

## FALL RIVER, MASSACHUSETTS

**TABLE 1-7: 20-YEAR CAPITAL IMPROVEMENT PLAN**

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									
3. Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond	\$400,000						\$200,000	\$200,000					
4. Upgrades 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												
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
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									
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. 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													
TRANSMISSION AND DISTRIBUTION SYSTEM IMPROVEMENTS													
Transmission System Improvements													
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. 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													
4. 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										
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
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
10. Comprehensive Hydrant Flushing & Valve Exercising Program	\$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
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
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

FALL RIVER, MASSACHUSETTS  
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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

\* Membrane filtration is estimated at approximately \$22.2 million.

**TABLE 1-7: 20-YEAR CAPITAL IMPROVEMENT PLAN**

PROJECT TASKS																COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026		
WATER SUPPLY IMPROVEMENTS																															
1. Conduct Water Audit																\$30,000		\$30,000													
2. Conduct Safe Yield Study																\$40,000			\$40,000												
3. Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond																\$400,000						\$200,000	\$200,000								
4. Upgrades 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															
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		
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												
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14. Electrical Systems Upgrade																\$125,000				\$125,000											
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SUB-TOTAL WATER TREATMENT IMPROVEMENTS																															
TRANSMISSION AND DISTRIBUTION SYSTEM IMPROVEMENTS																															
Transmission System Improvements																															
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		
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		
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													
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		\$40,000	
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	\$50,000	\$50,000	\$50,000	
10. Comprehensive Hydrant Flushing & Valve Exercising Program																\$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	\$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	\$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		\$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	\$300,000	

ALL RIVER, MASSACHUSETTS  
ABLE 1-7: 20-YEAR CAPITAL IMPROVEMENT PLAN

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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

Membrane filtration is estimated at approximately \$22.2 million.

**TABLE 1-7: 20-YEAR CAPITAL IMPROVEMENT PLAN**

PROJECT TASKS																	COST	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
ATER SUPPLY IMPROVEMENTS																															
1. Conduct Water Audit																	\$30,000		\$30,000												
2. Conduct Safe Yield Study																	\$40,000			\$40,000											
3. Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond																	\$400,000						\$200,000	\$200,000							
4. Upgrades to Copicut Transfer Station																	\$250,000				\$250,000										
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7. Update Watershed Protection Plan to conform to DEP guidelines																	\$50,000		\$50,000												
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ATER TREATMENT IMPROVEMENTS																															
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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											
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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
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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		\$40,000
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	\$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	\$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	\$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		\$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	\$300,000

ALL RIVER, MASSACHUSETTS  
ABLE 1-7: 20-YEAR CAPITAL IMPROVEMENT PLAN

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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

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**ABLE 1-7: 20-YEAR CAPITAL IMPROVEMENT PLAN**

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ATER SUPPLY IMPROVEMENTS															
1. Conduct Water Audit	\$30,000		\$30,000												
2. Conduct Safe Yield Study	\$40,000			\$40,000											
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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															
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2. SCADA System and Process Control Equipment	\$50,000		\$50,000												
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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															
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
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
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												
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		\$40,000
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	\$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	\$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	\$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	\$300,000	\$300,000

ALL RIVER, MASSACHUSETTS

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

Membrane filtration is estimated at approximately \$22.2 million.



**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
ATER SUPPLY IMPROVEMENTS															
1. Conduct Water Audit	\$30,000		\$30,000												
2. Conduct Safe Yield Study	\$40,000			\$40,000											
3. Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond	\$400,000						\$200,000	\$200,000							
4. Upgrades 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															
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
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															
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
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
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												
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		\$40,000
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	\$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	\$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	\$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	\$300,000	\$300,000

ALL RIVER, MASSACHUSETTS

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

Membrane filtration is estimated at approximately \$22.2 million.

**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
ATER SUPPLY IMPROVEMENTS															
1. Conduct Water Audit	\$30,000		\$30,000												
2. Conduct Safe Yield Study	\$40,000			\$40,000											
3. Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond	\$400,000						\$200,000	\$200,000							
4. Upgrades 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															
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
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															
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
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
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												
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		\$40,000
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	\$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	\$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	\$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	\$300,000	\$300,000

ALL RIVER, MASSACHUSETTS

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

Membrane filtration is estimated at approximately \$22.2 million.

**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
ATER SUPPLY IMPROVEMENTS															
1. Conduct Water Audit	\$30,000		\$30,000												
2. Conduct Safe Yield Study	\$40,000			\$40,000											
3. Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond	\$400,000						\$200,000	\$200,000							
4. Upgrades 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															
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
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															
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
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
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												
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		\$40,000
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	\$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	\$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	\$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	\$300,000	\$300,000

ALL RIVER, MASSACHUSETTS

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

Membrane filtration is estimated at approximately \$22.2 million.

**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
ATER SUPPLY IMPROVEMENTS															
1. Conduct Water Audit	\$30,000		\$30,000												
2. Conduct Safe Yield Study	\$40,000			\$40,000											
3. Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond	\$400,000						\$200,000	\$200,000							
4. Upgrades 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															
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
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															
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
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
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												
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		\$40,000
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	\$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	\$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	\$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	\$300,000	\$300,000

ALL RIVER, MASSACHUSETTS

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

Membrane filtration is estimated at approximately \$22.2 million.



**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
ATER SUPPLY IMPROVEMENTS																
1. Conduct Water Audit	\$30,000		\$30,000													
2. Conduct Safe Yield Study	\$40,000			\$40,000												
3. Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond	\$400,000							\$200,000	\$200,000							
4. Upgrades 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																
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	
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	\$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	\$10,000
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																
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	
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	
Storage Tank Impro																

ALL RIVER, MASSACHUSETTS

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

Membrane filtration is estimated at approximately \$22.2 million.

**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
ATER SUPPLY IMPROVEMENTS																
1. Conduct Water Audit	\$30,000		\$30,000													
2. Conduct Safe Yield Study	\$40,000			\$40,000												
3. Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond	\$400,000							\$200,000	\$200,000							
4. Upgrades 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																
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	
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	\$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	\$10,000
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																
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	
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	
Storage Tank Impro																

ALL RIVER, MASSACHUSETTS

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

Membrane filtration is estimated at approximately \$22.2 million.

**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
ATER SUPPLY IMPROVEMENTS																
1. Conduct Water Audit	\$30,000		\$30,000													
2. Conduct Safe Yield Study	\$40,000			\$40,000												
3. Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond	\$400,000							\$200,000	\$200,000							
4. 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																
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	
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	\$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	\$10,000
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																
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	
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	
Storage Tank																

ALL RIVER, MASSACHUSETTS

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

Membrane filtration is estimated at approximately \$22.2 million.

**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
ATER SUPPLY IMPROVEMENTS															
1. Conduct Water Audit	\$30,000		\$30,000												
2. Conduct Safe Yield Study	\$40,000			\$40,000											
3. Conduct Feasibility and Pilot Study for treatment of South Watuppa Pond	\$400,000						\$200,000	\$200,000							
4. Upgrades 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															
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
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															
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
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
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												
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		\$40,000
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	\$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	\$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	\$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	\$300,000	\$300,000

ALL RIVER, MASSACHUSETTS

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

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