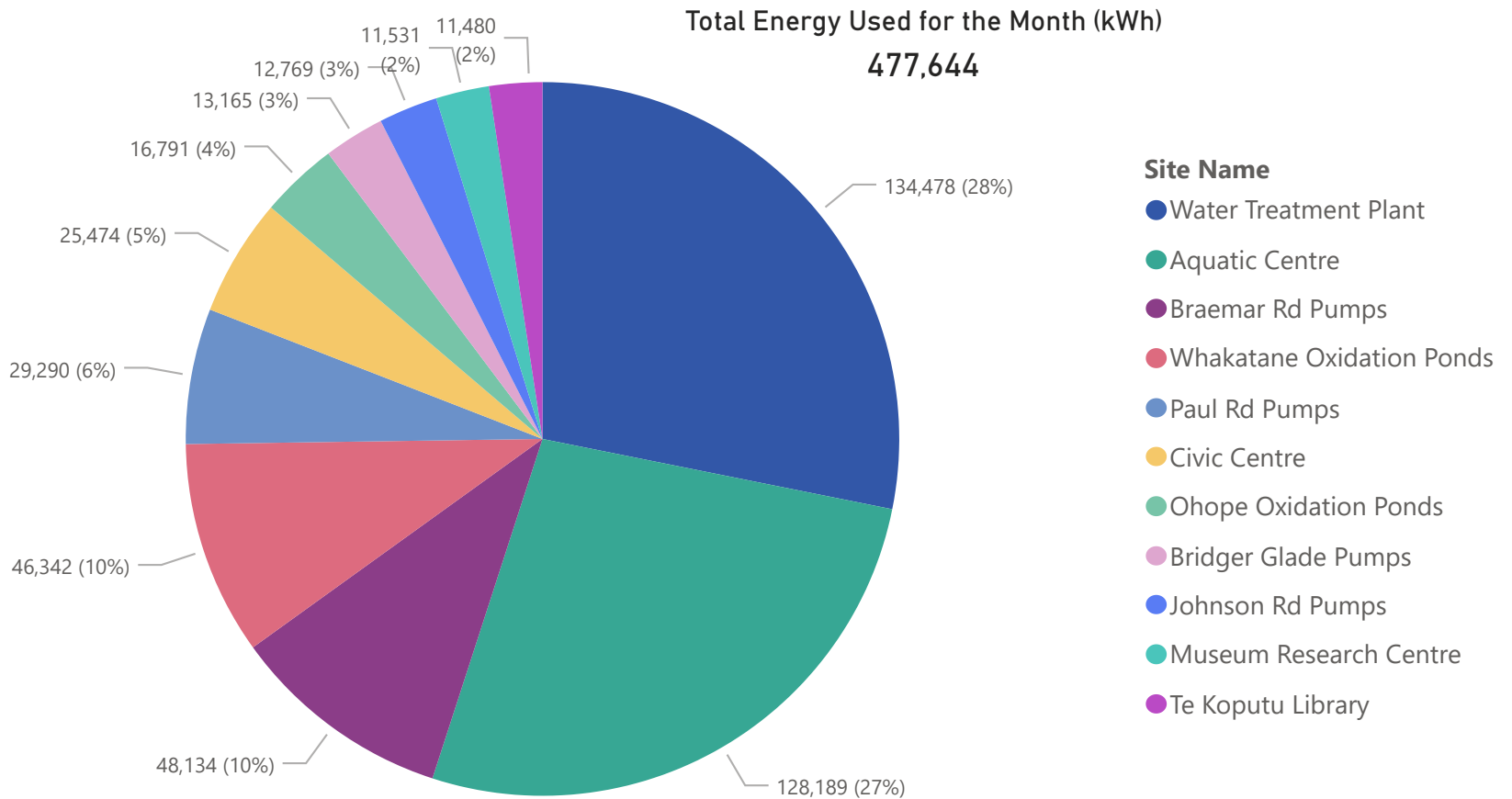


Whakatane District Council

Summary

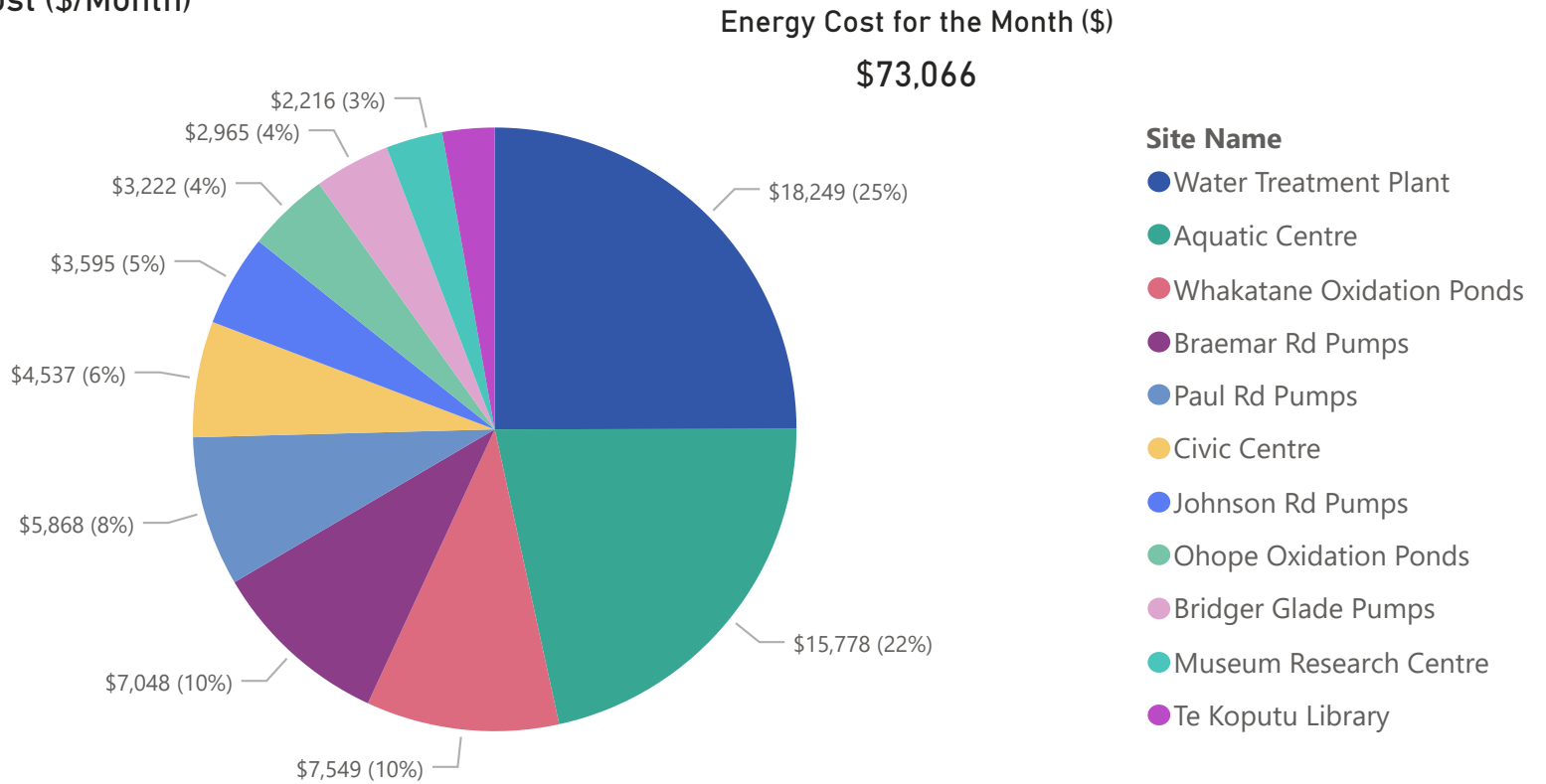
<p>\$5,131 Monthly Energy Cost Savings</p>	<p>-41,210 Elec. Savings (kWh/mo)</p>	<p>-10% Elec. Savings (%)</p>	<p>42,631 R12M Electricity Savings (kWh/yr)</p>	<p>23,227 CO2e Savings (kg/mo)</p>
<p>\$50,116 R12M Energy Cost Savings</p>	<p>131,431 Gas. Savings (kWh/mo)</p>	<p>95% Gas. Savings (%)</p>	<p>639,556 R12M Gas Savings (kWh/yr)</p>	<p>108,418 R12M CO2e Savings (kg/yr)</p>

Total Energy (kWh/Month)

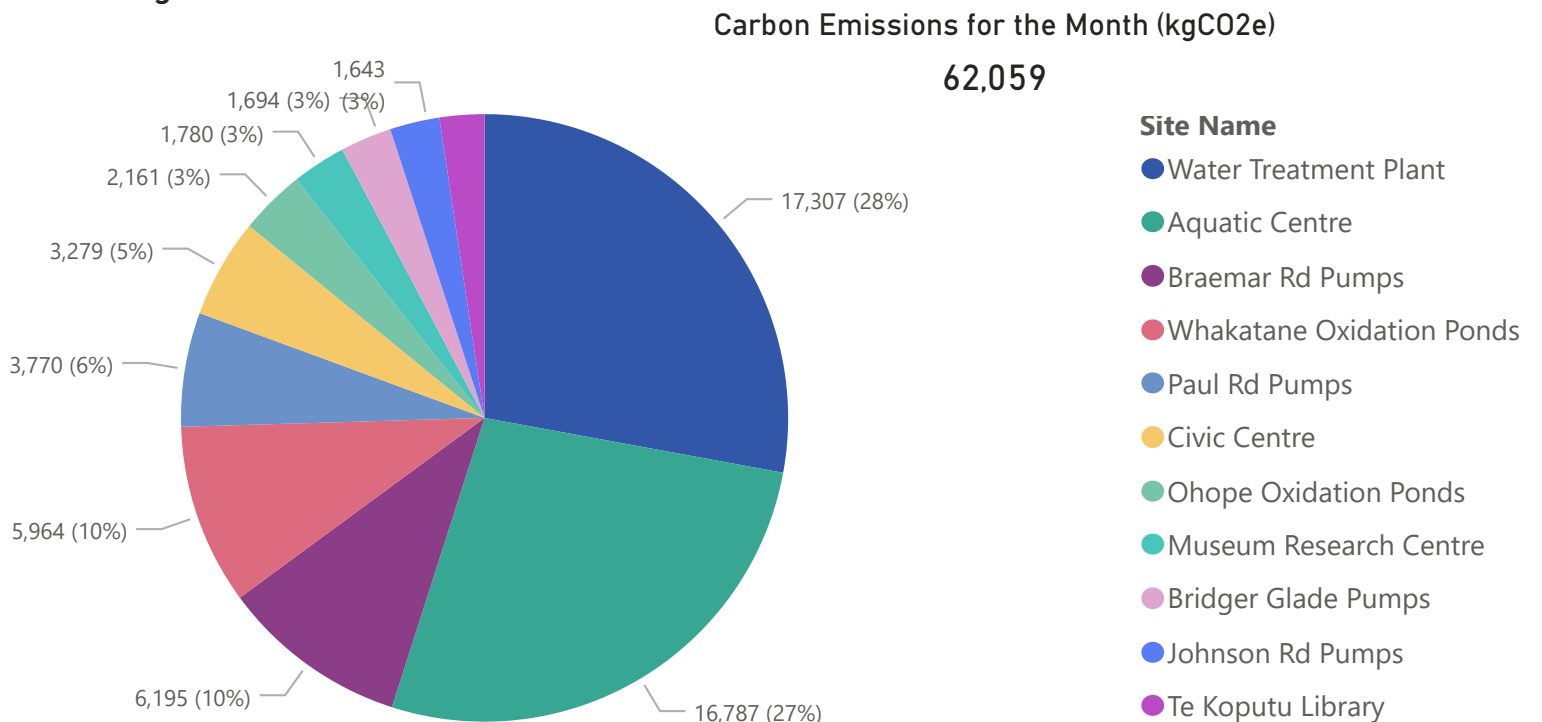


Whakatane District Council Summary

Energy Cost (\$/Month)



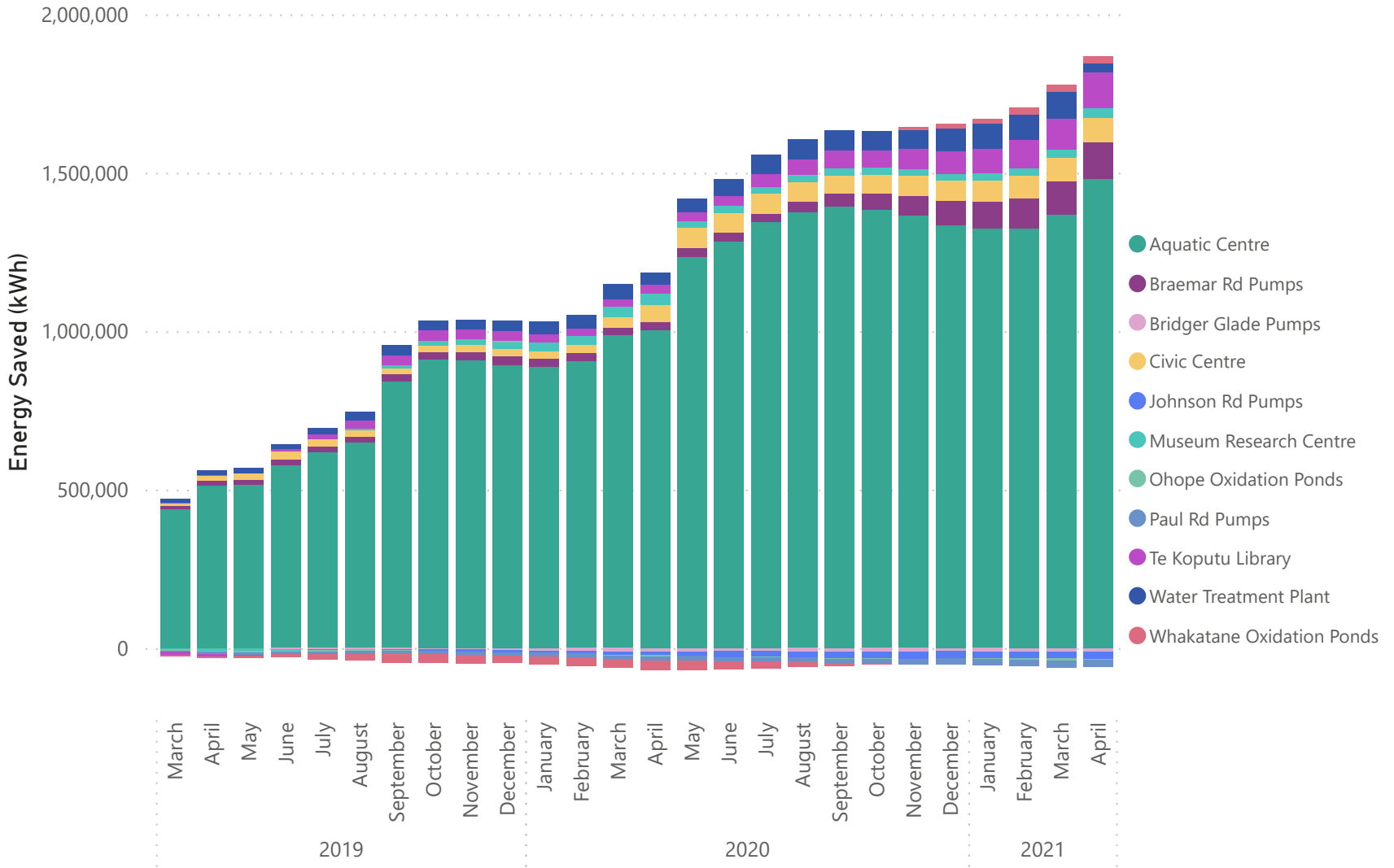
Carbon Emissions (kgCO2e/Month)



Whakatane District Council

Summary

Cumulative Energy Savings (kWh)

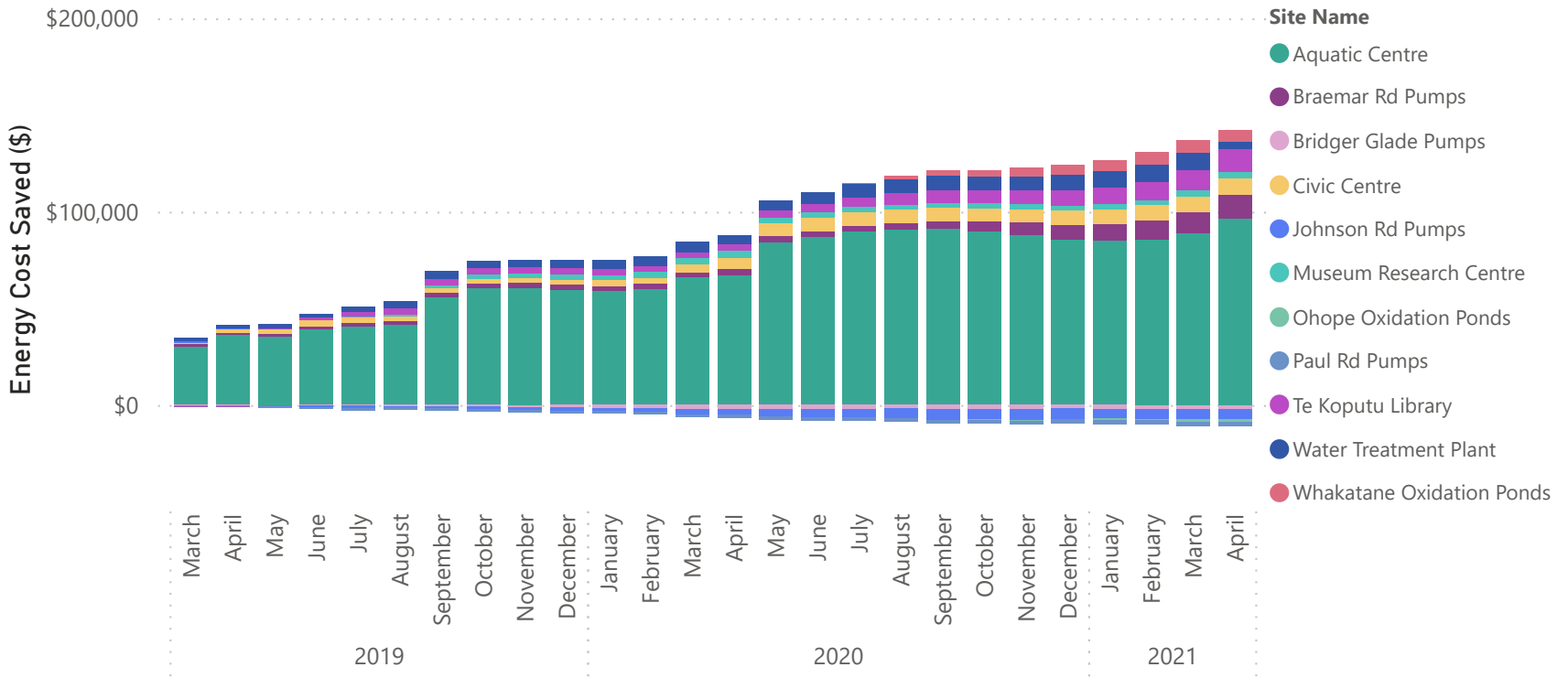


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

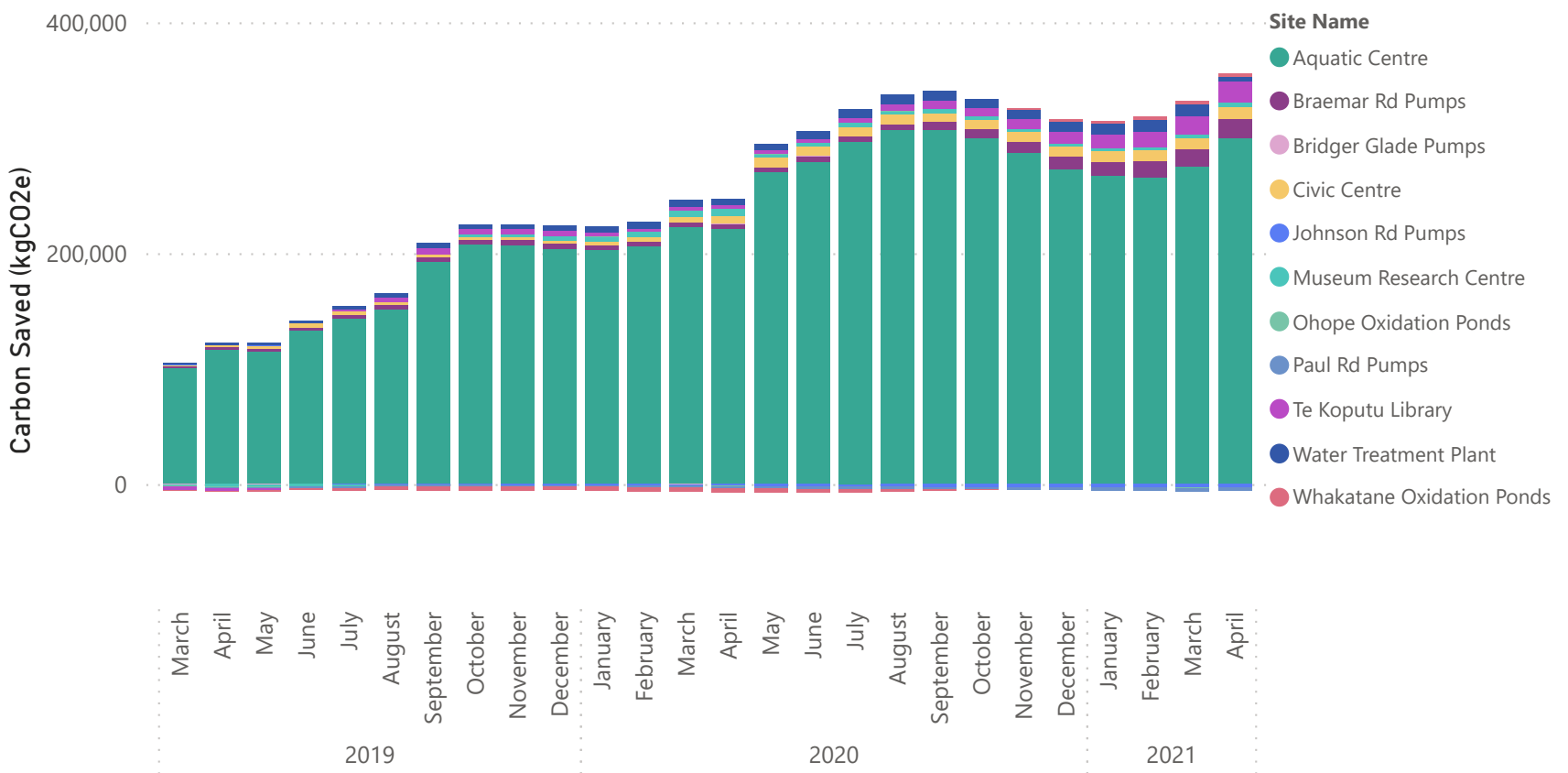
Whakatane District Council

Summary

Cumulative Energy Cost Savings (\$/month)



Cumulative Carbon Savings (kgCO2e/month)



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

Whakatane District Council

Civic Centre

<p>\$580 Monthly Energy Cost Savings</p>	<p>5,159 Elec. Savings (kWh/mo)</p>	<p>17% Elec. Savings (%)</p>	<p>26,057 R12M Electricity Savings (kWh/yr)</p>	<p>632 CO2e Savings (kg/mo)</p>
<p>\$2,842 R12M Energy Cost Savings</p>				<p>3,275 R12M CO2e Savings (kg/yr)</p>

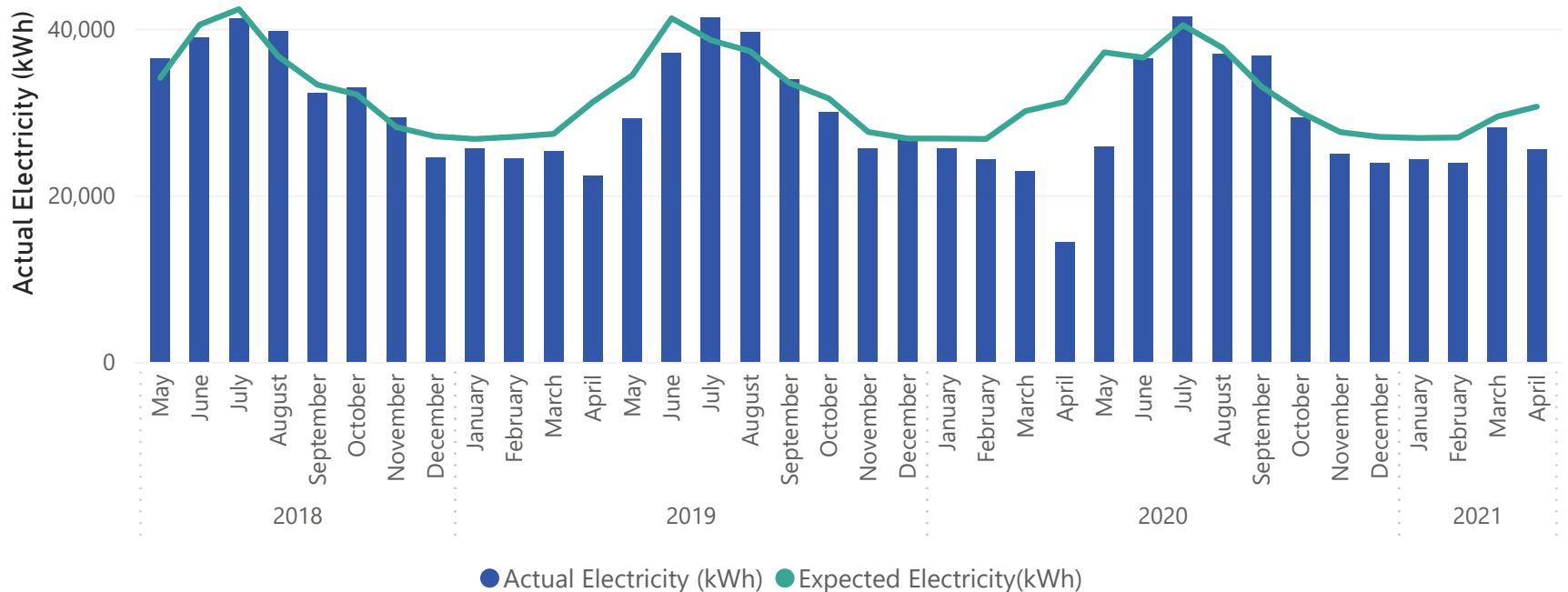
Comments:

Energy use in April was less than baseline, and has similar use to the past six months, excluding March. March was an outlier in energy use. 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 April 2020, April 2021 used significantly more electricity, however, last year was affected by the Covid-19 lockdown.

Rolling 12 month electricity savings have decreased significantly, which is a reflection of 'savings' made during some of the lockdown period no longer being counted in the 12 month savings period.

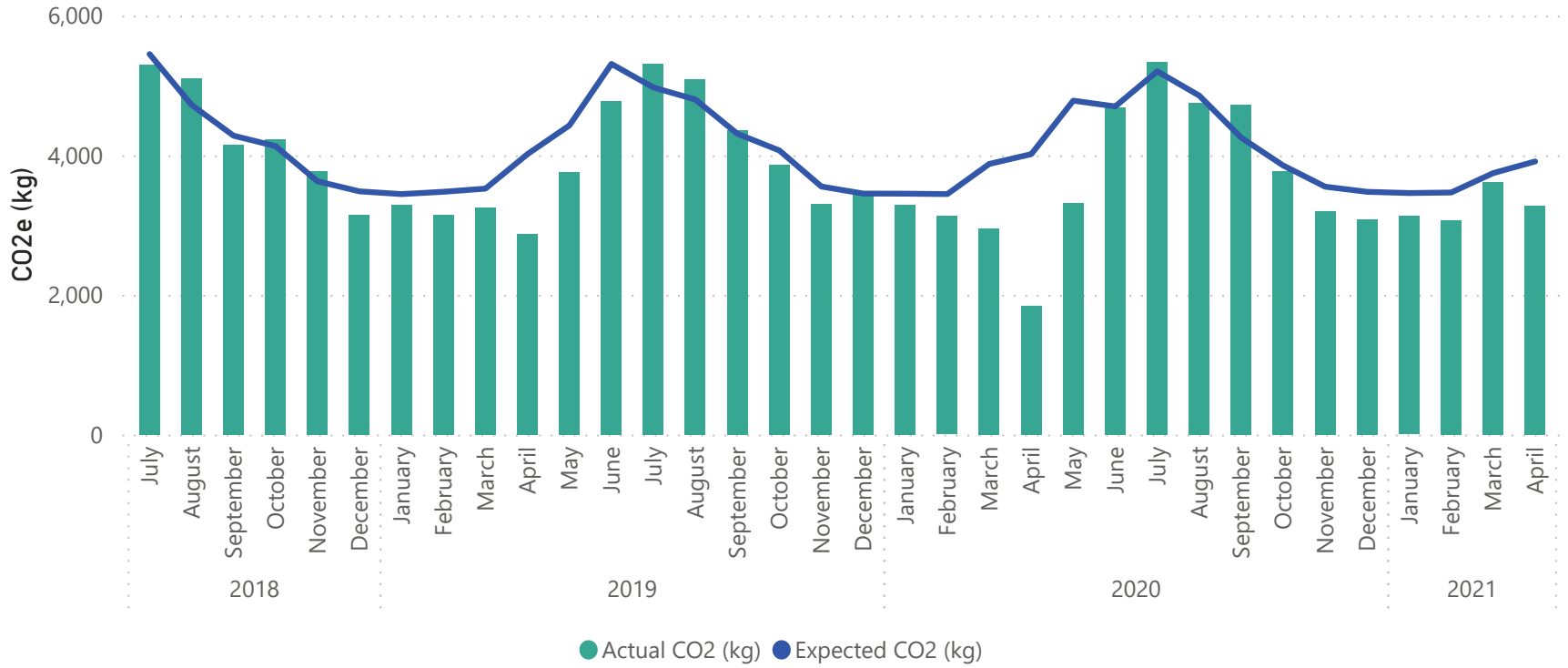
Civic Centre Electricity Use Compared to Baseline (kWh)



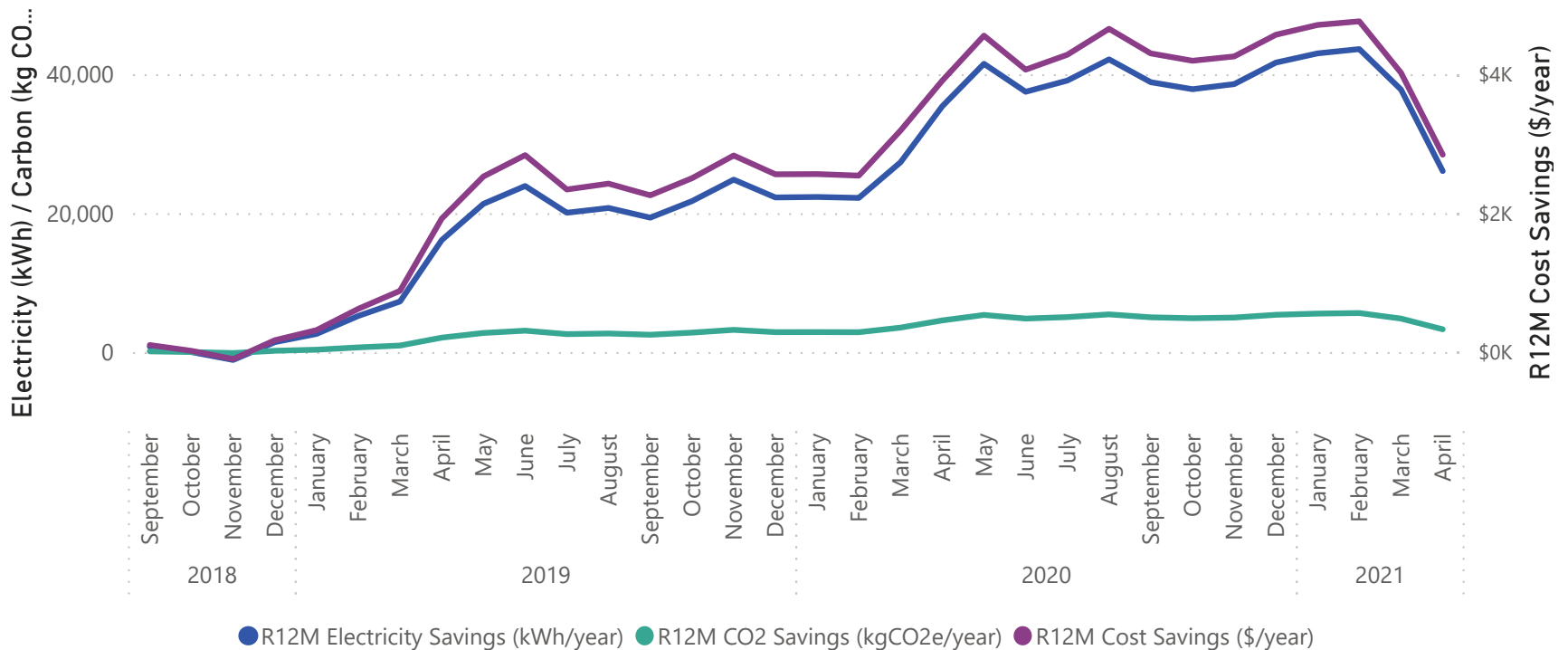
Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

Whakatane District Council Civic Centre

Civic Centre Carbon Emissions Compared to Baseline (kg CO₂e)



Civic Centre Cumulative Rolling 12 Month Savings

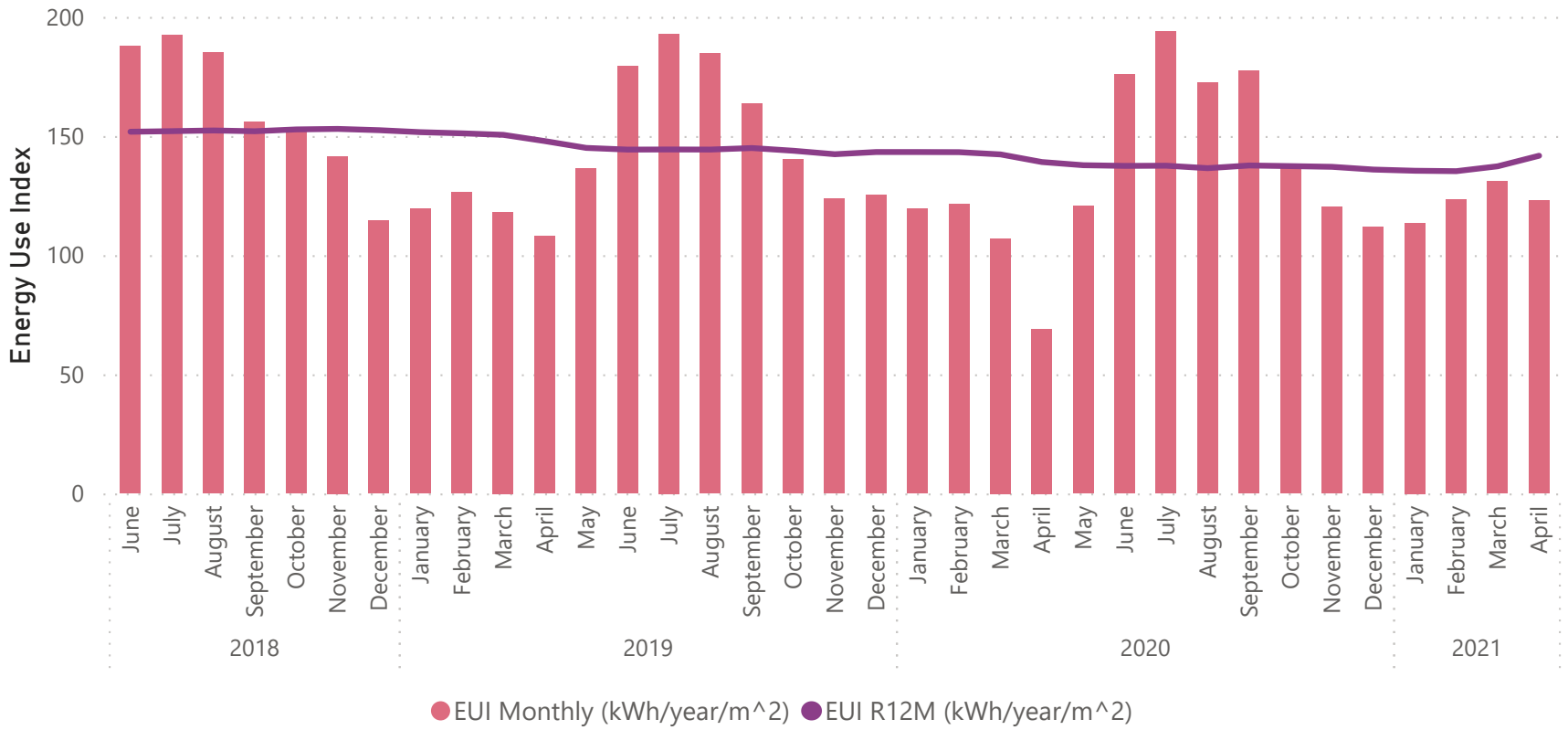


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

Whakatane District Council

Civic Centre

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



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

Whakatane District Council

Aquatic Centre

\$7,640 Monthly Energy Cost Savings	-8,561 Elec. Savings (kWh/mo)	-7% Elec. Savings (%)	-134,642 R12M Electricity Savings (kWh/yr)	24,879 CO2e Savings (kg/mo)
\$29,244 R12M Energy Cost Savings	119,679 Gas. Savings (kWh/mo)	97% Gas. Savings (%)	611,941 R12M Gas Savings (kWh/yr)	78,886 R12M CO2e Savings (kg/yr)

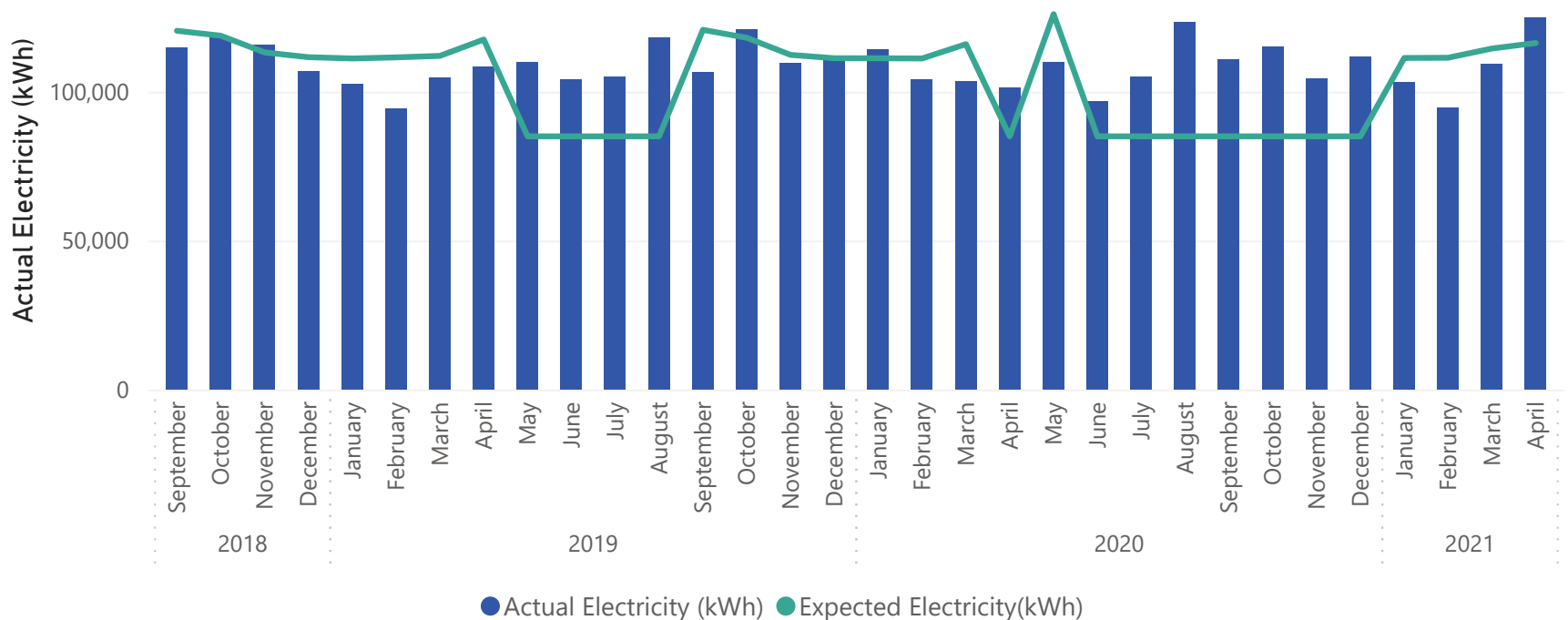
Comments:

The Aquatic Centre's outdoor pool re-opened on 5 January. The outdoor pool is now open year-round and uses a baseline that includes the outdoor pool. On 24 March, a heat pump was switched on that heats the outdoor pool instead of the gas boilers. From 24 March, gas boilers have only used natural gas for idling.

Electricity use in April 2021 is 7% above baseline, however, extra electricity is used by the heat pump instead of natural gas to heat the outdoor pool. Compared to 2020, April 2021 used an extra 23% more electricity.

Natural gas use was less than expected in April. Total gas used in April 2021 is approximately 7% of what was used in March 2021 and has saved approximately \$8,500 this month in natural gas charges.

Aquatic Centre Electricity Use Compared to Baseline (kWh)

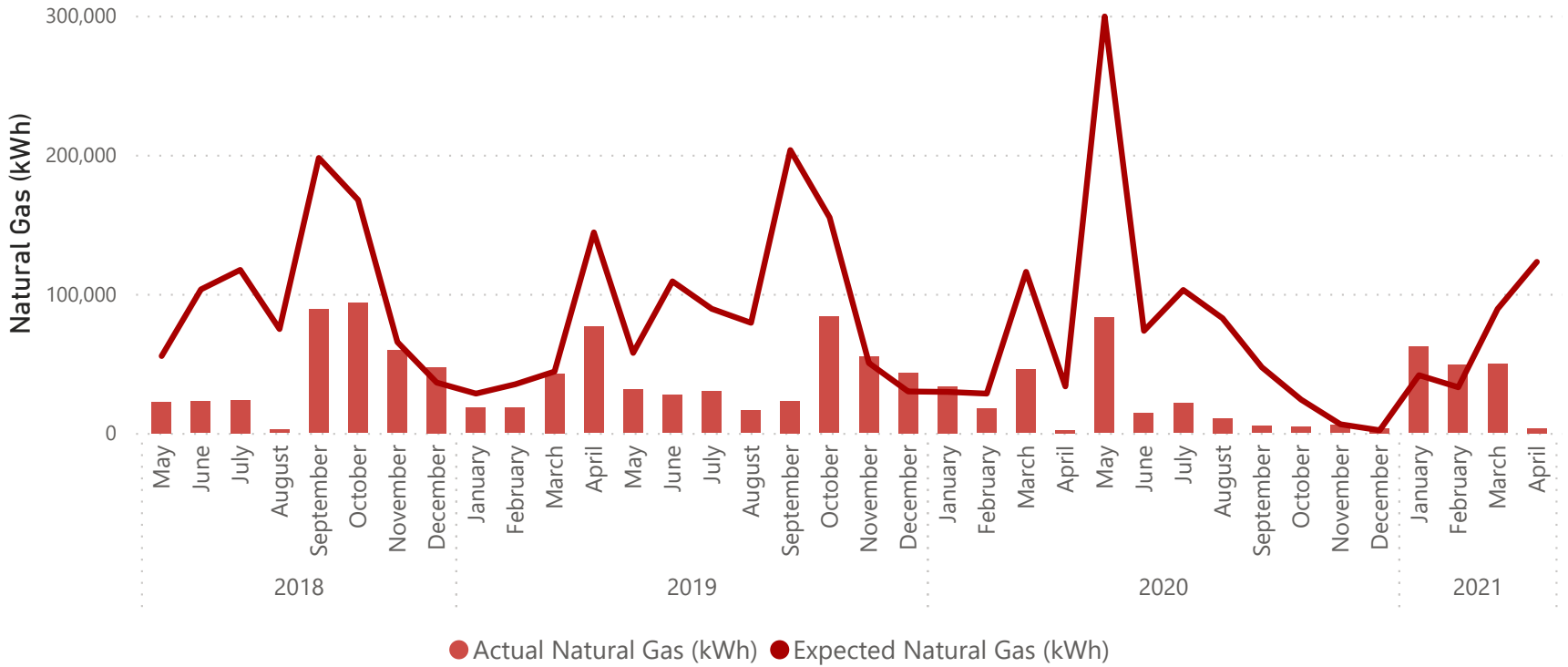


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

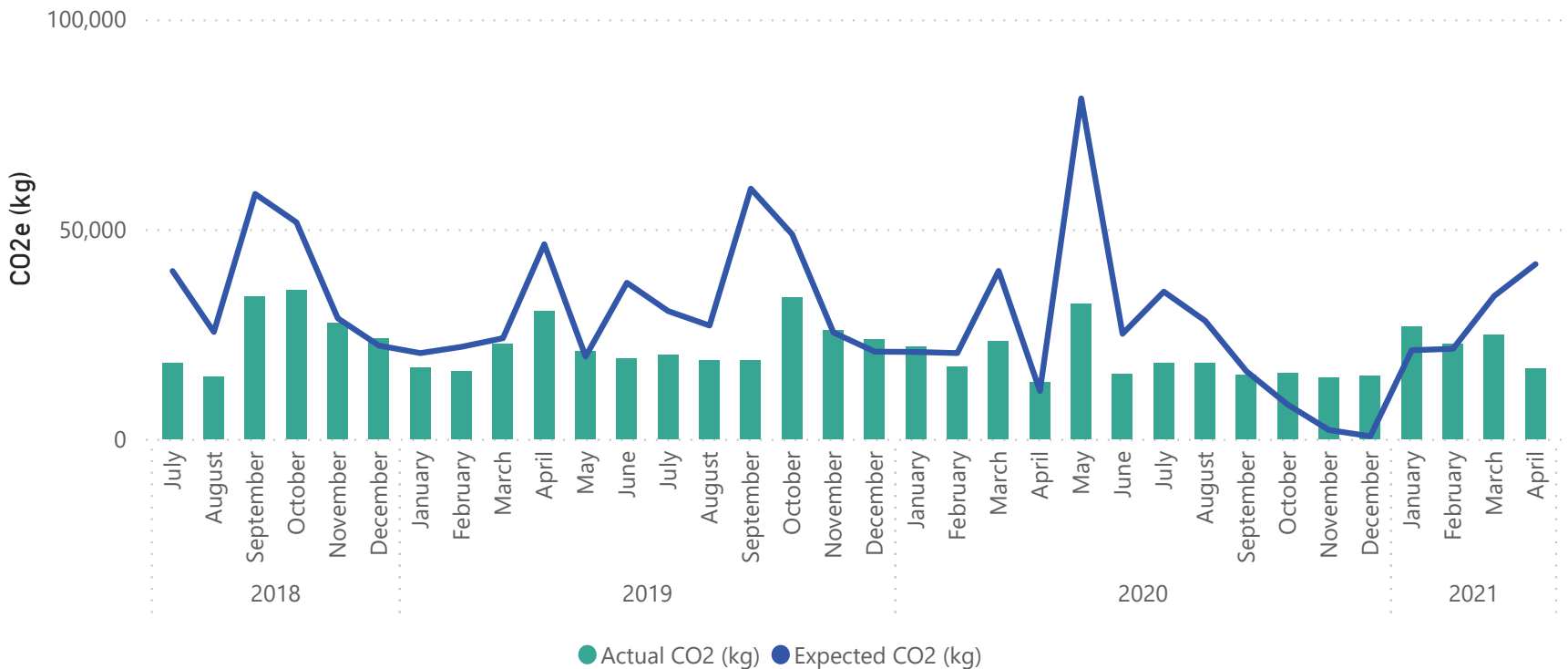
Whakatane District Council

Aquatic Centre

Aquatic Centre Natural Gas Compared to Baseline (kWh)



Aquatic Centre Carbon Emissions Compared to Baseline (kg CO2e)

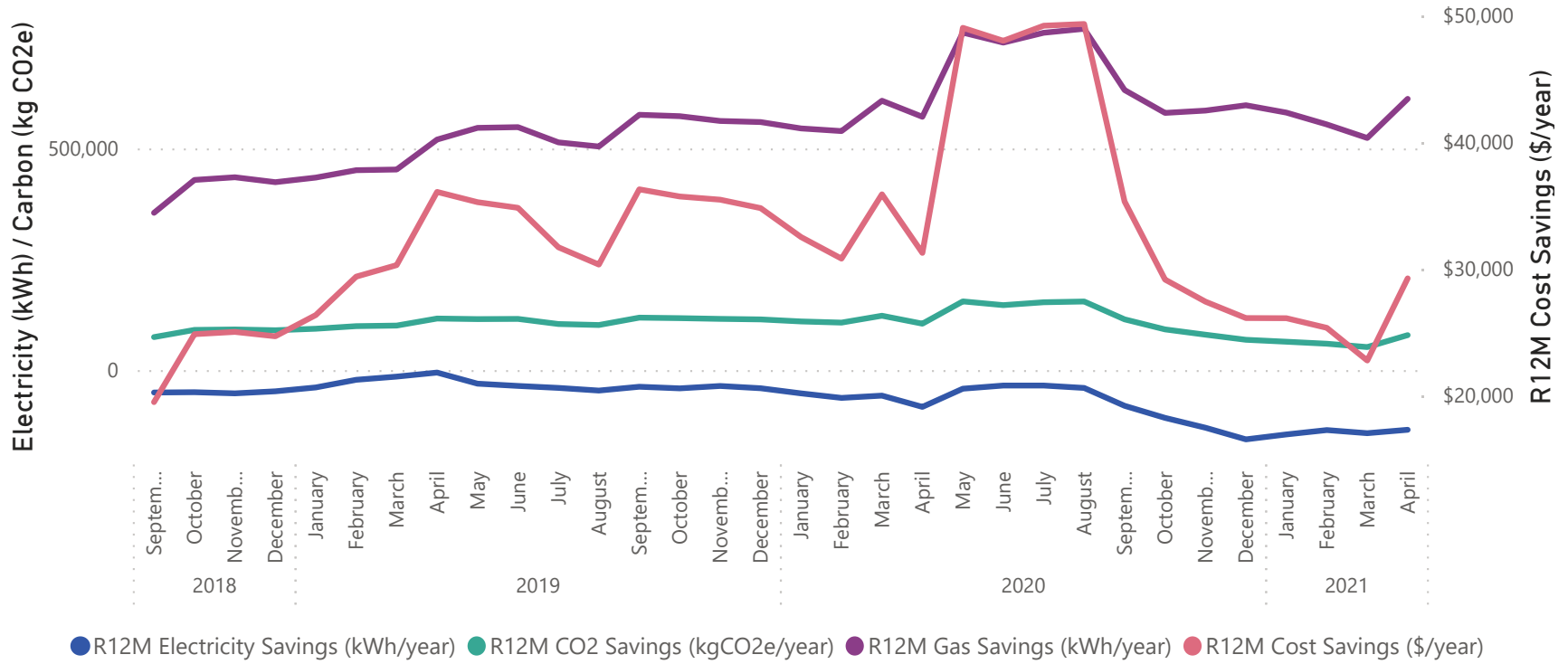


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

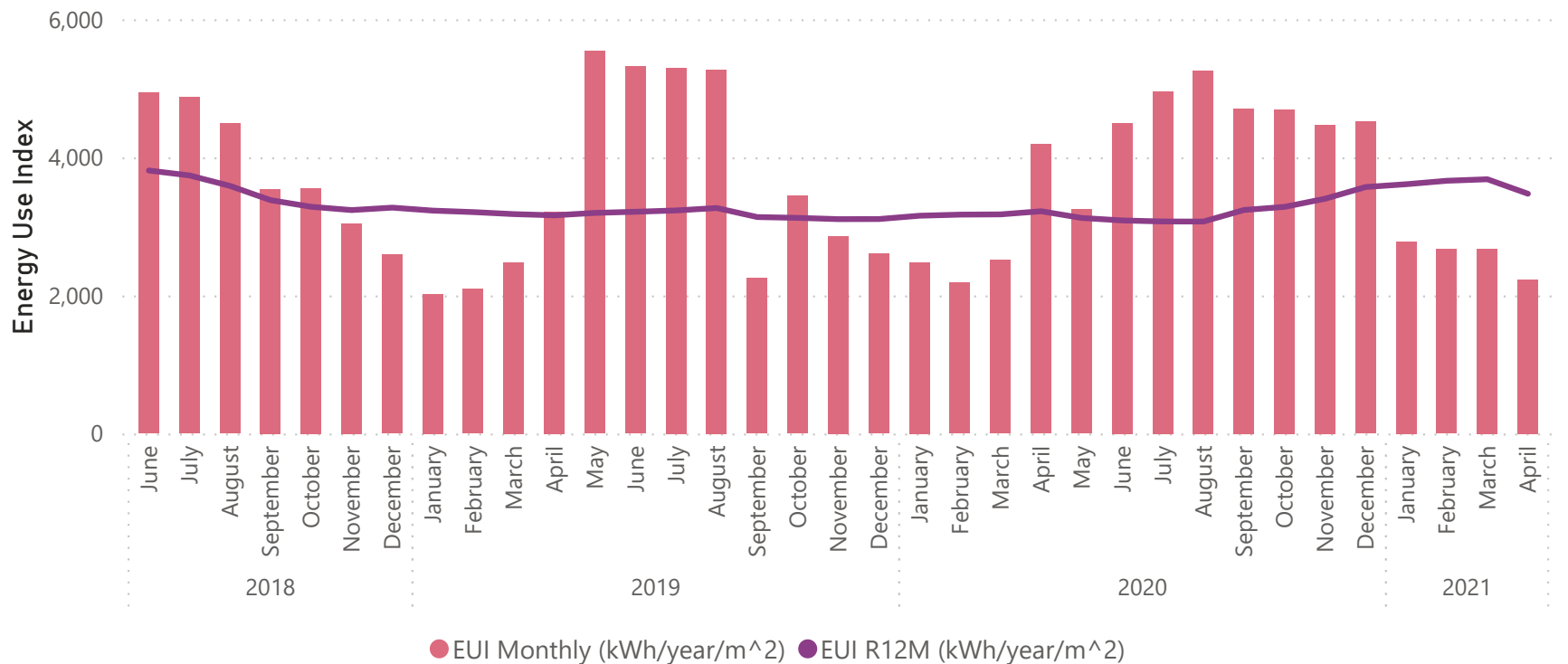
Whakatane District Council

Aquatic Centre

Aquatic Centre Cumulative Rolling 12 Month Savings



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



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

Whakatane District Council

Te Koputu Library

<p>\$1,052</p> <p>Monthly Energy Cost Savings</p>	<p>3,714</p> <p>Elec. Savings (kWh/mo)</p>	<p>24%</p> <p>Elec. Savings (%)</p>	<p>44,026</p> <p>R12M Electricity Savings (kWh/yr)</p>	<p>2,391</p> <p>CO2e Savings (kg/mo)</p>
<p>\$7,893</p> <p>R12M Energy Cost Savings</p>	<p>8,804</p> <p>Gas. Savings (kWh/mo)</p>	<p>100%</p> <p>Gas. Savings (%)</p>	<p>41,593</p> <p>R12M Gas Savings (kWh/yr)</p>	<p>14,737</p> <p>R12M CO2e Savings (kg/yr)</p>

Comments:

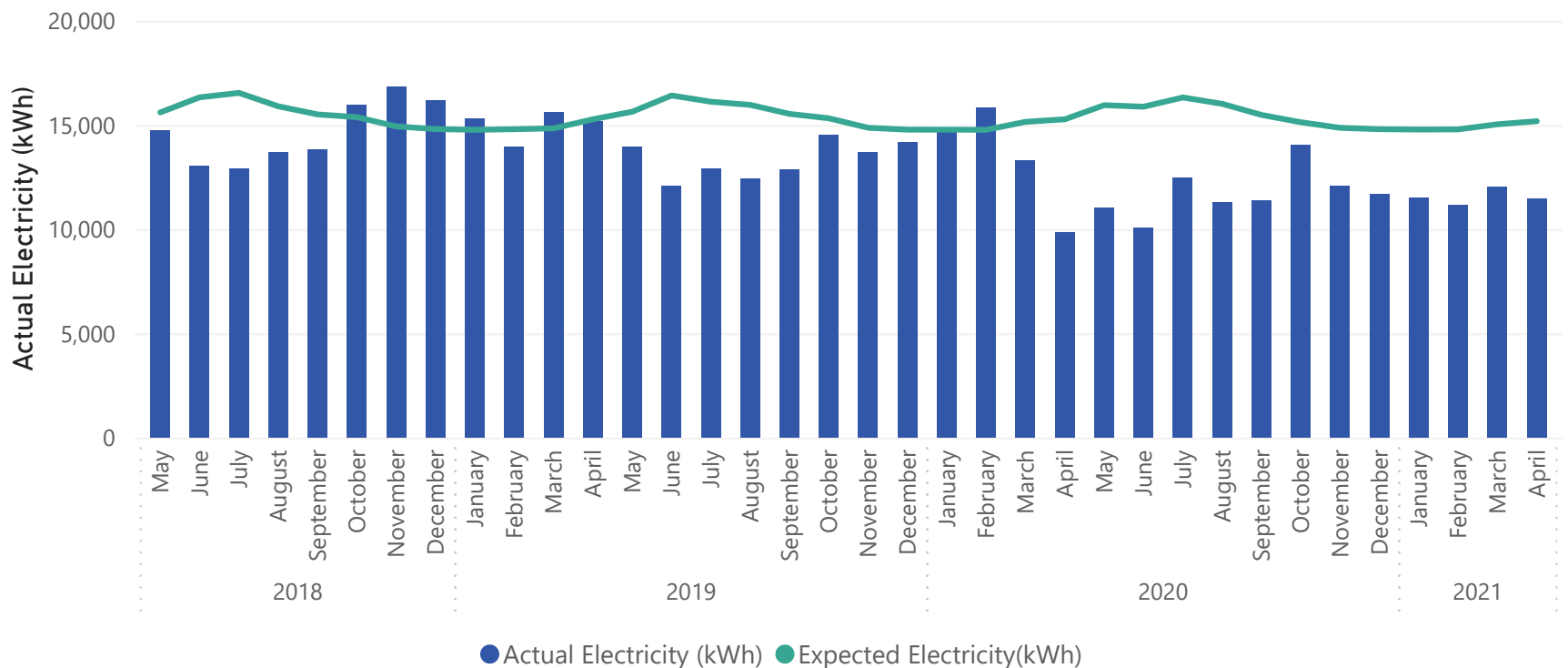
Electricity use has been significantly less than baseline for the past six months and electricity use has been less than baseline since March 2020. Compared to April 2020, the library's electricity use in April 2021 is 17% higher, although April 2020 was affected by the Covid-19 lockdown.

Natural gas was turned off for the month of April. Turning off the boilers completely has saved the Library \$644 this month in gas charges.

The library's rolling 12 month EUI has been dropping steadily and rolling 12 month energy savings are increasing, saving \$7,900, and 14,700 kgCO2e per year.

The monthly EUI for the library is 46% lower than it was a year ago.

Te Koputu Library Electricity Use Compared to Baseline (kWh)

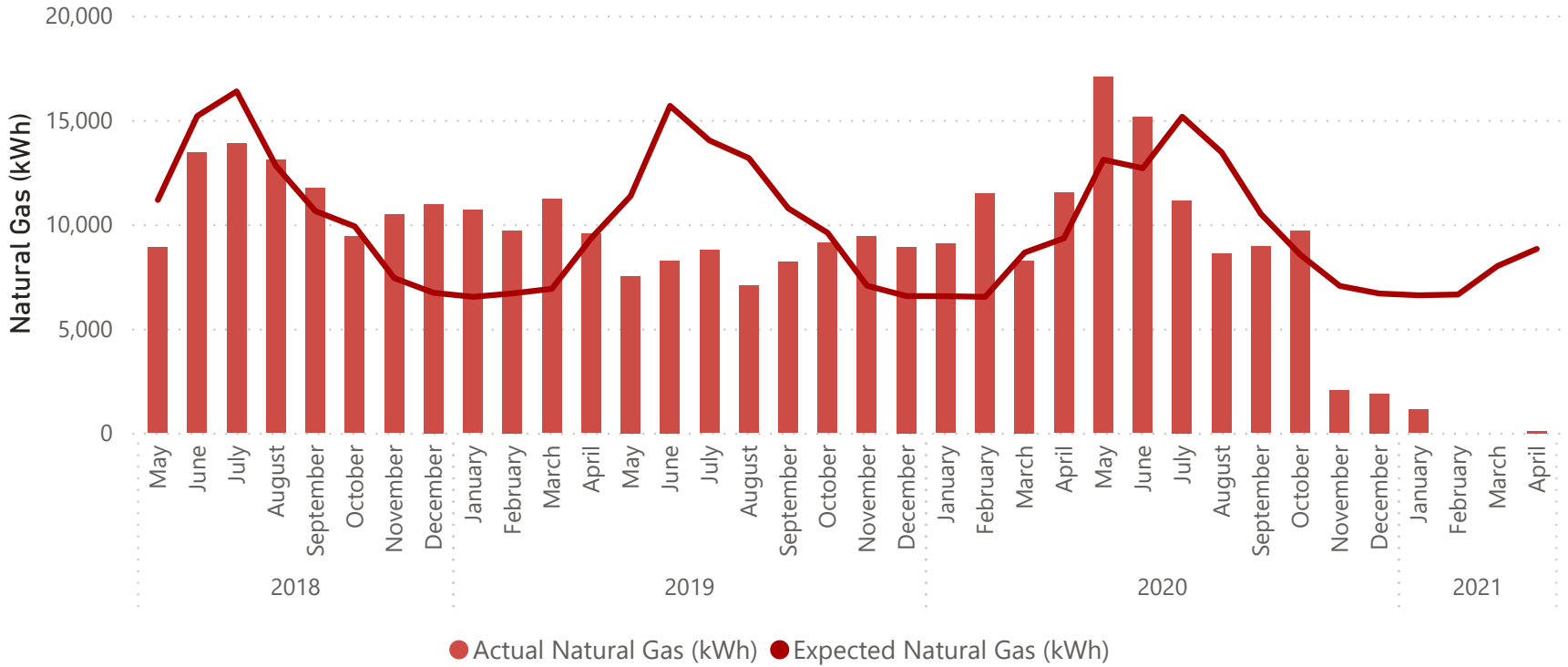


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

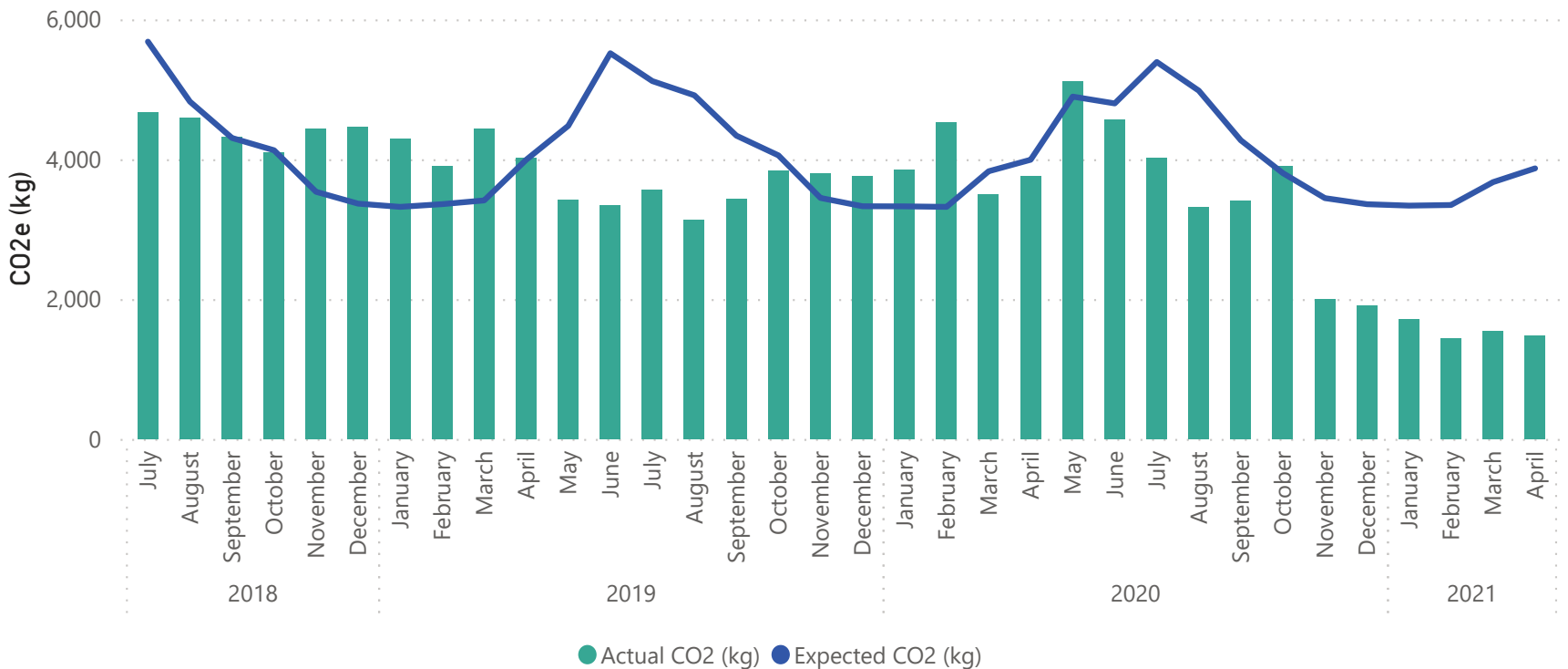
Whakatane District Council

Te Koputu Library

Te Koputu Library Natural Gas Compared to Baseline (kWh)



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

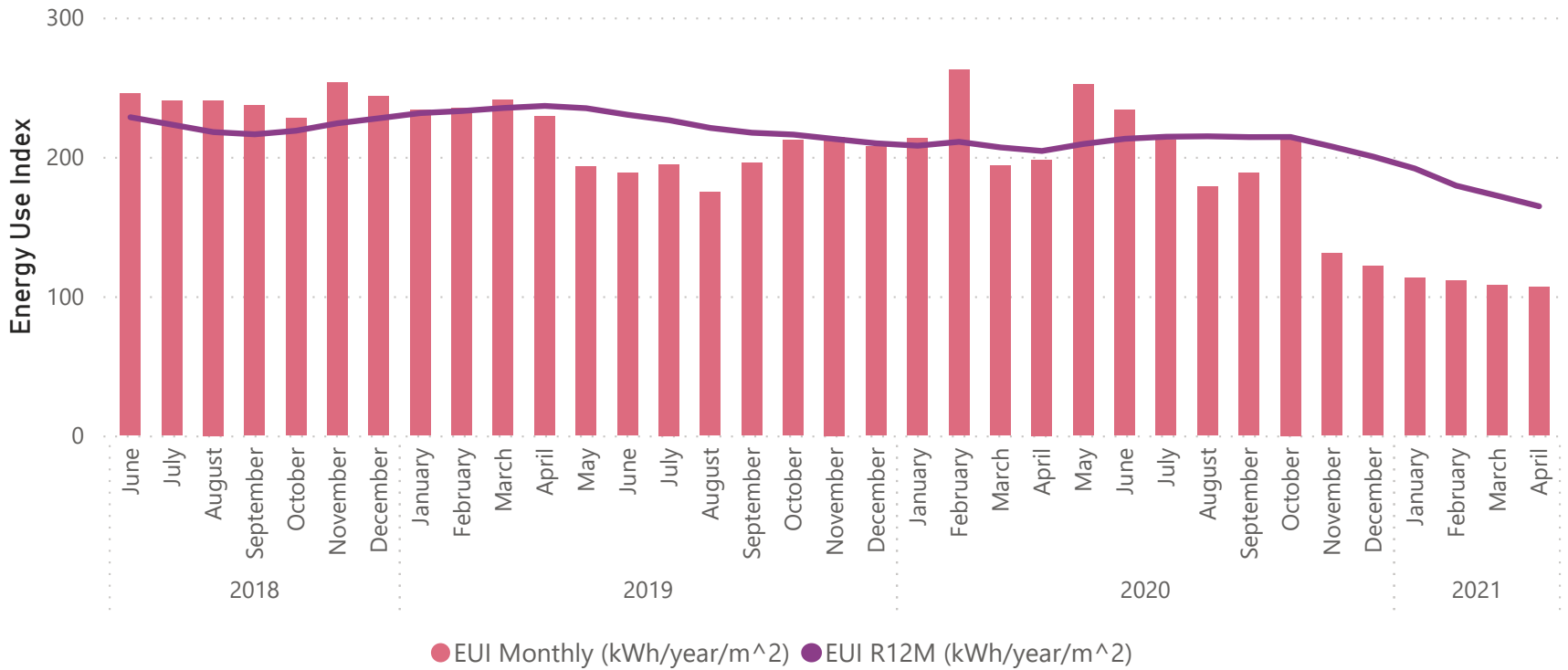


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

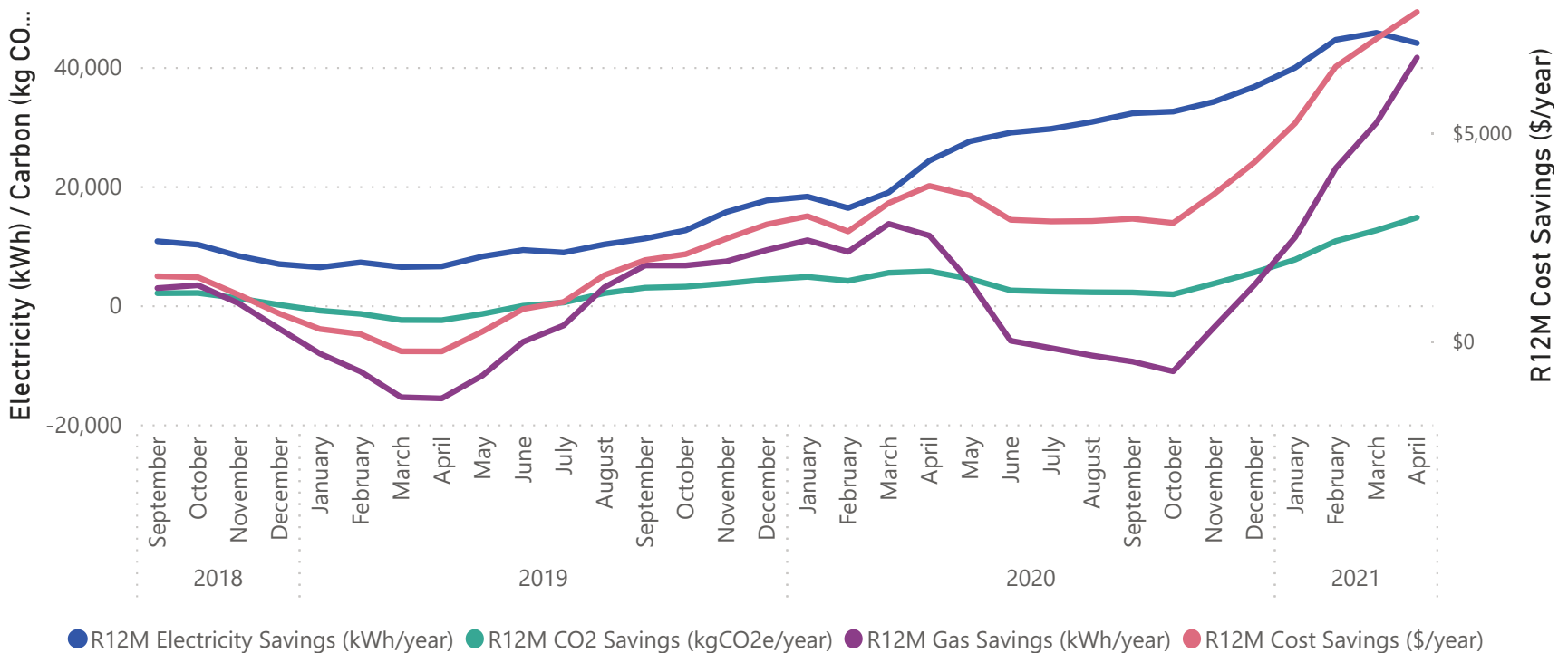
Whakatane District Council

Te Koputu Library

Te Koputu Library Energy Use Index by Month Compared to Rolling 12-Month Values



Te Koputu Library Cumulative Rolling 12 Month Savings



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

Whakatane District Council

Museum and Research Centre

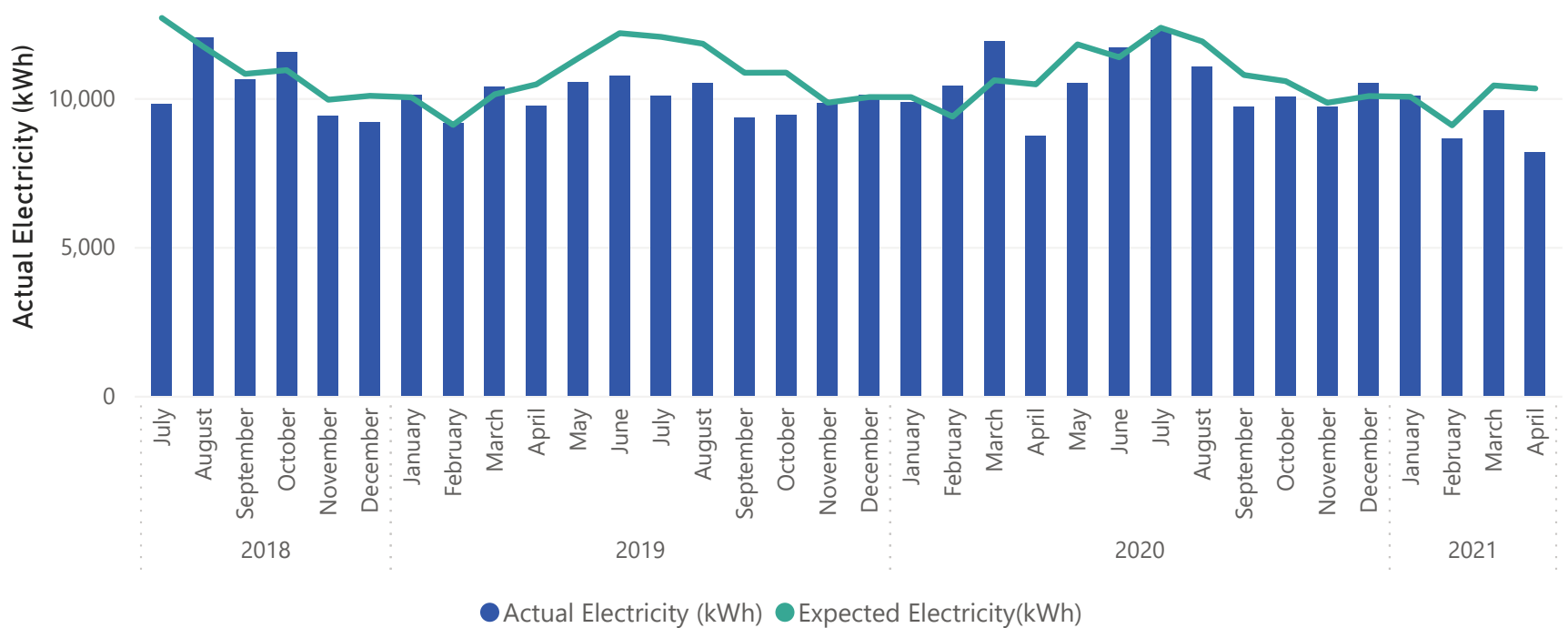
<p>\$452</p> <p>Monthly Energy Cost Savings</p>	<p>2,150</p> <p>Elec. Savings (kWh/mo)</p>	<p>21%</p> <p>Elec. Savings (%)</p>	<p>6,598</p> <p>R12M Electricity Savings (kWh/yr)</p>	<p>916</p> <p>CO2e Savings (kg/mo)</p>
<p>-\$302</p> <p>R12M Energy Cost Savings</p>	<p>2,948</p> <p>Gas. Savings (kWh/mo)</p>	<p>47%</p> <p>Gas. Savings (%)</p>	<p>-13,977</p> <p>R12M Gas Savings (kWh/yr)</p>	<p>-2,181</p> <p>R12M CO2e Savings (kg/yr)</p>

Comments:

Electricity use at the Museum and Research Centre is below baseline for April 2021. Compared to April 2020, electricity use has decreased by 6%. However, April 2020 was affected by lockdown and usage in April 2021 was expected to have been higher.

The Museum and Research Centre achieved a savings of 47% below baseline for natural gas. Compared to April 2020, the museum used 53% more natural gas in April 2021. This seems to be the result of the meter not being read for several months from Aug 2019 to Apr 2020.

Museum Research Centre Electricity Use Compared to Baseline (kWh)

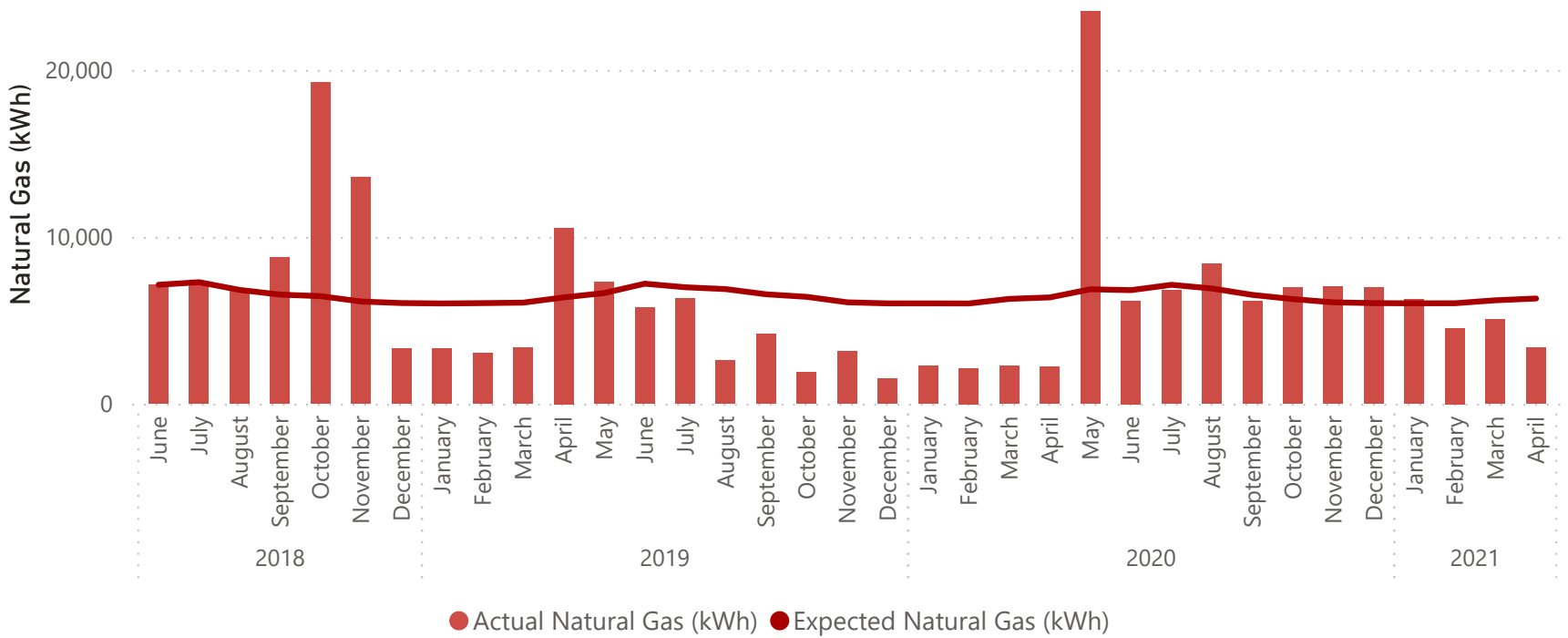


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

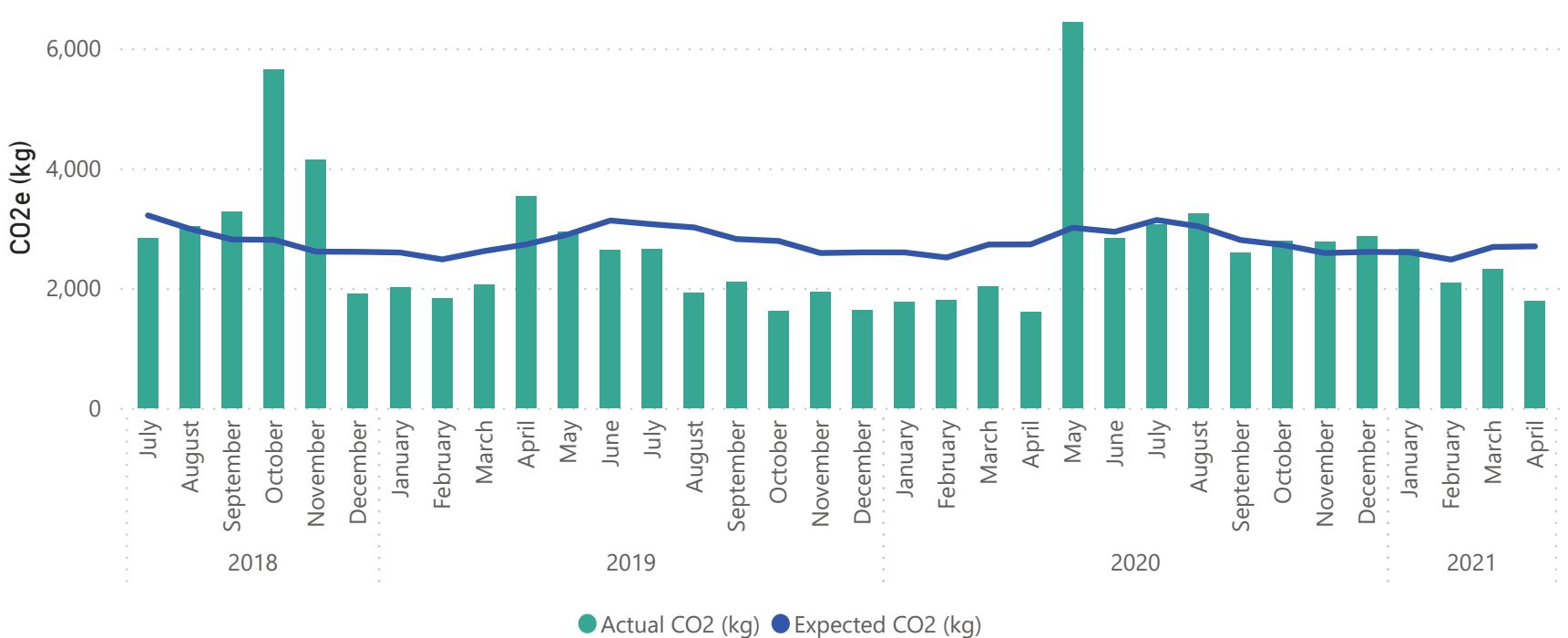
Whakatane District Council

Museum and Research Centre

Museum Research Centre Natural Gas Compared to Baseline (kWh)



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

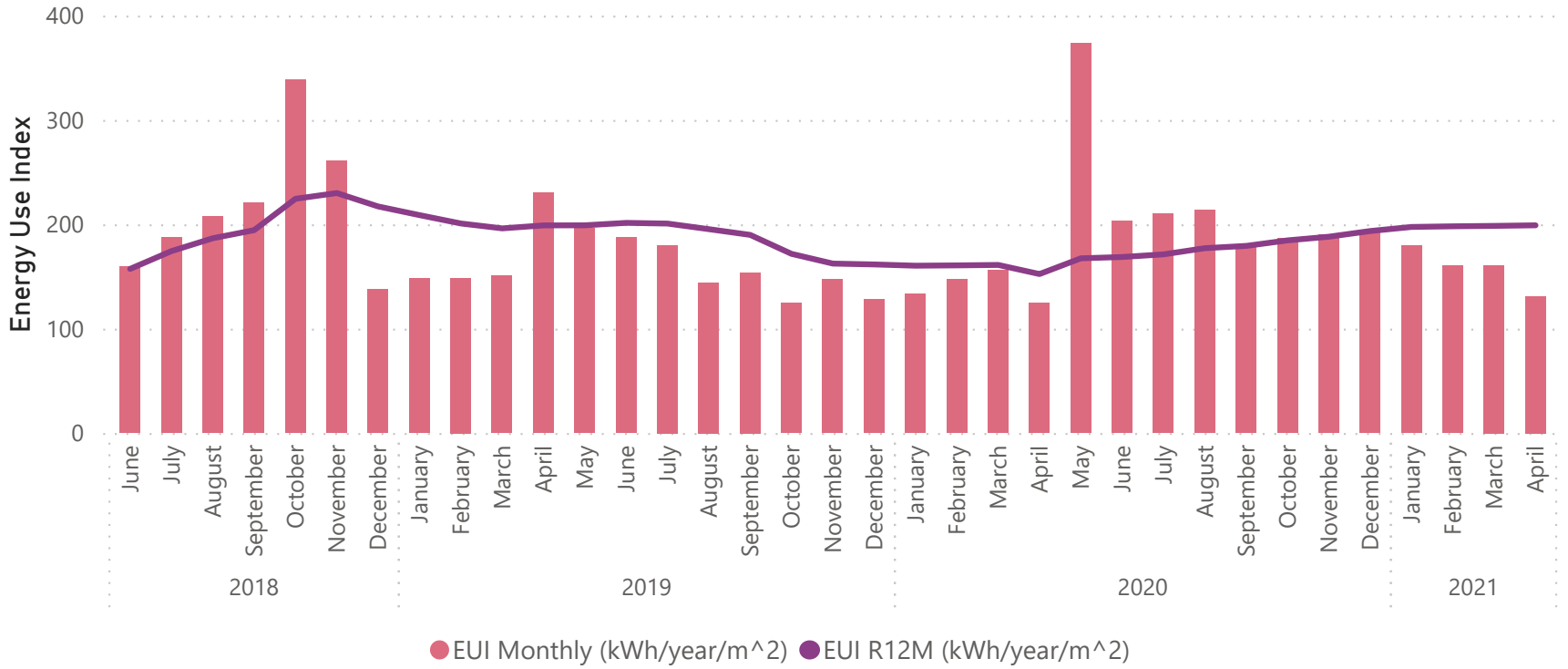


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

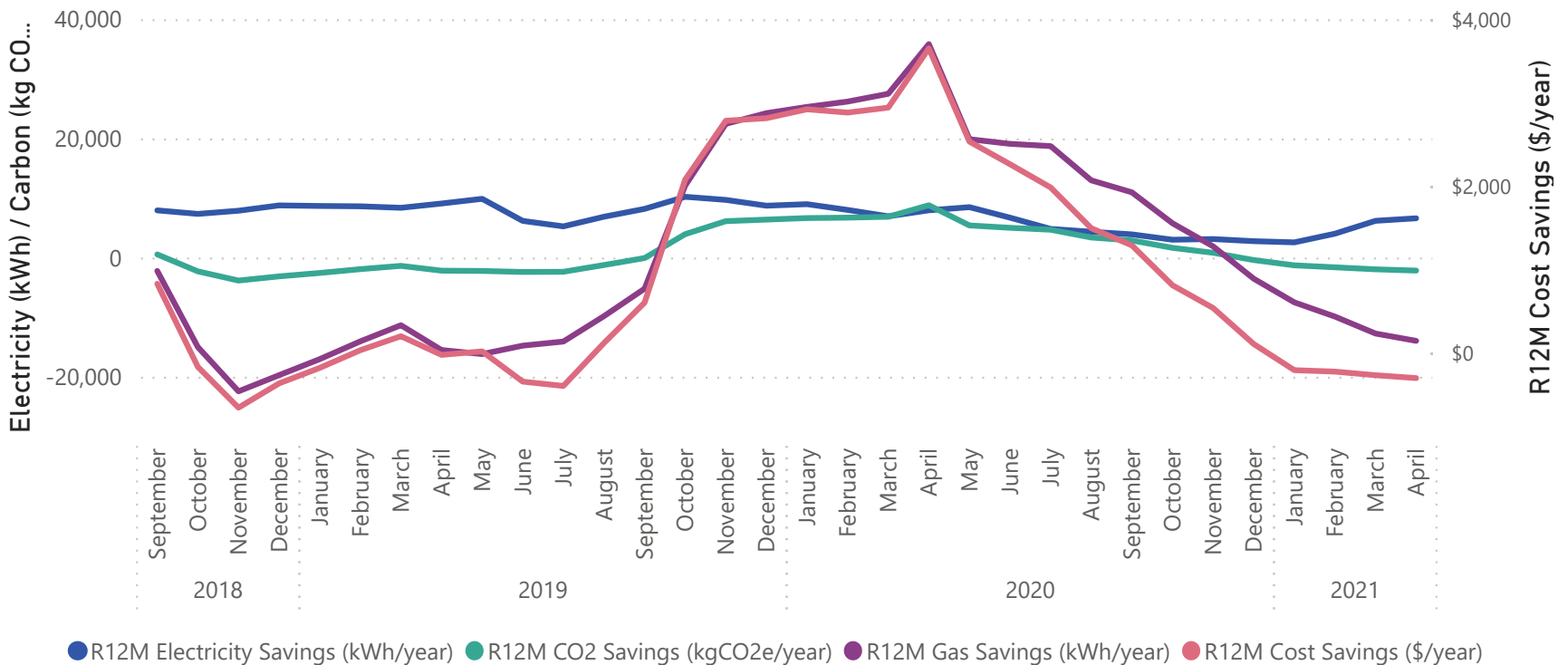
Whakatane District Council

Museum and Research Centre

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



Museum Research Centre Cumulative Rolling 12 Month Savings



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

Whakatane District Council

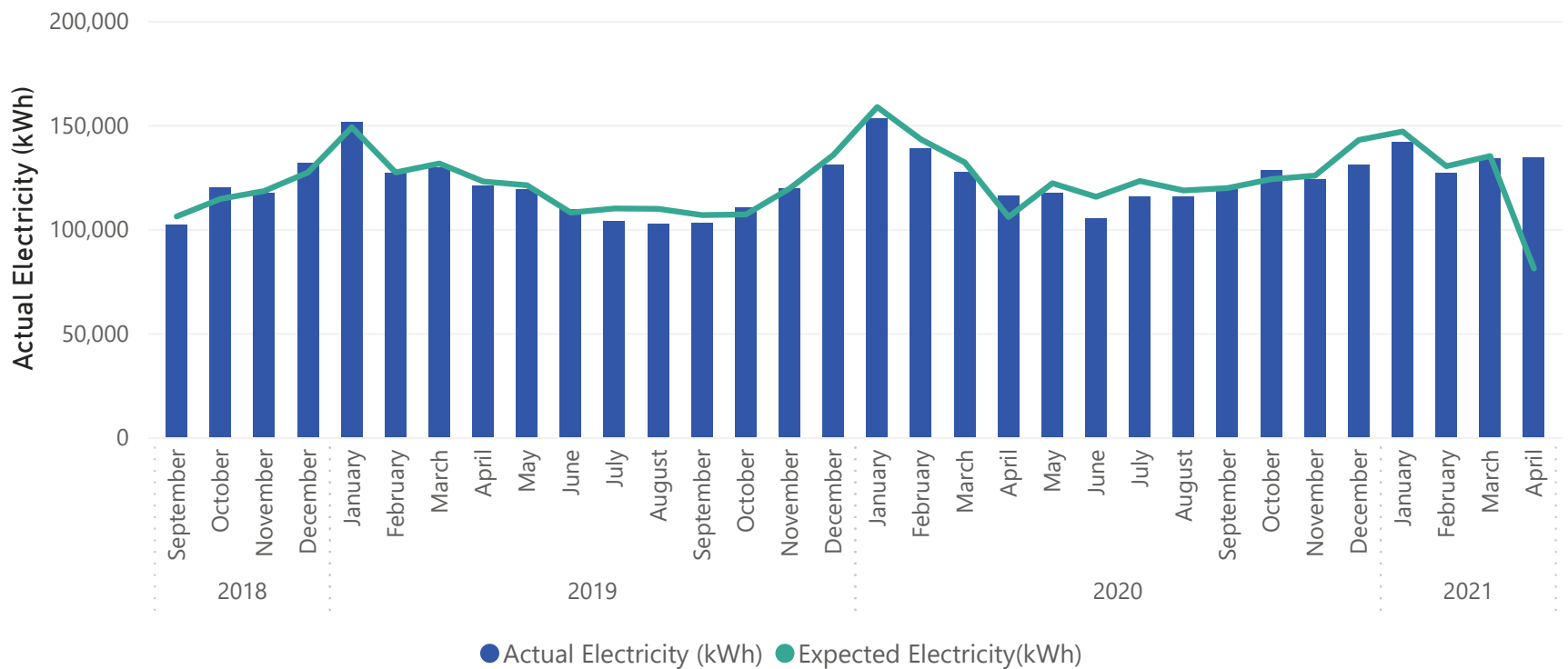
Water Treatment Plant

<p>-\$5,663 Monthly Energy Cost Savings</p>	<p>-53,511 Elec. Savings (kWh/mo)</p>	<p>-66% Elec. Savings (%)</p>	<p>-8,017 R12M Electricity Savings (kWh/yr)</p>	<p>-6,887 CO2e Savings (kg/mo)</p>
<p>-\$691 R12M Energy Cost Savings</p>				<p>-1,032 R12M CO2e Savings (kg/yr)</p>

Comments:

Demand for water in April 2021 was 26% lower and electricity use was 16% higher compared to April 2020. The 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.

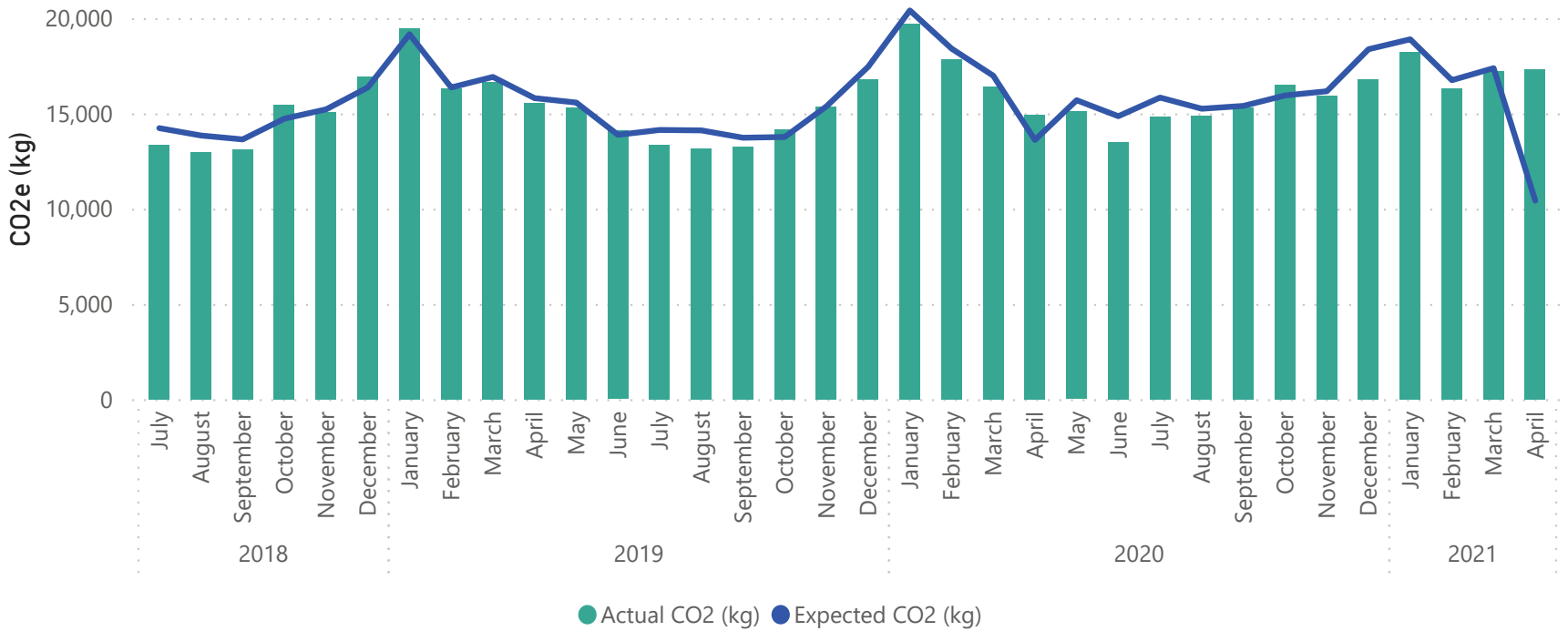
Water Treatment Plant Electricity Use Compared to Baseline (kWh)



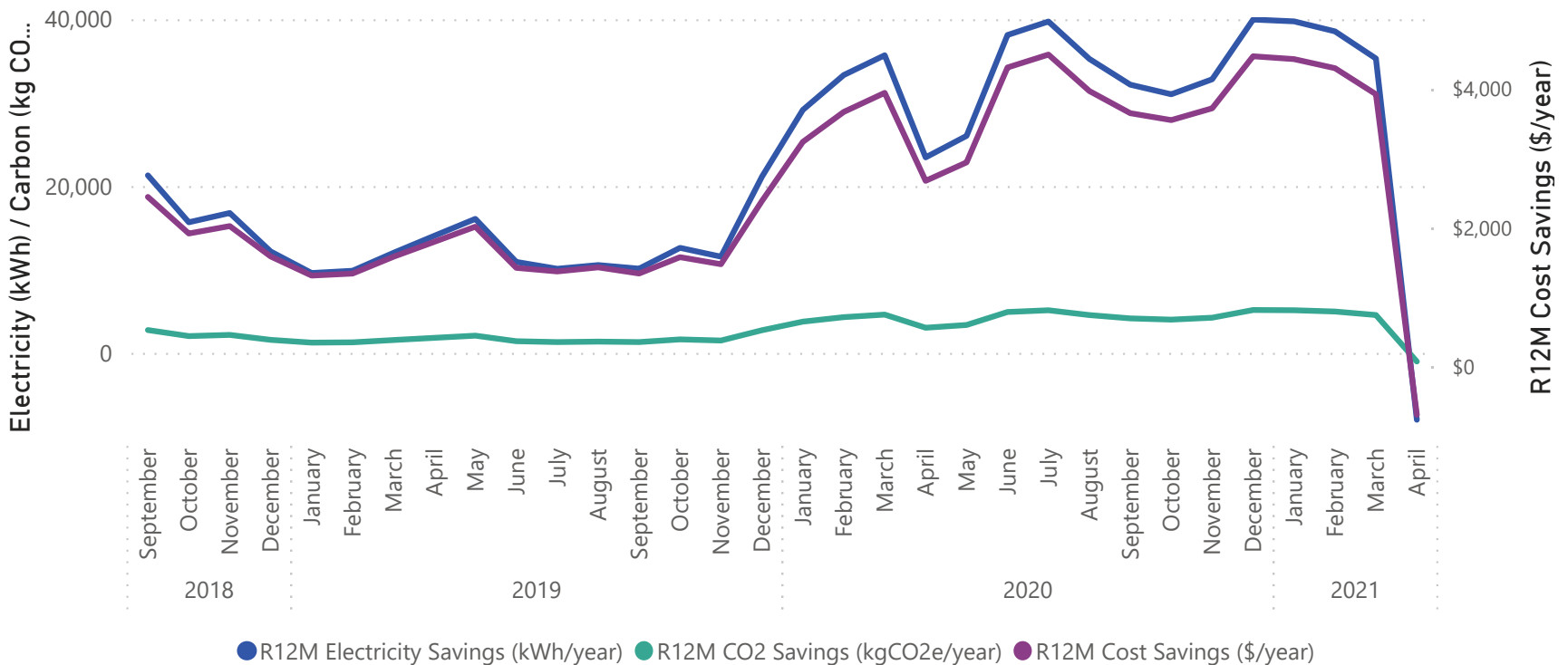
Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

Whakatane District Council Water Treatment Plant

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



Water Treatment Plant Cumulative Rolling 12 Month Savings

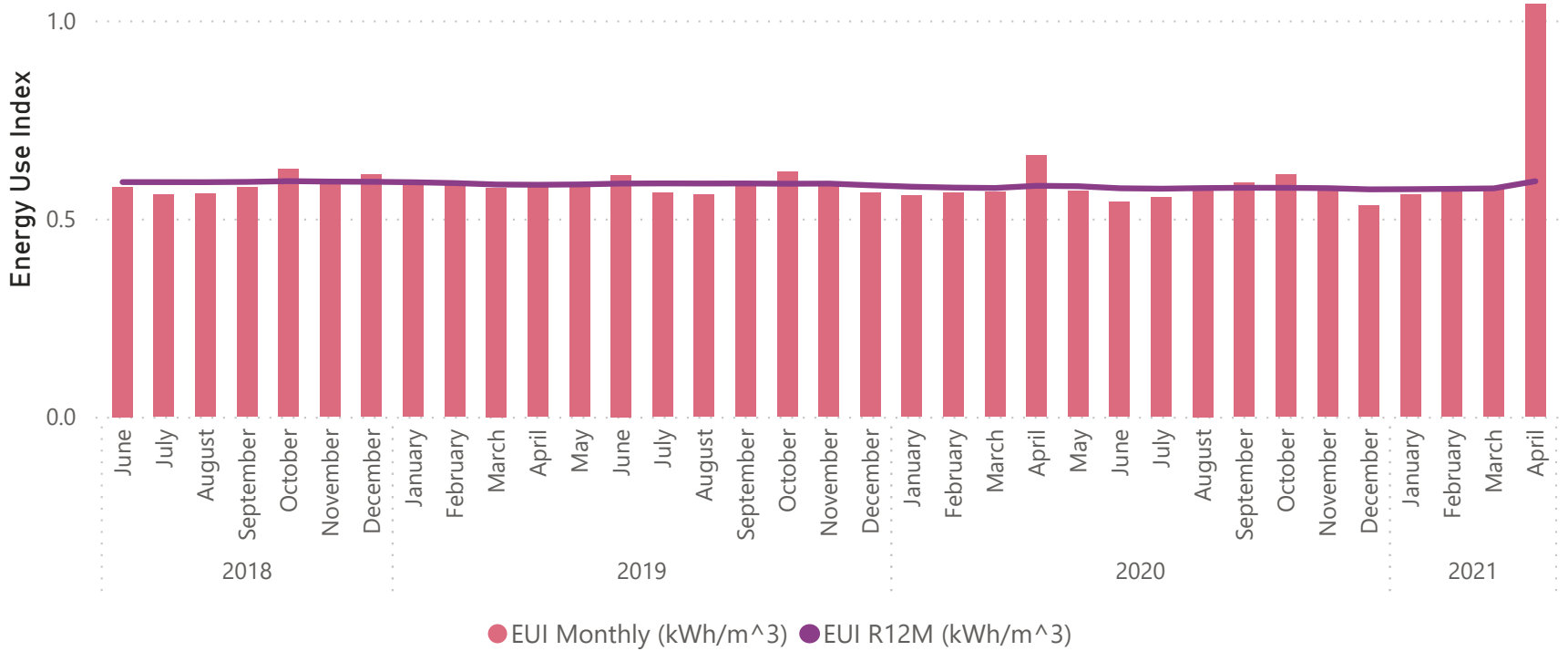


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

Whakatane District Council

Water Treatment Plant

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



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

Whakatane District Council

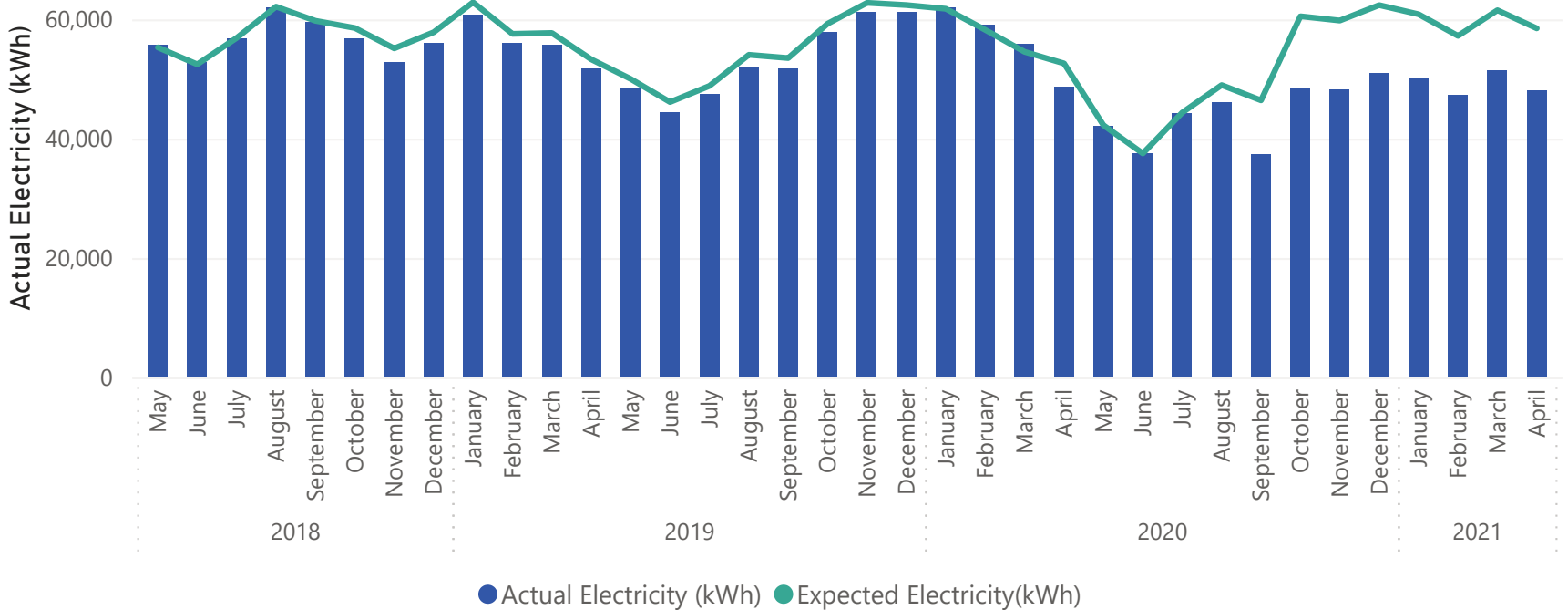
Braemar Road Pump Station

<p>\$1,118 Monthly Energy Cost Savings</p>	<p>10,364 Elec. Savings (kWh/mo)</p>	<p>18% Elec. Savings (%)</p>	<p>88,442 R12M Electricity Savings (kWh/yr)</p>	<p>1,363 CO2e Savings (kg/mo)</p>
<p>\$9,243 R12M Energy Cost Savings</p>				<p>12,120 R12M CO2e Savings (kg/yr)</p>

Comments:

Rolling 12 month savings have set a new record, with savings of \$9,200 per year, 88,400 kWh per year, and 12,100 kgCO2e per year.

Braemar Rd Pumps Electricity Use Compared to Baseline (kWh)

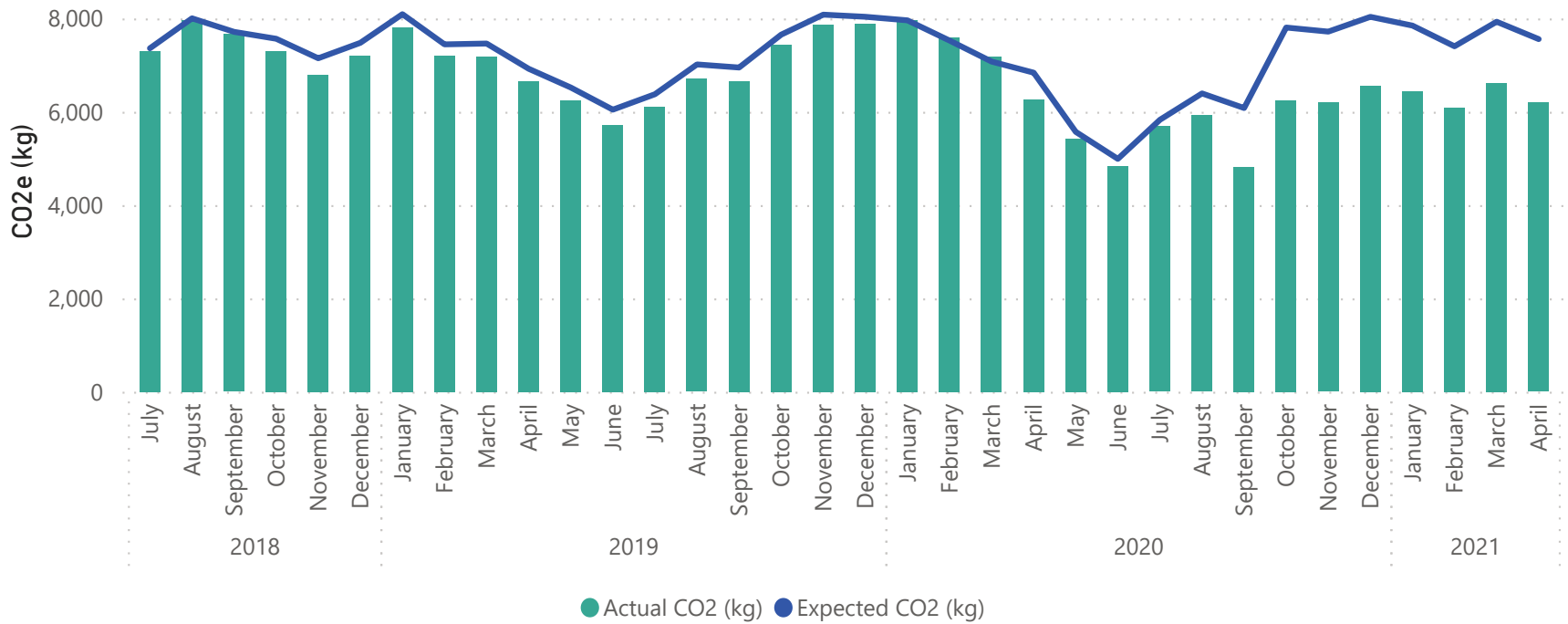


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

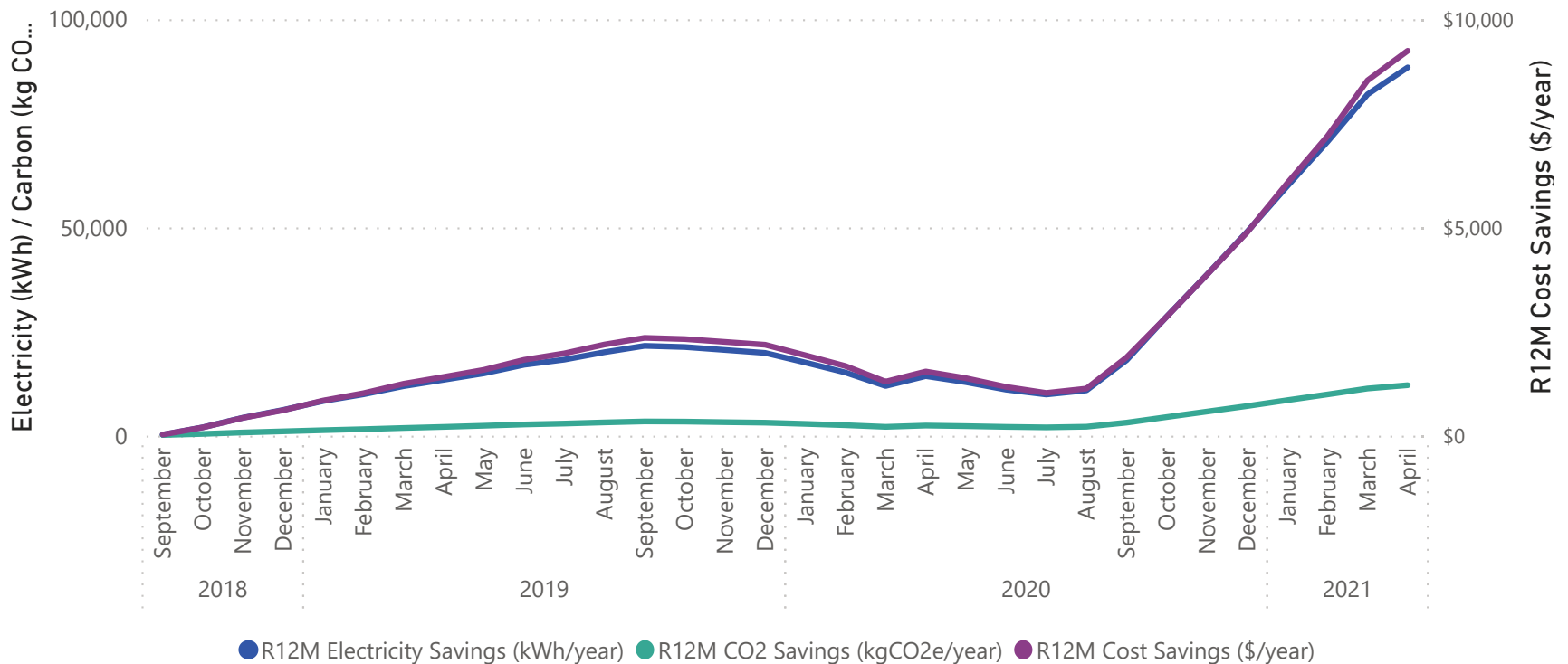
Whakatane District Council

Braemar Road Pump Station

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



Braemar Rd Pumps Cumulative Rolling 12 Month Savings

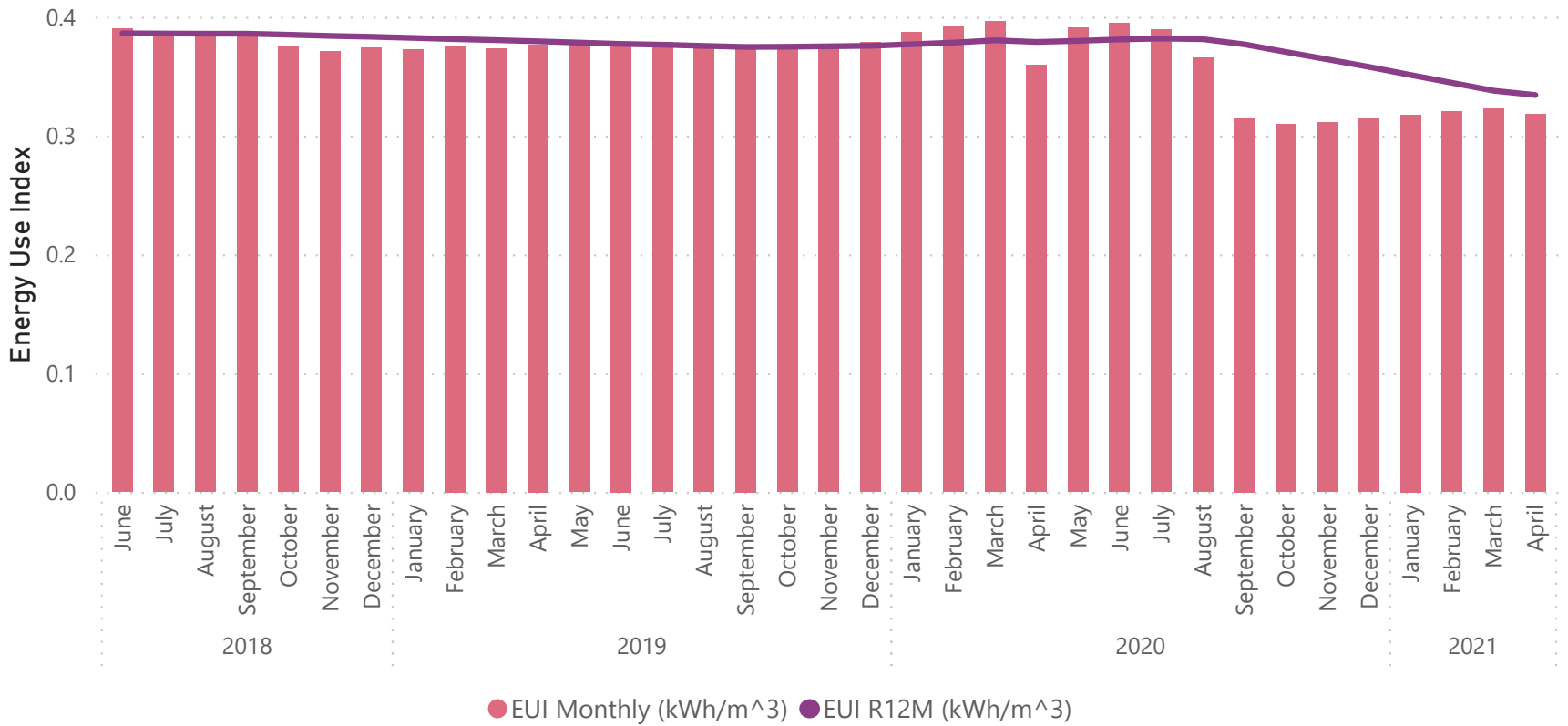


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

Whakatane District Council

Braemar Road Pump Station

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



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

Whakatane District Council

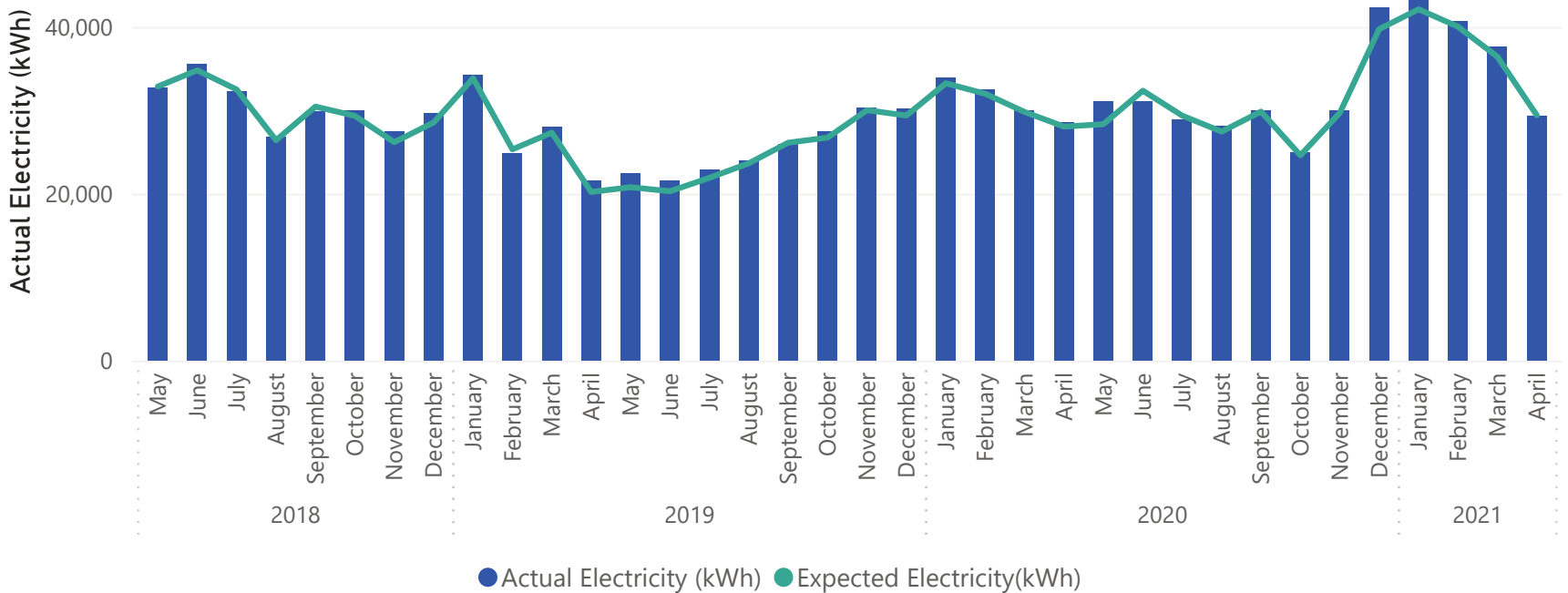
Paul Road Pump Station

<p>\$11 Monthly Energy Cost Savings</p>	<p>103 Elec. Savings (kWh/mo)</p>	<p>0% Elec. Savings (%)</p>	<p>-8,498 R12M Electricity Savings (kWh/yr)</p>	<p>14 CO2e Savings (kg/mo)</p>
<p>-\$860 R12M Energy Cost Savings</p>				<p>-1,085 R12M CO2e Savings (kg/yr)</p>

Comments:

Paul Rd Pump Station electricity was close to baseline in April 2021 and pumped water has increased by 6% compared to April 2020. 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)

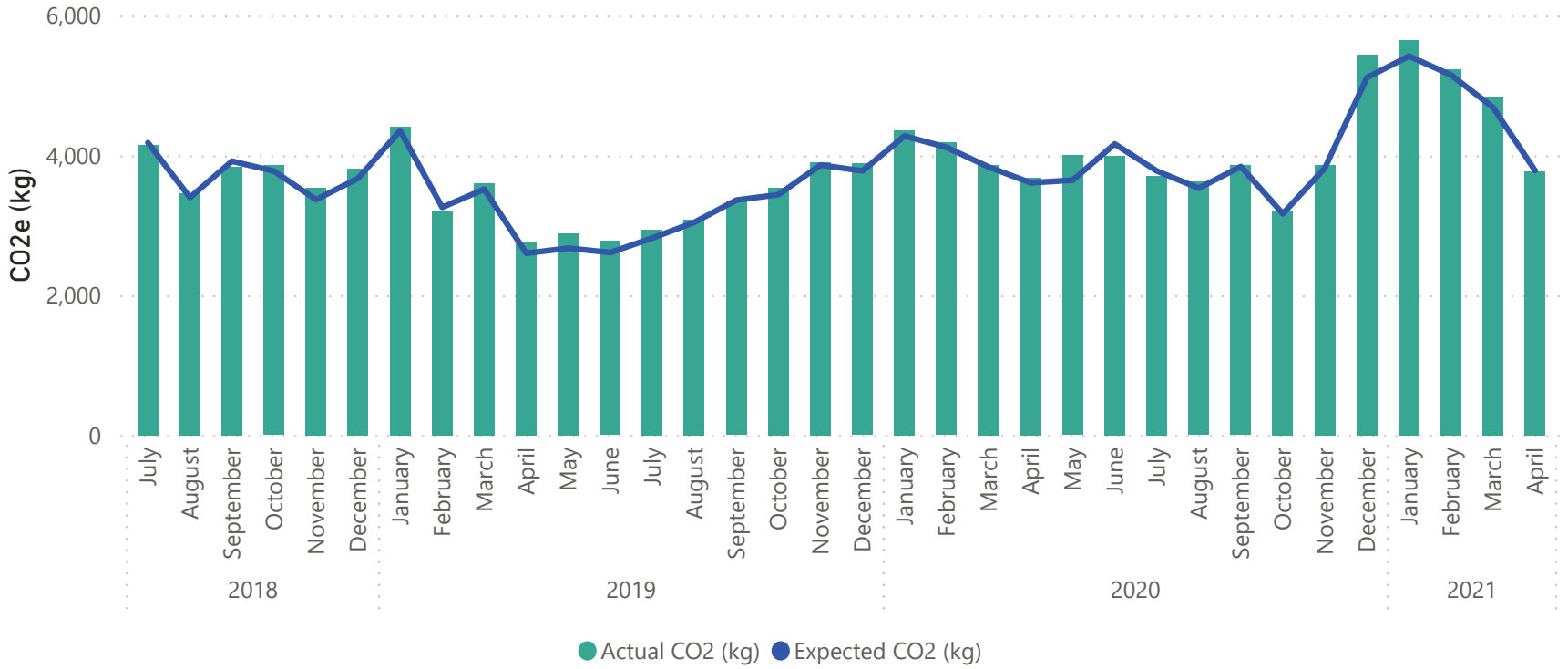


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

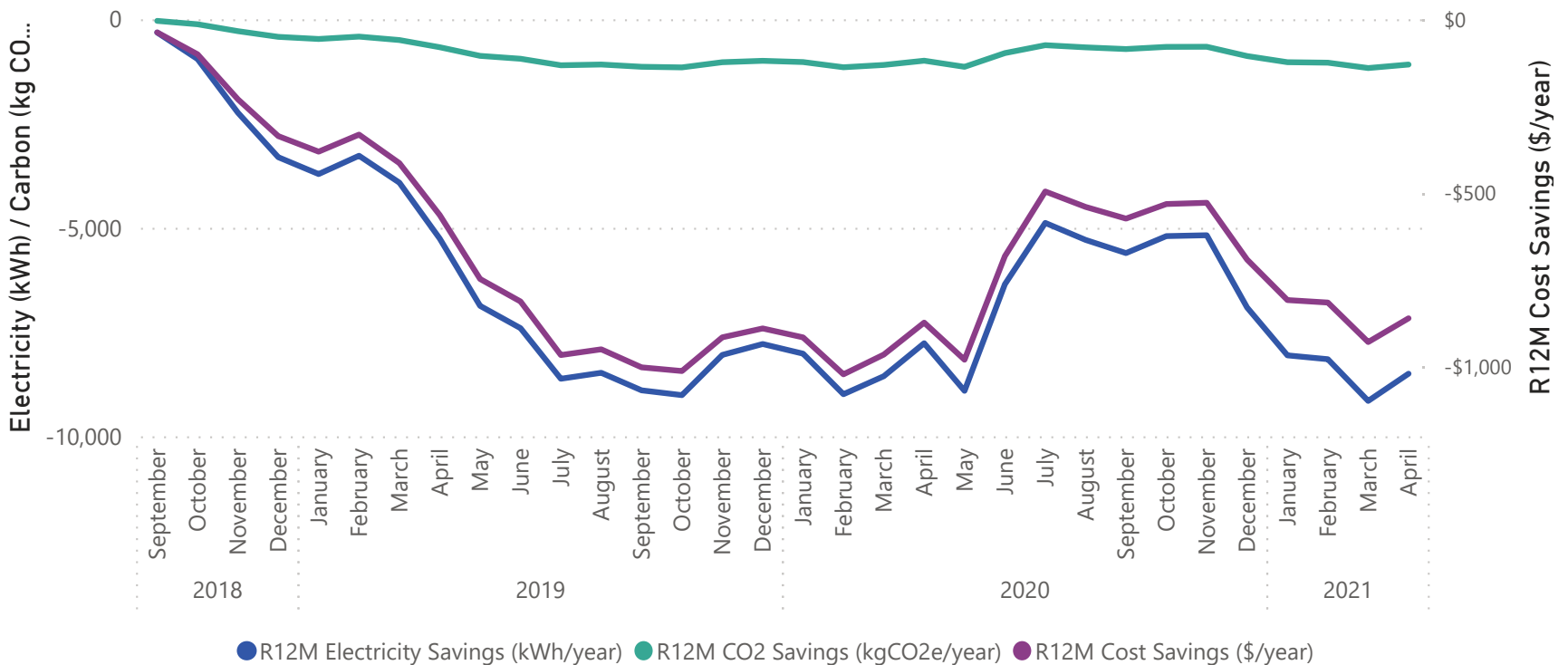
Whakatane District Council

Paul Road Pump Station

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



Paul Rd Pumps Cumulative Rolling 12 Month Savings

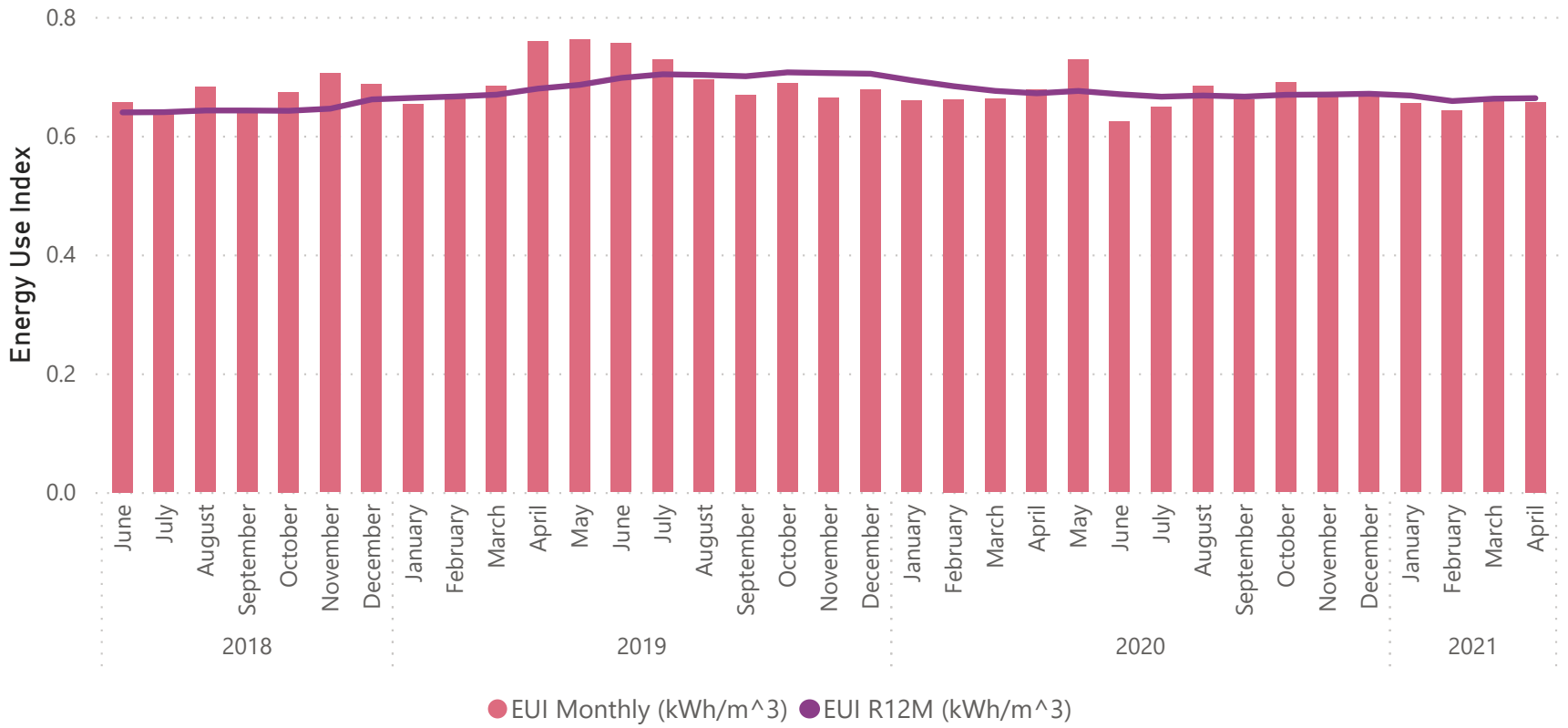


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

Whakatane District Council

Paul Road Pump Station

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



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

Whakatane District Council

Johnson Road Pump Station

<p>-\$26 Monthly Energy Cost Savings</p>	<p>-118 Elec. Savings (kWh/mo)</p>	<p>-1% Elec. Savings (%)</p>	<p>-8,780 R12M Electricity Savings (kWh/yr)</p>	<p>-15 CO2e Savings (kg/mo)</p>
<p>-\$2,016 R12M Energy Cost Savings</p>				<p>-1,122 R12M CO2e Savings (kg/yr)</p>

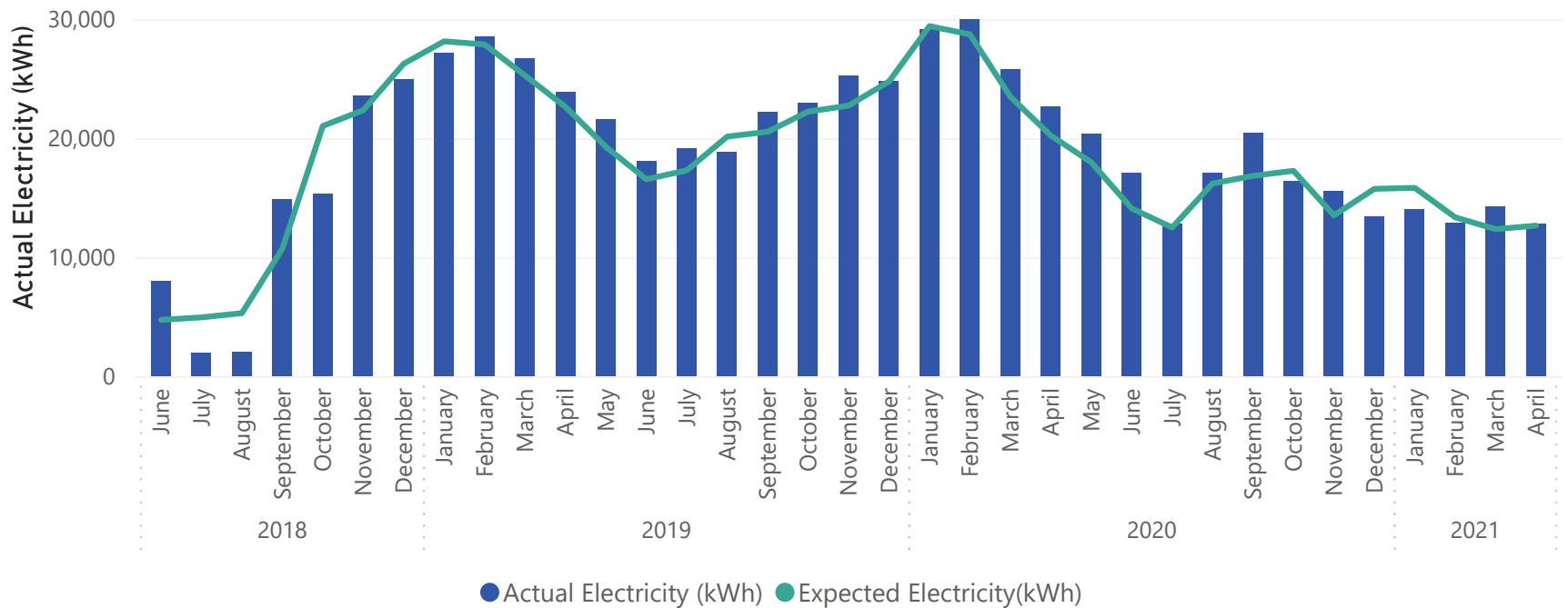
Comments:

Electricity use was slightly more than baseline at Johnson Rd in April 2021. This may be partly due to when the electricity meter was read, although energy use is adjusted for the actual number of days in the month.

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.

Rolling 12 month savings have been rising for the past six months.

Johnson Rd Pumps Electricity Use Compared to Baseline (kWh)

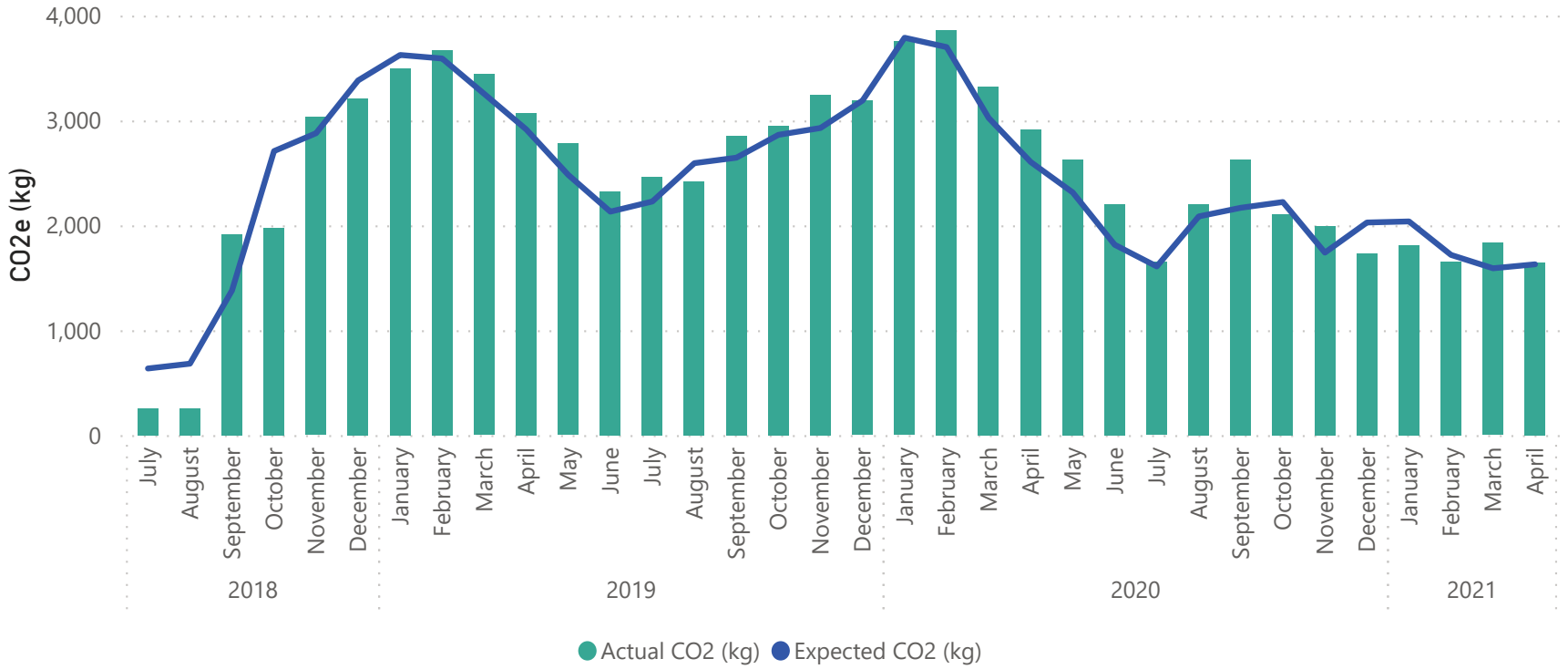


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

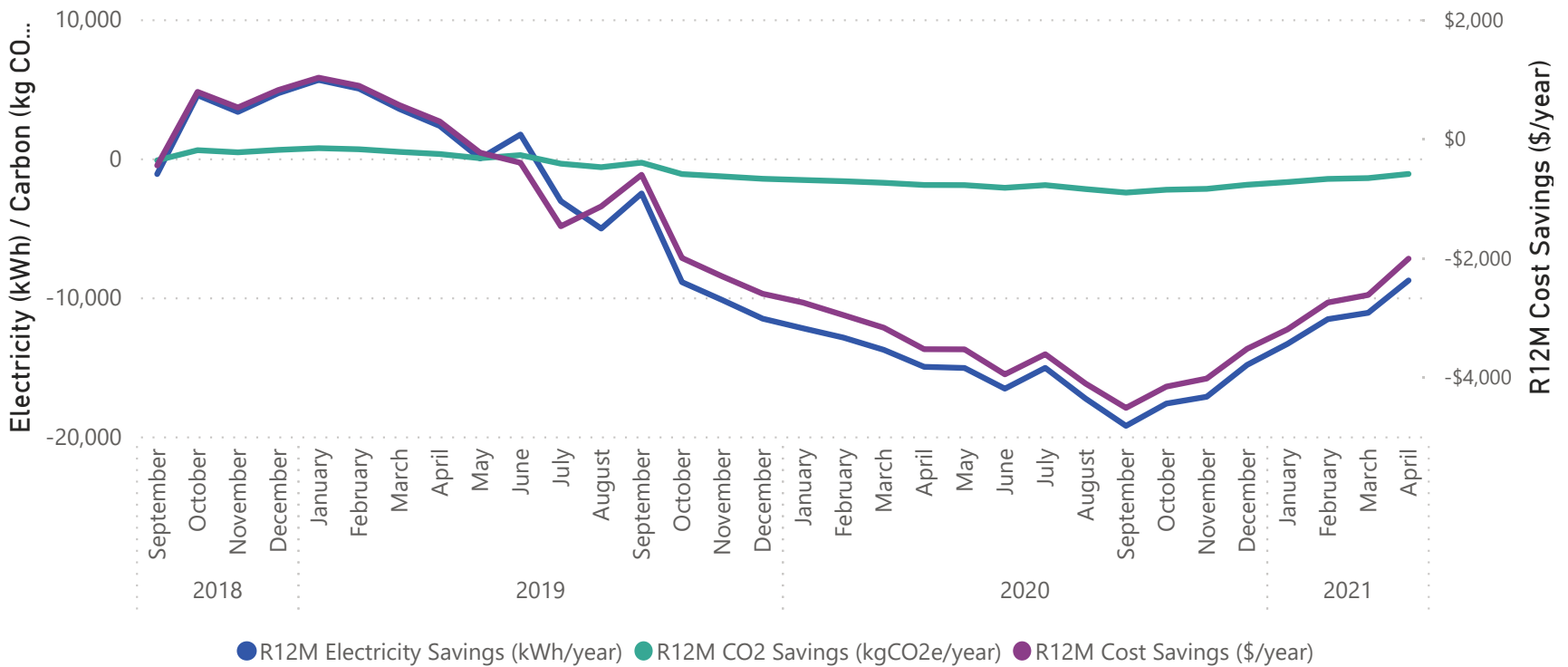
Whakatane District Council

Johnson Road Pump Station

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



Johnson Rd Pumps Cumulative Rolling 12 Month Savings

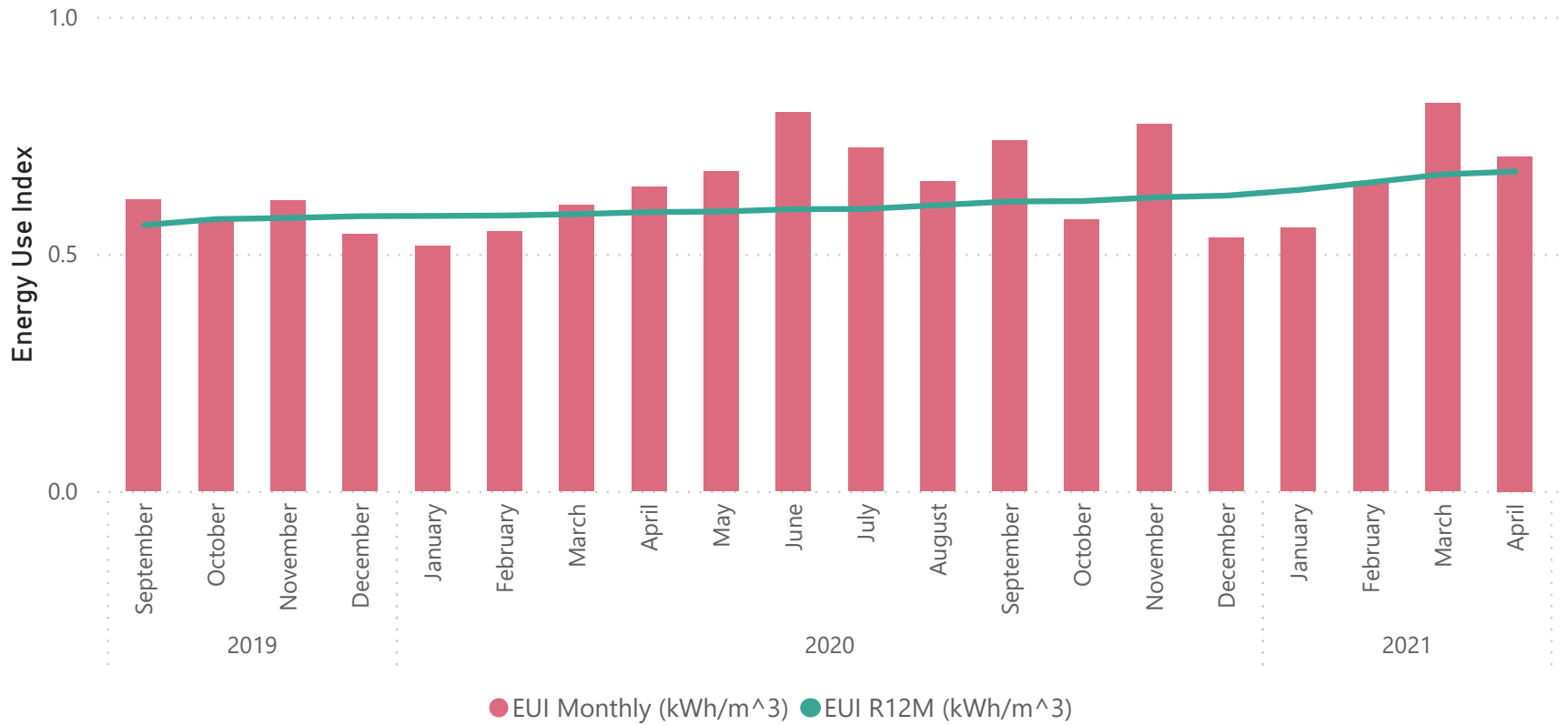


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

Whakatane District Council

Johnson Road Pump Station

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



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

Whakatane District Council

Johnson and Braemar Rd Pump Stations

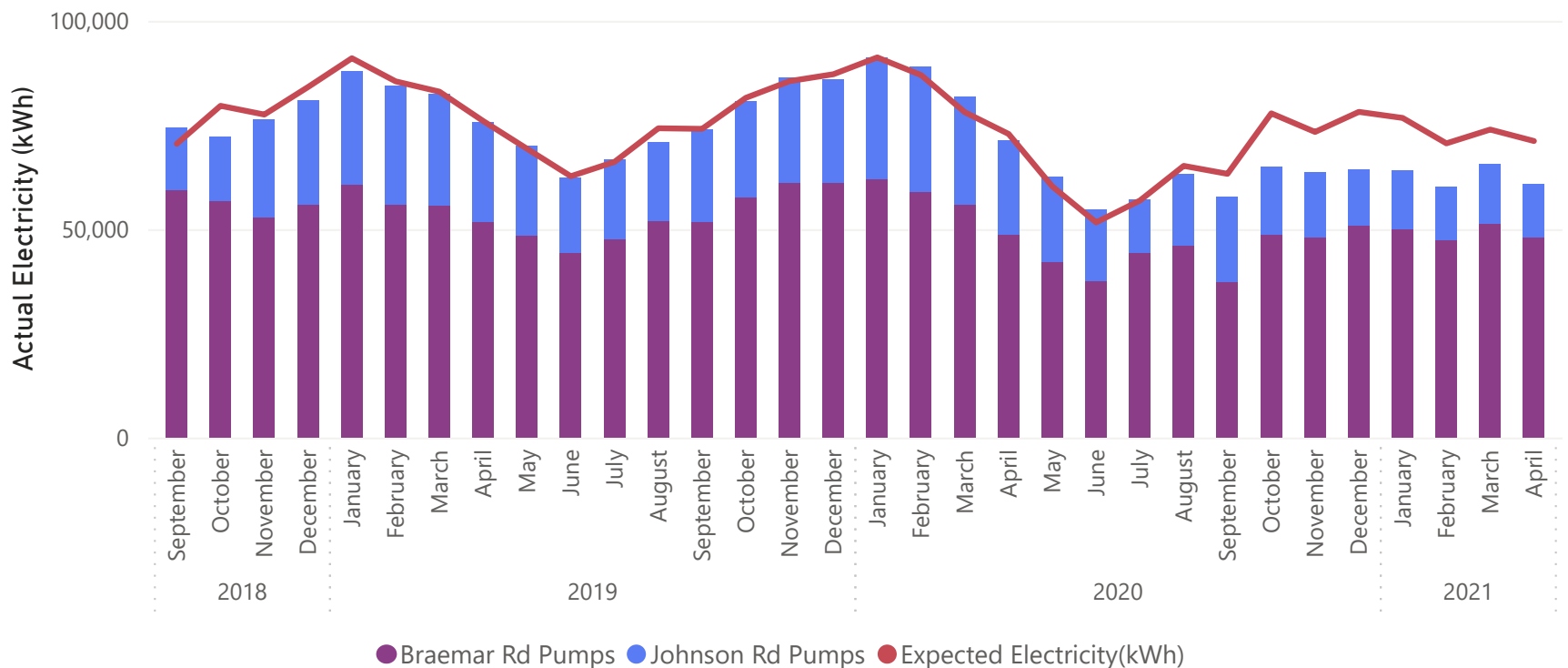
<p>\$1,092 Monthly Energy Cost Savings</p>	<p>10,246 Elec. Savings (kWh/mo)</p>	<p>14% Elec. Savings (%)</p>	<p>79,662 R12M Electricity Savings (kWh/yr)</p>	<p>1,348 CO2e Savings (kg/mo)</p>
<p>\$7,227 R12M Energy Cost Savings</p>				<p>10,999 R12M CO2e Savings (kg/yr)</p>

Comments:

Monitoring Johnson Road and Braemar Road pump stations together was a new addition to monitoring and targeting in February 2021. Baseline electricity is the sum of expected electricity for both pump stations and is adjusted for the volume of water pumped.

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)

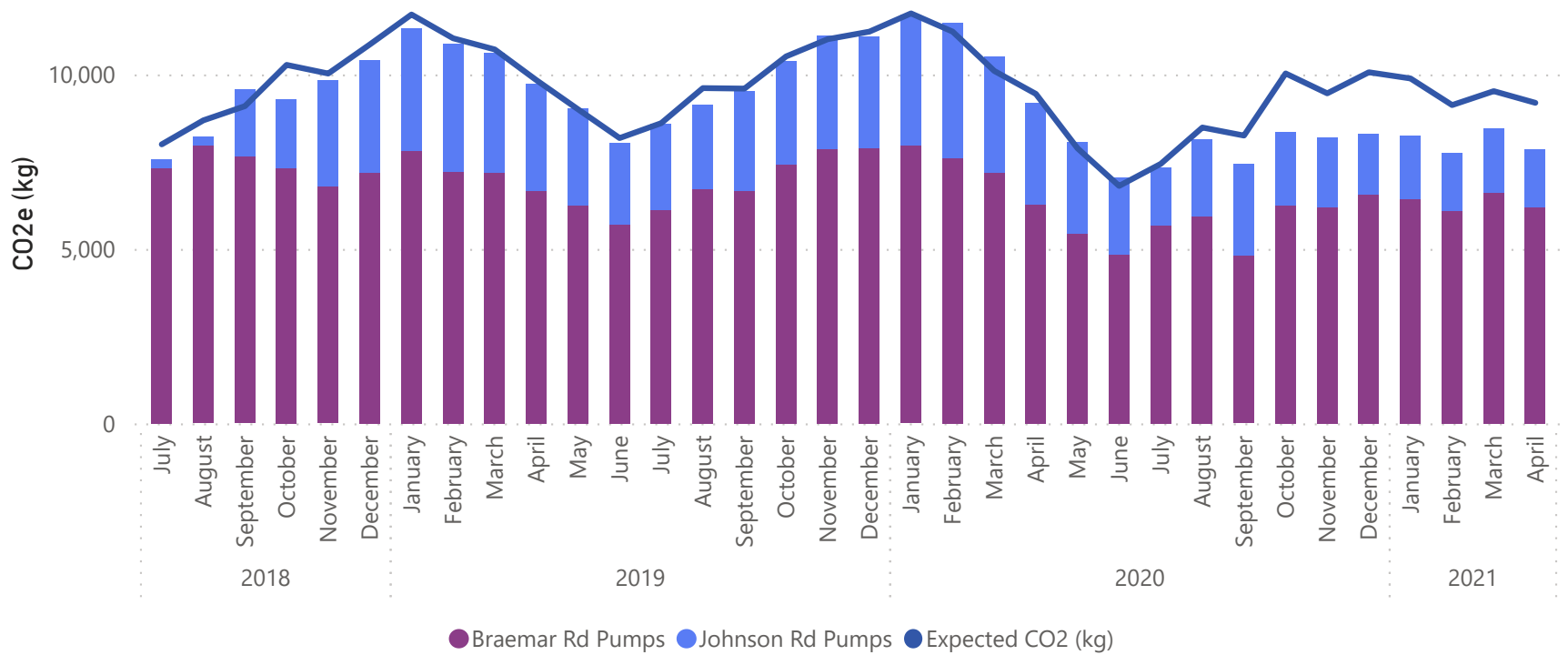


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

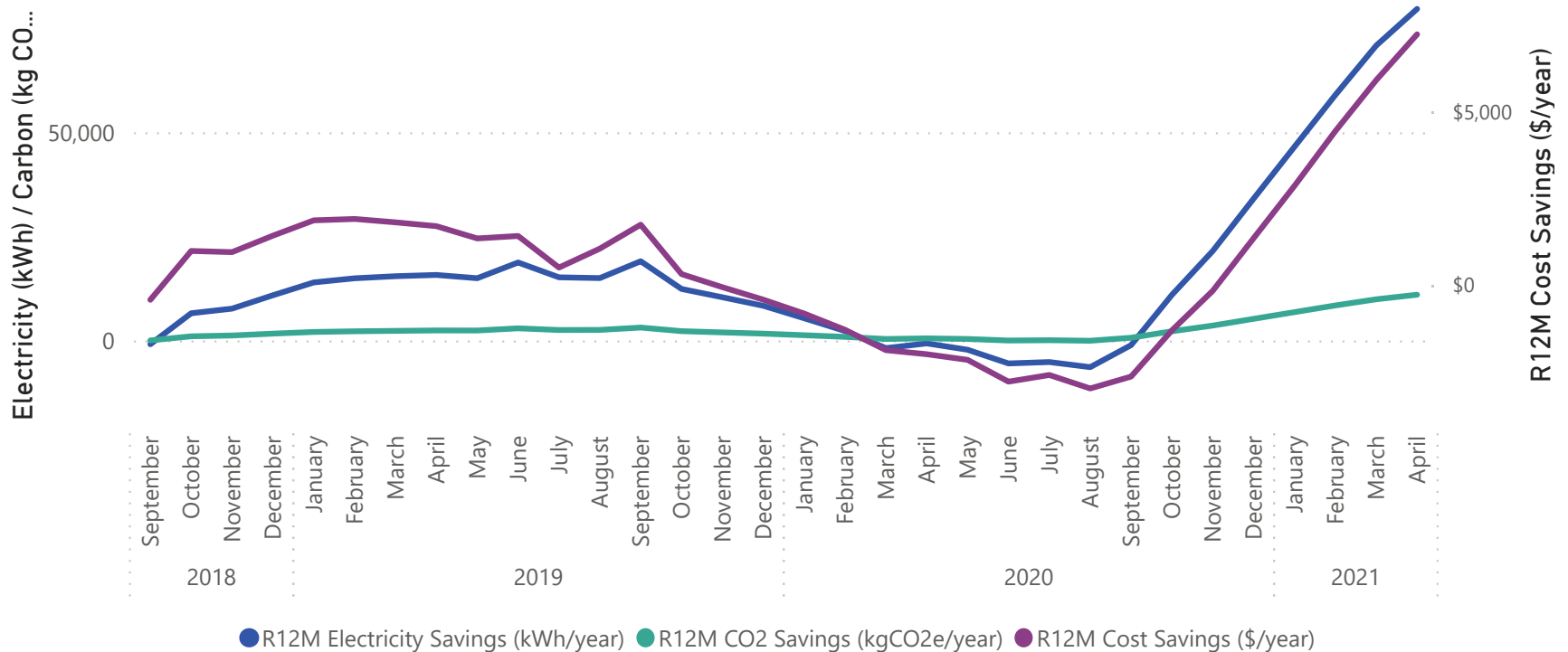
Whakatane District Council

Johnson and Braemar Rd Pump Stations

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



Johnson and Braemar Rd Pump Stations Cumulative Rolling 12 Month Savings

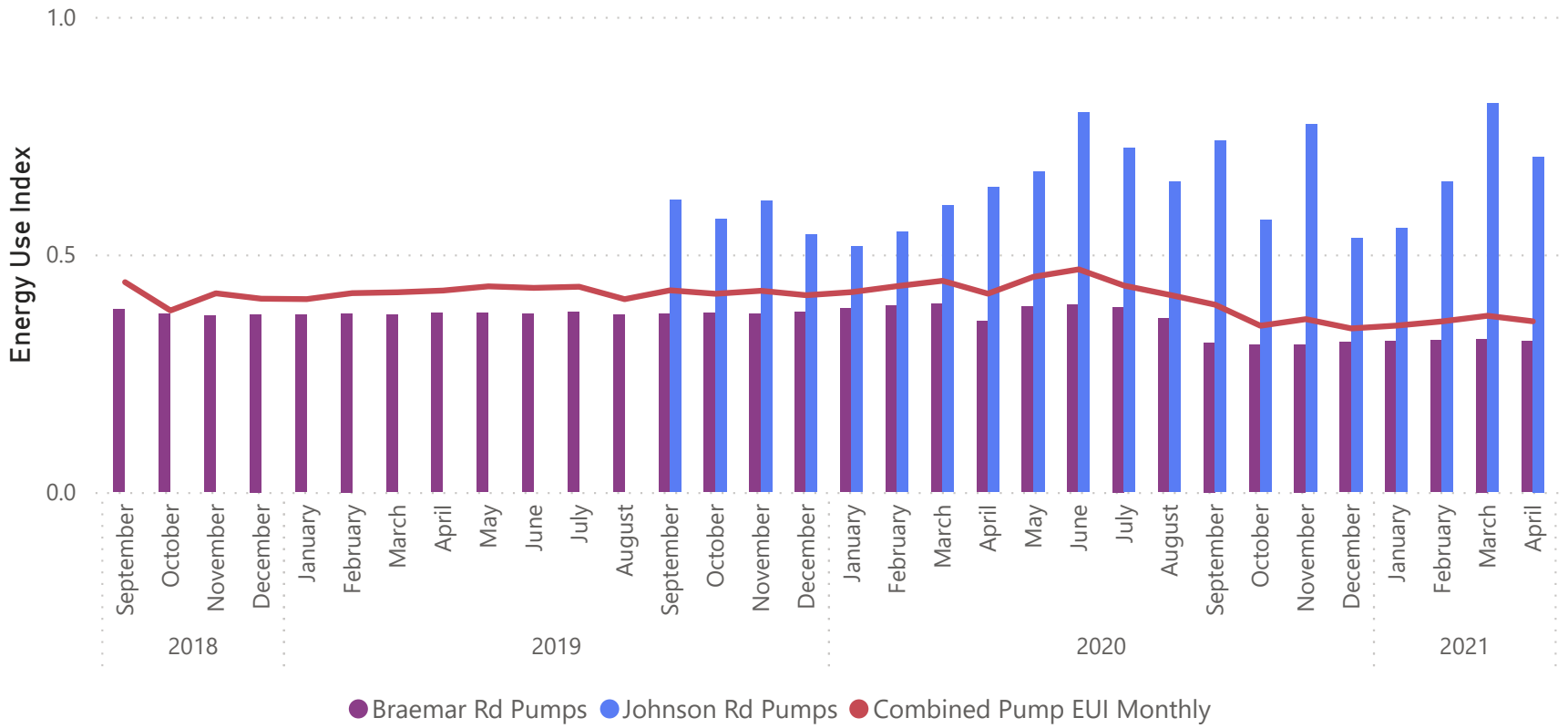


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

Whakatane District Council

Johnson and Braemar Rd Pump Stations

Johnson and Braemar Rd Pump Stations Energy Use Index by Month



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

Whakatane District Council

Bridger Glade Pump Station

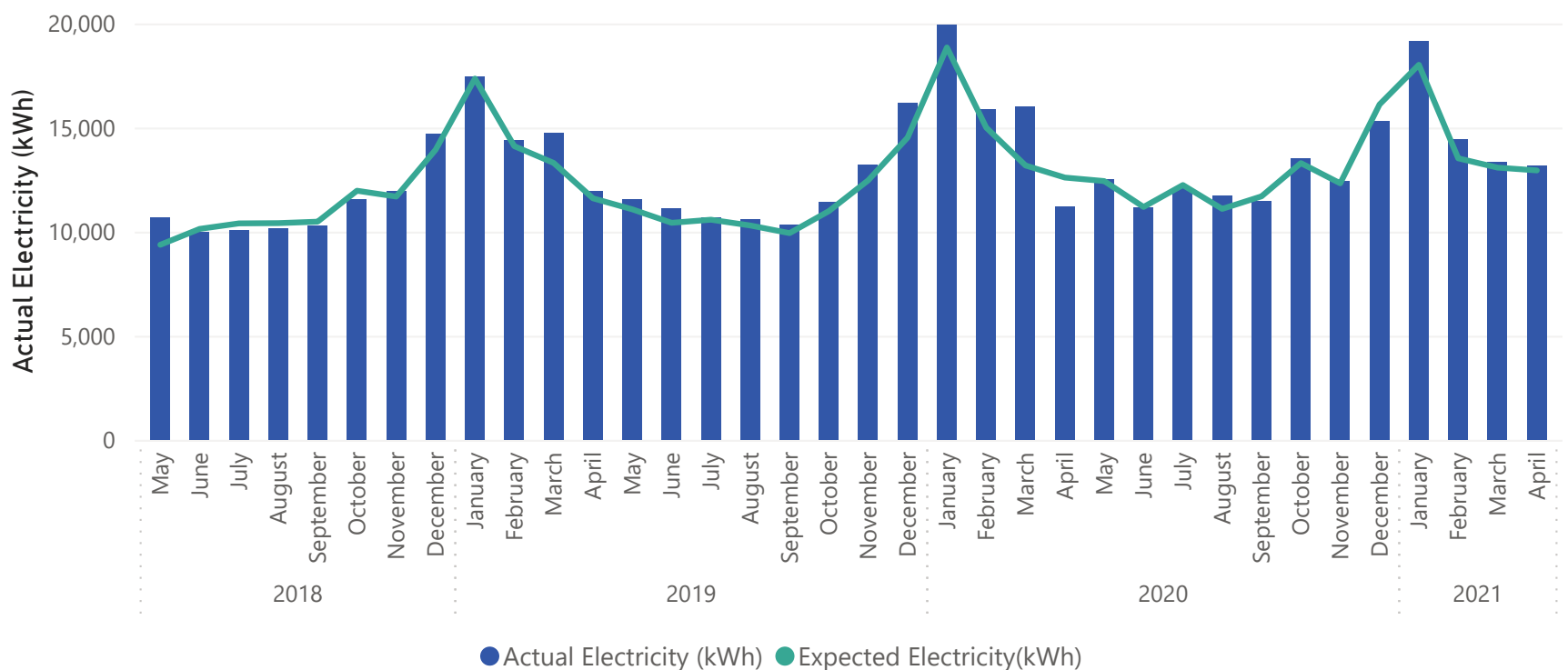
<p>-\$40</p> <p>Monthly Energy Cost Savings</p>	<p>-223</p> <p>Elec. Savings (kWh/mo)</p>	<p>-2%</p> <p>Elec. Savings (%)</p>	<p>-2,354</p> <p>R12M Electricity Savings (kWh/yr)</p>	<p>-29</p> <p>CO2e Savings (kg/mo)</p>
<p>-\$422</p> <p>R12M Energy Cost Savings</p>				<p>-303</p> <p>R12M CO2e Savings (kg/yr)</p>

Comments:

Electricity use was 2% more than baseline for the month of April 2021 at Bridger Glade pump station. Compared to April 2020, the volume of water supplied by Bridger Glade pumps has increased by 3% and electricity use has increased by 18%.

Rolling 12 month savings have decreased this month, after coming close to becoming positive in March 2021.

Bridger Glade Pumps Electricity Use Compared to Baseline (kWh)

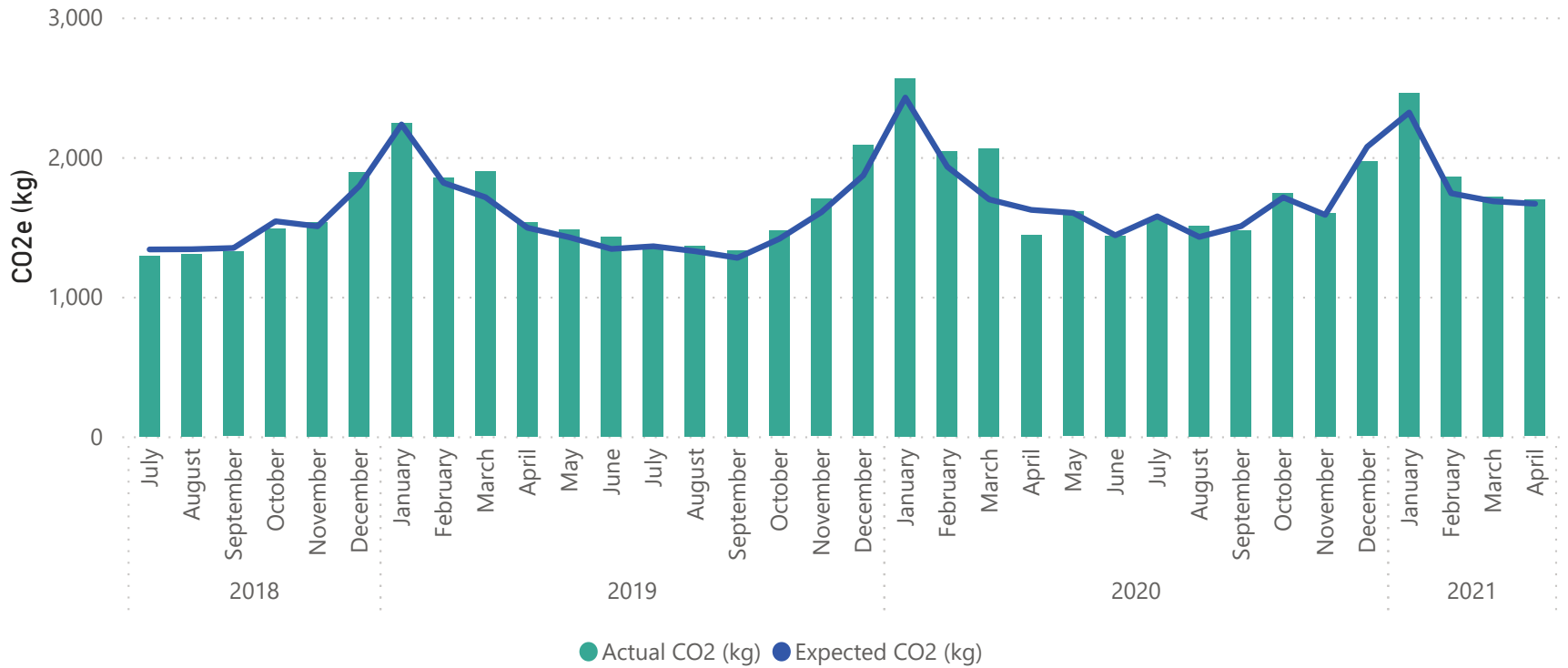


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

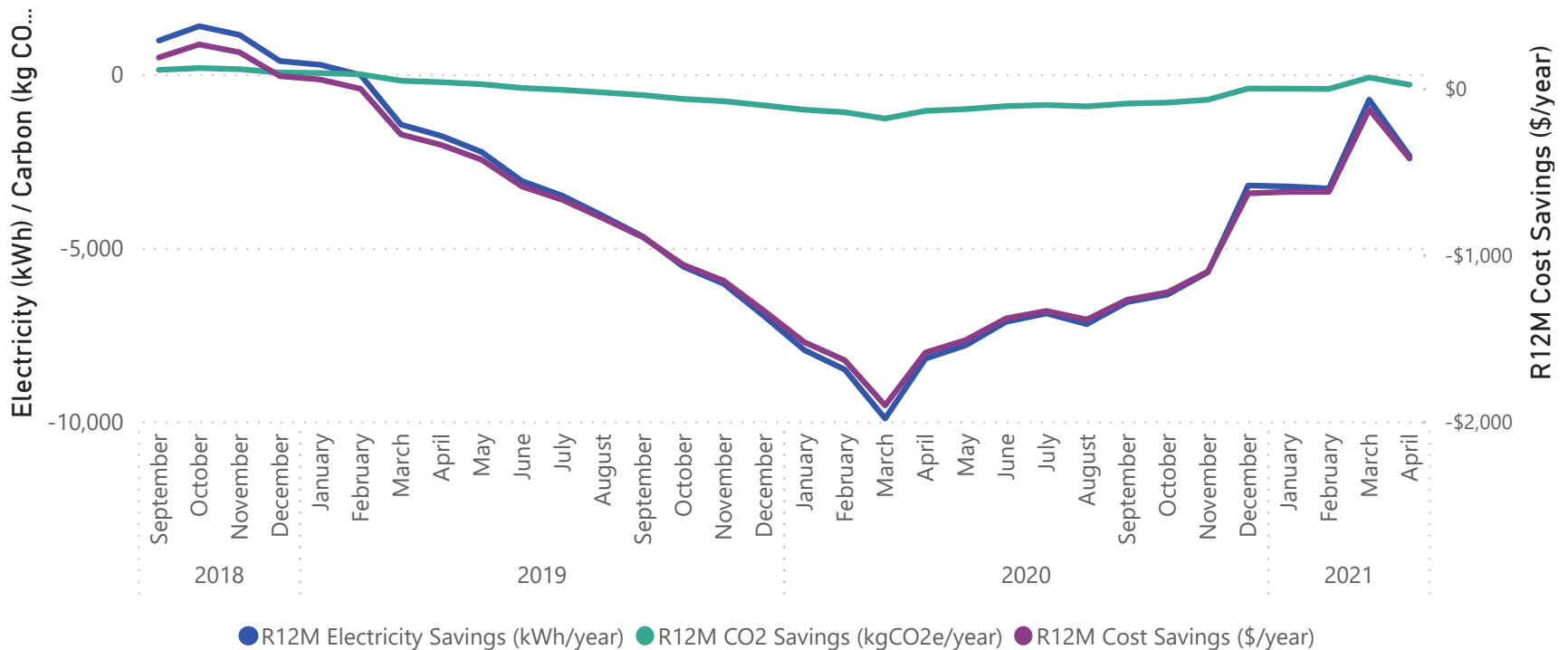
Whakatane District Council

Bridger Glade Pump Station

Bridger Glade Pumps Carbon Emissions Compared to Baseline (kg CO2e)



Bridger Glade Pumps Cumulative Rolling 12 Month Savings

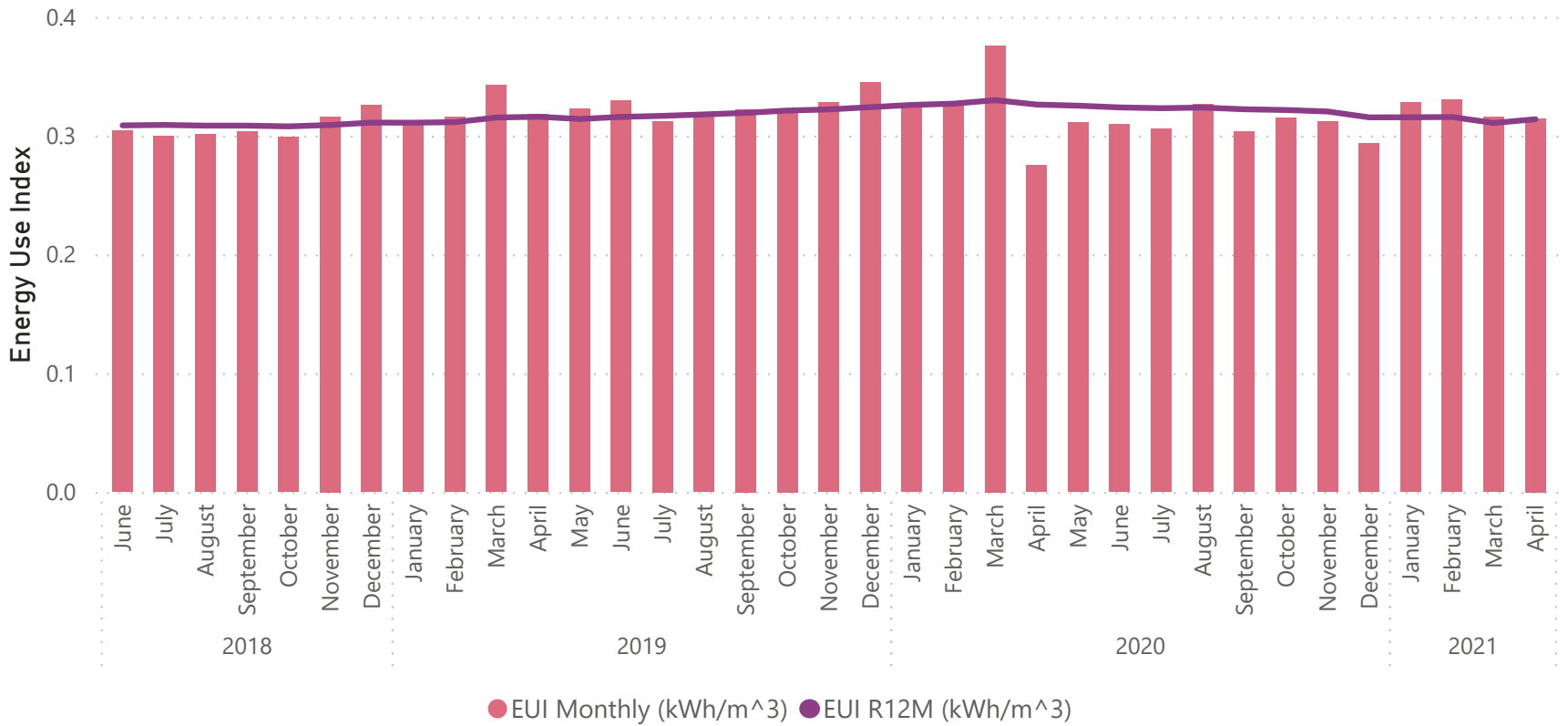


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

Whakatane District Council

Bridger Glade Pump Station

Bridger Glade Pumps Energy Use Index by Month Compared to Rolling 12-Month Values



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

Whakatane District Council

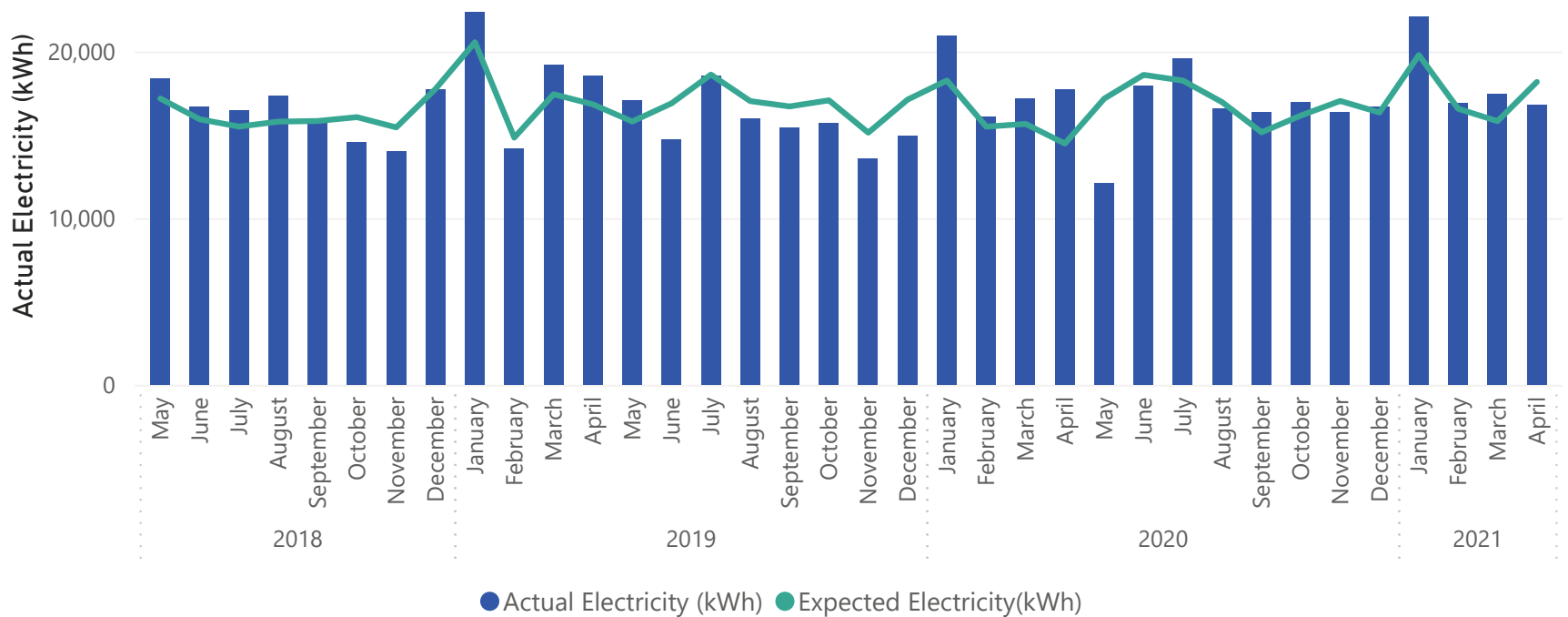
Ohope Oxidation Ponds

\$239 Monthly Energy Cost Savings	1,375 Elec. Savings (kWh/mo)	8% Elec. Savings (%)	-5,479 R12M Electricity Savings (kWh/yr)	177 CO2e Savings (kg/mo)
-\$953 R12M Energy Cost Savings				-705 R12M CO2e Savings (kg/yr)

Comments:

Electricity use was 8% less than expected in April 2021, compared to April 2020, demand has increased by 90% and electricity has increased by 5%. 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)

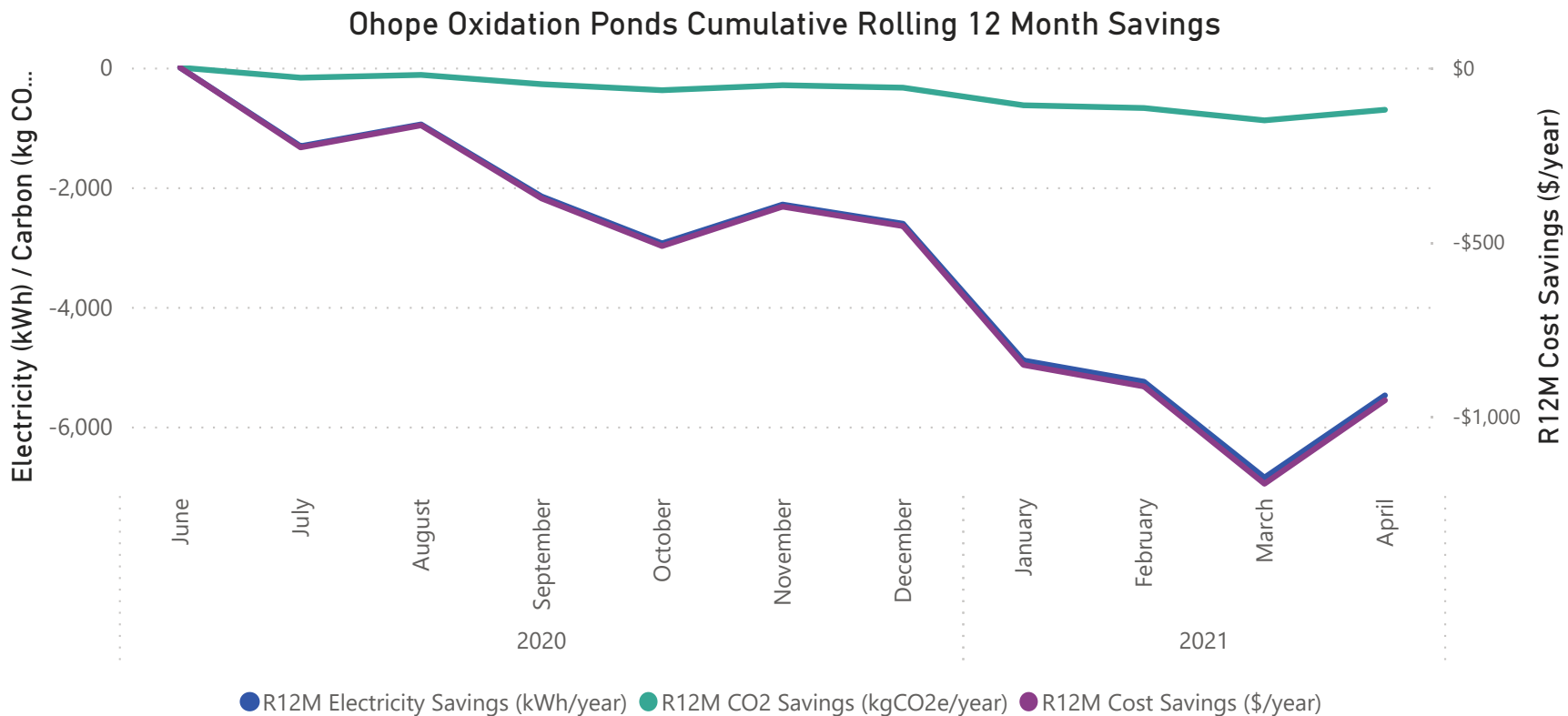
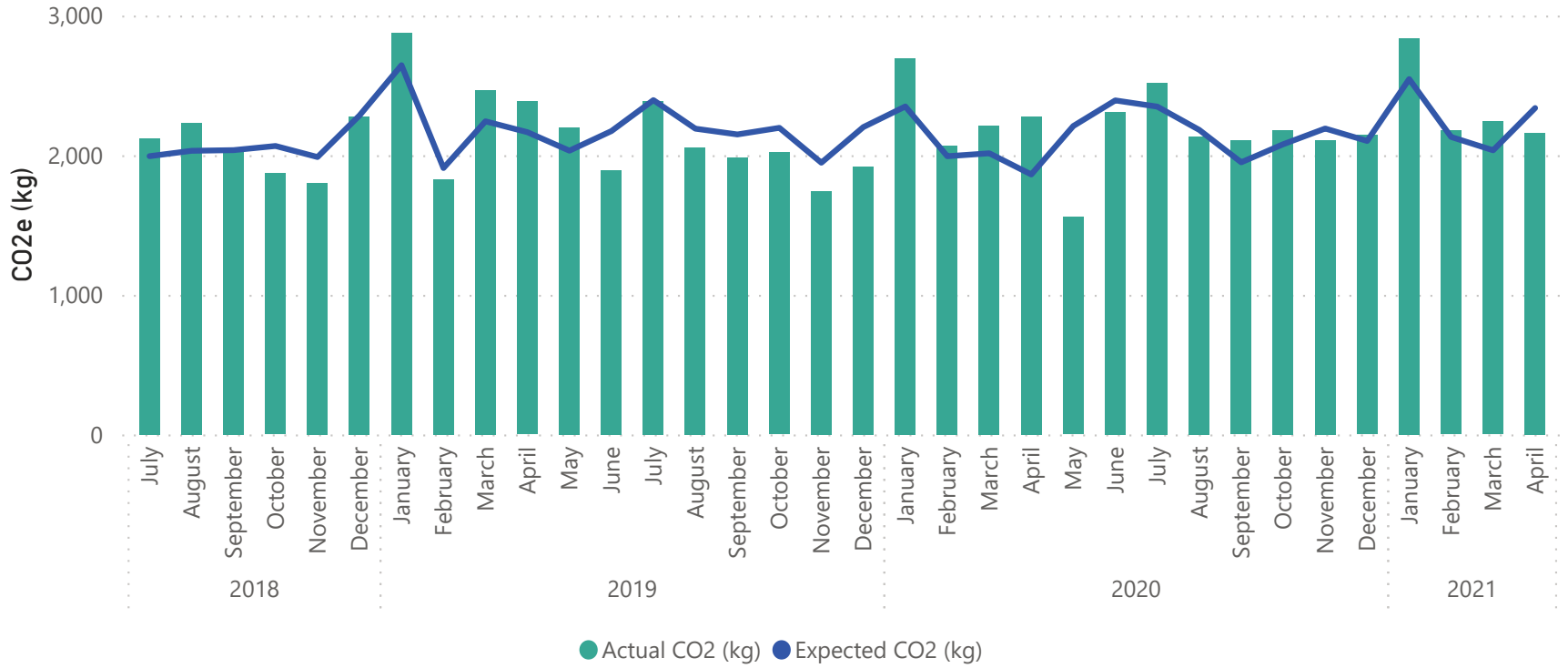


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

Whakatane District Council

Ohope Oxidation Ponds

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

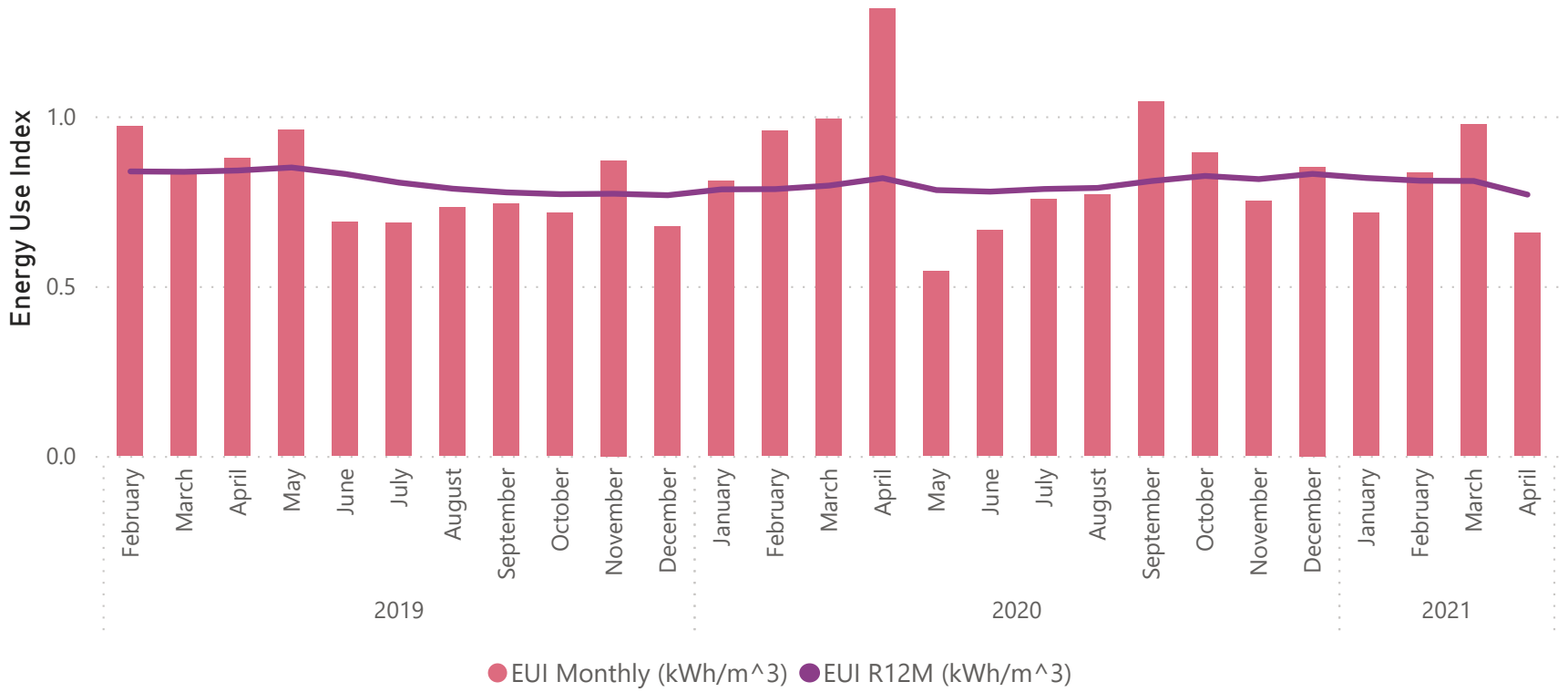


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Whakatane District Council

Ohope Oxidation Ponds

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



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

Whakatane District Council

Whakatane Oxidation Ponds

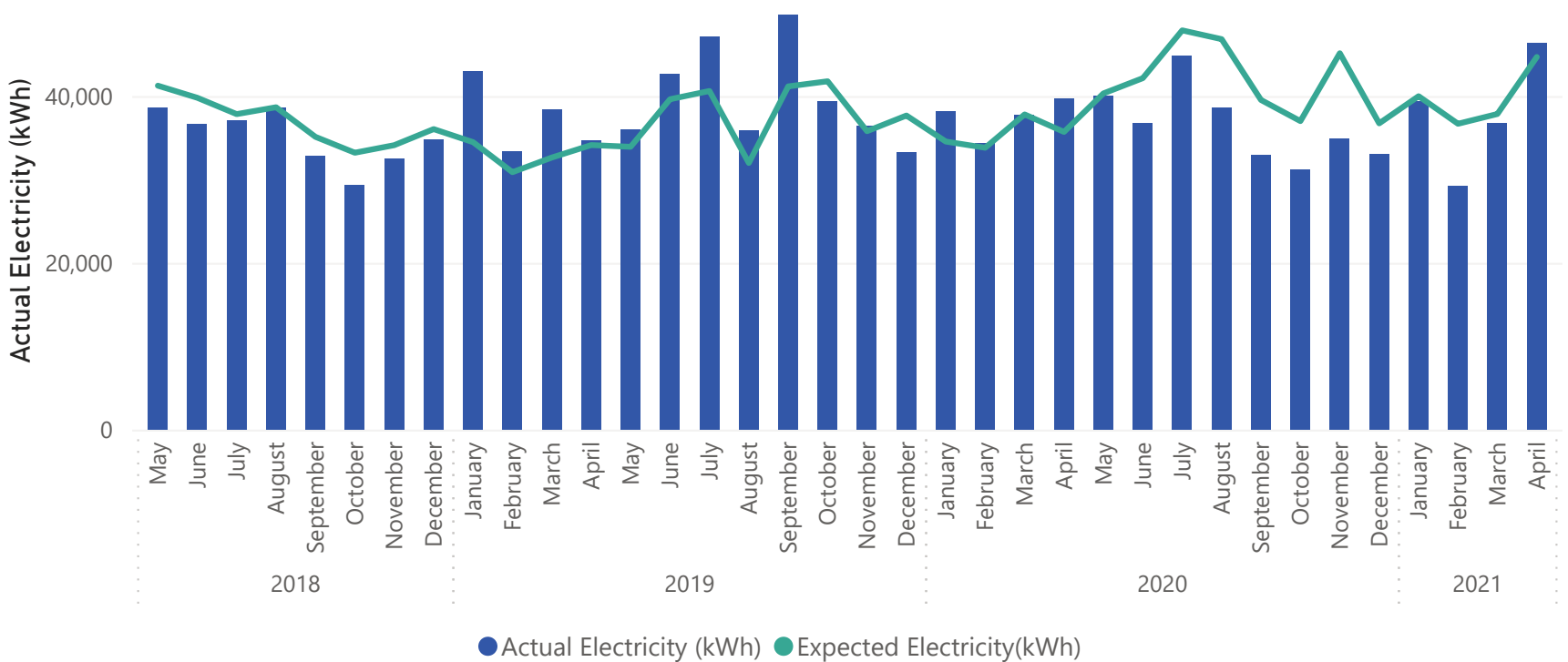
<p>-\$231 Monthly Energy Cost Savings</p>	<p>-1,661 Elec. Savings (kWh/mo)</p>	<p>-4% Elec. Savings (%)</p>	<p>45,281 R12M Electricity Savings (kWh/yr)</p>	<p>-214 CO2e Savings (kg/mo)</p>
<p>\$6,140 R12M Energy Cost Savings</p>				<p>5,828 R12M CO2e Savings (kg/yr)</p>

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 April 2021, the oxidation ponds used 4% more electricity compared to baseline. Rolling 12 month EUI has been steadily decreasing.

Whakatane Oxidation Ponds Electricity Use Compared to Baseline (kWh)

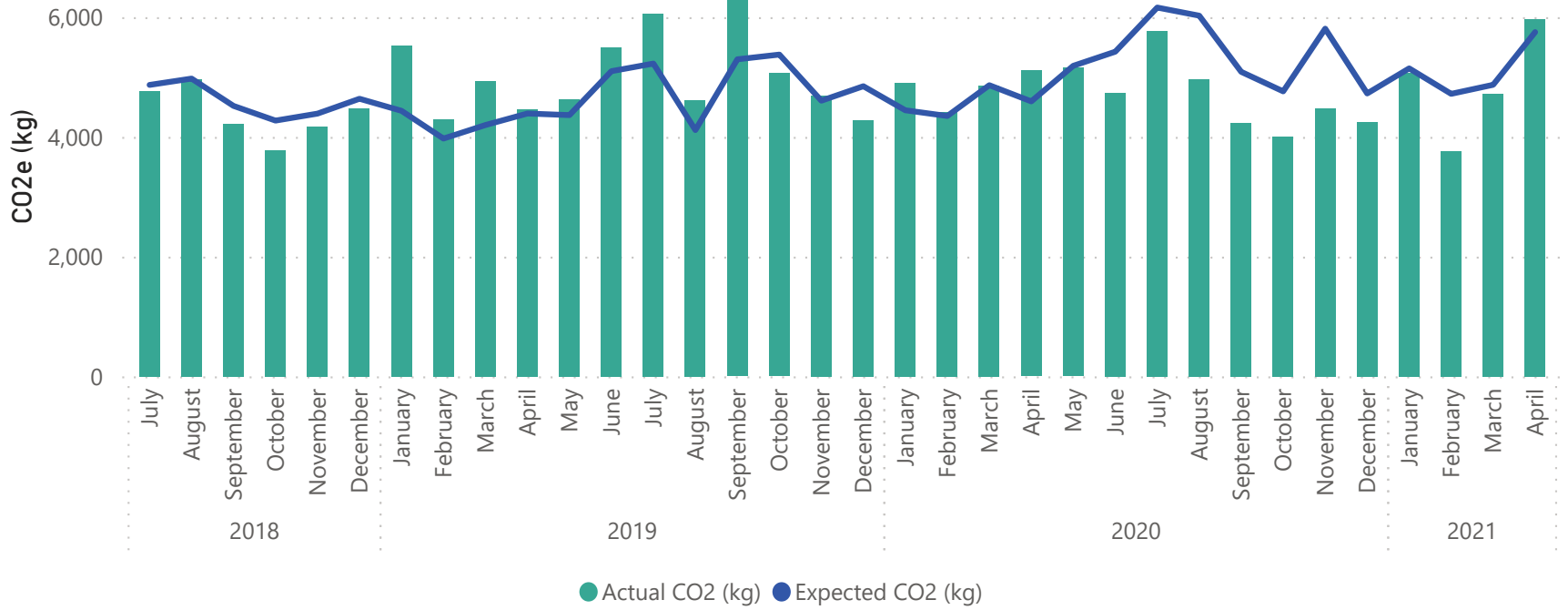


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

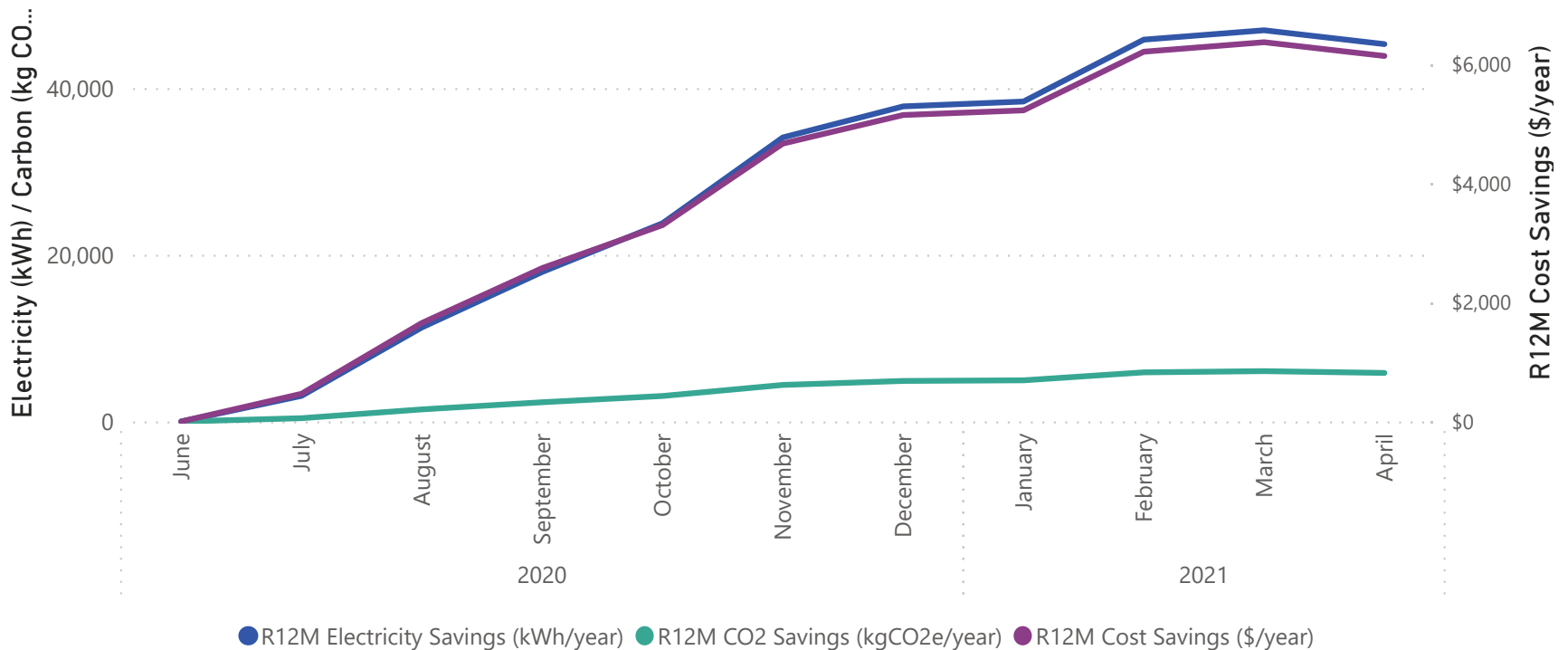
Whakatane District Council

Whakatane Oxidation Ponds

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



Whakatane Oxidation Ponds Cumulative Rolling 12 Month Savings

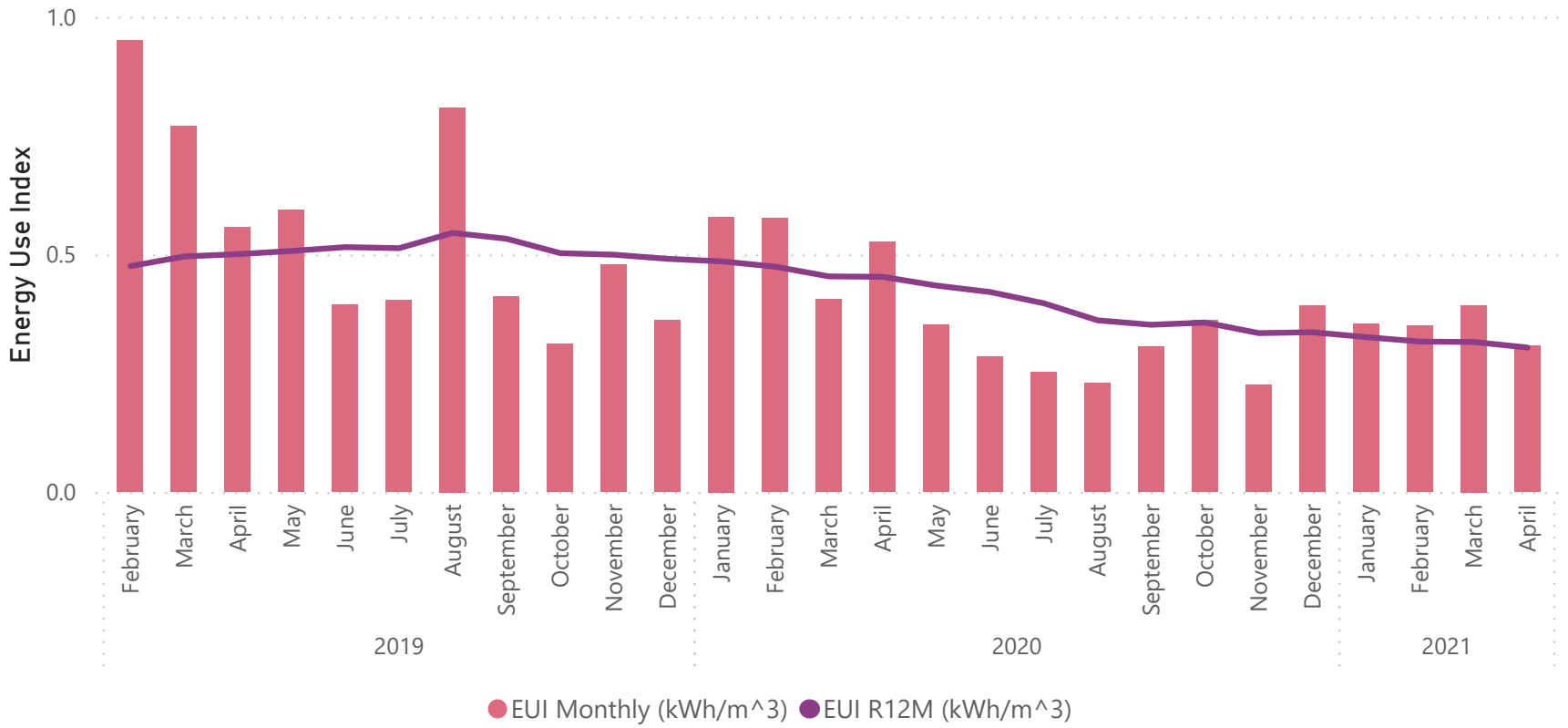


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Whakatane District Council

Whakatane Oxidation Ponds

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



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