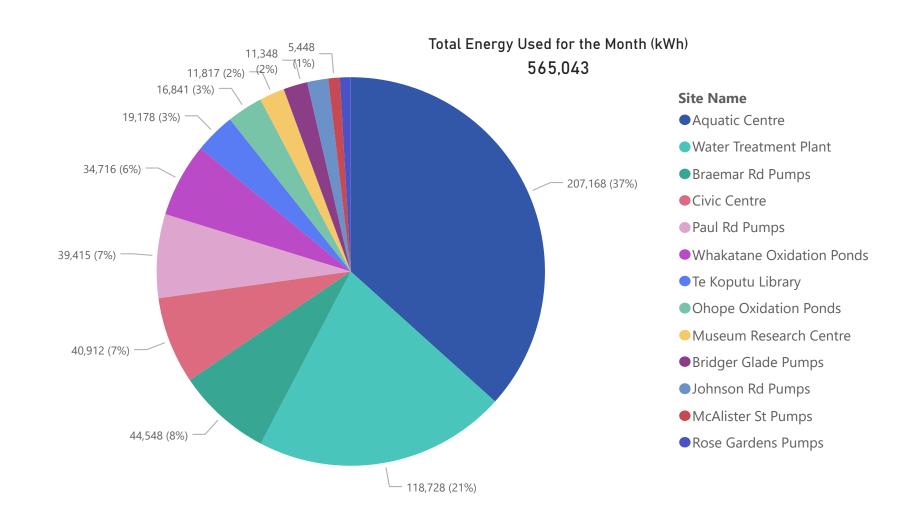


Summary

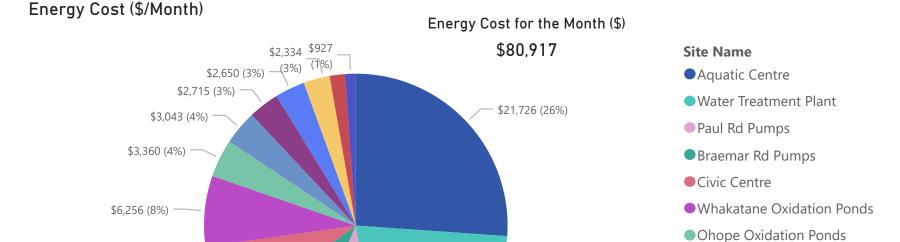
\$23,519 Monthly Energy Cost Savings	46,079 Elec. Savings (kWh/mo)	10% Elec. Savings (%)	153,530 R12M Electricity Savings (kWh/yr)	60,786 CO2e Savings (kg/mo)
\$102,693 R12M Energy Cost Savings	252,652 Gas. Savings (kWh/mo)	68% Gas. Savings (%)	1,178,638 R12M Gas Savings (kWh/yr)	239,919 R12M CO2e Savings (kg/yr)

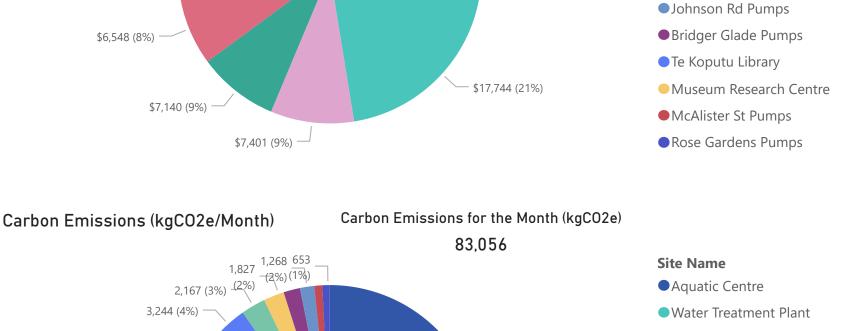
Total Energy (kWh/Month)

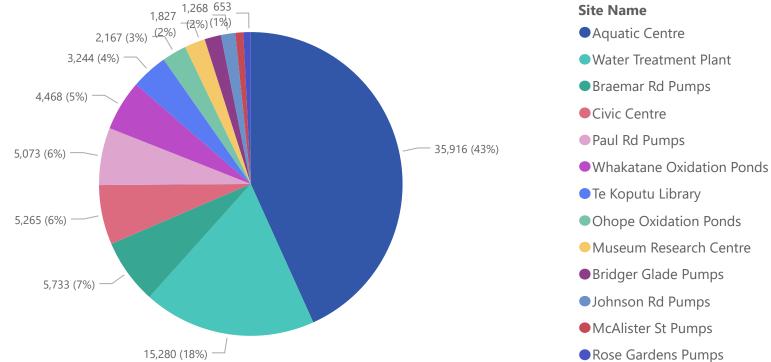




Summary

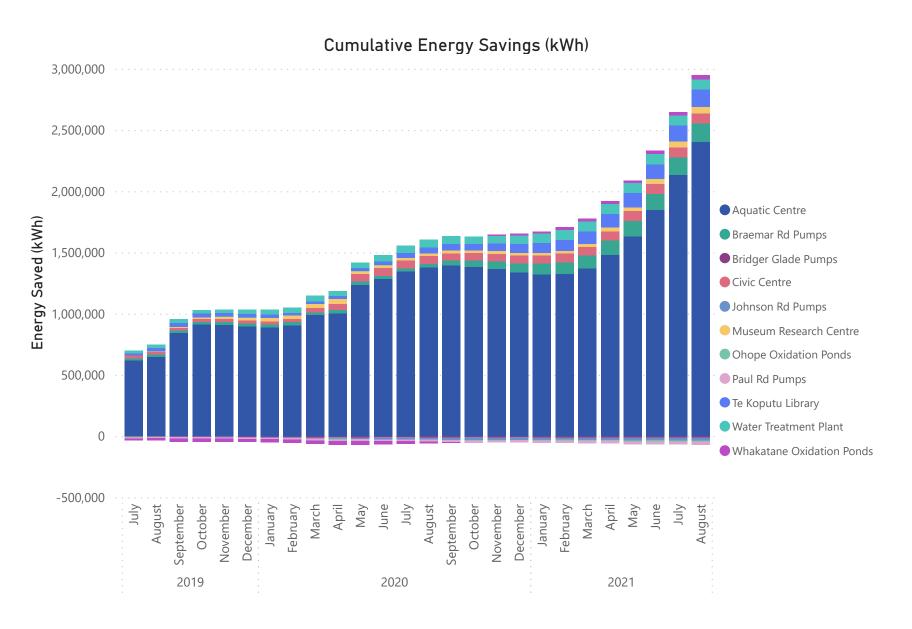








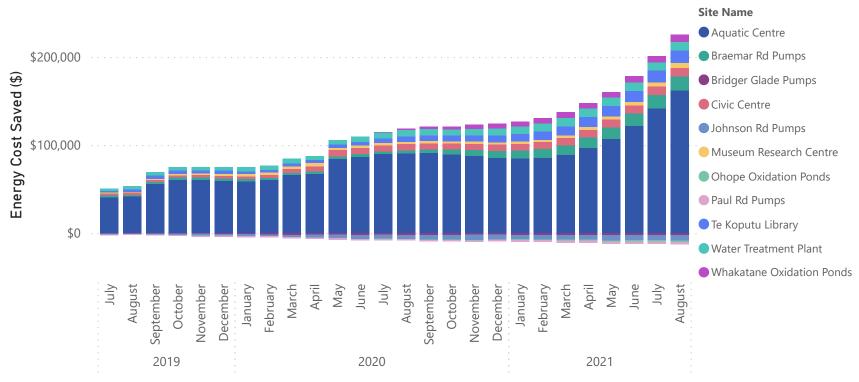
Summary



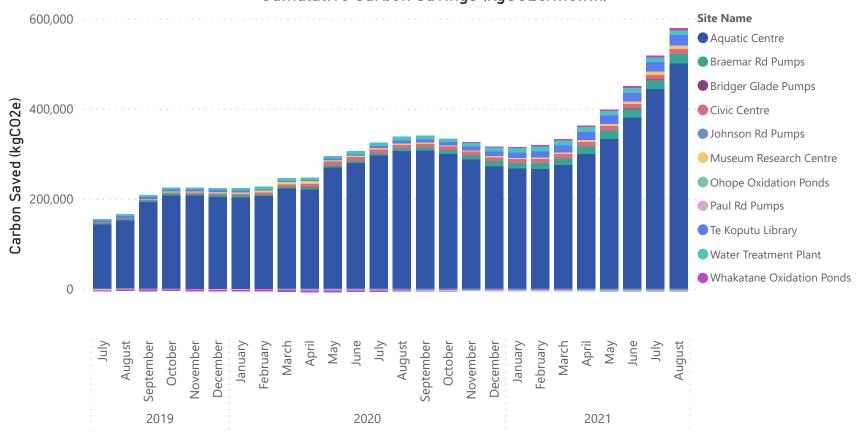


Summary











Civic Centre

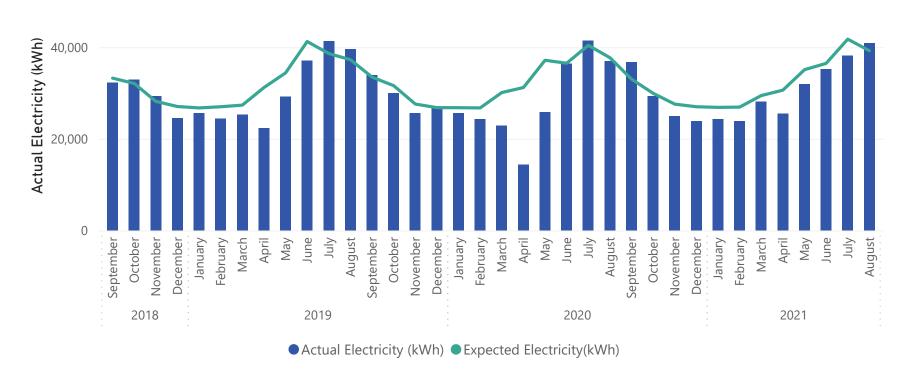
-\$199	-1,671	-4%	21,185	-241
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
\$2,391				2,471
R12M Energy Cost Savings				R12M CO2e Savings (kg/yr)

Comments:

Electric vehicle charging stations have seen an uptake in recent months, non-routine adjustments have been made to account for the increased electricity use.

The Civic Centre used more electricity than expected this month. TOU data indicates a baseload increase around 20-25kW started on 9 August and continued for the rest of the month. A load of this size might be attributed to HVAC being left on unnecessarily.

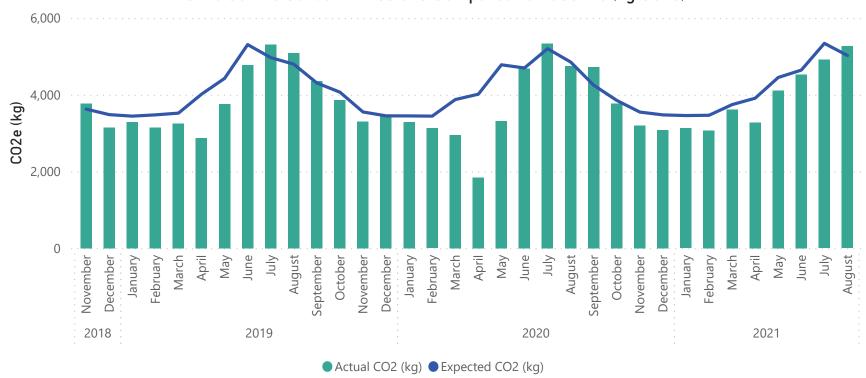
Civic Centre Electricity Use Compared to Baseline (kWh)





Civic Centre



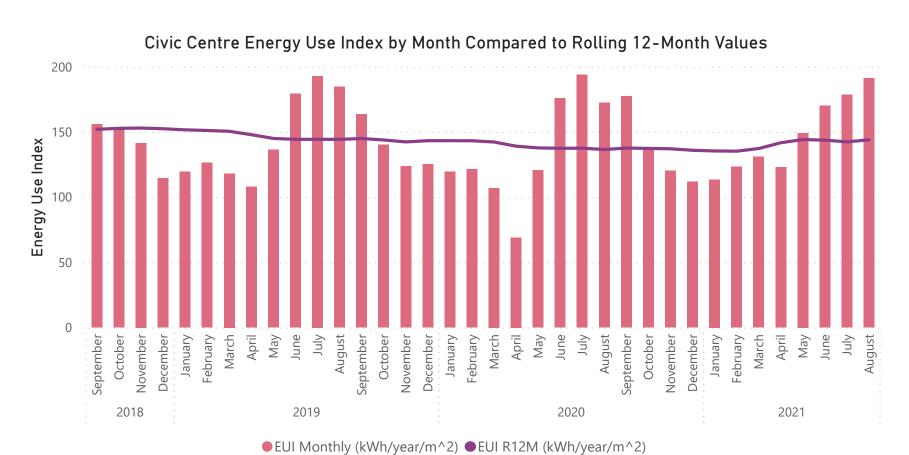


Civic Centre Cumulative Rolling 12 Month Savings





Civic Centre





Aquatic Centre

\$20,490 Monthly Energy Cost Savings	26,606 Elec. Savings (kWh/mo)	21% Elec. Savings (%)	-87,658 R12M Electricity Savings (kWh/yr)	56,278 CO2e Savings (kg/mo)
\$71,405 R12M Energy Cost Savings	243,629 Gas. Savings (kWh/mo)	70% Gas. Savings (%)	1,112,521 R12M Gas Savings (kWh/yr)	194,113 R12M CO2e Savings (kg/yr)

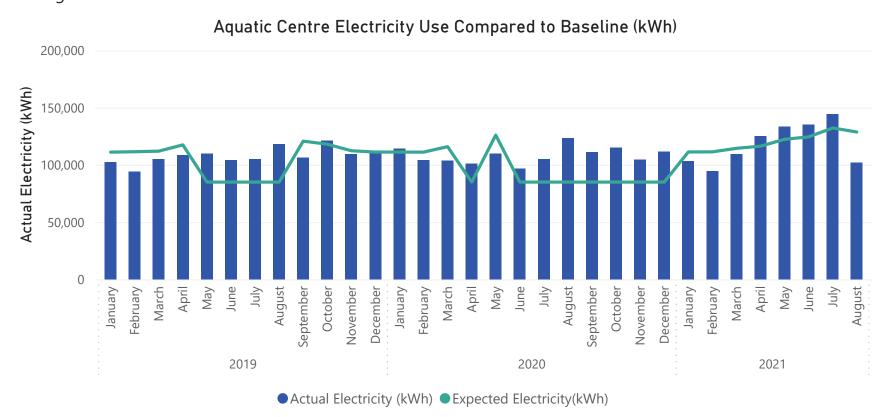
Comments:

The outdoor pool is now open year-round and uses a baseline that reflects this change.

Electricity use was 21% below baseline after four months being above baseline. Some of these savings can be attributed to the Aquatic Centre being closed to public during alert levels three and four.

Natural gas was not substantially different from last month, despite the pool being closed for about half of August.

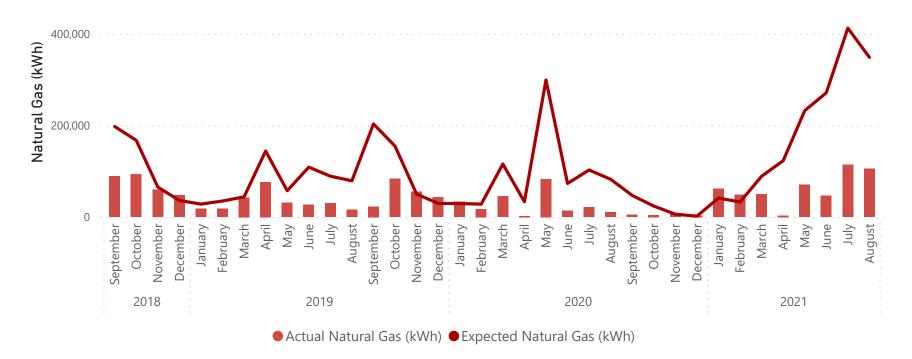
The outdoor pool is open year round and natural gas is used to prevent condensation on the outdoor pool cover. Natural gas is also used to supplement the heat pump for the outdoor pool during periods of high demand. Gas savings for the month are 70% less than baseline.



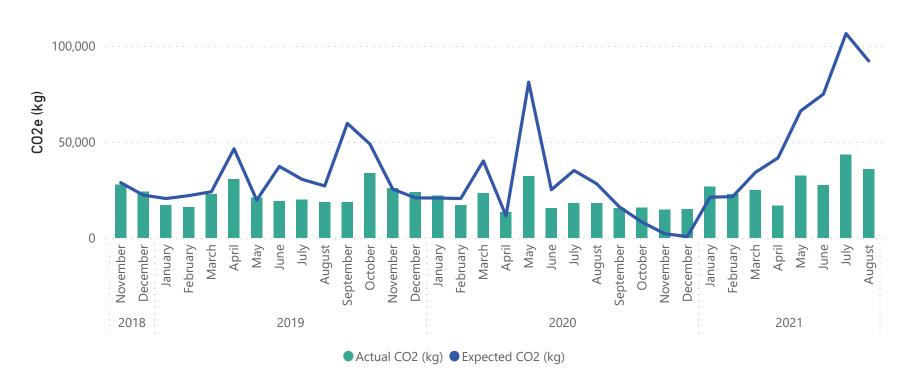


Aquatic Centre

Aquatic Centre Natural Gas Compared to Baseline (kWh)



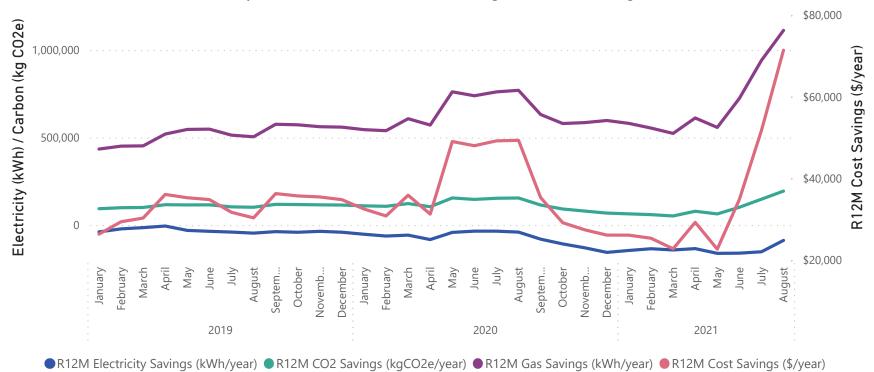
Aquatic Centre Carbon Emissions Compared to Baseline (kg CO2e)



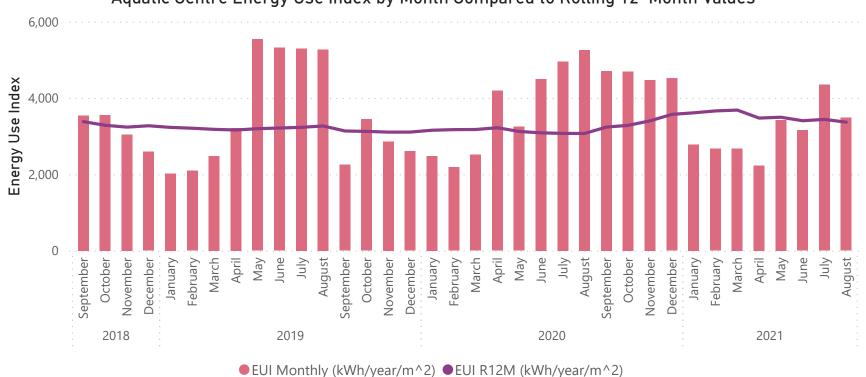


Aquatic Centre





Aquatic Centre Energy Use Index by Month Compared to Rolling 12-Month Values





Te Koputu Library

\$1,083	5,788	36%	42,154	1,939
Monthly Energy Cost Savings		Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
\$8,387 R12M Energy Cost Savings	5,486 Gas. Savings (kWh/mo)	38% Gas. Savings (%)	50,492 R12M Gas Savings (kWh/yr)	16,425 R12M CO2e Savings (kg/yr)

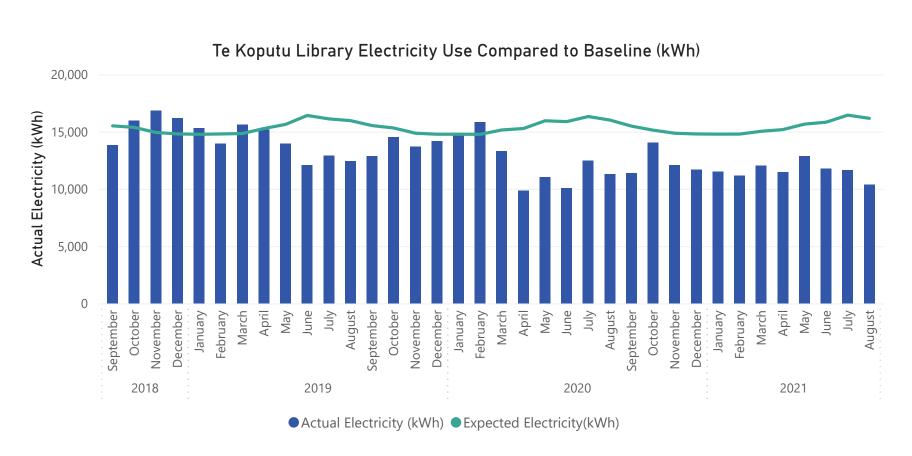
Comments:

Electricity use has been less than baseline since March 2020.

Electricity and natural gas use were both below baseline in August 2021, however, some of these savings can be credited towards the facility being closed to the public during during alert levels three and four.

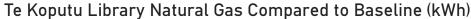
Natural gas was previously switched off in February 2021. Natural gas was turned back on in May 2021.

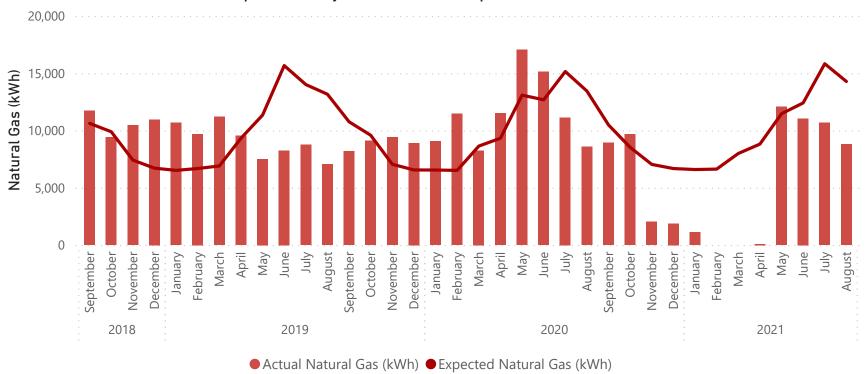
Rolling 12 month cost savings are at a new high, with approximately \$8,400 saved per year.



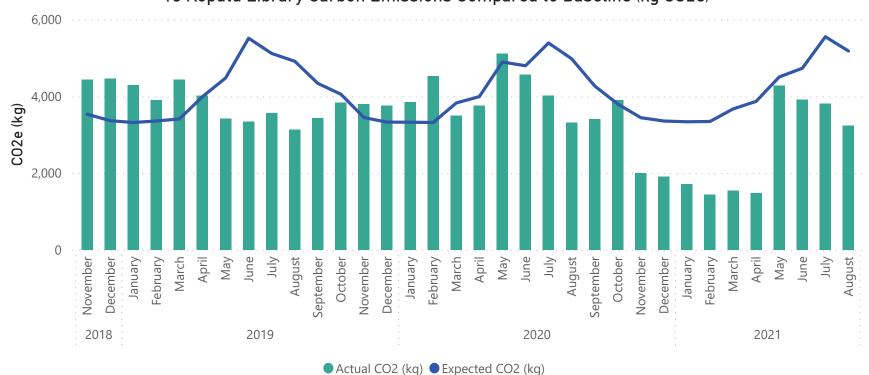


Te Koputu Library





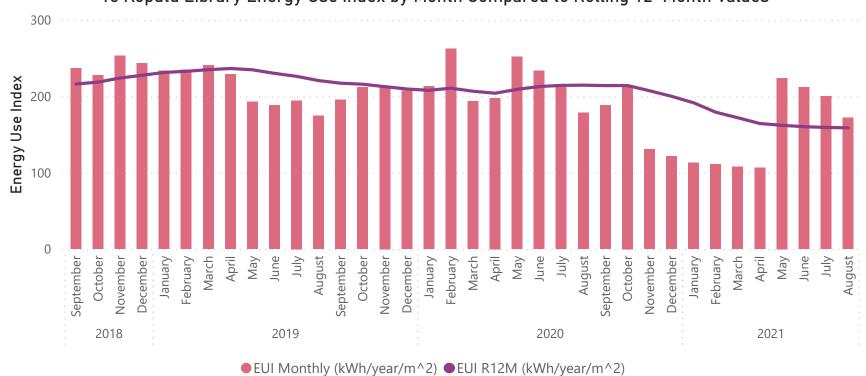


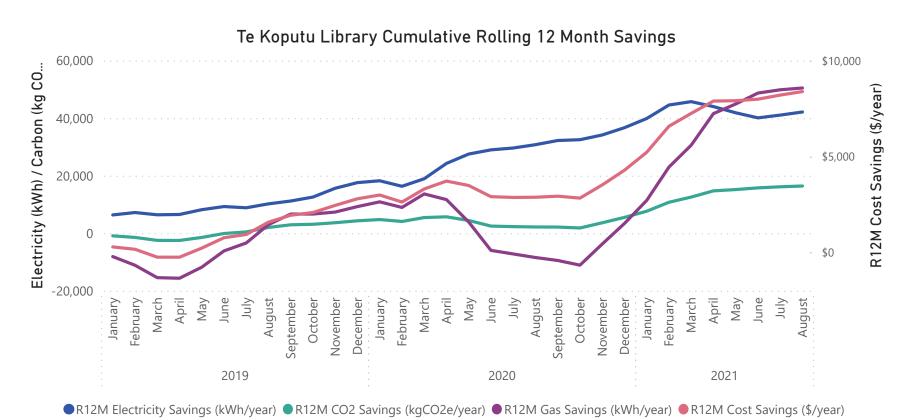




Te Koputu Library









Museum and Research Centre

\$705 Monthly Energy Cost Savings	3,787 Elec. Savings (kWh/mo)	31% Elec. Savings (%)	16,950 R12M Electricity Savings (kWh/yr)	1,254 CO2e Savings (kg/mo)
\$3,122 R12M Energy Cost Savings	3,538 Gas. Savings (kWh/mo)	50% Gas. Savings (%)	15,625 R12M Gas Savings (kWh/yr)	5,569 R12M CO2e Savings (kg/yr)

Comments:

Electricity use in August 2021 compared to August 2020 is 25% lower and gas use was is 59% lower for the same period.

Some of these savings reflect the recent work on the HVAC system, operation of the air handling unit has been changed as well as modifying timing on air conditioning. Some of the savings are likely attributed to the Museum and Research Centre being closed to public during alert levels 3 and 4.

Rolling 12 month savings have increased this month.

Museum Research Centre Electricity Use Compared to Baseline (kWh)

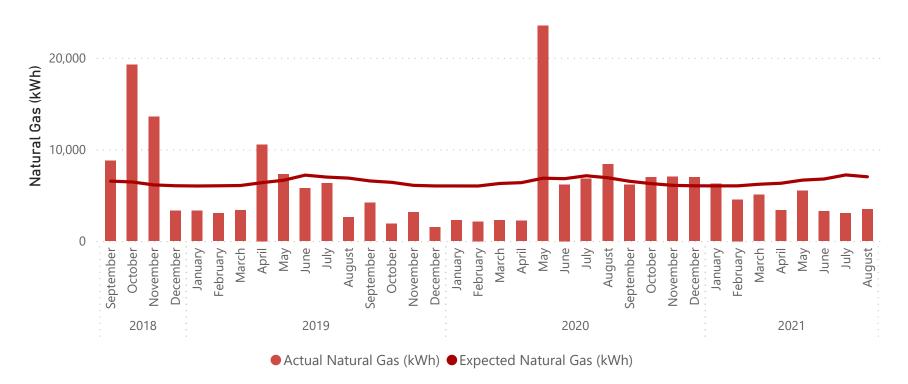


● Actual Electricity (kWh) ■ Expected Electricity(kWh)

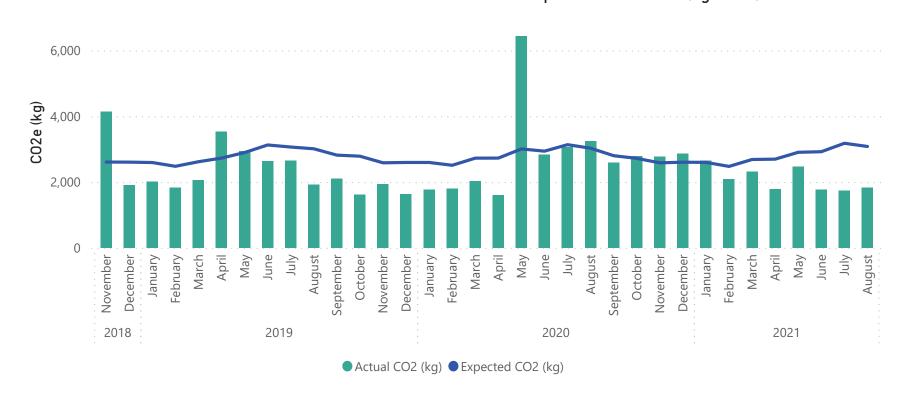


Museum and Research Centre

Museum Research Centre Natural Gas Compared to Baseline (kWh)



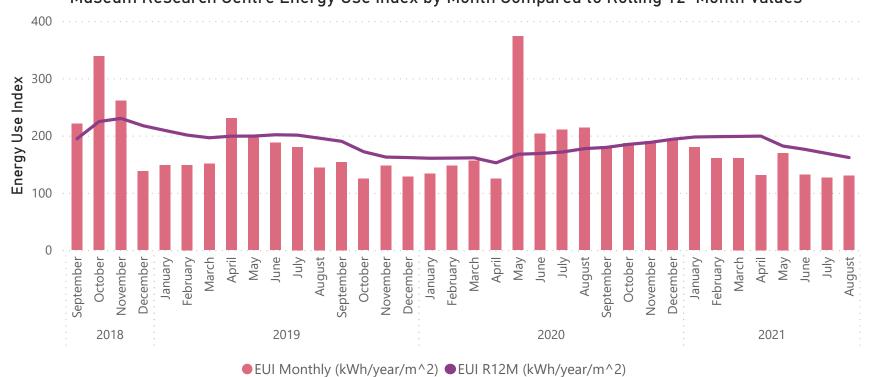
Museum Research Centre Carbon Emissions Compared to Baseline (kg CO2e)

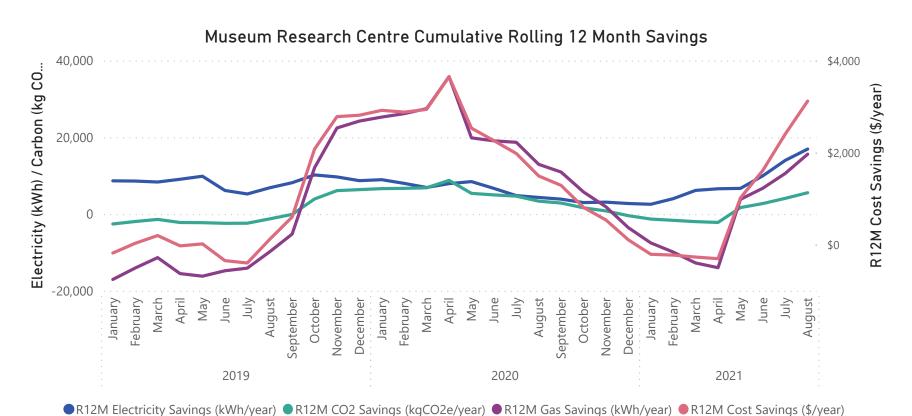




Museum and Research Centre









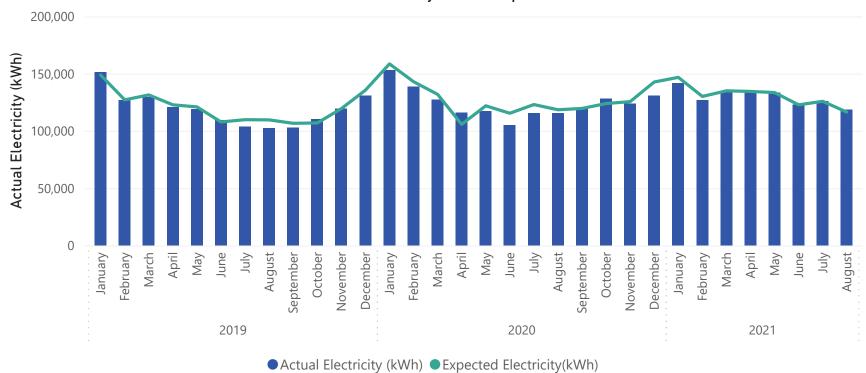
Water Treatment Plant

-\$267	-2,312	-2%	17,678	-298
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
\$1,801				2,275
R12M Energy Cost Savings				R12M CO2e Savings (kg/yr)

Comments:

Metering for April to July 2021 was incorrect and was previously only picking up approximately half of the actual value. To rectify this in monitoring, electricity use for those months have been set equal to expected electricity use.

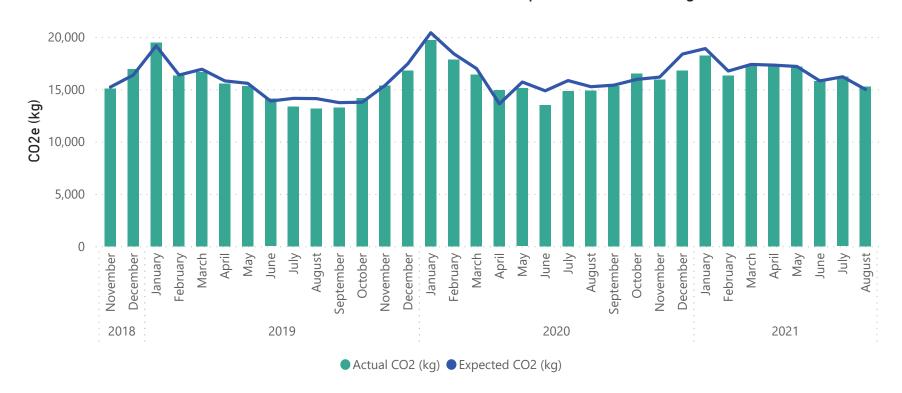
Water Treatment Plant Electricity Use Compared to Baseline (kWh)

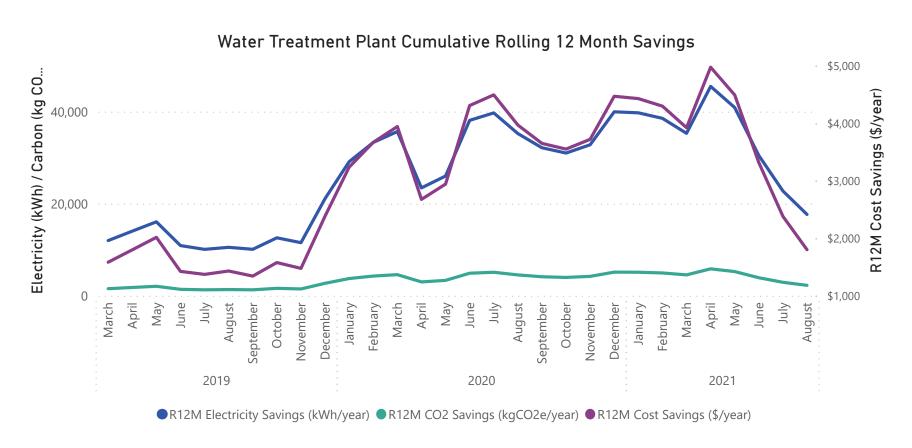




Water Treatment Plant

Water Treatment Plant Carbon Emissions Compared to Baseline (kg CO2e)

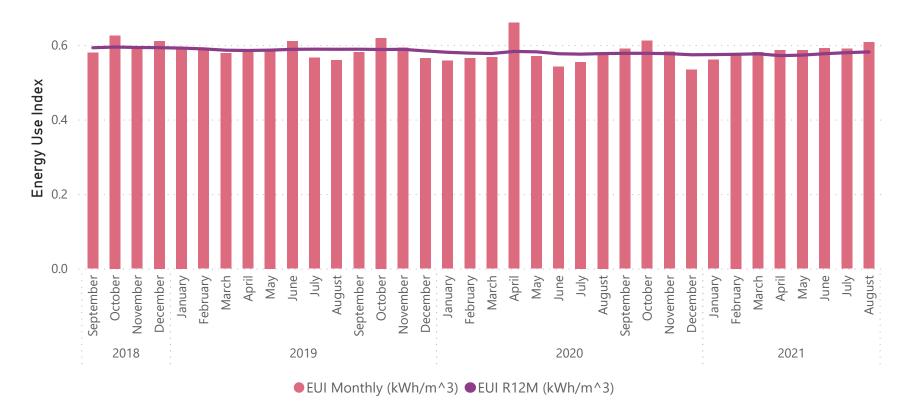






Water Treatment Plant

Water Treatment Plant Energy Use Index by Month Compared to Rolling 12-Month Values





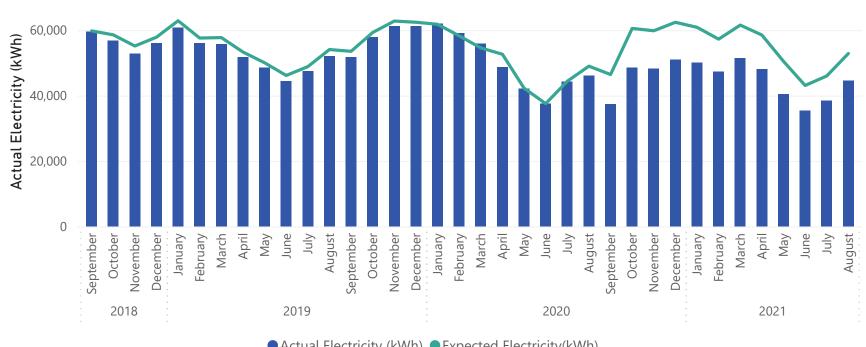
Braemar Road Pump Station

\$986	8,312	16%	118,884	1,134
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
\$12,795 R12M Energy Cost Savings				15,917 R12M CO2e Savings (kg/yr)

Comments:

This month marks a full 12 months of operation for the high efficiency pumps and motors. Rolling 12 month savings have set a new record, with savings of \$12,800 per year, 118,900 kWh per year, and 15,900 kgCO2e per year.

Braemar Rd Pumps Electricity Use Compared to Baseline (kWh)

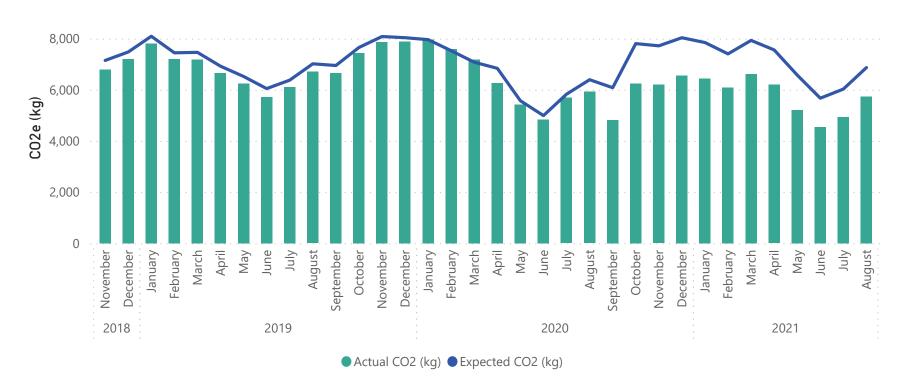


Actual Electricity (kWh)Expected Electricity(kWh)

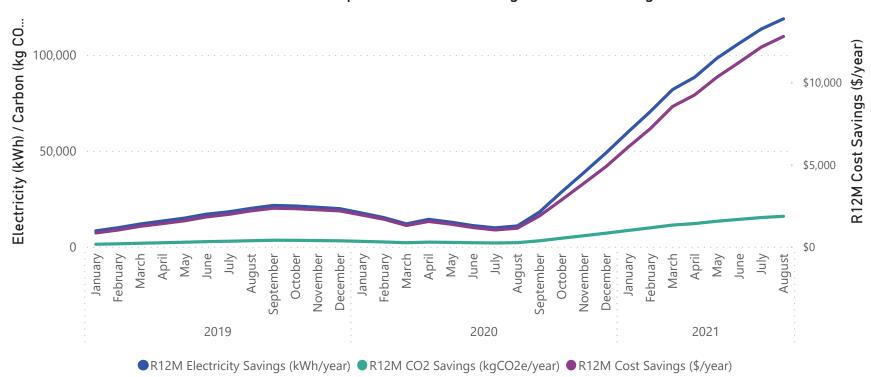


Braemar Road Pump Station

Braemar Rd Pumps Carbon Emissions Compared to Baseline (kg CO2e)



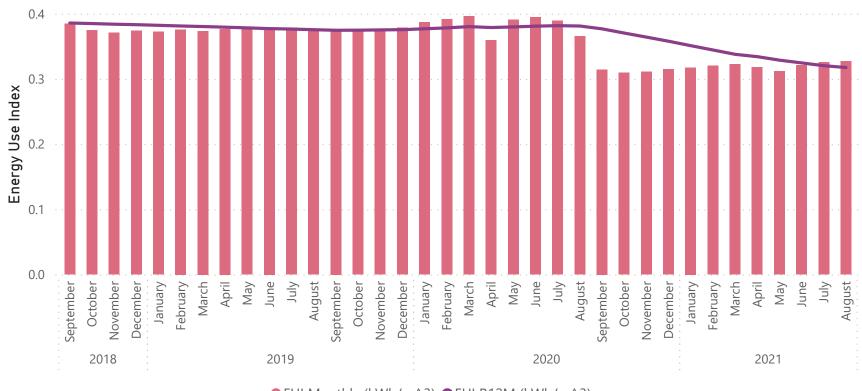






Braemar Road Pump Station





● EUI Monthly (kWh/m^3) ● EUI R12M (kWh/m^3)



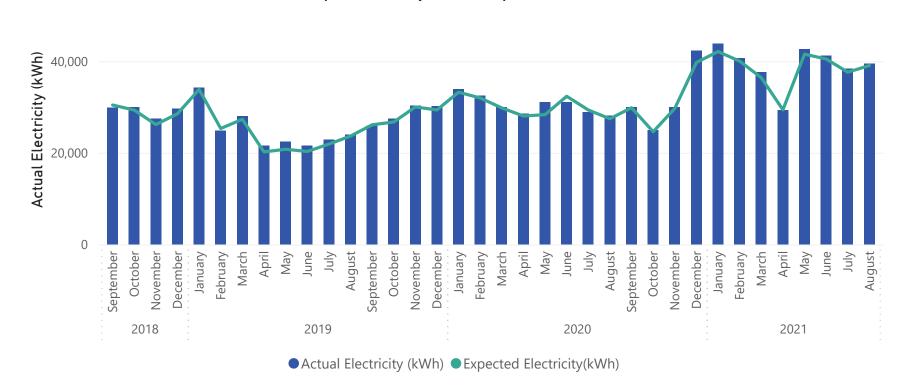
Paul Road Pump Station

-\$42	-358	-1%	-9,869	-45
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
-\$1,049				-1,261
R12M Energy Cost Savings				R12M CO2e Savings (kg/yr)

Comments:

On an EUI basis, the pumps are still operating consistently at a rate of approximately 0.65 kWh per cubic meter.

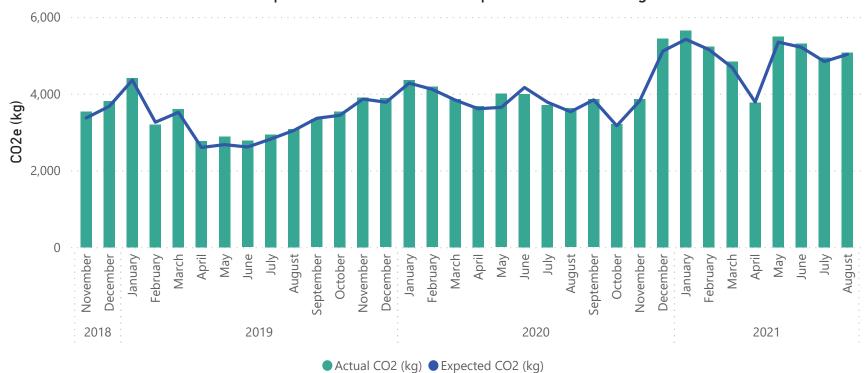
Paul Rd Pumps Electricity Use Compared to Baseline (kWh)

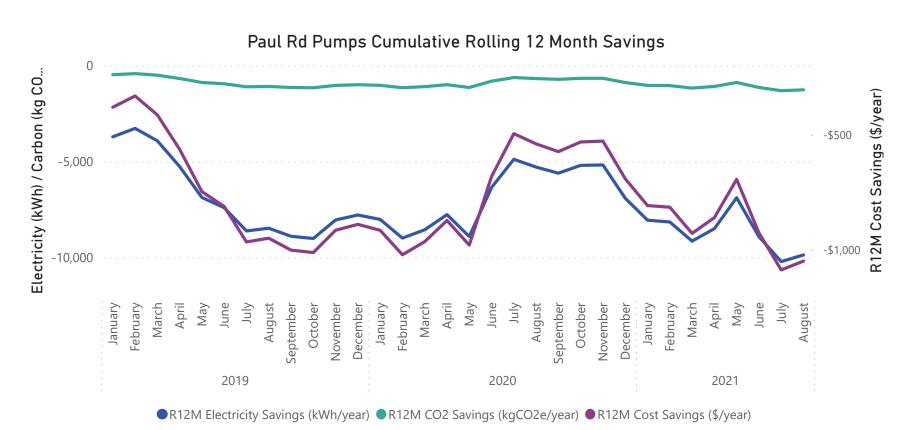




Paul Road Pump Station









Paul Road Pump Station







Johnson Road Pump Station

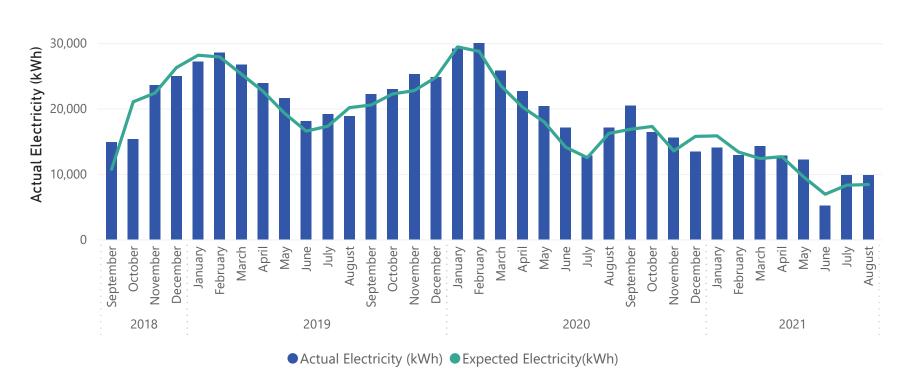
-\$322	-1,462	-17%	-6,052	-188
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
-\$1,328				-773
R12M Energy Cost Savings				R12M CO2e Savings (kg/yr)

Comments:

Generally, both Paul Road and Johnson Rd's EUIs are approximately twice as high compared to Bridger Glade and Braemar Road on a kWh per cubic meter pumped basis. This may be due to operating at different pressures.

For May to August 2021, Johnson Road Pump Station's EUI has increased by approximately 60% compared to previous 12 months. The month of August had an EUI of 1.18, 76% higher than average for the 12 months ending April 2021. As Johnson Road Pump Station has a non-zero baseload, it is expected that as the pump station is used less, the EUI will also increase.

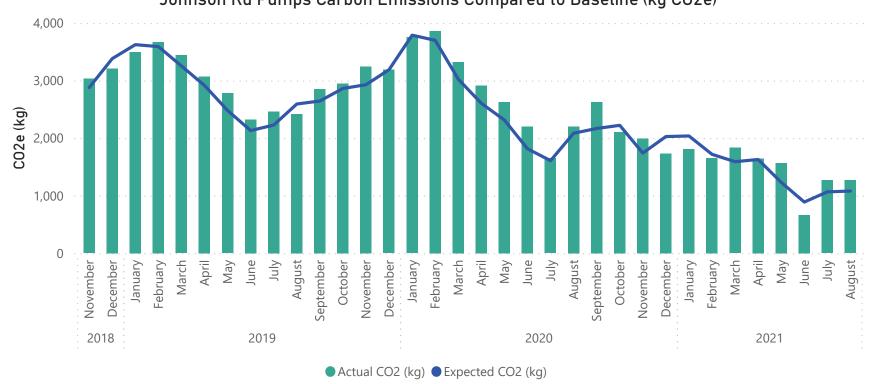
Johnson Rd Pumps Electricity Use Compared to Baseline (kWh)

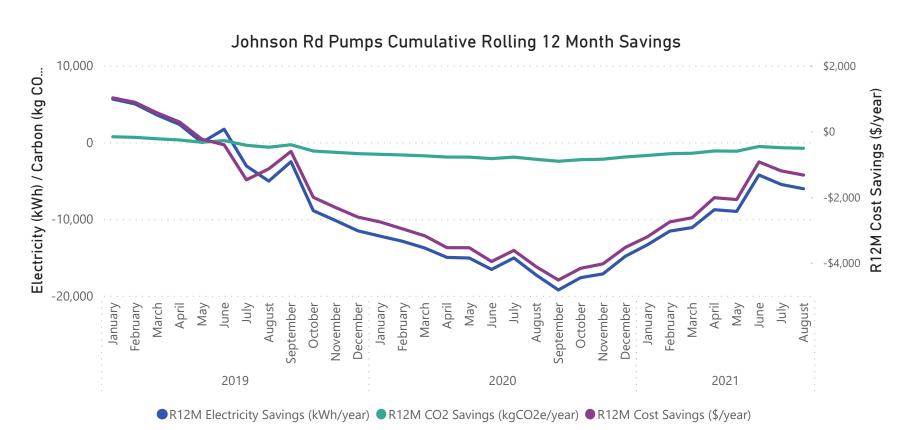




Johnson Road Pump Station



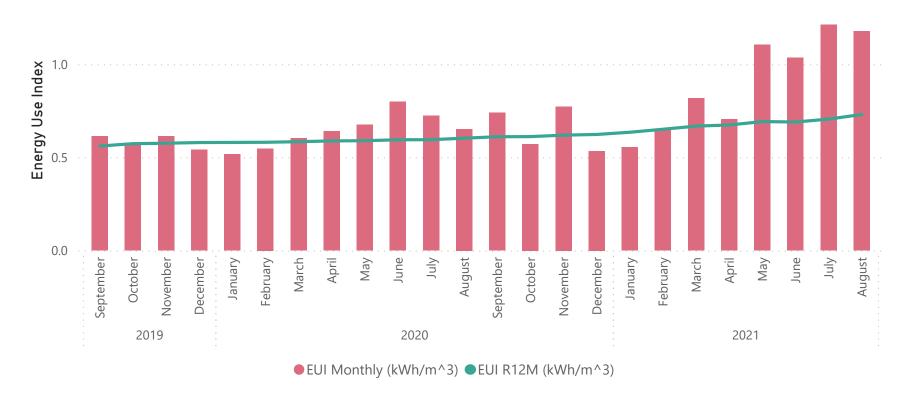






Johnson Road Pump Station

Johnson Rd Pumps Energy Use Index by Month Compared to Rolling 12-Month Values





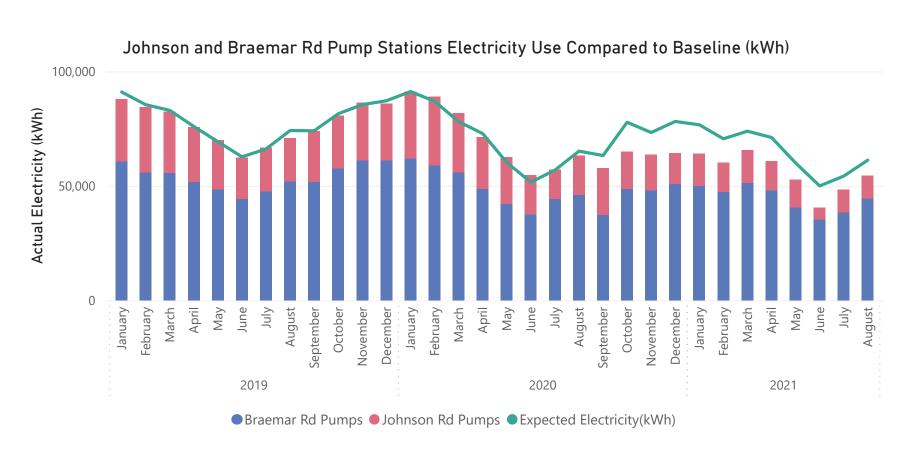
Johnson and Braemar Rd Pump Stations

947
vings (kg/mo)
5,145
e Savings (kg/yr)

Comments:

It is clear from the combined monitoring how the new, more efficient pumps (installed September 2020) at Braemar Road greatly contribute to the collective savings. On an EUI basis, even before the more efficient pumps were installed, Braemar Road was pumping water more efficiently.

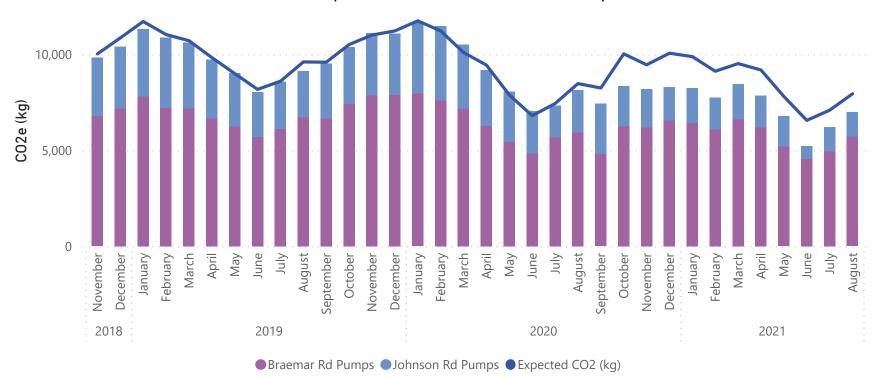
Recently, Johnson Road pump station's EUI has increased and Braemar pumps are using approximately 72% less energy to pump the same amount of water, on a kWh per cubic meter basis. The combined EUI for Johnson Road and Braemar Road in August was 0.38 kWh per cubic meter.

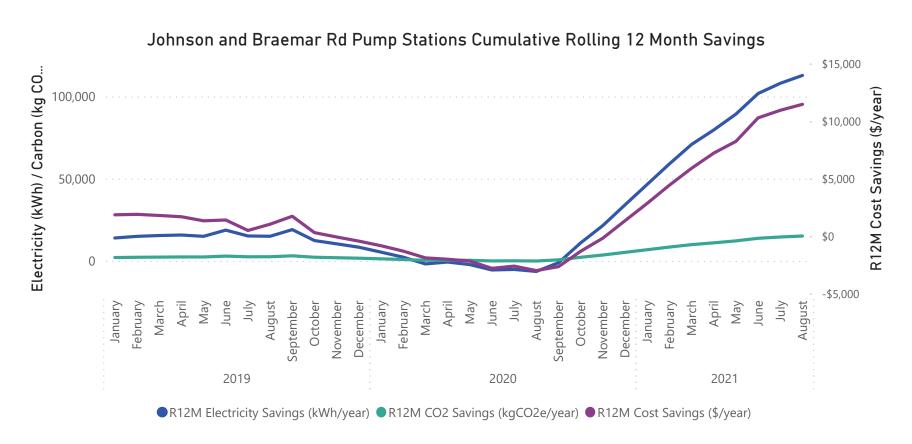




Johnson and Braemar Rd Pump Stations

Johnson and Braemar Rd Pump Stations Carbon Emissions Compared to Baseline (kWh)

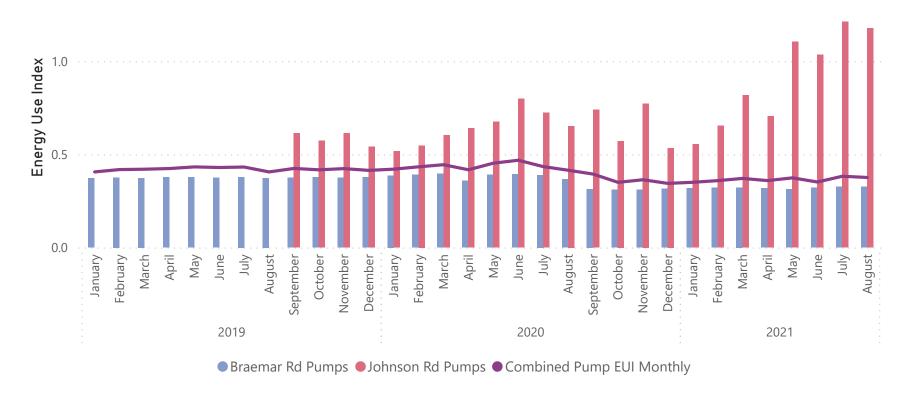






Johnson and Braemar Rd Pump Stations

Johnson and Braemar Rd Pump Stations Energy Use Index by Month



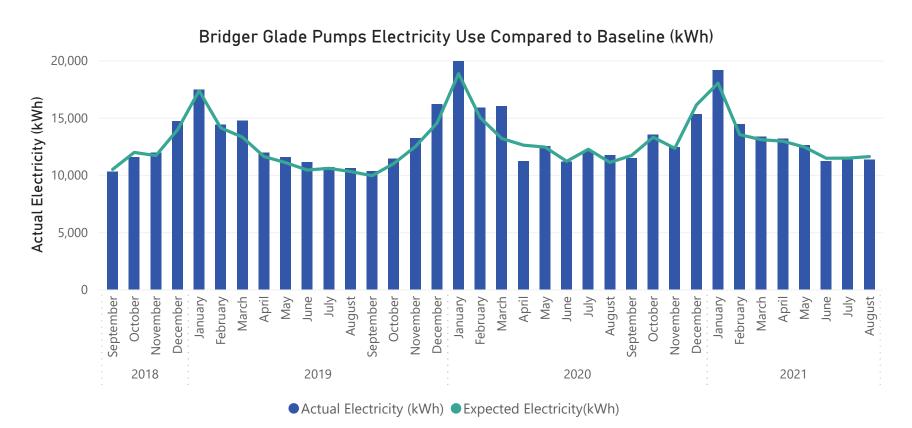


Bridger Glade Pump Station

252	2%	-1,364	32
Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
			-176
			R12M CO2e Savings (kg/yr)

Comments:

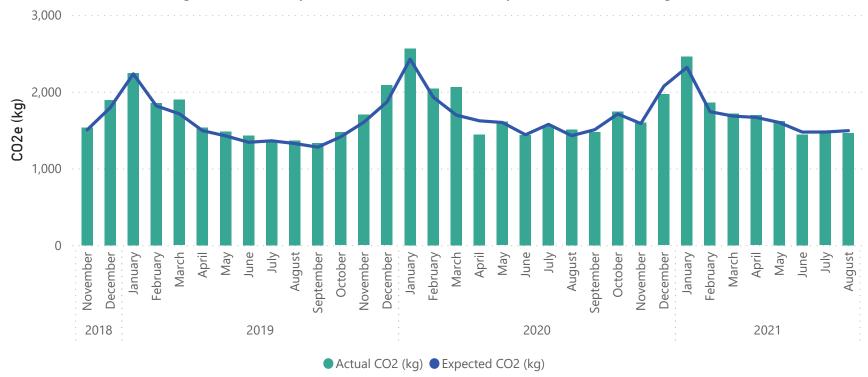
Electricity use was 2% less than baseline for the month of August 2021 at Bridger Glade pump station. In August 2021 the volume of water pumped was 5% more and electricity was 3% less compared to to August 2020.



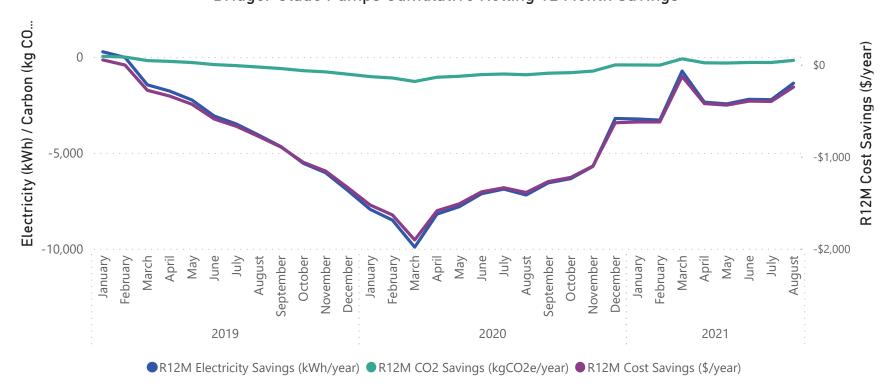


Bridger Glade Pump Station





Bridger Glade Pumps Cumulative Rolling 12 Month Savings





Bridger Glade Pump Station







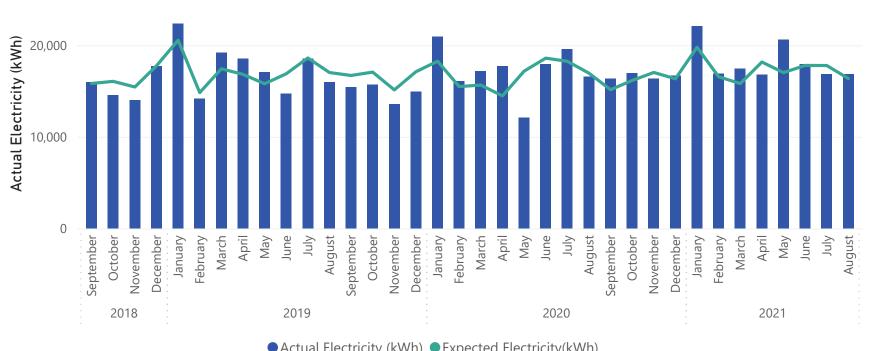
Ohope Oxidation Ponds

-\$86	-477	-3%	-7,790	-61
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
-\$1,374				-1,003
R12M Energy Cost Savings				R12M CO2e Savings (kg/yr)

Comments:

Comparing August 2021 to August 2020, demand has decreased by 9% and electricity use has increased by 2%. This may be partly due to when the electricity meter was read as Ohope Oxidation Ponds are a non-half hourly account.

Ohope Oxidation Ponds Electricity Use Compared to Baseline (kWh)

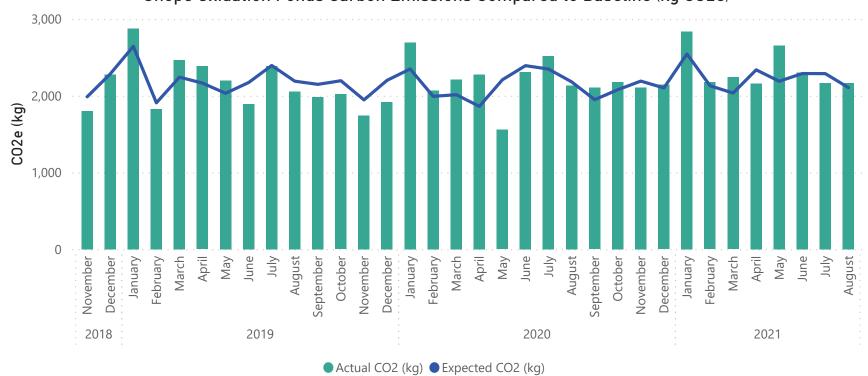


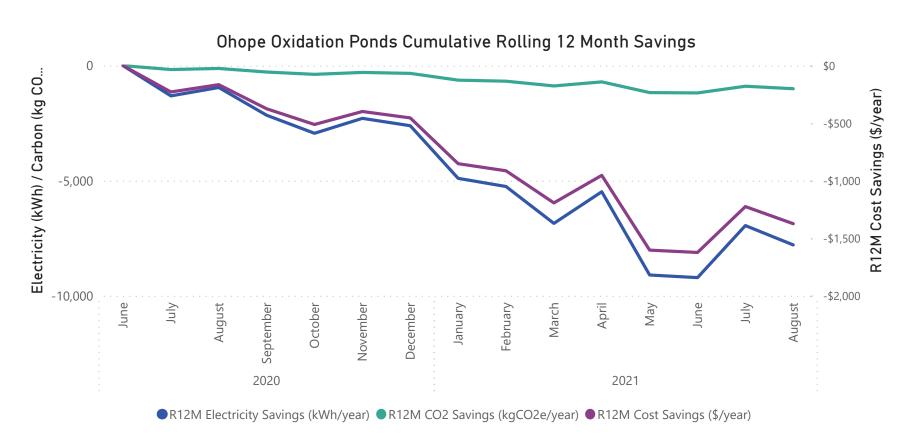
Actual Electricity (kWh)Expected Electricity(kWh)



Ohope Oxidation Ponds



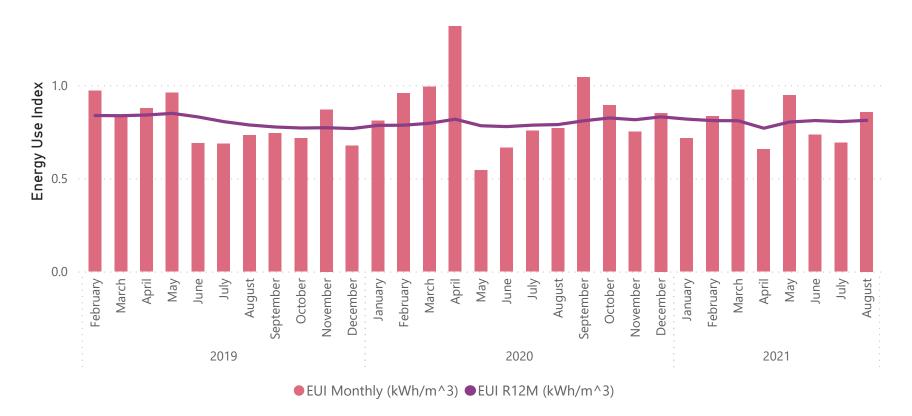






Ohope Oxidation Ponds

Ohope Oxidation Ponds Energy Use Index by Month Compared to Rolling 12-Month Values





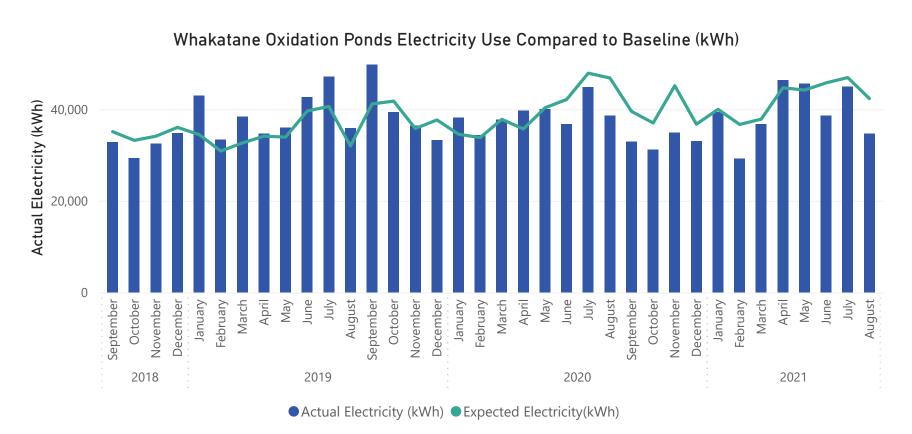
Whakatane Oxidation Ponds

\$1,124	7,613	18%	49,412	980
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
\$6,785				6,359
R12M Energy Cost Savings				R12M CO2e Savings (kg/yr)

Comments:

The Whakatane Oxidation Ponds have two ICPs, the aerators are set up as a time of use (TOU) account (supplied by Mercury), and the pumps are non-TOU (supplied by Genesis).

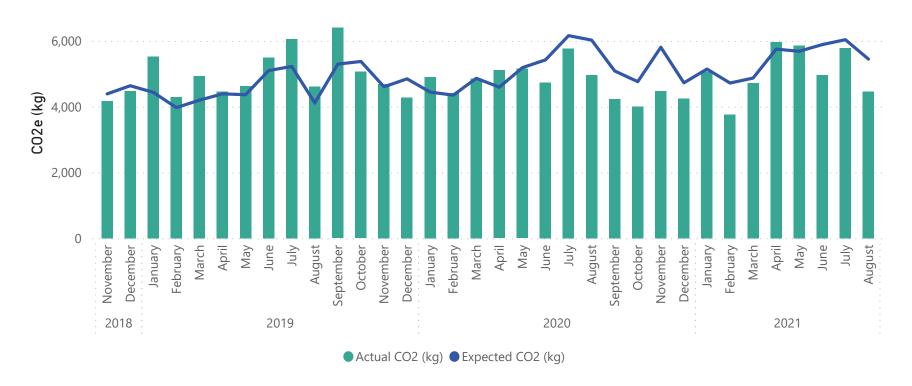
In August 2021, the oxidation ponds used 18% less electricity compared to baseline. Rolling 12 month EUI has been steadily decreasing, which is good.

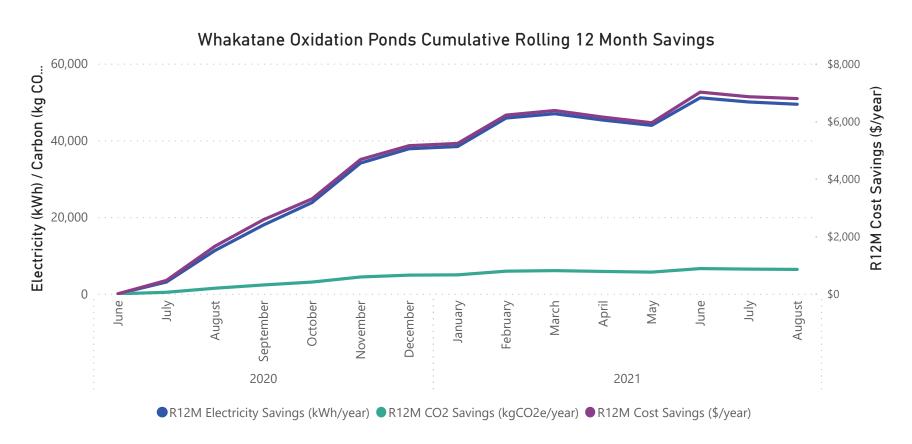




Whakatane Oxidation Ponds

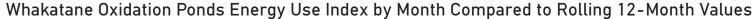
Whakatane Oxidation Ponds Carbon Emissions Compared to Baseline (kg CO2e)







Whakatane Oxidation Ponds







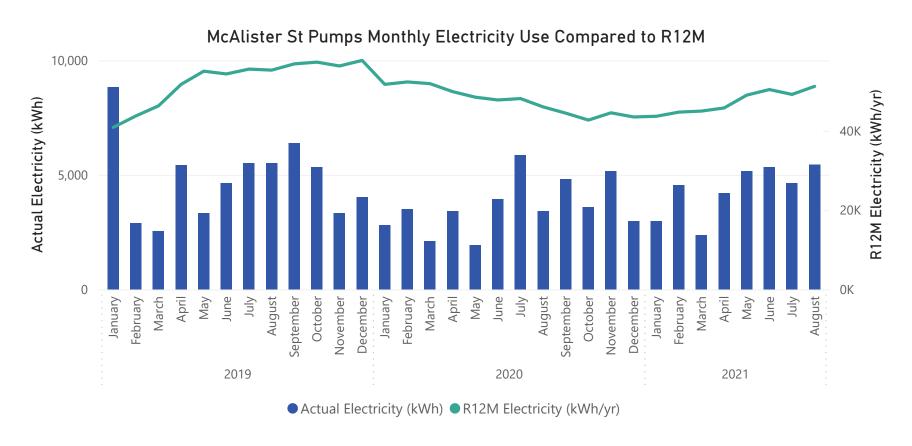
McAlister Street Pump Station

\$1,36 Monthly Energy	•	
\$14,40 R12M Energy C	•	

Comments:

McAlister Street Pump Station is a new addition to monitoring for August 2021. No flow meter is available for this pump station, so only electricity use and cost have been included in monitoring.

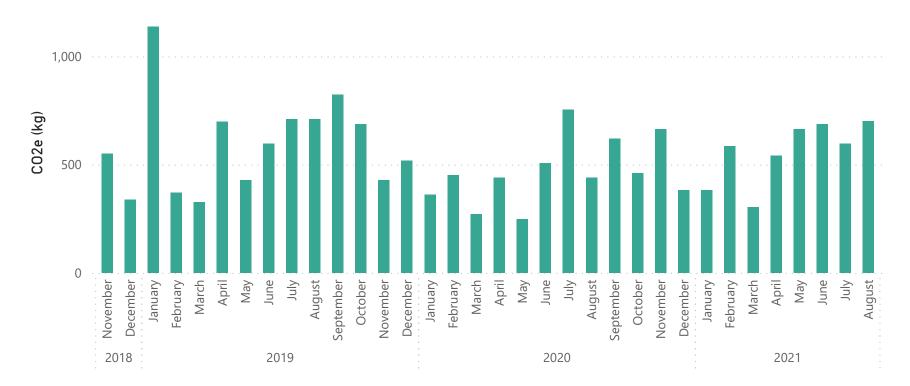
McAlister Street Pump Station is on a NHH account, some months' usage may be estimated by the retailer and captured by a subsequent meter reading.

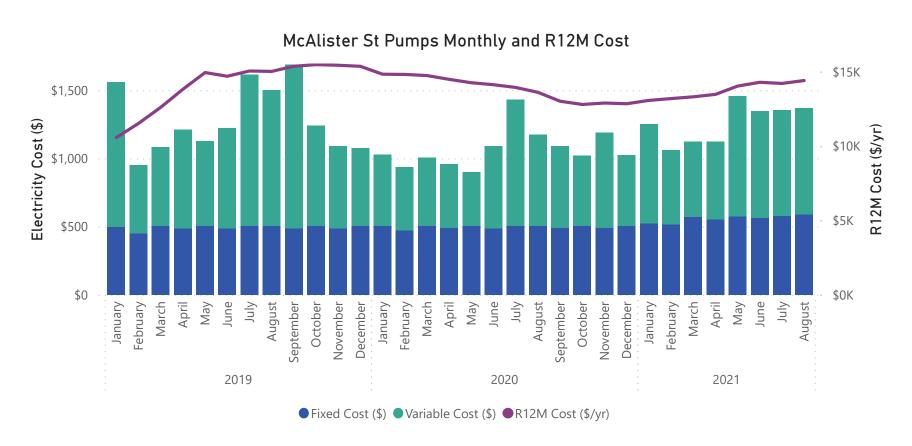




McAlister Street Pump Station

McAlister St Pumps Carbon Emissions (kgCO2e)







Rose Gardens Pump Station

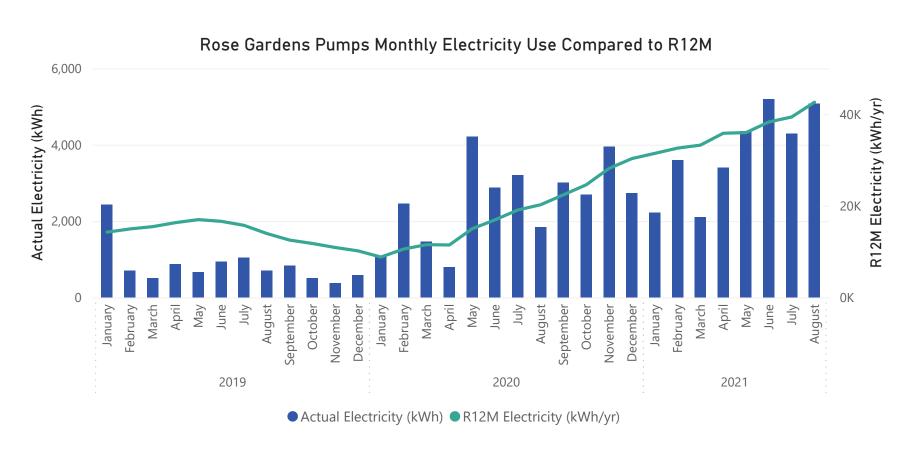
\$927 Monthly Energy Cost (\$)	5,071 Monthly Energy Use (kWh)
\$8,777 R12M Energy Cost (\$/yr)	42,624 R12M Energy Use (kWh/yr)

Comments:

Rose Gardens Pump Station is a new addition to monitoring for August 2021. No flow meter is available for this pump station, so only electricity use and cost have been included in monitoring.

The Rose Gardens Pump Station is on a NHH account, some months' usage may be estimated by the retailer and captured by a subsequent meter reading.

Electricity use increased from January 2020 and has continued to increase through to August 2021.





Rose Gardens Pump Station

Rose Gardens Pumps Carbon Emissions (kgCO2e)

