








Building: Wastewater Treatment Facility  
20 Putnam Road  
Newport, New Hampshire

Condition	
1	Fully operational, new, recently replaced
2	Fully operational, 0-25% of life expectancy used, no issues, no concerns,
3	Fully operational, 25-50% life expectancy used, periodic problems
4	Operational, 50-75% life expectancy used, occasional problems, frequent repairs needed
5	Operational only with constant attention, 100% life expectancy used, failure imminent







Priority is scaled 1-10 with 1 being urgent

Architectural						
This brick building built for its intended use in 1971 with a later addition and renovations in 1989. Buildings are in very good conditions with durable tile and glazed CMU finishes. Windows were replaced in 1989 and the only problem is the roof, which is a stone ballasted membrane with the stone making it difficult to chase down leaks.						
Equipment	Condition	Est. Remaining Service Life	Priority	Cost Estimate	Remarks & Recommendations	Photos

Town of Newport, Building Assessment July 31,2017

	equipment	condition	Est remaining Service life	priority	cost	remarks &recommendations		
	709,Paint Surface	4	4	7	\$300	Scrape, sand, prime and paint with high performance paint.		
	708,Asphalt Shingle	5	0	1	\$ 7.00 sq.ft.  \$500	Replace asphalt shingle roof and other shed roofs at the same time as the main building.		
	707,Rubber Roof	5	0	1	\$ 18/sq.ft  6905 Sq.ft.  \$124,290	Rubber roof has been a constant problem with leaking. Roof is ballasted stone roof which is difficult to trace leaks from as the stone hides pathways. Suggest this roof be replaced with an adhered membrane roof with additional insulation. Verify with structural engineer quantity of allowed insulation.	 	
								

Town of Newport, Building Assessment July 31,2017

	equipment	condition	Est remaining Service life	priority	cost	remarks &recommendations		
	706,Caulking	4	2	2	\$ 7.00 lineal ft.	Building is well maintained but could use exterior caulking.		
	705,Window Newer	2	20+	10	\$800 Per window	Windows were replaced in 2009, no work needed.		
	704,Flooring	2	20+	10	\$12.00/sq. ft.	All interior finishes are in very good condition.		
	703,ADA Issues:					Front entrance is not ADA, side entrance is.		
	702,ADA Issues:					Bathrooms are not ADA compliant.		






Town of Newport, Building Assessment July 31,2017


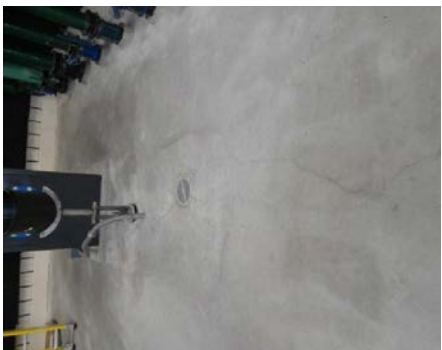


	equipment	condition	Est remaining Service life	priority	cost	remarks &recommendations		
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Structural


Structural Description: This facility is a one-story, 7000 square feet wastewater treatment plant, constructed originally in 1971 and expanded (building addition) in 1989. The original building includes a basement pump room at its south end. The original building has a flat roof with a 1.5” deep, cold-formed steel roof deck, supported on open web steel joists. The joists bear on the exterior masonry walls, which are typically comprised of 8” concrete masonry with a 4” exterior brick veneer. The roof of the 1989 addition is at an elevation coincident with the original building. The roof of the addition is comprised of precast, pre-stressed concrete deck elements (most likely, hollow core plank). The precast plank bears on the perimeter masonry walls. The roofs of both the original building and the 1989 addition have a number of skylights. The floor slabs in the central and northerly ends of the original building, as well as the floor in the 1989 addition, are exposed, cast-in-place, grade supported concrete slabs. The floor slabs in the work areas are pitched to floor drains. The basement pump room at the south end of the original building is comprised of a concrete floor slab, concrete perimeter foundation walls, with a 10” thick reinforced concrete framed concrete floor slab, supported on two intermediate structural steel beams. This 10” framed slab extends over the pump room at an elevation coincident with the main floor. The framed slab has a square central opening to facilitate replacement of the pump in the basement below. Aside from the entry lobby and office area, this building is dedicated to industrial uses. The majority of the pumps and other heavy equipment is floor mounted on housekeeping pads. The building has two hand operated hoists, with associated hoistway travel beams, located at the north and south ends of the original building.

Equipment	Condition	Est. Remaining Service Life	Priority	Cost Estimate	Remarks & Recommendations		
308,Roof description (addition): precast plank, spanning E-W (info only)							
308,Roof description: 1.5” cold-formed steel deck on open web steel joists. Joists clear span E-W the entire width of the original bldg. (info only).							




Town of Newport, Building Assessment July 31,2017

	equipment	condition	Est remaining Service life	priority	cost	remarks &recommendations		
	442, Foundation					Top of foundation wall is chipped at corner of building.		
	443,Slab on grade floor -					Some cracking from floor drains and from housekeeping pads due to absence of control Joints.	 	
	440, Bearing Wall					Exterior walls of original building are 4" brick, 8" CMU, load bearing masonry - typ. (info only)		
	439,Foundation					Lower Level - influ room and pump room - reinforced concrete construction. (info only)		
	438,Floor Framing					Floor framing over Lower Level at S end of original building: Cast in place 10" concrete flat slab on steel Framing.		
	437,Slab on Grade					Slab on grade - north and center sections of original building (info only).		

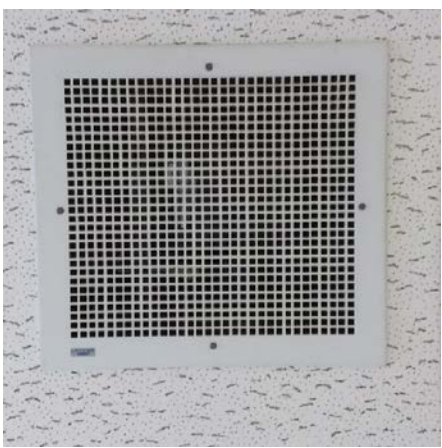




Town of Newport, Building Assessment July 31,2017

	equipment	condition	Est remaining Service life	priority	cost	remarks &recommendations		
	445,Foundation	5	0	4	\$10 lineal ft.	Full height vertical crack in foundation wall - should be routed out and sealed.		

Mechanical







	Equipment	Condition	Est. Remaining Service Life	Priority	Cost Estimate	Remarks & Recommendations		
	449,Ceiling-mounted fan powered hot water unit heater  Unknown install date	3 Fully operational, 25-50% life expectancy used, periodic problems	10 Years	10	\$3,500	This unit is in GRIT Building. No access to retrieve make or model.		
	448,Rooftop curb mounted up blast exhaust fan  No access to roof					This fan is mounted on GRIT Building roof.		

Town of Newport, Building Assessment July 31,2017

	equipment	condition	Est remaining Service life	priority	cost	remarks & recommendations		
	350, ,Ceiling-mounted exhaust fan ducted To Greenheck Model: GRS-10-OD gravity relief hood on roof  Exhaust fan installed in 1987 renovation	5 Operational only with constant attention, 100% life expectancy used, failure imminent	0	1	\$2,500	Unable to retrieve information on ceiling mounted E.F. Office/ lab		
	348,Greenheck Model: GRS-10-OD	3 Fully operational, 25-50% life expectancy used, periodic problems	10 Years	10	\$2,500	Original to building.  Exhausts one bathroom. EH#4 near office/lab	 	
	347,Rooftop exhaust fan original to the building  Unable to visualize nameplate	5 Operational only with constant attention, 100% life expectancy used, failure imminent	0	1	\$2,500	Serves to exhaust parts, fan is approximately 40 years old. office lab	 	

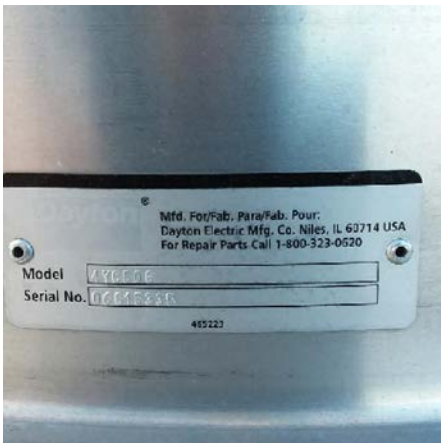
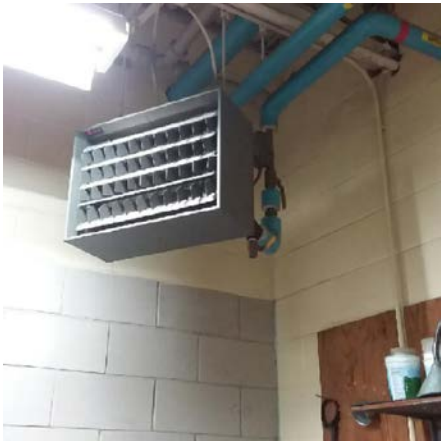




Town of Newport, Building Assessment July 31,2017


	equipment	condition	Est remaining Service life	priority	cost	remarks &recommendations		
	336,Wall mount fan coil unit heater	3 Fully operational, 25-50% life expectancy used, periodic problems	10 Years	10	\$2500	Provides heat in common corridor area. E 113		
	335,Rooftop exhaust fan	1 Fully operational, new, recently replaced	20 Years	10	\$2,500	Replaced within the last 5 years.  No visible nameplate.  Exhausts garage area.		
	451,Hose bib					Frost proof outside Grit building		
	331,Rooftop exhaust fan  Make: Dayton  Model: 4YG506	1 Fully operational, new, recently replaced	15 Years	10	\$2,500	Replaced within the last 5 years.  Serves the filter room.		






Town of Newport, Building Assessment July 31,2017

	equipment	condition	Est remaining Service life	priority	cost	remarks &recommendations		
								
	315,TRANE ceiling hung hot water unit heater	3 Fully operational, 25-50% life expectancy used, periodic problems	10 Years	10	\$3,500	Provides heat to the pump room.		
	329,Trench Drain					There are many trench drains throughout this building.		

Town of Newport, Building Assessment July 31,2017






	equipment	condition	Est remaining Service life	priority	cost	remarks &recommendations		
	330,Ceiling hung hot water unit heater	3 Fully operational, 25-50% life expectancy used, periodic problems	10	10	\$3500	Provides heat to filter room		
	326,Rooftop exhaust fan  Unable to visualize nameplate	1 Fully operational, new, recently replaced	20 Years	10	\$2,500	Replaced within the last 5 years.  Chemical storage	 	
	328,Ceiling hung hot water unit heater	3 Fully operational, 25-50% life expectancy used, periodic problems	10	10	\$3,500	Provides heat to chemical storage		

Town of Newport, Building Assessment July 31,2017






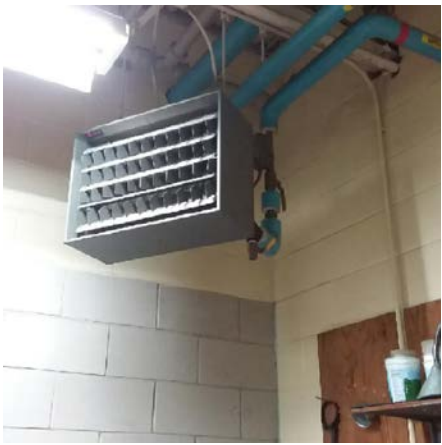
	equipment	condition	Est remaining Service life	priority	cost	remarks &recommendations		
	359,10,000 Gallon underground oil tank  Installed 20-plus years ago  Unknown condition of tank			Per state	\$31,000			
	358,Oil tank monitor for underground tank	2 Fully operational, 0-25% life expectancy used, no issues, no concerns	15	10	\$3,000	Appears to be in working order. Boiler room.		
	357,Inline circulation pumps	2 Fully operational, 0-25% life expectancy used, no issues, no concerns	15	10	\$3,000	Supplies heating hot water to heating terminals.  Unable to access for nameplate information.		








Town of Newport, Building Assessment July 31,2017

	equipment	condition	Est remaining Service life	priority	cost	remarks &recommendations		
	356,Kenmore Model: 153.321511HT  50 Gallon capacity electric water heater  Installed in 2007	2 Fully operational, 0-25% life expectancy used, no issues, no concerns	15 Years	10	\$2,000	This water heater operates during the months that the heat plant is not operating.  The hot water is stored in the adjacent storage tank. Boiler room		
	355,41 Gallon domestic hot water storage tank  Installed in the 1987 renovation  Make: AMTROL Model: BM-81418-BZ	2 Fully operational, 0-25% life expectancy used, no issues, no concerns	15 Years	10	\$2,500	Storage for the adjacent electric water heater.  Tank does have ability to heat water. Although tank is 30 years old, it appears to be in good condition. Boiler room		
	351,Ceiling hung hot water Unit heater  Installed in the 1987 renovation	3 Fully operational, 25-50% life expectancy used, periodic problems	10 Years	10	\$3,500	Provides heat to parts room.		

Town of Newport, Building Assessment July 31,2017




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	345,Rooftop exhaust fan original to the building  Unable to visualize nameplate	5 Operational only with constant attention, 100% life expectancy used, failure imminent	0	1	\$2,500	Serves to exhaust parts, fan is approximately 40 years old.		
	344,970,000 BTU oil-fired boiler  Make: Burnham  Model: PF-507  Boiler was installed in 1986  The oil burner gun was replaced in 2006	3 Fully operational, 25-50% life expectancy used, periodic problems	5 to 10 Years	7	\$10,000	Provides heating water and domestic hot water. Boiler is atmospherically vented through roof  Boiler provides domestic hot water during the heating season only.  Boiler shows sign of burn between boiler skin and burner panel.		
								
	322,Ceiling hung hot water unit heater	3 Fully operational, 25-50% life expectancy used, periodic problems	10	10	\$3,500	Provides heat to blower room		

Town of Newport, Building Assessment July 31,2017






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	325,Rooftop exhaust fan  Unable to visualize nameplate	1 Fully operational, new, recently replaced	20 Years	10	\$2,500	Replaced within the last 5 years.  Serves to exhaust blower room.		
	324, Rooftop exhaust fan  Unable to visualize nameplate	1 Fully operational, new, recently replaced	20 Years	10	\$2,500	Replaced within the last 5 Years.  Serves to exhaust storage room.A102		
	334,Ceiling hung hot water Unit heater	3 Fully operational, 25-50% life expectancy used, periodic problems	10 Years	10	\$3,500	Provides heat for garage		








Town of Newport, Building Assessment July 31,2017

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	364,Hot water Unit heater provided with explosion motor for corrosive Atmosphere	3 Fully operational, 25-50% life expectancy used, periodic problems	10 Years	10	\$3,500	Provides heat for screen room.		
	362,Ceiling hung Hot water Unit heater provided with explosion-proof motor for corrosive atmosphere	3 Fully operational, 25-50% life expectancy used, periodic problems	10 Years	10	\$3,500	Provides heat for de-chlorination system room.		
	360,Ceiling hung Hot water Unit heater	3 Fully operational, 25-50% life expectancy used, periodic problems	10 Years	10	\$3,500	Provides heat for storage room.E115		

Town of Newport, Building Assessment July 31,2017






	equipment	condition	Est remaining Service life	priority	cost	remarks &recommendations		
	349,Roof mounted upblast exhaust fan  Make: FLOAIRE  Model: DU85H	1 Fully operational, new, recently replaced	20 Years	10	\$4,000	Replaced within the last 5 years, interlocked with fresh air intake hood.  Serves to exhaust screen room.		
								
	346, Upblast exhaust fan original to building	4 Operational, 50- 75% life expectancy used, occasional problems, frequent repairs needed	5 Years	5	\$6,000	Unable to visualize complete nameplate  Serves to exhaust de- chlorination system room.		

Town of Newport, Building Assessment July 31,2017


	equipment	condition	Est remaining Service life	priority	cost	remarks & recommendations		
								
	318,Rooftop exhaust fan  Make: Dayton Model: 4YC50G	1 Fully operational, new, recently replaced	25 Years	10	\$2,500	Replaced within the last 5 years.  Serves to exhaust the control room.		
								





Town of Newport, Building Assessment July 31,2017

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	317,Fan powered Hot water Unit heater	3 Fully operational, 25-50% life expectancy used, periodic problems	10 Years	10	\$3,500	Typical throughout building.  Provides heat for control room.		
	315,Trane fan powered Hot water unit heater	3 Fully operational, 25-50% life expectancy used, periodic problems	10 Years	10	\$3,500	Provides heat to pump room on the lower level.	 	
	314, 2" copper pipe with RPZ					Maintained by water dept.	 	







Town of Newport, Building Assessment July 31,2017

	equipment	condition	Est remaining Service life	priority	cost	remarks & recommendations		
								

Electrical




	Equipment	Condition	Est. Remaining Service Life	Priority	Cost Estimate	Remarks & Recommendations		
	456,7.5 KVA wall mounted Transformer	2 Fully operational, 0-25% life expectancy used, no issues, no concerns	15 Years	10	\$1,000	Transformer is housed in a wooden enclosure attached to the GRIT building.		

Town of Newport, Building Assessment July 31,2017





	equipment	condition	Est remaining Service life	priority	cost	remarks &recommendations		
	453,480 Volt 3 phase panelboard	2 Fully operational, 0-25% life expectancy used, no issues, no concerns	15 Years	10	\$6,000	Panelboard is housed in a wooden enclosure attached to the GRIT building.		
	452,208 Volt panelboard	2 Fully operational, 0-25% life expectancy used, no issues, no concerns	15 Years	10	\$4,000	Panel board is housed in a wooden enclosure attached to the GRIT building.		
	450,Explosion-proof type devices throughout building	2 Fully operational, 0-25% life expectancy used, no issues, no concerns	15 Years	10	\$3,000	These devices are located in the GRIT building.		







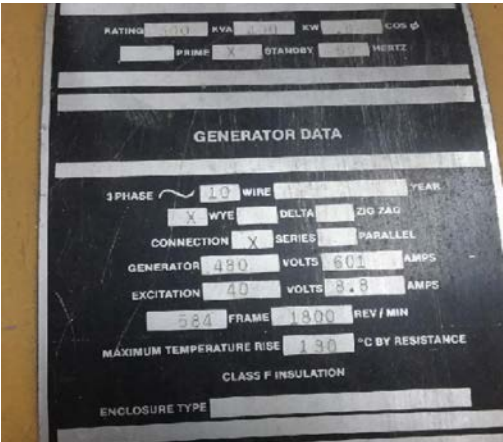
Town of Newport, Building Assessment July 31,2017

	equipment	condition	Est remaining Service life	priority	cost	remarks &recommendations		
								
	367, FACP Installed 2013	1 Fully operational, new, recently replaced	20 Years	10	\$6,000	Control panel is dispatched to the police department which is the Central Dispatch Center.		
	327, 120/ 208 3 phase flush mount panelboard ELP 2	2 Fully operational, 0-25% life expectancy used, no issues, no concerns	15 Years	10	\$4,000			

Town of Newport, Building Assessment July 31,2017




	equipment	condition	Est remaining Service life	priority	cost	remarks &recommendations		
	365,Three - 100 KVA pole-mounted transformers	2 Fully operational, 0-25% life expectancy used, no issues, no concerns	15 Years	10		Provides power to building through underground service.  Electric meter is also pole mounted.  Maintained by power supplier.		
								
	323, 208 Volt 3 phase flush mount panelboard PP	2 Fully operational, 0-25% life expectancy used, no issues, no concerns	15 Years	10	\$4,000			

Town of Newport, Building Assessment July 31,2017

	equipment	condition	Est remaining Service life	priority	cost	remarks & recommendations		
	321, 321,480 Volt 3 phase entrance, MDP and two floor mount transformers	2 Fully operational, 0-25% life expectancy used, no issues, no concerns	15 Years	10	\$15,000	Generator room		
								
	320,400 KW floor mounted diesel generator  Make: CATERPILLAR Model: 3408	2 Fully operational, 0-25% life expectancy used, no issues, no concerns	15 Years	10	\$200,000	Provides power for entire building.  Generator is housed inside the building.  Unknown date of install. Appears to be well maintained.		




Town of Newport, Building Assessment July 31,2017

	equipment	condition	Est remaining Service life	priority	cost	remarks &recommendations		
	319, Electrical Panelboard  ELP-1 225 AMP - 120/208 3 phase	2 Fully operational, 0-25% life expectancy used, no issues, no concerns	15 Years	10	\$4,000			
	316,Pull station and horn strobe	2 Fully operational, 0-25% life expectancy used, no issues, no concerns	15 Years	10	\$250	Typical at exits of building.		
	363,outdoor lighting	4 Operational, 50- 75% life expectancy used, occasional problems, frequent repairs needed	5	5	\$500 each	Outside chlorination room		

Town of Newport, Building Assessment July 31,2017

	equipment	condition	Est remaining Service life	priority	cost	remarks & recommendations		
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Site								
	<p>The building is paved on south and east sides, with a grassed area to the west. Pavement appears to be from at least 2 separate placements with the oldest one (dating from late 1970's or early 1980's) placed around the building, and a second placement (late 1980's or early 1990's) on the access road section parallel with the building and in a small parking area in front of the building.</p> <p>Pavement in the older section is characterized by alligator cracking in the areas near the front gate, longitudinal/transverse cracking in the section in front of, and to the east side of the building. A few of these longitudinal cracks have become eroded and widened over time. Given the appearance of the alligator cracking, it appears that this may result from the bituminous pavement applied directly over the subgrade soils, or upon a base course layer that was not thick enough. The longitudinal cracks are likely resulting from reflective cracks from the underlying asphalt layer.</p>							
	Equipment	Condition	Est. Remaining Service Life	Priority	Cost Estimate	Remarks & Recommendations	Photos	
	860, Pavement	4	2	4	PT \$2.80 sq.ft.  28,000 sq.ft  \$78,400	Photo - View towards entrance gate of the Sewer Treatment Plant.		
	861, Pavement				PF \$7.17 sq.ft.  28,000 sq.ft  \$200,760	Alligator cracking and potholing/ pavement breakup at front of the parking area.	