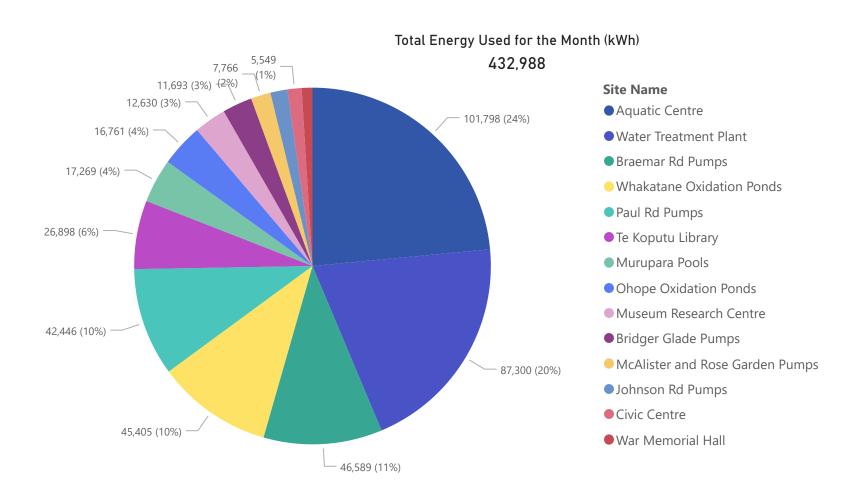


Summary

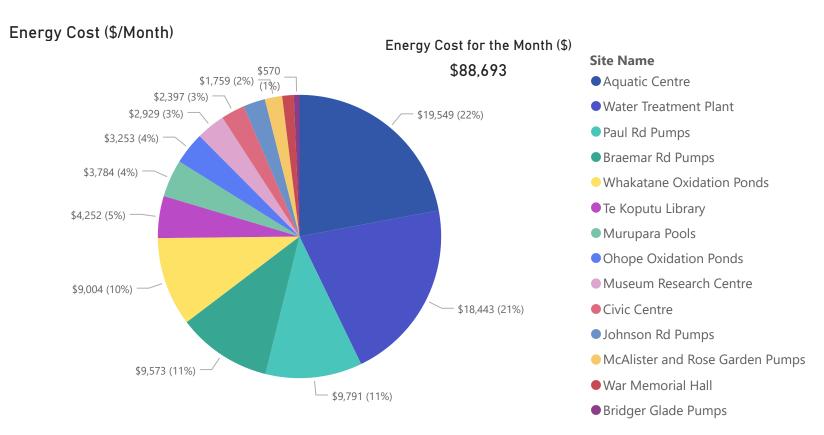
\$13,180 Monthly Energy Cost Savings	73,931 Elec. Savings (kWh/mo)	15% Elec. Savings (%)	420,683 R12M Electricity Savings (kWh/yr)	10,017 CO2e Savings (kg/mo)
\$126,558 R12M Energy Cost Savings	1,602 Gas. Savings (kWh/mo)	8% Gas. Savings (%)	582,998 R12M Gas Savings (kWh/yr)	181,729 R12M CO2e Savings (kg/yr)

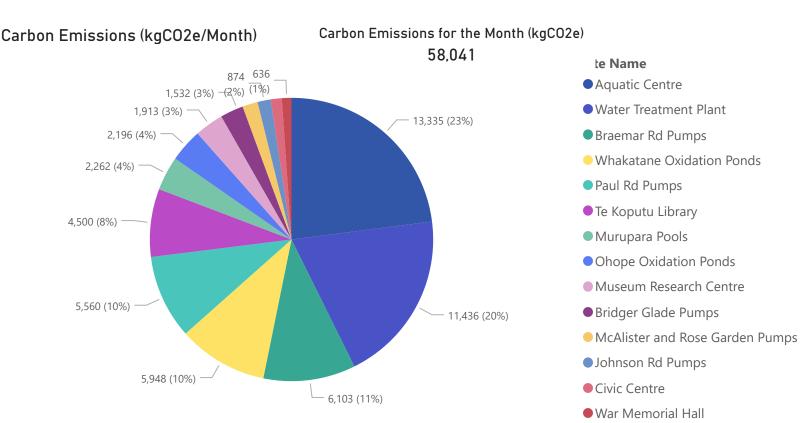
Total Energy (kWh/Month)





Summary

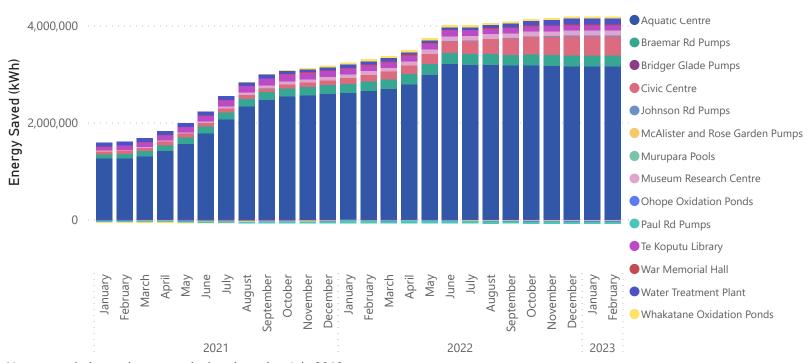






Summary

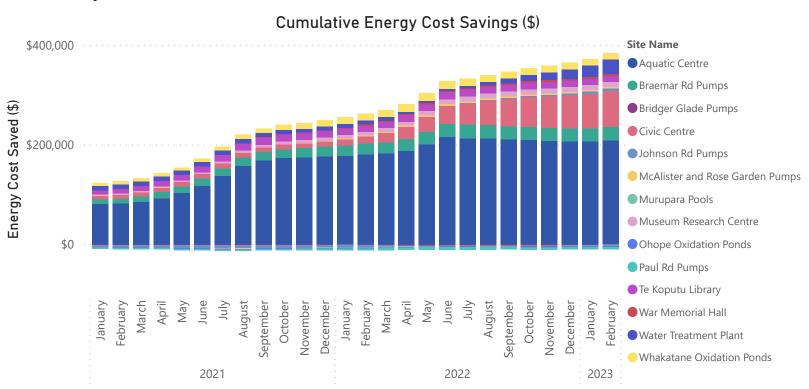
Cumulative Energy Savings (kWh)



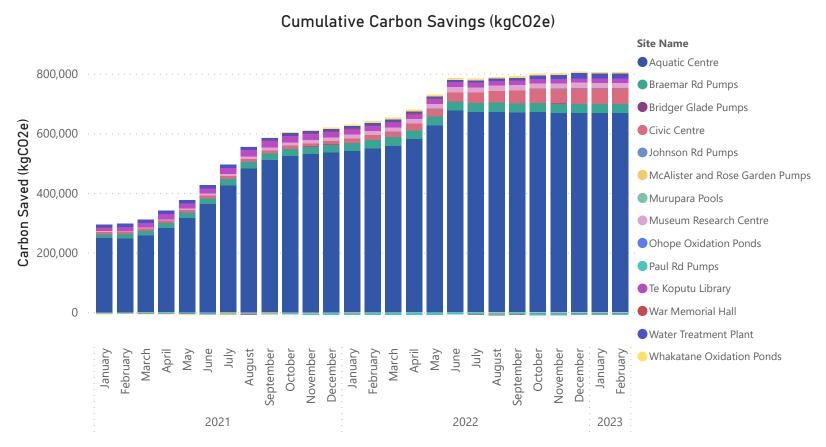
Note, cumulative savings are calculated starting July 2018



Summary



Note, cumulative savings are calculated starting July 2018





Civic Centre

\$3,198	18,741	77%	301,632	2,455
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
\$58,445				39,145
R12M Energy Cost Savings				R12M CO2e Savings (kg/yr)

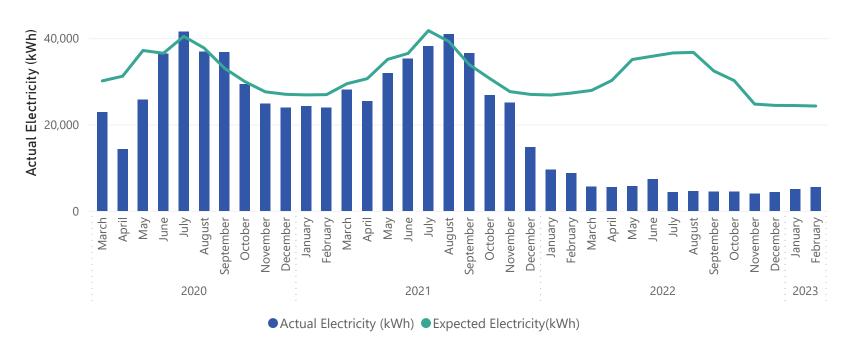
Comments:

The baseline for the Civic Centre has been updated, the baseline period was selected as Dec-2020 to Nov-2021, in order to exclude months where refurbishment was taking place.

Electricity use continues to be less than baseline for 2023, the Civic Centre renovation has displaced many office workers, which has decreased electricity demand.

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

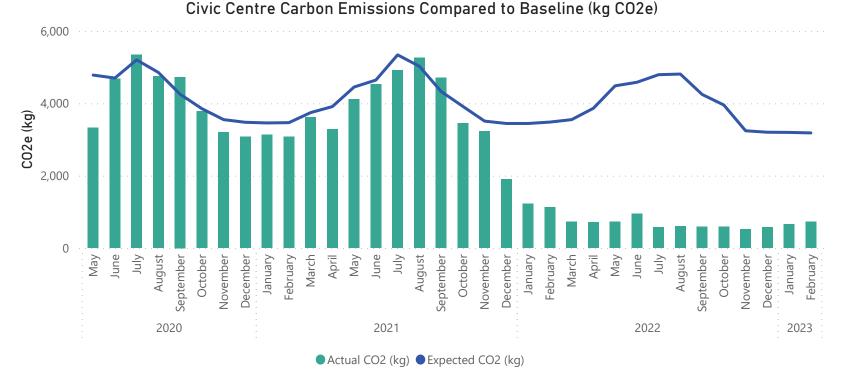
Civic Centre Electricity Use Compared to Baseline (kWh)



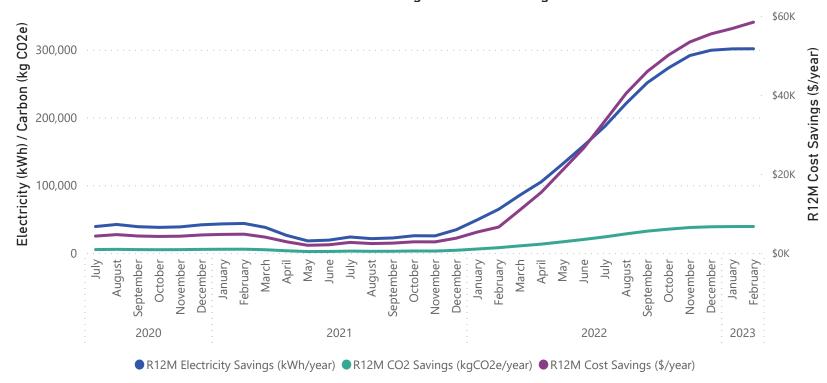


Civic Centre



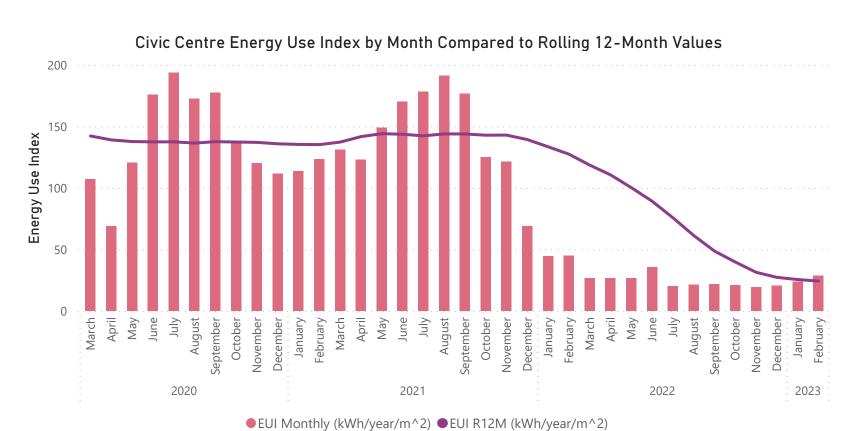








Civic Centre





Aquatic Centre

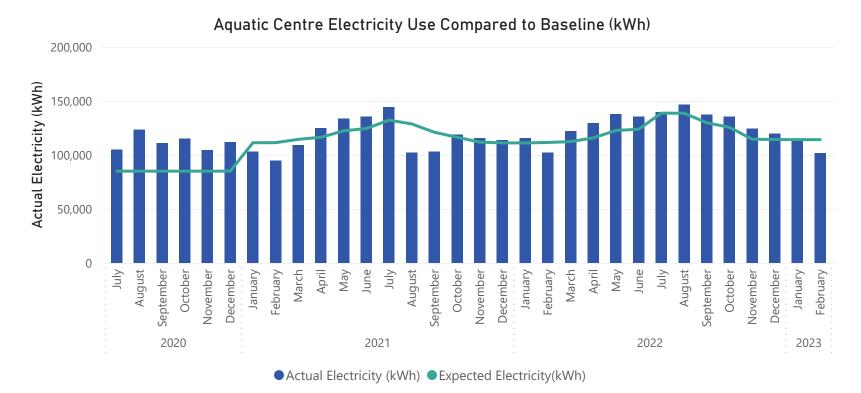
\$2,194 Monthly Energy Cost Savings	12,377 Elec. Savings (kWh/mo)	11% Elec. Savings (%)	-78,597 R12M Electricity Savings (kWh/yr)	1,850 CO2e Savings (kg/mo)
\$27,593 R12M Energy Cost Savings	1,105 Gas. Savings (kWh/mo)	100% Gas. Savings (%)	600,171 R12M Gas Savings (kWh/yr)	120,188 R12M CO2e Savings (kg/yr)

Comments:

Electricity and natural gas baselines have been updated for the Aquatic Centre, the baseline period is May 2021 to June 2022 and excludes Aug. and Sept. 2021 due to changes in Covid-19 alert levels and partial closure. The outdoor pool is open year-round and the baseline reflects this change.

Electricity use was less than expected in February 2023. The Aquatic Centre did not use any gas this month, the boilers have been turned off since 17 December. The EUI for the month is lower than the average for the past 12 months, which is excellent.

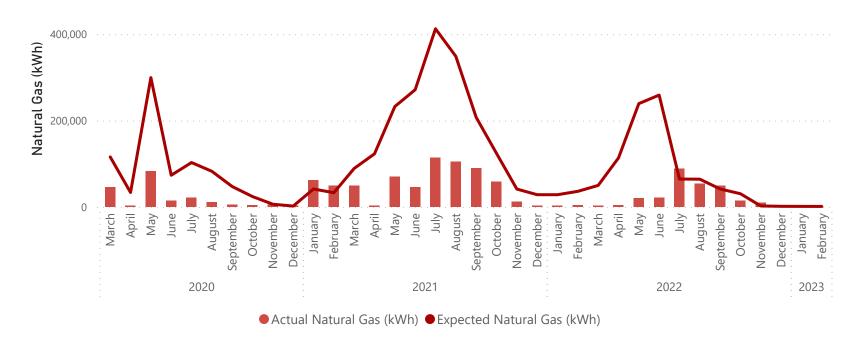
Rolling 12 month savings are decreasing and will continue to decrease as a result from savings being measured against the new baseline. Savings can be increased by implementing new energy saving initiatives.



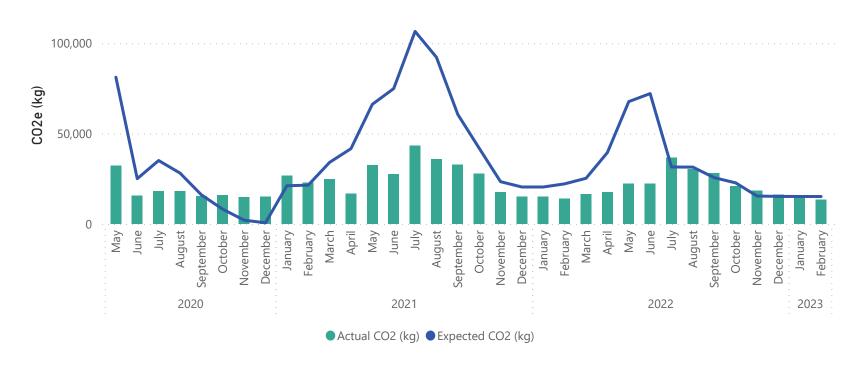


Aquatic Centre

Aquatic Centre Natural Gas Compared to Baseline (kWh)

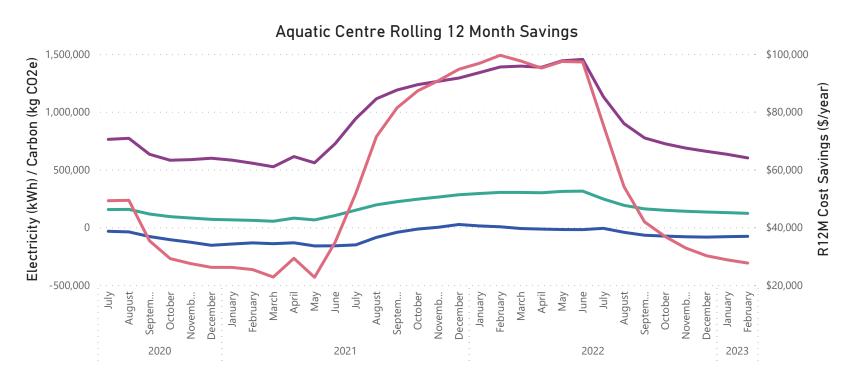


Aquatic Centre Carbon Emissions Compared to Baseline (kg CO2e)

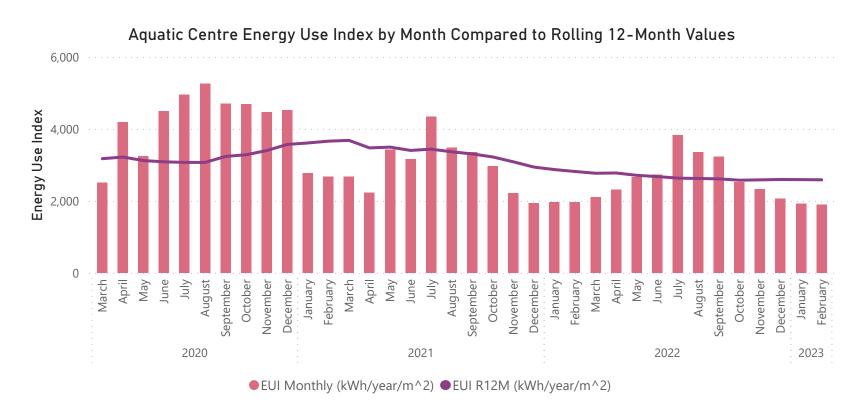




Aquatic Centre



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





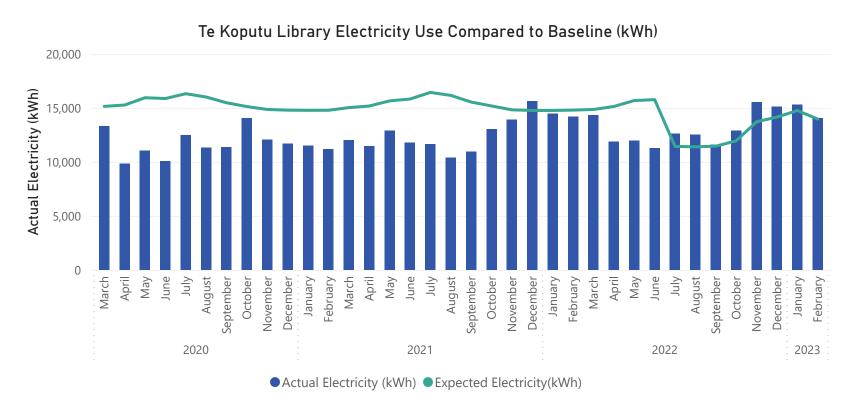
Te Koputu Library

\$2 Monthly Energy Cost Savings	-78 Elec. Savings (kWh/mo)	-1% Elec. Savings (%)	5,177 R12M Electricity Savings (kWh/yr)	31 CO2e Savings (kg/mo)
\$311 R12M Energy Cost Savings	198 Gas. Savings (kWh/mo)	2% Gas. Savings (%)	-15,016 R12M Gas Savings (kWh/yr)	-2,493 R12M CO2e Savings (kg/yr)

Comments:

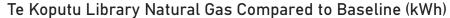
New baselines were established for electricity and natural gas at the Library, the baseline period is July 2021 to June 2022 and use cooling degree days as the independent variable.

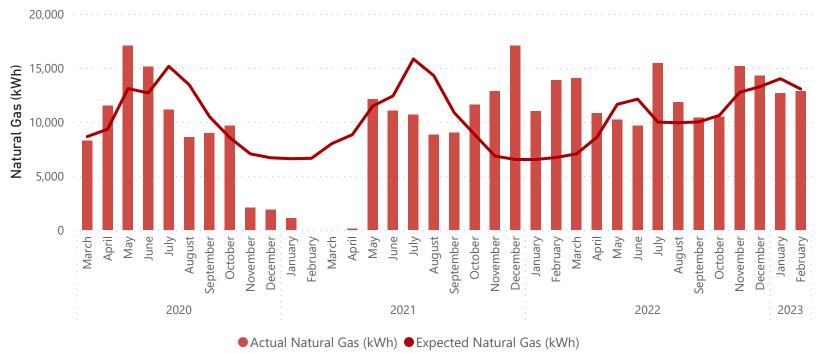
Electricity use was above baseline for the month, natural gas use was less than expected, a CO2e saving was achieved. The average daily temperature in February 2023 was approximately one degree cooler than February 2022. Rolling 12 month cost savings and natural gas savings have been increasing in the past several months, which is good.



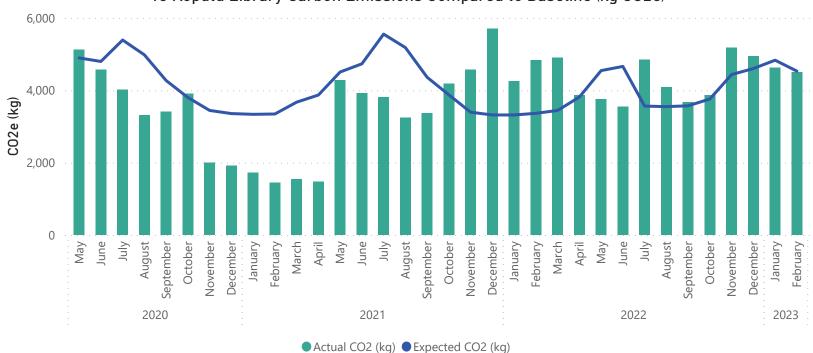


Te Koputu Library









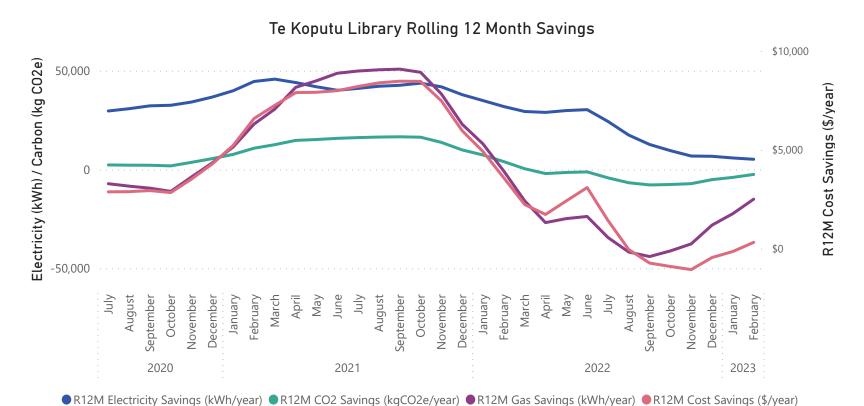


Te Koputu Library





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





Museum and Research Centre

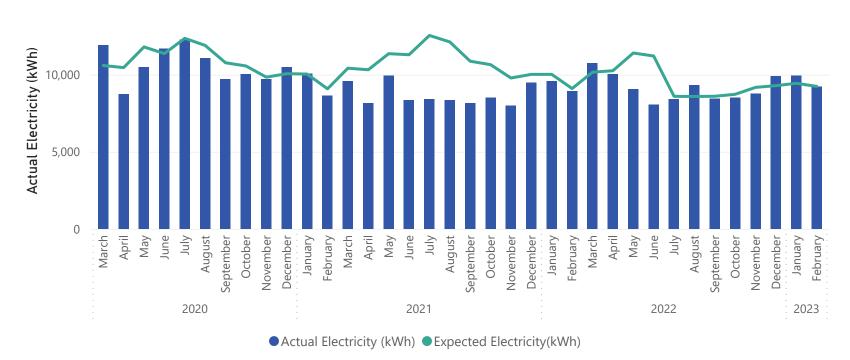
-\$47 Monthly Energy Cost Savings	14 Elec. Savings (kWh/mo)	0% Elec. Savings (%)	4,282 R12M Electricity Savings (kWh/yr)	-126 CO2e Savings (kg/mo)
\$2,121 R12M Energy Cost Savings	-619 Gas. Savings (kWh/mo)	-22% Gas. Savings (%)	14,627 R12M Gas Savings (kWh/yr)	3,724 R12M CO2e Savings (kg/yr)

Comments:

New baselines were established for electricity and natural gas at the Museum and Research Centre, the baseline period is July 2021 to June 2022. The electricity baseline uses cooling degree days as the independent variable and the natural gas baseline uses heating degree days as the independent variable.

Natural gas use was higher than expected, which is likely due to dehumidification requirements.

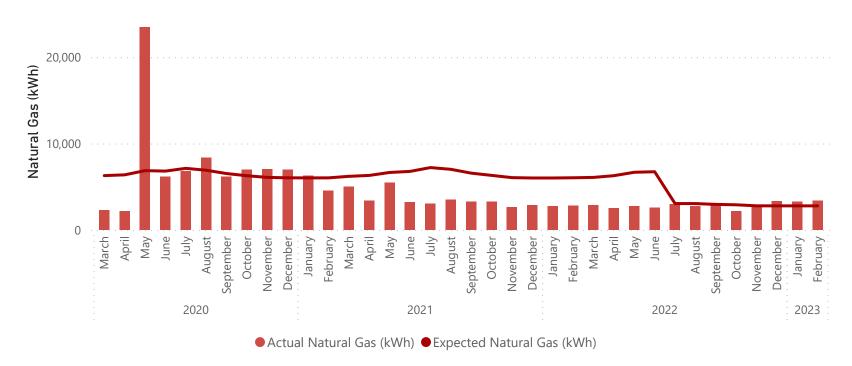
Museum Research Centre Electricity Use Compared to Baseline (kWh)



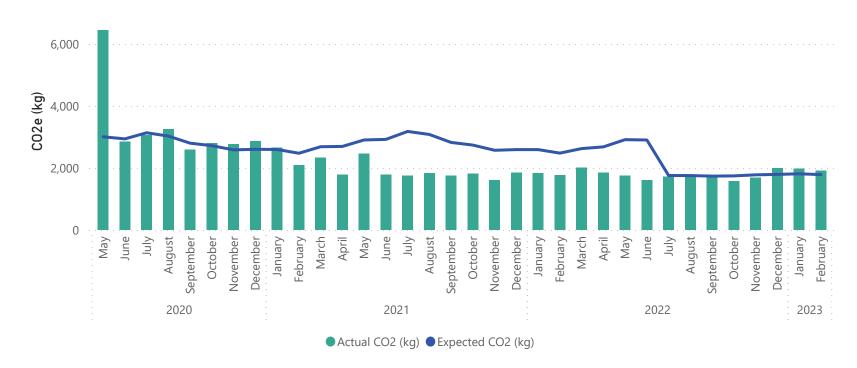


Museum and Research Centre

Museum Research Centre Natural Gas Compared to Baseline (kWh)

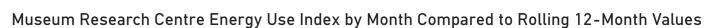


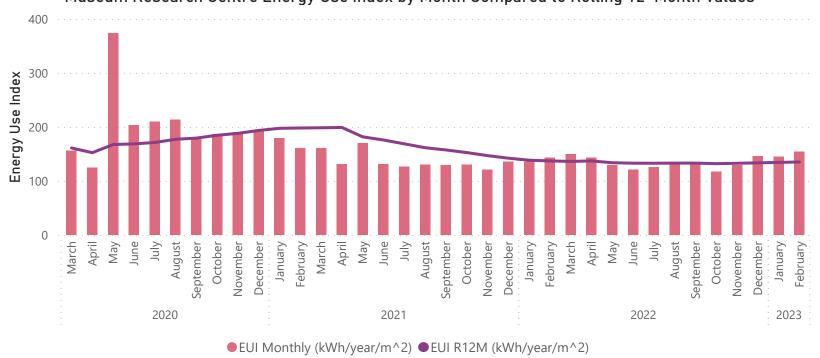
Museum Research Centre Carbon Emissions Compared to Baseline (kg CO2e)



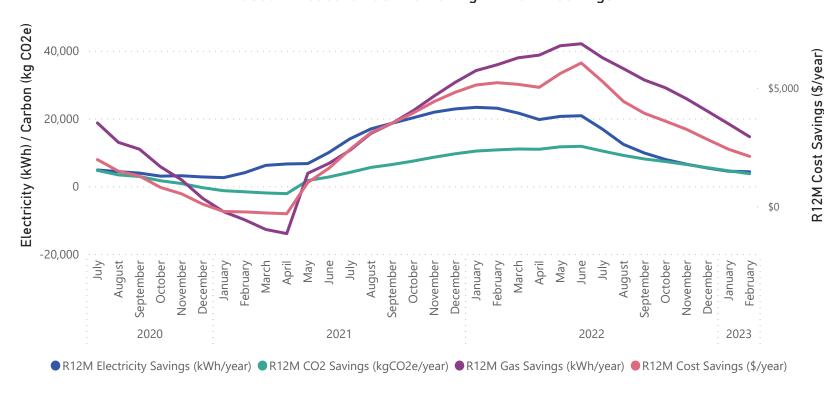


Museum and Research Centre





Museum Research Centre Rolling 12 Month Savings





War Memorial Hall

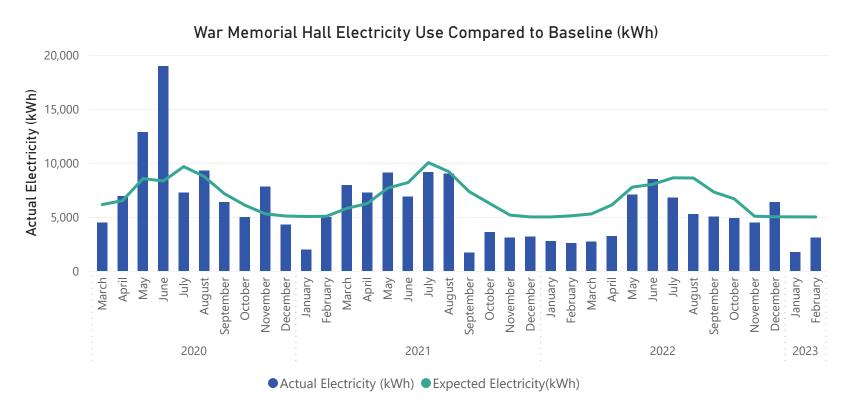
\$409 Monthly Energy Cost Savings	1,908 Elec. Savings (kWh/mo)	38% Elec. Savings (%)	19,348 R12M Electricity Savings (kWh/yr)	440 CO2e Savings (kg/mo)
\$2,716 R12M Energy Cost Savings	917 Gas. Savings (kWh/mo)	45% Gas. Savings (%)	-16,785 R12M Gas Savings (kWh/yr)	-1,064 R12M CO2e Savings (kg/yr)

Comments:

The baseline was updated for War Memorial Hall, the baseline adjusts for ambient temperature. The baseline period is July 2021 to June 2022. The War Memorial Hall uses more electricity and gas in winter months.

The War Memorial Hall has NHH accounts for both natural gas and electricity. Some months' usage may be estimated by the retailer and captured by a subsequent meter reading. It is recommended that manual meter readings are taken, which would improve accuracy of electricity and gas usage.

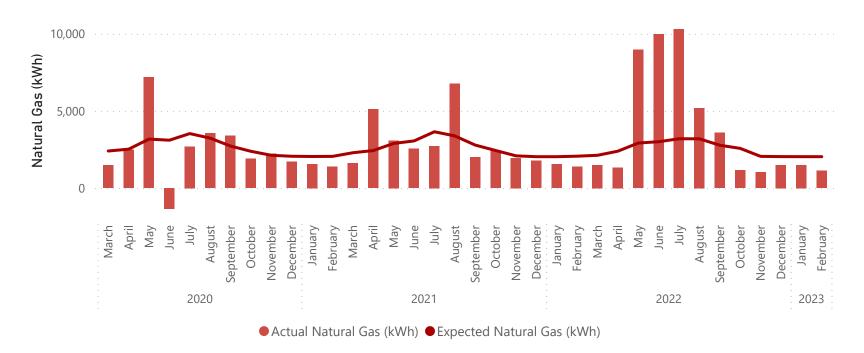
The War Memorial Hall has achieved significant gas and electricity savings in January and February 2023. December 2022 used more electricity than expected, this may be partly due to when the electricity meter was read, The War Memorial Hall may have also seen higher occupancy in December with holiday events.



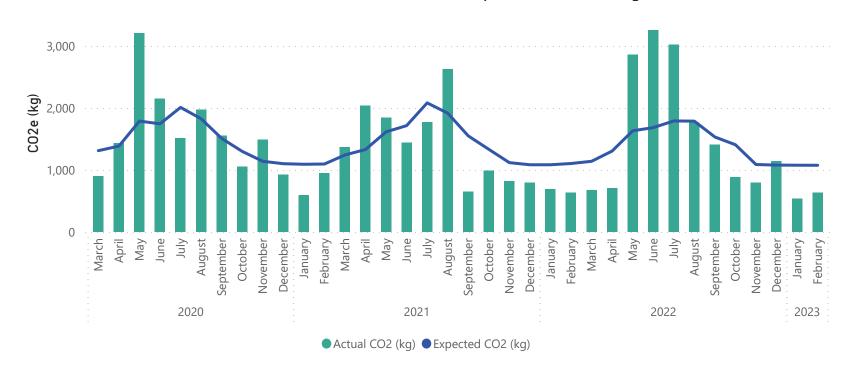


War Memorial Hall

War Memorial Hall Natural Gas Compared to Baseline (kWh)



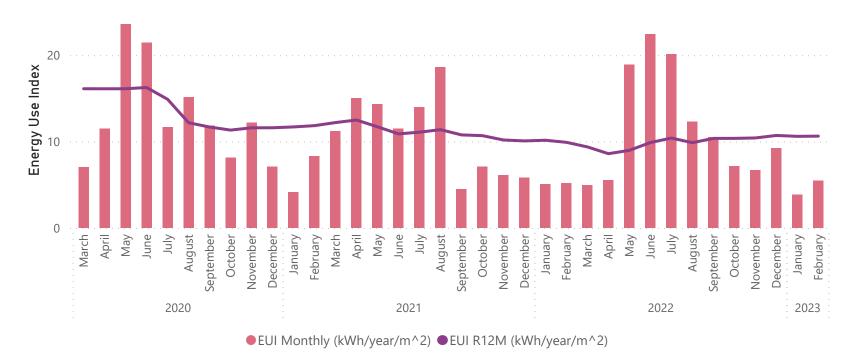
War Memorial Hall Carbon Emissions Compared to Baseline (kg CO2e)

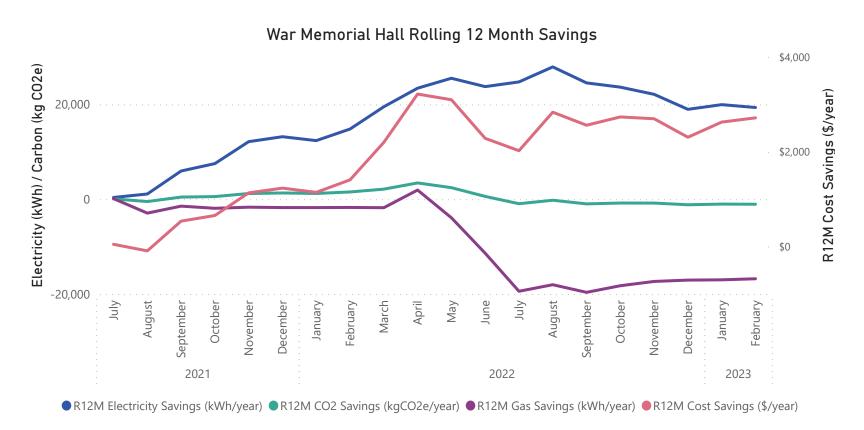




War Memorial Hall

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







Water Treatment Plant

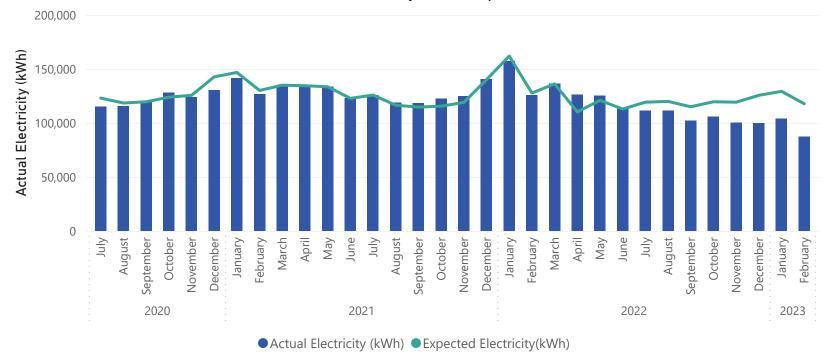
\$5,145	30,483	26%	122,548	3,993
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
\$20,723				16,103
R12M Energy Cost Savings				R12M CO2e Savings (kg/yr)

Comments:

The electricity use baseline was updated for the Water Treatment Plant, the baseline period is July 2021 to June 2022. The electricity baseline uses the amount of water pumped (m³) as the independent variable.

Another month of good savings has been achieved at the WTP in February 2023. The monthly EUI is less than the average over the last 12 months and rolling 12-month savings are increasing, which is excellent. Less water has been treated in February 2023 compared to February 2022.

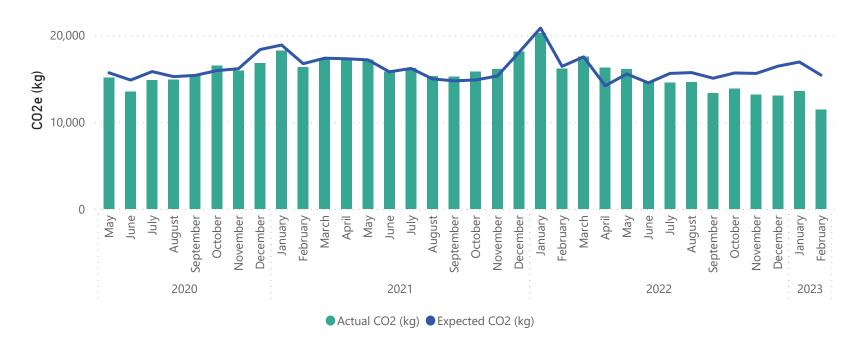


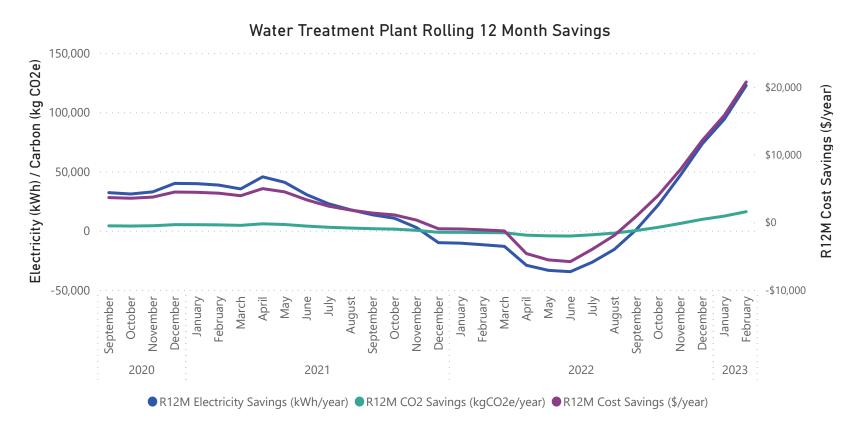




Water Treatment Plant

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

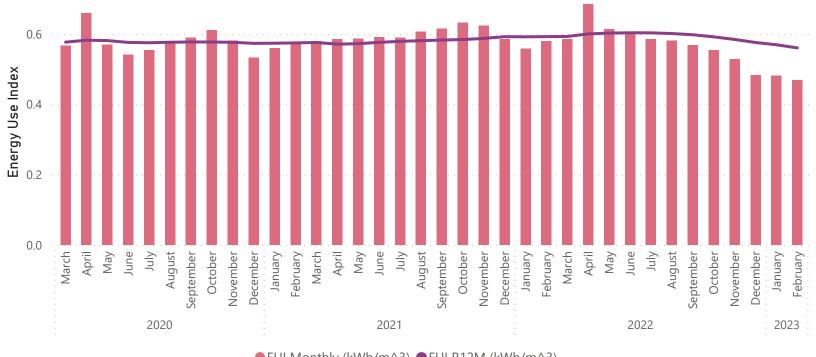






Water Treatment Plant

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



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



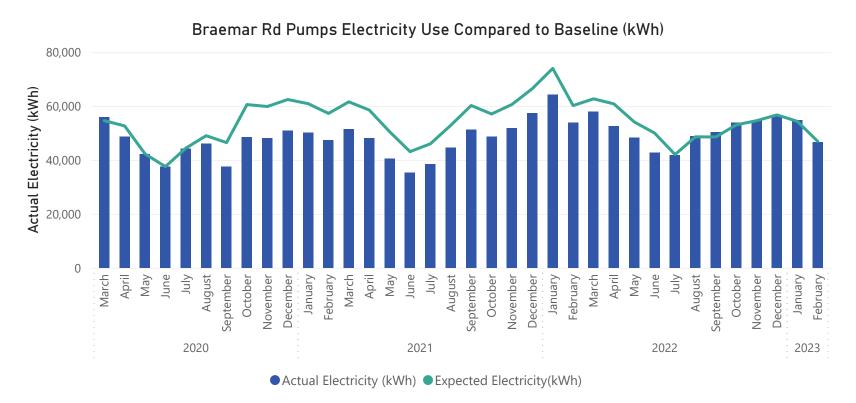
Braemar Road Pump Station

\$49 Monthly Energy Cost Savings	285 Elec. Savings (kWh/mo)	1% Elec. Savings (%)	23,427 R12M Electricity Savings (kWh/yr)	37 CO2e Savings (kg/mo)
\$5,223 R12M Energy Cost Savings	Liec. Savings (kwii) ino)	Elec. Savings (70)	NIZIN Electricity Savings (KWII) III	3,167 R12M CO2e Savings (kg/yr)

Comments:

The electricity use baseline was updated for the Braemar Road Pump Station, the baseline period is July 2021 to June 2022. The electricity baseline uses the amount of water pumped (m³) as the independent variable.

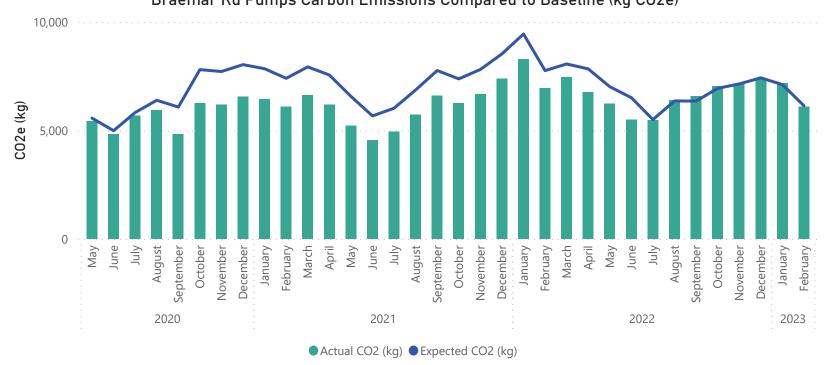
Savings from the high efficiency pumps and motors will no longer be visible when comparing to the new baseline and rolling 12-month savings will decrease. However, real savings have been achieved since September 2020, using approximately 15% less electricity compared to the older pumps and motors, which is evident in the EUI chart.



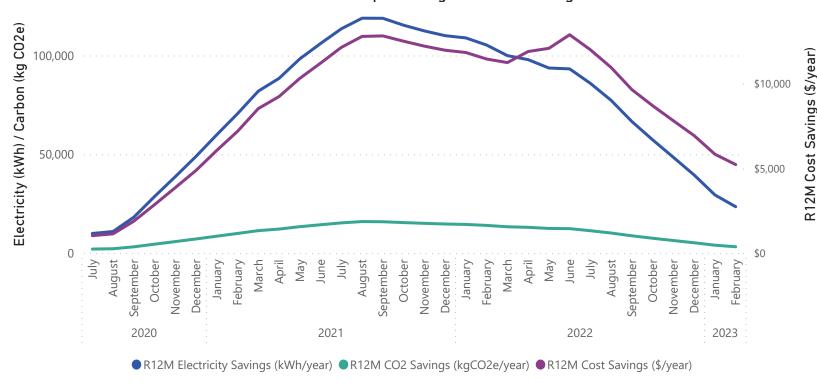


Braemar Road Pump Station









2022

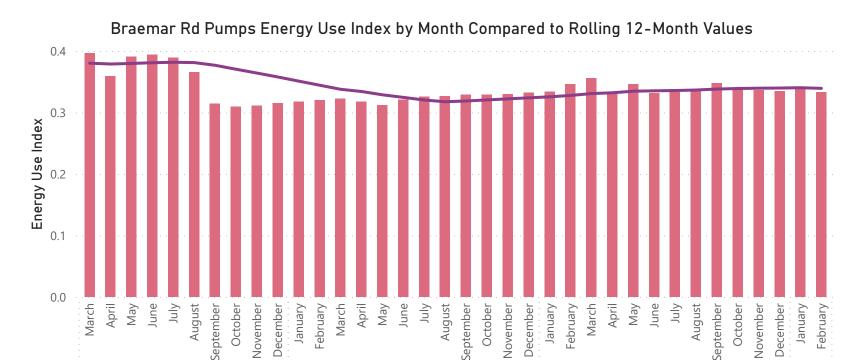
2023



Whakatane District Council

Braemar Road Pump Station

2020



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

2021



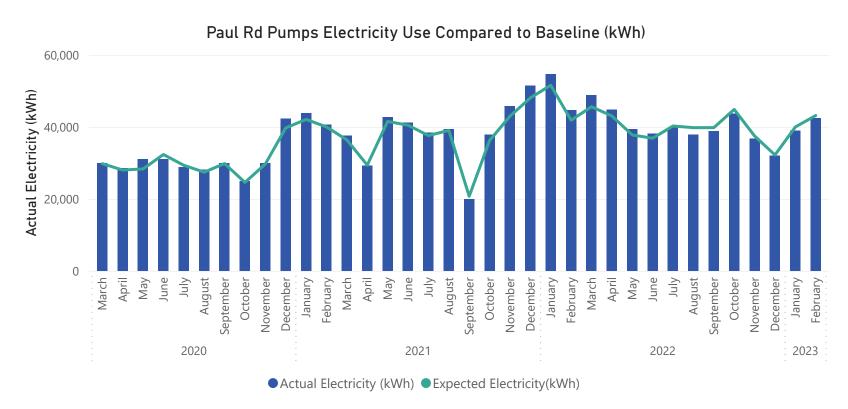
Paul Road Pump Station

\$127	742	2%	-701	97
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
-\$305				-70
R12M Energy Cost Savings				R12M CO2e Savings (kg/yr)

Comments:

The electricity use baseline was updated for the Paul Road Pump Station, the baseline period is July 2021 to June 2022. The electricity baseline uses the amount of water pumped (m³) as the independent variable. The updated baseline has a smaller baseload factor and a larger variable component.

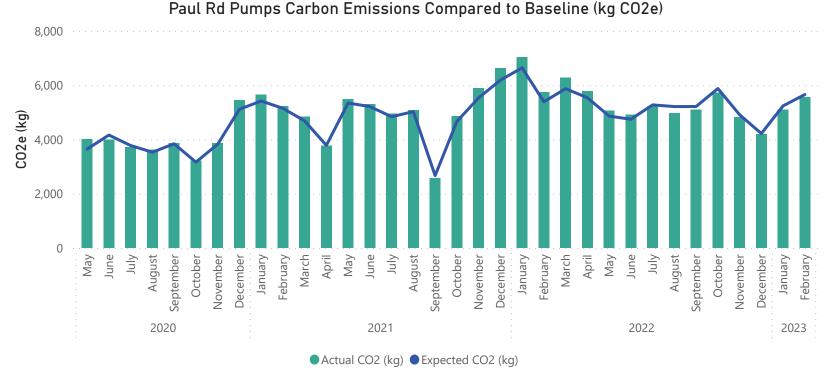
Another month where small savings have been achieved at the Paul Road Pump Station. The monthly EUI is slightly less than average over the past 12 months and rolling 12 month savings are increasing, however are still negative.

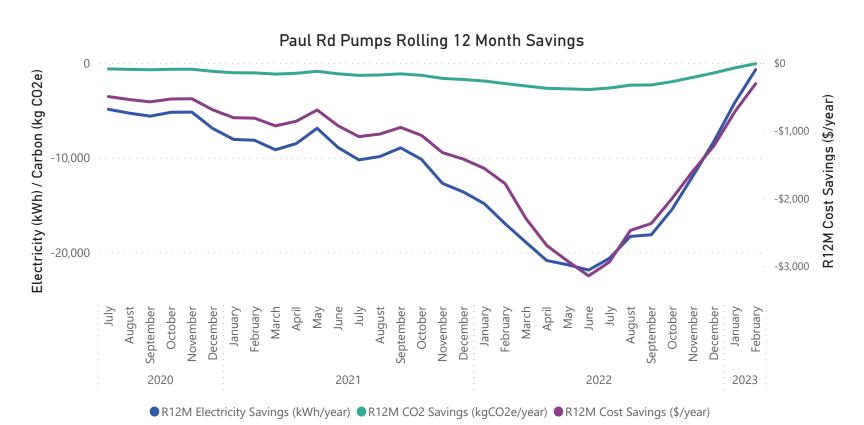




Paul Road Pump Station



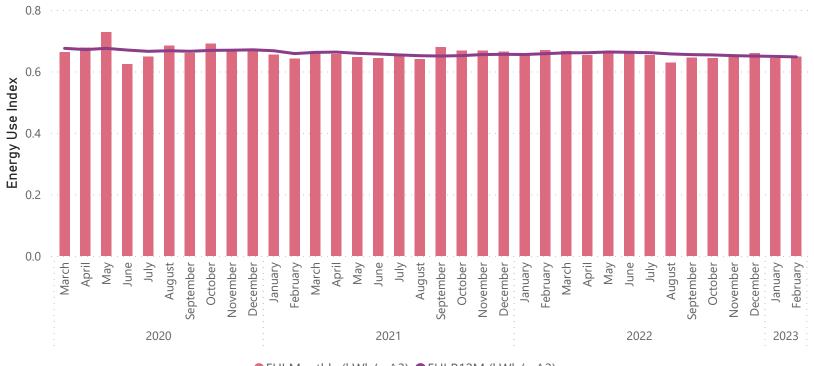






Paul Road Pump Station





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



Johnson Road Pump Station

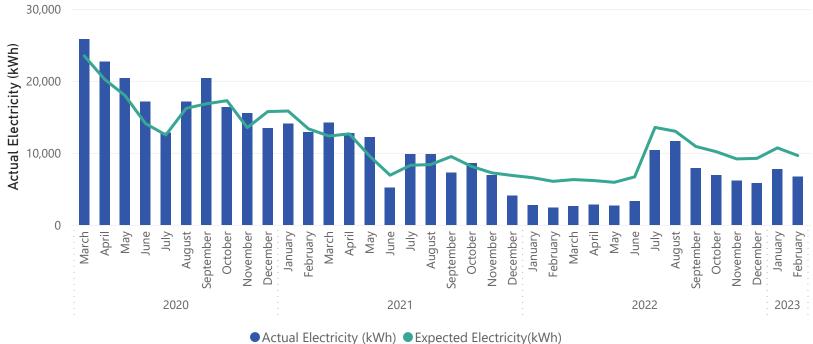
\$639	2,968	31%	36,934	389
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
\$8,021				4,807
R12M Energy Cost Savings				R12M CO2e Savings (kg/yr)

Comments:

The electricity use baseline was updated for the Johnson Road Pump Station, the baseline period is Aug 2018 to June 2022. The electricity baseline uses the amount of water pumped (m³) as the independent variable. The updated baseline has a smaller baseload factor and a larger variable component.

Another good month of savings for the month at Johnson Rd Pump Station, using nearly 30% less electricity than expected.





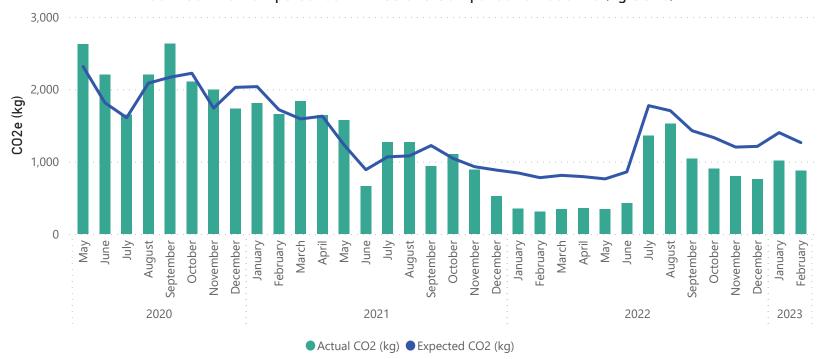
\$10,000



Whakatane District Council

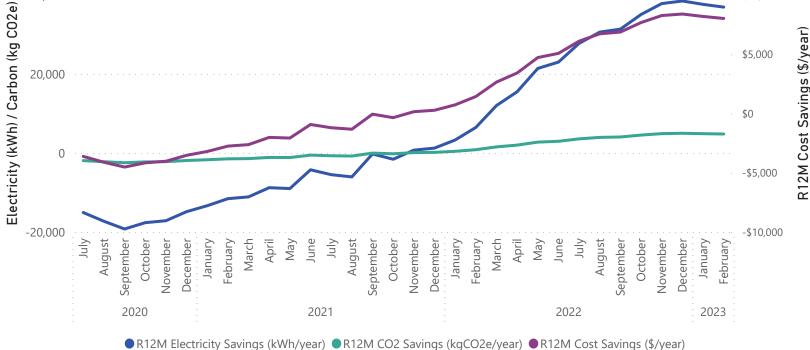
Johnson Road Pump Station





Johnson Rd Pumps Rolling 12 Month Savings

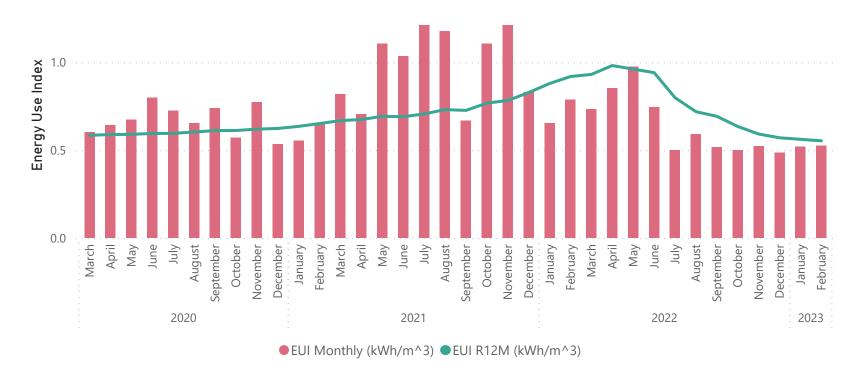






Johnson Road Pump Station

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





Johnson and Braemar Rd Pump Stations

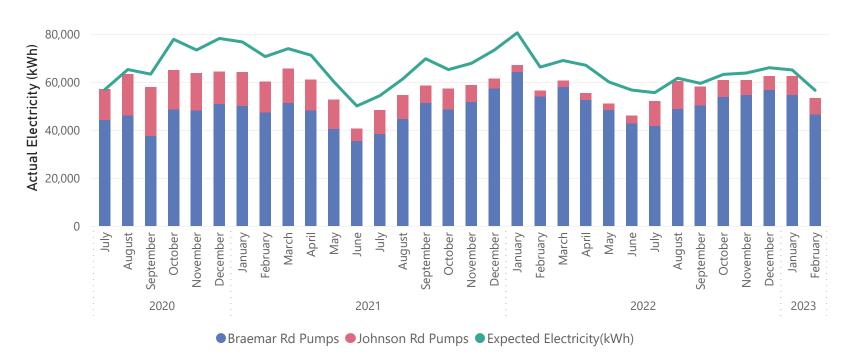
\$688	3,254	6%	60,361	426
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
\$13,243 R12M Energy Cost Savings				7,974 R12M CO2e Savings (kg/yr)

Comments:

Baselines were updated for Johnson Road and Braemar Road pump stations.

Johnson Rd achieved savings in February 2023, Braemar Rd pump station's electricity use slightly less than expected for the month. The monthly EUI for the two pumps has shown a trend of decreasing energy use in recent months, which is good.

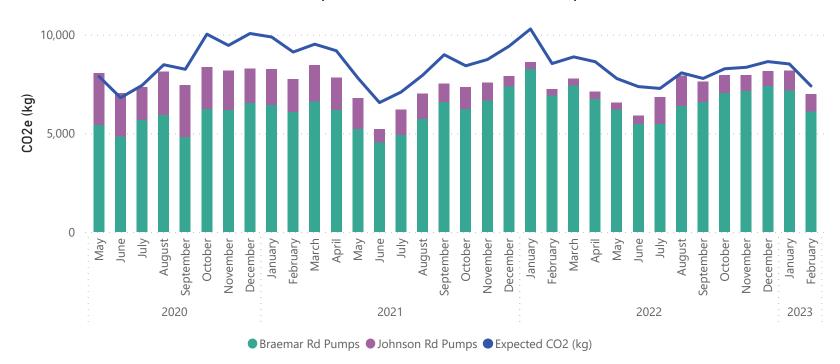
Johnson and Braemar Rd Pump Stations Electricity Use Compared to Baseline (kWh)

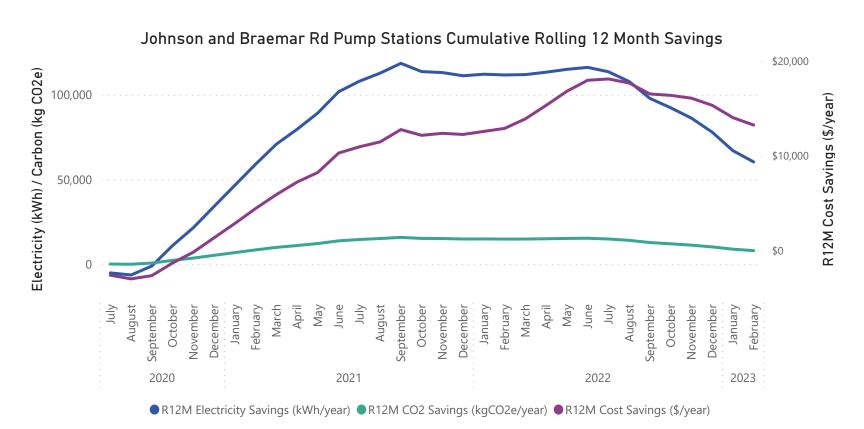




Johnson and Braemar Rd Pump Stations

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

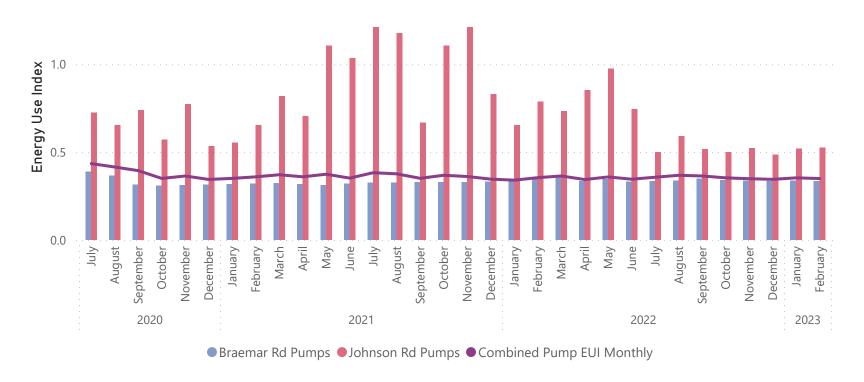






Johnson and Braemar Rd Pump Stations

Johnson and Braemar Rd Pump Stations Energy Use Index by Month





Bridger Glade Pump Station

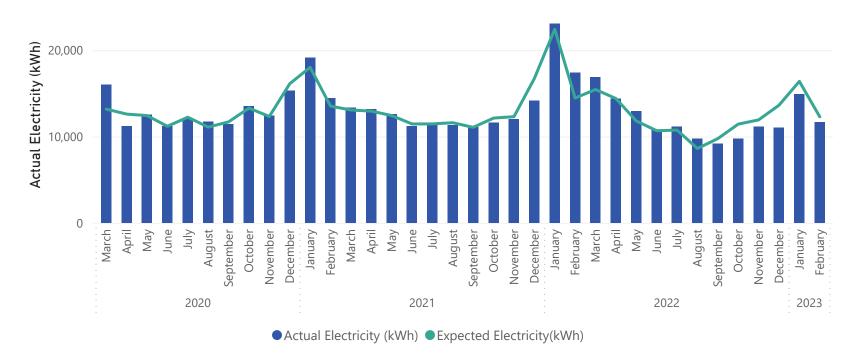
595	5%	3,577	78
Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
			475
			R12M CO2e Savings (kg/yr)

Comments:

The electricity use baseline was updated for the Bridger Glade Pump Station, the baseline period is July 2021 to June 2022. The electricity baseline uses the amount of water pumped (m³) as the independent variable. The updated baseline has no baseload factor and a marginally larger variable component.

February is the sixth 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. The monthly EUI is less than average over the last 12 months.

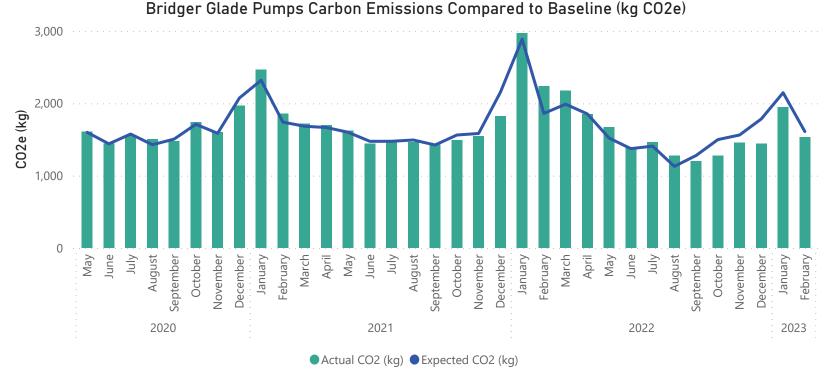
Bridger Glade Pumps Electricity Use Compared to Baseline (kWh)



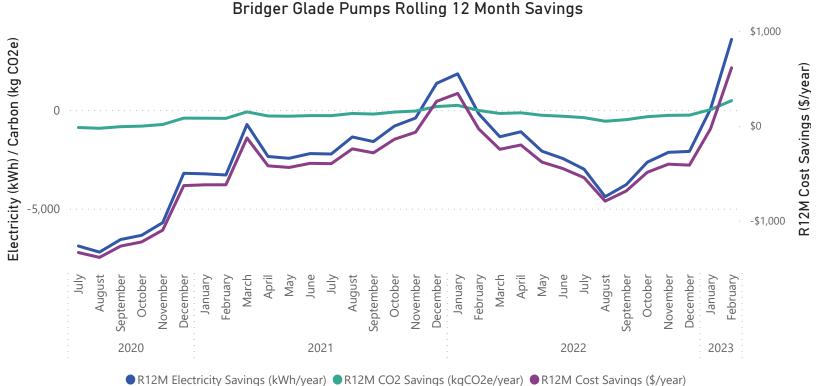


Bridger Glade Pump Station





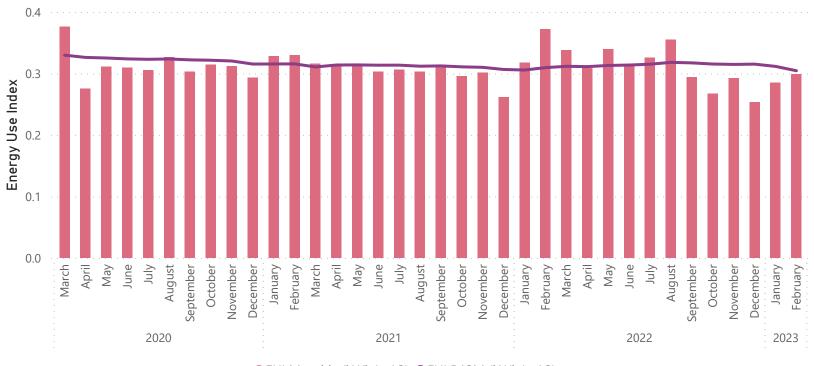






Bridger Glade Pump Station





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



Ohope Oxidation Ponds

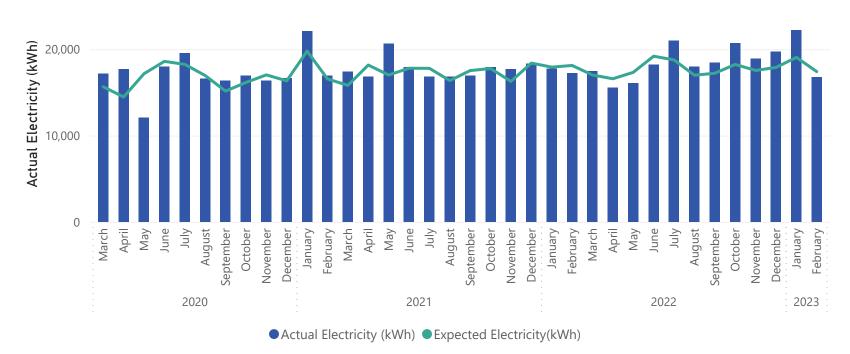
\$113 Monthly Energy Cost Savings	642 Elec. Savings (kWh/mo)	4% Elec. Savings (%)	-9,881 R12M Electricity Savings (kWh/yr)	84 CO2e Savings (kg/mo)
-\$1,729 R12M Energy Cost Savings				-1,301 R12M CO2e Savings (kg/yr)

Comments:

The baseline for electricity use was updated for the Ohope Oxidation Ponds, the baseline period is July 2021 to June 2022. The electricity baseline uses the amount of effluent pumped (m^3) as the independent variable. The updated baseline has a larger baseload factor and a smaller variable component.

Ohope Oxidation Ponds have used more electricity than expected in 8 of the last 12 months. Rainfall has generally been higher than usual, which may contribute to higher electricity usage.

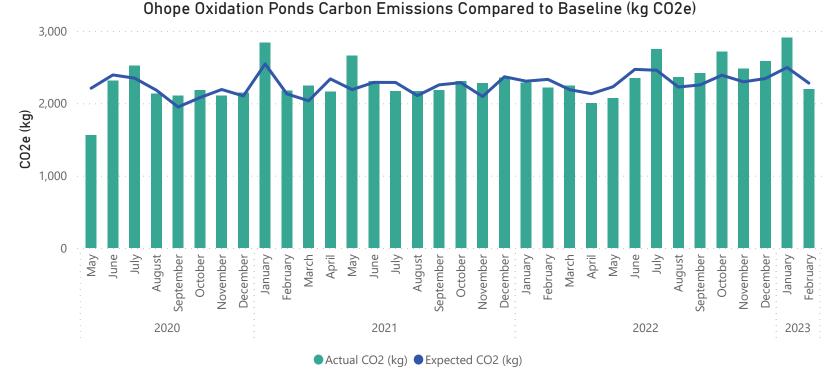
Ohope Oxidation Ponds Electricity Use Compared to Baseline (kWh)

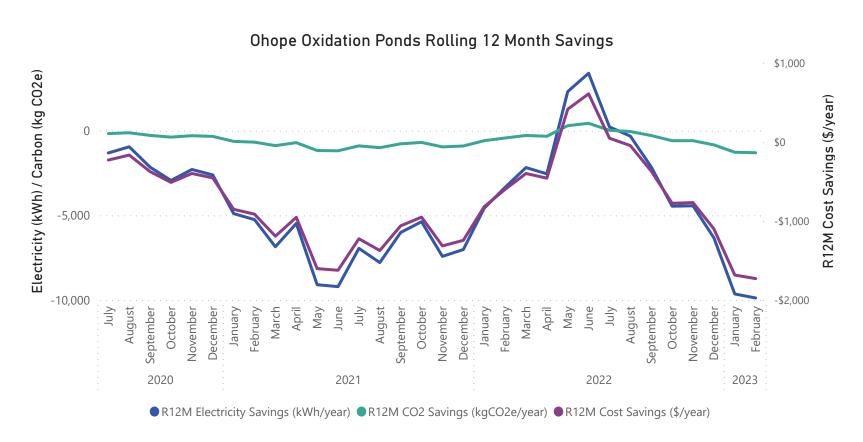




Ohope Oxidation Ponds



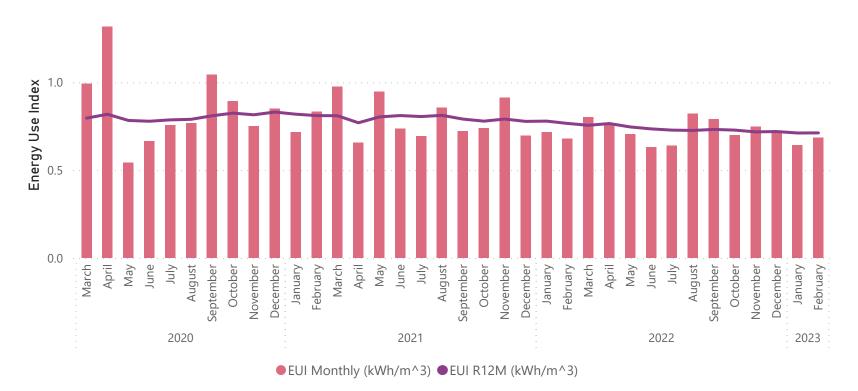






Ohope Oxidation Ponds

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





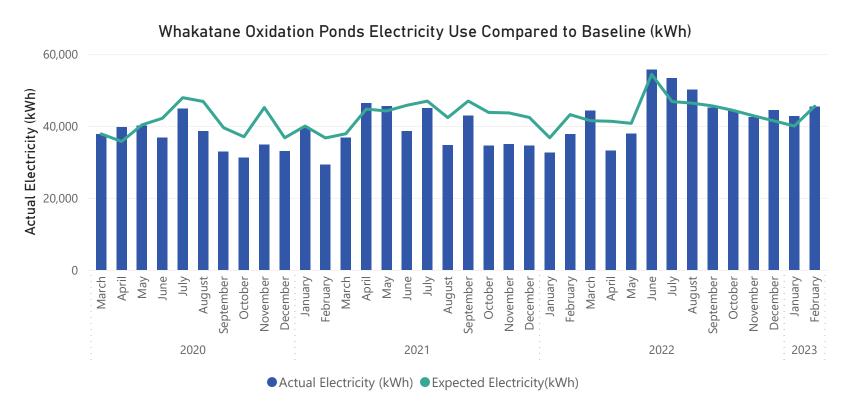
Whakatane Oxidation Ponds

\$16	92	0%	-8,110	12
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
-\$1,267				-1,078
R12M Energy Cost Savings				R12M CO2e Savings (kg/yr)

Comments:

The electricity use baseline was updated for the Whakatane Oxidation Ponds, the baseline period is July 2021 to June 2022. The electricity baseline combines electricity use for the NHH and TOU account and uses the effluent volumes each month (m^3) as the independent variable. The updated baseline has a smaller baseload factor and a smaller variable component.

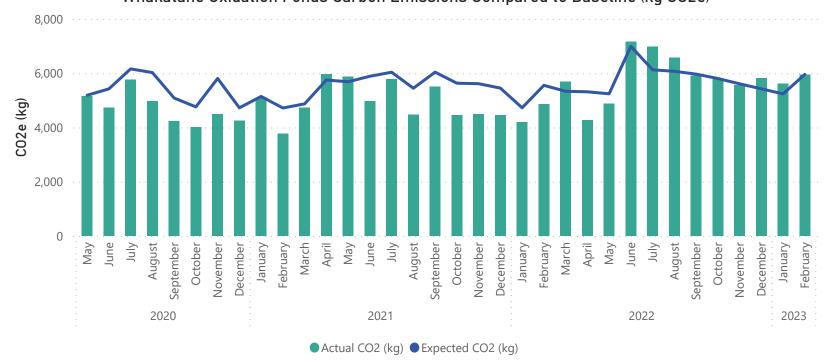
The oxidation ponds' electricity use is close to expected in February 2023. The monthly EUI has decreased, previously the EUI was steadily increasing from September 2022 to January 2023.

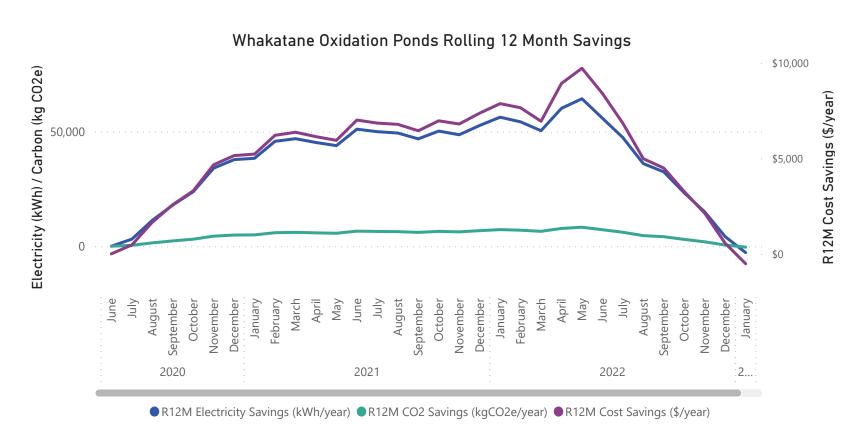




Whakatane Oxidation Ponds









Whakatane Oxidation Ponds

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





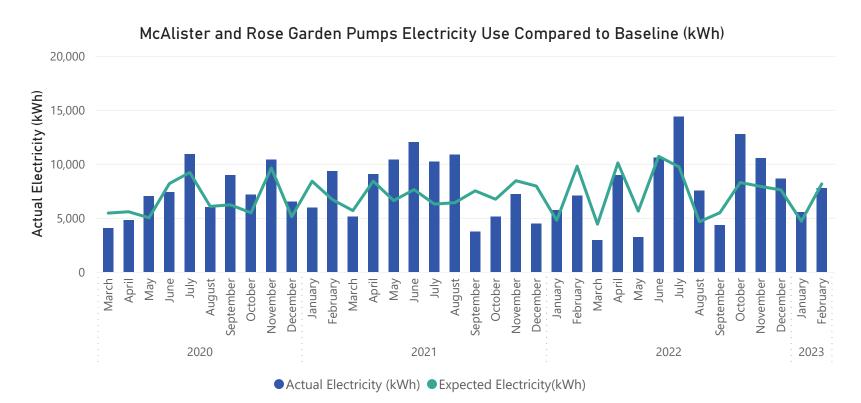
McAlister Street and Rose Garden Pump Stations

\$366 Monthly Energy Cost Savings	387 Elec. Savings (kWh/mo)	5% Elec. Savings (%)	-9,795 R12M Electricity Savings (kWh/yr)	51 CO2e Savings (kg/mo)
\$2,176 R12M Energy Cost Savings				-1,295 R12M CO2e Savings (kg/yr)

Comments:

The baseline for McAlister St and Rose Garden Pumps was updated, the baseline adjusts for the amount of rainfall at the Kopeopeo weather station. Expected electricity is for McAlister St and Rose Gardens combined. The baseline period uses data from July 2021 to June 2022. The updated baseline uses a smaller baseload and a marginally smaller variable component.

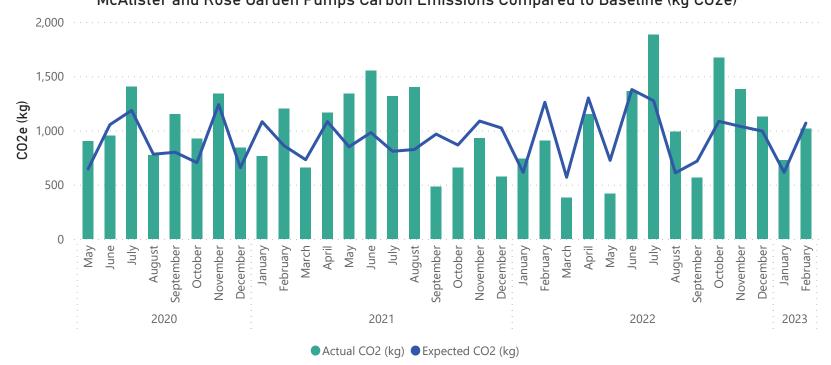
The pump stations used less electricity than expected this month. February 2023 was a high rainfall month. Over 200mm of rain coincided within the billing period.



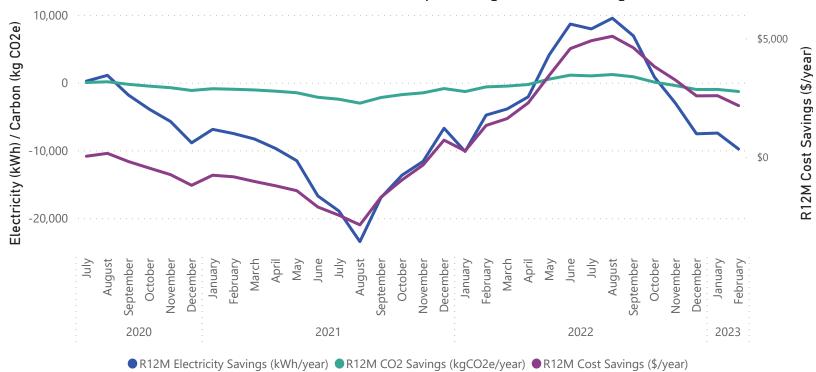


McAlister Street and Rose Garden Pump Stations











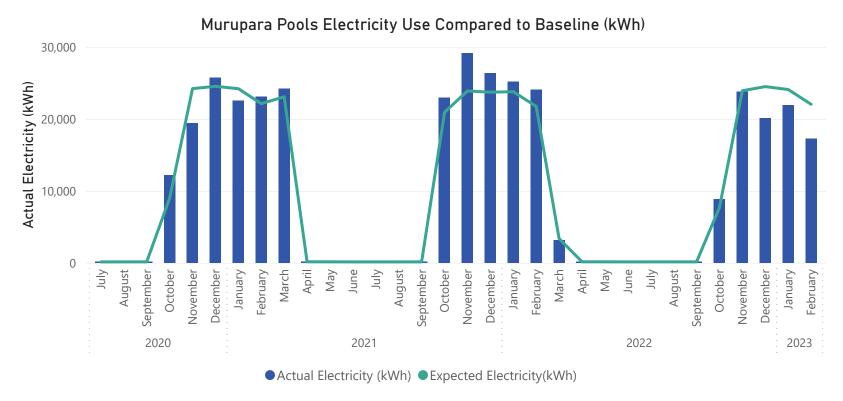
Murupara Pools

\$863 Monthly Energy Cost Savings	4,774 Elec. Savings (kWh/mo)	22% Elec. Savings (%)	10,842 R12M Electricity Savings (kWh/yr)	625 CO2e Savings (kg/mo)
\$1,919 R12M Energy Cost Savings				1,420 R12M CO2e Savings (kg/yr)

Comments:

Murupara Pools have been added to reporting in December 2022. The baseline period uses data from July 2021 to June 2022 and adjusts for ambient temperature as well as how many days in the month the pool is open or closed.

The pools used less electricity than expected in February 2023, even though it was a cooler month compared to previous seasons, which usually requires more electricity for heating.





Murupara Pools

August

October

November

September

2020

