PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
WATER SUPPLY IMPROVEMENTS													
1. Conduct Water Audit	\$30,000		\$30,000										
2. Conduct Safe Yield Study	\$40,000			\$40,000									
Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond	\$400,000						\$200,000	\$200,000					
Updgrades to Copicut Transfer Station	\$250,000				\$250,000								
5. Watershed Facilities Improvements	\$750,000		\$250,000	\$250,000	\$250,000								
6. Dam Improvements	\$1,725,000	\$413,000	\$413,000	\$343,000	\$409,000	\$147,000							
7. Update Watershed Protection Plan to conform to DEP guidelines	\$50,000		\$50,000										
8. Evaluate Raw Water Intake	\$30,000			\$30,000									
SUB-TOTAL WATER SUPPLY IMPROVEMENTS													
WATER TREATMENT IMPROVEMENTS													
1. Chlorine Feed Relocation	\$0												
SCADA System and Process Control Equipment	\$50,000		\$50,000										
3. Telemetry Upgrade	\$250,000				\$125,000	\$125,000							
4. Annual Budget to Replace Aging Equipment / Maintain Building	\$200,000 /yr		\$175,000	\$150,000	\$125,000	\$200,000	\$250,000	\$215,000	\$145,000	\$250,000	\$250,000	\$250,000	\$250,000
5. Filter Media Replacement	\$125,000 /10yr		\$125,000										
6. Turbidimeters and Monitoring Equipment	\$5,000 /yr		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
7. Rehabilitation of Low Lift Pumps & new VFD's	\$150,000			\$150,000	Ψ2,000		ψ2,000		45,000	Ψ5,000			Ψ,000
8. Refurbish/Replace Three High Lift Finish Water Pumps	\$325,000			Ψ130,000			\$75,000	\$125,000	\$125,000				
9. Training for Plant Personnel	\$10,000 /yr		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
10. Residual Disposal and Management	\$800,000		\$100,000	\$700,000	φ10,000	Ψ10,000	\$10,000	Ψ10,000	Ψ10,000	\$10,000	φ10,000	Ψ10,000	Ψ10,000
Residual Disposal and Management Backwash Segregation and Recycling	\$2,000,000		\$100,000	\$150,000	\$1,850,000								
12. Emergency Reserve Fund	\$350,000			\$350,000	\$1,650,000								
13. Convert from Gas to Liquid Chlorine	\$600,000			\$330,000		\$600,000							
14. Electrical Systems Upgrade	\$125,000				\$125,000	\$000,000							
	\$123,000				\$123,000								
Advanced Treatment (pending regulatory requirements)	\$18,000,000 *							\$2,000,000	\$8,000,000	\$8,000,000			
Intermediate Pumping and GAC Filtration or Membrane Filtration Granting	\$5,600,000						\$1,600,000	\$4,000,000	\$8,000,000	\$8,000,000			
SUB-TOTAL WATER TREATMENT IMPROVEMENTS													
TRANSMISSION AND DISTRIBUTION SYSTEM IMPROVEMENTS													
TRANSMISSION AND DISTRIBUTION STSTEM INTROVEMENTS													
Transmission System Improvements													
1. Redundant Transmission Line from WTP	\$3,000,000												
Annual Pipe Replacement Program													
Annual pipe replacement program	~\$4,300,000 /yr	\$1,200,000	\$4,533,570	\$3,823,200	\$3,223,800	\$4,033,800	\$2,430,000	\$4,244,400	\$4,422,600	\$4,941,000	\$3,207,600	\$3,742,200	\$2,284,200
3. Paving allowance for annual pipe replacement program	~\$2,200,000 /yr	\$950,000	\$2,895,000	\$2,436,750	\$1,993,500	\$2,406,000	\$1,409,250	\$2,379,000	\$2,405,250	\$2,611,500	\$1,650,750	\$1,870,500	\$1,140,750
Storage Tank Improvements													
Cleaning and Painting of Storage Tanks (every 15-20 yrs)	\$8,500,000												\$2,000,000
Airport Road High Service Area Improvements													
5. Replace Airport Road tank, construct Commerce Drive Pump Station	\$4,000,000	\$3,000,000	\$1,000,000										
Replace Airport Road tank, construct Commerce Drive Fullip Station Future High Service Area Dedicated Water Main	\$500,000	\$3,000,000	\$1,000,000		\$500,000								
Distribution System Operation Improvements	#4.400 ===	4	m=	m	# 3 0 = = = :	# 3 0 = = = :							
7. Investigation and Improvements for Low Pressure Areas	\$4,100,000	\$25,000	\$25,000	\$50,000	\$2,000,000	\$2,000,000							
8. Perform Leak Detection Survey of 250 miles of water main (every 2 years)	\$40,000 /2yrs		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000
9. Allowance for leak repair	\$50,000 /yr	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000		\$50,000	\$50,000	\$50,000
10. Comprehensive Hydrant Flushing & Valve Exercising Program	\$60,000 /yr		\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000		\$60,000	\$60,000	\$60,000
11. Valve and Hydrant Replacement Allowance	\$50,000 /yr		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000		\$50,000	\$50,000	\$50,000
12. Storage Facility Inspections (every 3 to 5 years)	\$20,000 /3yrs			\$20,000			\$20,000			\$20,000			\$20,000
13. Annual Meter Replacement Program (1,000 meters per year)	\$300,000 /yr		\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000
	I						İ						

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Distribution Area Maintenance Improvements													
14. Debris Removal along Bedford Street	\$1,400,000		\$400,000		\$1,000,000								
15. Distribution Maintenance Area, Buildings, and Structures													
Building	\$700,000		\$150,000	\$550,000									
Replace or Rehabilitate Distribution Maintenance Building	\$2,800,000					\$1,400,000	\$1,400,000						
Evaluate / Rehabilitate Distribution Storage Area	\$1,700,000					\$850,000	\$850,000						
16. Evaluate / Remove 1950 Pump Station and Screen House	\$1,000,000				\$1,000,000								
17. Repair and Rehabilitate Structures of Historical Significance	\$2,500,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000		
18. Distribution Vehicle Maintenance and Replacement	\$2,200,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
SUB-TOTAL DISTRIBUTION SYSTEM IMPROVEMENTS													
TOTAL COST PER YEAR		\$5,988,000	\$11,061,570	\$9,867,950	\$13,716,300	\$12,586,800	\$9,099,250	\$13,988,400	\$15,962,850	\$16,647,500	\$5,973,350	\$6,437,700	\$6,309,950

 $^{{\}small *\ Membrane\ filtration\ is\ estimated\ at\ approximately\ \$22.2\ million.}$

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
ATER SUPPLY IMPROVEMENTS														
1. Conduct Water Audit	\$30,000		\$30,000											
2. Conduct Safe Yield Study	\$40,000			\$40,000										
Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond	\$400,000						\$200,000	\$200,000						
Updgrades to Copicut Transfer Station	\$250,000				\$250,000									
5. Watershed Facilities Improvements	\$750,000		\$250,000	\$250,000	\$250,000									
6. Dam Improvements	\$1,725,000	\$413,000	\$413,000	\$343,000	\$409,000	\$147,000								
7. Update Watershed Protection Plan to conform to DEP guidelines	\$50,000		\$50,000											
8. Evaluate Raw Water Intake	\$30,000			\$30,000										
SUB-TOTAL WATER SUPPLY IMPROVEMENTS														
ATER TREATMENT IMPROVEMENTS														
Chlorine Feed Relocation	\$0													
SCADA System and Process Control Equipment	\$50,000		\$50,000											
Telemetry Upgrade	\$250,000				\$125,000	\$125,000								
Annual Budget to Replace Aging Equipment / Maintain Building	\$200,000 /yr		\$175,000	\$150,000	\$125,000	\$200,000	\$250,000	\$215,000	\$145,000	\$250,000	\$250,000	\$250,000	\$250,000	\$200,0
Filter Media Replacement	\$125,000 /10yr		\$125,000	4150,000	Q123,000		0200,000	Ψ213,000	Ψ1.5,000				\$230,000	9200,0
Truck Precial Replacement Turbidimeters and Monitoring Equipment	\$5,000 /yr		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,0
7. Rehabilitation of Low Lift Pumps & new VFD's	\$150,000		\$5,000	\$150,000	\$5,000	\$5,000	\$5,000	\$3,000	\$5,000	\$5,000	\$5,000	\$5,000	\$3,000	\$3,0
Refurbish/Replace Three High Lift Finish Water Pumps	\$325,000			\$150,000			\$75,000	\$125,000	\$125,000					
9. Training for Plant Personnel			\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$123,000	\$123,000	¢10.000	\$10,000	\$10,000	\$10,000	¢10.0
	\$10,000 /yr				\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,00
10. Residual Disposal and Management	\$800,000		\$100,000	\$700,000	## 050 000									
11. Backwash Segregation and Recycling	\$2,000,000			\$150,000	\$1,850,000									
12. Emergency Reserve Fund	\$350,000			\$350,000										
13. Convert from Gas to Liquid Chlorine	\$600,000					\$600,000								
14. Electrical Systems Upgrade	\$125,000				\$125,000									
Advanced Treatment (pending regulatory requirements)														
15. Intermediate Pumping and GAC Filtration or Membrane Filtration	\$18,000,000 *							\$2,000,000	\$8,000,000	\$8,000,000				
16. Ozonation	\$5,600,000						\$1,600,000	\$4,000,000						
SUB-TOTAL WATER TREATMENT IMPROVEMENTS														
RANSMISSION AND DISTRIBUTION SYSTEM IMPROVEMENTS														
Transmission System Improvements														
1. Redundant Transmission Line from WTP	\$3,000,000													
Annual Pipe Replacement Program														
Annual pipe replacement program	~\$4,300,000 /yr	\$1,200,000	\$4,533,570	\$3,823,200	\$3,223,800	\$4,033,800	\$2,430,000	\$4,244,400	\$4,422,600	\$4,941,000	\$3,207,600	\$3,742,200	\$2,284,200	\$3,223,80
Paving allowance for annual pipe replacement program	~\$2,200,000 /yr	\$950,000	\$2,895,000	\$2,436,750	\$1,993,500	\$2,406,000	\$1,409,250	\$2,379,000	\$2,405,250	\$2,611,500	\$1,650,750	\$1,870,500	\$1,140,750	\$1,574,25
Storage Tank Improvements														
4. Cleaning and Painting of Storage Tanks (every 15-20 yrs)	\$8,500,000												\$2,000,000	\$2,000,00
Airport Road High Service Area Improvements														
5. Replace Airport Road tank, construct Commerce Drive Pump Station	\$4,000,000	\$3,000,000	\$1,000,000											
6. Future High Service Area Dedicated Water Main	\$500,000				\$500,000									
Distribution System Operation Improvements														
7. Investigation and Improvements for Low Pressure Areas	\$4,100,000	\$25,000	\$25,000	\$50,000	\$2,000,000	\$2,000,000								
8. Perform Leak Detection Survey of 250 miles of water main (every 2 years)	\$40,000 /2yrs		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000	
	\$50,000 /yr	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,0
Allowance for leak repair							¢<0.000	\$60,000	0.50.000		0.00.000	0.00.000	# co ooo	\$60,00
Allowance for leak repair Comprehensive Hydrant Flushing & Valve Exercising Program	\$60,000 /yr		\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$00,00
	\$60,000 /yr \$50,000 /yr		\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$50,000	\$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$50,00
10. Comprehensive Hydrant Flushing & Valve Exercising Program														

ABLE 1-7: 20-YEAR CAPITAL IMPROVEMENT PLAN

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Distribution Area Maintenance Improvements														
14. Debris Removal along Bedford Street	\$1,400,000		\$400,000		\$1,000,000									
15. Distribution Maintenance Area, Buildings, and Structures														
Building	\$700,000		\$150,000	\$550,000										
Replace or Rehabilitate Distribution Maintenance Building	\$2,800,000					\$1,400,000	\$1,400,000							
Evaluate / Rehabilitate Distribution Storage Area	\$1,700,000					\$850,000	\$850,000							
16. Evaluate / Remove 1950 Pump Station and Screen House	\$1,000,000				\$1,000,000									
17. Repair and Rehabilitate Structures of Historical Significance	\$2,500,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000			
18. Distribution Vehicle Maintenance and Replacement	\$2,200,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
SUB-TOTAL DISTRIBUTION SYSTEM IMPROVEMENTS														
TOTAL COST PER YEAR		\$5,988,000	\$11,061,570	\$9,867,950	\$13,716,300	\$12,586,800	\$9,099,250	\$13,988,400	\$15,962,850	\$16,647,500	\$5,973,350	\$6,437,700	\$6,309,950	\$7,573,050

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
A TEEN CLINN V. N. ADDOVEDNESS															i
ATER SUPPLY IMPROVEMENTS 1. Conduct Water Audit	\$30,000		\$30,000												
			\$30,000	\$40,000											
Conduct Safe Yield Study Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond	\$40,000			\$40,000			\$200,000	\$200,000							
	\$400,000				\$250,000		\$200,000	\$200,000							
4. Updgrades to Copicut Transfer Station	\$250,000		\$250,000	\$250,000											
5. Watershed Facilities Improvements	\$750,000	\$413,000		\$250,000	\$250,000	#1.47.000									
6. Dam Improvements	\$1,725,000	\$413,000	\$413,000	\$343,000	\$409,000	\$147,000									
7. Update Watershed Protection Plan to conform to DEP guidelines	\$50,000		\$50,000	#20.000											
8. Evaluate Raw Water Intake	\$30,000			\$30,000											
SUB-TOTAL WATER SUPPLY IMPROVEMENTS															
ATER TREATMENT IMPROVEMENTS															
1. Chlorine Feed Relocation	\$0														
2. SCADA System and Process Control Equipment	\$50,000		\$50,000												
3. Telemetry Upgrade	\$250,000				\$125,000	\$125,000									
4. Annual Budget to Replace Aging Equipment / Maintain Building	\$200,000 /yr		\$175,000	\$150,000	\$125,000	\$200,000	\$250,000	\$215,000	\$145,000	\$250,000	\$250,000	\$250,000	\$250,000	\$200,000	\$200,00
5. Filter Media Replacement	\$125,000 /10yr		\$125,000												
6. Turbidimeters and Monitoring Equipment	\$5,000 /yr		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,00
7. Rehabilitation of Low Lift Pumps & new VFD's	\$150,000			\$150,000											
8. Refurbish/Replace Three High Lift Finish Water Pumps	\$325,000						\$75,000	\$125,000	\$125,000						
9. Training for Plant Personnel	\$10,000 /yr		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,00
10. Residual Disposal and Management	\$800,000		\$100,000	\$700,000											
11. Backwash Segregation and Recycling	\$2,000,000			\$150,000	\$1,850,000										
12. Emergency Reserve Fund	\$350,000			\$350,000											
13. Convert from Gas to Liquid Chlorine	\$600,000			\$550,000		\$600,000									
14. Electrical Systems Upgrade	\$125,000				\$125,000	Ψ000,000									
Advanced Treatment (pending regulatory requirements)	Ψ123,000				Ψ123,000										
15. Intermediate Pumping and GAC Filtration or Membrane Filtration	\$18,000,000 *							\$2,000,000	\$8,000,000	\$8,000,000					
16. Ozonation	\$5,600,000						\$1,600,000	\$4,000,000	\$8,000,000	\$6,000,000					
SUB-TOTAL WATER TREATMENT IMPROVEMENTS															
RANSMISSION AND DISTRIBUTION SYSTEM IMPROVEMENTS															ı
Transmission System Improvements	#2 000 000														
1. Redundant Transmission Line from WTP	\$3,000,000														
Annual Pipe Replacement Program															
2. Annual pipe replacement program	~\$4,300,000 /yr	\$1,200,000	\$4,533,570	\$3,823,200	\$3,223,800	\$4,033,800	\$2,430,000	\$4,244,400	\$4,422,600	\$4,941,000	\$3,207,600	\$3,742,200	\$2,284,200	\$3,223,800	\$4,260,60
3. Paving allowance for annual pipe replacement program	~\$2,200,000 /yr	\$950,000	\$2,895,000	\$2,436,750	\$1,993,500	\$2,406,000	\$1,409,250	\$2,379,000	\$2,405,250	\$2,611,500	\$1,650,750	\$1,870,500	\$1,140,750	\$1,574,250	\$1,927,50
Storage Tank Improvements															ı
4. Cleaning and Painting of Storage Tanks (every 15-20 yrs)	\$8,500,000												\$2,000,000	\$2,000,000	
Airport Road High Service Area Improvements															
5. Replace Airport Road tank, construct Commerce Drive Pump Station	\$4,000,000	\$3,000,000	\$1,000,000												
6. Future High Service Area Dedicated Water Main	\$500,000				\$500,000										
Distribution System Operation Improvements															
7. Investigation and Improvements for Low Pressure Areas	\$4,100,000	\$25,000	\$25,000	\$50,000	\$2,000,000	\$2,000,000									
8. Perform Leak Detection Survey of 250 miles of water main (every 2 years)	\$40,000 /2yrs		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,00
9. Allowance for leak repair	\$50,000 /yr	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,00
10. Comprehensive Hydrant Flushing & Valve Exercising Program	\$60,000 /yr		\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,00
11. Valve and Hydrant Replacement Allowance	\$50,000 /yr		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,00
12. Storage Facility Inspections (every 3 to 5 years)	\$20,000 /3yrs			\$20,000			\$20,000			\$20,000			\$20,000		
13. Annual Meter Replacement Program (1,000 meters per year)	\$300,000 /yr		\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,00
13. Annual vieter Replacement Program (1,000 meters per year)	\$300,000 /yr		\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$30

ABLE 1-7: 20-YEAR CAPITAL IMPROVEMENT PLAN

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Distribution Area Maintenance Improvements															
14. Debris Removal along Bedford Street	\$1,400,000		\$400,000		\$1,000,000										
15. Distribution Maintenance Area, Buildings, and Structures															
Building	\$700,000		\$150,000	\$550,000											
Replace or Rehabilitate Distribution Maintenance Building	\$2,800,000					\$1,400,000	\$1,400,000								
Evaluate / Rehabilitate Distribution Storage Area	\$1,700,000					\$850,000	\$850,000								
16. Evaluate / Remove 1950 Pump Station and Screen House	\$1,000,000				\$1,000,000										
17. Repair and Rehabilitate Structures of Historical Significance	\$2,500,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000				
18. Distribution Vehicle Maintenance and Replacement	\$2,200,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,00
SUB-TOTAL DISTRIBUTION SYSTEM IMPROVEMENTS															
TOTAL COST PER YEAR		\$5,988,000	\$11,061,570	\$9,867,950	\$13,716,300	\$12,586,800	\$9,099,250	\$13,988,400	\$15,962,850	\$16,647,500	\$5,973,350	\$6,437,700	\$6,309,950	\$7,573,050	\$7,003,10

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
ATER SUPPLY IMPROVEMENTS		Ī	Ī	Ī	Ţ		1	Ī	Ī			1				
1. Conduct Water Audit	\$30,000		\$30,000													+
Conduct Water Audit Conduct Safe Yield Study	\$40,000		0,000,000	\$40,000												
Conduct Safe Yield Study Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond	\$40,000			φ+υ,υυυ			\$200,000	\$200,000								
Updgrades to Copicut Transfer Station	\$250,000				\$250,000		φ200,000	\$200,000								
Watershed Facilities Improvements	\$750,000		\$250,000	\$250,000	\$250,000											
6. Dam Improvements	\$1,725,000	\$413,000	\$413,000	\$343,000	\$409,000	\$147,000										
7. Update Watershed Protection Plan to conform to DEP guidelines	\$50,000		\$50,000						***************************************							
8. Evaluate Raw Water Intake	\$30,000			\$30,000												
SUB-TOTAL WATER SUPPLY IMPROVEMENTS																
ATER TREATMENT IMPROVEMENTS																
1. Chlorine Feed Relocation	\$0															
2. SCADA System and Process Control Equipment	\$50,000		\$50,000													
3. Telemetry Upgrade	\$250,000				\$125,000	\$125,000										
4. Annual Budget to Replace Aging Equipment / Maintain Building	\$200,000 /yr		\$175,000	\$150,000	\$125,000	\$200,000	\$250,000	\$215,000	\$145,000	\$250,000	\$250,000	\$250,000	\$250,000	\$200,000	\$200,000	0
5. Filter Media Replacement	\$125,000 /10yr		\$125,000													
6. Turbidimeters and Monitoring Equipment	\$5,000 /yr		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	0
7. Rehabilitation of Low Lift Pumps & new VFD's	\$150,000			\$150,000												
8. Refurbish/Replace Three High Lift Finish Water Pumps	\$325,000						\$75,000	\$125,000	\$125,000							-
9. Training for Plant Personnel	\$10,000 /yr		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	0
10. Residual Disposal and Management	\$800,000		\$100,000	\$700,000												
11. Backwash Segregation and Recycling	\$2,000,000			\$150,000	\$1,850,000											-
12. Emergency Reserve Fund	\$350,000			\$350,000												-
13. Convert from Gas to Liquid Chlorine	\$600,000					\$600,000										-
14. Electrical Systems Upgrade	\$125,000				\$125,000											-
Advanced Treatment (pending regulatory requirements)	#10.000.com							#0.000 ·	#C 057 :	60.0==						-
15. Intermediate Pumping and GAC Filtration or Membrane Filtration 16. Ozonation	\$18,000,000 * \$5,600,000						\$1,600,000	\$2,000,000 \$4,000,000	\$8,000,000	\$8,000,000						
SUB-TOTAL WATER TREATMENT IMPROVEMENTS															/	
RANSMISSION AND DISTRIBUTION SYSTEM IMPROVEMENTS							1									
I																
Transmission System Improvements																
1. Redundant Transmission Line from WTP	\$3,000,000															-
Annual Pipe Replacement Program												1				
Annual Pipe Replacement Program 2. Annual pipe replacement program	~\$4,300,000 /yr	\$1,200,000	\$4,533,570	\$3,823,200	\$3,223,800	\$4,033,800	\$2,430,000	\$4,244,400	\$4,422,600	\$4,941,000	\$3,207,600	\$3,742,200	\$2,284,200	\$3,223,800	\$4,260,600)
Annual pipe replacement program Paving allowance for annual pipe replacement program	~\$4,300,000 /yr ~\$2,200,000 /yr	\$1,200,000 \$950,000	\$4,533,570 \$2,895,000	\$3,823,200 \$2,436,750	\$3,223,800 \$1,993,500		\$2,430,000 \$1,409,250	\$4,244,400 \$2,379,000	\$4,422,600 \$2,405,250				\$2,284,200 \$1,140,750			
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Storage Tank Improvements																
4. Cleaning and Painting of Storage Tanks (every 15-20 yrs)	\$8,500,000												\$2,000,000	\$2,000,000		
Airport Road High Service Area Improvements																
5. Replace Airport Road tank, construct Commerce Drive Pump Station	\$4,000,000	\$3,000,000	\$1,000,000													ļ
5. Future High Service Area Dedicated Water Main	\$500,000				\$500,000											
Distribution System Operation Improvements																
7. Investigation and Improvements for Low Pressure Areas	\$4,100,000	\$25,000	\$25,000	\$50,000	\$2,000,000											
Perform Leak Detection Survey of 250 miles of water main (every 2 years)	\$40,000 /2yrs		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000	
9. Allowance for leak repair	\$50,000 /yr	\$50,000	\$50,000	\$50,000	\$50,000		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000			
Comprehensive Hydrant Flushing & Valve Exercising Program	\$60,000 /yr		\$60,000	\$60,000	\$60,000		\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000			
Valve and Hydrant Replacement Allowance	\$50,000 /yr		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000		\$50,000	<u>)</u>
•															_	
Storage Facility Inspections (every 3 to 5 years) Annual Meter Replacement Program (1,000 meters per year)	\$20,000 /3yrs \$300,000 /yr		\$300,000	\$20,000 \$300,000	\$300,000	\$300,000	\$20,000 \$300,000	\$300,000	\$300,000	\$20,000 \$300,000	\$300,000	\$300,000	\$20,000 \$300,000		\$300,000	

ABLE 1-7: 20-YEAR CAPITAL IMPROVEMENT PLAN

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Distribution Area Maintenance Improvements															
14. Debris Removal along Bedford Street	\$1,400,000		\$400,000		\$1,000,000										
15. Distribution Maintenance Area, Buildings, and Structures															
Building	\$700,000		\$150,000	\$550,000											
Replace or Rehabilitate Distribution Maintenance Building	\$2,800,000					\$1,400,000	\$1,400,000								
Evaluate / Rehabilitate Distribution Storage Area	\$1,700,000					\$850,000	\$850,000								
16. Evaluate / Remove 1950 Pump Station and Screen House	\$1,000,000				\$1,000,000										
17. Repair and Rehabilitate Structures of Historical Significance	\$2,500,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000				
18. Distribution Vehicle Maintenance and Replacement	\$2,200,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
SUB-TOTAL DISTRIBUTION SYSTEM IMPROVEMENTS															
TOTAL COST PER YEAR		\$5,988,000	\$11,061,570	\$9,867,950	\$13,716,300	\$12,586,800	\$9,099,250	\$13,988,400	\$15,962,850	\$16,647,500	\$5,973,350	\$6,437,700	\$6,309,950	\$7,573,050	\$7,003,100

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
ATER SUPPLY IMPROVEMENTS		Ī	Ī	Ī	Ţ		1	Ī	Ī			1				
1. Conduct Water Audit	\$30,000		\$30,000													+
Conduct Water Audit Conduct Safe Yield Study	\$40,000		0,000,000	\$40,000												
Conduct Safe Yield Study Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond	\$40,000			φ+υ,υυυ			\$200,000	\$200,000								
Updgrades to Copicut Transfer Station	\$250,000				\$250,000		Ψ200,000	\$200,000								
Watershed Facilities Improvements	\$750,000		\$250,000	\$250,000	\$250,000											
6. Dam Improvements	\$1,725,000	\$413,000	\$413,000	\$343,000	\$409,000	\$147,000										
7. Update Watershed Protection Plan to conform to DEP guidelines	\$50,000		\$50,000						***************************************							
8. Evaluate Raw Water Intake	\$30,000			\$30,000												
SUB-TOTAL WATER SUPPLY IMPROVEMENTS																
ATER TREATMENT IMPROVEMENTS																
1. Chlorine Feed Relocation	\$0															
2. SCADA System and Process Control Equipment	\$50,000		\$50,000													
3. Telemetry Upgrade	\$250,000				\$125,000	\$125,000										
4. Annual Budget to Replace Aging Equipment / Maintain Building	\$200,000 /yr		\$175,000	\$150,000	\$125,000	\$200,000	\$250,000	\$215,000	\$145,000	\$250,000	\$250,000	\$250,000	\$250,000	\$200,000	\$200,000	0
5. Filter Media Replacement	\$125,000 /10yr		\$125,000													
6. Turbidimeters and Monitoring Equipment	\$5,000 /yr		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	0
7. Rehabilitation of Low Lift Pumps & new VFD's	\$150,000			\$150,000												
8. Refurbish/Replace Three High Lift Finish Water Pumps	\$325,000						\$75,000	\$125,000	\$125,000							-
9. Training for Plant Personnel	\$10,000 /yr		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	0
10. Residual Disposal and Management	\$800,000		\$100,000	\$700,000												
11. Backwash Segregation and Recycling	\$2,000,000			\$150,000	\$1,850,000											-
12. Emergency Reserve Fund	\$350,000			\$350,000												-
13. Convert from Gas to Liquid Chlorine	\$600,000					\$600,000										-
14. Electrical Systems Upgrade	\$125,000				\$125,000											-
Advanced Treatment (pending regulatory requirements)	#10.000.com							#0.000 ·	#C 057 :	60.0==						-
15. Intermediate Pumping and GAC Filtration or Membrane Filtration 16. Ozonation	\$18,000,000 * \$5,600,000						\$1,600,000	\$2,000,000 \$4,000,000	\$8,000,000	\$8,000,000						
SUB-TOTAL WATER TREATMENT IMPROVEMENTS															/	
RANSMISSION AND DISTRIBUTION SYSTEM IMPROVEMENTS							1									
I																
Transmission System Improvements																
1. Redundant Transmission Line from WTP	\$3,000,000															-
Annual Pipe Replacement Program												1				
Annual Pipe Replacement Program 2. Annual pipe replacement program	~\$4,300,000 /yr	\$1,200,000	\$4,533,570	\$3,823,200	\$3,223,800	\$4,033,800	\$2,430,000	\$4,244,400	\$4,422,600	\$4,941,000	\$3,207,600	\$3,742,200	\$2,284,200	\$3,223,800	\$4,260,600)
Annual pipe replacement program Paving allowance for annual pipe replacement program	~\$4,300,000 /yr ~\$2,200,000 /yr	\$1,200,000 \$950,000	\$4,533,570 \$2,895,000	\$3,823,200 \$2,436,750	\$3,223,800 \$1,993,500		\$2,430,000 \$1,409,250	\$4,244,400 \$2,379,000	\$4,422,600 \$2,405,250				\$2,284,200 \$1,140,750			
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Storage Tank Improvements																
4. Cleaning and Painting of Storage Tanks (every 15-20 yrs)	\$8,500,000												\$2,000,000	\$2,000,000		
Airport Road High Service Area Improvements																
5. Replace Airport Road tank, construct Commerce Drive Pump Station	\$4,000,000	\$3,000,000	\$1,000,000													ļ
5. Future High Service Area Dedicated Water Main	\$500,000				\$500,000											
Distribution System Operation Improvements																
7. Investigation and Improvements for Low Pressure Areas	\$4,100,000	\$25,000	\$25,000	\$50,000	\$2,000,000											
Perform Leak Detection Survey of 250 miles of water main (every 2 years)	\$40,000 /2yrs		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000	
9. Allowance for leak repair	\$50,000 /yr	\$50,000	\$50,000	\$50,000	\$50,000		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000			
Comprehensive Hydrant Flushing & Valve Exercising Program	\$60,000 /yr		\$60,000	\$60,000	\$60,000		\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000			
Valve and Hydrant Replacement Allowance	\$50,000 /yr		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000		\$50,000	<u>)</u>
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Storage Facility Inspections (every 3 to 5 years) Annual Meter Replacement Program (1,000 meters per year)	\$20,000 /3yrs \$300,000 /yr		\$300,000	\$20,000 \$300,000	\$300,000	\$300,000	\$20,000 \$300,000	\$300,000	\$300,000	\$20,000 \$300,000	\$300,000	\$300,000	\$20,000 \$300,000		\$300,000	

ABLE 1-7: 20-YEAR CAPITAL IMPROVEMENT PLAN

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Distribution Area Maintenance Improvements															
14. Debris Removal along Bedford Street	\$1,400,000		\$400,000		\$1,000,000										
15. Distribution Maintenance Area, Buildings, and Structures															
Building	\$700,000		\$150,000	\$550,000											
Replace or Rehabilitate Distribution Maintenance Building	\$2,800,000					\$1,400,000	\$1,400,000								
Evaluate / Rehabilitate Distribution Storage Area	\$1,700,000					\$850,000	\$850,000								
16. Evaluate / Remove 1950 Pump Station and Screen House	\$1,000,000				\$1,000,000										
17. Repair and Rehabilitate Structures of Historical Significance	\$2,500,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000				
18. Distribution Vehicle Maintenance and Replacement	\$2,200,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
SUB-TOTAL DISTRIBUTION SYSTEM IMPROVEMENTS															
TOTAL COST PER YEAR		\$5,988,000	\$11,061,570	\$9,867,950	\$13,716,300	\$12,586,800	\$9,099,250	\$13,988,400	\$15,962,850	\$16,647,500	\$5,973,350	\$6,437,700	\$6,309,950	\$7,573,050	\$7,003,100

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
ATER SUPPLY IMPROVEMENTS		Ī	Ī	Ī	Ţ		1	Ī	Ī			1				
1. Conduct Water Audit	\$30,000		\$30,000													+
Conduct Water Audit Conduct Safe Yield Study	\$40,000		0,000,000	\$40,000												
Conduct Safe Yield Study Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond	\$40,000			φ+υ,υυυ			\$200,000	\$200,000								
Updgrades to Copicut Transfer Station	\$250,000				\$250,000		φ200,000	\$200,000								
Watershed Facilities Improvements	\$750,000		\$250,000	\$250,000	\$250,000											
6. Dam Improvements	\$1,725,000	\$413,000	\$413,000	\$343,000	\$409,000	\$147,000										
7. Update Watershed Protection Plan to conform to DEP guidelines	\$50,000		\$50,000						***************************************							
8. Evaluate Raw Water Intake	\$30,000			\$30,000												
SUB-TOTAL WATER SUPPLY IMPROVEMENTS																
ATER TREATMENT IMPROVEMENTS																
1. Chlorine Feed Relocation	\$0															
2. SCADA System and Process Control Equipment	\$50,000		\$50,000													
3. Telemetry Upgrade	\$250,000				\$125,000	\$125,000										
4. Annual Budget to Replace Aging Equipment / Maintain Building	\$200,000 /yr		\$175,000	\$150,000	\$125,000	\$200,000	\$250,000	\$215,000	\$145,000	\$250,000	\$250,000	\$250,000	\$250,000	\$200,000	\$200,000	0
5. Filter Media Replacement	\$125,000 /10yr		\$125,000													
6. Turbidimeters and Monitoring Equipment	\$5,000 /yr		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	0
7. Rehabilitation of Low Lift Pumps & new VFD's	\$150,000			\$150,000												
8. Refurbish/Replace Three High Lift Finish Water Pumps	\$325,000						\$75,000	\$125,000	\$125,000							-
9. Training for Plant Personnel	\$10,000 /yr		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	0
10. Residual Disposal and Management	\$800,000		\$100,000	\$700,000												
11. Backwash Segregation and Recycling	\$2,000,000			\$150,000	\$1,850,000											-
12. Emergency Reserve Fund	\$350,000			\$350,000												-
13. Convert from Gas to Liquid Chlorine	\$600,000					\$600,000										-
14. Electrical Systems Upgrade	\$125,000				\$125,000											-
Advanced Treatment (pending regulatory requirements)	#10.000.com							#0.000 ·	#C 057	60.0==						-
15. Intermediate Pumping and GAC Filtration or Membrane Filtration 16. Ozonation	\$18,000,000 * \$5,600,000						\$1,600,000	\$2,000,000 \$4,000,000	\$8,000,000	\$8,000,000						
SUB-TOTAL WATER TREATMENT IMPROVEMENTS															/	
RANSMISSION AND DISTRIBUTION SYSTEM IMPROVEMENTS							1									
I																
Transmission System Improvements																
1. Redundant Transmission Line from WTP	\$3,000,000															-
Annual Pipe Replacement Program												1				
Annual Pipe Replacement Program 2. Annual pipe replacement program	~\$4,300,000 /yr	\$1,200,000	\$4,533,570	\$3,823,200	\$3,223,800	\$4,033,800	\$2,430,000	\$4,244,400	\$4,422,600	\$4,941,000	\$3,207,600	\$3,742,200	\$2,284,200	\$3,223,800	\$4,260,600)
Annual pipe replacement program Paving allowance for annual pipe replacement program	~\$4,300,000 /yr ~\$2,200,000 /yr	\$1,200,000 \$950,000	\$4,533,570 \$2,895,000	\$3,823,200 \$2,436,750	\$3,223,800 \$1,993,500		\$2,430,000 \$1,409,250	\$4,244,400 \$2,379,000	\$4,422,600 \$2,405,250				\$2,284,200 \$1,140,750			
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Storage Tank Improvements																
4. Cleaning and Painting of Storage Tanks (every 15-20 yrs)	\$8,500,000												\$2,000,000	\$2,000,000		
Airport Road High Service Area Improvements																
5. Replace Airport Road tank, construct Commerce Drive Pump Station	\$4,000,000	\$3,000,000	\$1,000,000													ļ
5. Future High Service Area Dedicated Water Main	\$500,000				\$500,000											
Distribution System Operation Improvements																
7. Investigation and Improvements for Low Pressure Areas	\$4,100,000	\$25,000	\$25,000	\$50,000	\$2,000,000											
Perform Leak Detection Survey of 250 miles of water main (every 2 years)	\$40,000 /2yrs		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000	
9. Allowance for leak repair	\$50,000 /yr	\$50,000	\$50,000	\$50,000	\$50,000		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000			
Comprehensive Hydrant Flushing & Valve Exercising Program	\$60,000 /yr		\$60,000	\$60,000	\$60,000		\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000			
Valve and Hydrant Replacement Allowance	\$50,000 /yr		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000		\$50,000	<u>)</u>
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Storage Facility Inspections (every 3 to 5 years) Annual Meter Replacement Program (1,000 meters per year)	\$20,000 /3yrs \$300,000 /yr		\$300,000	\$20,000 \$300,000	\$300,000	\$300,000	\$20,000 \$300,000	\$300,000	\$300,000	\$20,000 \$300,000	\$300,000	\$300,000	\$20,000 \$300,000		\$300,000	

ABLE 1-7: 20-YEAR CAPITAL IMPROVEMENT PLAN

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Distribution Area Maintenance Improvements															
14. Debris Removal along Bedford Street	\$1,400,000		\$400,000		\$1,000,000										
15. Distribution Maintenance Area, Buildings, and Structures															
Building	\$700,000		\$150,000	\$550,000											
Replace or Rehabilitate Distribution Maintenance Building	\$2,800,000					\$1,400,000	\$1,400,000								
Evaluate / Rehabilitate Distribution Storage Area	\$1,700,000					\$850,000	\$850,000								
16. Evaluate / Remove 1950 Pump Station and Screen House	\$1,000,000				\$1,000,000										
17. Repair and Rehabilitate Structures of Historical Significance	\$2,500,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000				
18. Distribution Vehicle Maintenance and Replacement	\$2,200,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
SUB-TOTAL DISTRIBUTION SYSTEM IMPROVEMENTS															
TOTAL COST PER YEAR		\$5,988,000	\$11,061,570	\$9,867,950	\$13,716,300	\$12,586,800	\$9,099,250	\$13,988,400	\$15,962,850	\$16,647,500	\$5,973,350	\$6,437,700	\$6,309,950	\$7,573,050	\$7,003,100

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
A TUD CURRY V IN INDOVINATION																
ATER SUPPLY IMPROVEMENTS 1. Conduct Water Audit	\$30,000		\$30,000													
Conduct Water Adult Conduct Safe Yield Study	\$40,000		\$30,000	\$40,000												
Conduct Sale Field Study Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond	\$400,000			\$40,000			\$200,000	\$200,000								
Updgrades to Copicut Transfer Station	\$250,000				\$250,000		\$200,000	\$200,000								
Watershed Facilities Improvements	\$750,000		\$250,000	\$250,000	\$250,000											
Dam Improvements	\$1,725,000	\$413,000	\$413,000	\$343,000	\$409,000	\$147,000										
Update Watershed Protection Plan to conform to DEP guidelines	\$50,000	\$413,000	\$50,000	\$343,000	\$409,000	\$147,000										
Condition of the Composition of the Compositio	\$30,000		\$30,000	\$30,000												
o. Evaluate Naw Water Intake	330,000			\$30,000												
SUB-TOTAL WATER SUPPLY IMPROVEMENTS																
ATER TREATMENT IMPROVEMENTS																
1. Chlorine Feed Relocation	\$0															
SCADA System and Process Control Equipment	\$50,000		\$50,000													
3. Telemetry Upgrade	\$250,000				\$125,000	\$125,000										
4. Annual Budget to Replace Aging Equipment / Maintain Building	\$200,000 /yr		\$175,000	\$150,000	\$125,000	\$200,000	\$250,000	\$215,000	\$145,000	\$250,000	\$250,000	\$250,000	\$250,000	\$200,000	\$200,000	
5. Filter Media Replacement	\$125,000 /10yr		\$125,000													
6. Turbidimeters and Monitoring Equipment	\$5,000 /yr		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	
7. Rehabilitation of Low Lift Pumps & new VFD's	\$150,000			\$150,000												
8. Refurbish/Replace Three High Lift Finish Water Pumps	\$325,000						\$75,000	\$125,000	\$125,000							
9. Training for Plant Personnel	\$10,000 /yr		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	
10. Residual Disposal and Management	\$800,000		\$100,000	\$700,000												
11. Backwash Segregation and Recycling	\$2,000,000			\$150,000	\$1,850,000											
12. Emergency Reserve Fund	\$350,000			\$350,000												
13. Convert from Gas to Liquid Chlorine	\$600,000					\$600,000										
14. Electrical Systems Upgrade	\$125,000				\$125,000											
Advanced Treatment (pending regulatory requirements)																
15. Intermediate Pumping and GAC Filtration or Membrane Filtration	\$18,000,000 *							\$2,000,000	\$8,000,000	\$8,000,000						
16. Ozonation	\$5,600,000						\$1,600,000	\$4,000,000								
SUB-TOTAL WATER TREATMENT IMPROVEMENTS																
RANSMISSION AND DISTRIBUTION SYSTEM IMPROVEMENTS																
Transmission System Improvements																
1. Redundant Transmission Line from WTP	\$3,000,000															
Annual Pipe Replacement Program																
Annual pipe replacement program	~\$4,300,000 /yr	\$1,200,000	\$4,533,570	\$3,823,200	\$3,223,800	\$4,033,800	\$2,430,000	\$4,244,400	\$4,422,600	\$4,941,000	\$3,207,600	\$3,742,200	\$2,284,200	\$3,223,800	\$4,260,600	
3. Paving allowance for annual pipe replacement program	~\$2,200,000 /yr	\$950,000	\$2,895,000	\$2,436,750	\$1,993,500	\$2,406,000	\$1,409,250	\$2,379,000	\$2,405,250	\$2,611,500	\$1,650,750	\$1,870,500	\$1,140,750	\$1,574,250	\$1,927,500	
G																
Storage Tank Improvements 4. Cleaning and Painting of Storage Tanks (every 15-20 yrs)	\$8,500,000												\$2,000,000	\$2,000,000		
4. Cleaning and Fainting of Storage Tanks (every 15-20 yrs)	\$8,500,000												\$2,000,000	\$2,000,000		
Airport Road High Service Area Improvements																
5. Replace Airport Road tank, construct Commerce Drive Pump Station	\$4,000,000	\$3,000,000	\$1,000,000													
6. Future High Service Area Dedicated Water Main	\$500,000				\$500,000											
Distribution System Operation Improvements																
7. Investigation and Improvements for Low Pressure Areas	\$4,100,000	\$25,000	\$25,000	\$50,000	\$2,000,000	\$2,000,000										
	\$40,000 /2yrs		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000	
8. Perform Leak Detection Survey of 250 miles of water main (every 2 years)		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	
	\$50,000 /yr	\$30,000														
	\$50,000 /yr \$60,000 /yr	\$30,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	
9. Allowance for leak repair		\$30,000		\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000		\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	
Allowance for leak repair Comprehensive Hydrant Flushing & Valve Exercising Program	\$60,000 /yr		\$60,000													

ABLE 1-7: 20-YEAR CAPITAL IMPROVEMENT PLAN

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Distribution Area Maintenance Improvements															
14. Debris Removal along Bedford Street	\$1,400,000		\$400,000		\$1,000,000										
15. Distribution Maintenance Area, Buildings, and Structures															
Building	\$700,000		\$150,000	\$550,000											
Replace or Rehabilitate Distribution Maintenance Building	\$2,800,000					\$1,400,000	\$1,400,000								
Evaluate / Rehabilitate Distribution Storage Area	\$1,700,000					\$850,000	\$850,000								
16. Evaluate / Remove 1950 Pump Station and Screen House	\$1,000,000				\$1,000,000										
17. Repair and Rehabilitate Structures of Historical Significance	\$2,500,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000				
18. Distribution Vehicle Maintenance and Replacement	\$2,200,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
SUB-TOTAL DISTRIBUTION SYSTEM IMPROVEMENTS															
TOTAL COST PER YEAR		\$5,988,000	\$11,061,570	\$9,867,950	\$13,716,300	\$12,586,800	\$9,099,250	\$13,988,400	\$15,962,850	\$16,647,500	\$5,973,350	\$6,437,700	\$6,309,950	\$7,573,050	\$7,003,100

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
A TUD CURRY V IN INDOVINATION																
ATER SUPPLY IMPROVEMENTS 1. Conduct Water Audit	\$30,000		\$30,000													
Conduct Water Adult Conduct Safe Yield Study	\$40,000		\$30,000	\$40,000												
Conduct Sale Field Study Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond	\$400,000			\$40,000			\$200,000	\$200,000								
Updgrades to Copicut Transfer Station	\$250,000				\$250,000		\$200,000	\$200,000								
Watershed Facilities Improvements	\$750,000		\$250,000	\$250,000	\$250,000											
Dam Improvements	\$1,725,000	\$413,000	\$413,000	\$343,000	\$409,000	\$147,000										
Update Watershed Protection Plan to conform to DEP guidelines	\$50,000	\$413,000	\$50,000	\$343,000	\$409,000	\$147,000										
Condition of the Control of the	\$30,000		\$30,000	\$30,000												
o. Evaluate Naw Water Intake	330,000			\$30,000												
SUB-TOTAL WATER SUPPLY IMPROVEMENTS																
ATER TREATMENT IMPROVEMENTS																
1. Chlorine Feed Relocation	\$0															
SCADA System and Process Control Equipment	\$50,000		\$50,000													
3. Telemetry Upgrade	\$250,000				\$125,000	\$125,000										
4. Annual Budget to Replace Aging Equipment / Maintain Building	\$200,000 /yr		\$175,000	\$150,000	\$125,000	\$200,000	\$250,000	\$215,000	\$145,000	\$250,000	\$250,000	\$250,000	\$250,000	\$200,000	\$200,000	
5. Filter Media Replacement	\$125,000 /10yr		\$125,000													
6. Turbidimeters and Monitoring Equipment	\$5,000 /yr		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	
7. Rehabilitation of Low Lift Pumps & new VFD's	\$150,000			\$150,000												
8. Refurbish/Replace Three High Lift Finish Water Pumps	\$325,000						\$75,000	\$125,000	\$125,000							
9. Training for Plant Personnel	\$10,000 /yr		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	
10. Residual Disposal and Management	\$800,000		\$100,000	\$700,000												
11. Backwash Segregation and Recycling	\$2,000,000			\$150,000	\$1,850,000											
12. Emergency Reserve Fund	\$350,000			\$350,000												
13. Convert from Gas to Liquid Chlorine	\$600,000					\$600,000										
14. Electrical Systems Upgrade	\$125,000				\$125,000											
Advanced Treatment (pending regulatory requirements)																
15. Intermediate Pumping and GAC Filtration or Membrane Filtration	\$18,000,000 *							\$2,000,000	\$8,000,000	\$8,000,000						
16. Ozonation	\$5,600,000						\$1,600,000	\$4,000,000								
SUB-TOTAL WATER TREATMENT IMPROVEMENTS																
RANSMISSION AND DISTRIBUTION SYSTEM IMPROVEMENTS																
Transmission System Improvements																
1. Redundant Transmission Line from WTP	\$3,000,000															
Annual Pipe Replacement Program																
Annual pipe replacement program	~\$4,300,000 /yr	\$1,200,000	\$4,533,570	\$3,823,200	\$3,223,800	\$4,033,800	\$2,430,000	\$4,244,400	\$4,422,600	\$4,941,000	\$3,207,600	\$3,742,200	\$2,284,200	\$3,223,800	\$4,260,600	
3. Paving allowance for annual pipe replacement program	~\$2,200,000 /yr	\$950,000	\$2,895,000	\$2,436,750	\$1,993,500	\$2,406,000	\$1,409,250	\$2,379,000	\$2,405,250	\$2,611,500	\$1,650,750	\$1,870,500	\$1,140,750	\$1,574,250	\$1,927,500	
G																
Storage Tank Improvements 4. Cleaning and Painting of Storage Tanks (every 15-20 yrs)	\$8,500,000												\$2,000,000	\$2,000,000		
4. Cleaning and Fainting of Storage Tanks (every 15-20 yrs)	\$8,500,000												\$2,000,000	\$2,000,000		
Airport Road High Service Area Improvements																
5. Replace Airport Road tank, construct Commerce Drive Pump Station	\$4,000,000	\$3,000,000	\$1,000,000													
6. Future High Service Area Dedicated Water Main	\$500,000				\$500,000											
Distribution System Operation Improvements																
7. Investigation and Improvements for Low Pressure Areas	\$4,100,000	\$25,000	\$25,000	\$50,000	\$2,000,000	\$2,000,000										
	\$40,000 /2yrs		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000	
8. Perform Leak Detection Survey of 250 miles of water main (every 2 years)		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	
	\$50,000 /yr	\$30,000														
	\$50,000 /yr \$60,000 /yr	\$30,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	
9. Allowance for leak repair		\$30,000		\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000		\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	
Allowance for leak repair Comprehensive Hydrant Flushing & Valve Exercising Program	\$60,000 /yr		\$60,000													

ABLE 1-7: 20-YEAR CAPITAL IMPROVEMENT PLAN

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Distribution Area Maintenance Improvements															
14. Debris Removal along Bedford Street	\$1,400,000		\$400,000		\$1,000,000										
15. Distribution Maintenance Area, Buildings, and Structures															
Building	\$700,000		\$150,000	\$550,000											
Replace or Rehabilitate Distribution Maintenance Building	\$2,800,000					\$1,400,000	\$1,400,000								
Evaluate / Rehabilitate Distribution Storage Area	\$1,700,000					\$850,000	\$850,000								
16. Evaluate / Remove 1950 Pump Station and Screen House	\$1,000,000				\$1,000,000										
17. Repair and Rehabilitate Structures of Historical Significance	\$2,500,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000				
18. Distribution Vehicle Maintenance and Replacement	\$2,200,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
SUB-TOTAL DISTRIBUTION SYSTEM IMPROVEMENTS															
TOTAL COST PER YEAR		\$5,988,000	\$11,061,570	\$9,867,950	\$13,716,300	\$12,586,800	\$9,099,250	\$13,988,400	\$15,962,850	\$16,647,500	\$5,973,350	\$6,437,700	\$6,309,950	\$7,573,050	\$7,003,100

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
A TUD CURRY V IN INDOVINATION																
ATER SUPPLY IMPROVEMENTS 1. Conduct Water Audit	\$30,000		\$30,000													
Conduct Water Adult Conduct Safe Yield Study	\$40,000		\$30,000	\$40,000												
Conduct Sale Field Study Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond	\$400,000			\$40,000			\$200,000	\$200,000								
Updgrades to Copicut Transfer Station	\$250,000				\$250,000		\$200,000	\$200,000								
Watershed Facilities Improvements	\$750,000		\$250,000	\$250,000	\$250,000											
Dam Improvements	\$1,725,000	\$413,000	\$413,000	\$343,000	\$409,000	\$147,000										
Update Watershed Protection Plan to conform to DEP guidelines	\$50,000	\$413,000	\$50,000	\$343,000	\$409,000	\$147,000										
Condition of the Control of the	\$30,000		\$30,000	\$30,000												
o. Evaluate Naw Water Intake	330,000			\$30,000												
SUB-TOTAL WATER SUPPLY IMPROVEMENTS																
ATER TREATMENT IMPROVEMENTS																
1. Chlorine Feed Relocation	\$0															
SCADA System and Process Control Equipment	\$50,000		\$50,000													
3. Telemetry Upgrade	\$250,000				\$125,000	\$125,000										
4. Annual Budget to Replace Aging Equipment / Maintain Building	\$200,000 /yr		\$175,000	\$150,000	\$125,000	\$200,000	\$250,000	\$215,000	\$145,000	\$250,000	\$250,000	\$250,000	\$250,000	\$200,000	\$200,000	
5. Filter Media Replacement	\$125,000 /10yr		\$125,000													
6. Turbidimeters and Monitoring Equipment	\$5,000 /yr		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	
7. Rehabilitation of Low Lift Pumps & new VFD's	\$150,000			\$150,000												
8. Refurbish/Replace Three High Lift Finish Water Pumps	\$325,000						\$75,000	\$125,000	\$125,000							
9. Training for Plant Personnel	\$10,000 /yr		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	
10. Residual Disposal and Management	\$800,000		\$100,000	\$700,000												
11. Backwash Segregation and Recycling	\$2,000,000			\$150,000	\$1,850,000											
12. Emergency Reserve Fund	\$350,000			\$350,000												
13. Convert from Gas to Liquid Chlorine	\$600,000					\$600,000										
14. Electrical Systems Upgrade	\$125,000				\$125,000											
Advanced Treatment (pending regulatory requirements)																
15. Intermediate Pumping and GAC Filtration or Membrane Filtration	\$18,000,000 *							\$2,000,000	\$8,000,000	\$8,000,000						
16. Ozonation	\$5,600,000						\$1,600,000	\$4,000,000								
SUB-TOTAL WATER TREATMENT IMPROVEMENTS																
RANSMISSION AND DISTRIBUTION SYSTEM IMPROVEMENTS																
Transmission System Improvements																
1. Redundant Transmission Line from WTP	\$3,000,000															
Annual Pipe Replacement Program																
Annual pipe replacement program	~\$4,300,000 /yr	\$1,200,000	\$4,533,570	\$3,823,200	\$3,223,800	\$4,033,800	\$2,430,000	\$4,244,400	\$4,422,600	\$4,941,000	\$3,207,600	\$3,742,200	\$2,284,200	\$3,223,800	\$4,260,600	
3. Paving allowance for annual pipe replacement program	~\$2,200,000 /yr	\$950,000	\$2,895,000	\$2,436,750	\$1,993,500	\$2,406,000	\$1,409,250	\$2,379,000	\$2,405,250	\$2,611,500	\$1,650,750	\$1,870,500	\$1,140,750	\$1,574,250	\$1,927,500	
G																
Storage Tank Improvements 4. Cleaning and Painting of Storage Tanks (every 15-20 yrs)	\$8,500,000												\$2,000,000	\$2,000,000		
4. Cleaning and Fainting of Storage Tanks (every 15-20 yrs)	\$8,500,000												\$2,000,000	\$2,000,000		
Airport Road High Service Area Improvements																
5. Replace Airport Road tank, construct Commerce Drive Pump Station	\$4,000,000	\$3,000,000	\$1,000,000													
6. Future High Service Area Dedicated Water Main	\$500,000				\$500,000											
Distribution System Operation Improvements																
7. Investigation and Improvements for Low Pressure Areas	\$4,100,000	\$25,000	\$25,000	\$50,000	\$2,000,000	\$2,000,000										
	\$40,000 /2yrs		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000	
8. Perform Leak Detection Survey of 250 miles of water main (every 2 years)		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	
	\$50,000 /yr	\$30,000														
	\$50,000 /yr \$60,000 /yr	\$30,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	
9. Allowance for leak repair		\$30,000		\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000		\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	
Allowance for leak repair Comprehensive Hydrant Flushing & Valve Exercising Program	\$60,000 /yr		\$60,000													

ABLE 1-7: 20-YEAR CAPITAL IMPROVEMENT PLAN

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Distribution Area Maintenance Improvements															
14. Debris Removal along Bedford Street	\$1,400,000		\$400,000		\$1,000,000										
15. Distribution Maintenance Area, Buildings, and Structures															
Building	\$700,000		\$150,000	\$550,000											
Replace or Rehabilitate Distribution Maintenance Building	\$2,800,000					\$1,400,000	\$1,400,000								
Evaluate / Rehabilitate Distribution Storage Area	\$1,700,000					\$850,000	\$850,000								
16. Evaluate / Remove 1950 Pump Station and Screen House	\$1,000,000				\$1,000,000										
17. Repair and Rehabilitate Structures of Historical Significance	\$2,500,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000				
18. Distribution Vehicle Maintenance and Replacement	\$2,200,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
SUB-TOTAL DISTRIBUTION SYSTEM IMPROVEMENTS															
TOTAL COST PER YEAR		\$5,988,000	\$11,061,570	\$9,867,950	\$13,716,300	\$12,586,800	\$9,099,250	\$13,988,400	\$15,962,850	\$16,647,500	\$5,973,350	\$6,437,700	\$6,309,950	\$7,573,050	\$7,003,100

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
A TUD CURRY V IN INDOVINATION																
ATER SUPPLY IMPROVEMENTS 1. Conduct Water Audit	\$30,000		\$30,000													
Conduct Water Adult Conduct Safe Yield Study	\$40,000		\$30,000	\$40,000												
Conduct Sale Field Study Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond	\$400,000			\$40,000			\$200,000	\$200,000								
Updgrades to Copicut Transfer Station	\$250,000				\$250,000		\$200,000	\$200,000								
Watershed Facilities Improvements	\$750,000		\$250,000	\$250,000	\$250,000											
Dam Improvements	\$1,725,000	\$413,000	\$413,000	\$343,000	\$409,000	\$147,000										
Update Watershed Protection Plan to conform to DEP guidelines	\$50,000	\$413,000	\$50,000	\$343,000	\$409,000	\$147,000										
Condition of the Composition of the Compositio	\$30,000		\$30,000	\$30,000												
o. Evaluate Naw Water Intake	330,000			\$30,000												
SUB-TOTAL WATER SUPPLY IMPROVEMENTS																
ATER TREATMENT IMPROVEMENTS																
1. Chlorine Feed Relocation	\$0															
SCADA System and Process Control Equipment	\$50,000		\$50,000													
3. Telemetry Upgrade	\$250,000				\$125,000	\$125,000										
4. Annual Budget to Replace Aging Equipment / Maintain Building	\$200,000 /yr		\$175,000	\$150,000	\$125,000	\$200,000	\$250,000	\$215,000	\$145,000	\$250,000	\$250,000	\$250,000	\$250,000	\$200,000	\$200,000	
5. Filter Media Replacement	\$125,000 /10yr		\$125,000													
6. Turbidimeters and Monitoring Equipment	\$5,000 /yr		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	
7. Rehabilitation of Low Lift Pumps & new VFD's	\$150,000			\$150,000												
8. Refurbish/Replace Three High Lift Finish Water Pumps	\$325,000						\$75,000	\$125,000	\$125,000							
9. Training for Plant Personnel	\$10,000 /yr		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	
10. Residual Disposal and Management	\$800,000		\$100,000	\$700,000												
11. Backwash Segregation and Recycling	\$2,000,000			\$150,000	\$1,850,000											
12. Emergency Reserve Fund	\$350,000			\$350,000												
13. Convert from Gas to Liquid Chlorine	\$600,000					\$600,000										
14. Electrical Systems Upgrade	\$125,000				\$125,000											
Advanced Treatment (pending regulatory requirements)																
15. Intermediate Pumping and GAC Filtration or Membrane Filtration	\$18,000,000 *							\$2,000,000	\$8,000,000	\$8,000,000						
16. Ozonation	\$5,600,000						\$1,600,000	\$4,000,000								
SUB-TOTAL WATER TREATMENT IMPROVEMENTS																
RANSMISSION AND DISTRIBUTION SYSTEM IMPROVEMENTS																
Transmission System Improvements																
1. Redundant Transmission Line from WTP	\$3,000,000															
Annual Pipe Replacement Program																
Annual pipe replacement program	~\$4,300,000 /yr	\$1,200,000	\$4,533,570	\$3,823,200	\$3,223,800	\$4,033,800	\$2,430,000	\$4,244,400	\$4,422,600	\$4,941,000	\$3,207,600	\$3,742,200	\$2,284,200	\$3,223,800	\$4,260,600	
3. Paving allowance for annual pipe replacement program	~\$2,200,000 /yr	\$950,000	\$2,895,000	\$2,436,750	\$1,993,500	\$2,406,000	\$1,409,250	\$2,379,000	\$2,405,250	\$2,611,500	\$1,650,750	\$1,870,500	\$1,140,750	\$1,574,250	\$1,927,500	
G																
Storage Tank Improvements 4. Cleaning and Painting of Storage Tanks (every 15-20 yrs)	\$8,500,000												\$2,000,000	\$2,000,000		
4. Cleaning and Fainting of Storage Tanks (every 15-20 yrs)	\$8,500,000												\$2,000,000	\$2,000,000		
Airport Road High Service Area Improvements																
5. Replace Airport Road tank, construct Commerce Drive Pump Station	\$4,000,000	\$3,000,000	\$1,000,000													
6. Future High Service Area Dedicated Water Main	\$500,000				\$500,000											
Distribution System Operation Improvements																
7. Investigation and Improvements for Low Pressure Areas	\$4,100,000	\$25,000	\$25,000	\$50,000	\$2,000,000	\$2,000,000										
	\$40,000 /2yrs		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000	
8. Perform Leak Detection Survey of 250 miles of water main (every 2 years)		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	
	\$50,000 /yr	\$30,000														
	\$50,000 /yr \$60,000 /yr	\$30,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	
9. Allowance for leak repair		\$30,000		\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000		\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	
Allowance for leak repair Comprehensive Hydrant Flushing & Valve Exercising Program	\$60,000 /yr		\$60,000													

ABLE 1-7: 20-YEAR CAPITAL IMPROVEMENT PLAN

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Distribution Area Maintenance Improvements															
14. Debris Removal along Bedford Street	\$1,400,000		\$400,000		\$1,000,000										
15. Distribution Maintenance Area, Buildings, and Structures															
Building	\$700,000		\$150,000	\$550,000											
Replace or Rehabilitate Distribution Maintenance Building	\$2,800,000					\$1,400,000	\$1,400,000								
Evaluate / Rehabilitate Distribution Storage Area	\$1,700,000					\$850,000	\$850,000								
16. Evaluate / Remove 1950 Pump Station and Screen House	\$1,000,000				\$1,000,000										
17. Repair and Rehabilitate Structures of Historical Significance	\$2,500,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000				
18. Distribution Vehicle Maintenance and Replacement	\$2,200,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
SUB-TOTAL DISTRIBUTION SYSTEM IMPROVEMENTS															
TOTAL COST PER YEAR		\$5,988,000	\$11,061,570	\$9,867,950	\$13,716,300	\$12,586,800	\$9,099,250	\$13,988,400	\$15,962,850	\$16,647,500	\$5,973,350	\$6,437,700	\$6,309,950	\$7,573,050	\$7,003,100

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
A TUD CURRY V IN INDOVINATION																
ATER SUPPLY IMPROVEMENTS 1. Conduct Water Audit	\$30,000		\$30,000													
Conduct Water Adult Conduct Safe Yield Study	\$40,000		\$30,000	\$40,000												
Conduct Sale Field Study Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond	\$400,000			\$40,000			\$200,000	\$200,000								
Updgrades to Copicut Transfer Station	\$250,000				\$250,000		\$200,000	\$200,000								
Watershed Facilities Improvements	\$750,000		\$250,000	\$250,000	\$250,000											
Dam Improvements	\$1,725,000	\$413,000	\$413,000	\$343,000	\$409,000	\$147,000										
Update Watershed Protection Plan to conform to DEP guidelines	\$50,000	\$413,000	\$50,000	\$343,000	\$409,000	\$147,000										
Condition of the Composition of the Compositio	\$30,000		\$30,000	\$30,000												
o. Evaluate Naw Water Intake	330,000			\$30,000												
SUB-TOTAL WATER SUPPLY IMPROVEMENTS																
ATER TREATMENT IMPROVEMENTS																
1. Chlorine Feed Relocation	\$0															
SCADA System and Process Control Equipment	\$50,000		\$50,000													
3. Telemetry Upgrade	\$250,000				\$125,000	\$125,000										
4. Annual Budget to Replace Aging Equipment / Maintain Building	\$200,000 /yr		\$175,000	\$150,000	\$125,000	\$200,000	\$250,000	\$215,000	\$145,000	\$250,000	\$250,000	\$250,000	\$250,000	\$200,000	\$200,000	
5. Filter Media Replacement	\$125,000 /10yr		\$125,000													
6. Turbidimeters and Monitoring Equipment	\$5,000 /yr		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	
7. Rehabilitation of Low Lift Pumps & new VFD's	\$150,000			\$150,000												
8. Refurbish/Replace Three High Lift Finish Water Pumps	\$325,000						\$75,000	\$125,000	\$125,000							
9. Training for Plant Personnel	\$10,000 /yr		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	
10. Residual Disposal and Management	\$800,000		\$100,000	\$700,000												
11. Backwash Segregation and Recycling	\$2,000,000			\$150,000	\$1,850,000											
12. Emergency Reserve Fund	\$350,000			\$350,000												
13. Convert from Gas to Liquid Chlorine	\$600,000					\$600,000										
14. Electrical Systems Upgrade	\$125,000				\$125,000											
Advanced Treatment (pending regulatory requirements)																
15. Intermediate Pumping and GAC Filtration or Membrane Filtration	\$18,000,000 *							\$2,000,000	\$8,000,000	\$8,000,000						
16. Ozonation	\$5,600,000						\$1,600,000	\$4,000,000								
SUB-TOTAL WATER TREATMENT IMPROVEMENTS																
RANSMISSION AND DISTRIBUTION SYSTEM IMPROVEMENTS																
Transmission System Improvements																
1. Redundant Transmission Line from WTP	\$3,000,000															
Annual Pipe Replacement Program																
Annual pipe replacement program	~\$4,300,000 /yr	\$1,200,000	\$4,533,570	\$3,823,200	\$3,223,800	\$4,033,800	\$2,430,000	\$4,244,400	\$4,422,600	\$4,941,000	\$3,207,600	\$3,742,200	\$2,284,200	\$3,223,800	\$4,260,600	
3. Paving allowance for annual pipe replacement program	~\$2,200,000 /yr	\$950,000	\$2,895,000	\$2,436,750	\$1,993,500	\$2,406,000	\$1,409,250	\$2,379,000	\$2,405,250	\$2,611,500	\$1,650,750	\$1,870,500	\$1,140,750	\$1,574,250	\$1,927,500	
G																
Storage Tank Improvements 4. Cleaning and Painting of Storage Tanks (every 15-20 yrs)	\$8,500,000												\$2,000,000	\$2,000,000		
4. Cleaning and Fainting of Storage Tanks (every 15-20 yrs)	\$8,500,000												\$2,000,000	\$2,000,000		
Airport Road High Service Area Improvements																
5. Replace Airport Road tank, construct Commerce Drive Pump Station	\$4,000,000	\$3,000,000	\$1,000,000													
6. Future High Service Area Dedicated Water Main	\$500,000				\$500,000											
Distribution System Operation Improvements																
7. Investigation and Improvements for Low Pressure Areas	\$4,100,000	\$25,000	\$25,000	\$50,000	\$2,000,000	\$2,000,000										
	\$40,000 /2yrs		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000	
8. Perform Leak Detection Survey of 250 miles of water main (every 2 years)		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	
	\$50,000 /yr	\$30,000														
	\$50,000 /yr \$60,000 /yr	\$30,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	
9. Allowance for leak repair		\$30,000		\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000		\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	
Allowance for leak repair Comprehensive Hydrant Flushing & Valve Exercising Program	\$60,000 /yr		\$60,000													

ABLE 1-7: 20-YEAR CAPITAL IMPROVEMENT PLAN

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Distribution Area Maintenance Improvements															
14. Debris Removal along Bedford Street	\$1,400,000		\$400,000		\$1,000,000										
15. Distribution Maintenance Area, Buildings, and Structures															
Building	\$700,000		\$150,000	\$550,000											
Replace or Rehabilitate Distribution Maintenance Building	\$2,800,000					\$1,400,000	\$1,400,000								
Evaluate / Rehabilitate Distribution Storage Area	\$1,700,000					\$850,000	\$850,000								
16. Evaluate / Remove 1950 Pump Station and Screen House	\$1,000,000				\$1,000,000										
17. Repair and Rehabilitate Structures of Historical Significance	\$2,500,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000				
18. Distribution Vehicle Maintenance and Replacement	\$2,200,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
SUB-TOTAL DISTRIBUTION SYSTEM IMPROVEMENTS															
TOTAL COST PER YEAR		\$5,988,000	\$11,061,570	\$9,867,950	\$13,716,300	\$12,586,800	\$9,099,250	\$13,988,400	\$15,962,850	\$16,647,500	\$5,973,350	\$6,437,700	\$6,309,950	\$7,573,050	\$7,003,100

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
A TUD CURRY V IN INDOVINATION																
ATER SUPPLY IMPROVEMENTS 1. Conduct Water Audit	\$30,000		\$30,000													
Conduct Water Adult Conduct Safe Yield Study	\$40,000		\$30,000	\$40,000												
Conduct Sale Field Study Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond	\$400,000			\$40,000			\$200,000	\$200,000								
Updgrades to Copicut Transfer Station	\$250,000				\$250,000		\$200,000	\$200,000								
Watershed Facilities Improvements	\$750,000		\$250,000	\$250,000	\$250,000											
Dam Improvements	\$1,725,000	\$413,000	\$413,000	\$343,000	\$409,000	\$147,000										
Update Watershed Protection Plan to conform to DEP guidelines	\$50,000	\$413,000	\$50,000	\$343,000	\$409,000	\$147,000										
Condition of the Composition of the Compositio	\$30,000		\$30,000	\$30,000												
o. Evaluate Naw Water Intake	330,000			\$30,000												
SUB-TOTAL WATER SUPPLY IMPROVEMENTS																
ATER TREATMENT IMPROVEMENTS																
1. Chlorine Feed Relocation	\$0															
SCADA System and Process Control Equipment	\$50,000		\$50,000													
3. Telemetry Upgrade	\$250,000				\$125,000	\$125,000										
4. Annual Budget to Replace Aging Equipment / Maintain Building	\$200,000 /yr		\$175,000	\$150,000	\$125,000	\$200,000	\$250,000	\$215,000	\$145,000	\$250,000	\$250,000	\$250,000	\$250,000	\$200,000	\$200,000	
5. Filter Media Replacement	\$125,000 /10yr		\$125,000													
6. Turbidimeters and Monitoring Equipment	\$5,000 /yr		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	
7. Rehabilitation of Low Lift Pumps & new VFD's	\$150,000			\$150,000												
8. Refurbish/Replace Three High Lift Finish Water Pumps	\$325,000						\$75,000	\$125,000	\$125,000							
9. Training for Plant Personnel	\$10,000 /yr		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	
10. Residual Disposal and Management	\$800,000		\$100,000	\$700,000												
11. Backwash Segregation and Recycling	\$2,000,000			\$150,000	\$1,850,000											
12. Emergency Reserve Fund	\$350,000			\$350,000												
13. Convert from Gas to Liquid Chlorine	\$600,000					\$600,000										
14. Electrical Systems Upgrade	\$125,000				\$125,000											
Advanced Treatment (pending regulatory requirements)																
15. Intermediate Pumping and GAC Filtration or Membrane Filtration	\$18,000,000 *							\$2,000,000	\$8,000,000	\$8,000,000						
16. Ozonation	\$5,600,000						\$1,600,000	\$4,000,000								
SUB-TOTAL WATER TREATMENT IMPROVEMENTS																
RANSMISSION AND DISTRIBUTION SYSTEM IMPROVEMENTS																
Transmission System Improvements																
1. Redundant Transmission Line from WTP	\$3,000,000															
Annual Pipe Replacement Program																
Annual pipe replacement program	~\$4,300,000 /yr	\$1,200,000	\$4,533,570	\$3,823,200	\$3,223,800	\$4,033,800	\$2,430,000	\$4,244,400	\$4,422,600	\$4,941,000	\$3,207,600	\$3,742,200	\$2,284,200	\$3,223,800	\$4,260,600	
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G																
Storage Tank Improvements 4. Cleaning and Painting of Storage Tanks (every 15-20 yrs)	\$8,500,000												\$2,000,000	\$2,000,000		
4. Cleaning and Fainting of Storage Tanks (every 15-20 yrs)	\$8,500,000												\$2,000,000	\$2,000,000		
Airport Road High Service Area Improvements																
5. Replace Airport Road tank, construct Commerce Drive Pump Station	\$4,000,000	\$3,000,000	\$1,000,000													
6. Future High Service Area Dedicated Water Main	\$500,000				\$500,000											
Distribution System Operation Improvements																
7. Investigation and Improvements for Low Pressure Areas	\$4,100,000	\$25,000	\$25,000	\$50,000	\$2,000,000	\$2,000,000										
	\$40,000 /2yrs		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000	
8. Perform Leak Detection Survey of 250 miles of water main (every 2 years)		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	
	\$50,000 /yr	\$30,000														
	\$50,000 /yr \$60,000 /yr	\$30,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	
9. Allowance for leak repair		\$30,000		\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000		\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	\$60,000 \$50,000	
Allowance for leak repair Comprehensive Hydrant Flushing & Valve Exercising Program	\$60,000 /yr		\$60,000													

ABLE 1-7: 20-YEAR CAPITAL IMPROVEMENT PLAN

PROJECT TASKS	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Distribution Area Maintenance Improvements															
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15. Distribution Maintenance Area, Buildings, and Structures															
Building	\$700,000		\$150,000	\$550,000											
Replace or Rehabilitate Distribution Maintenance Building	\$2,800,000					\$1,400,000	\$1,400,000								
Evaluate / Rehabilitate Distribution Storage Area	\$1,700,000					\$850,000	\$850,000								
16. Evaluate / Remove 1950 Pump Station and Screen House	\$1,000,000				\$1,000,000										
17. Repair and Rehabilitate Structures of Historical Significance	\$2,500,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000				
18. Distribution Vehicle Maintenance and Replacement	\$2,200,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
SUB-TOTAL DISTRIBUTION SYSTEM IMPROVEMENTS															
TOTAL COST PER YEAR		\$5,988,000	\$11,061,570	\$9,867,950	\$13,716,300	\$12,586,800	\$9,099,250	\$13,988,400	\$15,962,850	\$16,647,500	\$5,973,350	\$6,437,700	\$6,309,950	\$7,573,050	\$7,003,100