

Prioritized Improvements Town of East Greenwich Wastewater Treatment Plant

Location	Item Description	Date of Installation	Reason for Recommended Action	Proposed Improvement	Total Constr. Cost	Total Capital Cost	Estimated Cost		
							Immediate	Category 0 - 3 yrs	Category 3 - 5 yrs
Water Street Pumping Station									
Upper Level	Panelboard P-4A	1988	Fair physical condition, but old and has reached the end of its useful service life.	Replace	\$6,600	\$8,000	\$0	\$0	\$8,000
Upper Level	Surge Protection	-	There is no electrical surge protection.	Provide a 200kA/phase surge protection device for the main incoming building power feed	\$6,600	\$8,000	\$0	\$8,000	
Upper Level	MCC #4E	1988	Fair physical condition, but old and has reached the end of its useful service life.	Replace MCC, provide with 200KA/phase surge protection if not already provided	\$54,900	\$65,900	\$0	\$0	\$65,900
Entire Building	Lighting	1988	Fair to poor physical condition, old and inefficient.	Replace with energy efficient LED fixtures	\$10,400	\$12,500	\$0	\$12,500	\$0
Entire Building	Emergency Lighting & Exit Signs	1988	Emergency lighting and exit signs are missing or broken	Replace existing emergency lighting, and provide new (LED) emergency lighting and exit signs where required by code.	\$3,500	\$4,200	\$4,200	\$0	\$0
Lower Level	Sump Pump Electrical boxes	1988	Poor condition	Replace	\$3,300	\$4,000	\$0	\$4,000	\$0
Upper Level	Unit Heater (2)	1988	Will be at end of expected service life	Replace with equivalent units	\$8,300	\$10,000	\$0	\$10,000	\$0
Intermediate Level	Unit Heater (1)	1988	Will be at end of expected service life	Replace with equivalent units	\$3,300	\$4,000	\$0	\$4,000	\$0
Wetwell	Supply and Exhaust Fan	1988	Will be at end of expected service life	Replace with equivalent units	\$14,900	\$17,900	\$0	\$0	\$17,900
Drywell	Supply and Exhaust Fan	1988	Will be at end of expected service life	Replace with equivalent units	\$11,900	\$14,300	\$0	\$0	\$14,300
Storage Area	Exhaust Fan EF-29	1988	Will be at end of expected service life	Replace with equivalent units	\$900	\$1,100	\$0	\$0	\$1,100
Subtotal					\$124,600	\$149,900	\$4,200	\$38,500	\$107,200
Headworks									
Primary Clarifiers									
Clarifiers 1 & 2	Drives, Mechanisms, Weirs & Baffles	1988	Poor Condition - At end of expected service life	Replace with equivalent units	\$422,400	\$422,400	\$422,400	\$0	\$0
Clarifiers 1 & 2	Drive-related electrical equipment	1988	Fair to poor condition, but old and has reached the end of its useful service life.	Replace (reuse below grade conduit)	\$13,200	\$15,900	\$0	\$15,900	\$0
Clarifiers 1 & 2	Other electrical equipment and lighting	1988	Fair to poor condition, but old and has reached the end of its useful service life.	Replace (reuse below grade conduit)	\$25,800	\$31,000	\$0	\$31,000	\$0
Subtotal					\$461,400	\$469,300	\$422,400	\$46,900	\$0
Pump Chamber No. 1									
Pump Chamber No. 1	Primary Sludge Pumps (2) & Valves	1988	Will be at end of expected service life	Replace with equivalent units	\$205,000	\$246,000	\$0	\$100,000	\$146,000
Pump Chamber No. 1	Unit Heater UH-4	1988	Will be at end of expected service life	Replace with equivalent units	\$4,200	\$5,100	\$0	\$5,100	\$0
Pump Chamber No. 1	Exhaust Fan EF-3	1988	Will be at end of expected service life	Replace with equivalent units	\$5,000	\$6,000	\$0	\$0	\$6,000
Subtotal					\$214,200	\$257,100	\$0	\$105,100	\$152,000
Process Building									
<i>1st Floor/Basement</i>									
Administrative Area	Building Envelope		Active leakage during significant weather events	Investigate source of leakage, repair damaged interior gypsum wall board	\$24,700	\$29,700	\$0	\$29,700	\$0
Women's Toilet/Men's Toilet	Bathroom sinks	1988	Three of four sinks are out of order	Investigate reason for out of order sinks	\$5,800	\$7,000	\$0	\$7,000	\$0
Generator Room	Backup Generator	1988	Fair physical condition, but old and has reached the end of its useful service life.	Replace Generator and provide new ventilation system since new generators need more cooling air	\$146,900	\$176,280	\$0	\$0	\$176,280
<i>Exterior</i>									
Truck Dock Area	Panelboard P-1A	1988	Poor physical condition, old and has reached the end of its useful service life.	Replace	\$6,600	\$8,000	\$0	\$8,000	\$0
Thickener Room	Panelboard P-1B	1988	Poor physical condition, old and has reached the end of its useful service life.	Replace	\$6,600	\$8,000	\$0	\$8,000	\$0
Thickener Room	Panelboard P-1C	1988	Poor physical condition, old and has reached the end of its useful service life.	Replace	\$6,600	\$8,000	\$0	\$8,000	\$0
Thickener Room	Gravity Thickeners	1988	Poor physical condition, excessive rust, corrosive environment, reached end of service life.	Replace internal mechanical elements and provide cover/ventilation to reduce corrosion issues in building.	\$552,500	\$663,000	\$0	\$663,000	\$0
	Sodium Hypochlorite Feed System	1988	Failed pump system and leaky valves/piping, safety issues.	Replace existing pumps, pipes & valves and connect to existing distribution. Add ANSI required safety features.	\$117,813	\$141,413	\$0	\$141,413	\$0
2nd Floor- Administrative Area	Panelboard P-2B	1988	Poor physical condition, old and has reached the end of its useful service life.	Replace	\$6,600	\$8,000	\$0	\$8,000	\$0

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2nd Floor- Laboratory	Panelboard P-2C	1988	Fair physical condition, but old and has reached the end of its useful service life.	Replace	\$6,600	\$8,000	\$0	\$8,000	\$0
RBC Building- Electric Rm	Panelboard P-3A	1988	Fair physical condition, but old and has reached the end of its useful service life.	Replace	\$6,600	\$8,000	\$0	\$8,000	\$0
1st Floor	Panelboard P-4B	1988	Fair to poor physical condition, but old and has reached the end of its useful service life.	Replace	\$6,600	\$8,000	\$0	\$8,000	\$0
Electric Room	MCC #1E	1988	Fair physical condition, but old and has reached the end of its useful service life.	Replace	\$80,900	\$97,100	\$0	\$0	\$97,100
Electric Room	MCC #1N	1988	Fair physical condition, but old and has reached the end of its useful service life.	Replace	\$44,100	\$53,000	\$0	\$0	\$53,000
Electric Room	Surge Protection	-	There is no electrical surge protection.	Provide a 300kA/phase surge protection device for the main incoming electrical service	\$8,300	\$10,000	\$0	\$10,000	\$0
Electric Room	Main Switchboard	1988	Fair physical condition, but old and has reached the end of its useful service life.	Replace switchboard, provide with a 300kA/phase surge protection if not already provided	\$12,600	\$152,000	\$0	\$0	\$152,000
Headworks	MCC #3	1988	Fair physical condition, but old and has reached the end of its useful service life.	Replace	\$54,900	\$65,900	\$0	\$0	\$65,900
Entire Building	Emergency Lighting & Exit Signs	1988	Emergency lighting and exit signs are missing or broken	Replace existing emergency lighting, and provide new (LED) emergency lighting and exit signs where required by code.	\$27,200	\$32,700	\$32,700	\$0	\$0
Lower Thickener Room	Pushbuttons and receptacles	1988	Poor condition, replace. Replace receptacles with GFI type.	Replace all. New receptacles should be GFI type	\$3,800	\$4,600	\$0	\$0	\$4,600
Process Building Attic	Air Handler - Office Area	1988	Unit has failed.	Replace unit with similar equipment.	\$77,188	\$92,625	\$0	\$0	\$92,625
Varies	Motor-Operated Damper (17)	1988	Will be at end of expected service life	Replace with equivalent units	\$14,000	\$16,800	\$0	\$0	\$16,800
Varies	Unit Heater (17)	1988	Will be at end of expected service life	Replace with equivalent units	\$69,900	\$83,900	\$0	\$0	\$83,900
Subtotal					\$1,286,800	\$1,682,018	\$32,700	\$907,113	\$742,205
Pump Chamber No. 2									
Pump Chamber No. 2	Mixed Sludge Pumps (2) & Valves	1988	Will be at end of expected service life	Replace with equivalent units	\$174,000	\$208,800	\$0	\$100,000	\$108,000
Pump Chamber No. 2	Waste Sludge Pumps (2) & Valves	1988	Will be at end of expected service life	Replace with equivalent units	\$192,600	\$231,200	\$0	\$100,000	\$131,200
Pump Chamber No. 2	Scum Pumps (2) & Valves	1988	Will be at end of expected service life	Replace with equivalent units	\$99,400	\$119,300	\$0	\$119,300	\$0
Pump Chamber No. 2	Scum Macerators (2)	1988	Will be at end of expected service life	Replace with equivalent units	\$49,700	\$59,700	\$0	\$59,700	\$0
Pump Chamber No. 2	Plant Water Strainer	1988	Will be at end of expected service life	Replace with equivalent unit	\$12,500	\$15,000	\$0	\$15,000	\$0
Pump Chamber No. 2	Sump Pumps (2)	1988	Will be at end of expected service life	Replace with equivalent units	\$5,000	\$6,000	\$0	\$0	\$6,000
Pump Chamber No. 2	Scum Pump/Grinder Control Panels	1988	Poor physical condition, old and have reached the end of their useful service lives.	Replace (costs assume pumps will be switch to VFDs)	\$21,600	\$26,000	\$0	\$26,000	\$0
Pump Chamber No. 2	Unit Heater UH-21	1988	Will be at end of expected service life	Replace with equivalent units	\$4,200	\$5,100	\$0	\$5,100	\$0
Pump Chamber No. 2	Exhaust Fan EF-19	1988	Will be at end of expected service life	Replace with equivalent units	\$5,000	\$6,000	\$0	\$0	\$6,000
Pump Chamber No. 2	Roof Ventilator (2)	1988	Will be at end of expected service life	Replace with equivalent units	\$12,400	\$14,900	\$0	\$0	\$14,900
Subtotal					\$576,400	\$692,000	\$0	\$425,100	\$266,100
Nitrogen Removal Building									
Influent Wetwell	Level Sensor	2006	Will be at end of expected service life	Replace with equivalent unit	\$5,000	\$6,000	\$0	\$0	\$6,000
BAF Reactors	Ultrasonic Level Sensors (3)	2006	Will be at end of expected service life	Replace with equivalent units	\$15,000	\$18,000	\$0	\$0	\$18,000
BAF Reactors	Filter Media & Underdrain System	2006	Will be at end of expected service life	Replace with equivalent units	\$347,900	\$417,500	\$0	\$0	\$417,500
Denitrification Filters	Ultrasonic Level Sensors (3)	2006	Will be at end of expected service life	Replace with equivalent units	\$15,000	\$18,000	\$0	\$0	\$18,000
Denitrification Filters	Filter Media & Underdrain System	2006	Will be at end of expected service life	Replace with equivalent units	\$347,900	\$417,500	\$0	\$0	\$417,500
Clearwell	Level Sensor	2006	Will be at end of expected service life	Replace with equivalent unit	\$5,000	\$6,000	\$0	\$0	\$6,000
Mudwell	Level Sensor	2006	Will be at end of expected service life	Replace with equivalent unit	\$5,000	\$6,000	\$0	\$0	\$6,000
Exterior	Joint Sealant between Sidewalks and Walls	2005	Joint sealant has failed in many locations	Remove and replace failed joint sealant	\$2,500	\$3,000	\$0	\$0	\$3,000
Subtotal					\$743,300	\$892,000	\$0	\$0	\$892,000
Total Capital Cost					\$3,406,700	\$4,142,318	\$459,300	\$1,522,713	\$2,159,505

Immediate - Items that have an immediate need for repair or replacement because of their condition or importance. Items that are safety or code concerns were included in this category.

Categories 0-3 & 0-5 Items that have an expected remaining service life of 5 or fewer years - repair or replacement is expected to be necessary during this period.