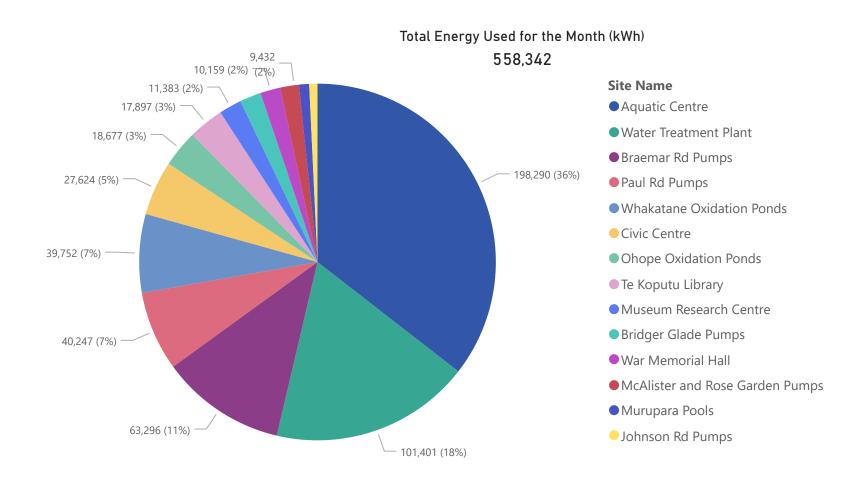


Summary

-\$407 Monthly Energy Cost Savings	20,500 Elec. Savings (kWh/mo)	4% Elec. Savings (%)	583,628 R12M Electricity Savings (kWh/yr)	-7,988 CO2e Savings (kg/mo)
\$92,735 R12M Energy Cost Savings	-48,153 Gas. Savings (kWh/mo)	-116% Gas. Savings (%)	-206,263 R12M Gas Savings (kWh/yr)	6,839 R12M CO2e Savings (kg/yr)

Total Energy (kWh/Month)



Ohope Oxidation Ponds

Museum Research Centre

McAlister and Rose Garden Pumps

War Memorial Hall

Murupara Pools

Johnson Rd Pumps

Bridger Glade Pumps



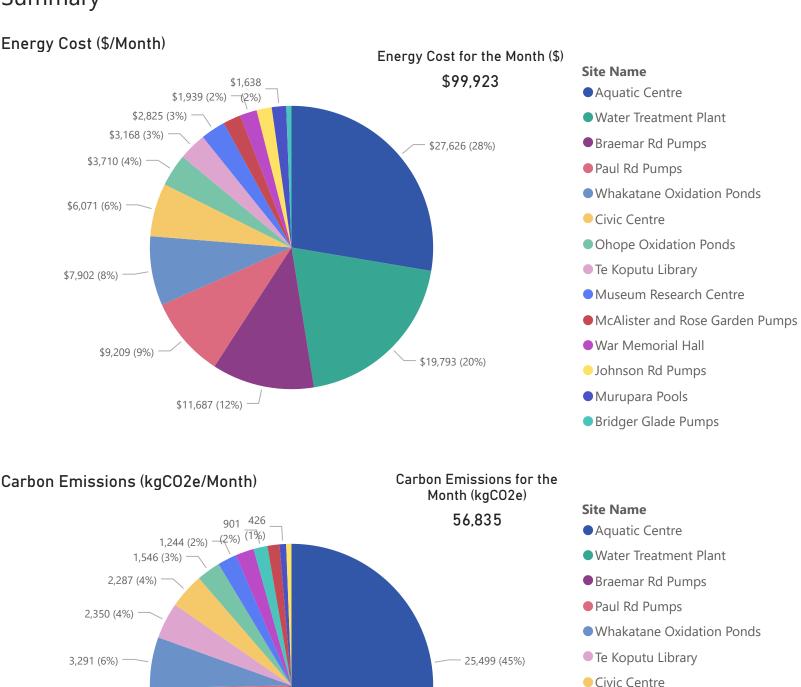
Whakatane District Council

Summary

3,332 (6%)

5,241 (9%)

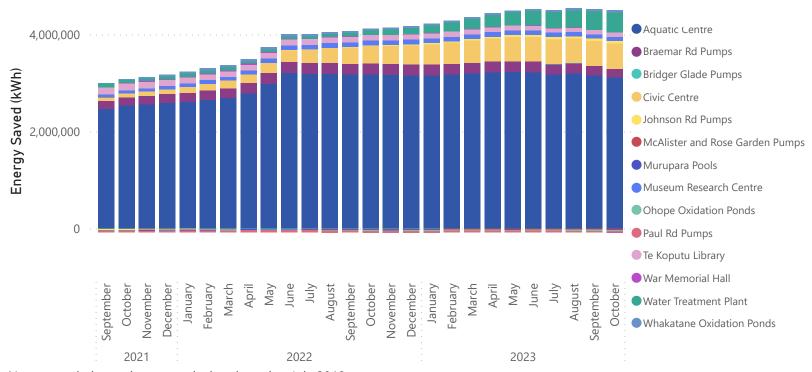
8,396 (15%)





Summary

Cumulative Energy Savings (kWh)

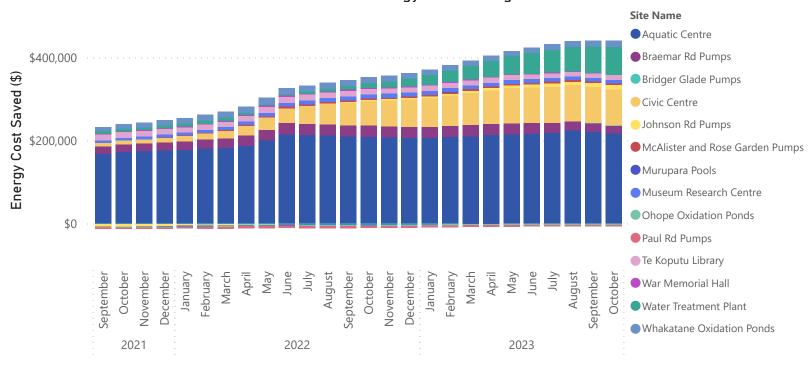


Note, cumulative savings are calculated starting July 2018

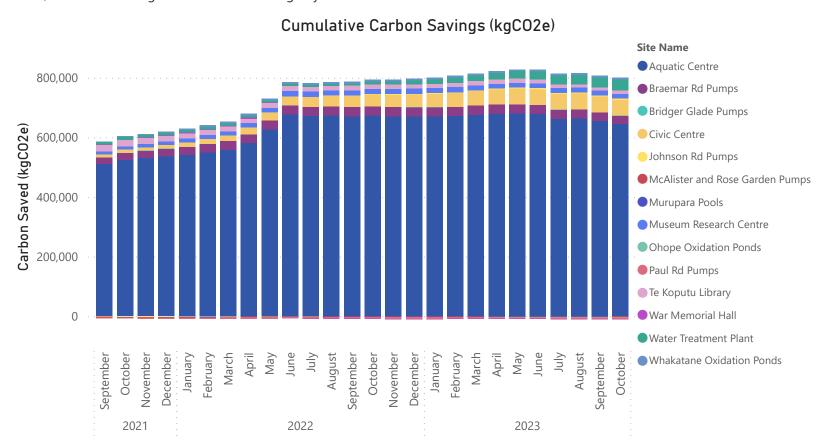


Summary





Note, cumulative savings are calculated starting July 2018





Civic Centre

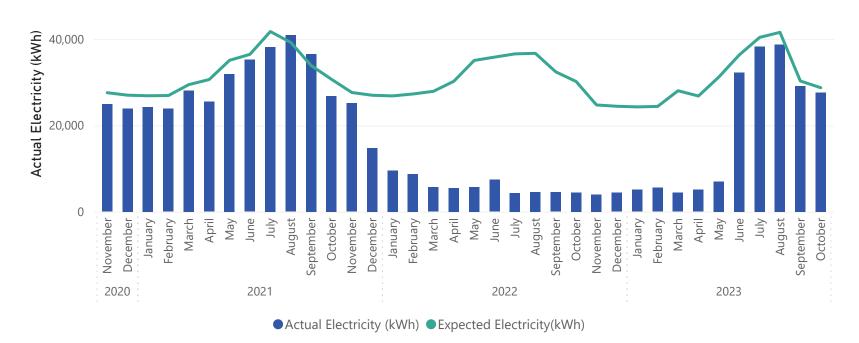
\$174	1,111	4%	159,766	92
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
\$27,850				13,229
R12M Energy Cost Savings				R12M CO2e Savings (kg/yr)

Comments:

The Civic Centre has returned to normal operation after ongoing refurbishments. It can be seen from TOU electricity afterhours reduced significantly from 11 October: afterhours electricity averaged 39 kW from 1-10 October, and 19 kW from 11-31 October. Compared to September, both peak demand and afterhours electricity have decreased in October, which is good. Peak demand has decreased by 5 kW on average. Overall, electricity use is less than expected.

Electric vehicle charging stations have been in use from March 2021, non-routine adjustments are on-going to account for the increased electricity use.

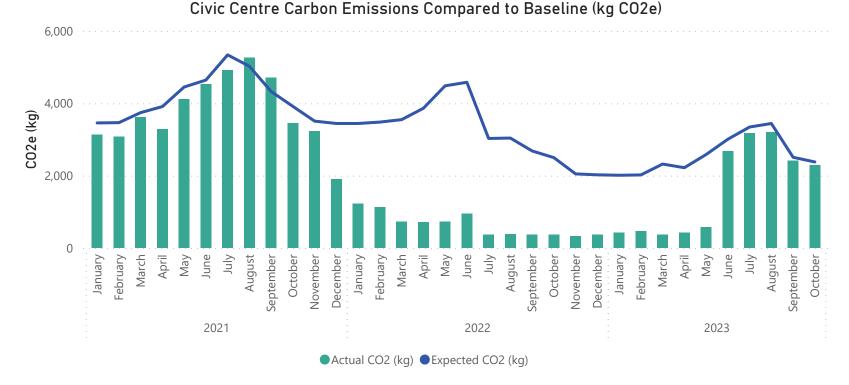
Civic Centre Electricity Use Compared to Baseline (kWh)





Civic Centre





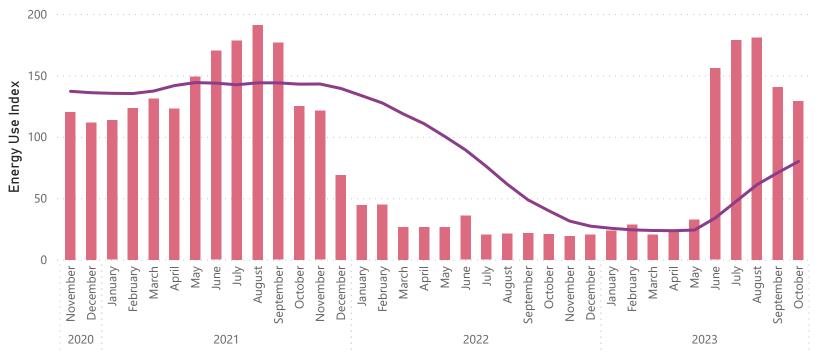






Civic Centre

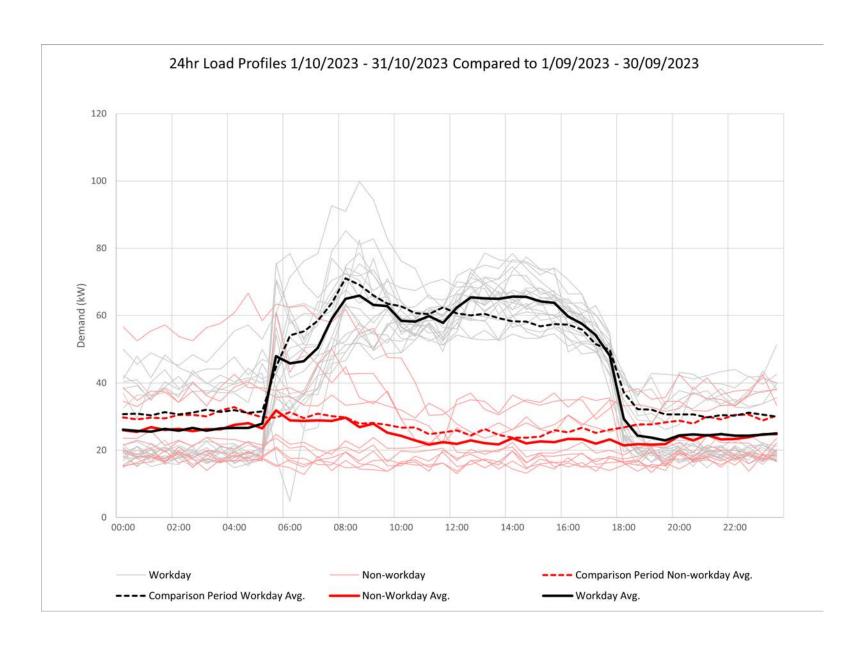




●EUI Monthly (kWh/year/m^2) ●EUI R12M (kWh/year/m^2)



Civic Centre





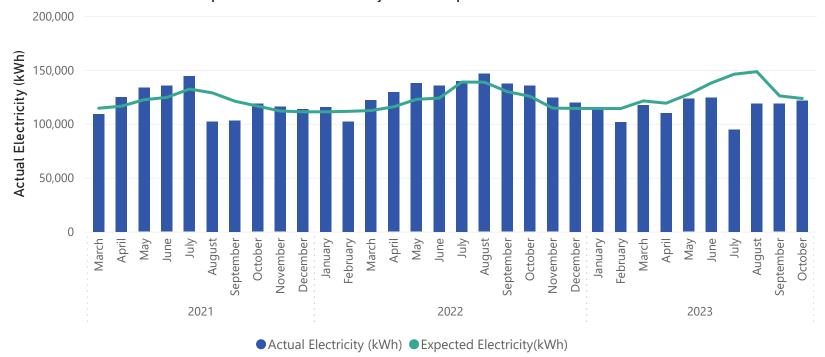
Aquatic Centre

-\$4,079 Monthly Energy Cost Savings	1,954 Elec. Savings (kWh/mo)	2% Elec. Savings (%)	117,337 R12M Electricity Savings (kWh/yr)	-10,207 CO2e Savings (kg/mo)
\$7,402 R12M Energy Cost Savings	- 51,551 Gas. Savings (kWh/mo)	-205% Gas. Savings (%)	-187,729 R12M Gas Savings (kWh/yr)	-28,042 R12M CO2e Savings (kg/yr)

Comments:

Electricity use was less than baseline in October 2023, gas was three times more than expected. The Aquatic Centre has been using the gas boilers as a temporary solution while heat pump and plant equipment are being repaired and redeveloped. The EUI for the month is higher than average over the past 12 months, as would be expected with more use of the gas boilers, heat pumps use energy more efficiently.

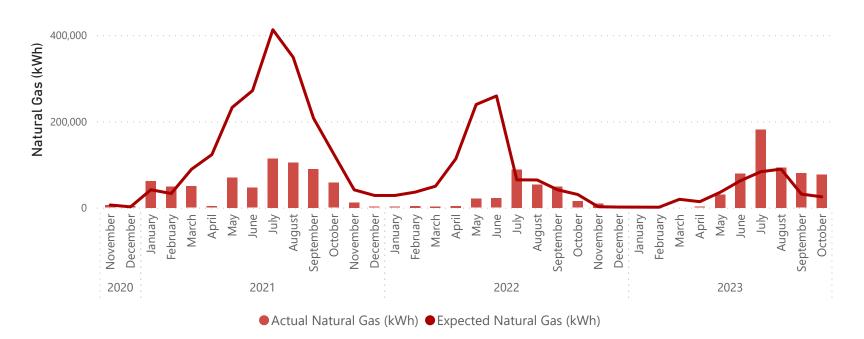
Aquatic Centre Electricity Use Compared to Baseline (kWh)



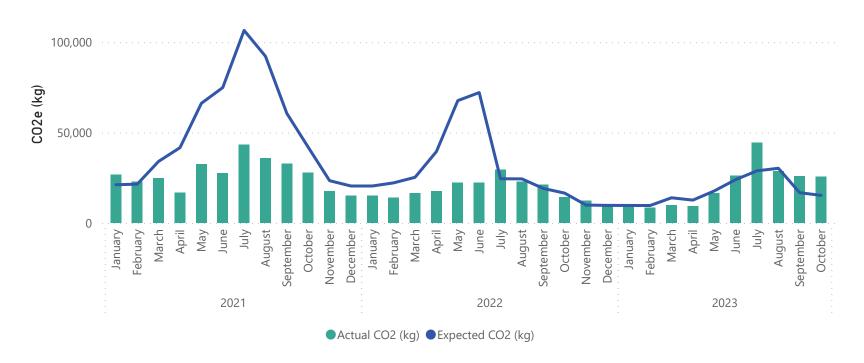


Aquatic Centre

Aquatic Centre Natural Gas Compared to Baseline (kWh)

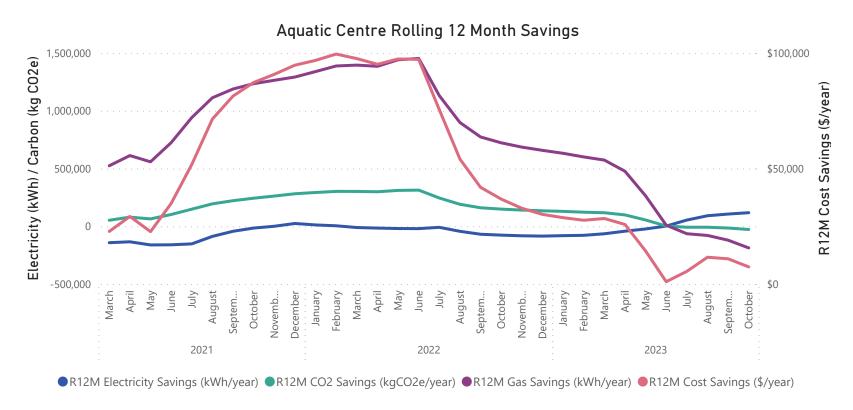


Aquatic Centre Carbon Emissions Compared to Baseline (kg CO2e)

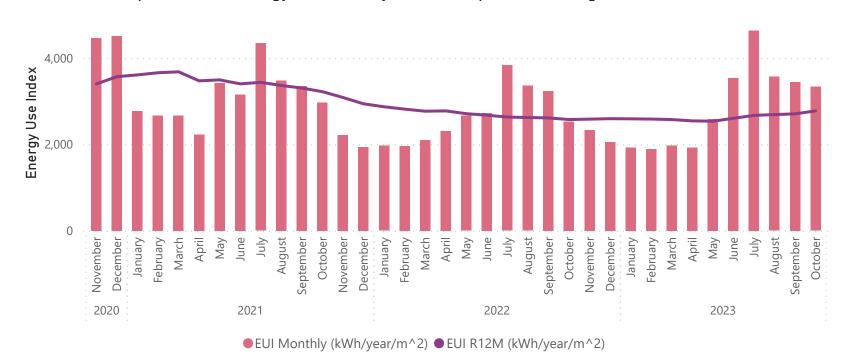




Aquatic Centre



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





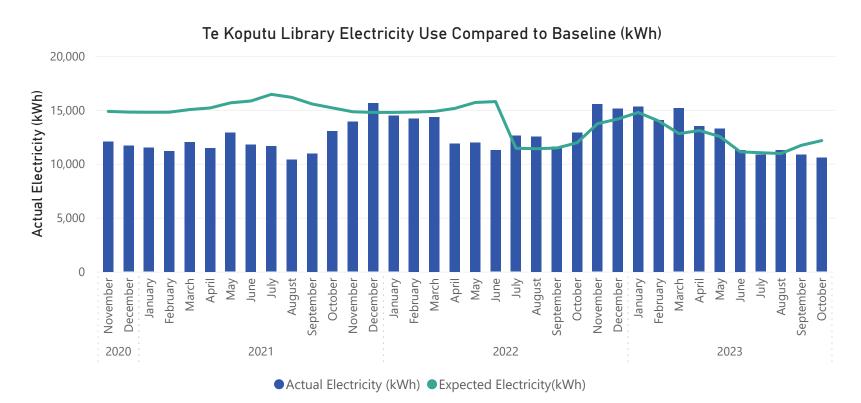
Te Koputu Library

\$551 Monthly Energy Cost Savings	1,597 Elec. Savings (kWh/mo)	13% Elec. Savings (%)	-4,740 R12M Electricity Savings (kWh/yr)	837 CO2e Savings (kg/mo)
-\$1,950 R12M Energy Cost Savings	3,504 Gas. Savings (kWh/mo)	32% Gas. Savings (%)	-13,593 R12M Gas Savings (kWh/yr)	-3,126 R12M CO2e Savings (kg/yr)

Comments:

Electricity and natural gas use was significantly less than expected for the month, an excellent result. Both natural gas and electricity use has declined for the past three months.

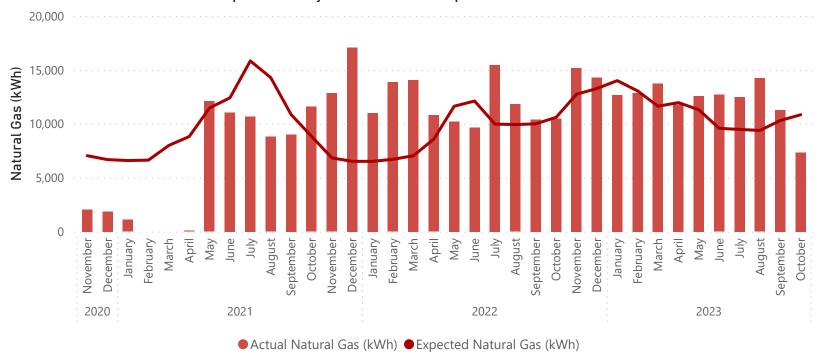
The Library's EUI for the month is 32% less than average compared to the last 12 months, which is great.



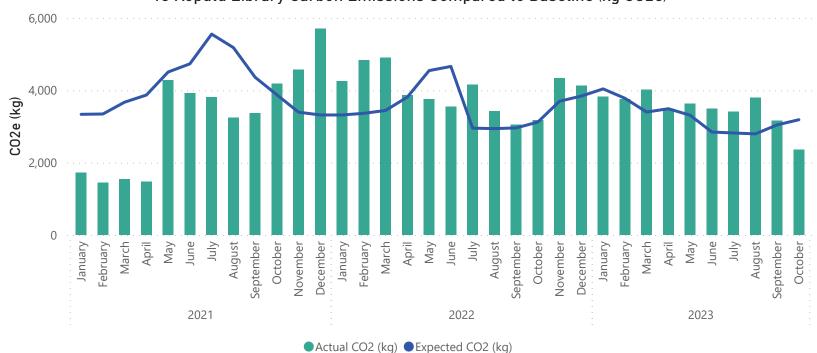


Te Koputu Library



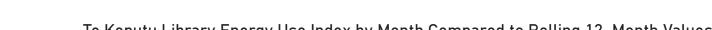


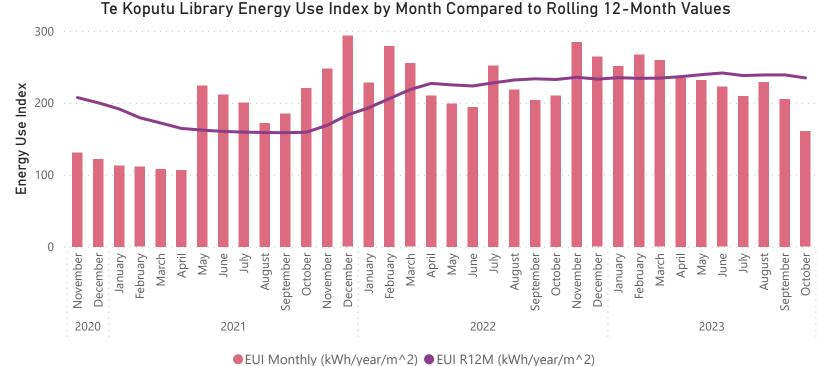




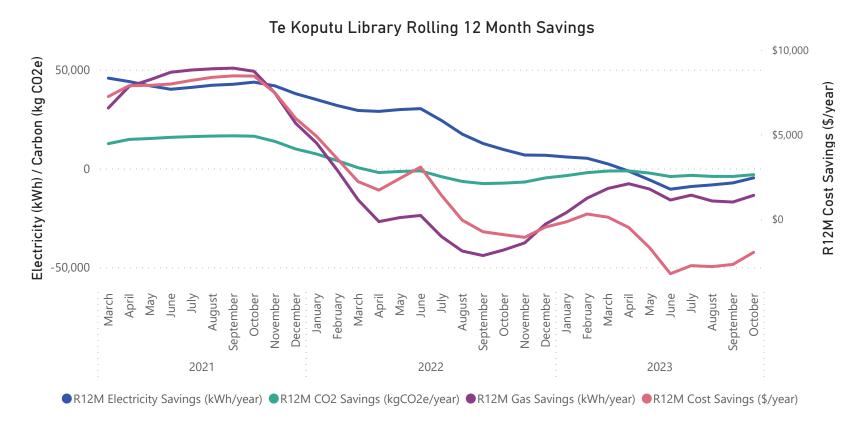


Te Koputu Library









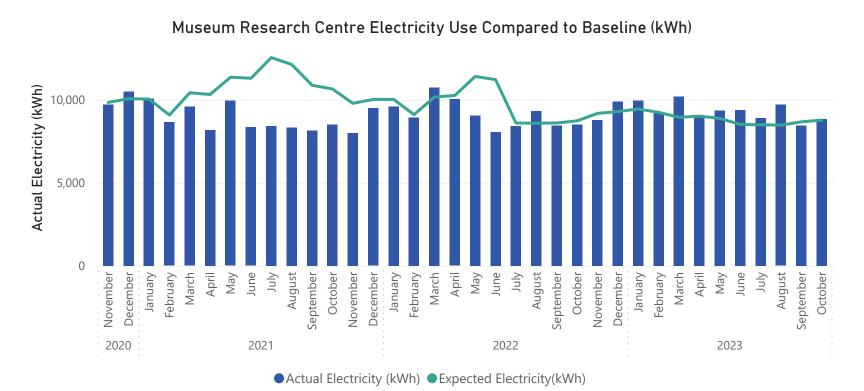


Museum and Research Centre

\$20 Monthly Energy Cost Savings	-57 Elec. Savings (kWh/mo)	-1% Elec. Savings (%)	-4,716 R12M Electricity Savings (kWh/yr)	63 CO2e Savings (kg/mo)
-\$1,319	337 Gas. Savings (kWh/mo)	12%	- 5,291	-1,455
R12M Energy Cost Savings		Gas. Savings (%)	R12M Gas Savings (kWh/yr)	R12M CO2e Savings (kg/yr)

Comments:

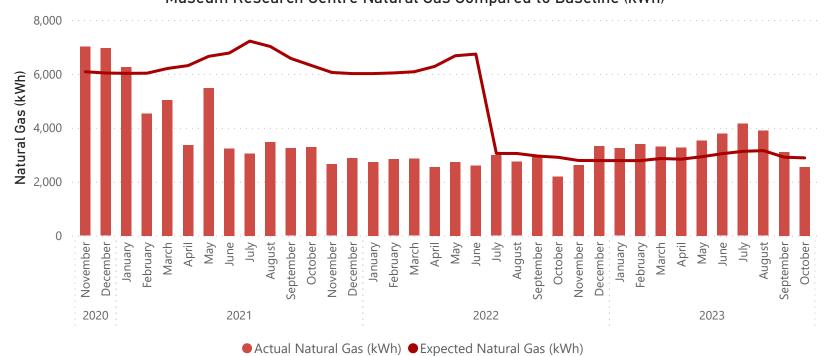
Natural gas use was less than expected and electricity use was marginally more than expected. Previously natural gas has been more than expected since December 2022. October 2023 is the second month in a row where the EUI was less than average compared to the last 12 months, which is good. Prior to September 2023 the EUI was higher than average since since December 2022.



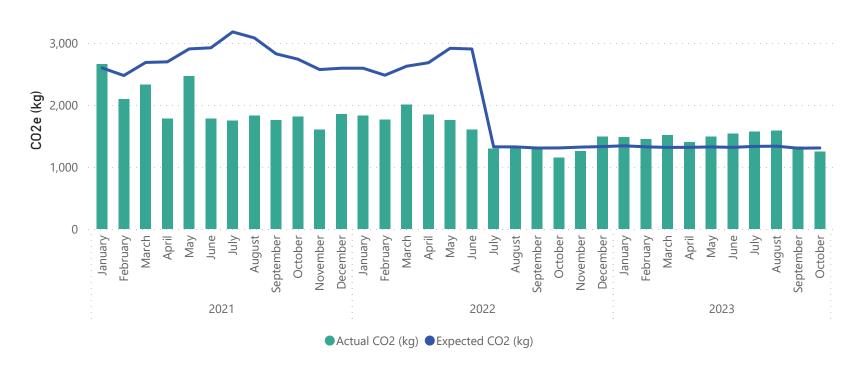


Museum and Research Centre



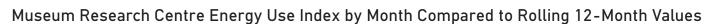


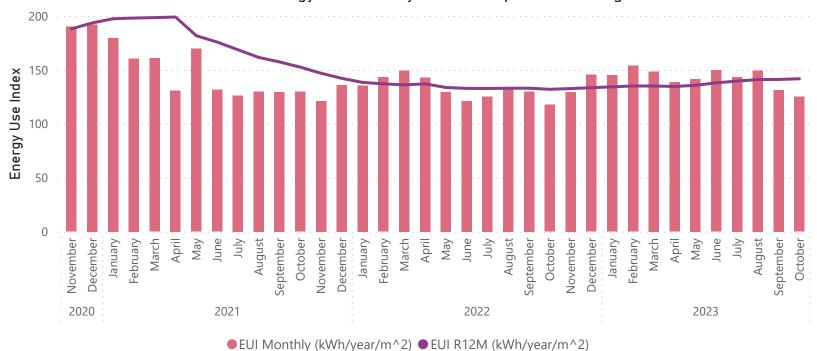
Museum Research Centre Carbon Emissions Compared to Baseline (kg CO2e)



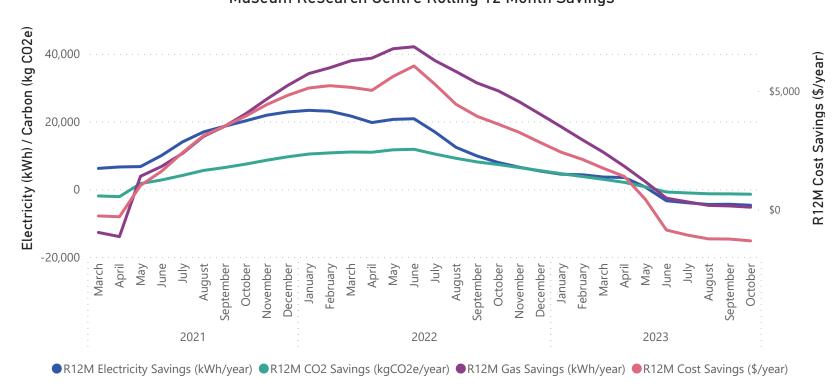


Museum and Research Centre





Museum Research Centre Rolling 12 Month Savings





War Memorial Hall

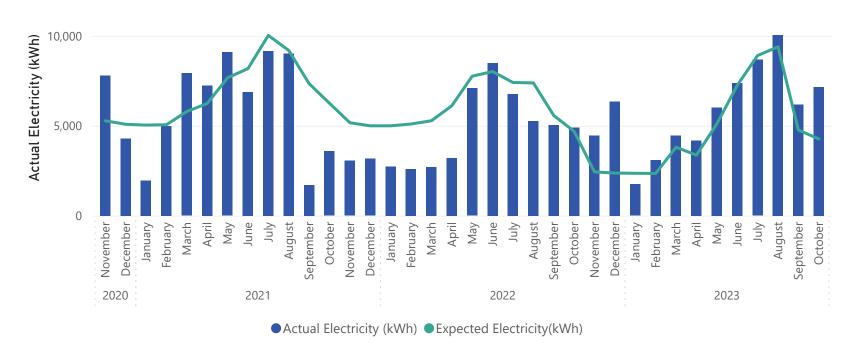
-\$491 Monthly Energy Cost Savings	-2,894 Elec. Savings (kWh/mo)	-68% Elec. Savings (%)	-13,400 R12M Electricity Savings (kWh/yr)	-329 CO2e Savings (kg/mo)
-\$2,289 R12M Energy Cost Savings	-443 Gas. Savings (kWh/mo)	- 17% Gas. Savings (%)	349 R12M Gas Savings (kWh/yr)	-1,039 R12M CO2e Savings (kg/yr)

Comments:

The War Memorial Hall used nearly 70% more electricity than expected. Ten of the past 12 months have used more electricity than expected. This may be due to higher occupancy rates than usual.

The hall has used more natural gas than expected in October. Natural gas use has decreased compared to August and July. The 2023 winter season has used less natural gas than the 2022 winter season, which is good.

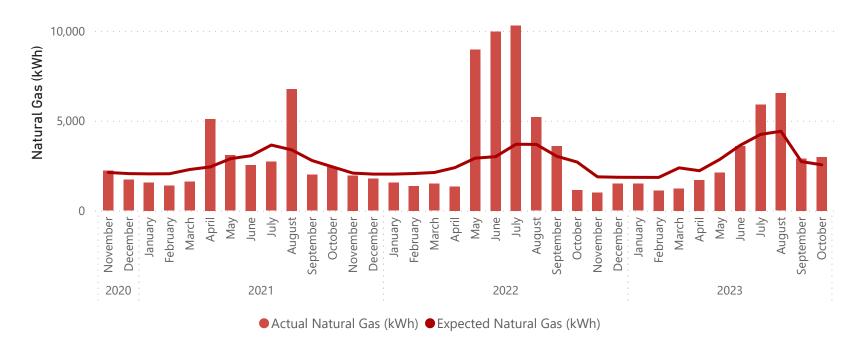
War Memorial Hall Electricity Use Compared to Baseline (kWh)



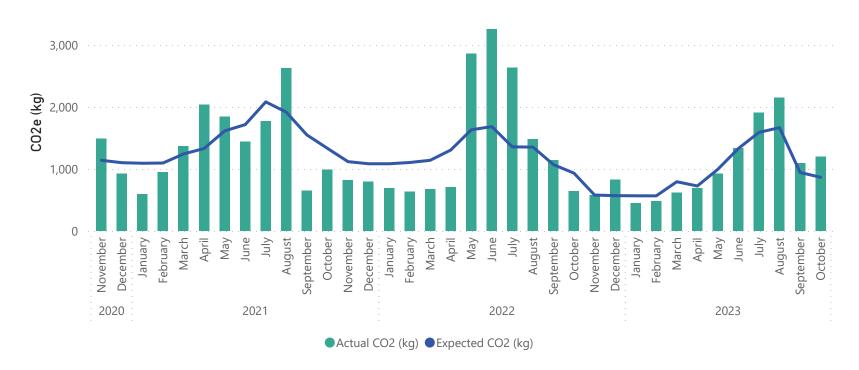


War Memorial Hall

War Memorial Hall Natural Gas Compared to Baseline (kWh)



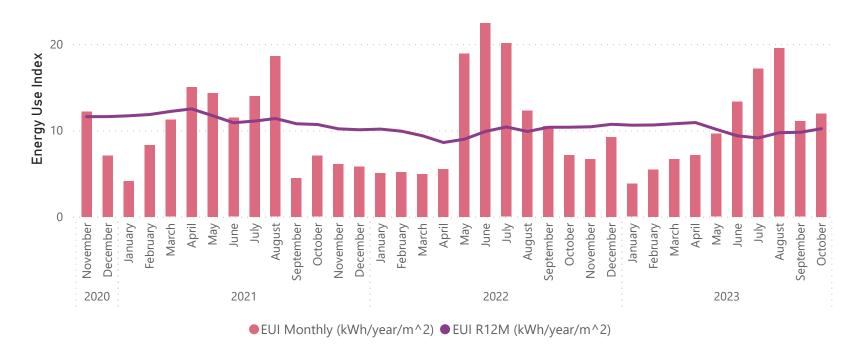
War Memorial Hall Carbon Emissions Compared to Baseline (kg CO2e)

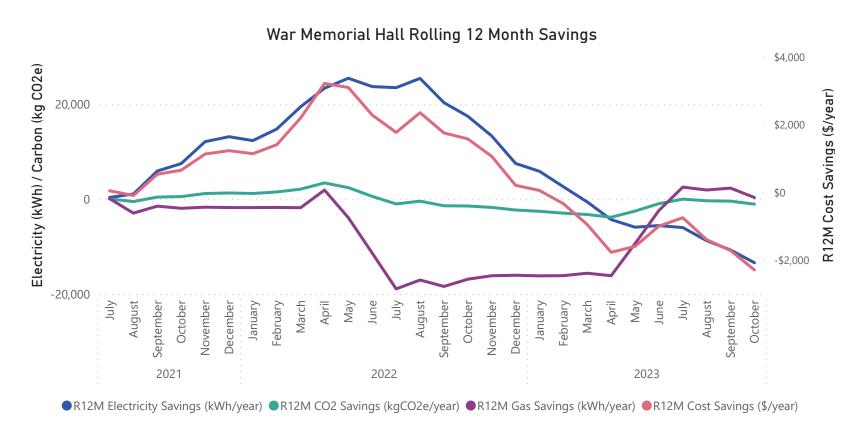




War Memorial Hall

War Memorial Hall Energy Use Index by Month Compared to Rolling 12-Month Values







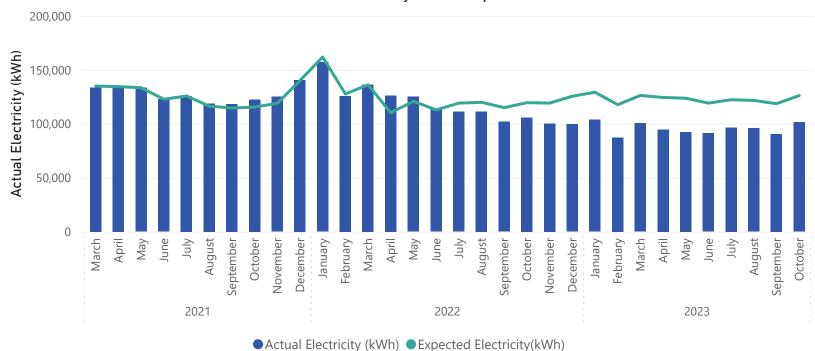
Water Treatment Plant

\$3,747	24,781	20%	320,096	2,052
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
\$56,197				26,504
R12M Energy Cost Savings				R12M CO2e Savings (kg/yr)

Comments:

Another month of savings has been achieved at the WTP in October 2023. Consistent savings between 15-25% have been observed since November 2022. Rolling 12 month savings have been increasing, with approximately \$56,000, 320,000 kWh, and 26,500 kgCO2e saved in the past 12 months, which is excellent.

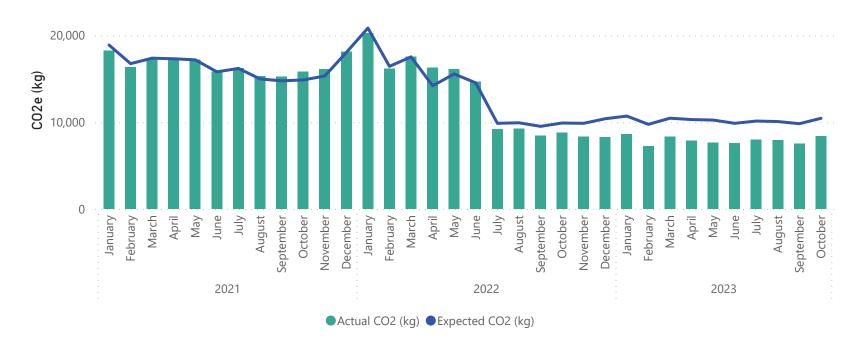
Water Treatment Plant Electricity Use Compared to Baseline (kWh)

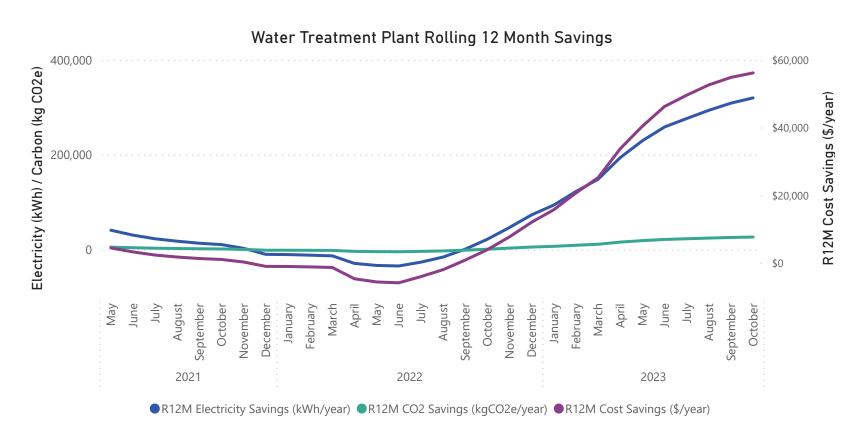




Water Treatment Plant

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

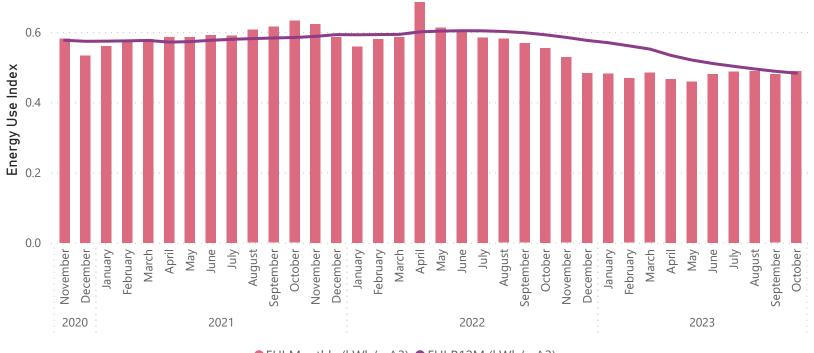






Water Treatment Plant

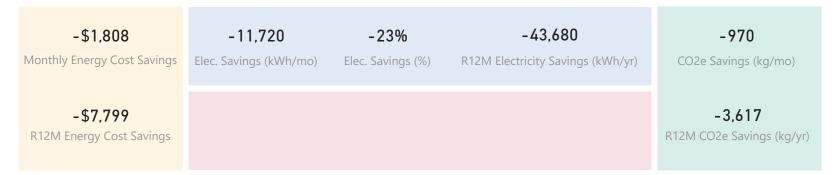
Water Treatment Plant Energy Use Index by Month Compared to Rolling 12-Month Values



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



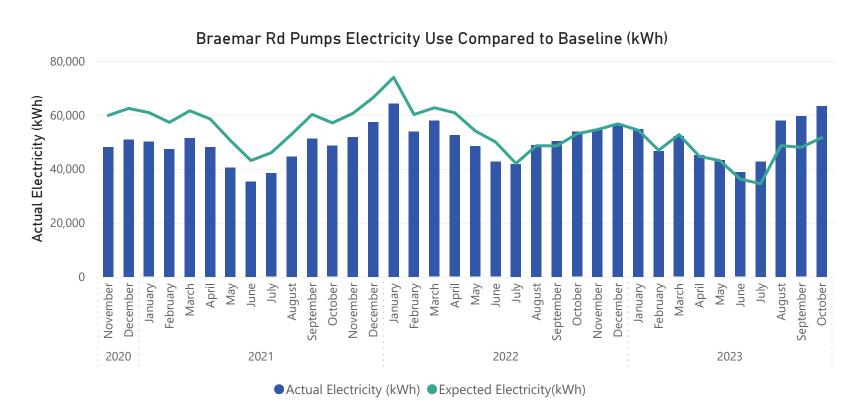
Braemar Road Pump Station



Comments:

Work has been completed at Braemar Rd which added filters and new low lift pumps. A contractor was able to supply accurate flows, which show the impact of increased pumping requirements from new filters, using approximately 20% more electricity than previous. New tags will be added to SCADA in future which will capture water metering.

Due to the new equipment added and increased electricity demand, when more data is available a non routine adjustment will be added to account for the increased demand or the site will be re-baselined.



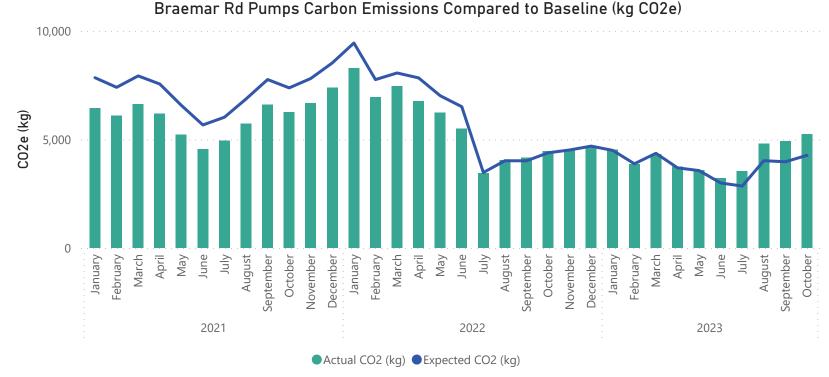


150,000

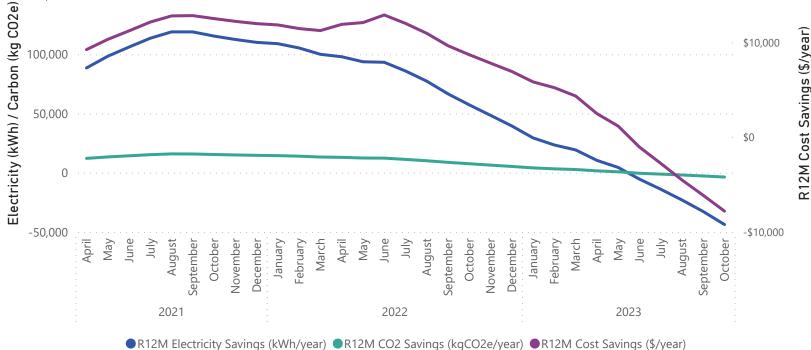
Whakatane District Council

Braemar Road Pump Station











Braemar Road Pump Station

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



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

2023



Whakatane District Council

Paul Road Pump Station

\$27 Monthly Energy Cost Savings	173 Elec. Savings (kWh/mo)	0% Elec. Savings (%)	11,873 R12M Electricity Savings (kWh/yr)	14 CO2e Savings (kg/mo)
\$2,192 R12M Energy Cost Savings				983 R12M CO2e Savings (kg/yr)

Comments:

2020

2021

Electricity use was close to expected at Paul Road Pump Station. The monthly EUI is above average over the past 12 months. Energy performance has been consistent, with savings each month from April 2023.

60,000 Actual Electricity (kWh) 40,000 20,000 August August June June February March April July March Мау September November February September April December January February October December January October November December January September

2022

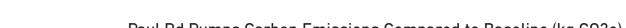
Paul Rd Pumps Electricity Use Compared to Baseline (kWh)

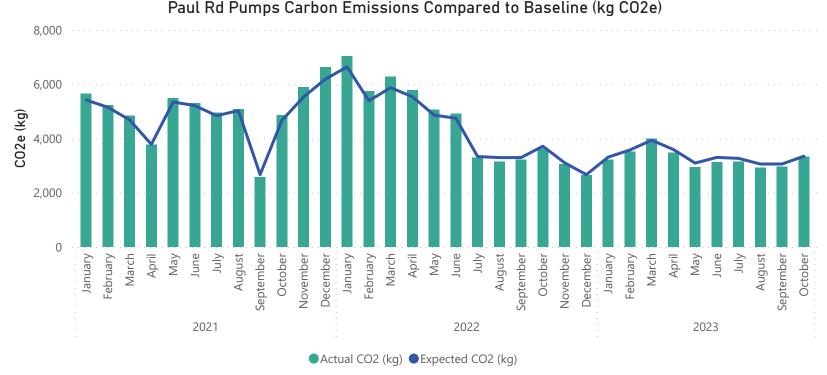
Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time *Baselines were updated for all sites from July 2022.*

◆Actual Electricity (kWh)◆Expected Electricity(kWh)

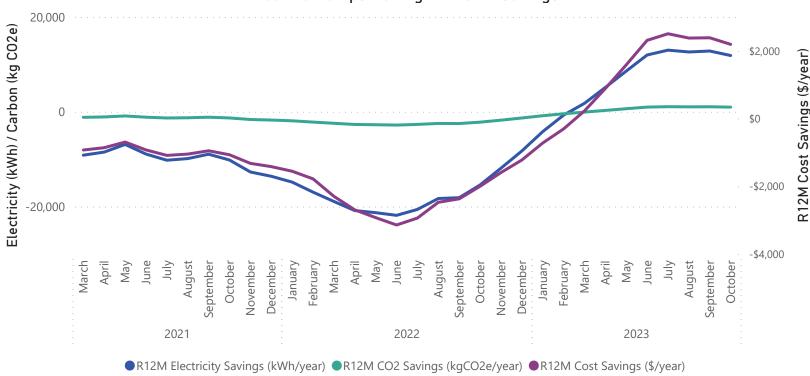


Paul Road Pump Station





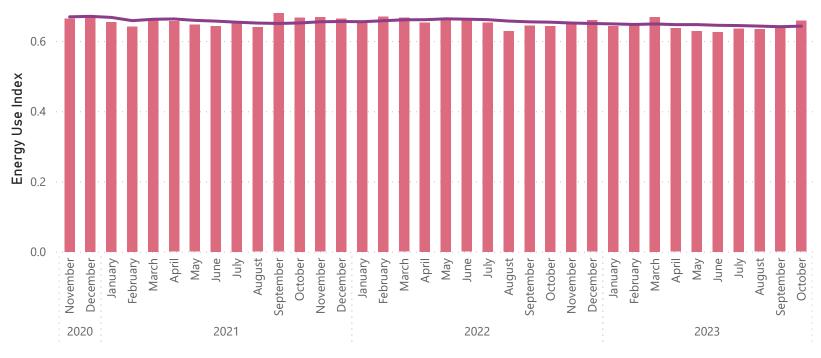






Paul Road Pump Station

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



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



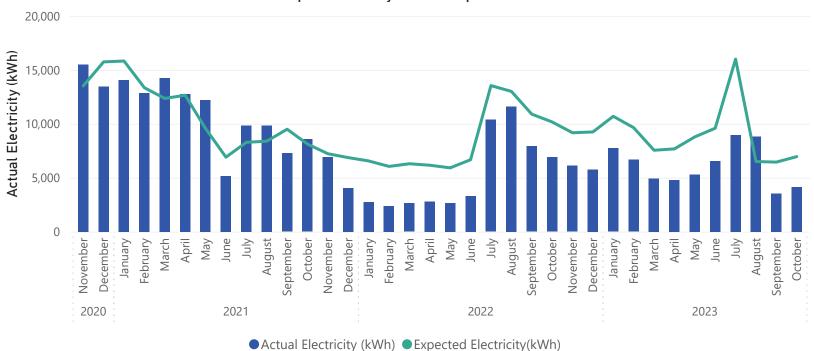
Johnson Road Pump Station

\$623	2,803	40%	34,920	232
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
\$7,555				2,891
R12M Energy Cost Savings				R12M CO2e Savings (kg/yr)

Comments:

Johnson Rd Pump used 40% less electricity than expected. The pump has been achieving consistent savings from Dec 2021, with the exception of August 2023, which may be due to when the electricity meter was read or that increased electricity use may be due to some interactive effects between Johnson and Braemar Rd pump stations.

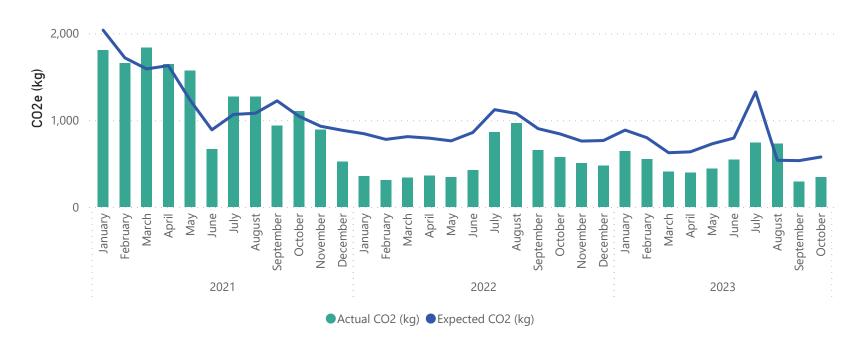
Johnson Rd Pumps Electricity Use Compared to Baseline (kWh)

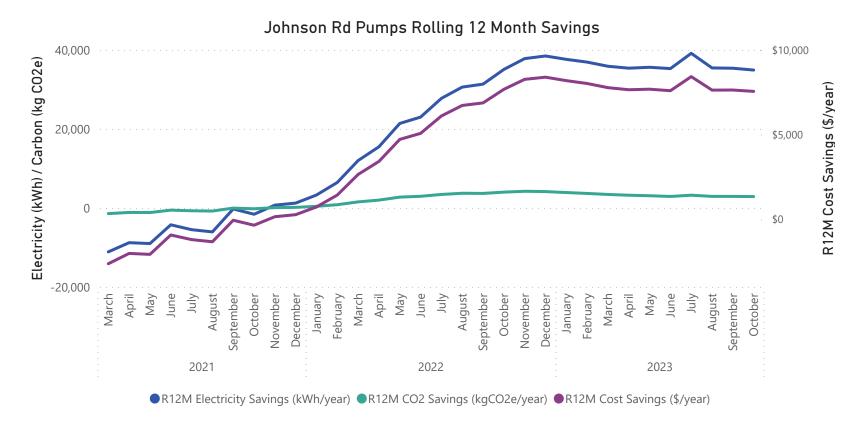




Johnson Road Pump Station

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







Johnson Road Pump Station

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



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



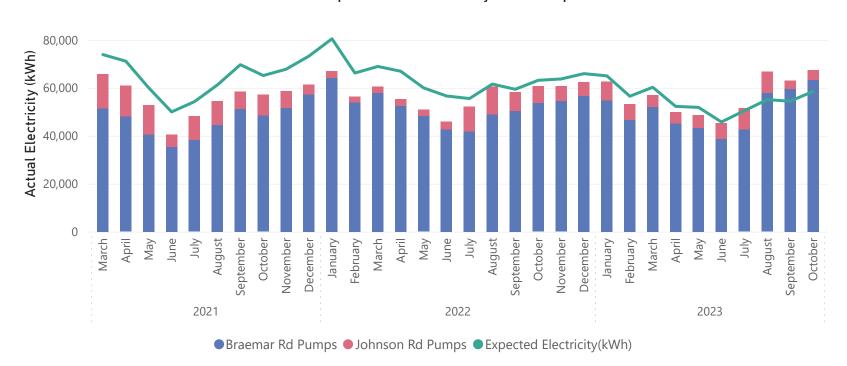
Johnson and Braemar Rd Pump Stations

-\$1,184 Monthly Energy Cost Savings	-8,917 Elec. Savings (kWh/mo)	-15% Elec. Savings (%)	-8,760 R12M Electricity Savings (kWh/yr)	-738 CO2e Savings (kg/mo)
-\$244 R12M Energy Cost Savings				-725 R12M CO2e Savings (kg/yr)

Comments:

Braemar Rd pump station has used more electricity than expected in August, September, and October 2023, this is mostly attributed to the new filters at Braemar Road, which have increased pumping requirements.

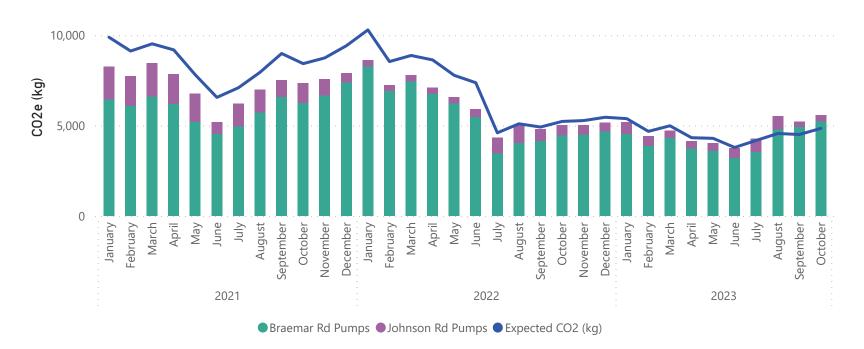
Johnson and Braemar Rd Pump Stations Electricity Use Compared to Baseline (kWh)

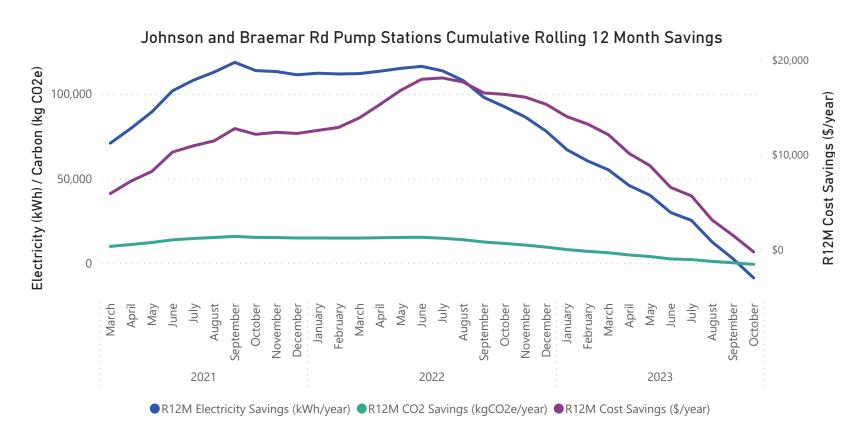




Johnson and Braemar Rd Pump Stations

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

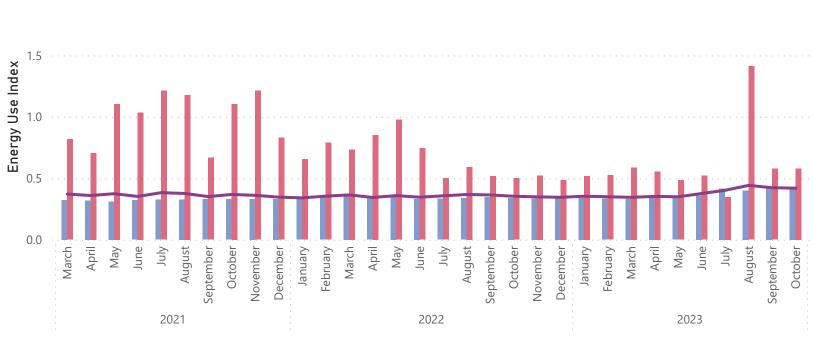






Johnson and Braemar Rd Pump Stations







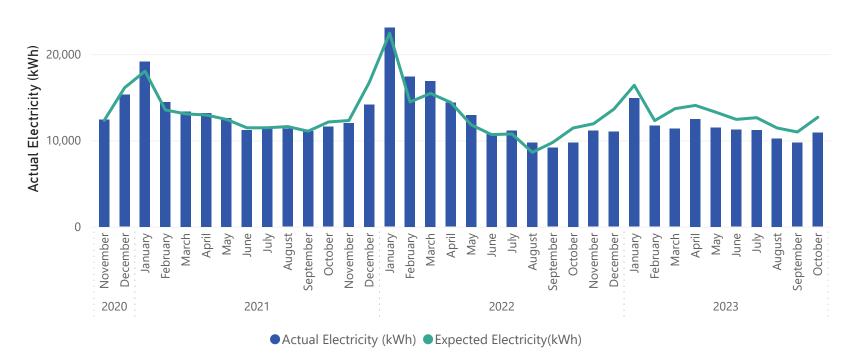
Bridger Glade Pump Station

\$318	1,794	14%	18,113	149
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
¢0.10F				1.500
\$3,197 R12M Energy Cost Savings				1,500 R12M CO2e Savings (kg/yr)

Comments:

October 2023 is the 14th month in a row that the Bridger Glade Pump Station has used less electricity than expected, this is due to new supply pumps that were installed in late August 2022. Savings over the past year are \$3,200, 18,000 kWh, and 1,500 kg CO2e.

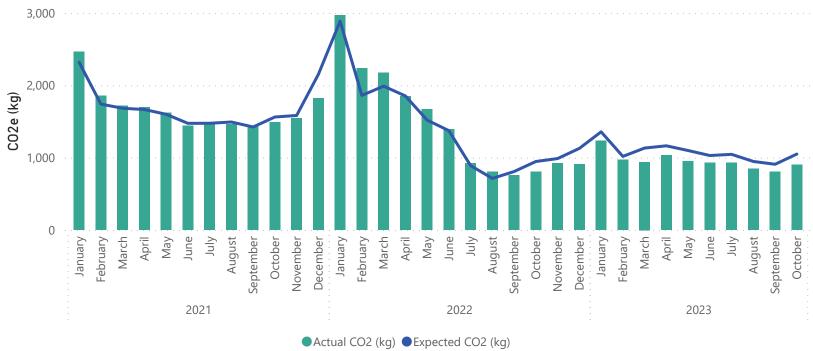
Bridger Glade Pumps Electricity Use Compared to Baseline (kWh)



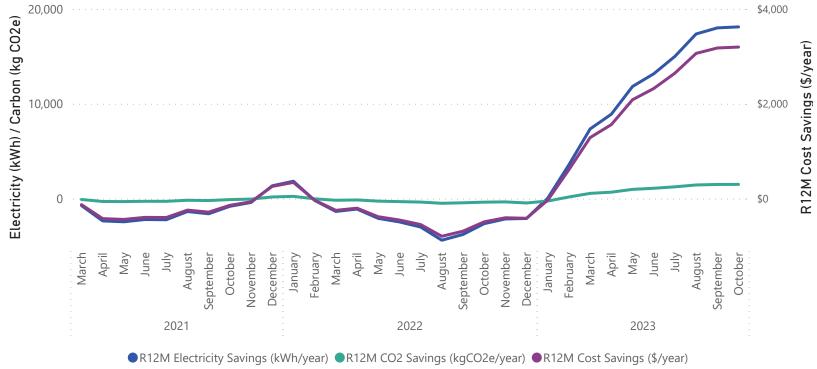


Bridger Glade Pump Station





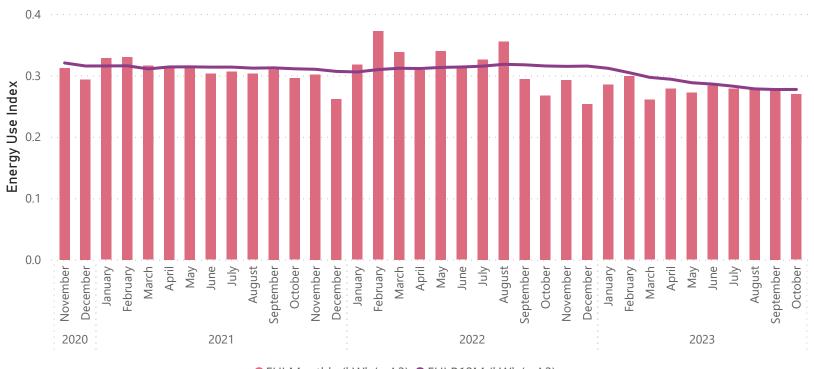






Bridger Glade Pump Station

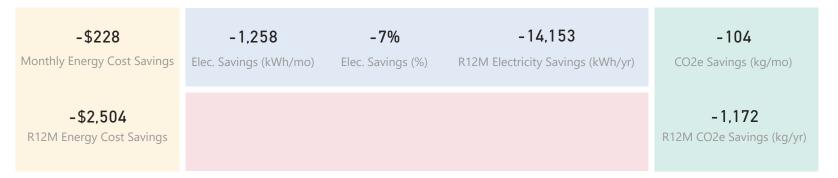




● EUI Monthly (kWh/m^3) ● EUI R12M (kWh/m^3)



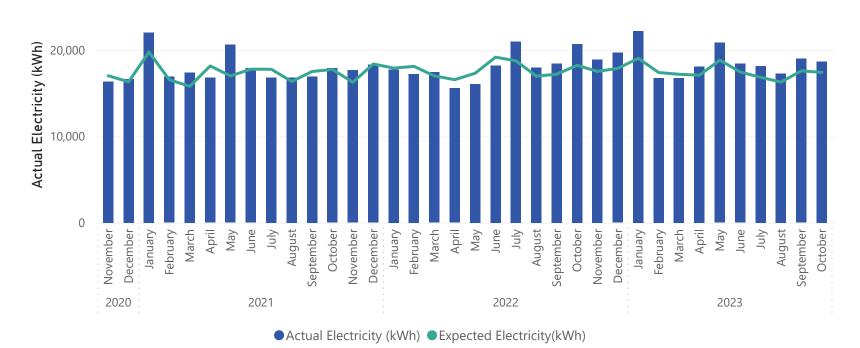
Ohope Oxidation Ponds



Comments:

Ohope Oxidation Ponds have used more electricity than expected in 10 of the last 12 months. Rainfall has generally been higher than usual, which may contribute to higher electricity usage. The monthly EUI in October is close to average for the past 12 months.

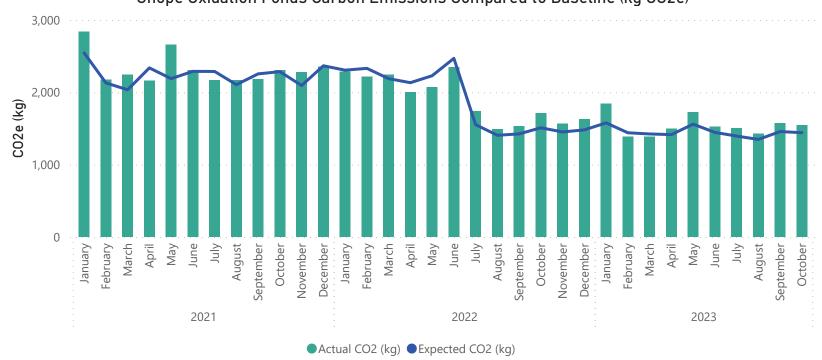
Ohope Oxidation Ponds Electricity Use Compared to Baseline (kWh)



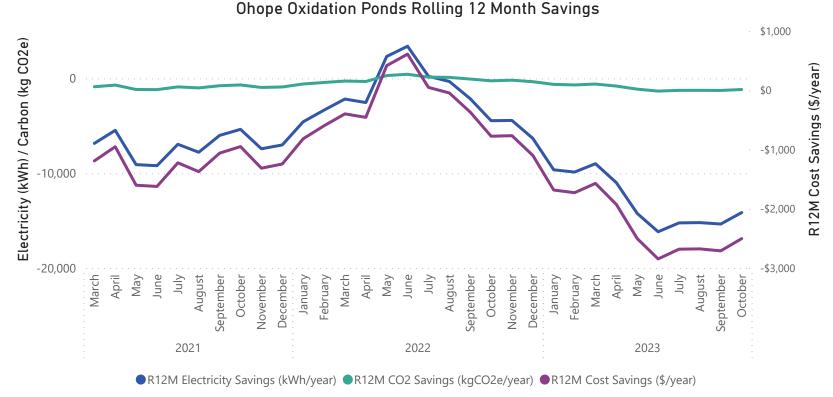


Ohope Oxidation Ponds











Ohope Oxidation Ponds





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

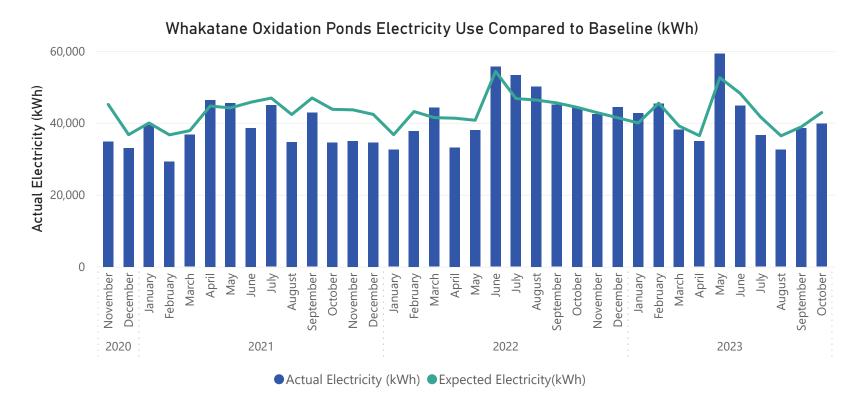


Whakatane Oxidation Ponds

\$535	3,128	7%	6,344	259
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
\$1,349 R12M Energy Cost Savings				525 R12M CO2e Savings (kg/yr)
K12IVI Energy Cost Savings				KTZIVI COZE Saviligs (kg/yl)

Comments:

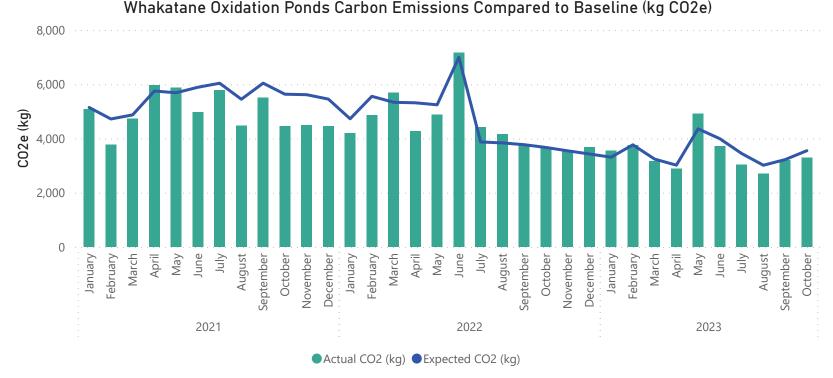
The oxidation ponds used less electricity than expected in October 2023. October 2023 was a month with lower than average rainfall, approximately 70mm of rain was recorded for the month. Rolling 12 month EUI is trending downwards, which is good, however, August and September were higher than average compared to the last 12 months.



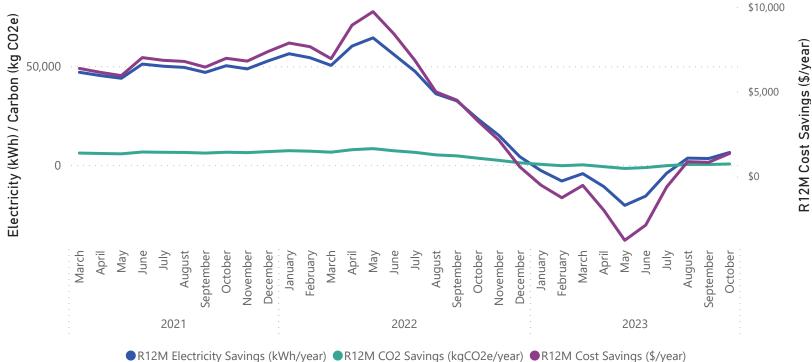


Whakatane Oxidation Ponds











Whakatane Oxidation Ponds

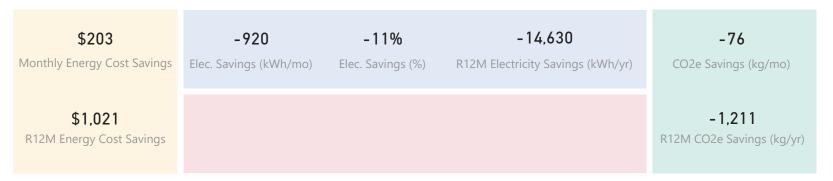




● EUI Monthly (kWh/m^3) ● EUI R12M (kWh/m^3)



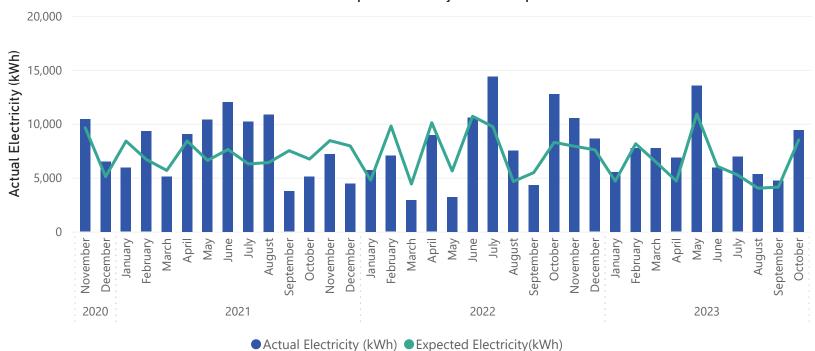
McAlister Street and Rose Garden Pump Stations



Comments:

The pump stations used 11% more electricity than expected this month. Approximately 230mm of rain coincided within the billing period. Rainfall over the past 12 months averaged about 150mm per month.

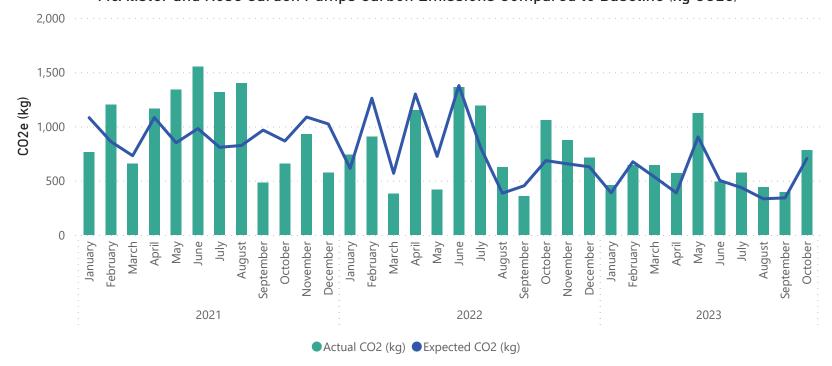
McAlister and Rose Garden Pumps Electricity Use Compared to Baseline (kWh)



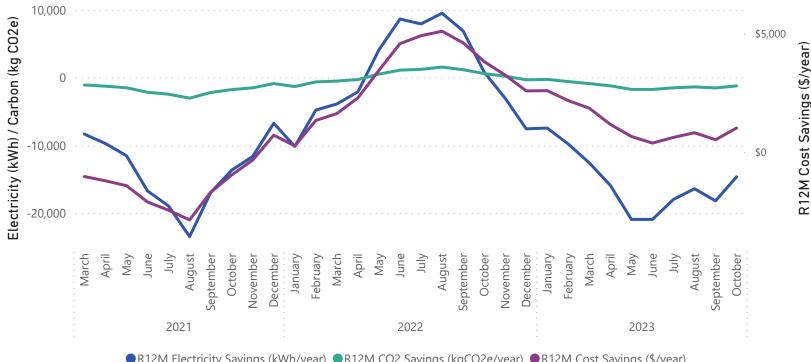


McAlister Street and Rose Garden Pump Stations





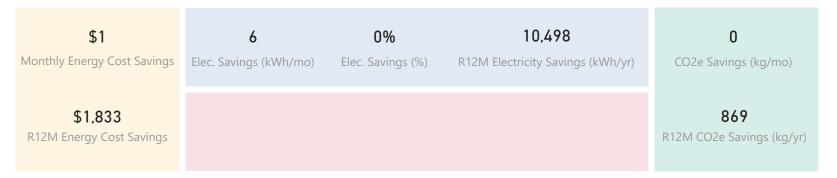




●R12M Electricity Savings (kWh/year) ●R12M CO2 Savings (kgCO2e/year) ●R12M Cost Savings (\$/year)

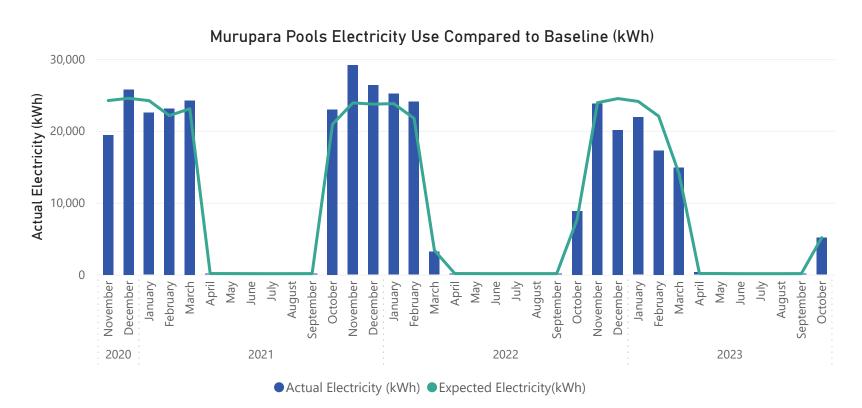


Murupara Pools



Comments:

Murupara Pools have opened for the season, heating of the pools started in late October 2023.





Murupara Pools



