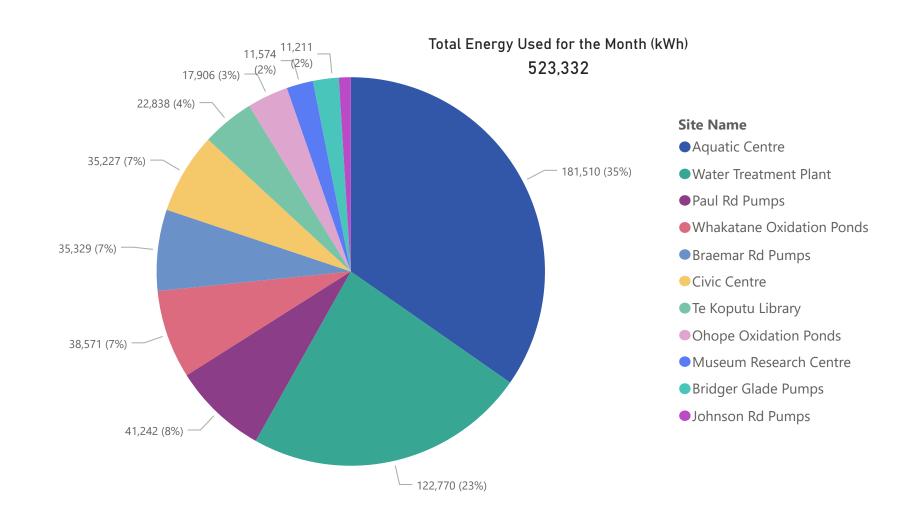


Summary

\$12,818 Monthly Energy Cost Savings	-35,370 Elec. Savings (kWh/mo)	-8% Elec. Savings (%)	-85,124 R12M Electricity Savings (kWh/yr)	45,438 CO2e Savings (kg/mo)
\$47,092 R12M Energy Cost Savings	230,051 Gas. Savings (kWh/mo)	79% Gas. Savings (%)	779,228 R12M Gas Savings (kWh/yr)	123,869 R12M CO2e Savings (kg/yr)

Total Energy (kWh/Month)



Bridger Glade Pumps

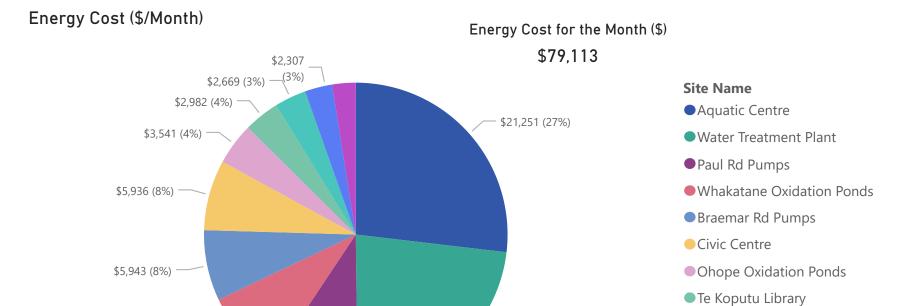
Johnson Rd Pumps

Museum Research Centre



Whakatane District Council

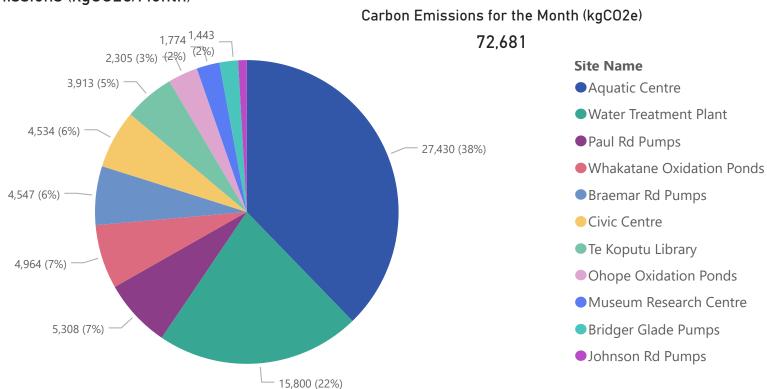
Summary



Carbon Emissions (kgCO2e/Month)

\$6,804 (9%)

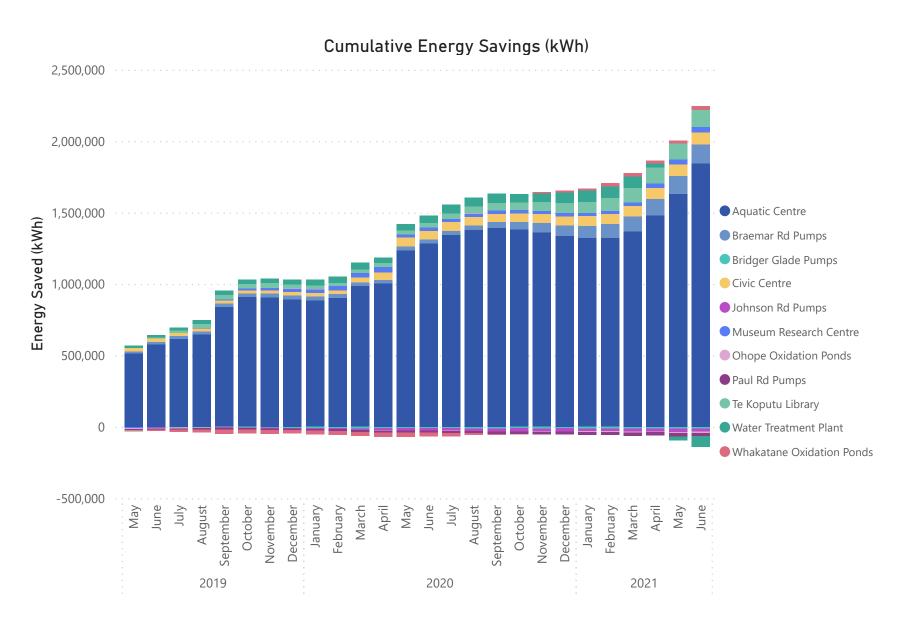
\$7,541 (10%)



\$18,159 (23%)



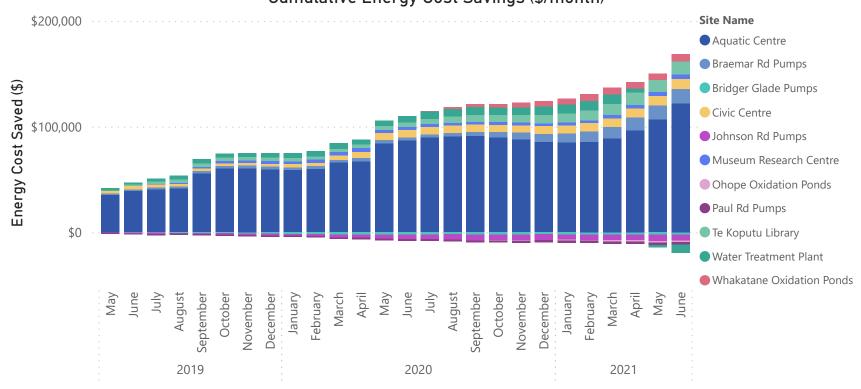
Summary



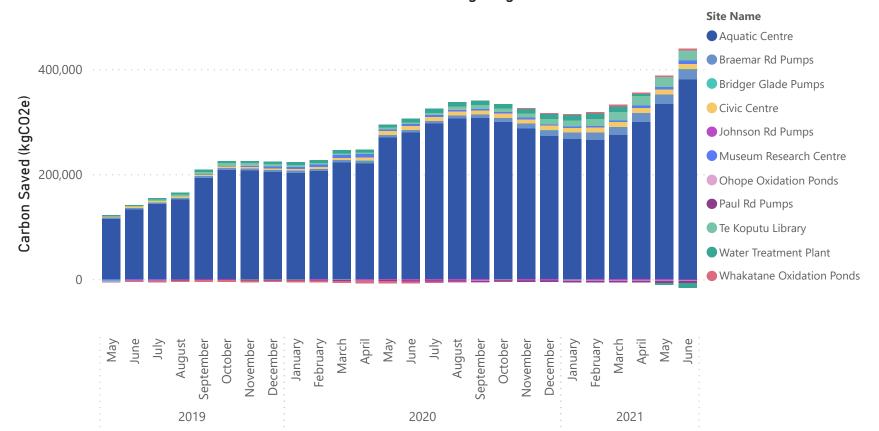


Summary





Cumulative Carbon Savings (kgC02e/month)





Civic Centre

\$151	1,248	3%	19,011	109
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
\$2,086				2,251
R12M Energy Cost Savings				R12M CO2e Savings (kg/yr)

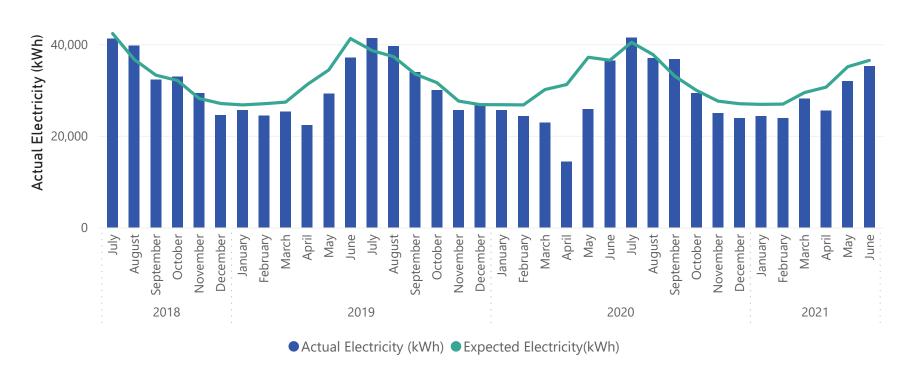
Comments:

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

Compared to June 2020, June 2021 used 3% more electricity, however, last year was slightly cooler.

Rolling 12 month savings decreased from February to May 2021, which is a reflection of 'savings' made during the 2020 lockdowns no longer being included in the 12 month savings period. In June 2021, rolling 12 month savings increased slightly.

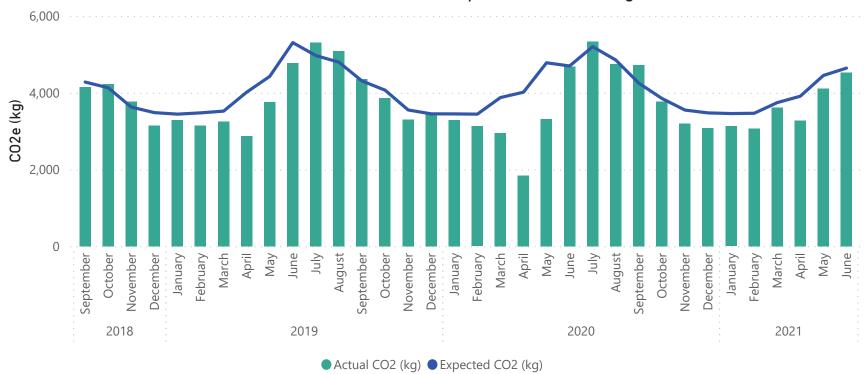
Civic Centre Electricity Use Compared to Baseline (kWh)



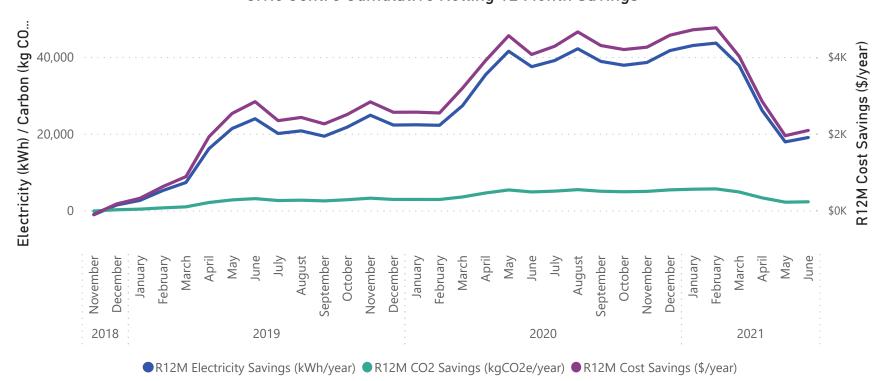


Civic Centre



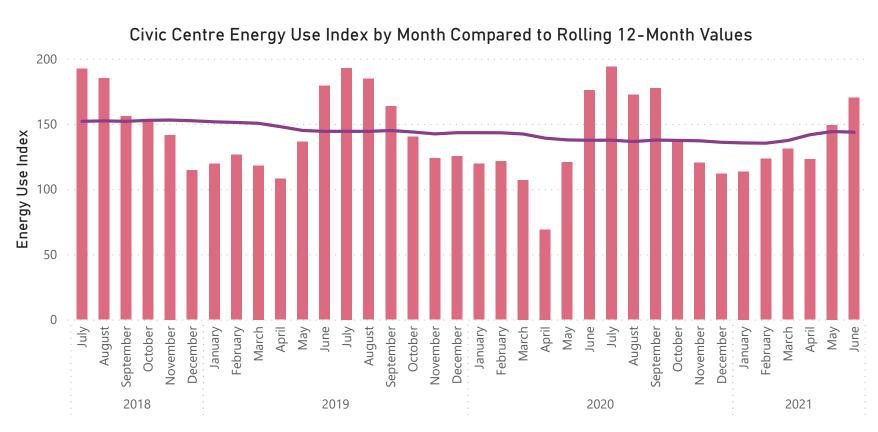


Civic Centre Cumulative Rolling 12 Month Savings





Civic Centre





Aquatic Centre

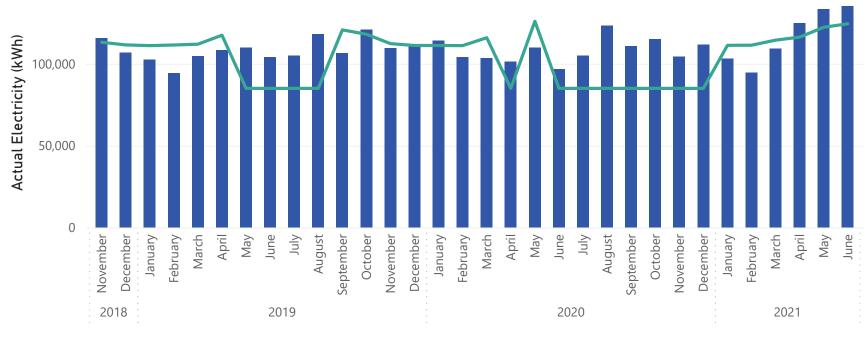
\$14,827 Monthly Energy Cost Savings	-10,819 Elec. Savings (kWh/mo)	- 9% Elec. Savings (%)	-160,665 R12M Electricity Savings (kWh/yr)	47,455 CO2e Savings (kg/mo)
\$34,845 R12M Energy Cost Savings	225,148 Gas. Savings (kWh/mo)	83% Gas. Savings (%)	723,748 R12M Gas Savings (kWh/yr)	101,594 R12M CO2e Savings (kg/yr)

Comments:

The outdoor pool is now open year-round and uses a baseline that reflects this change. The outdoor pool cover's underside is heated using natural gas, which prevents condensation on the underside of the cover.

Compared to June 2020, June 2021 used 40% more electricity and 2.3 times more natural gas. However, the outdoor pool is now open year round and natural gas is used to prevent condensation on the outdoor pool cover. CO2e savings in June 2021 are 63%. CO2e savings were only 38% in June 2020.

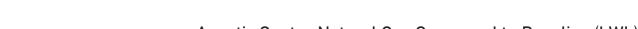


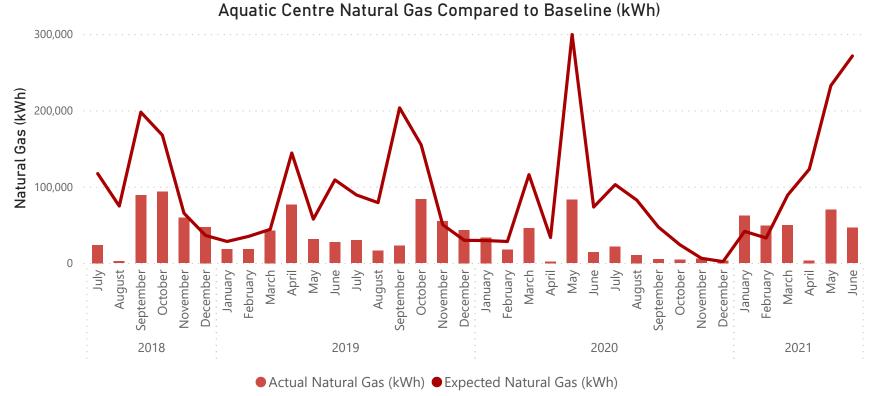


Actual Electricity (kWh)Expected Electricity(kWh)

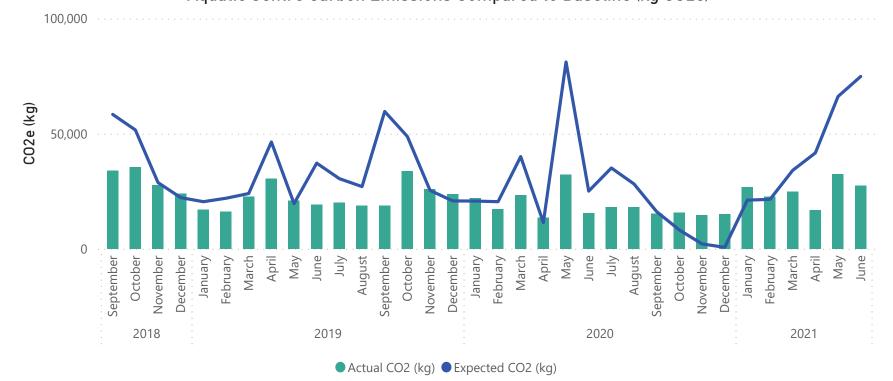


Aquatic Centre



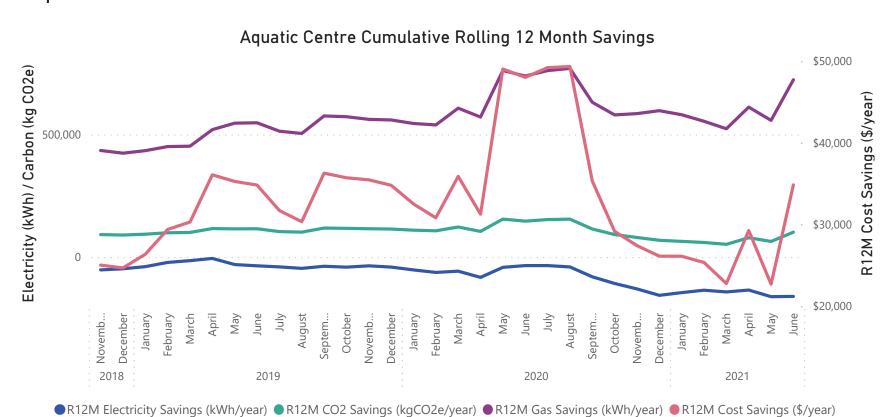


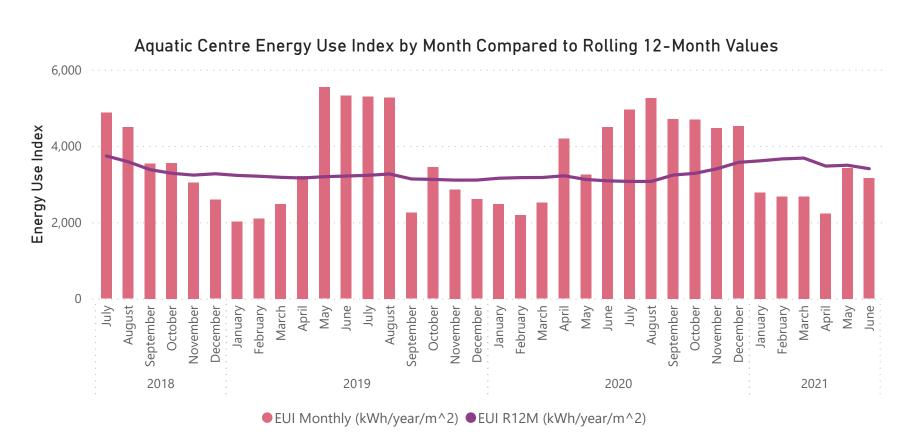
Aquatic Centre Carbon Emissions Compared to Baseline (kg CO2e)





Aquatic Centre







Te Koputu Library

\$577 Monthly Energy Cost Savings	4,041 Elec. Savings (kWh/mo)	26% Elec. Savings (%)	40,109 R12M Electricity Savings (kWh/yr)	820 CO2e Savings (kg/mo)
\$7,991 R12M Energy Cost Savings	1,362 Gas. Savings (kWh/mo)	11% Gas. Savings (%)	48,734 R12M Gas Savings (kWh/yr)	15,781 R12M CO2e Savings (kg/yr)

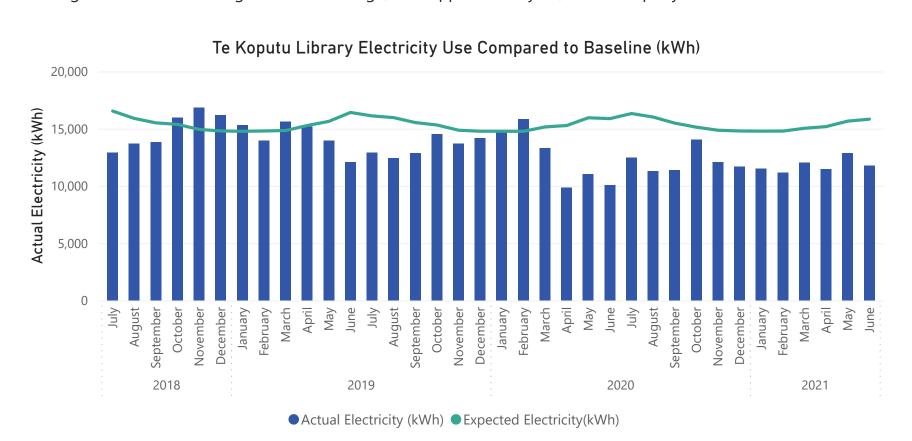
Comments:

Electricity use has been less than baseline since March 2020. Compared to June 2020, the library's electricity use in June 2021 is 17% higher.

Natural gas was previously switched off in February 2021. Natural gas was turned back on in May 2021. Natural gas used in June 2021 was 27% less than June 2020.

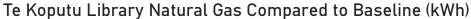
The monthly EUI for the library has increased from previous months due to natural gas consumption, however, less energy was used compared to June of last year.

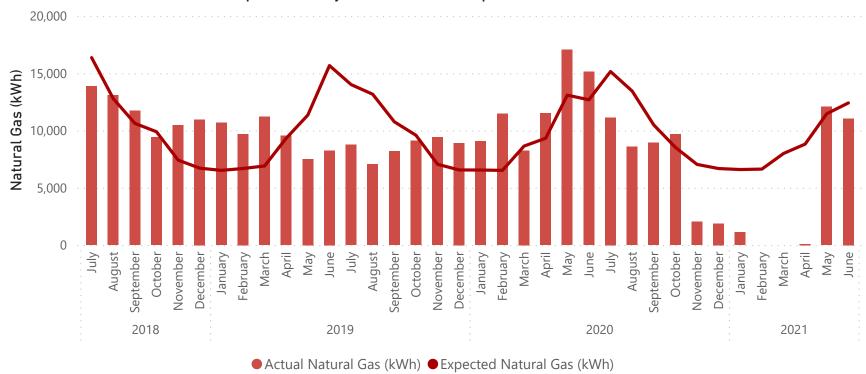
Rolling 12 month cost savings are at a new high, with approximately \$8,000 saved per year.



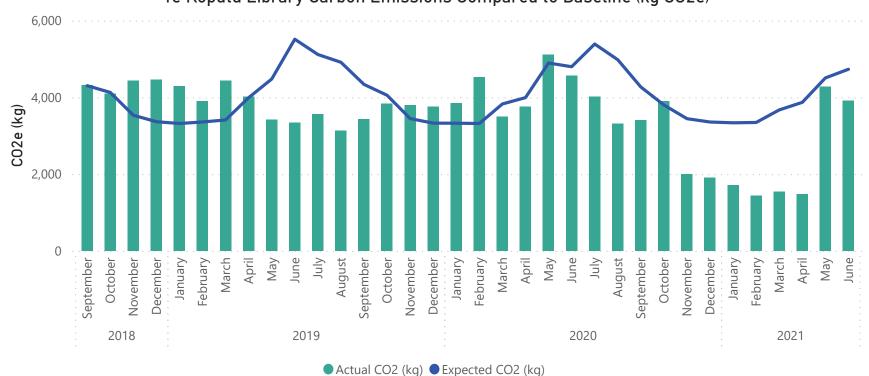


Te Koputu Library





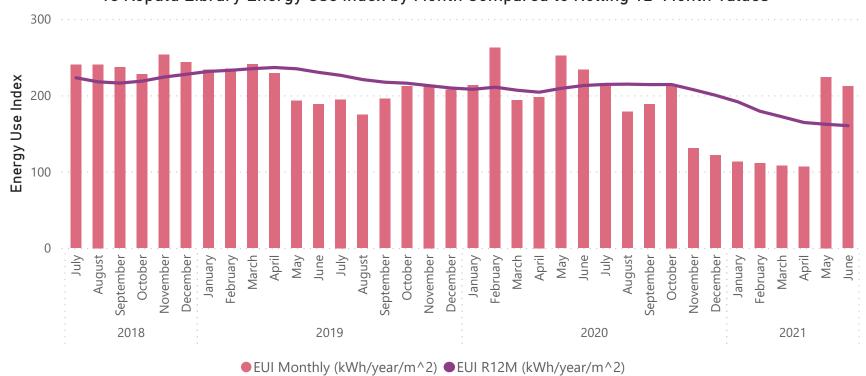
Te Koputu Library Carbon Emissions Compared to Baseline (kg CO2e)



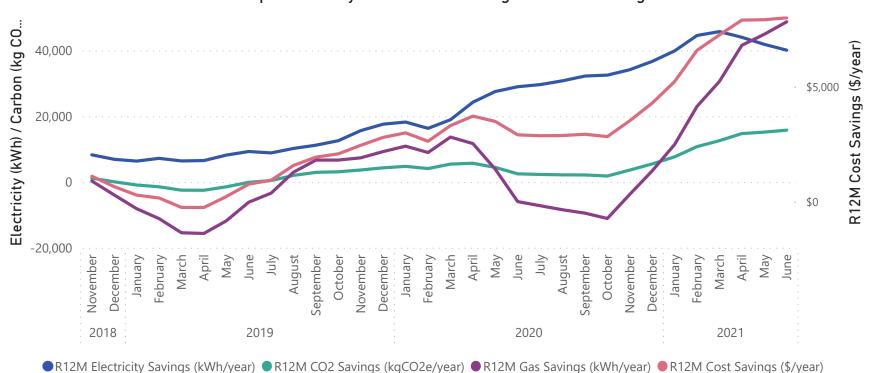


Te Koputu Library











Museum and Research Centre

\$608	2,953	26%	9,978	1,148
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
\$1,616 R12M Energy Cost Savings	3,542 Gas. Savings (kWh/mo)	52% Gas. Savings (%)	6,746 R12M Gas Savings (kWh/yr)	2,747 R12M CO2e Savings (kg/yr)

Comments:

Electricity use at the Museum and Research Centre is 26% below baseline in June 2021 and compared to June 2020, electricity use has decreased by 5%.

The Museum and Research Centre achieved a savings of 52% below baseline for natural gas.

Rolling 12 month savings have increased this month.

Museum Research Centre Electricity Use Compared to Baseline (kWh)

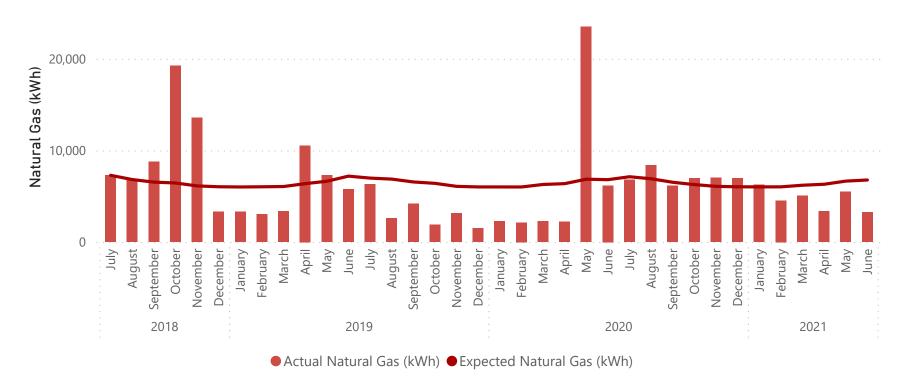


● Actual Electricity (kWh) ■ Expected Electricity(kWh)

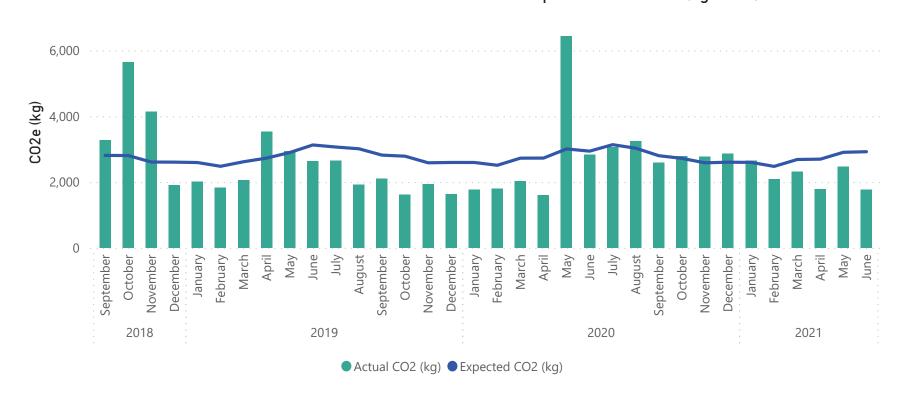


Museum and Research Centre

Museum Research Centre Natural Gas Compared to Baseline (kWh)

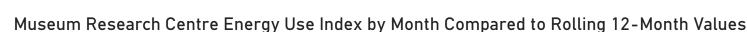


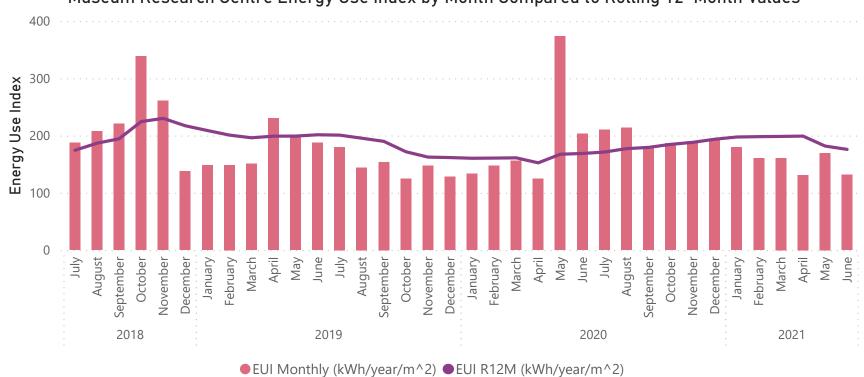
Museum Research Centre Carbon Emissions Compared to Baseline (kg CO2e)

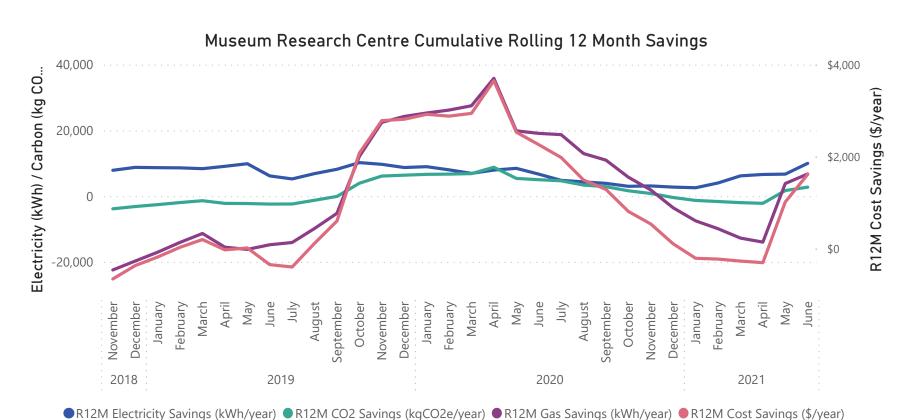




Museum and Research Centre







2021



Whakatane District Council

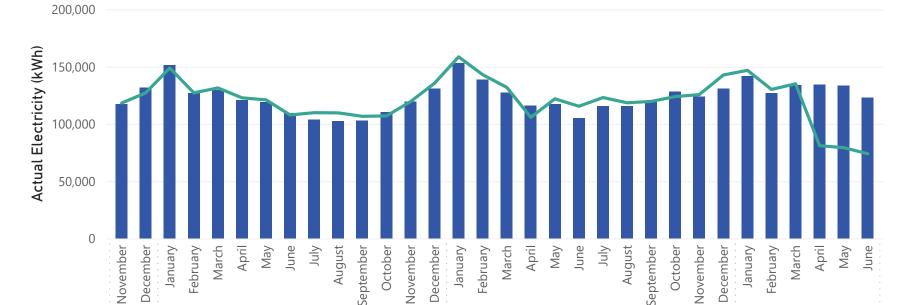
Water Treatment Plant

-\$5,629	-48,870	-66%	-126,156	-6,290
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
-\$13,800				-16,236
R12M Energy Cost Savings				R12M CO2e Savings (kg/yr)

Comments:

2018

Decreased water demand may be related to water metering errors. Pumped water was approximately 7400 cubic meters per day in until 4/04/21 when it dropped to approximately 260 for three days over the Easter weekend. After the Easter weekend, pumped water was approximately 4000 cubic meters per day (46% less than previous). Electricity use was relatively steady, using approximately 4,500 kWh per day, irrespective of the water pumped each day. It would be useful to understand if there has been any maintenance, or operational changes that have occurred around Easter. This trend has continued in June 2021.



Water Treatment Plant Electricity Use Compared to Baseline (kWh)

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

2020

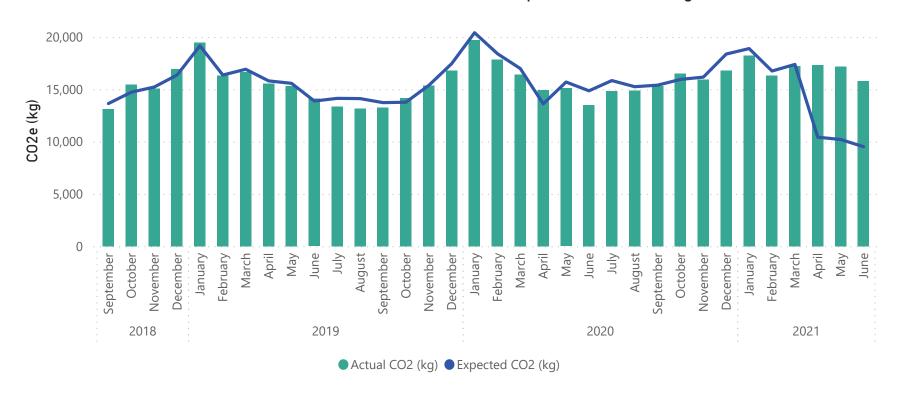
Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

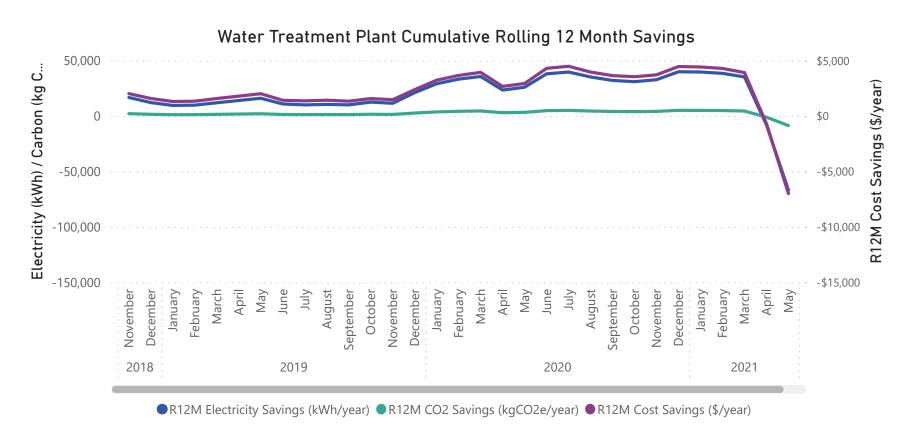
2019



Water Treatment Plant

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

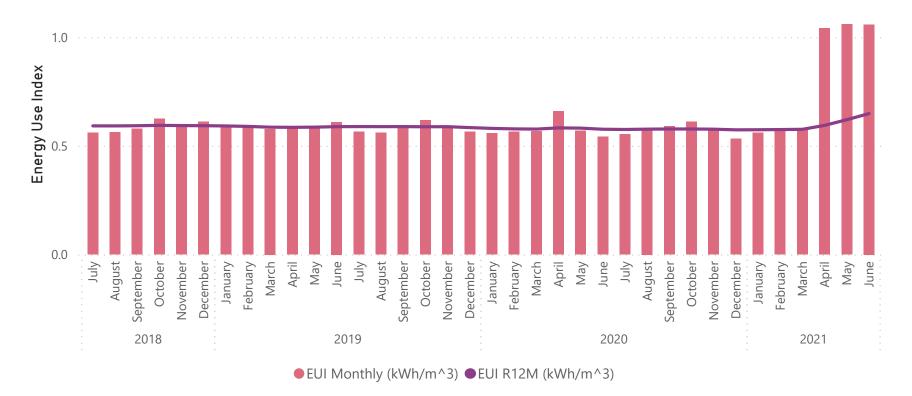






Water Treatment Plant

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





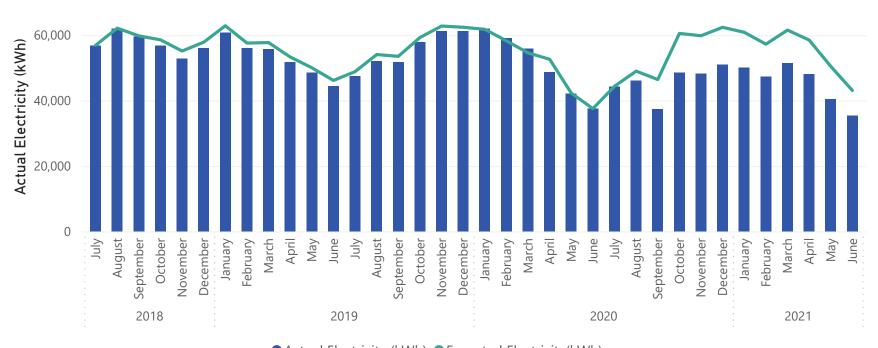
Braemar Road Pump Station

\$897	7,752	18%	106,086	1,124
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
¢11 217				14,305
\$11,217 R12M Energy Cost Savings				R12M CO2e Savings (kg/yr)

Comments:

Rolling 12 month savings have set a new record, with savings of \$11,200 per year, 106,000 kWh per year, and 14,300 kgCO2e per year, thanks to the new high efficiency pumps and motors.

Braemar Rd Pumps Electricity Use Compared to Baseline (kWh)

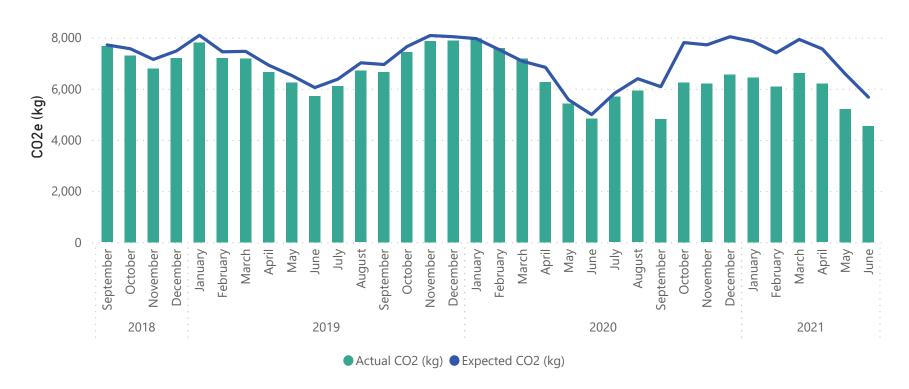


● Actual Electricity (kWh) ■ Expected Electricity(kWh)

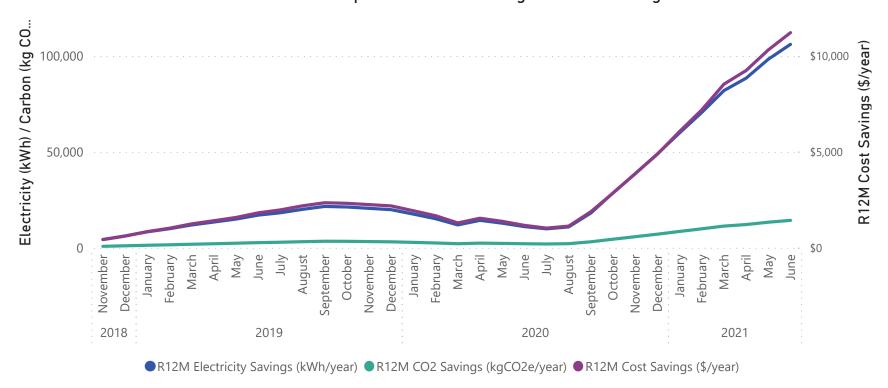


Braemar Road Pump Station

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

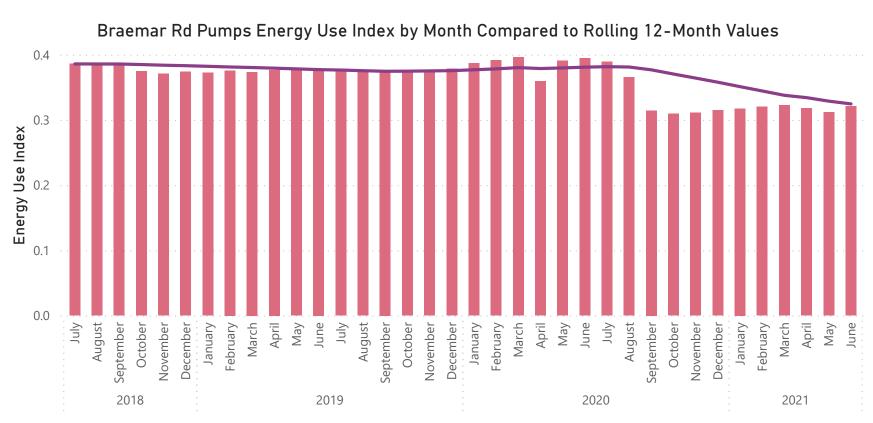


Braemar Rd Pumps Cumulative Rolling 12 Month Savings





Braemar Road Pump Station





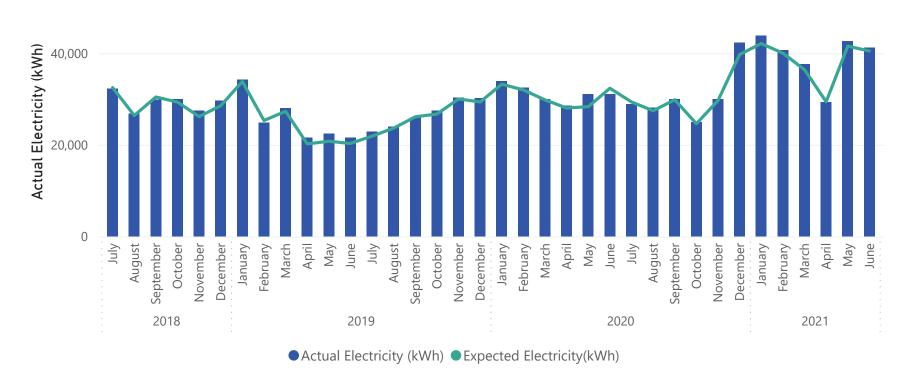
Paul Road Pump Station

-\$87	-750	-2%	-8,917	-96
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
-\$927 R12M Energy Cost Savings				-1,139 R12M CO2e Savings (kg/yr)

Comments:

Although demand was higher for Paul Road pump station this month, on an EUI basis, the pumps are still operating consistently at a rate of approx 0.66 kWh per cubic meter.

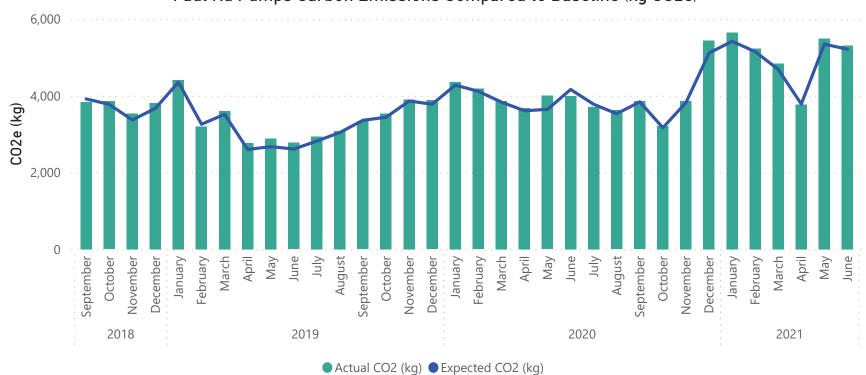
Paul Rd Pumps Electricity Use Compared to Baseline (kWh)

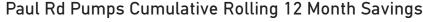


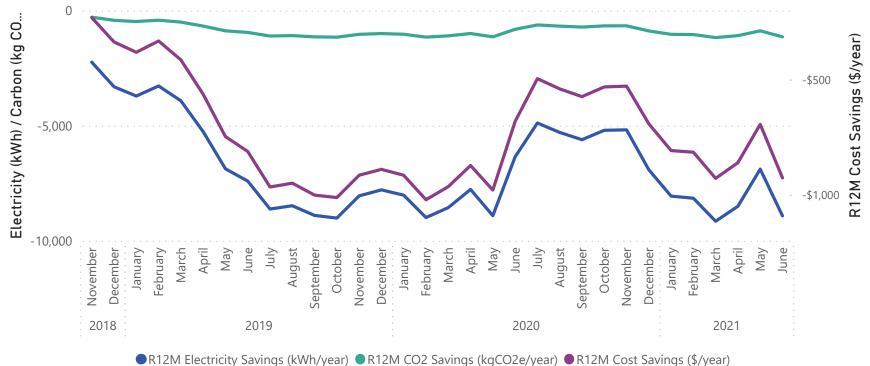


Paul Road Pump Station











Paul Road Pump Station







Johnson Road Pump Station

\$387	1,753	25%	-4,253	226
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
-\$928				-540
R12M Energy Cost Savings				R12M CO2e Savings (kg/yr)

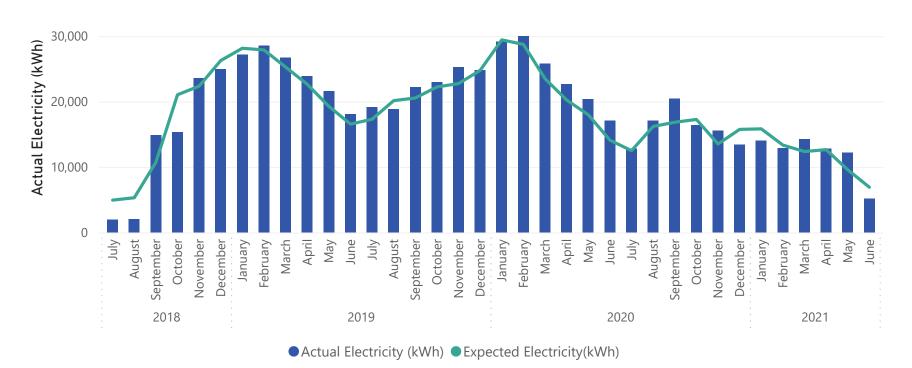
Comments:

Electricity use was 28% more than baseline at Johnson Rd in May 2021 and was 25% less than baseline in June 2021. This is likely due to when the electricity meter was read.

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 and June 2021, Johnson Road Pump Station's EUI has increased by approximately 60% compared to previous 12 months. The rolling 12-month EUI in December 2020 was 0.61 kWh/m³. The EUI for May and June 2021 averages 1.08 kWh/m³

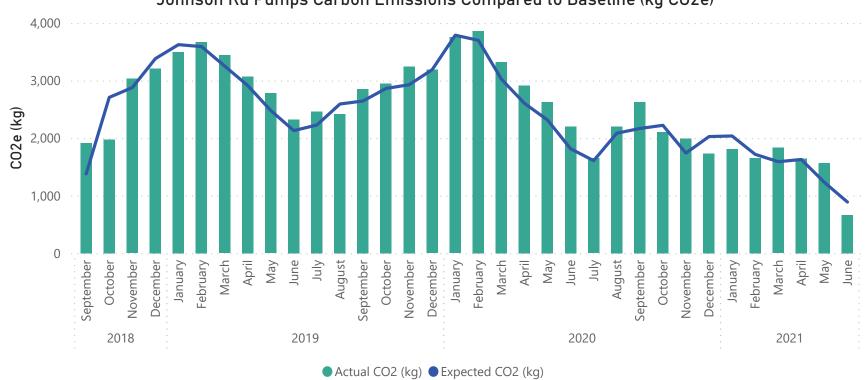
Johnson Rd Pumps Electricity Use Compared to Baseline (kWh)

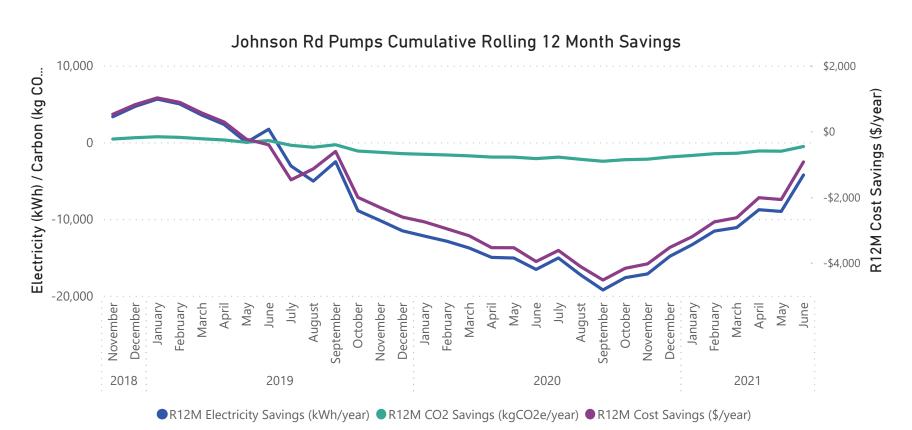




Johnson Road Pump Station



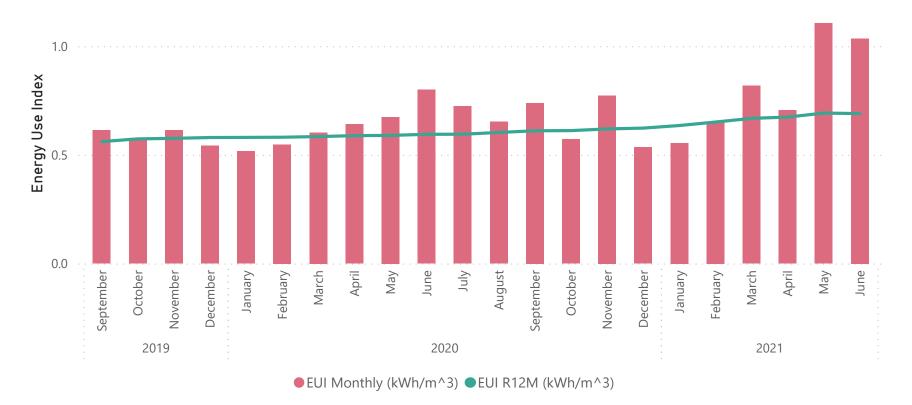






Johnson Road Pump Station

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





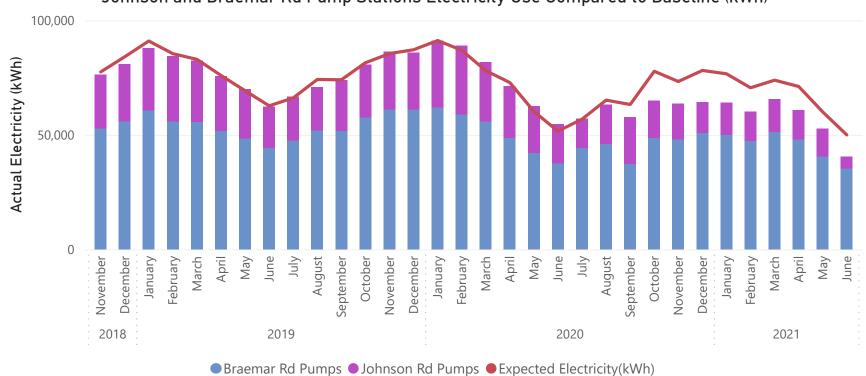
Johnson and Braemar Rd Pump Stations

	\$1,284	9,505	19%	101,833	1,350
ı	Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
	\$10,289				13,765
	R12M Energy Cost Savings				R12M CO2e Savings (kg/yr)

Comments:

It is clear from the combined monitoring how the new, more efficient pumps (installed September 2020) at Braemar Rd. 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, the Braemar pumps are using approximately half as much energy to pump the same amount of water, on a kWh per cubic meter basis when compared to Johnson Road.

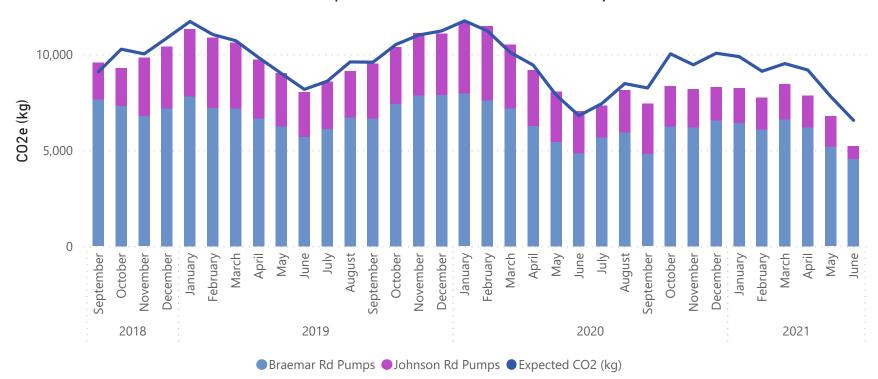
Johnson and Braemar Rd Pump Stations Electricity Use Compared to Baseline (kWh)



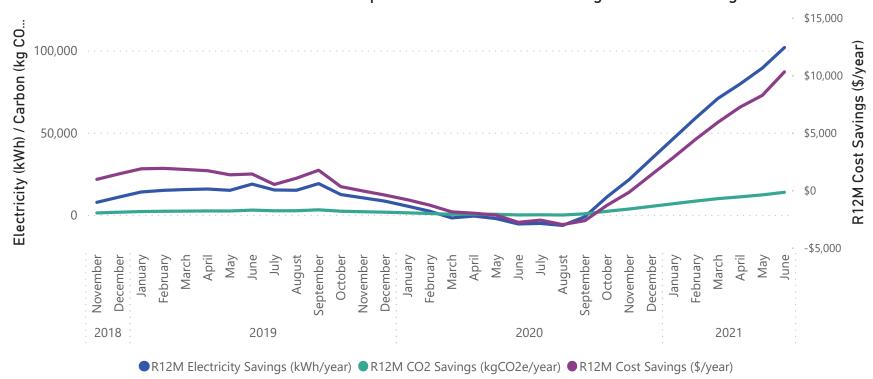


Johnson and Braemar Rd Pump Stations

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



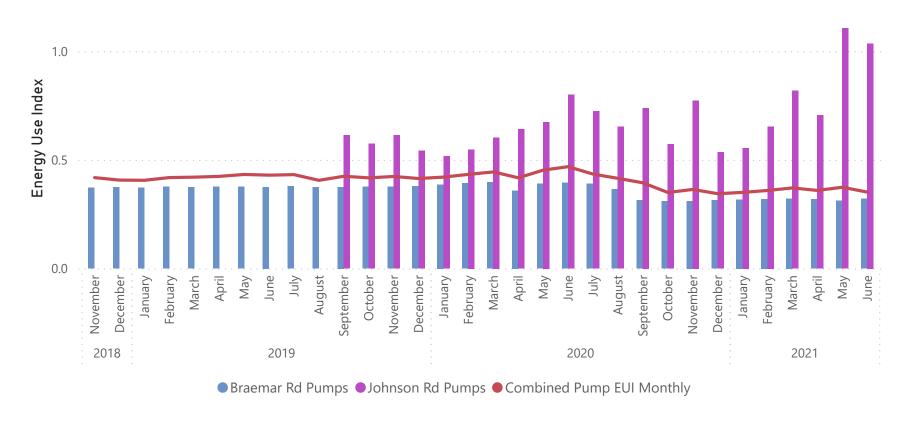






Johnson and Braemar Rd Pump Stations

Johnson and Braemar Rd Pump Stations Energy Use Index by Month



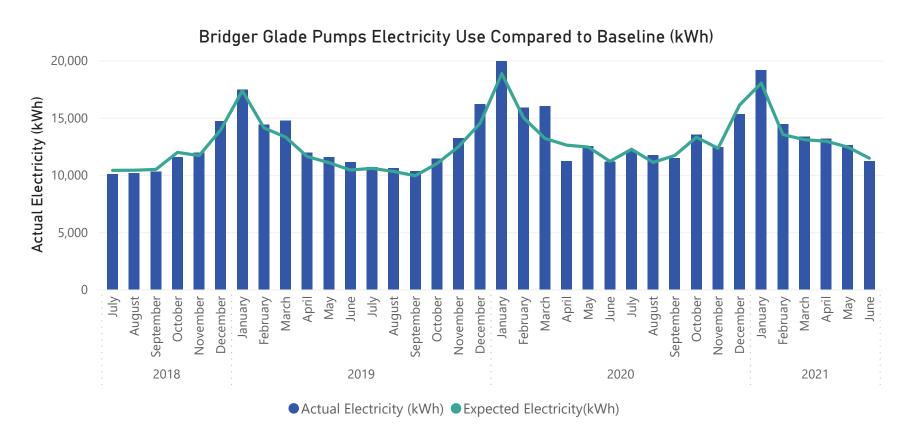


Bridger Glade Pump Station

\$45	246	2%	-2,206	32
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
#20 /				207
-\$396 R12M Energy Cost Savings				-284 R12M CO2e Savings (kg/yr)
3,				<i>3 x 3</i> , <i>y</i> ,

Comments:

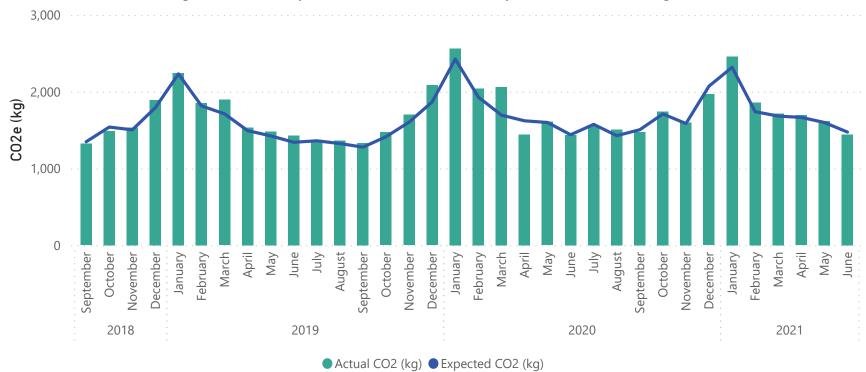
Electricity use was 2% less than baseline for the month of June 2021 at Bridger Glade pump station. In June 2021 the volume of water pumped was 2% higher and electricity was similar compared to to June 2020.



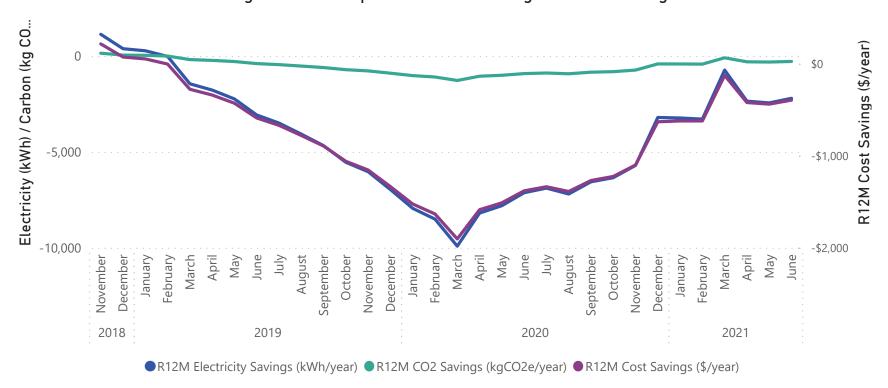


Bridger Glade Pump Station





Bridger Glade Pumps Cumulative Rolling 12 Month Savings





Bridger Glade Pump Station







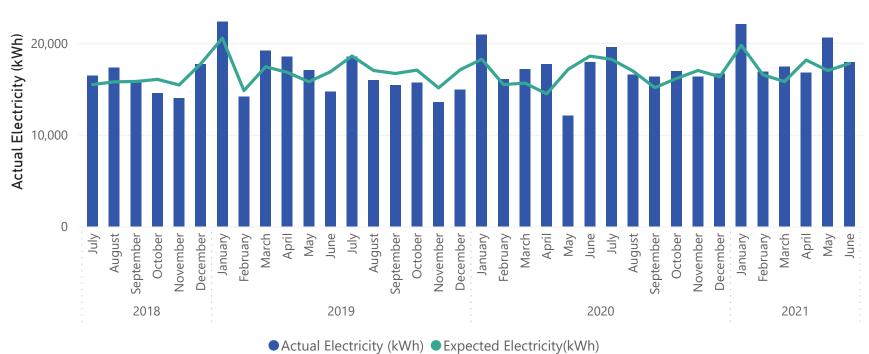
Ohope Oxidation Ponds

-\$20	-113	-1%	-9,210	-15
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
* 4 (00				4.405
-\$1,623 R12M Energy Cost Savings				- 1,185 R12M CO2e Savings (kg/yr)
3,				3 (3.7)

Comments:

Comparing June 2021 to June 2020, demand has decreased by 10% and electricity use is about the same. This may be partly due to when the electricity meter was read as Ohope Oxidation Ponds are a non-half hourly account.

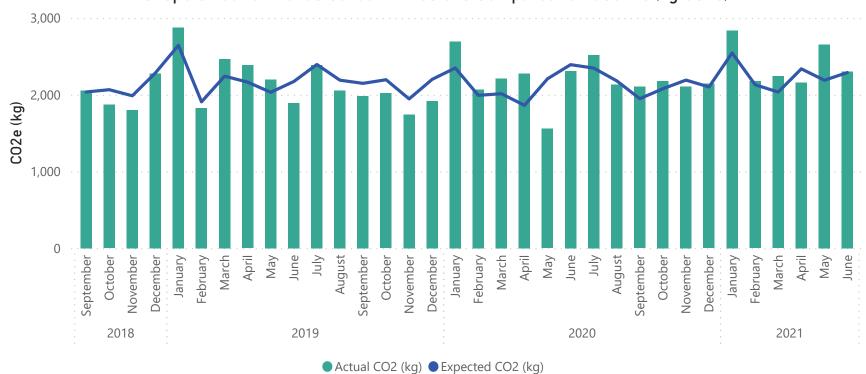
Ohope Oxidation Ponds Electricity Use Compared to Baseline (kWh)

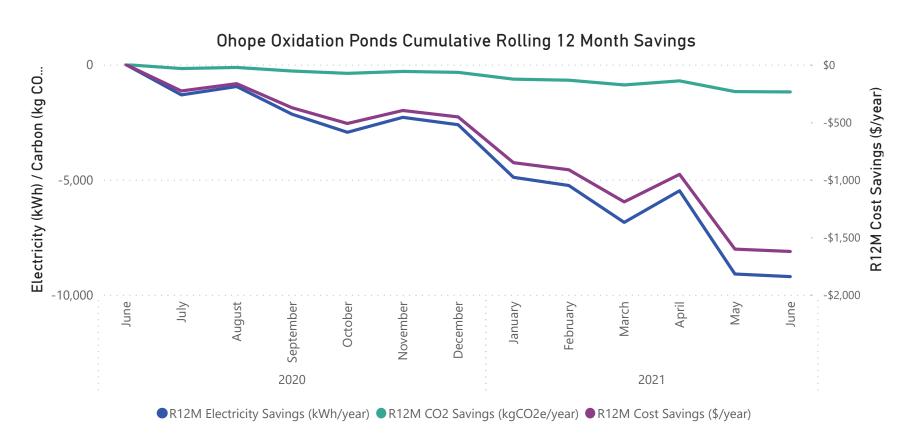




Ohope Oxidation Ponds



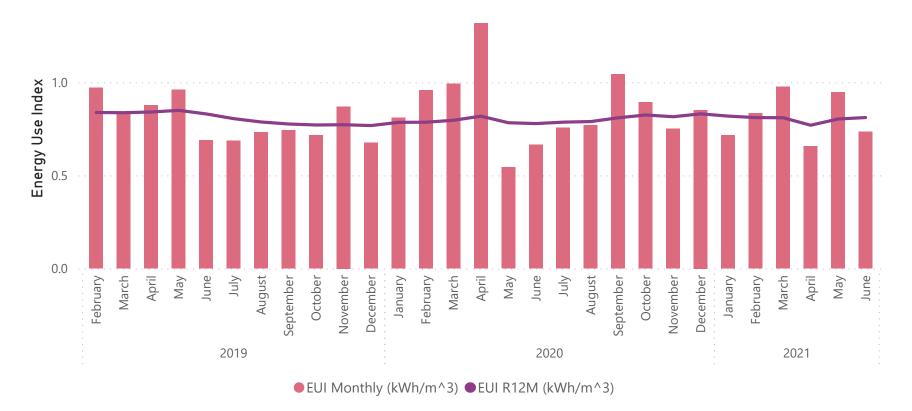






Ohope Oxidation Ponds

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





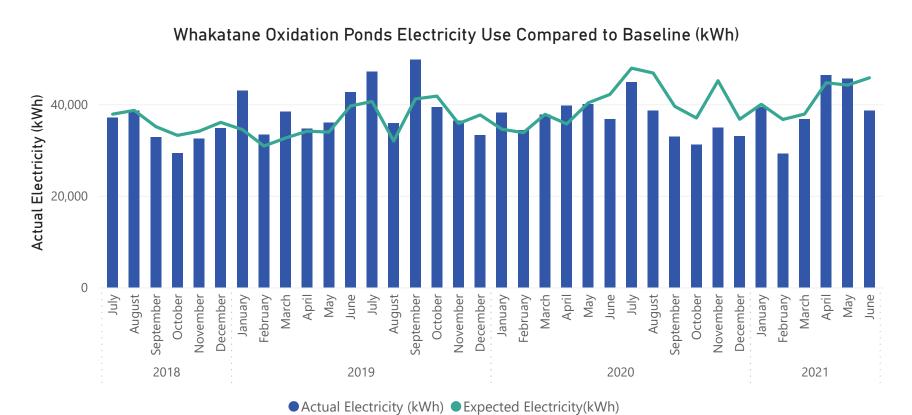
Whakatane Oxidation Ponds

\$1,064	7,188	16%	51,098	925
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
\$7,010				6,576
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).

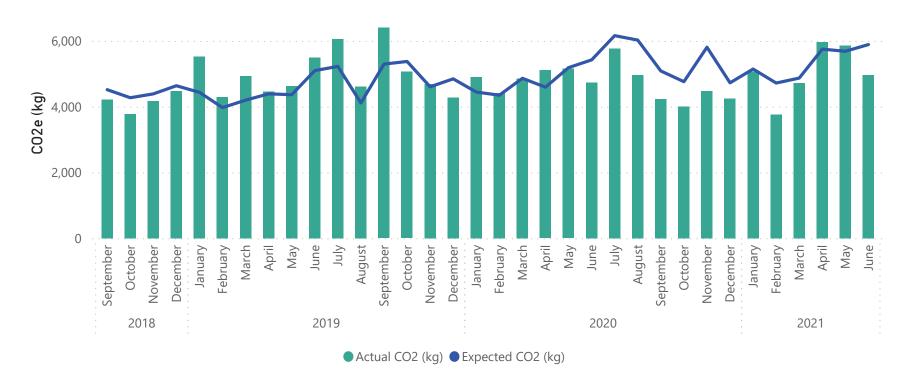
In June 2021, the oxidation ponds used 16% less electricity compared to baseline. Rolling 12 month EUI has been steadily decreasing, which is good.

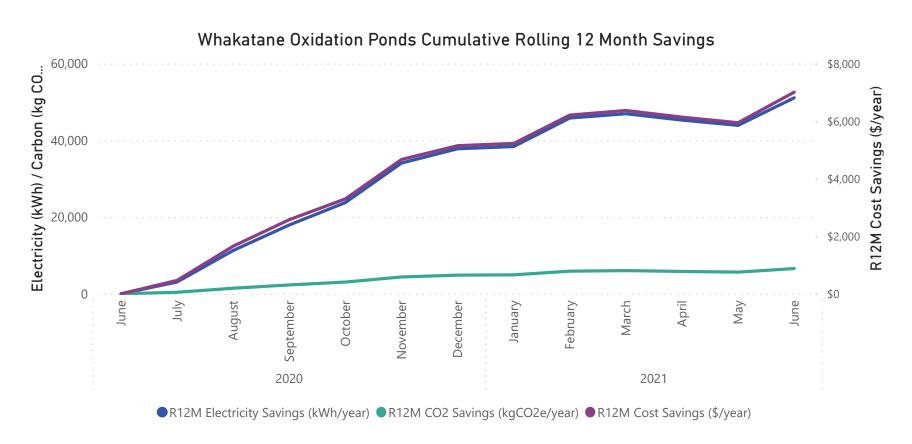




Whakatane Oxidation Ponds

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







Whakatane Oxidation Ponds

