

Lehigh County Authority 2018-2022 Capital Plan

Preliminary Plan: Board Presentation – August 28, 2017

Project Prioritization Categories

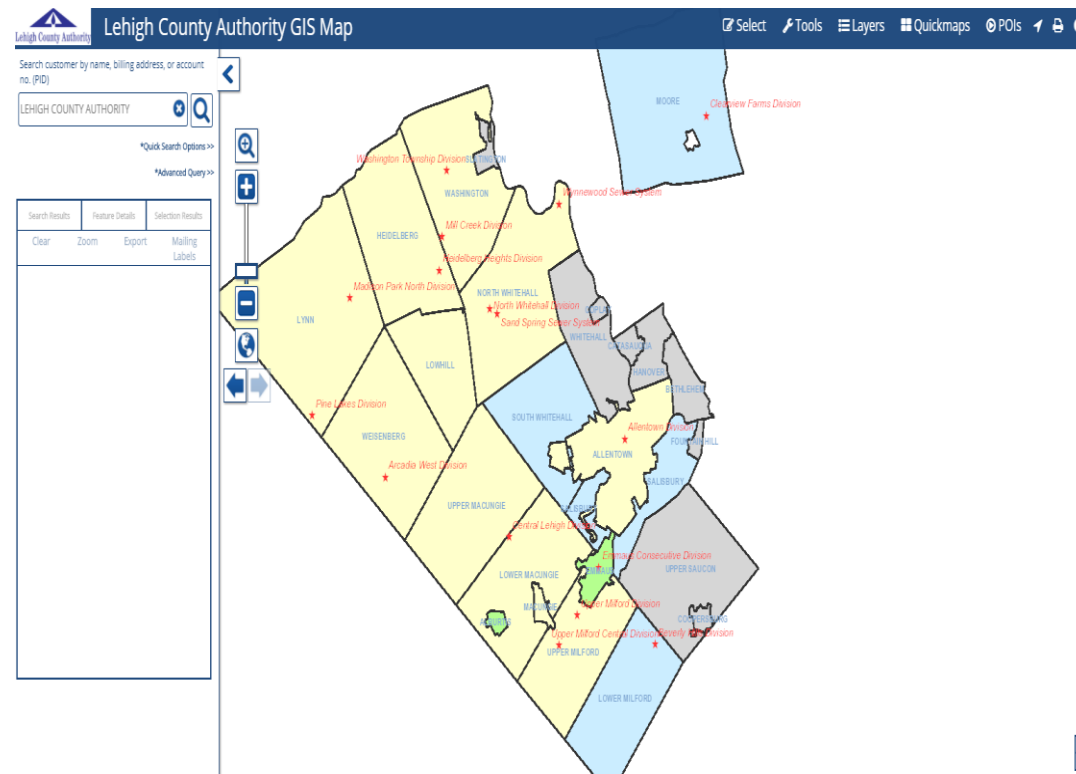
Project Category	Description
Regulatory	Required to meet Regulatory requirements
New Cust	New Customers
CA/OS	Concession Lease/Operating Standards
AM - Low	Asset Management - Low Risk
AM - Med	Asset Management - Medium Risk
AM - High	Asset Management - High Risk
AM - Varies	Asset Management - Varies
Efficiency	Efficiency
Sys Imp	System Improvement
Rev Opprt	Revenue Opportunity
Planning	Planning

Capital Plan Components

- ADMINISTRATION
- SUBURBAN DIVISION – WATER AND WASTEWATER
- ALLENTOWN DIVISION – WATER AND WASTEWATER

ADMINISTRATION PROJECTS

KEY PROJECT:
CON-A-2
GIS Upgrades & Application
Development



Administration – 2018 Projects

CP#	Project	2018 \$	2018-2022-\$
SD-A-1	SCADA Programming, Hardware & Software Upgrades	\$ 150,000	\$ 853,800
CON-A-1 *	Computer System Hardware & Software Upgrades	100,000	325,000
CON-A-2 *	Geographic Information System Upgrades & Application Dev.	220,000	720,000
CON-A-3 *	Information Technology Master Plan Update	75,000	250,000
CON-A-4 *	Document Management	50,000	480,000

**= Projects split 1/3 to Suburban and 2/3 to City Division*

**LEHIGH COUNTY AUTHORITY
ADMINISTRATION
2018-2022 CAPITAL PROGRAM**

Project #	Name or Title of Proposal	(1) Proj. Type	(1) Funding	Approvals	Project Cost		This Capital Program						Project Category (1)	
				stage (1)	Total Cost	Prior Years' (2)	2018 Year -1	2019 Year -2	2020 Year -3	2021 Year -4	2022 Year -5	Total	Primary	Secondary
	Annual													
SD-A-1	SCADA Programming, Hardware Upgrades, Software & Training	Regular	LCA	A	\$ 1,163,000	\$ 310,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 253,000	\$ 853,000	AM - Varies	Efficiency
CON-A-1*	Computer System Hardware & Software Upgrades	Regular	LCA	A	\$ 523,000	\$ 198,000	\$ 100,000	\$ 75,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 325,000	AM - High	N/A
	Subtotal				\$ 1,686,000	\$ 508,000	\$ 250,000	\$ 225,000	\$ 200,000	\$ 200,000	\$ 303,000	\$ 1,178,000		
	Previously Authorized													
CON-A-2*	GIS Upgrades & Application Development	Regular	LCA	V	\$ 1,245,000	\$ 525,000	\$ 220,000	\$ 200,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 720,000	Efficiency	N/A
	Subtotal				\$ 1,245,000	\$ 525,000	\$ 220,000	\$ 200,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 720,000		
	Pending Authorization													
CON-A-3*	Information Technology Master Plan Update	Regular	LCA	P	\$ 250,000	\$ -	\$ 75,000	\$ 50,000	\$ 125,000	\$ -	\$ -	\$ 250,000	Planning	N/A
CON-A-4*	Document Management	Regular	LCA	P	\$ 480,000	\$ -	\$ 50,000	\$ 400,000	\$ 30,000	\$ -	\$ -	\$ 480,000	Efficiency	N/A
	Subtotal				\$ 730,000	\$ -	\$ 125,000	\$ 450,000	\$ 155,000	\$ -	\$ -	\$ 730,000		
	GRAND TOTAL				\$ 3,661,000	\$ 1,033,000	\$ 595,000	\$ 875,000	\$ 455,000	\$ 300,000	\$ 403,000	\$ 2,628,000		

(*) CON = a Project that benefits both the Allentown and Suburban Divisions where Project costs will be allocated based on system revenue 2/3 City Division and 1/3 Suburban Division.

(1) Reference Glossary of Acronyms & Terms found immediately after the Table of Contents

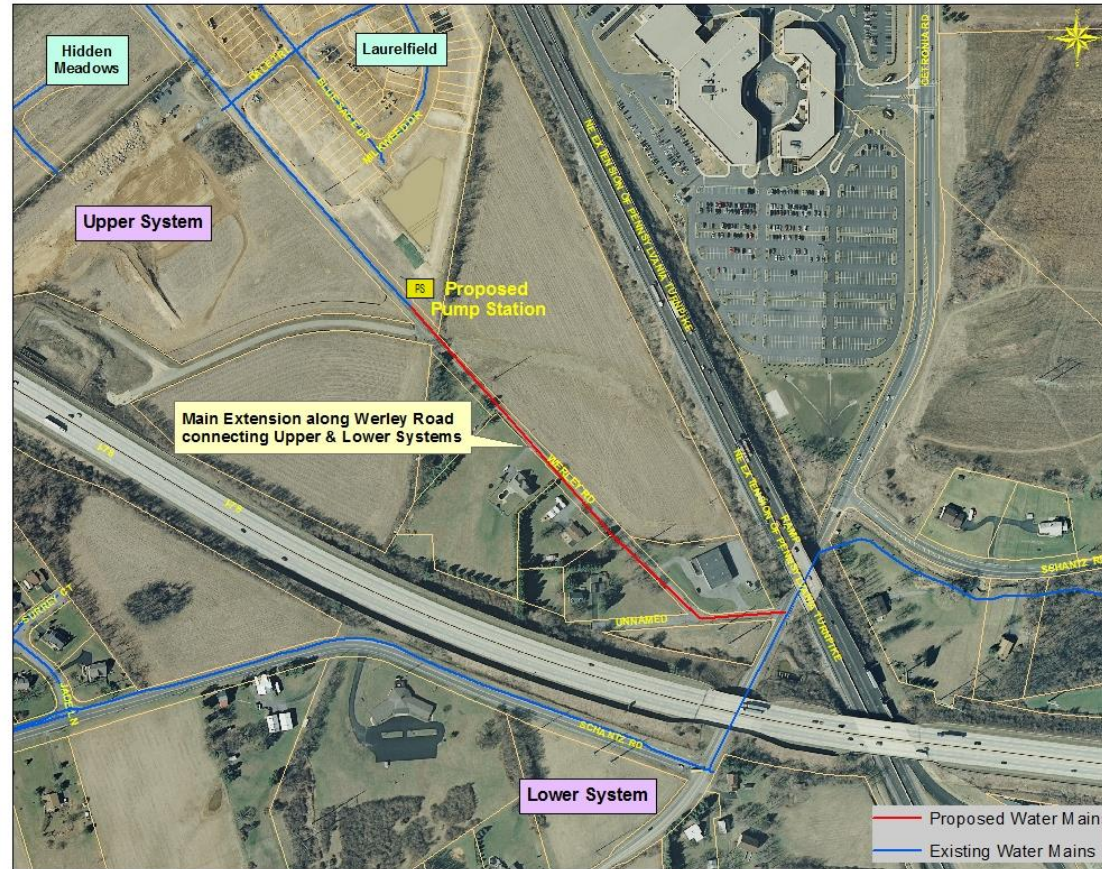
(2) Includes estimate of expenditures through 2017.

Administration – Financial Analysis

	Administration					
	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>Total</u>
CAPITAL SPENDING						
Administration						
Gross Spending						
Suburban	150	150	150	150	253	853
City	-	-	-	-	-	-
Consolidated	<u>445</u>	<u>725</u>	<u>305</u>	<u>150</u>	<u>150</u>	<u>1,775</u>
Total Gross Spending	595	875	455	300	403	2,628
Allocation In/Out	<u>(595)</u>	<u>(875)</u>	<u>(455)</u>	<u>(300)</u>	<u>(403)</u>	<u>(2,628)</u>
Net Administration	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
TOTAL CAPITAL SPENDING	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

SUBURBAN DIVISION - WATER

KEY PROJECT:
SD-W-49
CLD Aux. Pump Station &
Main Extension



2017 Forecast – Suburban Water

<u>\$000's</u>	<u>Budget</u>	<u>Forecast</u>	<u>Variance</u>	<u>FC/Bud %</u>	<u>Jul YTD</u>	<u>To Spend</u>
ANNUAL & ADMINISTRATIVE	2,464	1,759	705	71.4%	668	1,091
Well Abandonments	175	76	99	43.4%	2	74
Auxillary Water Pumping Station	175	11	164	6.3%	10	1
Small Water System Improvements	933	467	466	50.1%	16	451
Non-Residential Wtr Meter Replacement	982	501	481	51.0%	26	475
Water Main Replacements	1,688	1,386	302	82.1%	632	754
Additional Water Supply Small Satellite Systems	150	37	113	24.7%	7	30
Reservoir Rehabilitation Contract	189	187	2	98.9%	7	180
Crestwood Alternative Supply	467	200	267	42.8%	10	190
Route 309 Crossing Sand Spring Rd	174	51	123	29.3%	1	50
Miscellaneous Projects	50	43	7	86.0%	36	7
Total Spending	7,447	4,718	2,729	63.4%	1,415	3,303

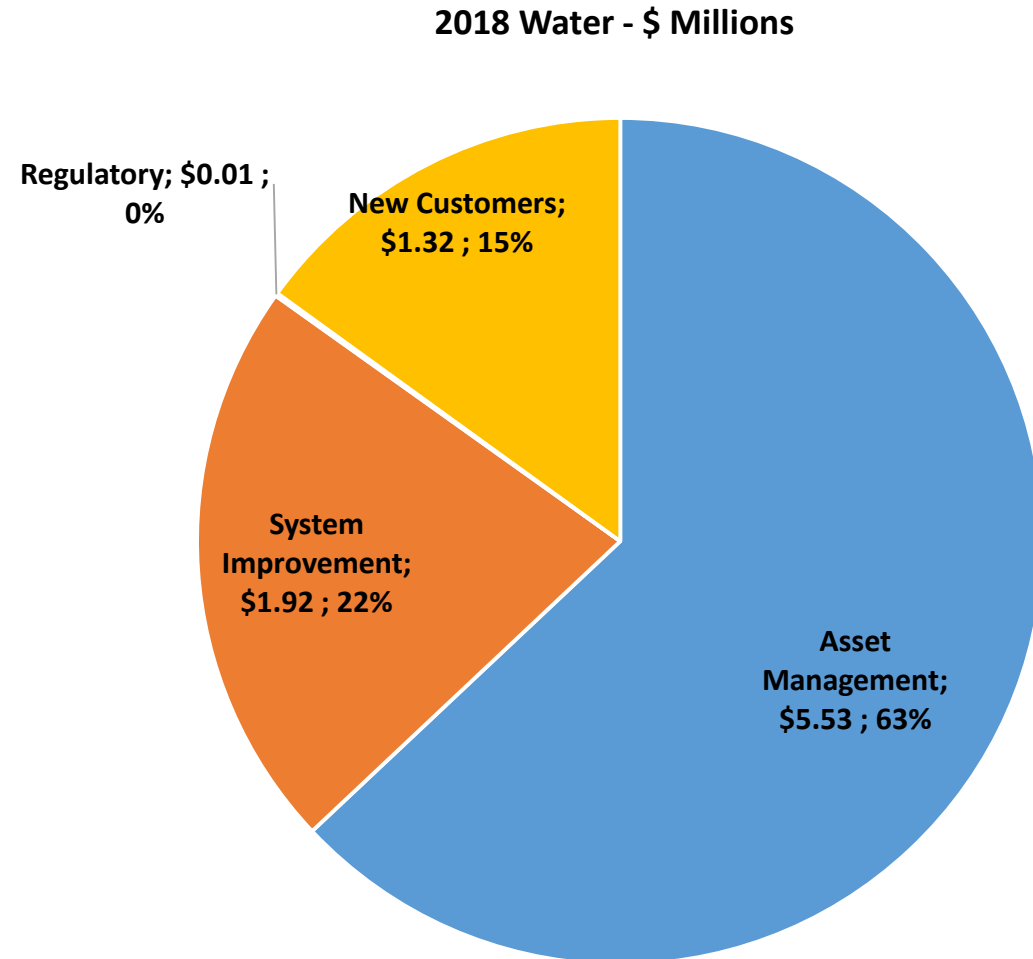
Capital Plan Suburban Division Water

2018 Water Capex Spending by Category

Budget Area	Category						
	AM	Efficiency	Regulatory	New Customers	Revenue Opp.	System Imp.	Total
Water	\$5,530,750	N/A	\$10,000	\$1,320,000	N/A	\$1,924,000	\$8,784,750

Capital Plan Suburban Division 2018 - Water

Capex Spending by Category



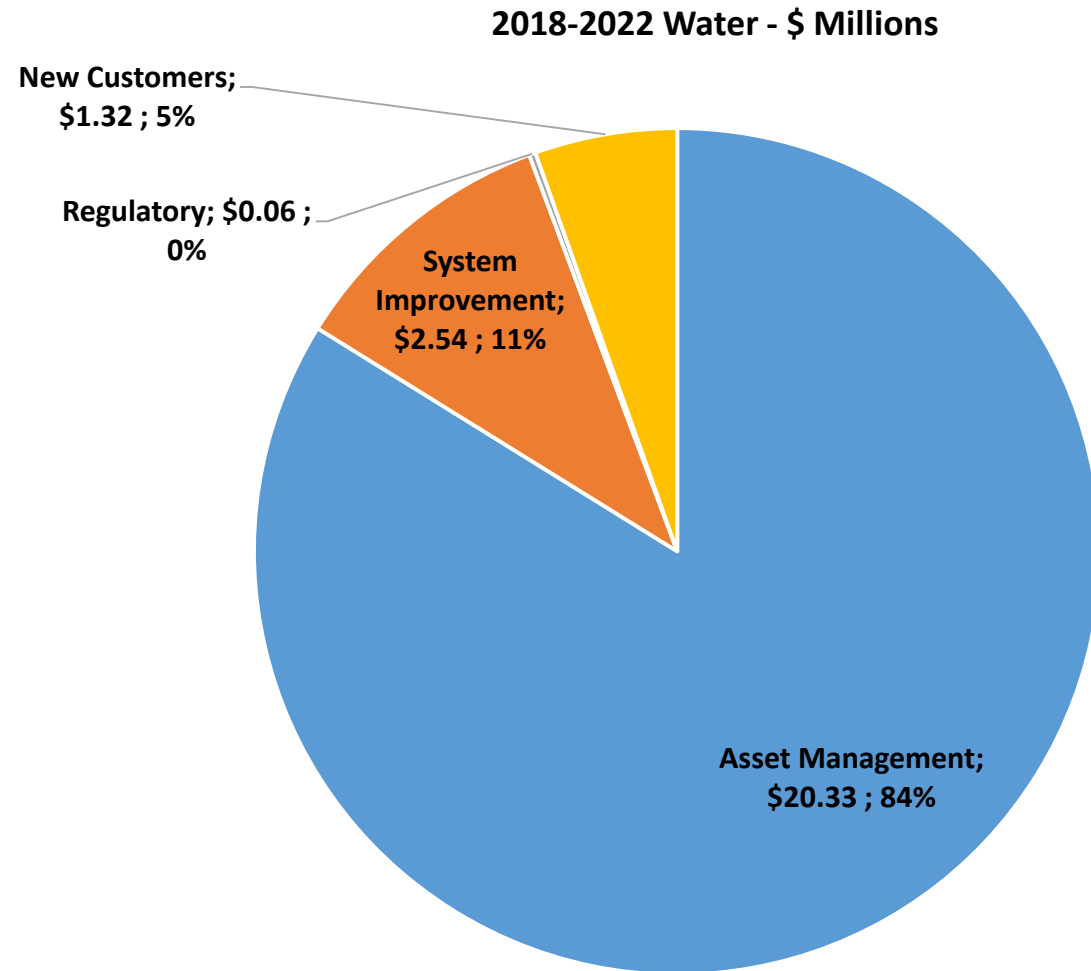
Capital Plan Suburban Division Water

2018-2022 Water Capex Spending by Category

Budget Area	Category						
	AM	Efficiency	Regulatory	New Customers	Revenue Opp.	System Imp.	Total
Water	\$20,327,750	N/A	\$60,000	\$1,320,000	N/A	\$2,542,000	\$24,249,750

Capital Plan Suburban Division 2018-2022: Water

Capex Spending by Category



**LEHIGH COUNTY AUTHORITY
SUBURBAN DIVISION
2018-2022 CAPITAL PROGRAM**

WATER

Project #	Name or Title of Proposal	(1) Type	(1) Proj. Funding	Approval Stage (1)	Project Cost		This Capital Program						Project Category (1)	
					Total Cost	Prior Years* (3)	2018 Year -1	2019 Year -2	2020 Year -3	2021 Year -4	2022 Year -5	Grand Total	Primary	Secondary
	<u>Annual</u>													
SD-W-A	Annual Projects	Regular	LCA	A	\$ 7,885,750	\$ 730,000	\$ 1,628,750	\$ 1,722,750	\$ 1,301,750	\$ 1,352,750	\$ 1,149,750	\$ 7,155,750	AM - Varies	N/A
	Subtotal				\$ 7,885,750	\$ 730,000	\$ 1,628,750	\$ 1,722,750	\$ 1,301,750	\$ 1,352,750	\$ 1,149,750	\$ 7,155,750		
	<u>Previously Authorized</u>													
SD-W-12	Water Main Replacement Projects	Regular	LCA	C	\$ 10,500,000	\$ -	\$ 2,100,000	\$ 2,100,000	\$ 2,100,000	\$ 2,100,000	\$ 2,100,000	\$ 10,500,000	AM - Varies	N/A
SD-W-25	Pine Lakes Pumping Station Improvements	Regular	LCA	C	\$ 725,000	\$ 563,000	\$ 162,000	\$ -	\$ -	\$ -	\$ -	\$ 162,000	AM - High	Regulatory
SD-W-48	Crestwood - New Alternate Water Supply	Regular	LCA	C	\$ 510,000	\$ 330,000	\$ 180,000	\$ -	\$ -	\$ -	\$ -	\$ 180,000	Sys Imp	N/A
SD-W-49	CLD Auxiliary Pumping Station & Main Extension - Lower to Upper System	Regular	LCA	D	\$ 1,877,000	\$ 95,000	\$ 1,464,000	\$ 318,000	\$ -	\$ -	\$ -	\$ 1,782,000	Sys Imp	N/A
	Subtotal				\$ 13,612,000	\$ 988,000	\$ 3,906,000	\$ 2,418,000	\$ 2,100,000	\$ 2,100,000	\$ 2,100,000	\$ 12,624,000		
	<u>Pending Authorization</u>													
SD-W-4	Upper Milford Central Division Improvements - Buss Acres	Regular	LCA	P	\$ 1,370,000	\$ -	\$ 500,000	\$ 870,000	\$ -	\$ -	\$ -	\$ 1,370,000	AM - High	Regulatory
SD-W-7	Well Abandonments	Regular	LCA	P	\$ 150,000	\$ 90,000	\$ 10,000	\$ 50,000	\$ -	\$ -	\$ -	\$ 60,000	Regulatory	N/A
SD-W-13	Arcadia West Division Total Dissolved Solids (TDS) Removal System	Regular	LCA	P	\$ 280,000	\$ -	\$ 80,000	\$ 200,000	\$ -	\$ -	\$ -	\$ 280,000	Sys Imp	Regulatory
SD-W-37	Additional (Redunant) Water Supply - Small Satellite Divisions	Regular	LCA	P	\$ 300,000	\$ -	\$ 200,000	\$ 50,000	\$ 50,000	\$ -	\$ -	\$ 300,000	Sys Imp	N/A
SD-W-53	Water Meter Replacement Project	Regular	LCA	P	\$ 1,640,000	\$ 500,000	\$ 1,140,000	\$ -	\$ -	\$ -	\$ -	\$ 1,140,000	AM - Med	Efficiency
SD-W-54	Central Lehigh to Upper Milford Division Interconnection	Regular	Fees & LCA	P	\$ 1,485,000	\$ 165,000	\$ 1,320,000	\$ -	\$ -	\$ -	\$ -	\$ 1,320,000	New Cust	Sys Imp
	Subtotal				\$ 5,225,000	\$ 755,000	\$ 3,250,000	\$ 1,170,000	\$ 50,000	\$ -	\$ -	\$ 4,470,000		
	GRAND TOTAL				\$ 26,722,750	\$ 2,473,000	\$ 8,784,750	\$ 5,310,750	\$ 3,451,750	\$ 3,452,750	\$ 3,249,750	\$ 24,249,750		

(1) Reference Glossary of Acronyms & Terms found immediately after the Table of Contents

(2) Includes estimate of expenditures through 2017.

Suburban Water – Financial Analysis

- Assumes 4% revenue growth in 2018 to cover added debt service incurred with 2017 Bond issue
- Water rate study in process to support rates in other years
- Assumes 2.8% annual increase in expenses
- Non-operating revenues provide \$4.1m of spending
- Operations reserves provides \$1.4m of spending
- Total borrowing for plan is \$6.3m (Year 2021)

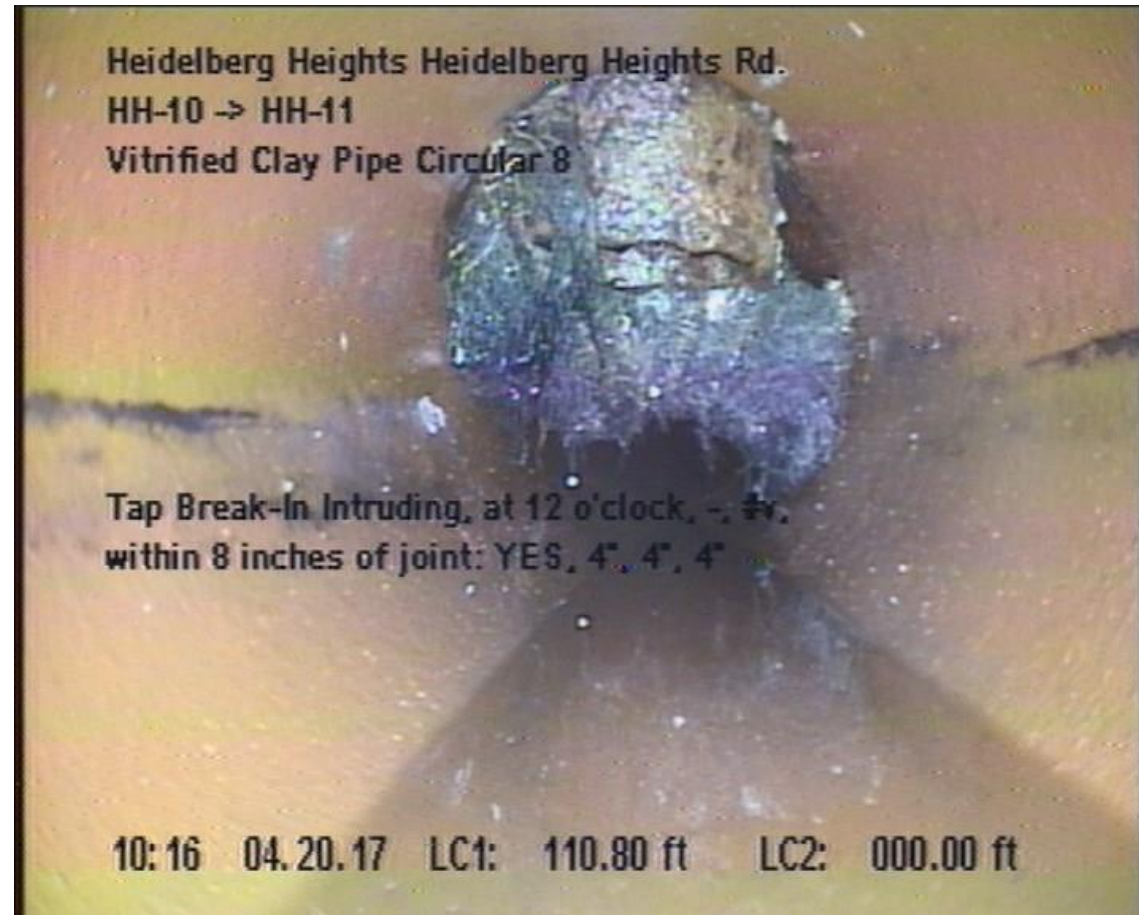
Suburban Water – Financial Analysis

	Suburban Water					
	2018	2019	2020	2021	2022	Total
CAPITAL SPENDING						
Water Capital						
Reimbursable Projects	-	-	-	-	-	-
Non-Reimbursable	8,785	5,311	3,452	3,452	3,250	24,250
Major Capital (CCRC)	-	-	-	-	-	-
Total Water	8,785	5,311	3,452	3,452	3,250	24,250
Net Administration	178	233	151	119	181	862
TOTAL CAPITAL SPENDING	<u>8,963</u>	<u>5,544</u>	<u>3,603</u>	<u>3,571</u>	<u>3,431</u>	<u>25,112</u>

	Suburban Water					
	2018	2019	2020	2021	2022	Total
FUNDING APPLIED:						
Project Reimbursement	-	-	-	-	-	-
From 2017 Bonds	8,785	4,512	-	-	-	13,297
From New Borrowing	-	-	-	3,452	2,848	6,300
From Previous Capital Reserves	-	-	-	-	-	-
From Operating Cash	178	1,032	3,603	119	583	5,515
Total Capital Spending	<u>8,963</u>	<u>5,544</u>	<u>3,603</u>	<u>3,571</u>	<u>3,431</u>	<u>25,112</u>
NEW BORROWING	<u>-</u>	<u>-</u>	<u>-</u>	<u>6,300</u>	<u>-</u>	<u>6,300</u>

SUBURBAN DIVISION - WASTEWATER

KEY PROJECT:
SD-S-17
Heidelberg Heights I & I
Investigation and
Remediation Project



2017 Forecast – Suburban Wastewater

\$000's	Budget	Forecast	Variance	FC/Bud %	Jul YTD	To Spend
ANNUAL & ADMINISTRATIVE	1,030	756	274	73.4%	75	681
Spring Creek Force Main Valve Replacement	30	20	10	66.7%	4	16
Jordan Creek Wastewater System	25	-	25	0.0%	-	-
Lynn Twp WTP Expansion	1,175	781	394	66.5%	29	752
NLSA Planning Study/ACT 537	10	-	10	0.0%	-	-
Park Pump Station Improvements / Force Main	670	301	369	44.9%	71	230
Combined Heat & Power WTP	300	-	300	0.0%	-	-
Signatory I/I Investig & Remediation - Test & Seal	1,070	1,028	42	96.1%	628	400
Small System I/I Removal - Test & Seal	330	227	103	68.8%	27	200
Common Rate Coll Sys Upgrade & Imp	340	300	40	88.2%	-	300
Wastewater TP Improvements	726	726	-	100.0%	63	663
Spring Creek PS Upgrade	407	206	201	50.6%	36	170
CLV WW Capacity Plan/Expansion	75	70	5	93.3%	-	70
Interceptor Access/Easement Acq	25	-	25	0.0%	-	-
WLI - Trexlertown Interceptor Upgrade	400	-	400	0.0%	-	-
Total Spending	6,613	4,415	2,198	66.8%	933	3,482

Capital Plan

Suburban Division

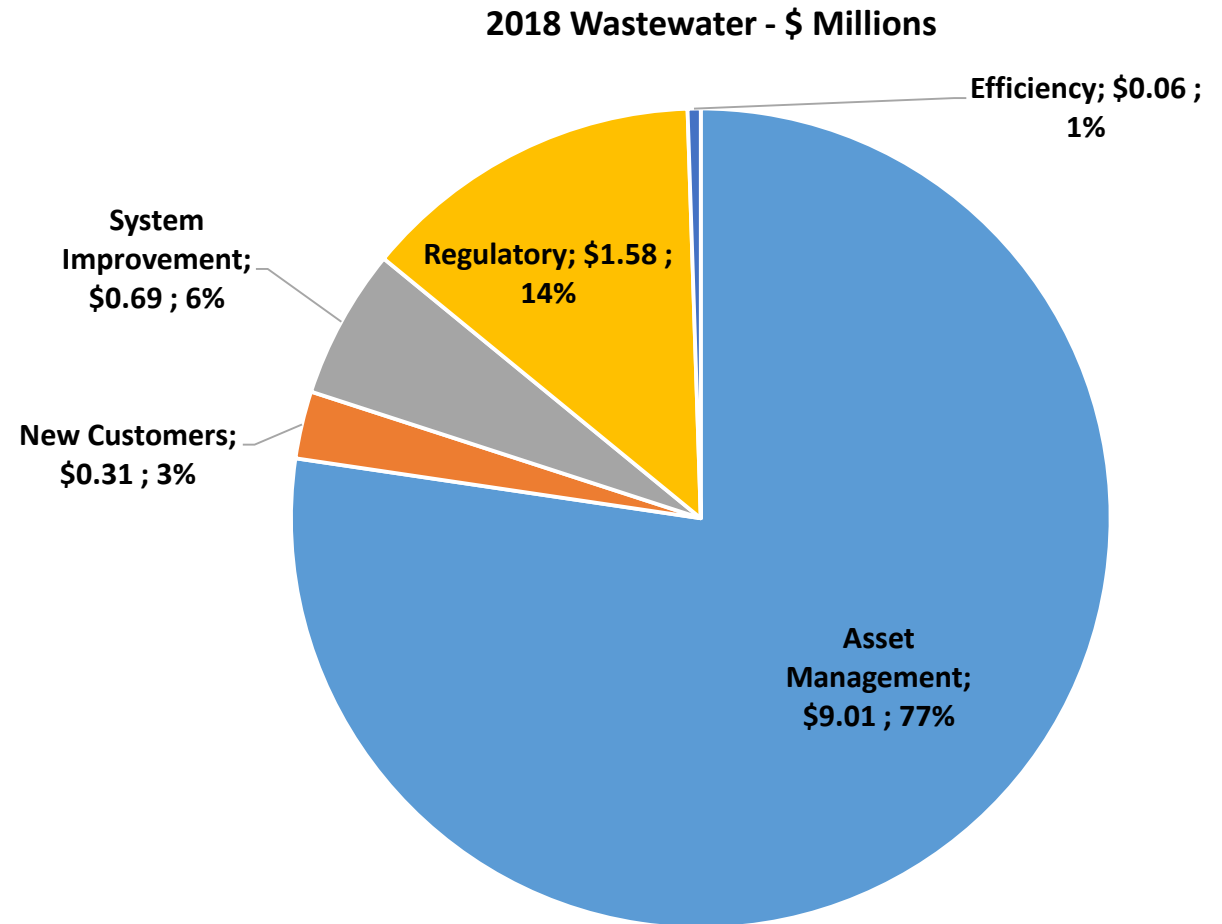
Wastewater

2018 Wastewater Capex Spending

Budget Area	Category						
	AM	Efficiency	Regulatory	New Customers	Revenue Opp.	System Imp.	Total
Wastewater	\$9,008,250	\$60,000	\$1,585,000	\$315,000	N/A	\$692,000	\$11,660,250

Capital Plan Suburban Division 2018 - Wastewater

Capex Spending by Category



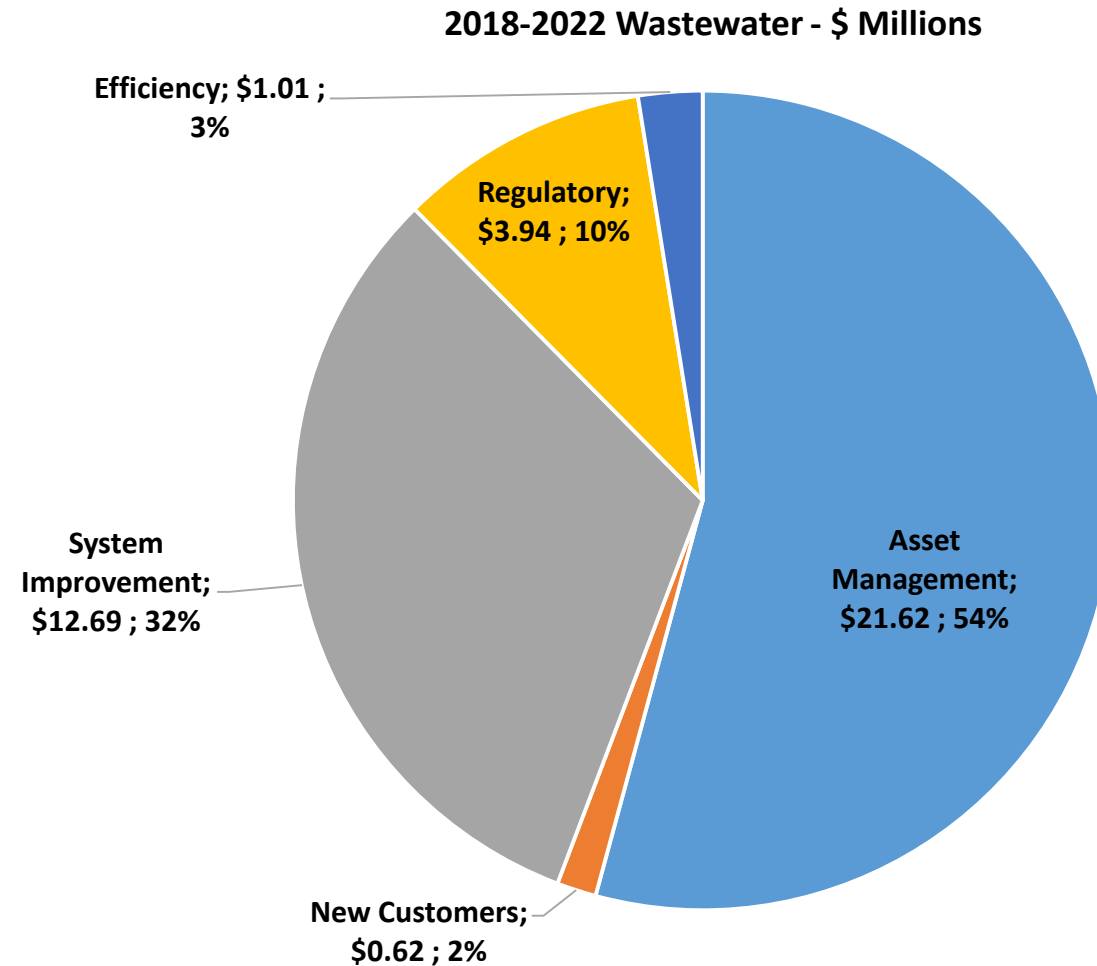
Capital Plan Suburban Division Wastewater

2018-2022 Wastewater Capex Spending

Budget Area	Category						
	AM	Efficiency	Regulatory	New Customers	Revenue Opp.	System Imp.	Total
Wastewater	\$21,617,250	\$1,010,000	\$3,935,000	\$615,000	N/A	\$12,692,000	\$39,869,250

Capital Plan Suburban Division 2018-2022: Wastewater

Capex Spending by Category



**LEHIGH COUNTY AUTHORITY
SUBURBAN DIVISION
2018-2022 CAPITAL PROGRAM
WASTEWATER**

Project #	Name or Title of Proposal	(1) P-0- Type	(1) P-0- Funding	Approval Stage (1)	Project Cost		This Capital Program						Project Category (1)	
					Total Cost	Prior Years' (2)	2018 Year -1	2019 Year -2	2020 Year -3	2021 Year -4	2022 Year -5	Grand Total	Primary	Secondary
	Annual													
SD-S-A	Annual Projects	Regular	LCA	A	\$ 2,479,250	\$ 525,000	\$ 827,250	\$ 268,250	\$ 440,250	\$ 225,250	\$ 195,250	\$ 1,954,250	AM - Varies	N/A
SD-S-22	Pretreatment Plant Improvements	Regular	LCA	A	\$ 4,100,000	\$ -	\$ 900,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 4,100,000	AM - Varies	Sys Imp
	Subtotal				\$ 6,579,250	\$ 525,000	\$ 1,727,250	\$ 1,066,250	\$ 1,240,250	\$ 1,025,250	\$ 995,250	\$ 6,054,250		
	Previously Authorized													
SD-S-3	Central Lehigh County WW Capacity Planning & Expansion	Regular	LCA	V	\$ 1,715,000	\$ 1,100,000	\$ 315,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 615,000	New Cust	N/A
SD-S-4	Spring Creek Force Main Air/Vacuum Valve Replacements	Regular	LCA	V	\$ 180,000	\$ 10,000	\$ 170,000	\$ -	\$ -	\$ -	\$ -	\$ 170,000	Sys Imp	N/A
SD-S-6	Wynnewood I & I Investigation & Remediation Program	Regular	LCA	V	\$ 500,000	\$ 250,000	\$ 20,000	\$ 230,000	\$ -	\$ -	\$ -	\$ 250,000	AM - Varies	Regulatory
SD-S-7	Wynnewood Terrace WWTP Remediation & Replacement	Regular	LCA	V	\$ 1,510,000	\$ 110,000	\$ 1,000,000	\$ 400,000	\$ -	\$ -	\$ -	\$ 1,400,000	AM - High	N/A
SD-S-13	Sand Spring WWTP Remediation & Replacement	Regular	LCA	S	\$ 1,510,000	\$ 110,000	\$ 800,000	\$ 600,000	\$ -	\$ -	\$ -	\$ 1,400,000	AM - High	N/A
SD-S-15	Park Pump Station Rehabilitation/Improvements	AO	LCA	P	\$ 4,760,000	\$ 300,000	\$ 3,000,000	\$ 1,400,000	\$ 60,000	\$ -	\$ -	\$ 4,460,000	AM - High	Regulatory
SD-S-17	Heidelberg Heights I & I Investigation & Remediation Program	Regular	LCA	V	\$ 390,000	\$ 25,000	\$ 200,000	\$ 140,000	\$ 25,000	\$ -	\$ -	\$ 365,000	AM - Varies	Regulatory
SD-S-18	Heidelberg Heights WWTP Rehabilitation	Regular	LCA	P	\$ 505,000	\$ 75,000	\$ 30,000	\$ 50,000	\$ 300,000	\$ 25,000	\$ 25,000	\$ 430,000	AM - High	N/A
SD-S-24	Signatory I & I Investigation & Remediation Program	AO	LCA	V	\$ 8,255,000	\$ 4,500,000	\$ 1,585,000	\$ 1,300,000	\$ 470,000	\$ 200,000	\$ 200,000	\$ 3,755,000	Regulatory	Sys Imp
SD-S-25	Lynn Township WWTP Upgrades & Expansion	Regular	LCA	D-Partial	\$ 5,083,755	\$ 615,755	\$ 608,000	\$ 89,000	\$ 1,887,000	\$ 1,886,000	\$ -	\$ 4,468,000	AM - High	N/A
SD-S-26	Lynn Township I & I Investigation & Remediation Program	Regular	LCA	P	\$ 320,000	\$ 30,000	\$ 125,000	\$ 125,000	\$ 40,000	\$ -	\$ -	\$ 290,000	AM - High	Regulatory
SD-S-27	Spring Creek Pump Station Upgrades	AO	LCA	D	\$ 581,000	\$ 359,000	\$ 222,000	\$ -	\$ -	\$ -	\$ -	\$ 222,000	Sys Imp	Efficiency
	Subtotal				\$ 25,309,755	\$ 7,484,755	\$ 8,073,000	\$ 4,409,000	\$ 2,857,000	\$ 2,186,000	\$ 300,000	\$ 17,825,000		
	Pending Authorization													
SD-S-2	Interceptor Access Easement Acquisitions	Regular	LCA	P	\$ 330,000	\$ -	\$ 60,000	\$ 100,000	\$ 100,000	\$ 50,000	\$ 20,000	\$ 330,000	Efficiency	Sys Imp
SD-S-8	Western Weisenberg WWTP Mechanical Screen	Regular	LCA	P	\$ 340,000	\$ -	\$ -	\$ 40,000	\$ 300,000	\$ -	\$ -	\$ 340,000	Efficiency	N/A
SD-S-12	Park Pump Station Force Main Rehabilitation	AO	LCA	P	\$ 2,550,000	\$ 50,000	\$ 1,500,000	\$ 1,000,000	\$ -	\$ -	\$ -	\$ 2,500,000	AM - High	N/A
SD-S-16	Park Pump Station - Sister Station	AO	LCA	P	\$ 180,000	\$ -	\$ -	\$ 60,000	\$ 10,000	\$ 10,000	\$ 100,000	\$ 180,000	Regulatory	AM - High
SD-S-19	Heidelberg Heights WWTP Mechanical Screen	Regular	LCA	P	\$ 340,000	\$ -	\$ -	\$ 40,000	\$ 300,000	\$ -	\$ -	\$ 340,000	Efficiency	N/A
SD-S-28	WLI - Trexertown Area Interceptor Upgrade	AO	LCA	P	\$ 12,300,000	\$ -	\$ 300,000	\$ 500,000	\$ 6,000,000	\$ 5,000,000	\$ 500,000	\$ 12,300,000	Sys Imp	Regulatory
	Subtotal				\$ 16,040,000	\$ 50,000	\$ 1,860,000	\$ 1,740,000	\$ 6,710,000	\$ 5,060,000	\$ 620,000	\$ 15,990,000		
	GRAND TOTAL				\$ 47,929,005	\$ 8,059,755	\$ 11,660,250	\$ 7,215,250	\$ 10,807,250	\$ 8,271,250	\$ 1,915,250	\$ 39,869,250		

(1) Reference Glossary of Acronyms & Terms found immediately after the Table of Contents

(2) Includes estimate of expenditures through 2017.

Suburban Wastewater – Financial Analysis

- Annual revenue growth of 2.4% required at a minimum to obtain necessary operations funding
- Expense growth of 2.8%
- Non-operating revenues provide \$6.0m
- Previous debt reserves providing \$9.9m
- Operations reserves providing \$15.7mm
- Total Borrowing of \$8.9m (Year 2020)

Suburban Wastewater – Financial Analysis

	Suburban Wastewater					
	2018	2019	2020	2021	2022	Total
CAPITAL SPENDING						
Wastewater Capital						
Reimbursable Projects (Non AO)	-	-	-	-	-	-
Non-Reimbursable Projects	11,660	7,215	10,807	8,272	1,915	39,869
Major Capital (CCRC)	-	-	-	-	-	-
Reimbursable Projects (AO)	-	-	-	-	-	-
Total Wastewater	11,660	7,215	10,807	8,272	1,915	39,869
Net Administration	119	156	100	80	121	576
TOTAL CAPITAL SPENDING	11,779	7,371	10,907	8,352	2,036	40,445

	Suburban Wastewater					
	2018	2019	2020	2021	2022	Total
FUNDING APPLIED:						
Project Reimbursement	-	-	-	-	-	-
From 2017 Bonds	-	-	-	-	-	-
From New Borrowing	-	-	8,850	-	-	8,850
From Previous Capital Reserves	9,898	-	-	-	-	9,898
From Operating Cash	1,881	7,371	2,057	8,352	2,036	21,697
Total Capital Spending	11,779	7,371	10,907	8,352	2,036	40,445
NEW BORROWING	-	-	8,850	-	-	8,850

ALLENTOWN DIVISION - WATER

KEY PROJECT:
AD-W-7
Water Main Replacements



City Division – Changes to the Draft Capital Plan (8/14/17 vs. 8/28/17)

- Total “LCA Funded” Projects (i.e. the Annual Projects) = \$3M (each) in 2018, 2019, 2020, 2021 and \$2.4M in 2022. This total includes spends for both Water and Sewer.
- Indenture Report Improvements Project is no longer funded
- Roof Phase 2 and 3 has been spread over the 5 year Plan
- CCRC/Schedule 7/AO/Uncompleted Work Projects have not been revised
- 8/14/17 Water Plan = 2018 Spends were \$9.0M; Total was \$63.0M
- 8/14/17 Sewer Plan = 2018 Spends were \$9.0M; Total was \$39.0M
- 8/28/17 Water Plan = 2018 Spends are \$7.1M; Total is \$59.6M
- 8/28/17 Sewer Plan = 2018 Spends are \$7.0M; Total is \$31.9M
- REDUCTION BY \$4M in 2018

2017 Forecast – City Division (Water)

<u>\$000's</u>	<u>Budget</u>	<u>Forecast</u>	<u>Variance</u>	<u>FC/Bud %</u>	<u>Jul YTD</u>	<u>To Spend</u>
WATER						
ANNUAL & ADMINISTRATIVE	1,776	1,773	3	99.8%	982	791
Schantz Spring Main Replacement	2,002	1,267	735	63.3%	34	1,233
Pre-lease Valve Repl	870	870	-	100.0%	24	846
AMR Meter Project	138	38	100	27.5%	2	36
Water Capital Mgmt/WFP Master Plan	100	100	-	100.0%	99	1
Emergency Power	1	1	-	100.0%	-	1
Water Main Replacements	200	200	-	100.0%	138	62
TOTAL WATER	5,087	4,249	838	83.5%	1,279	2,970

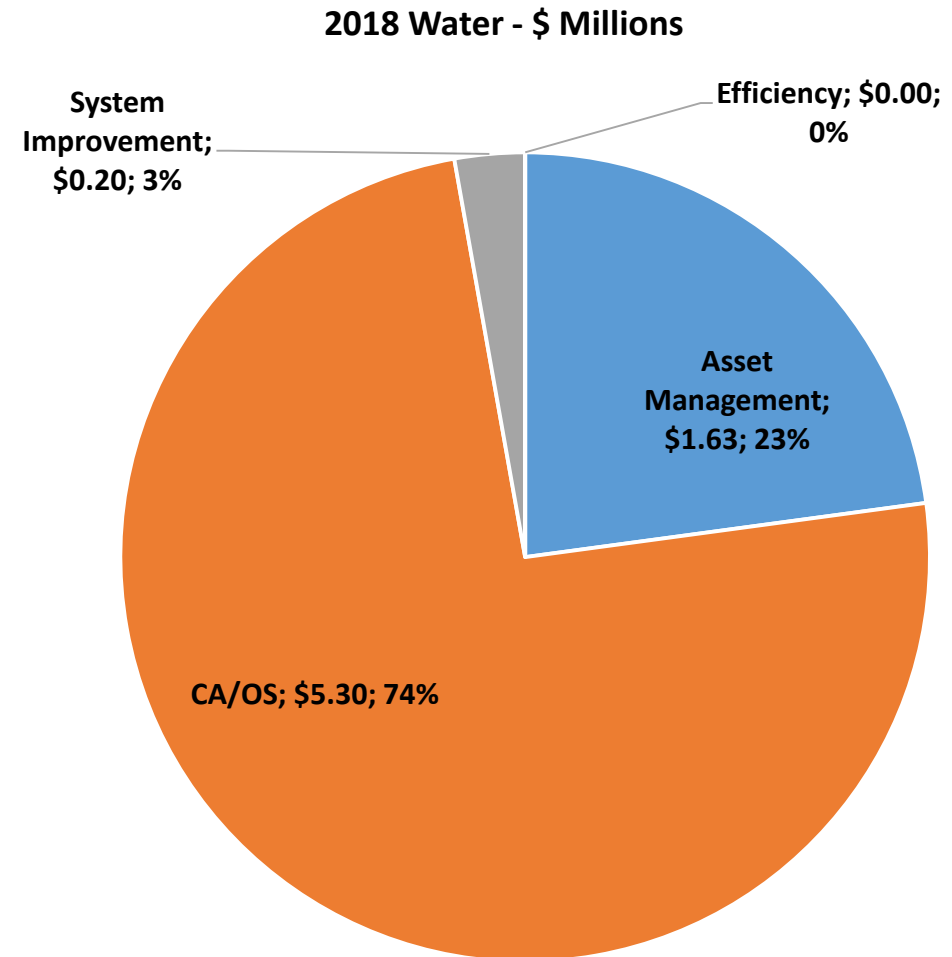
Capital Plan Allentown Division Water

2018 Water Capex Spending

Budget Area	Category							
	AM	CA/OS	Efficiency	Regulatory	New Customers	Revenue Opp.	System Imp.	Total
Water	\$1,631,000	\$5,295,000	\$0	N/A	N/A	N/A	\$200,000	\$7,126,000

Capital Plan Allentown Division 2018 - Water

Capex Spending by Category



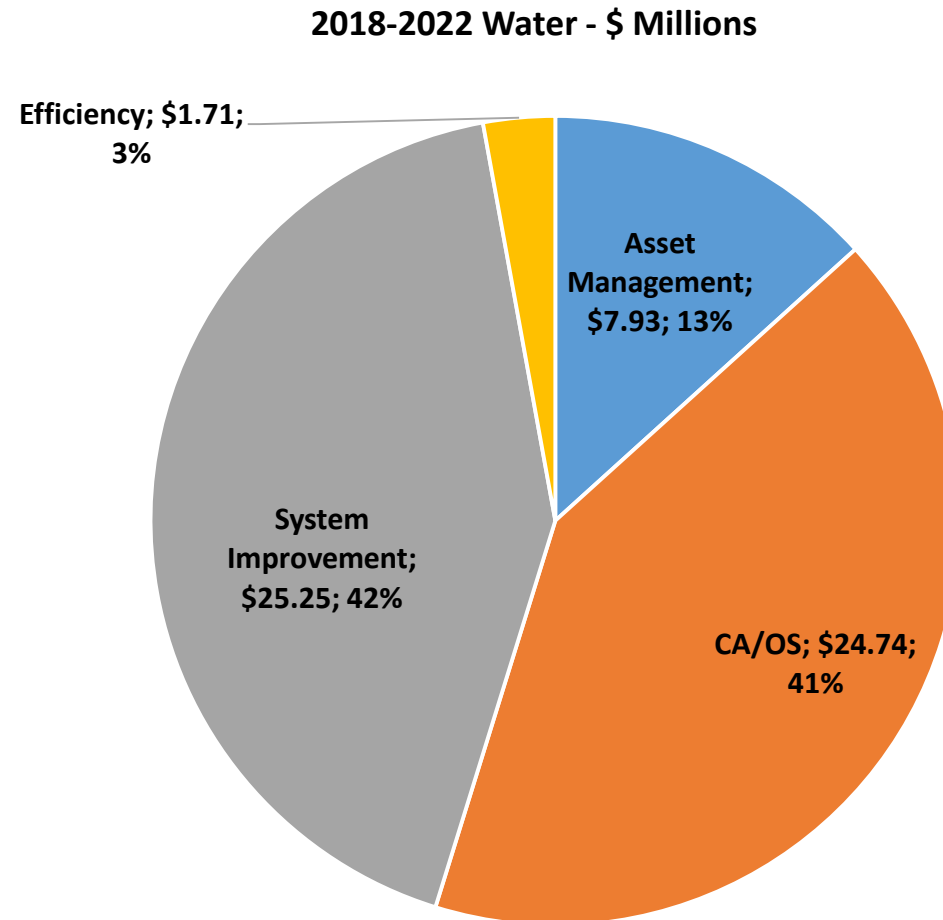
Capital Plan Allentown Division Water

2018-2022 Water Capex Spending

Budget Area	Category							
	AM	CA/OS	Efficiency	Regulatory	New Customers	Revenue Opp.	System Imp.	Total
Water	\$7,931,000	\$24,736,000	\$1,705,000	N/A	N/A	N/A	\$25,250,000	\$59,622,000

Capital Plan Allentown Division 2018-2022 - Water

Capex Spending by Category



**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION
2018-2022 CAPITAL PROGRAM
WATER**

Project #	Name or Title of Proposal	(1) Proj. Type	(1) Funding	Approval Stage (1)	Project Cost		This Capital Program						Project Category (1)	
					Total Cost	Prior to Years (2)	2018	2019	2020	2021	2022	Total	Primary	Secondary
	LCA FUNDED PROJECTS													
	<u>Annual</u>													
AD-W-A	Annual Projects	Regular	LCA	A	\$ 7,289,000	\$ 29,000	\$ 1,531,000	\$ 1,499,000	\$ 1,510,000	\$ 1,510,000	\$ 1,210,000	\$ 7,260,000	AM - Varies	N/A
	Subtotal				\$ 7,289,000	\$ 29,000	\$ 1,531,000	\$ 1,499,000	\$ 1,510,000	\$ 1,510,000	\$ 1,210,000	\$ 7,260,000		
	<u>Previously Authorized</u>													
AD-W-7	Water Main Replacements	S-7-MCI	CCRC	V	\$ 24,000,000	\$ -	\$ 4,800,000	\$ 4,800,000	\$ 4,800,000	\$ 4,800,000	\$ 4,800,000	\$ 24,000,000	CA/OS	AM - High
AD-W-9	Various Water System Related Studies	Regular	LCA	V	\$ 101,000	\$ -	\$ 20,000	\$ 21,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 101,000	CA/OS	Planning
AD-W-13	Facility Roof Replacements Phases 2 & 3	Regular	LCA	D	\$ 671,000	\$ -	\$ 100,000	\$ 100,000	\$ 100,000	\$ 171,000	\$ 200,000	\$ 671,000	AM - High	N/A
	Subtotal				\$ 24,772,000	\$ -	\$ 4,920,000	\$ 4,921,000	\$ 4,920,000	\$ 4,991,000	\$ 5,020,000	\$ 24,772,000		
	<u>Pending Authorization</u>													
AD-W-10	Emergency Power at WFP - Crystal & Schantz Springs Pumps	LCA-MCI	CCRC	P	\$ 1,790,000	\$ -	\$ -	\$ -	\$ -	\$ 890,000	\$ 900,000	\$ 1,790,000	Sys Imp	N/A
AD-W-11	Schantz Spring Main Replacement & Leak Rehabilitation	S-7-MCI	CCRC	P	\$ 2,290,000	\$ 1,955,000	\$ 335,000	\$ -	\$ -	\$ -	\$ -	\$ 335,000	CA/OS	AM - Med
AD-W-21	Fixed-Base Meter Reading System	Regular	LCA	P	\$ 1,705,000	\$ -	\$ -	\$ -	\$ 1,705,000	\$ -	\$ -	\$ 1,705,000	Efficiency	N/A
AD-W-22	Filter Upgrades	LCA-MCI	CCRC	P	\$ 12,340,000	\$ -	\$ 200,000	\$ 7,020,000	\$ 5,120,000	\$ -	\$ -	\$ 12,340,000	Sys Imp	Efficiency
AD-W-23	Intake Upgrades	LCA-MCI	CCRC	P	\$ 11,120,000	\$ -	\$ -	\$ -	\$ 440,000	\$ 5,340,000	\$ 5,340,000	\$ 11,120,000	Sys Imp	Efficiency
	Subtotal				\$ 29,245,000	\$ 1,955,000	\$ 535,000	\$ 7,020,000	\$ 7,265,000	\$ 6,230,000	\$ 6,240,000	\$ 27,290,000		
	TOTAL LCA FUNDED PROJECTS				\$ 61,306,000	\$ 1,984,000	\$ 6,986,000	\$ 13,440,000	\$ 13,695,000	\$ 12,731,000	\$ 12,470,000	\$ 59,322,000		
	<u>CITY FUNDED PROJECTS</u>													
AD-W-15	Ilron/AMR Meter Project	UW	Allentown	V	\$ 300,000	\$ -	\$ 140,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 300,000	CA/OS	Efficiency
	TOTAL CITY FUNDED PROJECTS				\$ 300,000	\$ -	\$ 140,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 300,000		
	GRAND TOTAL				\$ 61,606,000	\$ 1,984,000	\$ 7,126,000	\$ 13,480,000	\$ 13,735,000	\$ 12,771,000	\$ 12,510,000	\$ 59,622,000		

(1) Reference Glossary of Acronyms & Terms found immediately after the Table of Contents

(2) Includes estimate of expenditures through 2017.

ALLENTOWN DIVISION – WASTEWATER

KEY PROJECT:
AD-S-5
Electrical Substation Replacements



2017 Forecast – City Division (Wastewater)

<u>\$000's</u>	<u>Budget</u>	<u>Forecast</u>	<u>Variance</u>	<u>FC/Bud %</u>	<u>Jul YTD</u>	<u>To Spend</u>
WASTEWATER						
ANNUAL & ADMINISTRATIVE	1,305	1,294	11	99.2%	300	994
WWTP - Security Upgrades	215	215	-	100.0%	35	180
Electrical Substation Replacements	159	159	-	100.0%	-	159
Manhole Chimneys - Cycles 1,2 and 3	65	65	-	100.0%	10	55
Manhole Lining - Cycle 1, 2 & 3	1	1	-	100.0%	1	-
WWTP AO Phase 1 Improvements	947	200	747	21.1%	189	11
Various WW System Related Studies	7	7	-	100.0%	6	1
WWTP Interim Blending Pumping Station	1,310	-	1,310	0.0%	-	-
Sanitary Sewer Main Repl/Rehab	95	95	-	100.0%	24	71
WWTP - Digester Cover *2 Asset	1,480	1,480	-	100.0%	1,258	222
TOTAL WASTEWATER	5,584	3,516	2,068	63.0%	1,823	1,693
TOTAL CITY DIVISION	10,671	7,765	2,906	72.8%	3,102	4,663

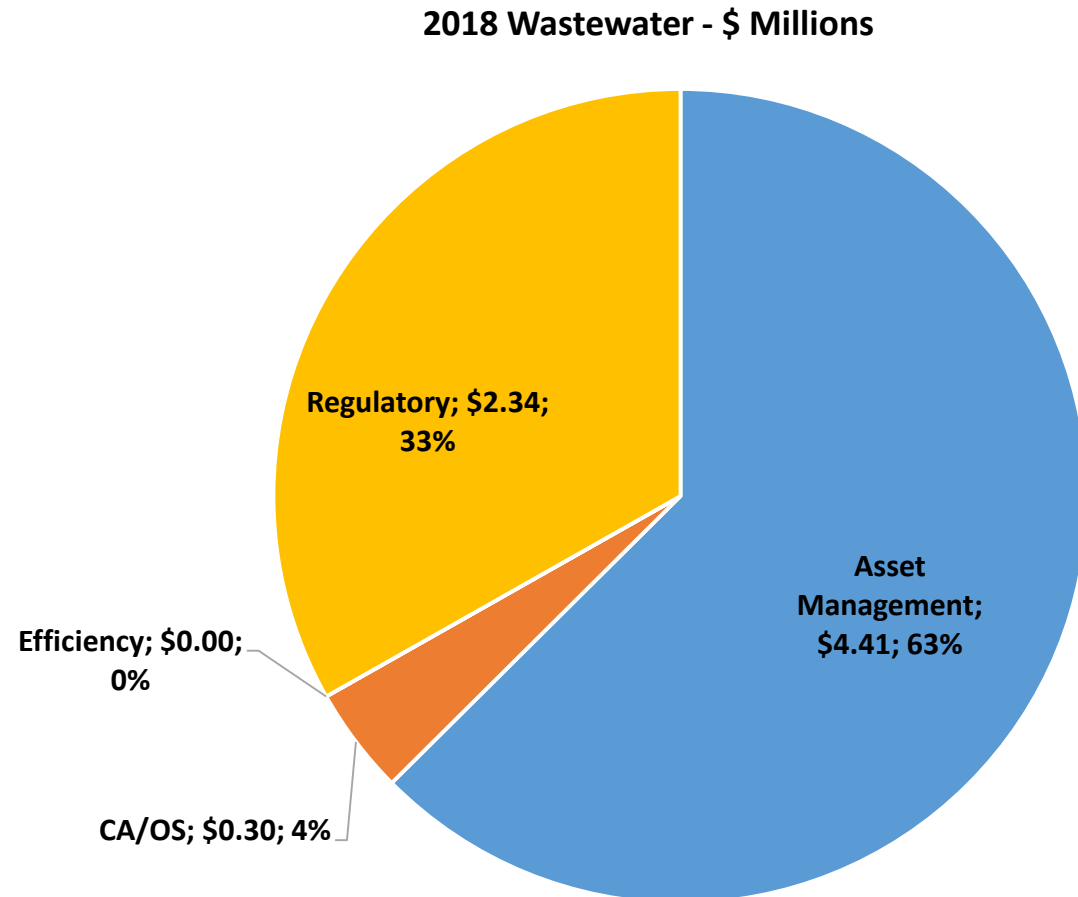
Capital Plan Allentown Division Wastewater

2018 Wastewater Capex Spending

Budget Area	Category							
	AM	CA/OS	Efficiency	Regulatory	New Customers	Revenue Opp.	System Imp.	Total
Wastewater	\$4,409,000	\$300,000	\$0	\$2,340,000	N/A	N/A	N/A	\$7,049,000

Capital Plan Allentown Division 2018 - Wastewater

Capex Spending by Category



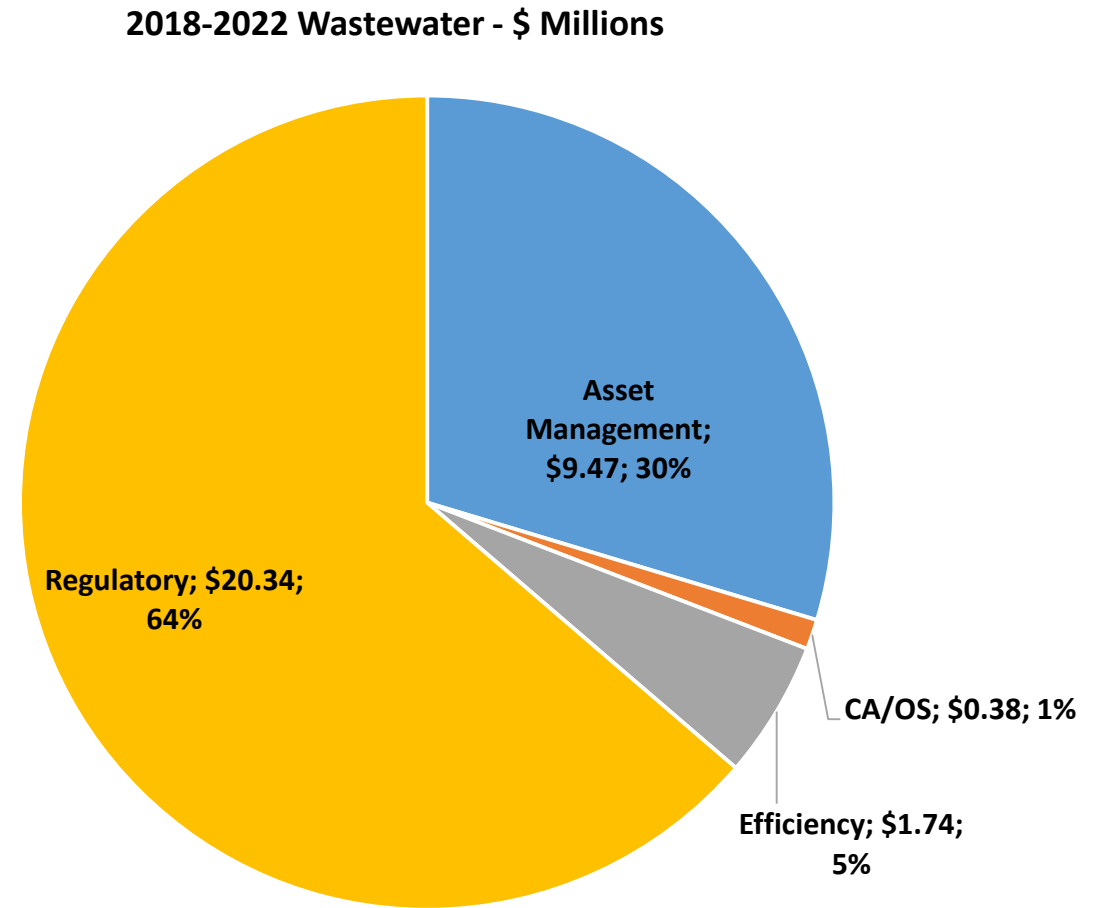
Capital Plan Allentown Division Wastewater

2018-2022 Wastewater Capex Spending

Budget Area	Category							
	AM	CA/OS	Efficiency	Regulatory	New Customers	Revenue Opp.	System Imp.	Total
Wastewater	\$9,473,000	\$380,000	\$1,740,000	\$20,340,000	N/A	N/A	N/A	\$31,933,000

Capital Plan Allentown Division 2018-2022 - Wastewater

Capex Spending by Category



**LEHIGH COUNTY AUTHORITY
ALLENTOWN DIVISION
2018-2022 CAPITAL PROGRAM
WASTEWATER**

Project #	Name or Title of Proposal	(1) Type	Funding (1)	Approval Stage (1)	Project Cost		This Capital Program						Project Category (1)	
					Total Cost	Prior to Years (2)	2018	2019	2020	2021	2022	Total	Primary	Secondary
	LCA FUNDED PROJECTS													
	Annual													
AD-S-A	Annual Projects	Regular	LCA	A	\$ 5,988,000	\$ -	\$ 1,049,000	\$ 1,360,000	\$ 1,350,000	\$ 1,279,000	\$ 950,000	\$ 5,988,000	AM - High	N/A
	Subtotal				\$ 5,988,000	\$ -	\$ 1,049,000	\$ 1,360,000	\$ 1,350,000	\$ 1,279,000	\$ 950,000	\$ 5,988,000		
	Previously Authorized													
AD-S-5	WWTP Electrical Substation Replacements	LCA-MCI	CCRC	E	\$ 3,665,000	\$ 180,000	\$ 3,360,000	\$ 125,000	\$ -	\$ -	\$ -	\$ 3,485,000	AM - High	N/A
AD-S-9	Various Wastewater System Related Studies	Regular	LCA	V	\$ 445,000	\$ 65,000	\$ 300,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 380,000	CA/OS	Planning
	Subtotal				\$ 4,110,000	\$ 245,000	\$ 3,660,000	\$ 145,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 3,865,000		
	Pending Authorization													
AD-S-6	WWTP Disinfection Upgrade	LCA-MCI	CCRC	P	\$ 1,740,000	\$ -	\$ -	\$ -	\$ -	\$ 850,000	\$ 890,000	\$ 1,740,000	Efficiency	N/A
AD-S-18	Indenture Report Improvements	Regular	LCA	A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	AM - Varles	N/A
	Subtotal				\$ 1,740,000	\$ -	\$ -	\$ -	\$ -	\$ 850,000	\$ 890,000	\$ 1,740,000		
	TOTAL LCA FUNDED PROJECTS				\$ 11,838,000	\$ 245,000	\$ 4,709,000	\$ 1,505,000	\$ 1,370,000	\$ 2,149,000	\$ 1,860,000	\$ 11,593,000		
	CITY FUNDED PROJECTS													
AD-S-11	Administrative Order Phase 1A WWTP Improvements	AO	Allentown	P	\$ 19,000,000	\$ -	\$ 1,000,000	\$ 9,000,000	\$ 9,000,000	\$ -	\$ -	\$ 19,000,000	Regulatory	CA/OS
AD-S-16	WWTP Interim Blending Pumping System	AO	Allentown	P	\$ 1,340,000	\$ -	\$ 1,340,000	\$ -	\$ -	\$ -	\$ -	\$ 1,340,000	Regulatory	CA/OS
	TOTAL CITY FUNDED PROJECTS				\$ 20,340,000	\$ -	\$ 2,340,000	\$ 9,000,000	\$ 9,000,000	\$ -	\$ -	\$ 20,340,000		
	Grand Total				\$ 32,178,000	\$ 245,000	\$ 7,049,000	\$ 10,505,000	\$ 10,370,000	\$ 2,149,000	\$ 1,860,000	\$ 31,933,000		

(1) Reference Glossary of Acronyms & Terms found immediately after the Table of Contents

(2) Includes estimate of expenditures through 2017.

City Division – Financial Analysis

- Assumes 4.0% revenue increase in 2018 (CPI = 1.5%, Index = 2.5%) from city ratepayers
- Annual revenue increase of 3.0% for 2019-2022 (CPI = 0.5%, Index = 2.5%)
- Assumes 2.8% annual increase in expenses
- Assumes 2.8% annual increase in signatory revenues (to match expense increases)
- Includes \$20.6m in reimbursements, primarily from City for Administrative Order projects
- Projects that are listed as “Major Capital” result in a capital cost recovery charge that adds to operating revenue - \$54.8m
- Net additional funding from operations required to limit negative impacts from borrowing
- Total borrow is \$31.6m

City Division – Financial Analysis

	City Division					
	2018	2019	2020	2021	2022	Total
CAPITAL SPENDING						
Water Capital						
Reimbursable Projects	140	40	40	40	40	300
Non-Reimbursable	1,651	1,620	3,335	1,701	1,430	9,737
Major Capital (CCRC)	<u>5,335</u>	<u>11,820</u>	<u>10,360</u>	<u>11,030</u>	<u>11,040</u>	<u>49,585</u>
Total Water	<u>7,126</u>	<u>13,480</u>	<u>13,735</u>	<u>12,771</u>	<u>12,510</u>	<u>59,622</u>
Wastewater Capital						
Reimbursable Projects (Non AO)	2,340	9,000	9,000	-	-	20,340
Non-Reimbursable Projects	1,349	1,380	1,370	1,299	970	6,368
Major Capital (CCRC)	<u>3,360</u>	<u>125</u>	<u>-</u>	<u>850</u>	<u>890</u>	<u>5,225</u>
Reimbursable Projects (AO)	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total Wastewater	<u>7,049</u>	<u>10,505</u>	<u>10,370</u>	<u>2,149</u>	<u>1,860</u>	<u>31,933</u>
Net Administration	<u>298</u>	<u>486</u>	<u>204</u>	<u>101</u>	<u>101</u>	<u>1,190</u>
TOTAL CAPITAL SPENDING	<u><u>14,473</u></u>	<u><u>24,471</u></u>	<u><u>24,309</u></u>	<u><u>15,021</u></u>	<u><u>14,471</u></u>	<u><u>92,745</u></u>

	City Division					
	2018	2019	2020	2021	2022	Total
FUNDING APPLIED:						
Project Reimbursement	2,480	9,040	9,040	40	40	20,640
From New Borrowing	9,360	9,440	-	7,000	5,800	31,600
From Previous Capital Reserves	2,335	-	-	-	-	2,335
From Operating Cash	<u>298</u>	<u>5,991</u>	<u>15,269</u>	<u>7,981</u>	<u>8,631</u>	<u>38,170</u>
Total Capital Spending	<u><u>14,473</u></u>	<u><u>24,471</u></u>	<u><u>24,309</u></u>	<u><u>15,021</u></u>	<u><u>14,471</u></u>	<u><u>92,745</u></u>

Summary

- 2018 Capital Budget
- Total 5-Year Capital Budget

	<u>2018</u>		<u>2018-2022</u>
Administration	\$ 595,000		\$ 2,628,000
Suburban Water	\$ 8,784,750		\$ 24,249,750
Suburban Wastewater	\$ 11,660,250		\$ 39,869,250
City Division	\$ 14,175,000		\$ 91,555,000
TOTAL	\$ 35,215,000		\$ 158,302,000

Discussion

Questions?