,824	68,064,144	74,266,255	80,790,096	86,499,151
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	(1,323,915)	(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)	(7,136,019)	(7,136,019)	(7,136,019)
Investments Converting to Cash	-	-	-	-	-
Grants	15,000,000	12,500,000	17,350,000	-	-
Proceeds From NEW Debt	-	-	107,300,000	-	-
Capex	(56,280,000)	(65,867,500)	(79,077,500)	(63,205,000)	(61,010,000)
<b>NET FUND FLOWS</b>	<b>(20,424,193)</b>	<b>(28,090,873)</b>	<b>68,467,475</b>	<b>(35,948,923)</b>	<b>(29,507,368)</b>
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	43,502,204	14,984,367	83,043,009	46,706,064	16,799,619
Unrestricted Investments	-	-	-	-	-
Total Unrestricted Balances	43,502,204	14,984,367	83,043,009	46,706,064	16,799,619
Days Operating Cash on Hand	191	211	225	230	217
DEBT SERVICE COVERAGE RATIO	2.16	2.37	1.88	2.00	2.13

\* Total User Charge Increases are estimated revenue increases based on the current Capital Plan presentation. Actual customer rates are calculated annually in accordance with LCA rate-making practices and subject to review and approval by LCA's Board of Directors.



# LCA Allentown Division – 2025-2029 Capital Plan

## CUSTOMER RATE PROJECTION

- City customer base rates assumed to increase by 5-6% annually by Lease formula
- Additional charges for Capital Cost Recovery Charge and Change of Law fees
- Total rate impact for City customers: 8-10% annually

2024 average residential water & sewer bill\* = \$915 per year

2029 estimated average residential water & sewer bill\* = \$1,397 per year

\* Calculated based on average usage of 13,000 gallons per quarter



## 2025-2029 Allentown Division Capital Plan: *RECAP OF DRAFT PLAN*

- **Capital investments 70% increase (\$133M) from prior plan**
- **Primary drivers:**
  - **Inclusion of new projects from Regional Sewer Plan (\$79M)**
  - **Expansion of LSL and PFAS projects (\$30M)**
- **LCA financial performance maintained with new borrowing**
- **Rate impact of 8-10% per year is significant**
- **Potential upside for City customers if more grant funding awarded**
- **Look for future plan refinement as Regional Sewer Plan finalized**

# Discussion

Questions?