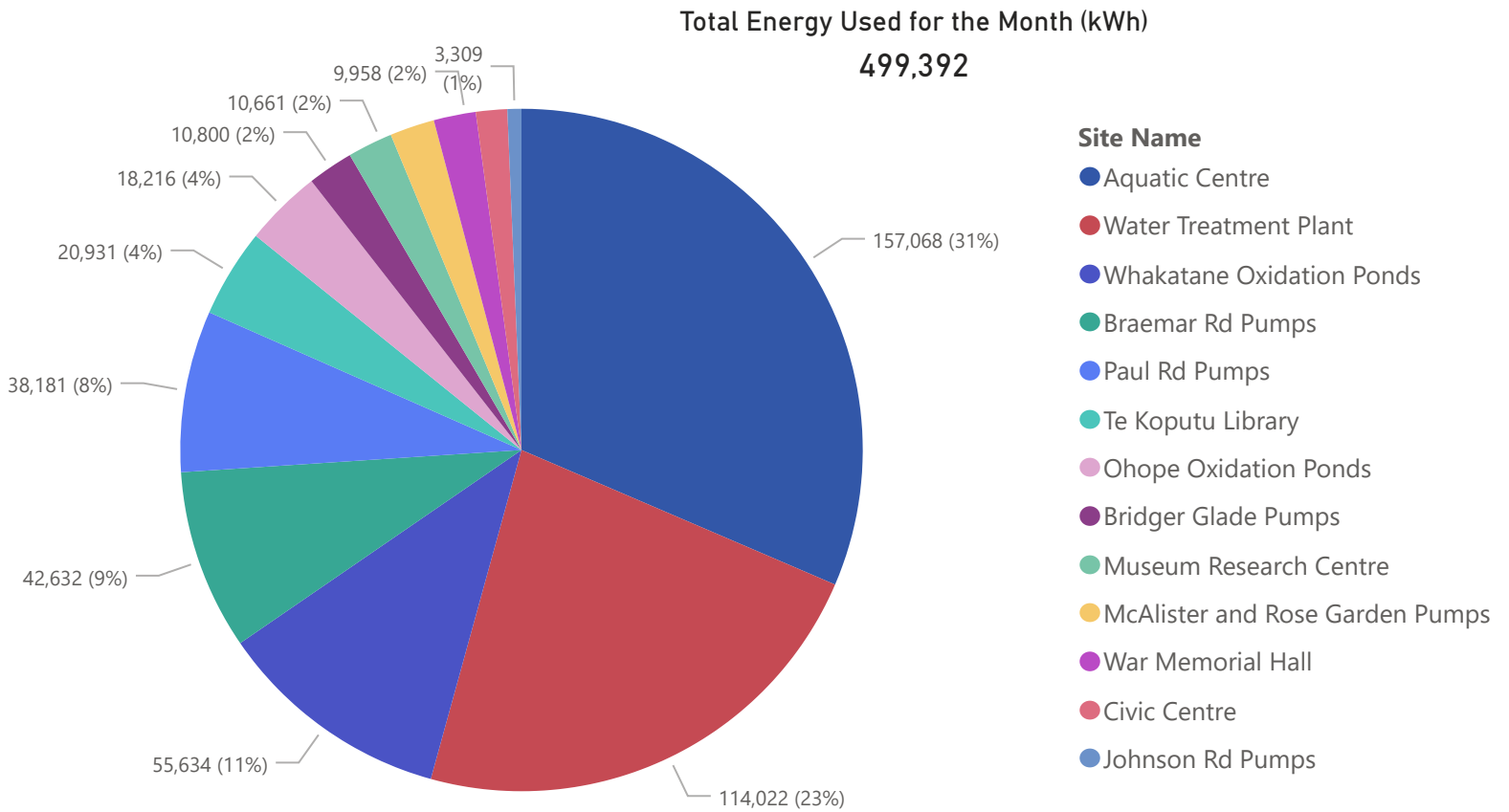


# Whakatane District Council

## Summary

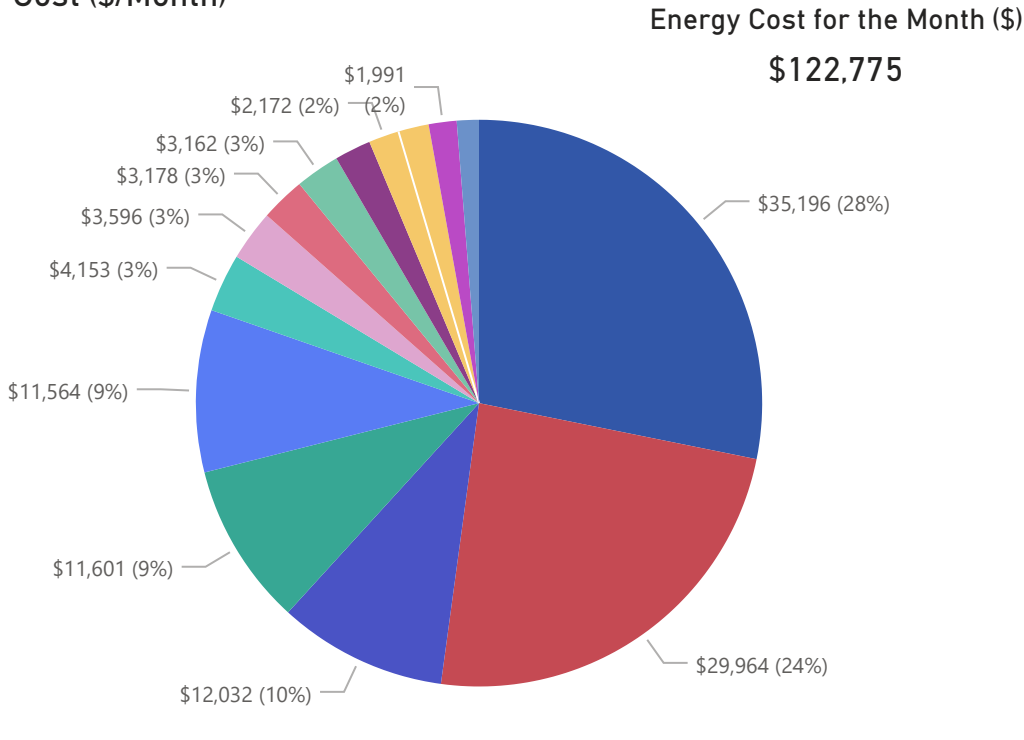
<p><b>\$24,598</b></p> <p>Monthly Energy Cost Savings</p>	<p><b>31,734</b></p> <p>Elec. Savings (kWh/mo)</p>	<p><b>6%</b></p> <p>Elec. Savings (%)</p>	<p><b>338,009</b></p> <p>R12M Electricity Savings (kWh/yr)</p>	<p><b>57,418</b></p> <p>CO2e Savings (kg/mo)</p>
<p><b>\$157,497</b></p> <p>R12M Energy Cost Savings</p>	<p><b>245,436</b></p> <p>Gas. Savings (kWh/mo)</p>	<p><b>87%</b></p> <p>Gas. Savings (%)</p>	<p><b>1,475,855</b></p> <p>R12M Gas Savings (kWh/yr)</p>	<p><b>363,935</b></p> <p>R12M CO2e Savings (kg/yr)</p>

### Total Energy (kWh/Month)



# Whakatane District Council Summary

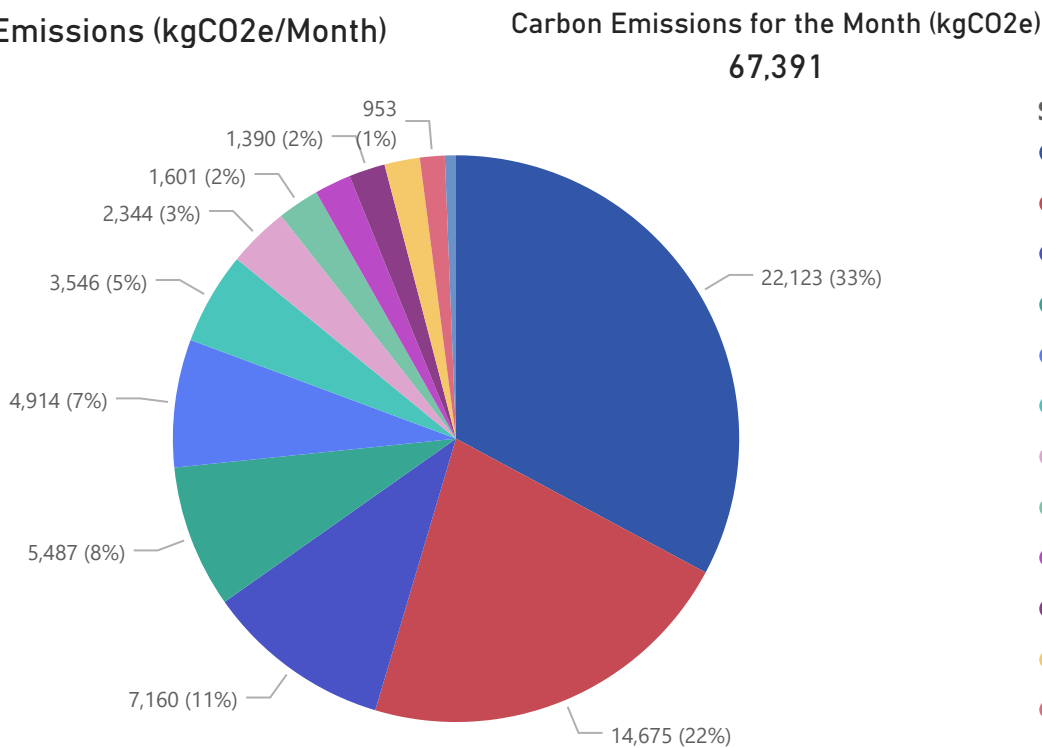
## Energy Cost (\$/Month)



### Site Name

- Aquatic Centre
- Water Treatment Plant
- Whakatane Oxidation Ponds
- Braemar Rd Pumps
- Paul Rd Pumps
- Te Koputu Library
- Ohope Oxidation Ponds
- Civic Centre
- Museum Research Centre
- Bridger Glade Pumps
- McAlister and Rose Garden Pumps
- War Memorial Hall
- Johnson Rd Pumps

## Carbon Emissions (kgCO2e/Month)

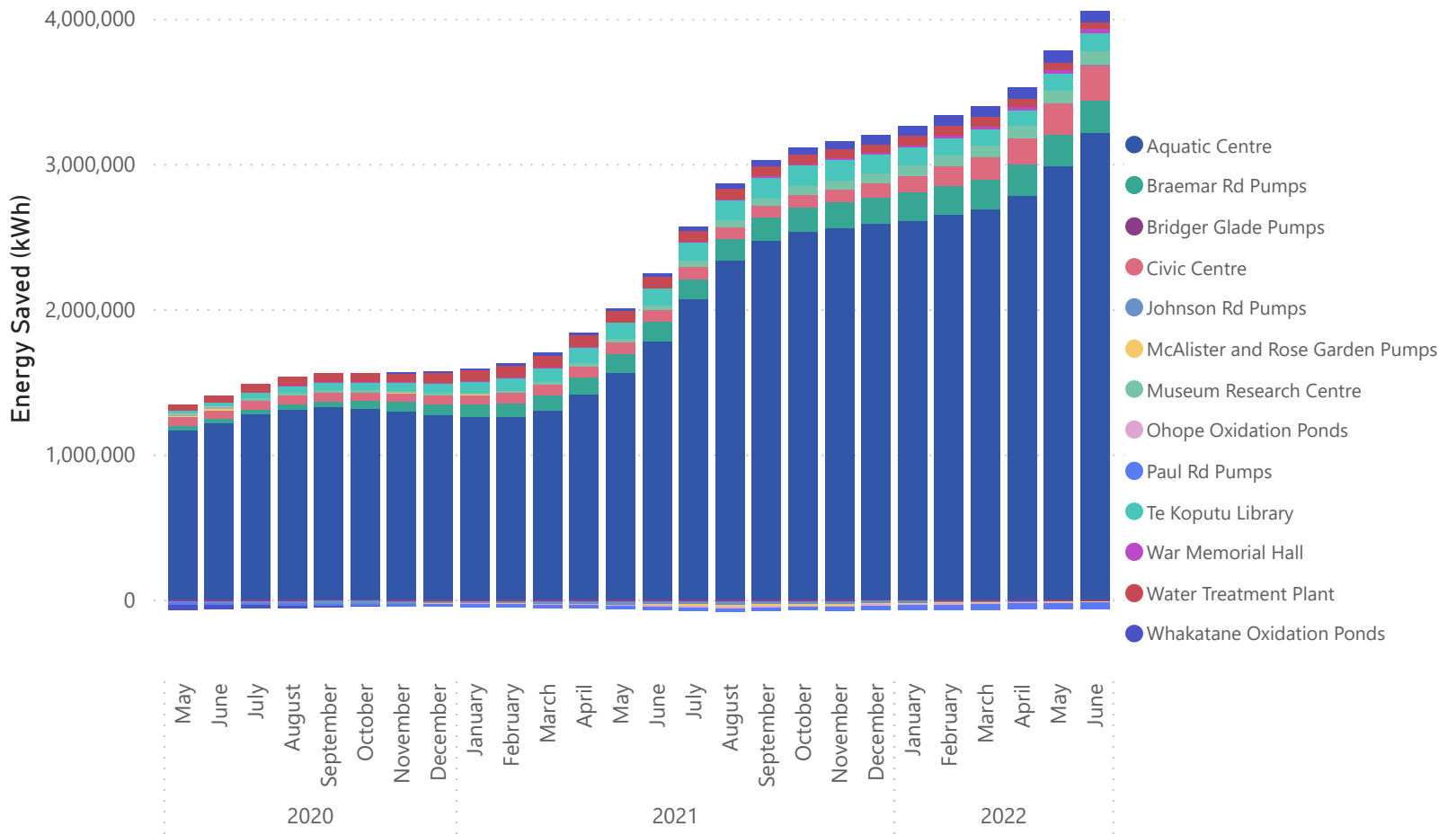


### Site Name

- Aquatic Centre
- Water Treatment Plant
- Whakatane Oxidation Ponds
- Braemar Rd Pumps
- Paul Rd Pumps
- Te Koputu Library
- Ohope Oxidation Ponds
- Museum Research Centre
- War Memorial Hall
- Bridger Glade Pumps
- McAlister and Rose Garden Pumps
- Civic Centre
- Johnson Rd Pumps

# Whakatane District Council Summary

Cumulative Energy Savings (kWh)

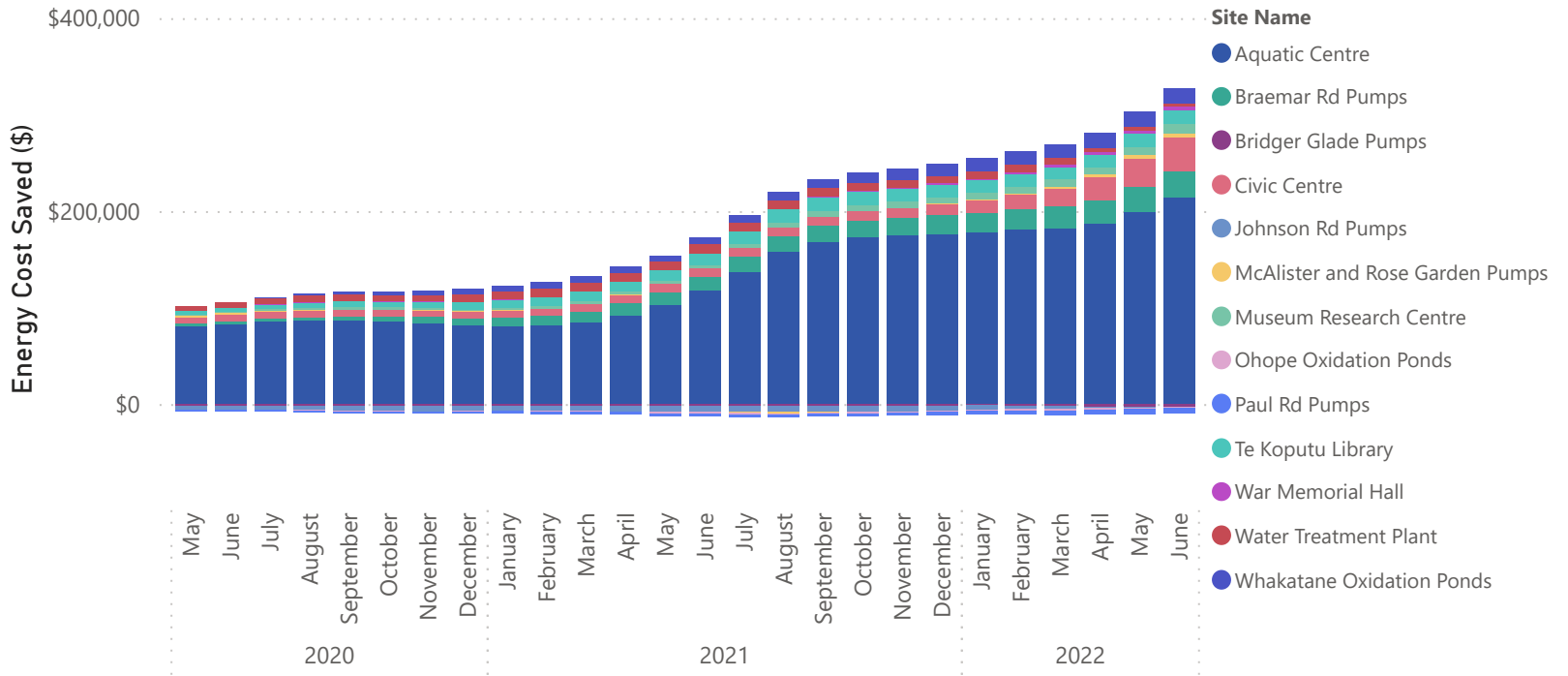


Note, cumulative savings are calculated starting July 2018

**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

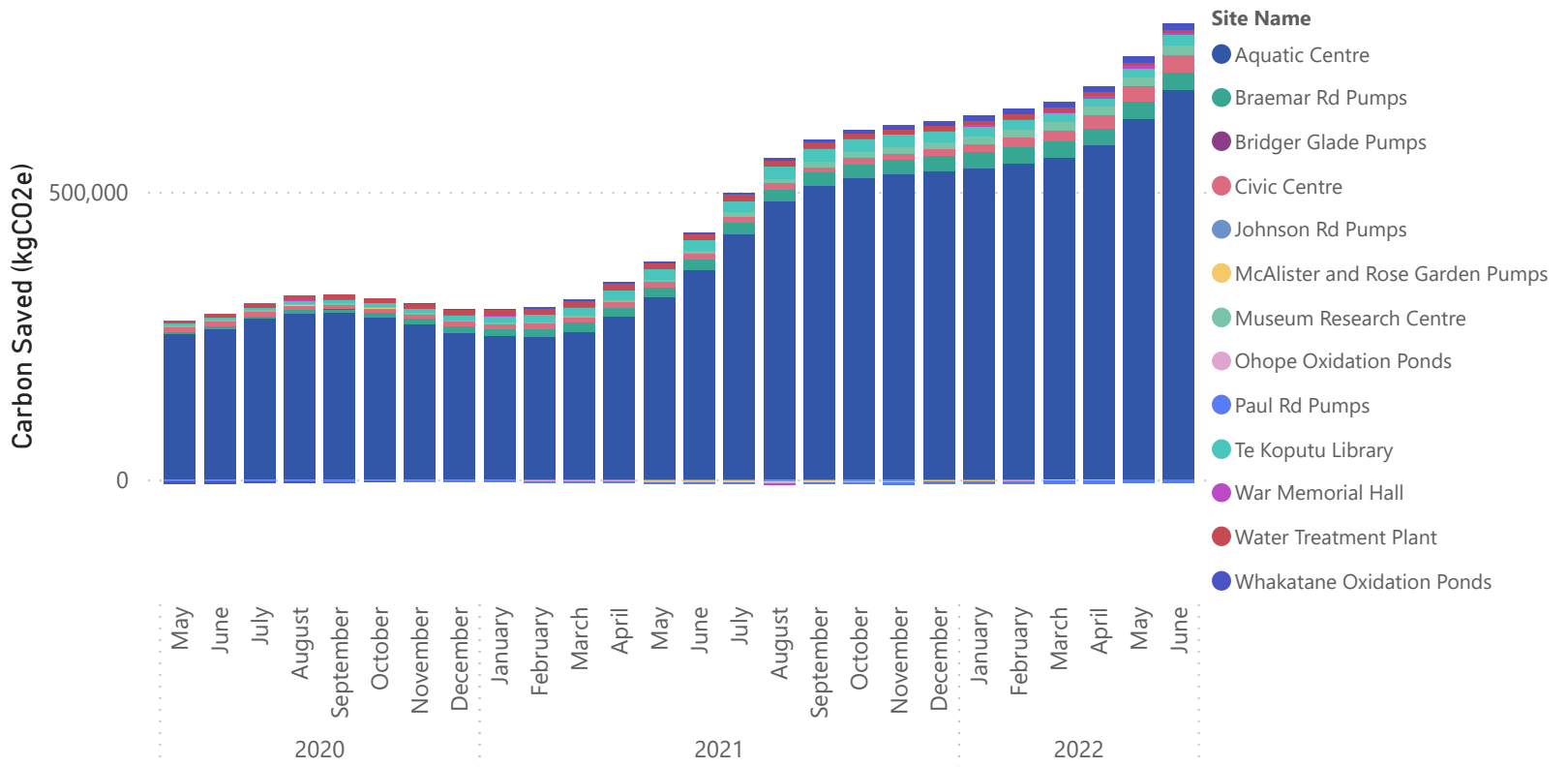
# Whakatane District Council Summary

### Cumulative Energy Cost Savings (\$)



Note, cumulative savings are calculated starting July 2018

### Cumulative Carbon Savings (kgCO2e)



**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><b>\$5,719</b> Monthly Energy Cost Savings</p>	<p><b>28,198</b> Elec. Savings (kWh/mo)</p>	<p><b>79%</b> Elec. Savings (%)</p>	<p><b>158,260</b> R12M Electricity Savings (kWh/yr)</p>	<p><b>3,629</b> CO2e Savings (kg/mo)</p>
<p><b>\$26,519</b> R12M Energy Cost Savings</p>				<p><b>20,024</b> R12M CO2e Savings (kg/yr)</p>

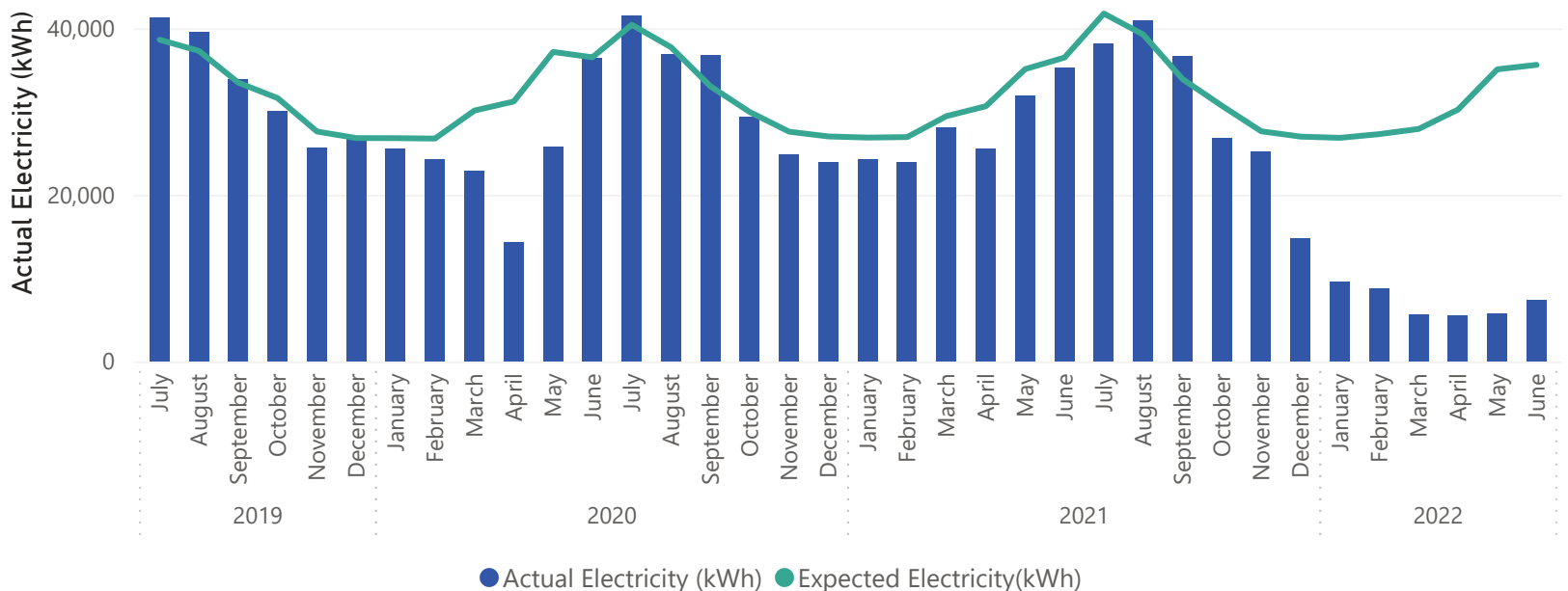
### Comments:

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

Electricity savings continue to be more than usual for 2022, the Civic Centre renovation has displaced many office workers, which has decreased electricity demand. The Civic Centre has not yet been billed for May or June 2022. Monthly cost is estimated based on recent months and will be updated as monthly invoices are released for the Civic Centre.

Marginal cost of electricity for the Civic Centre has approximately doubled due to new contract rates, compared to the same time last year.

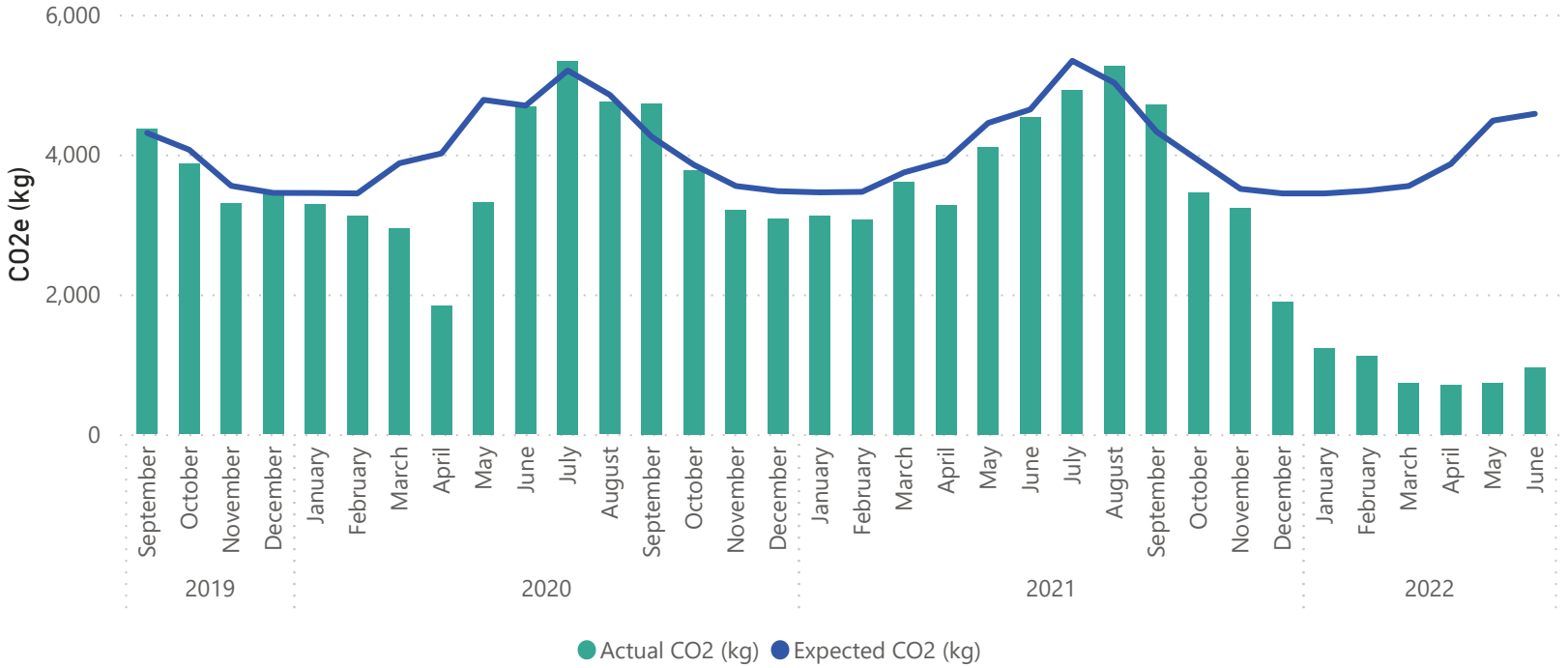
Civic Centre Electricity Use Compared to Baseline (kWh)



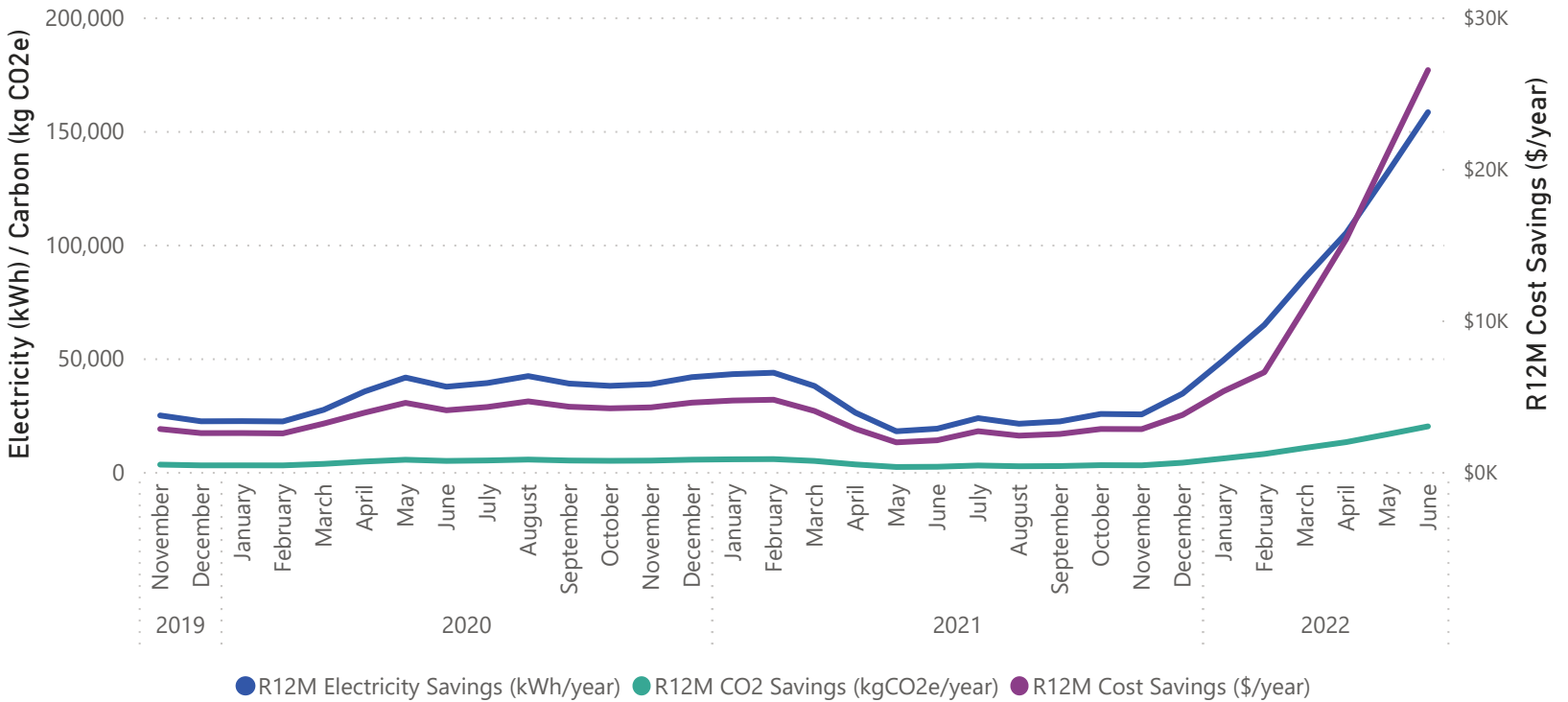
**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

# Whakatane District Council Civic Centre

### Civic Centre Carbon Emissions Compared to Baseline (kg CO2e)



### Civic Centre Rolling 12 Month Savings

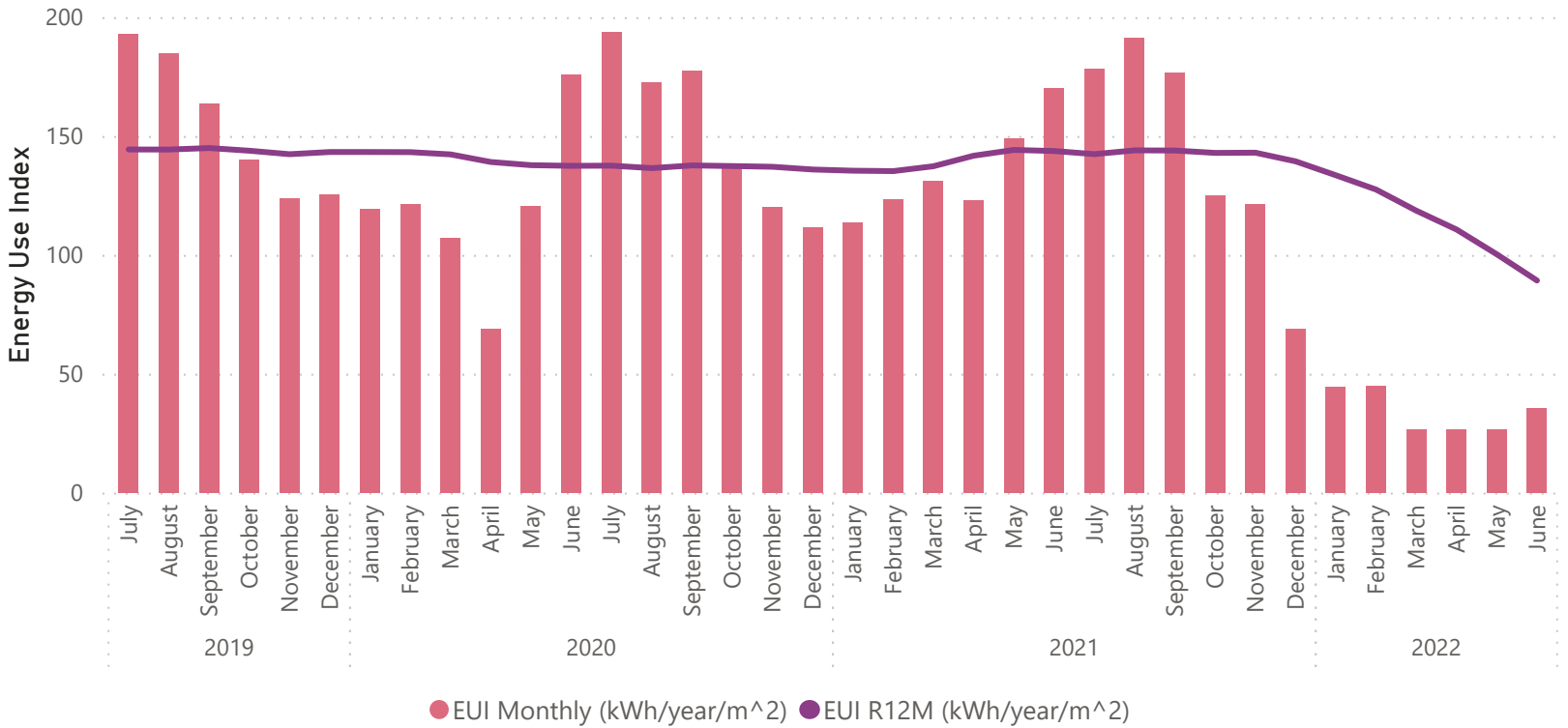


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

# 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

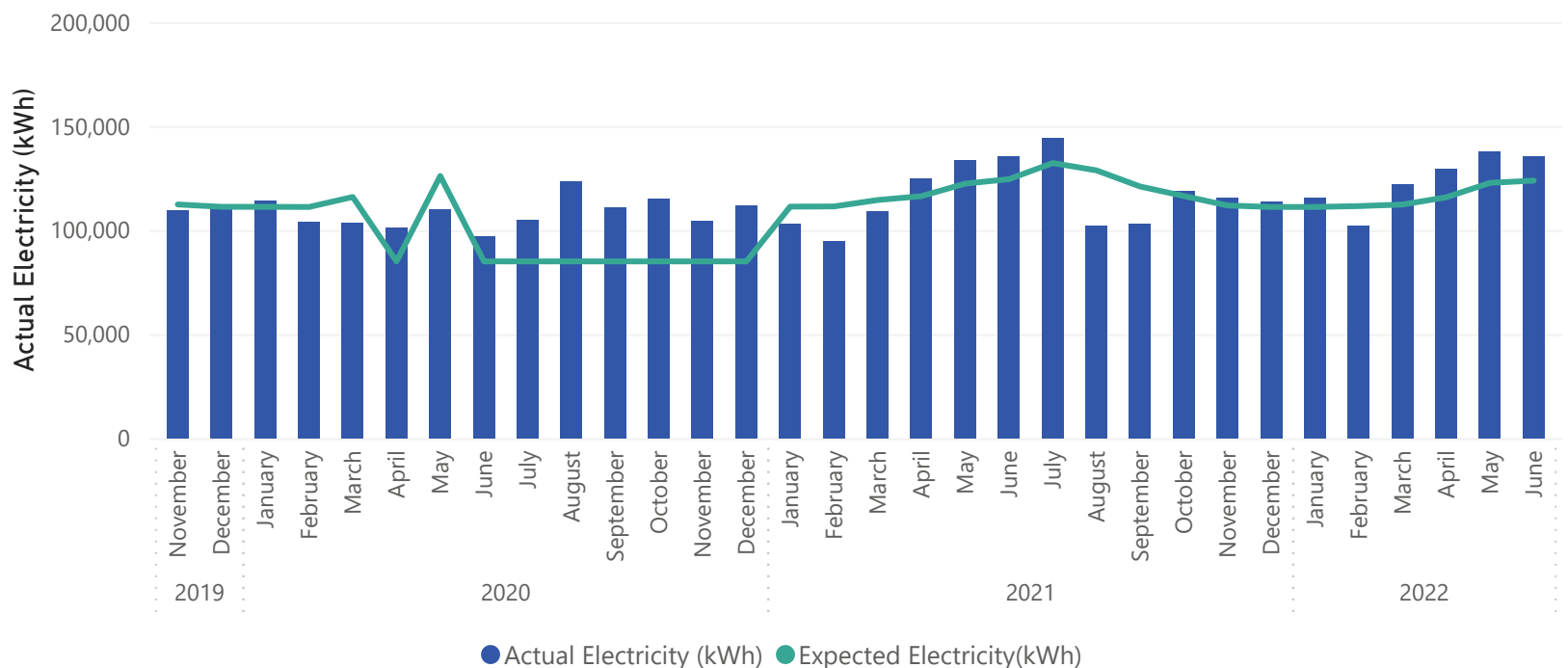
<p><b>\$14,270</b></p> <p>Monthly Energy Cost Savings</p>	<p><b>- 11,585</b></p> <p>Elec. Savings (kWh/mo)</p>	<p><b>-9%</b></p> <p>Elec. Savings (%)</p>	<p><b>-20,498</b></p> <p>R12M Electricity Savings (kWh/yr)</p>	<p><b>49,996</b></p> <p>CO2e Savings (kg/mo)</p>
<p><b>\$96,236</b></p> <p>R12M Energy Cost Savings</p>	<p><b>237,325</b></p> <p>Gas. Savings (kWh/mo)</p>	<p><b>92%</b></p> <p>Gas. Savings (%)</p>	<p><b>1,453,157</b></p> <p>R12M Gas Savings (kWh/yr)</p>	<p><b>312,817</b></p> <p>R12M CO2e Savings (kg/yr)</p>

### Comments:

The outdoor pool is now open year-round and uses a baseline that reflects this change. Electricity use above baseline reflects that the pool is now preferentially using electric heat pumps to heat the pool instead of natural gas, which reduces natural gas use but increases electricity consumption. Electricity use has increased from February 2022, lower ambient temperatures increase the amount of heating required.

Natural gas savings are still excellent, achieving 92% for the month of June 2022. Marginal cost of electricity for the Aquatic Centre has nearly doubled compared to this time last year, due to new contract rates.

Aquatic Centre Electricity Use Compared to Baseline (kWh)



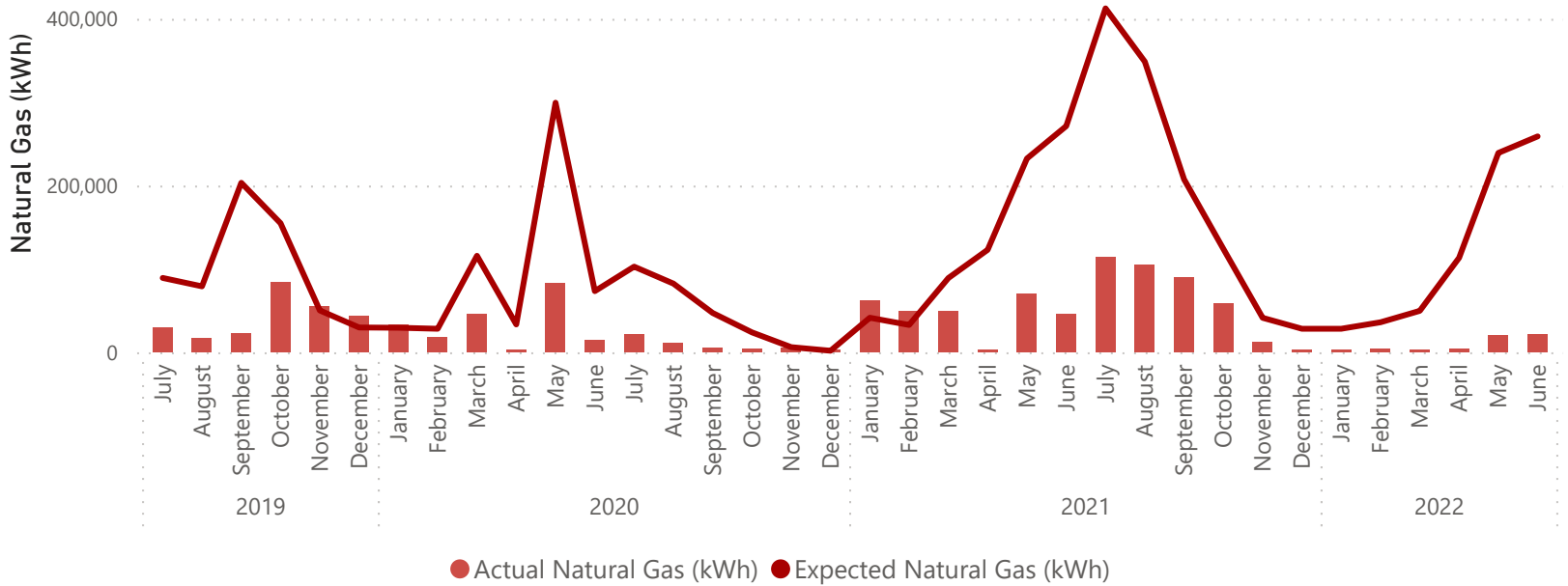
**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time



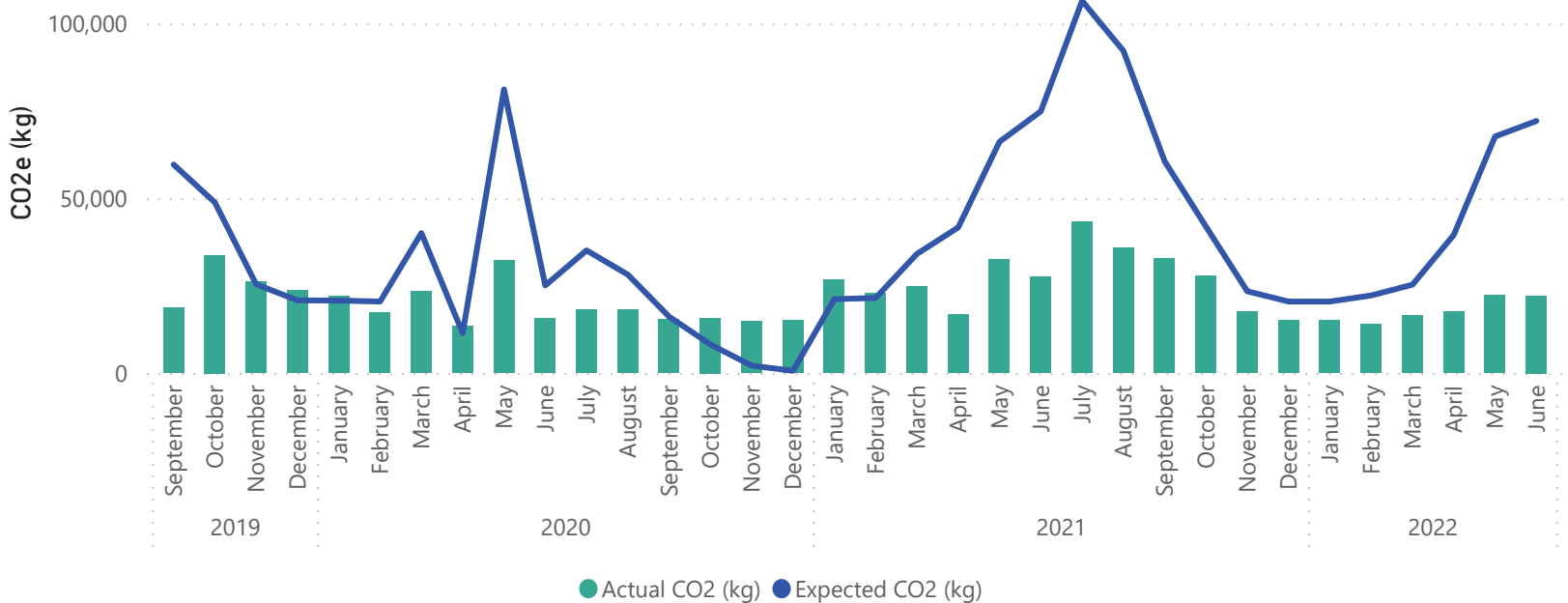
# Whakatane District Council

## Aquatic Centre

Aquatic Centre Natural Gas Compared to Baseline (kWh)



Aquatic Centre Carbon Emissions Compared to Baseline (kg CO2e)

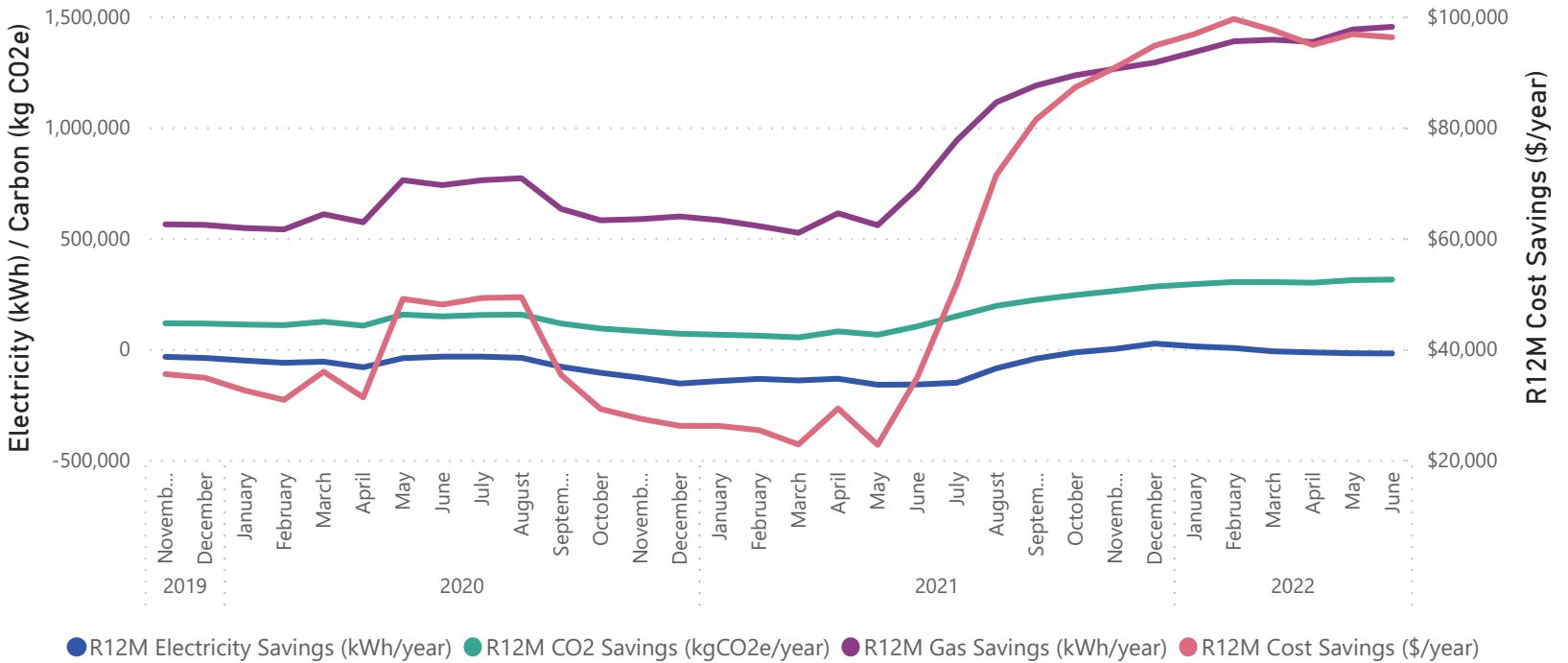


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

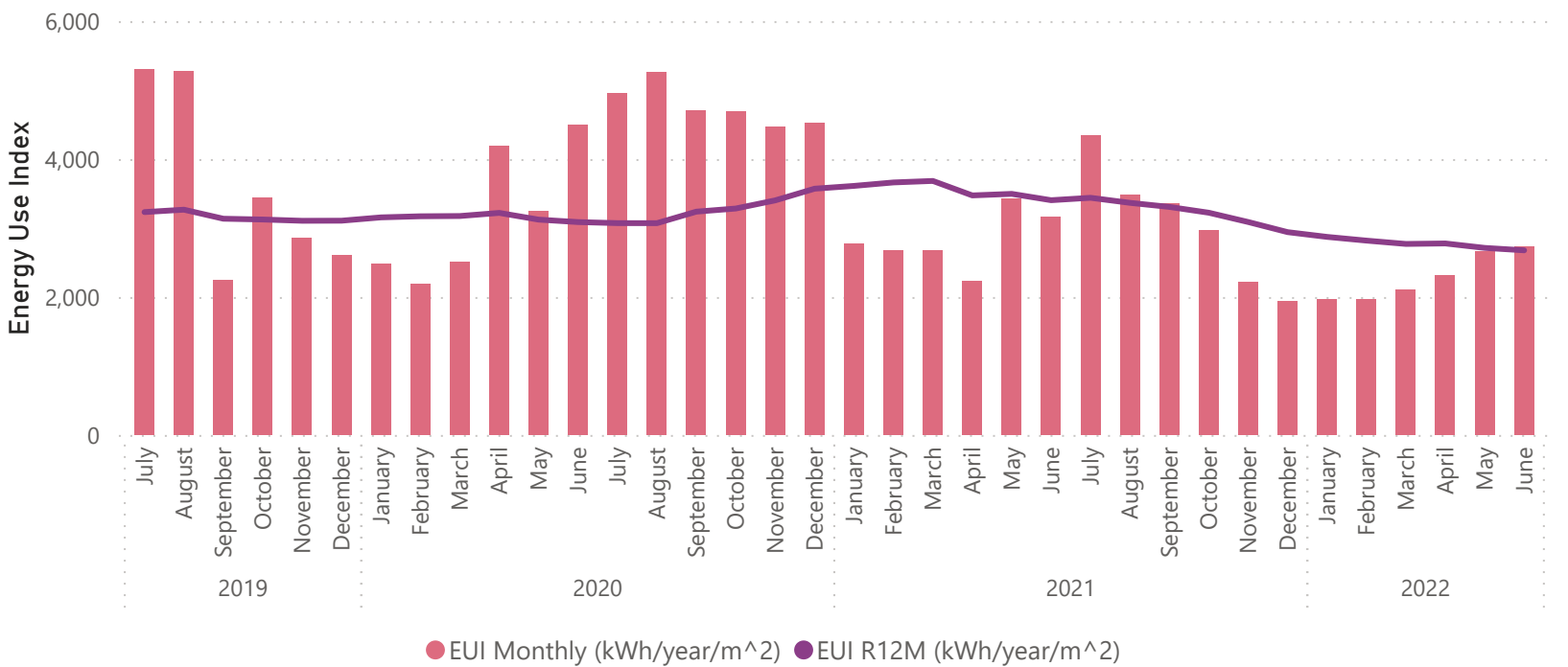
# Whakatane District Council

## Aquatic Centre

Aquatic Centre 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><b>\$1,251</b> Monthly Energy Cost Savings</p>	<p><b>4,515</b> Elec. Savings (kWh/mo)</p>	<p><b>29%</b> Elec. Savings (%)</p>	<p><b>30,312</b> R12M Electricity Savings (kWh/yr)</p>	<p><b>1,115</b> CO2e Savings (kg/mo)</p>
<p><b>\$3,088</b> R12M Energy Cost Savings</p>	<p><b>2,442</b> Gas. Savings (kWh/mo)</p>	<p><b>20%</b> Gas. Savings (%)</p>	<p><b>-23,781</b> R12M Gas Savings (kWh/yr)</p>	<p><b>-1,201</b> R12M CO2e Savings (kg/yr)</p>

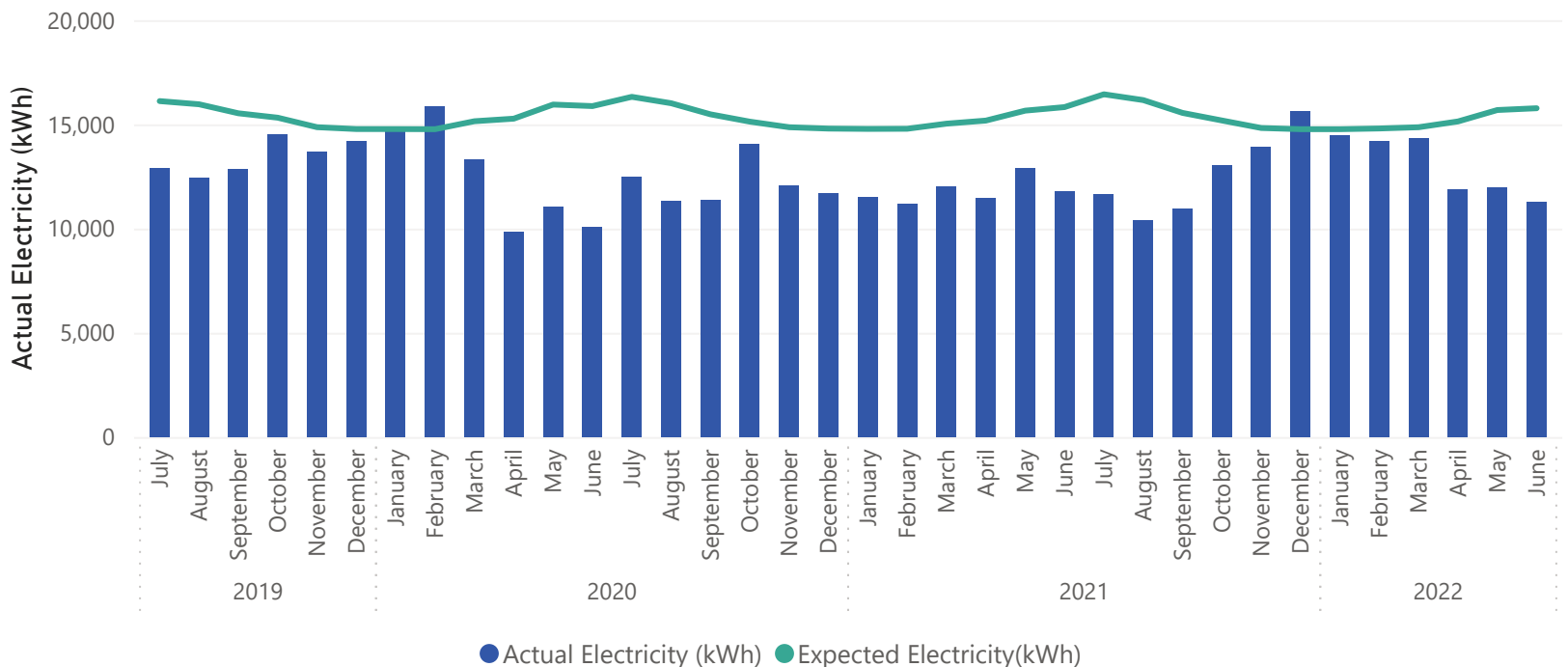
### Comments:

A pattern of seasonal reversal can be observed for gas use from May 2021 to June 2022, more gas is used during warmer months and less gas for cooler months.

Dehumidification loads are significant as electricity is required for cooling and gas is required for re-heat. Control of relative humidity has improved, however further investigation is needed to understand if this is optimised or if the cooling and heating coils are fighting each other excessively.

Marginal cost of electricity for the Library has roughly doubled compared to this time last year, due to new contract rates.

Te Koputu Library Electricity Use Compared to Baseline (kWh)

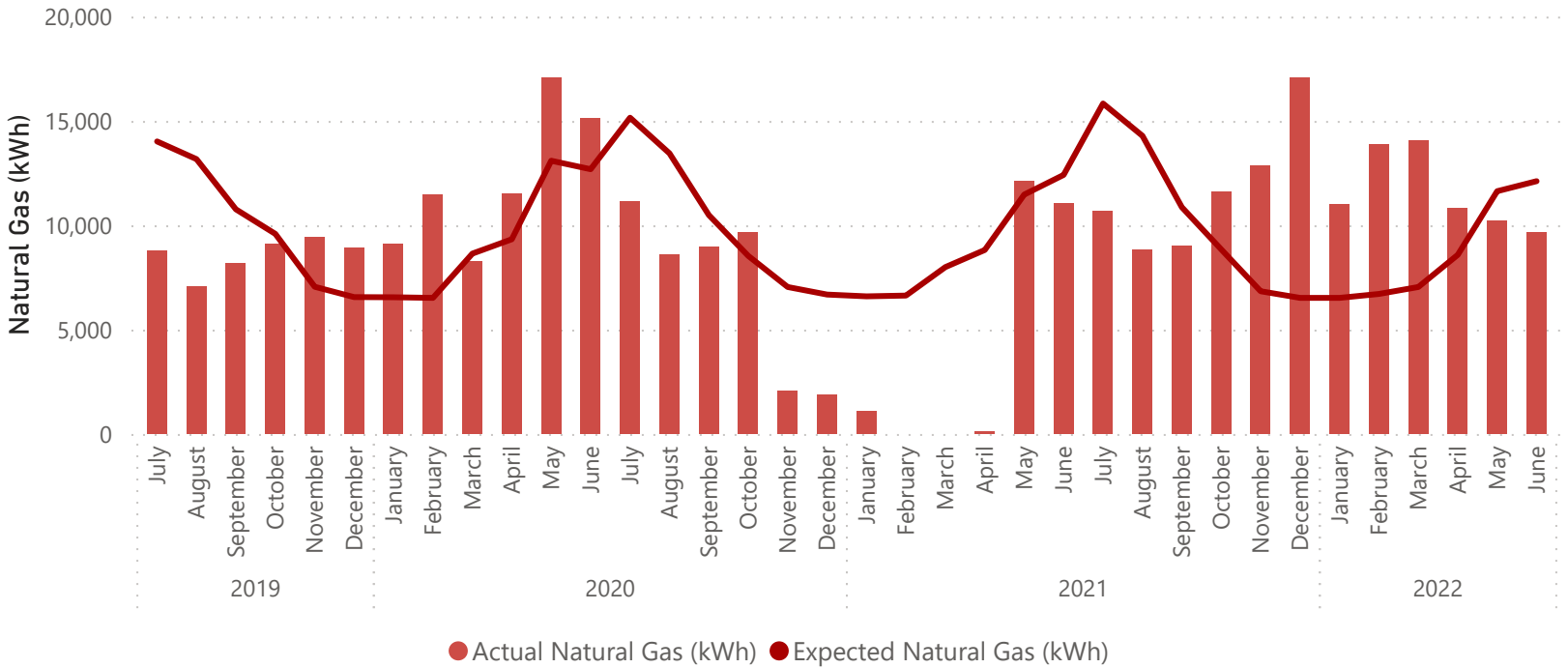


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

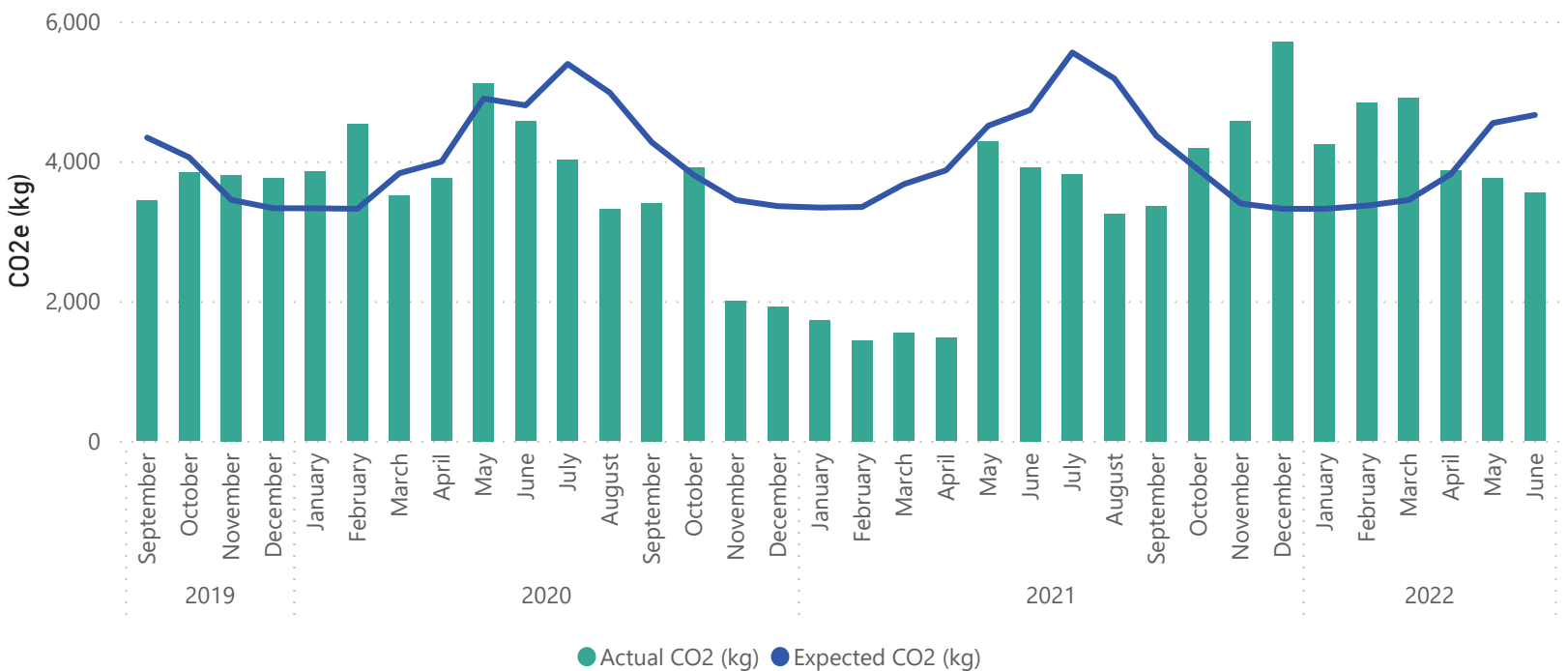
# Whakatane District Council

## Te Koputu Library

Te Koputu Library Natural Gas Compared to Baseline (kWh)



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

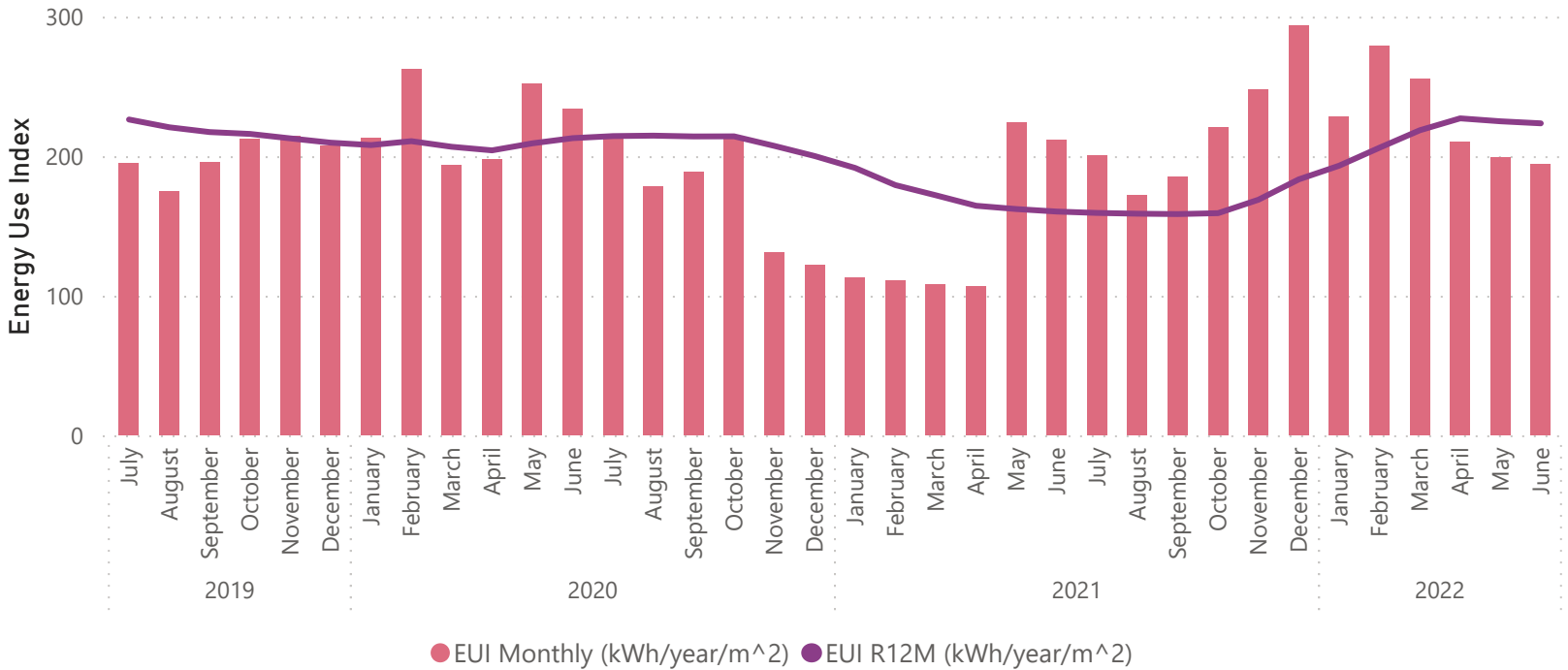


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

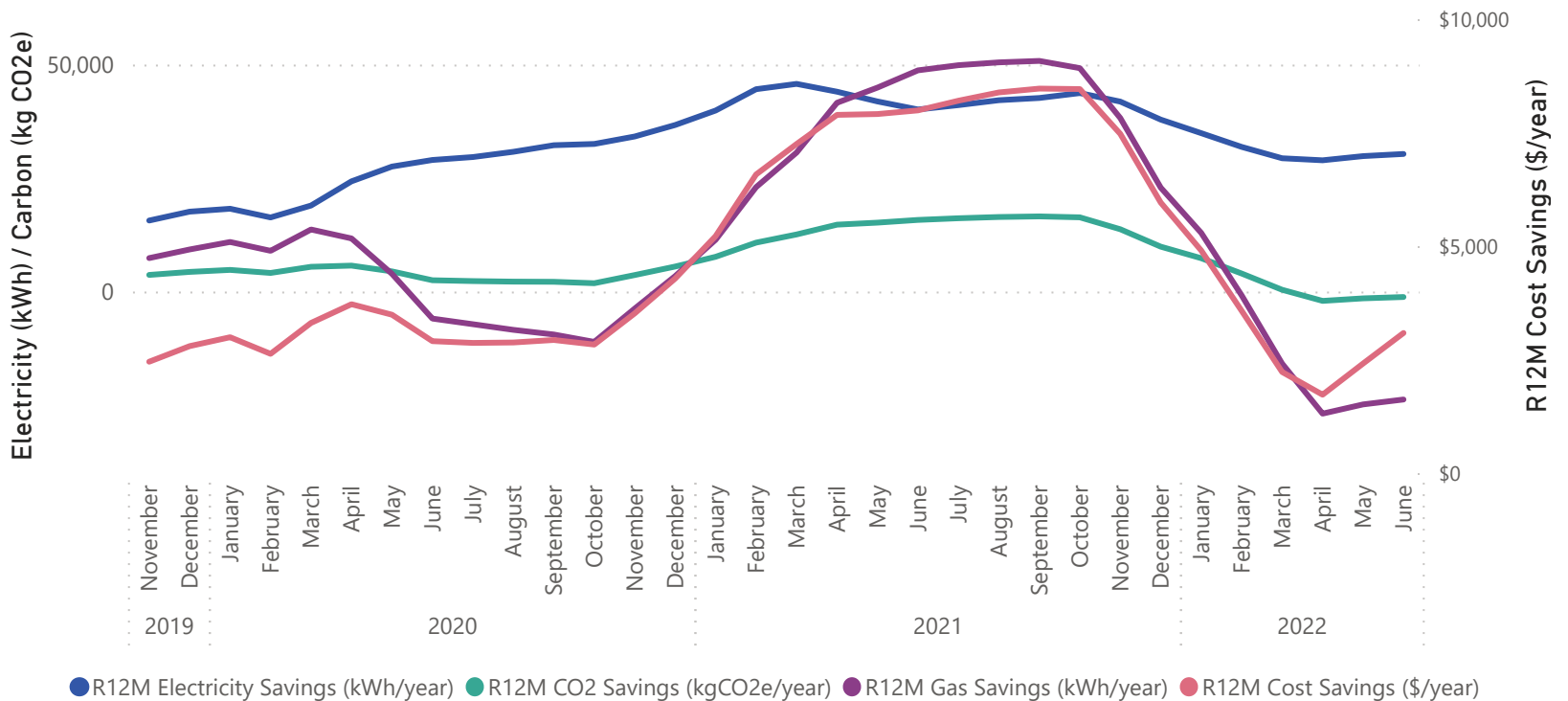
# Whakatane District Council

## Te Koputu Library

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



Te Koputu Library 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><b>\$1,051</b></p> <p>Monthly Energy Cost Savings</p>	<p><b>3,152</b></p> <p>Elec. Savings (kWh/mo)</p>	<p><b>28%</b></p> <p>Elec. Savings (%)</p>	<p><b>20,839</b></p> <p>R12M Electricity Savings (kWh/yr)</p>	<p><b>1,302</b></p> <p>CO2e Savings (kg/mo)</p>
<p><b>\$6,053</b></p> <p>R12M Energy Cost Savings</p>	<p><b>4,136</b></p> <p>Gas. Savings (kWh/mo)</p>	<p><b>61%</b></p> <p>Gas. Savings (%)</p>	<p><b>42,095</b></p> <p>R12M Gas Savings (kWh/yr)</p>	<p><b>11,808</b></p> <p>R12M CO2e Savings (kg/yr)</p>

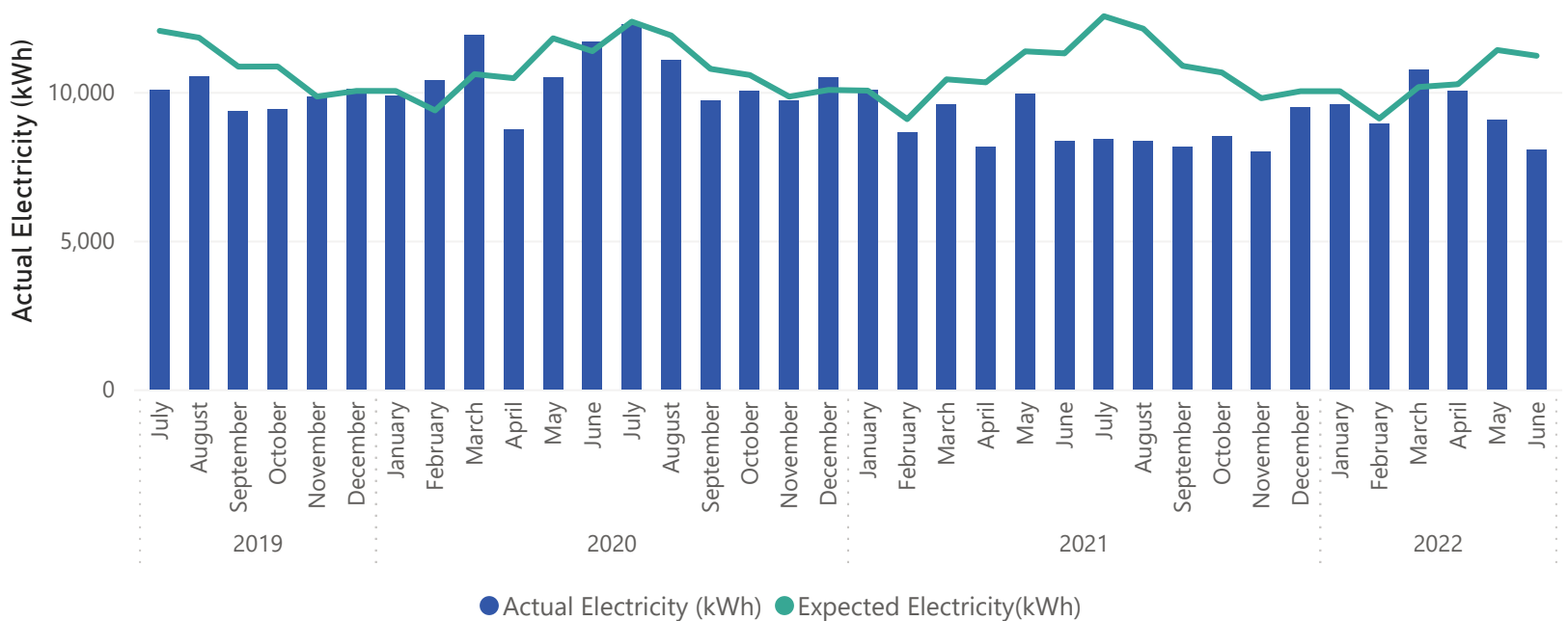
### Comments:

The rolling 12 month EUI has dropped consistently since April 2021 for the Museum and Research Centre, which is good. Electricity use was less than expected in June 2022 and council staff are occupying the building as the Civic Centre is being re-developed. Natural gas use has been consistently below baseline since June 2021.

Marginal cost of electricity for the Museum and Research Centre has doubled compared to this time last year, due to new contract rates.

Rolling 12 month savings have reached a new record; with 63,000 kWh in energy savings, 11,800 kg CO2e, and \$6,000 saved per year.

Museum Research Centre Electricity Use Compared to Baseline (kWh)

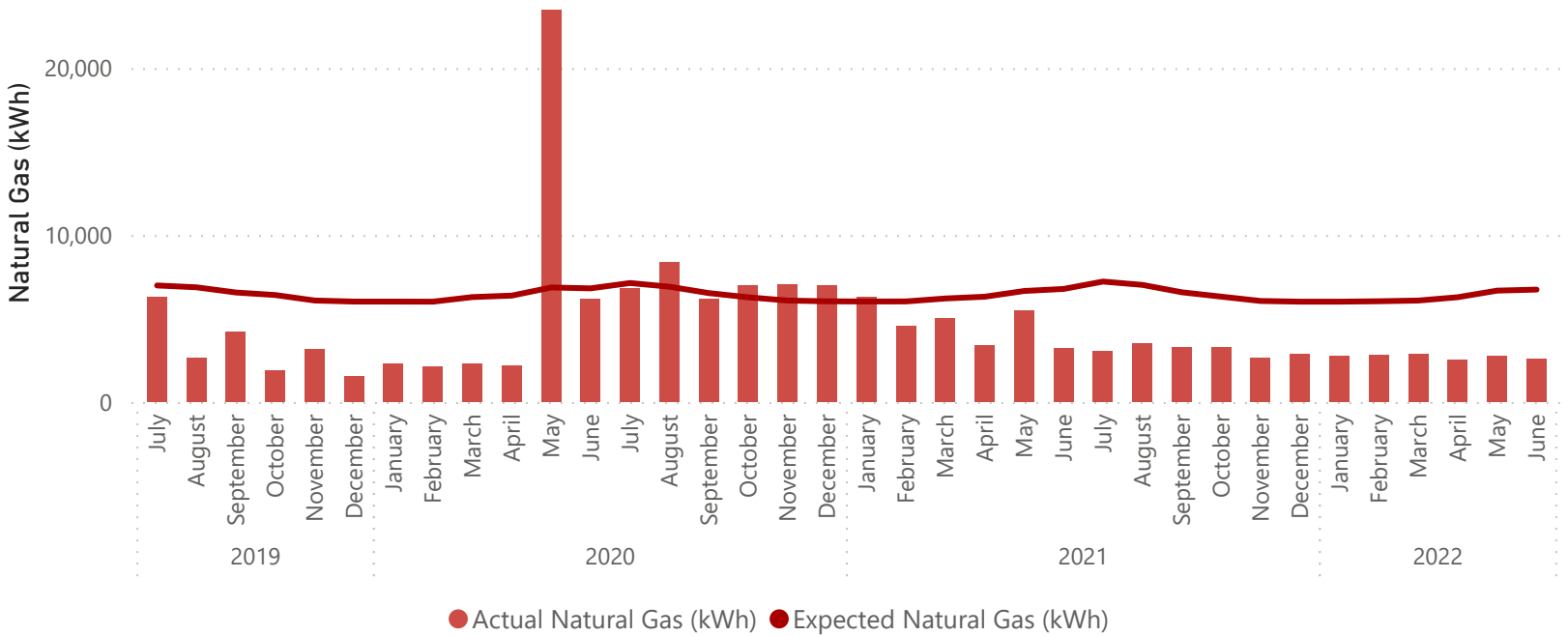


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

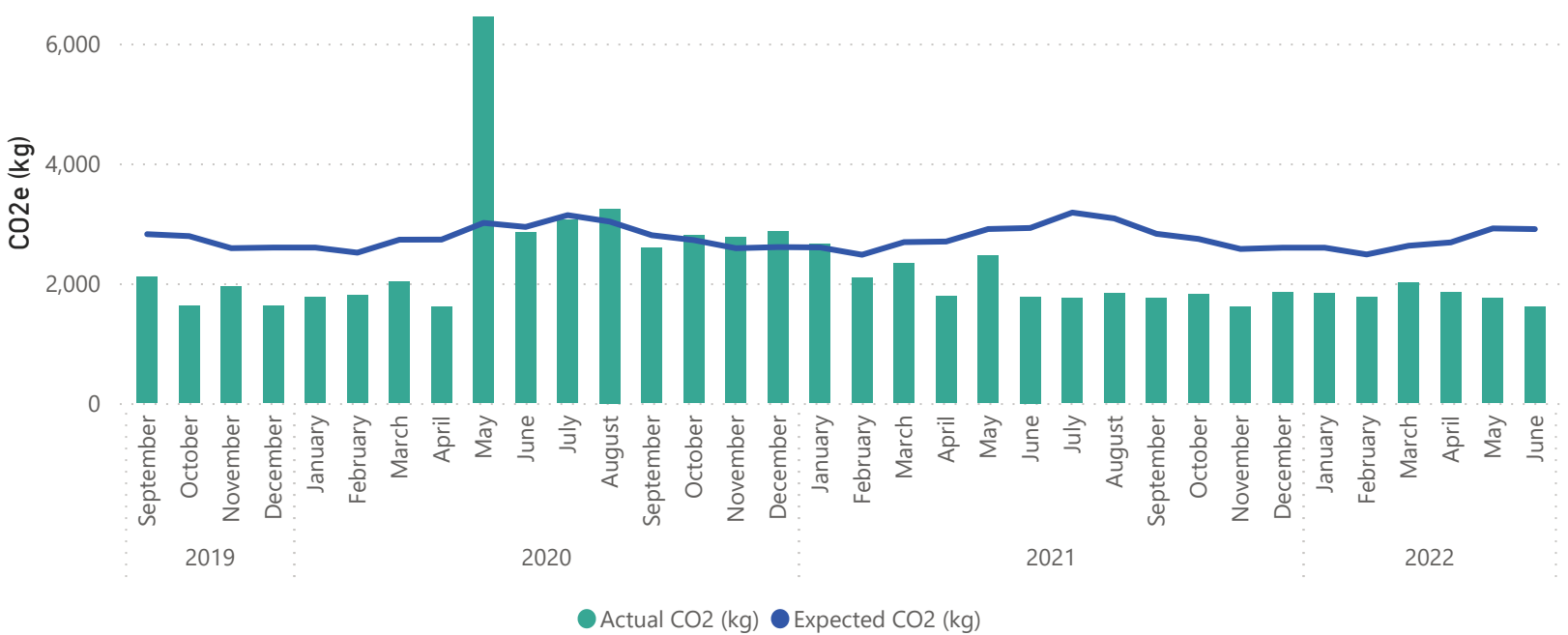
# Whakatane District Council

## Museum and Research Centre

Museum Research Centre Natural Gas Compared to Baseline (kWh)



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

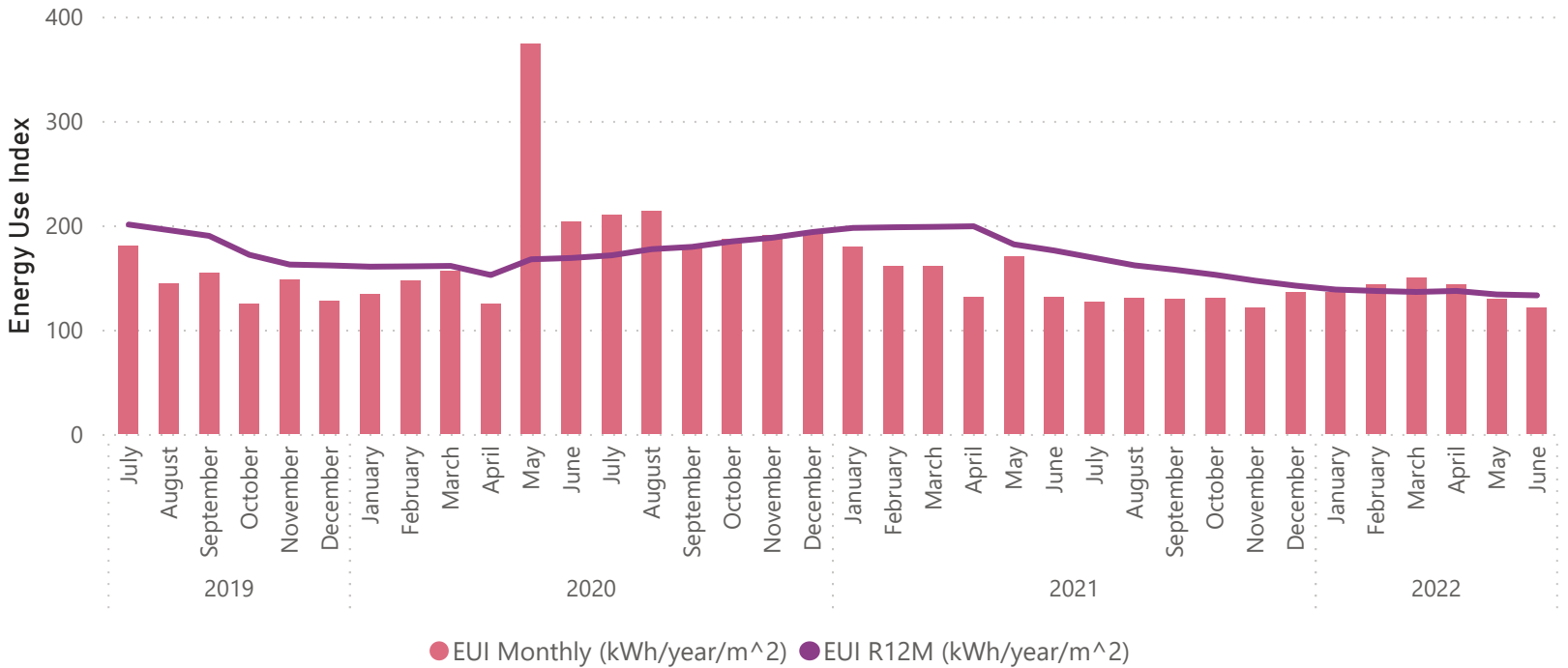


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

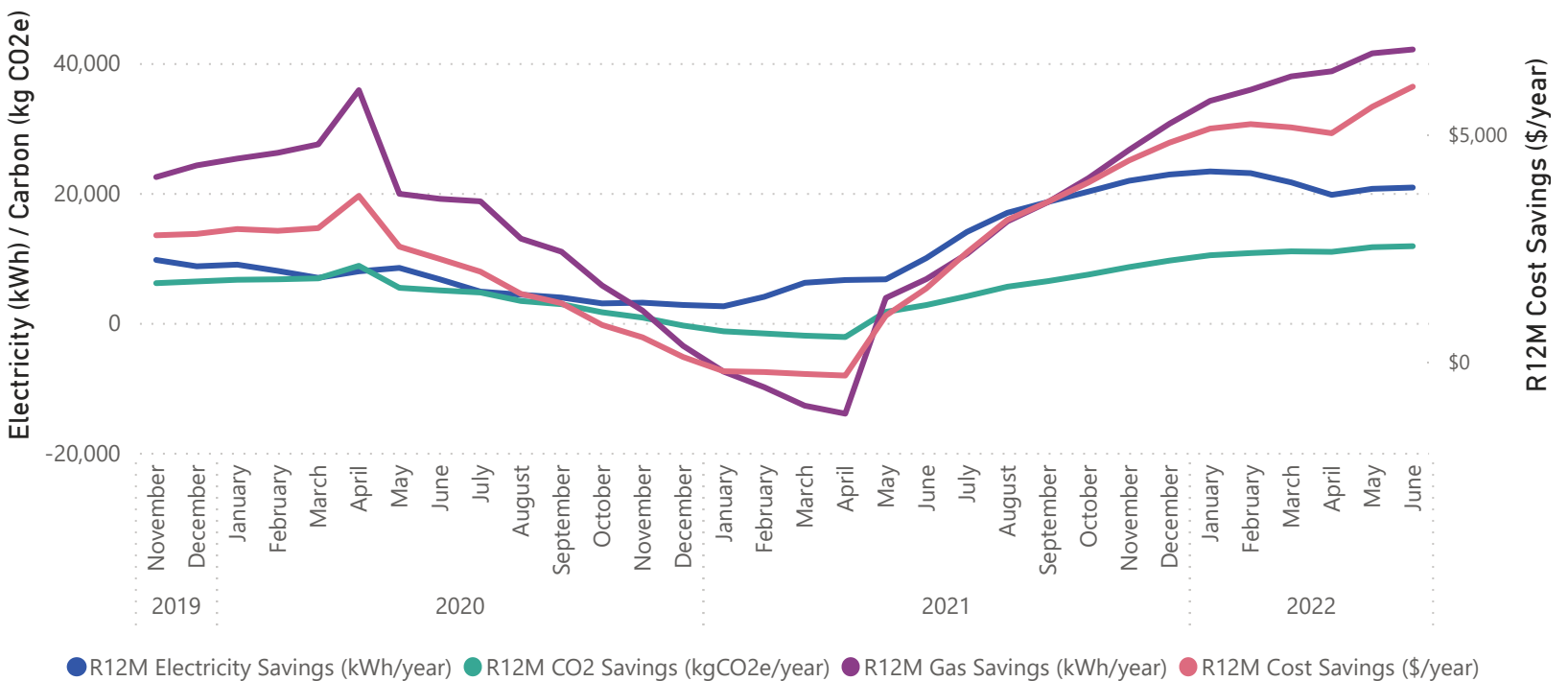
# Whakatane District Council

## Museum and Research Centre

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



Museum Research Centre 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

## War Memorial Hall

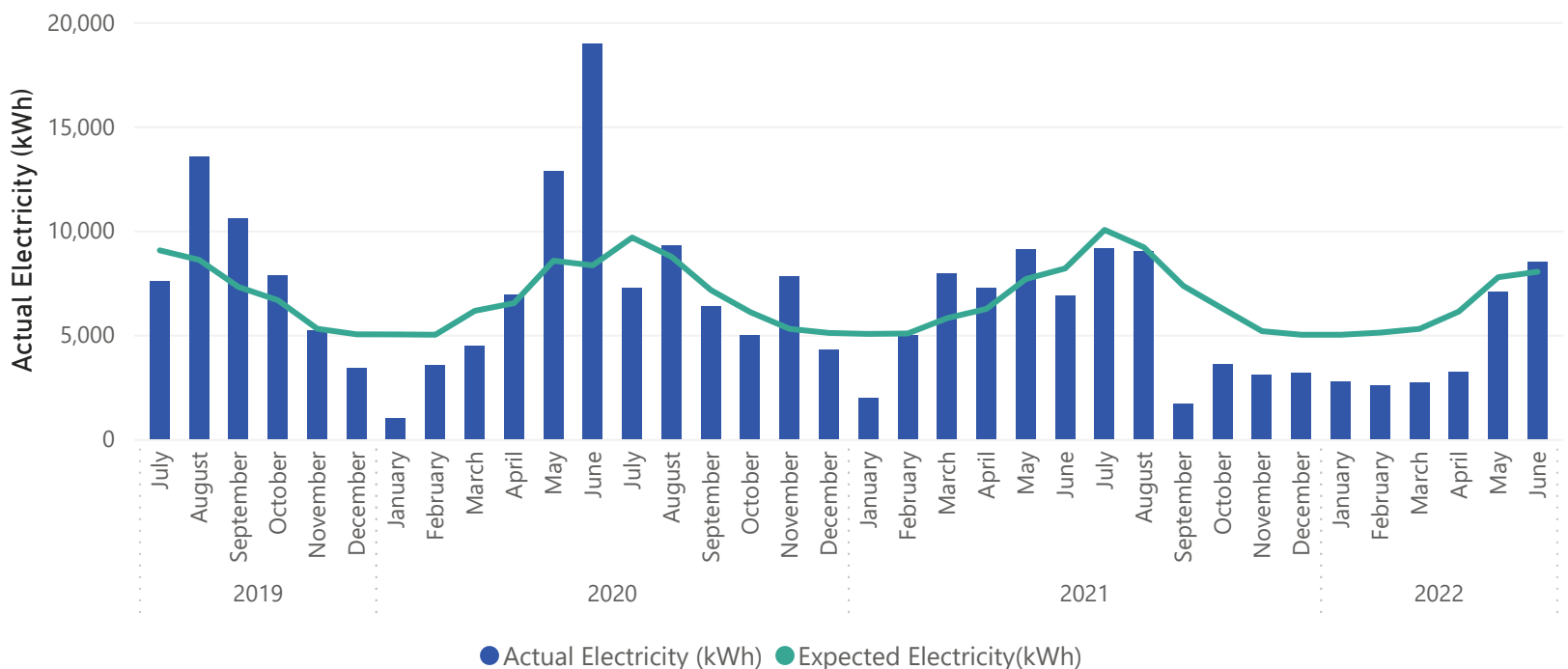
<p><b>\$2</b></p> <p>Monthly Energy Cost Savings</p>	<p><b>-466</b></p> <p>Elec. Savings (kWh/mo)</p>	<p><b>-6%</b></p> <p>Elec. Savings (%)</p>	<p><b>23,750</b></p> <p>R12M Electricity Savings (kWh/yr)</p>		
<p><b>\$3,444</b></p> <p>R12M Energy Cost Savings</p>	<p><b>1,532</b></p> <p>Gas. Savings (kWh/mo)</p>	<p><b>51%</b></p> <p>Gas. Savings (%)</p>	<p><b>4,383</b></p> <p>R12M Gas Savings (kWh/yr)</p>		
				<p><b>272</b></p> <p>CO2e Savings (kg/mo)</p>	
				<p><b>4,007</b></p> <p>R12M CO2e Savings (kg/yr)</p>	

### Comments:

A baseline was created for War Memorial Hall that adjusts for ambient temperature. The baseline period is July 2020 to June 2021. The War Memorial Hall uses more electricity and gas in winter months. The War Memorial Hall is on a NHH account, some months' usage may be estimated by the retailer and captured by a subsequent meter reading. Manual meter readings can improve accuracy of electricity and gas usage.

Demand for electricity in May and June 2022 has increased significantly compared to April 2022.

War Memorial Hall Electricity Use Compared to Baseline (kWh)

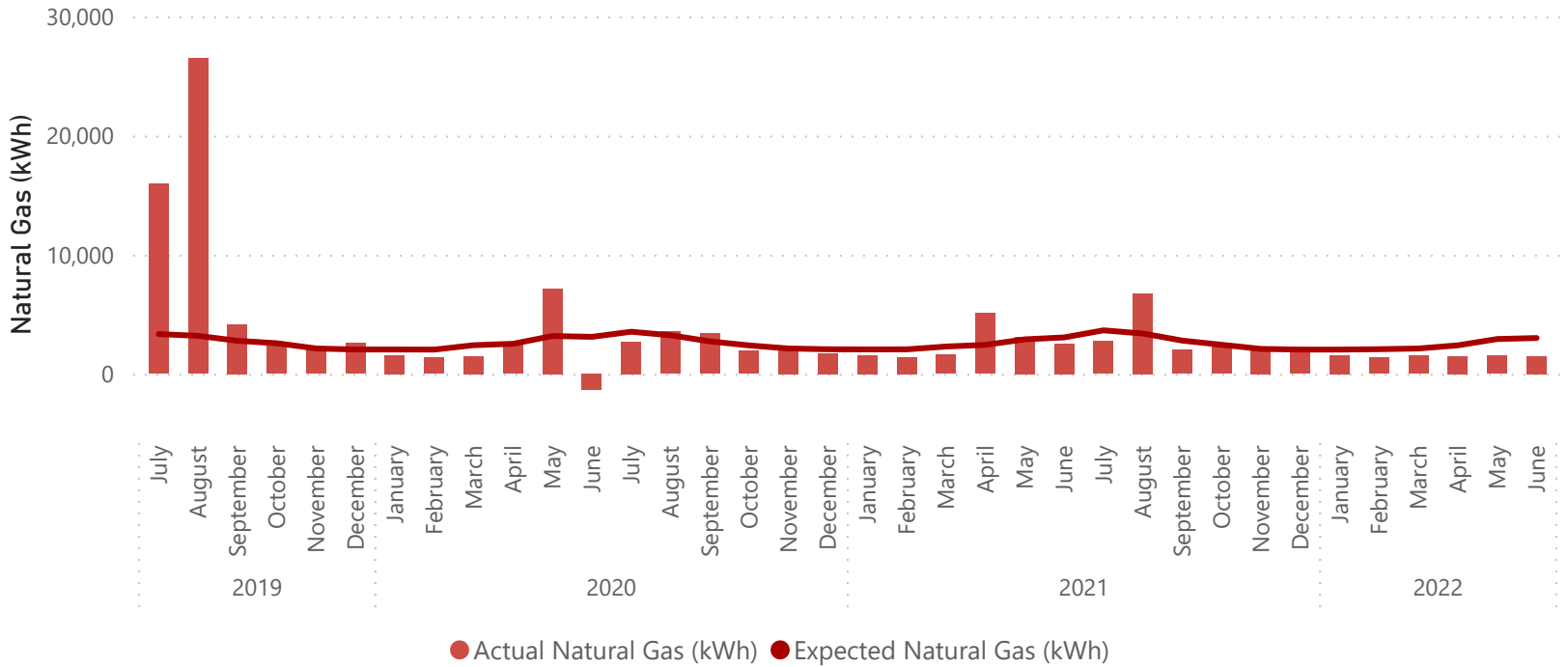


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

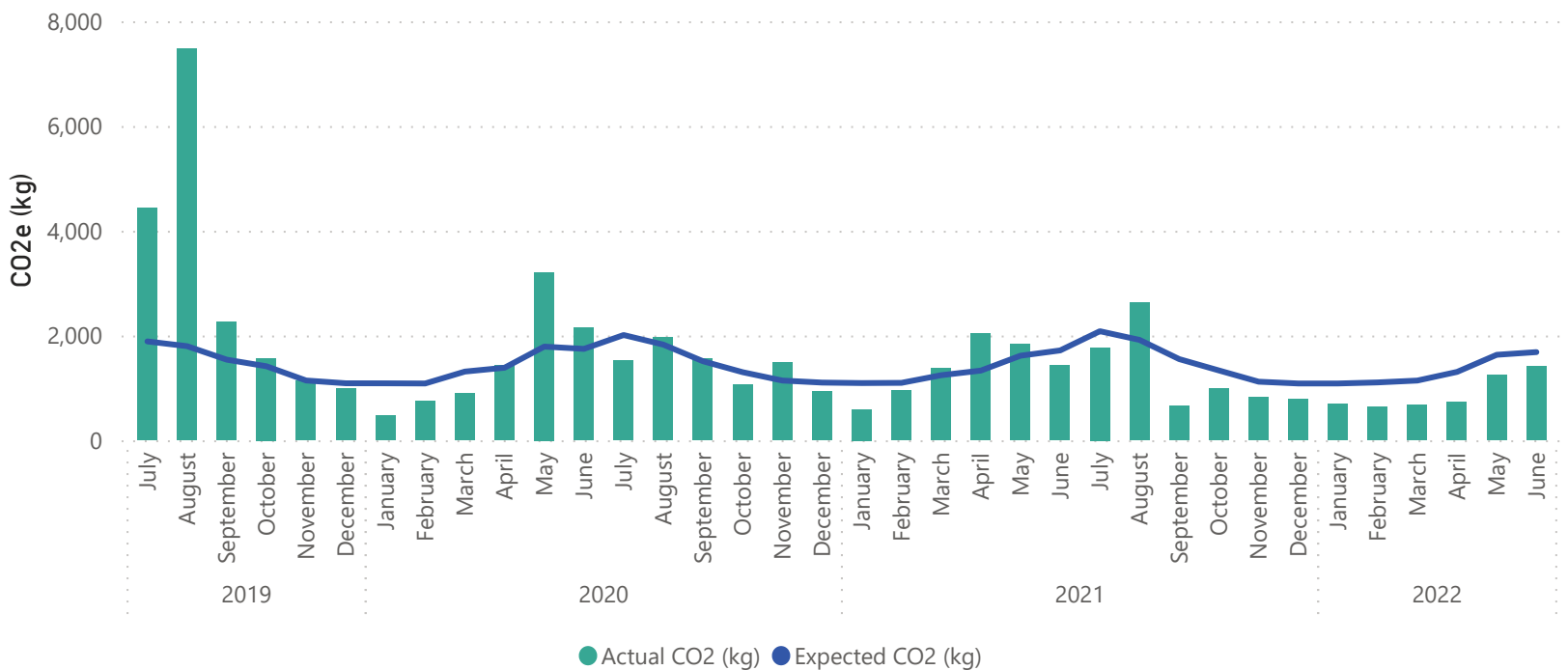
# Whakatane District Council

## War Memorial Hall

War Memorial Hall Natural Gas Compared to Baseline (kWh)



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

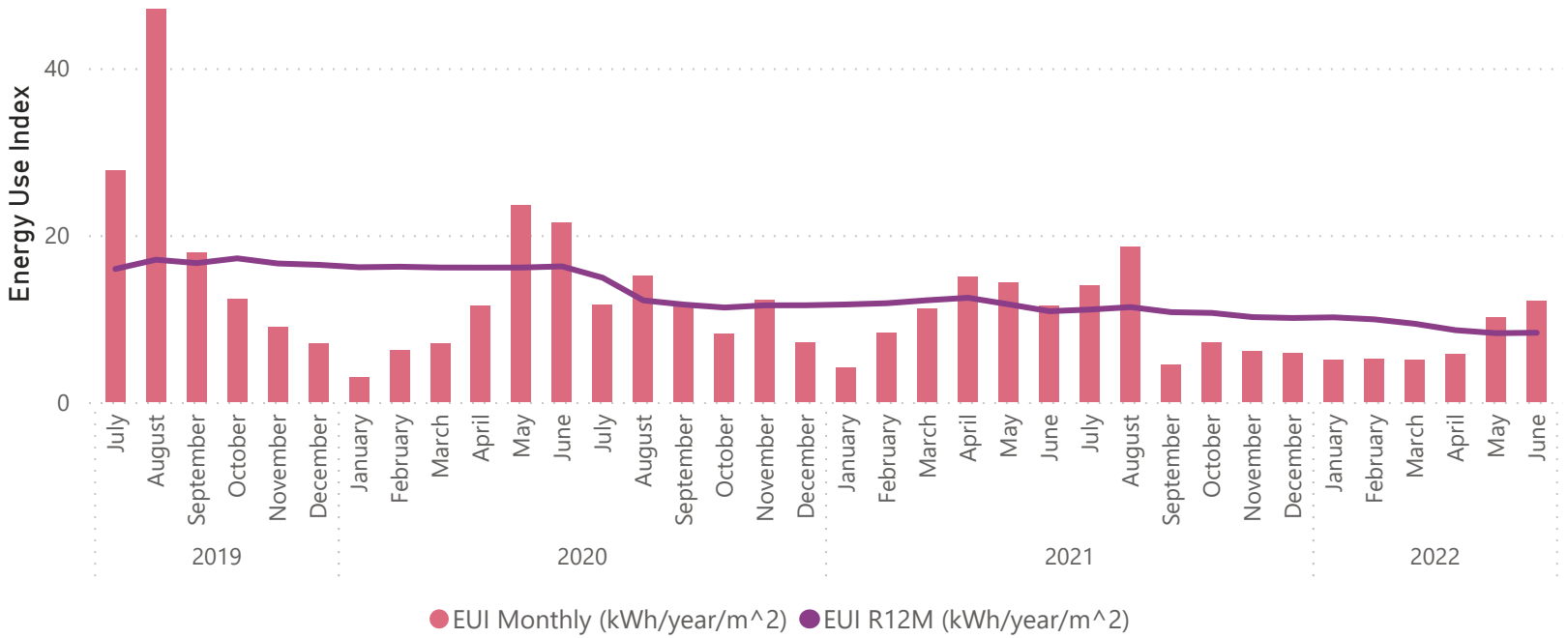


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

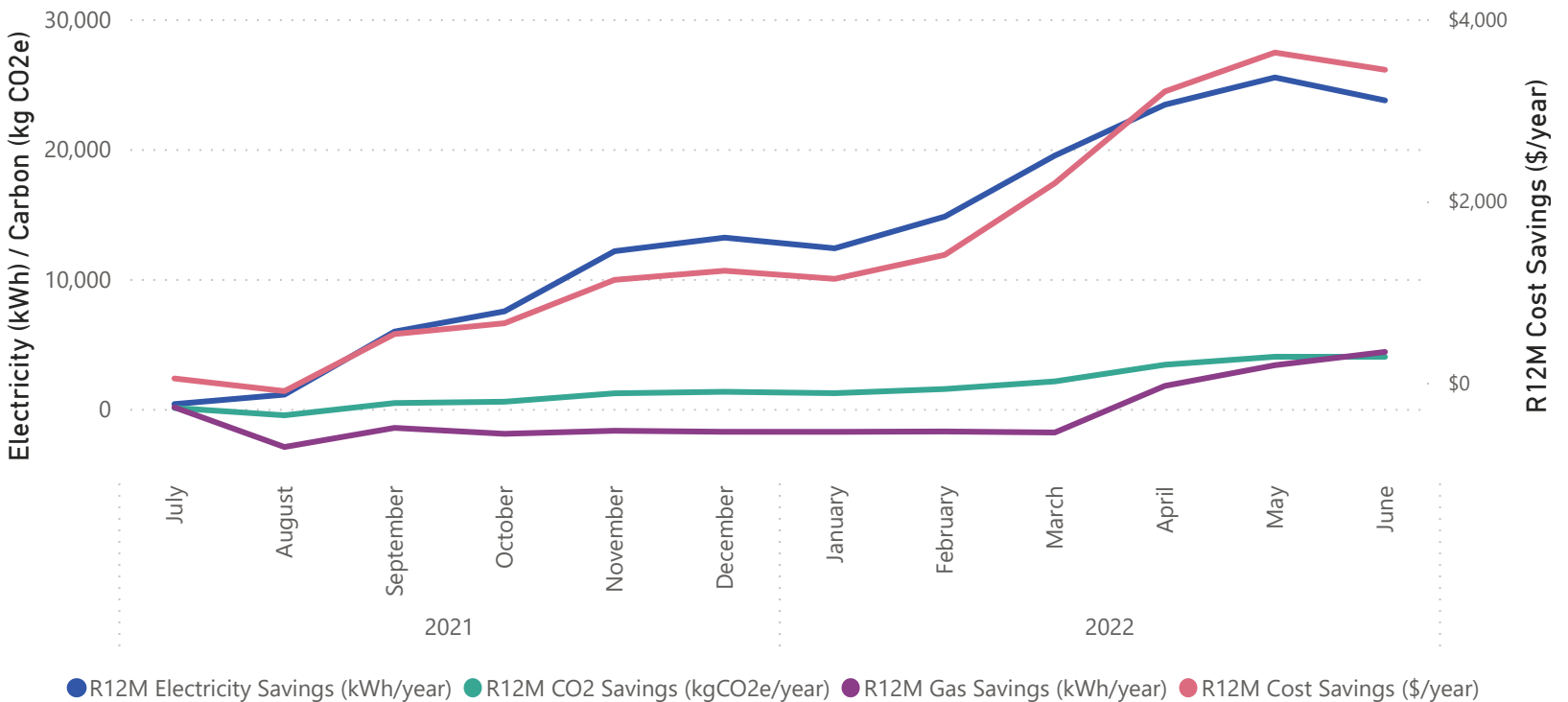
# Whakatane District Council

## War Memorial Hall

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



War Memorial Hall 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

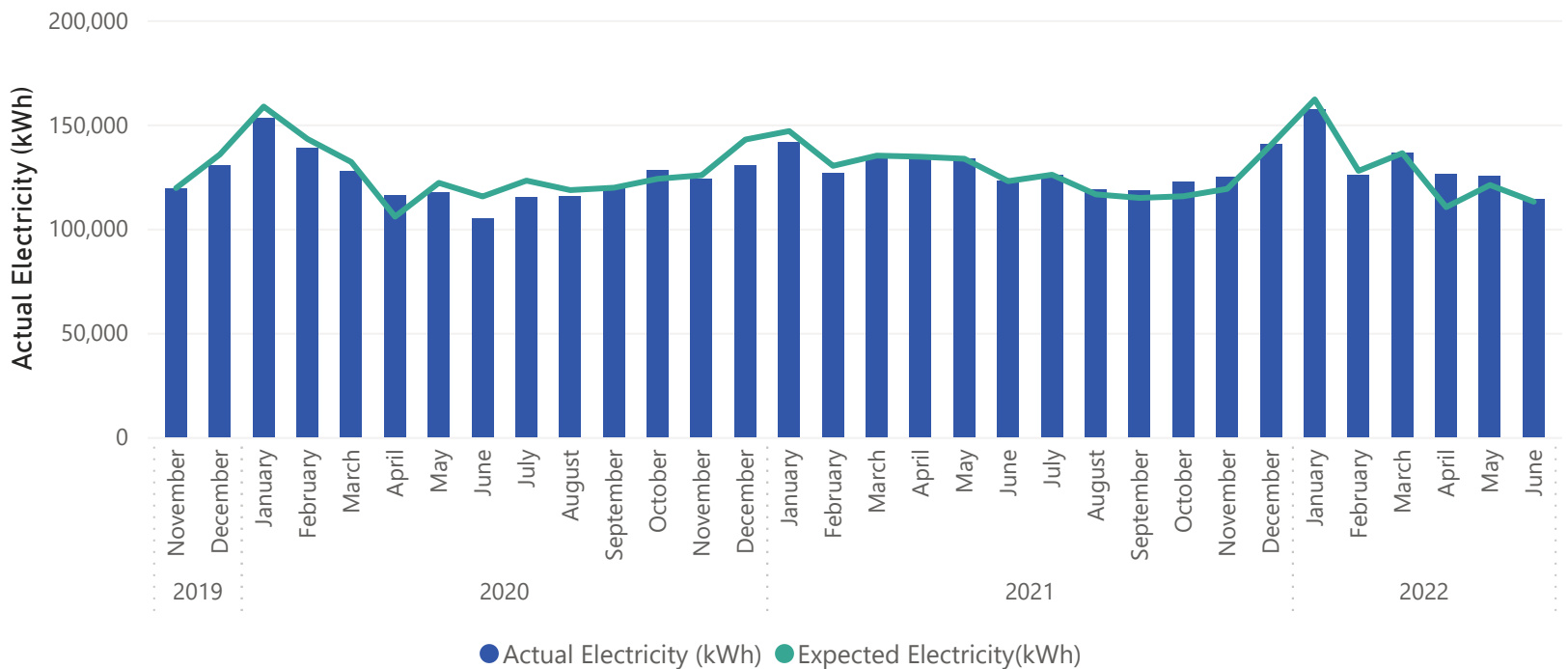
<p><b>-\$255</b> Monthly Energy Cost Savings</p>	<p><b>-1,118</b> Elec. Savings (kWh/mo)</p>	<p><b>-1%</b> Elec. Savings (%)</p>	<p><b>-34,543</b> R12M Electricity Savings (kWh/yr)</p>	<p><b>-144</b> CO2e Savings (kg/mo)</p>
<p><b>-\$5,810</b> R12M Energy Cost Savings</p>				<p><b>-4,446</b> R12M CO2e Savings (kg/yr)</p>

### Comments:

Electricity use was slightly more than expected. Months with lower demand typically have higher EUIs due to the non-zero baseload. The rolling 12-month EUI has been slowly increasing and has increased by 5% since June 2021.

Marginal cost of electricity for the WTP has doubled compared to this time last year, due to new contract rates.

Water Treatment Plant Electricity Use Compared to Baseline (kWh)

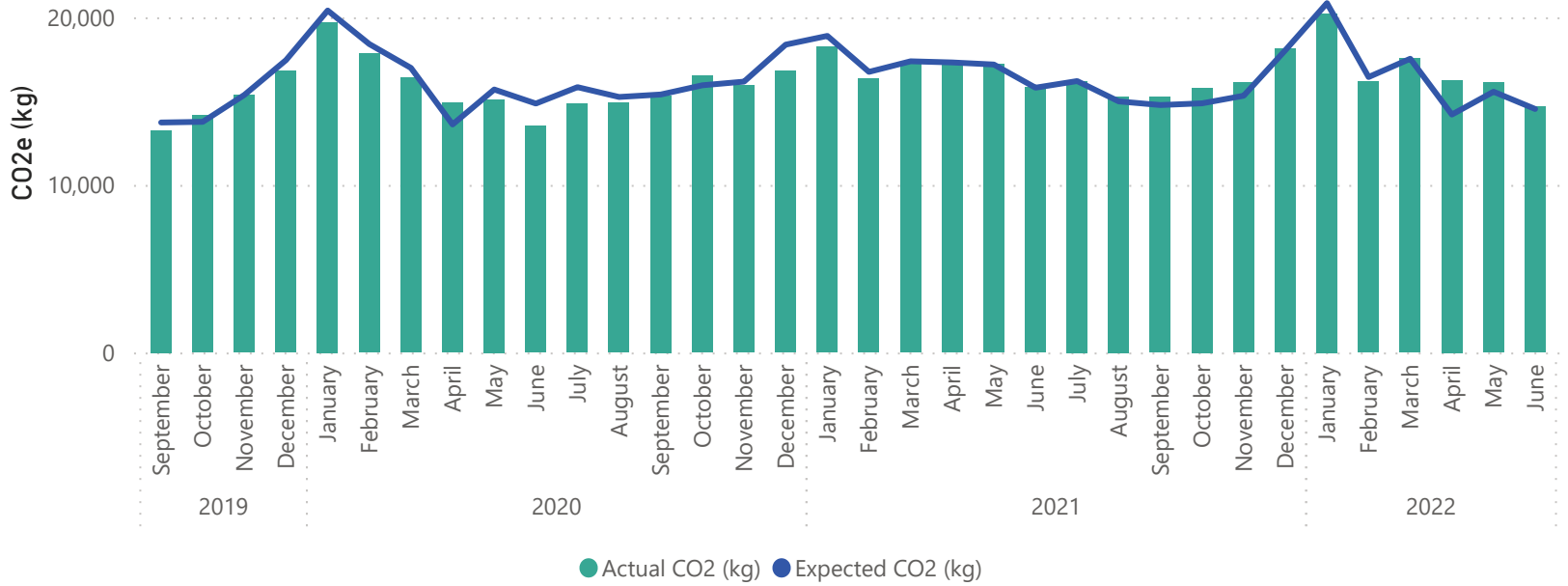


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

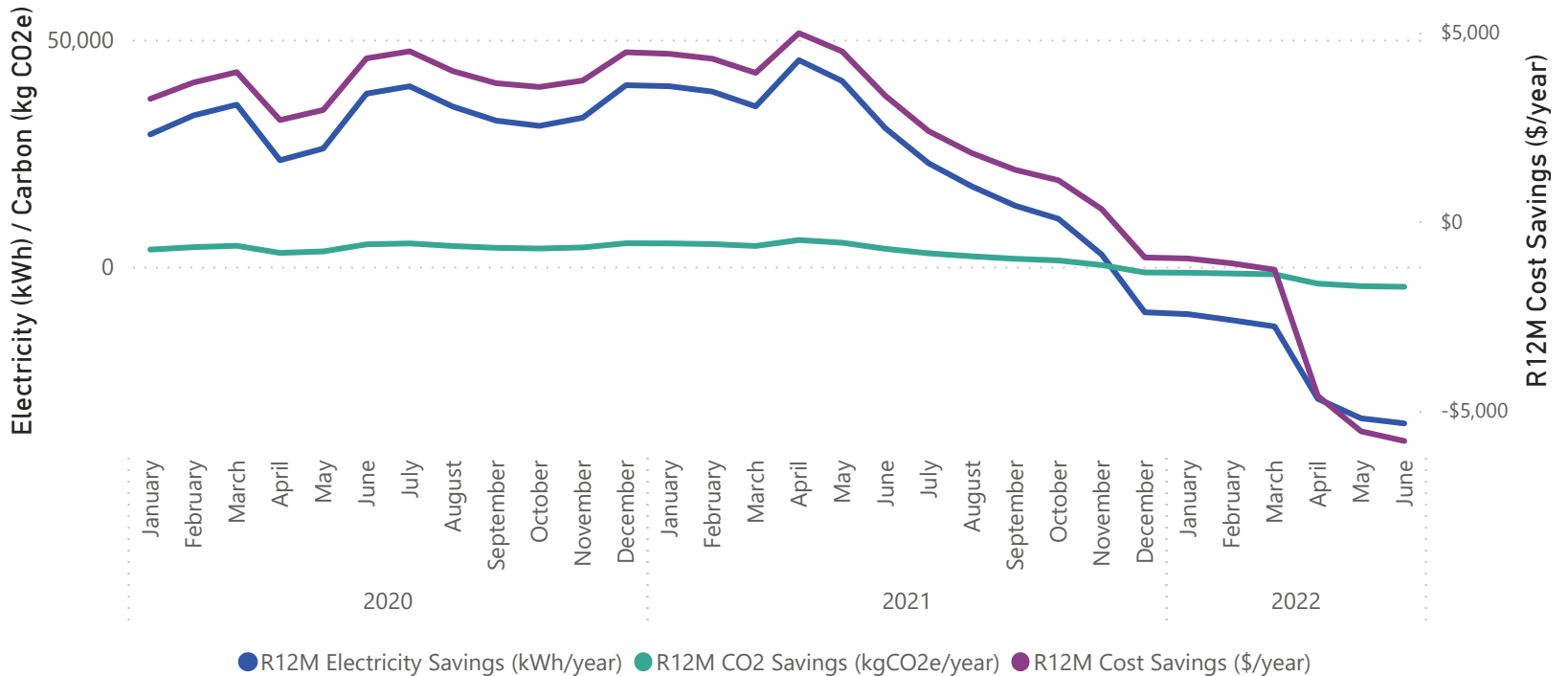
# Whakatane District Council

## Water Treatment Plant

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



Water Treatment Plant Rolling 12 Month Savings

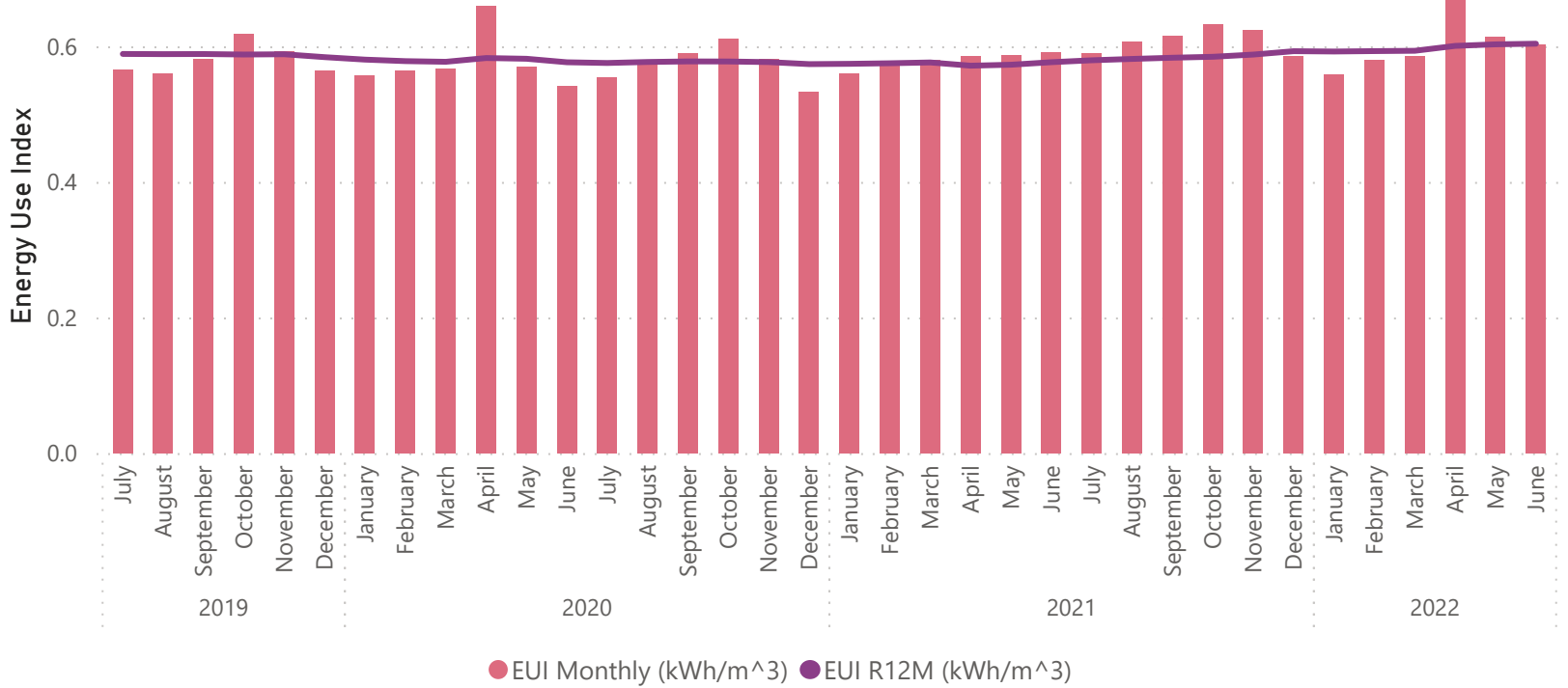


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

# 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

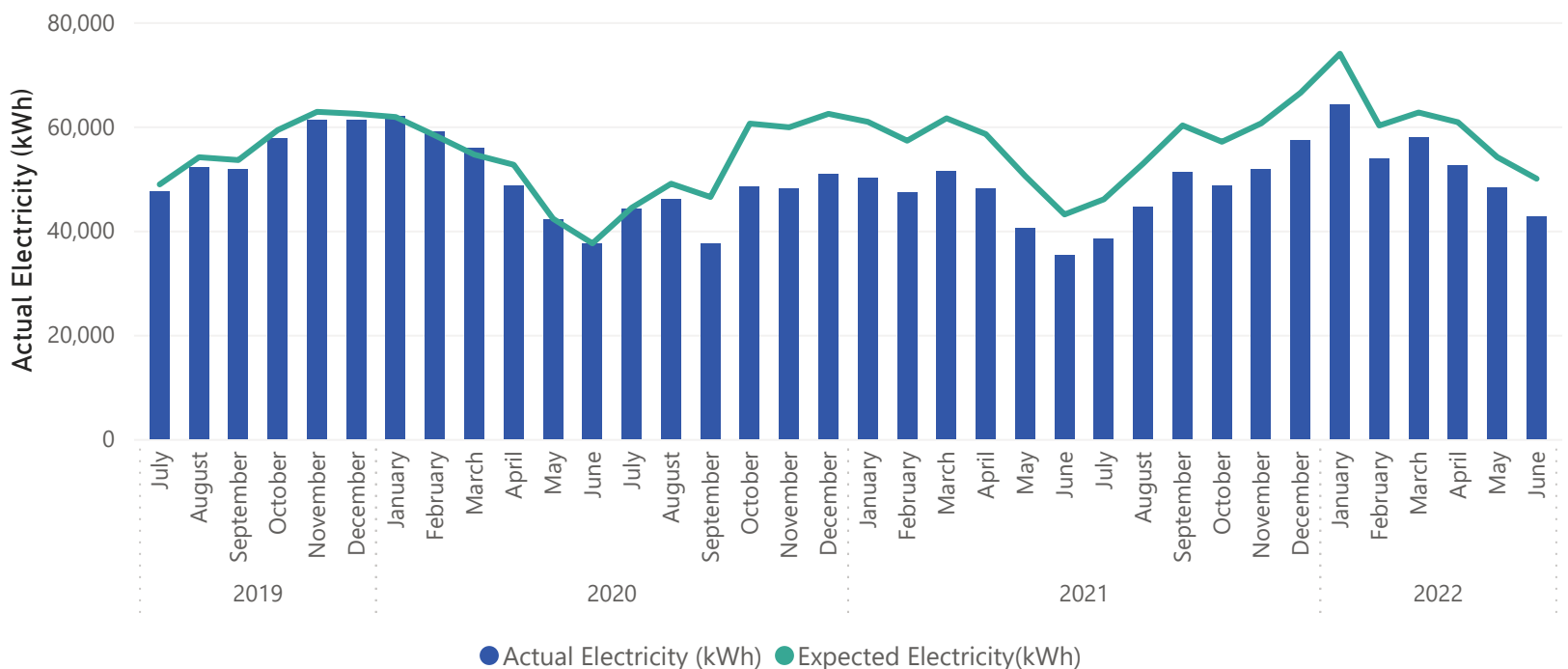
<p><b>\$1,699</b> Monthly Energy Cost Savings</p>	<p><b>7,316</b> Elec. Savings (kWh/mo)</p>	<p><b>15%</b> Elec. Savings (%)</p>	<p><b>93,222</b> R12M Electricity Savings (kWh/yr)</p>	<p><b>1,025</b> CO2e Savings (kg/mo)</p>
<p><b>\$12,892</b> R12M Energy Cost Savings</p>				<p><b>12,333</b> R12M CO2e Savings (kg/yr)</p>

### Comments:

Continued savings from high efficiency pumps and motors, installed September 2020. The EUI has slowly increased from May 2021, however, April and June 2022 had lower EUIs. An increasing EUI may indicate that the pumps and motors could benefit from maintenance to return their performance closer to what it was when the pumps were first installed.

Marginal cost of electricity for Braemar Road Pump Station has approximately doubled compared to this time last year, due to new contract rates.

Braemar Rd Pumps Electricity Use Compared to Baseline (kWh)

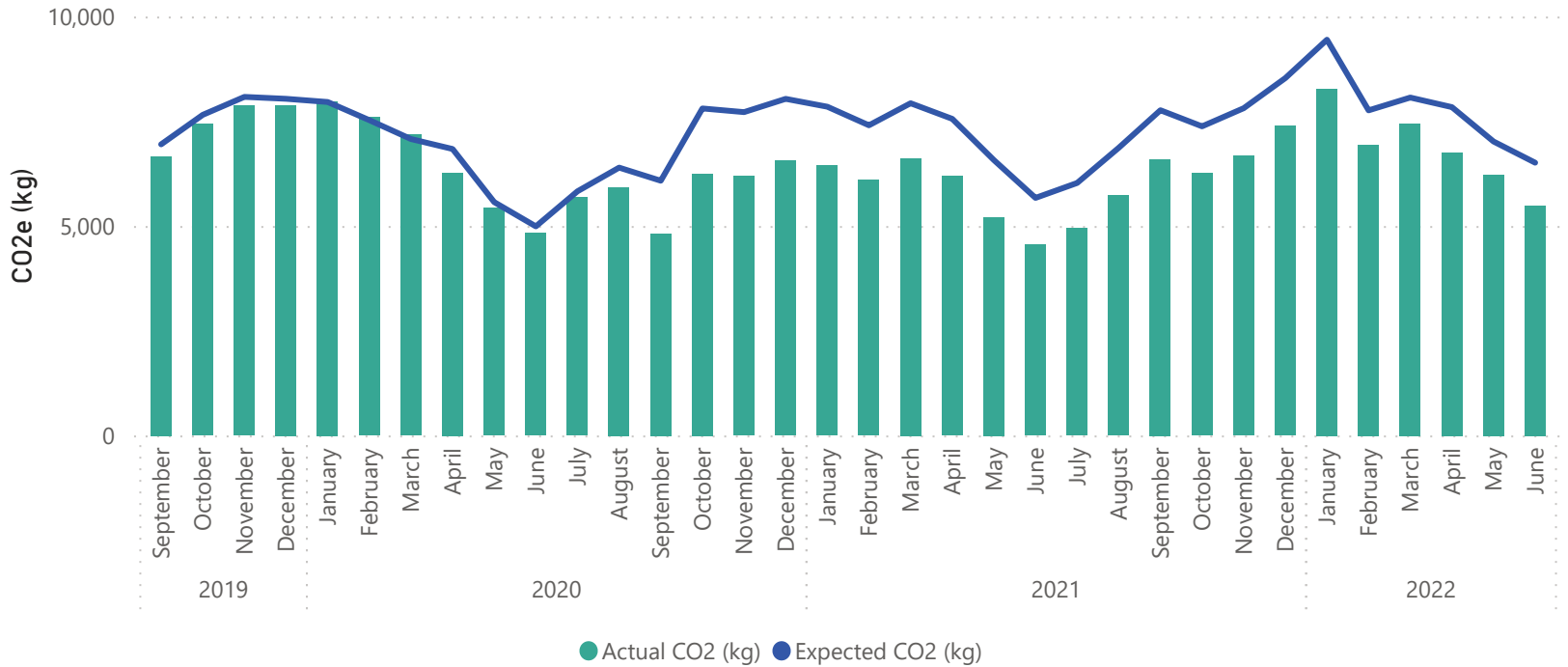


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

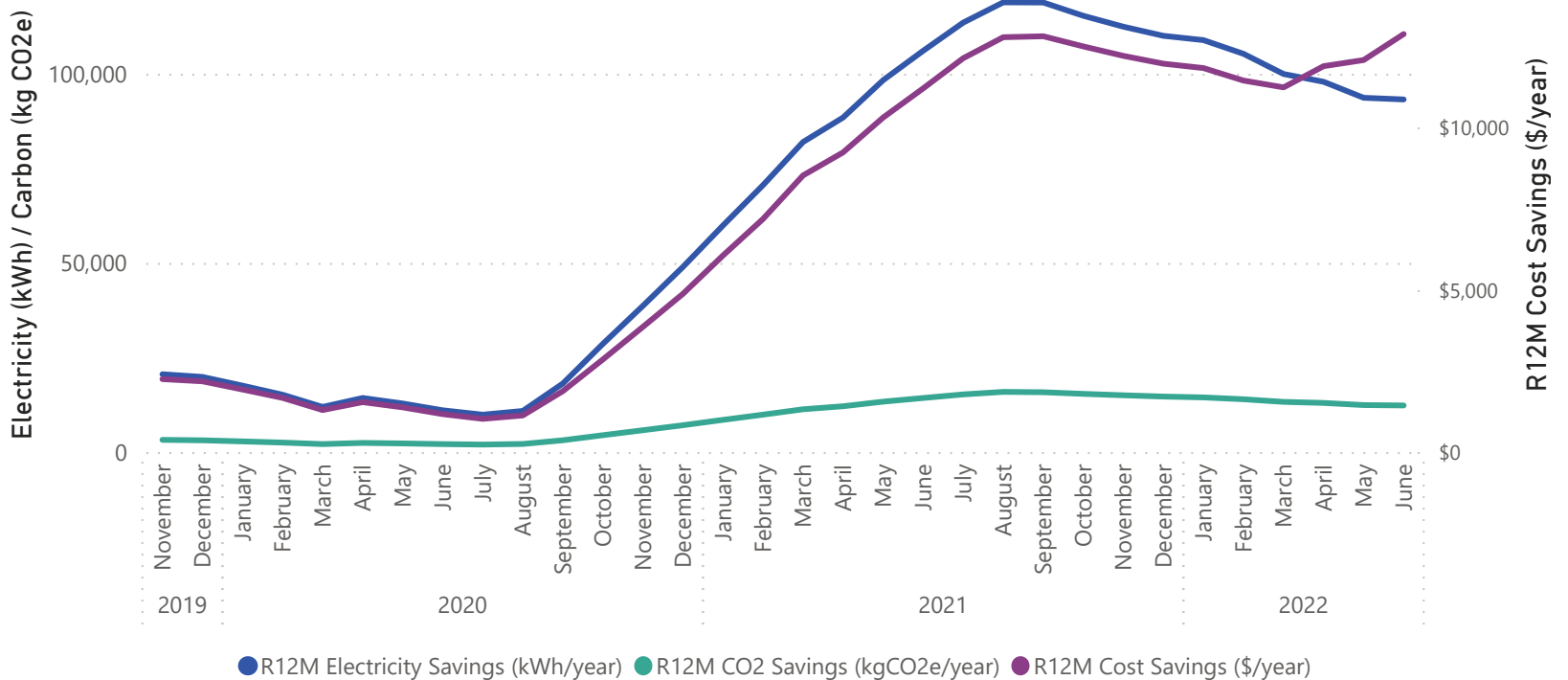
# Whakatane District Council

## Braemar Road Pump Station

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



Braemar Rd Pumps Rolling 12 Month Savings



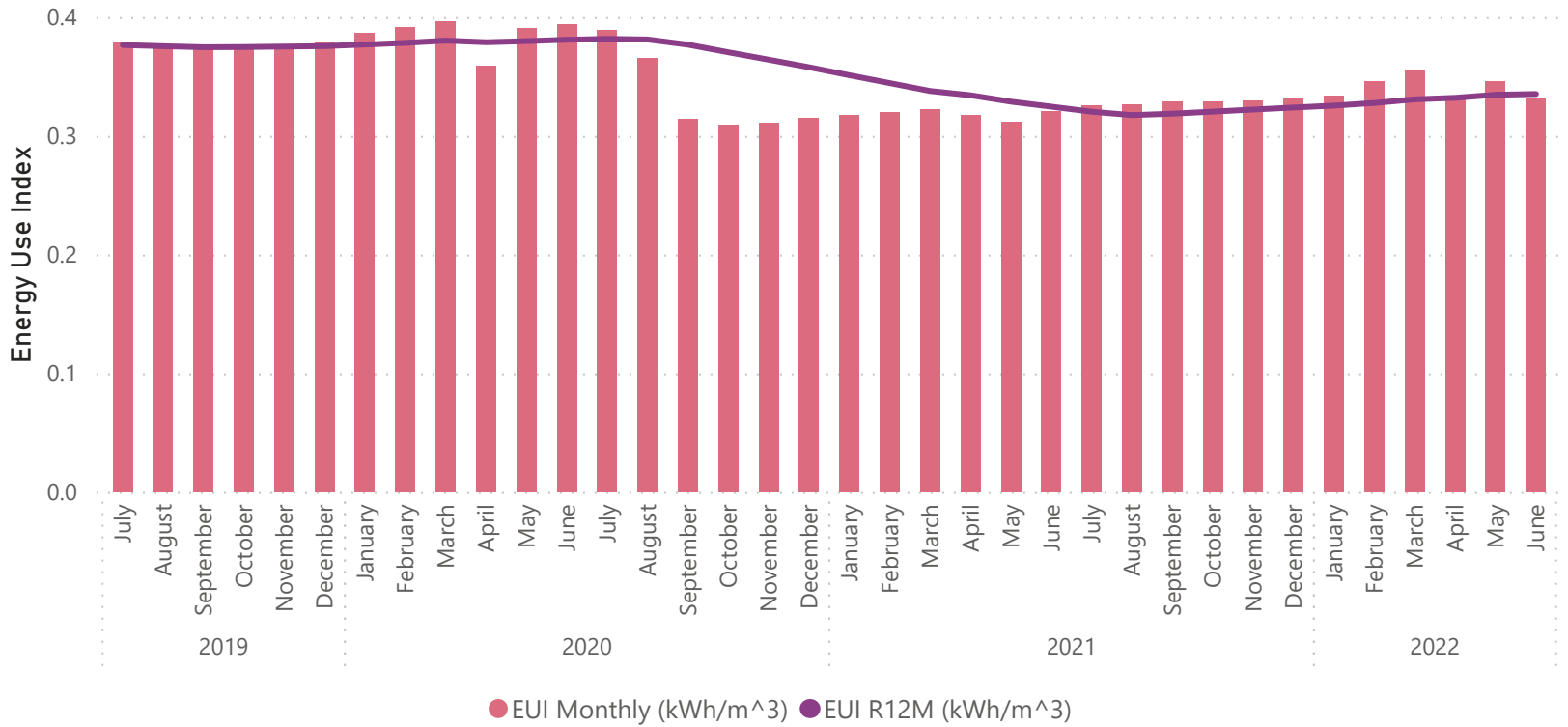
**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time



# 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

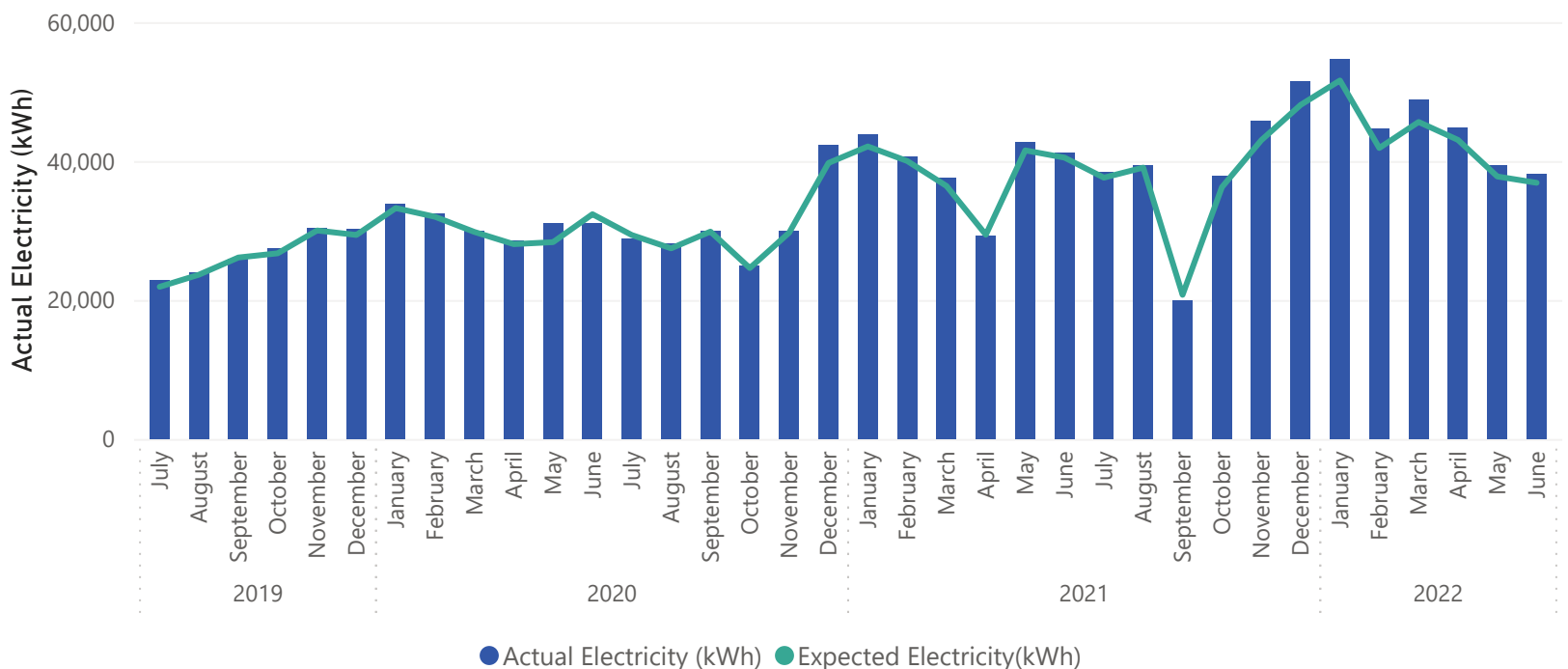
<p><b>-\$305</b> Monthly Energy Cost Savings</p>	<p><b>-1,312</b>      <b>-4%</b>      <b>-21,845</b> Elec. Savings (kWh/mo)    Elec. Savings (%)    R12M Electricity Savings (kWh/yr)</p>			<p><b>-168</b> CO2e Savings (kg/mo)</p>
<p><b>-\$3,143</b> R12M Energy Cost Savings</p>				<p><b>-2,801</b> R12M CO2e Savings (kg/yr)</p>

### Comments:

A general trend can be observed that months of high demand typically use more electricity than expected. This may indicate that the pump is operating outside its optimum efficiency range for periods of high demand.

Marginal cost of electricity for Paul Road Pump Station has approximately doubled compared to this time last year, due to new contract rates.

Paul Rd Pumps Electricity Use Compared to Baseline (kWh)

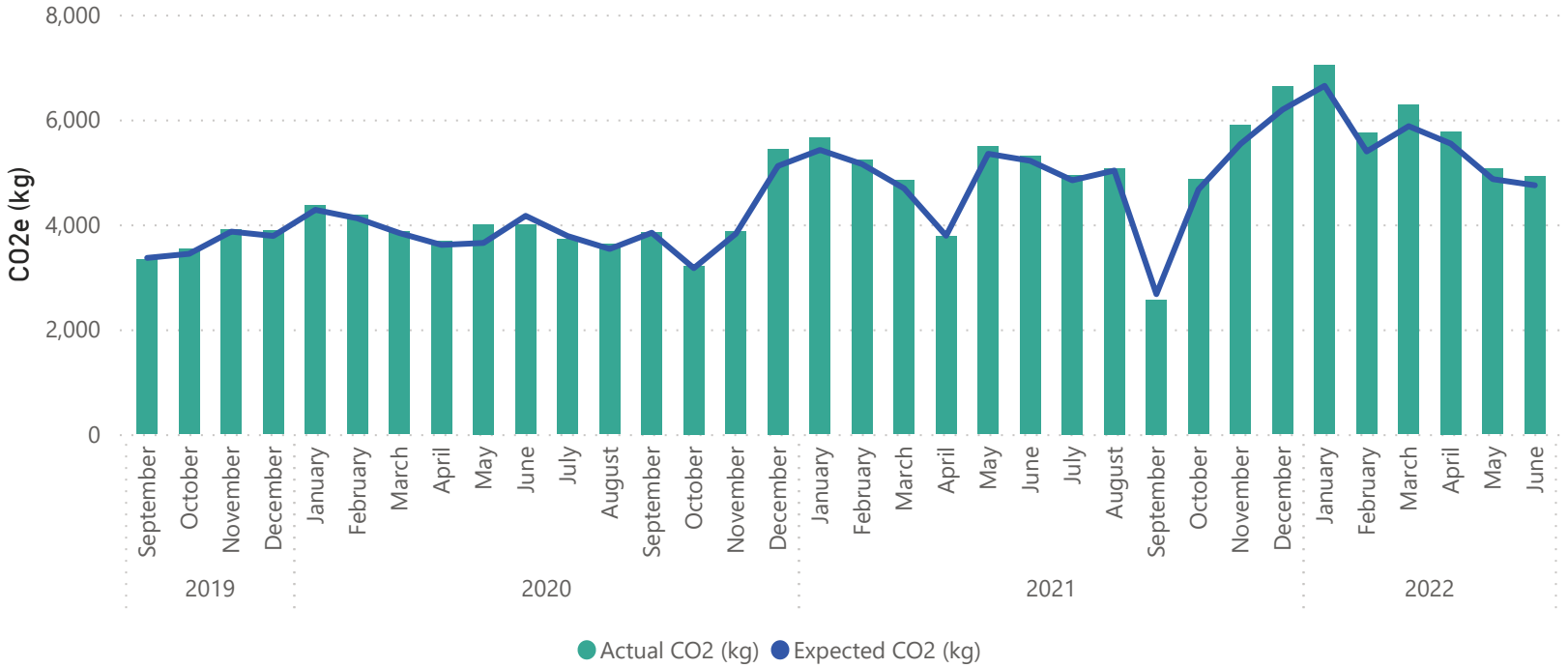


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

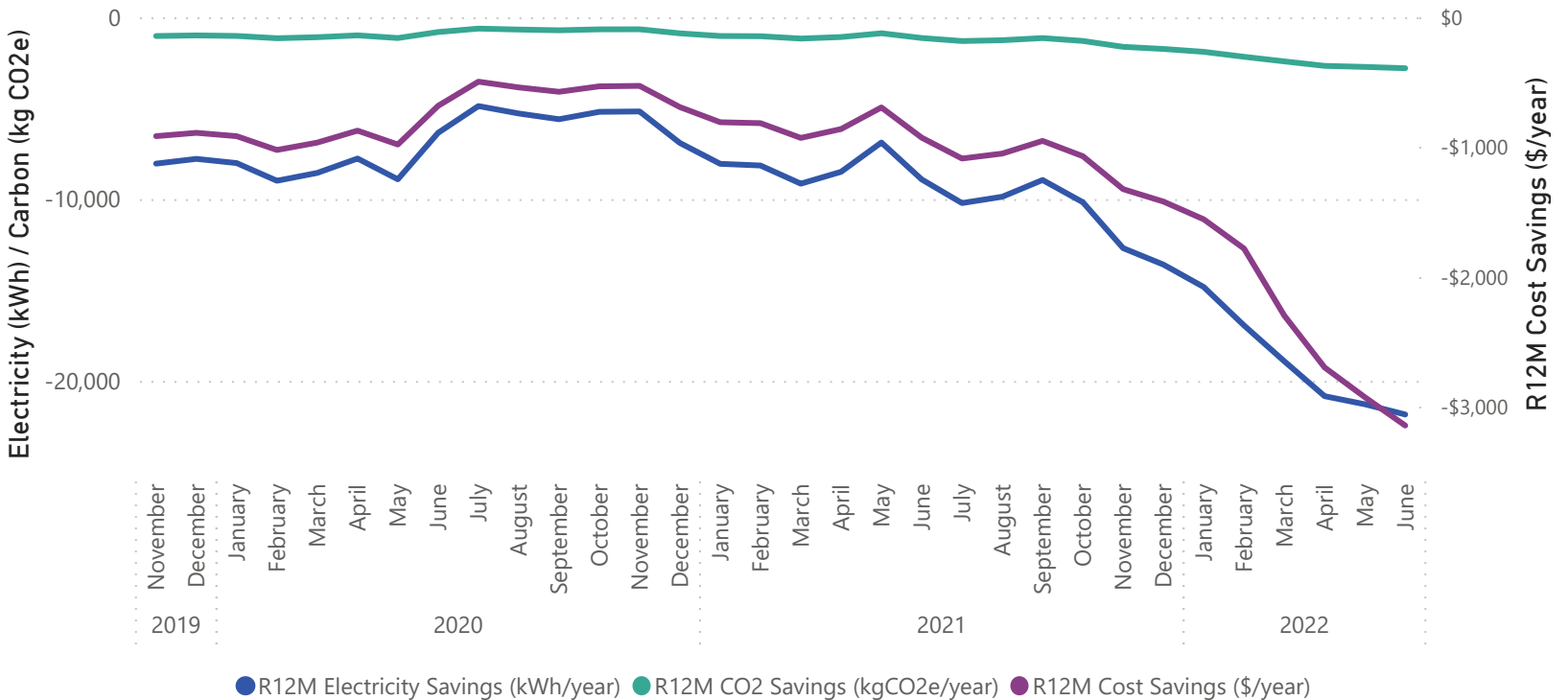
# Whakatane District Council

## Paul Road Pump Station

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



Paul Rd Pumps Rolling 12 Month Savings

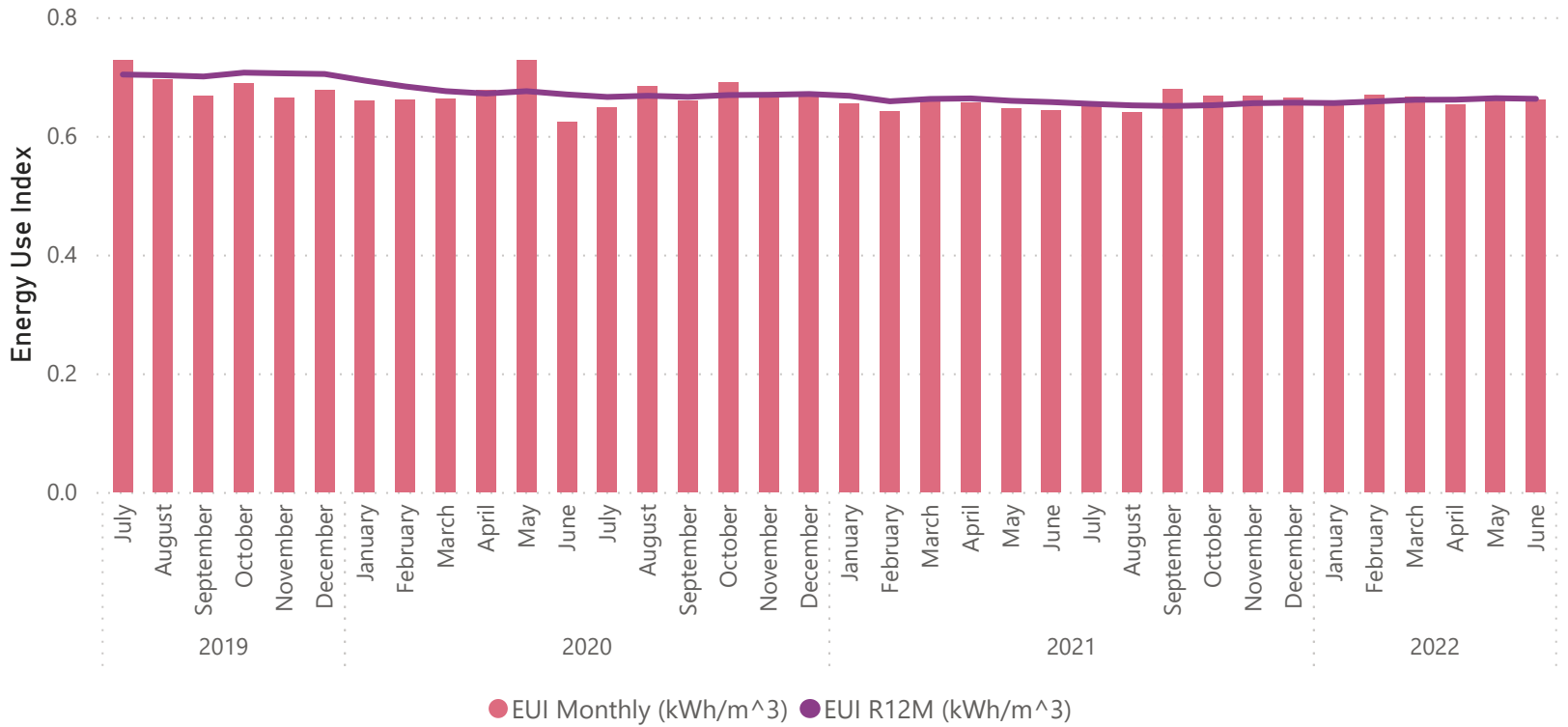


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

# 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

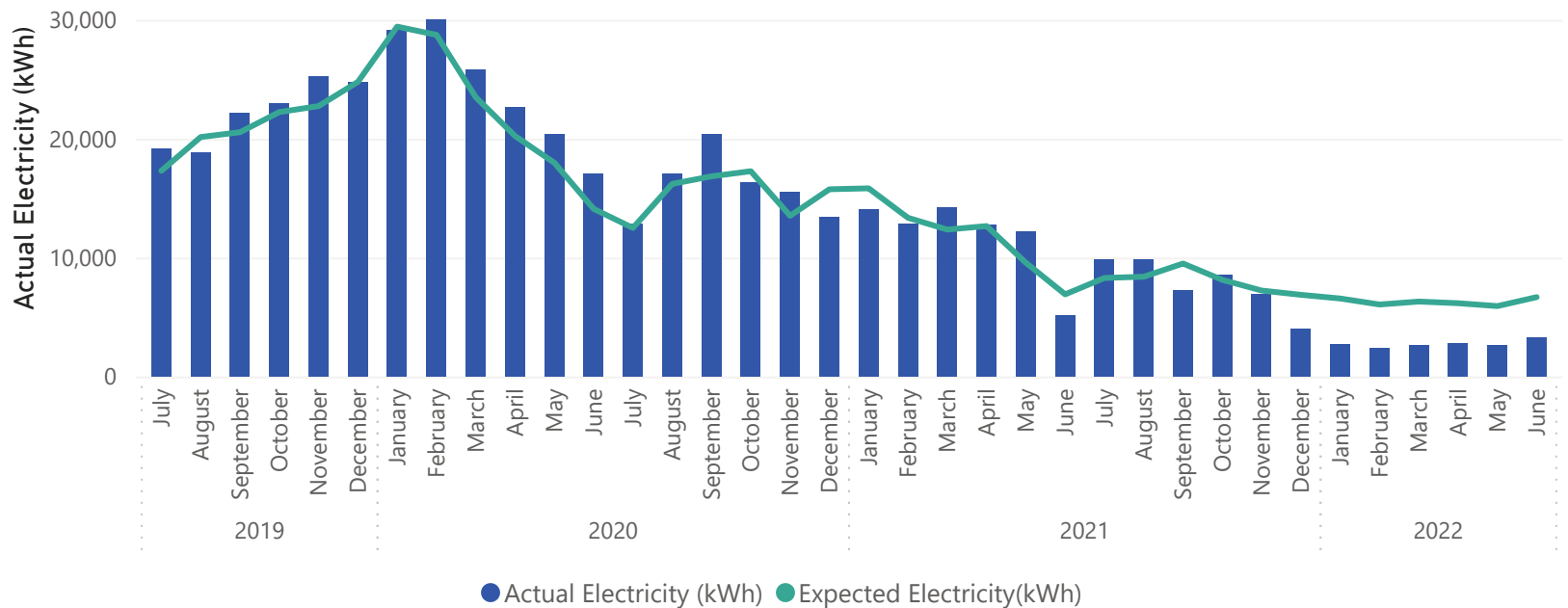
## Johnson Road Pump Station

<p><b>\$742</b> Monthly Energy Cost Savings</p>	<p><b>3,364</b> Elec. Savings (kWh/mo)</p>	<p><b>50%</b> Elec. Savings (%)</p>	<p><b>23,016</b> R12M Electricity Savings (kWh/yr)</p>	<p><b>433</b> CO2e Savings (kg/mo)</p>
<p><b>\$5,075</b> R12M Energy Cost Savings</p>				<p><b>2,964</b> R12M CO2e Savings (kg/yr)</p>

### Comments:

The pumps at Johnson Rd have been used less than previous years. The rolling 12-month EUI for Johnson Road Pump Station has increased over the past year as demand decreases. This is expected as the pump station has a non-zero baseload. Monthly electricity savings have been approximately 50% since December 2021. The pump station has saved approximately \$5,100 in the last 12 months.

Johnson Rd Pumps Electricity Use Compared to Baseline (kWh)

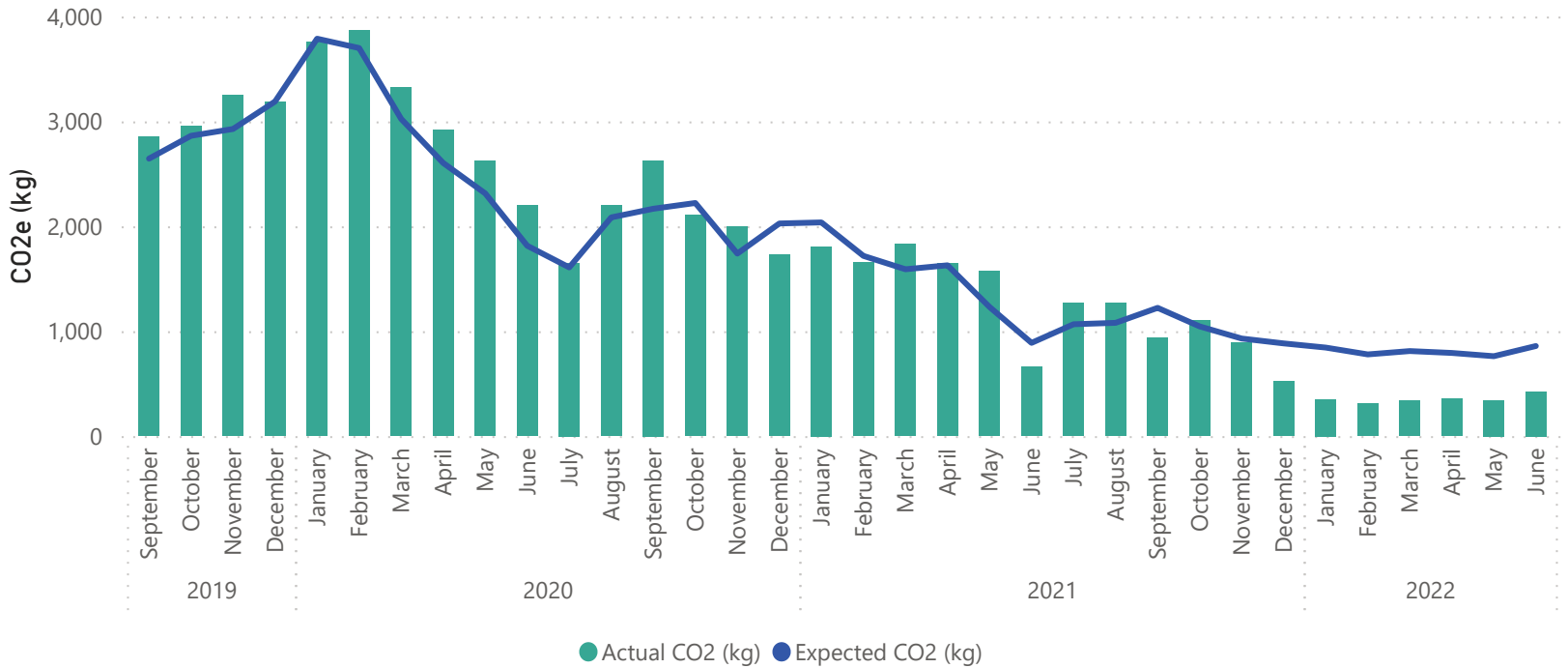


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

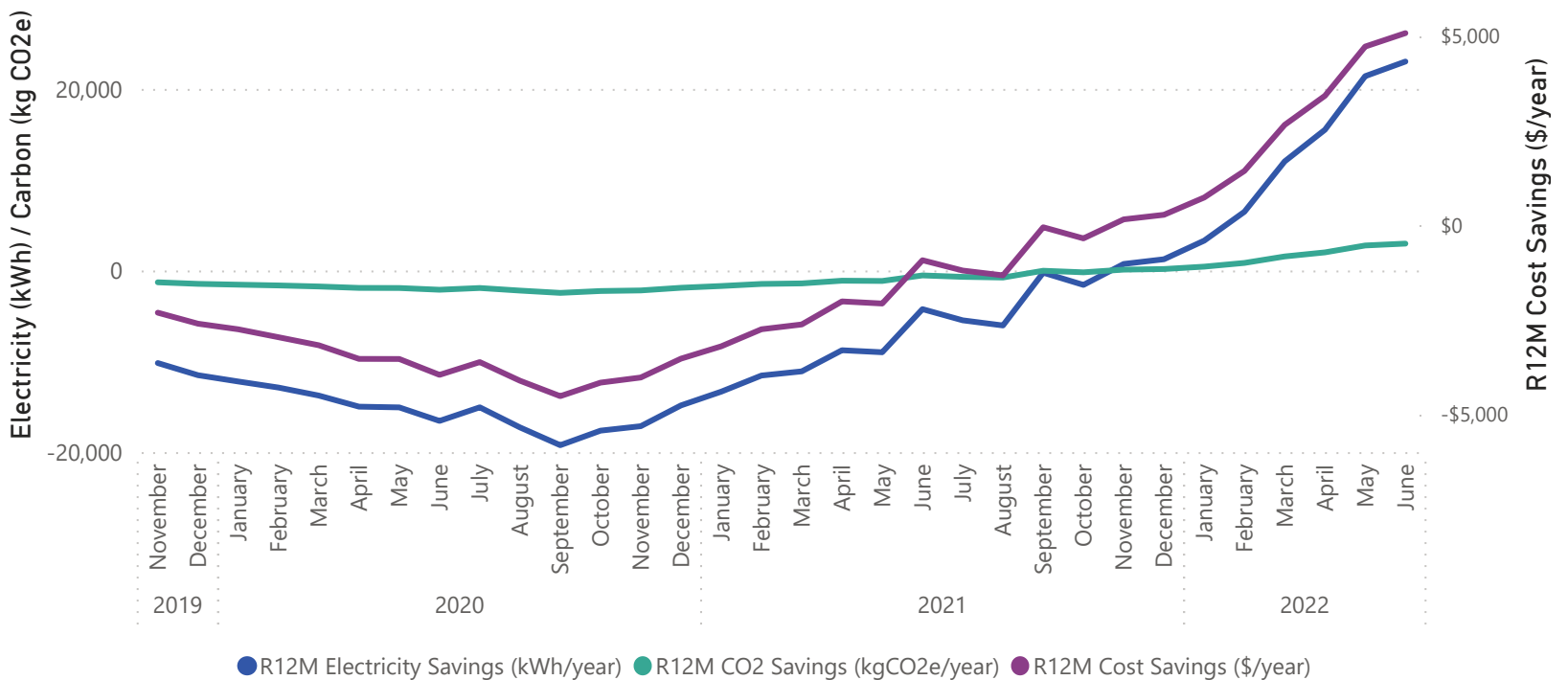
# Whakatane District Council

## Johnson Road Pump Station

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



Johnson Rd Pumps Rolling 12 Month Savings

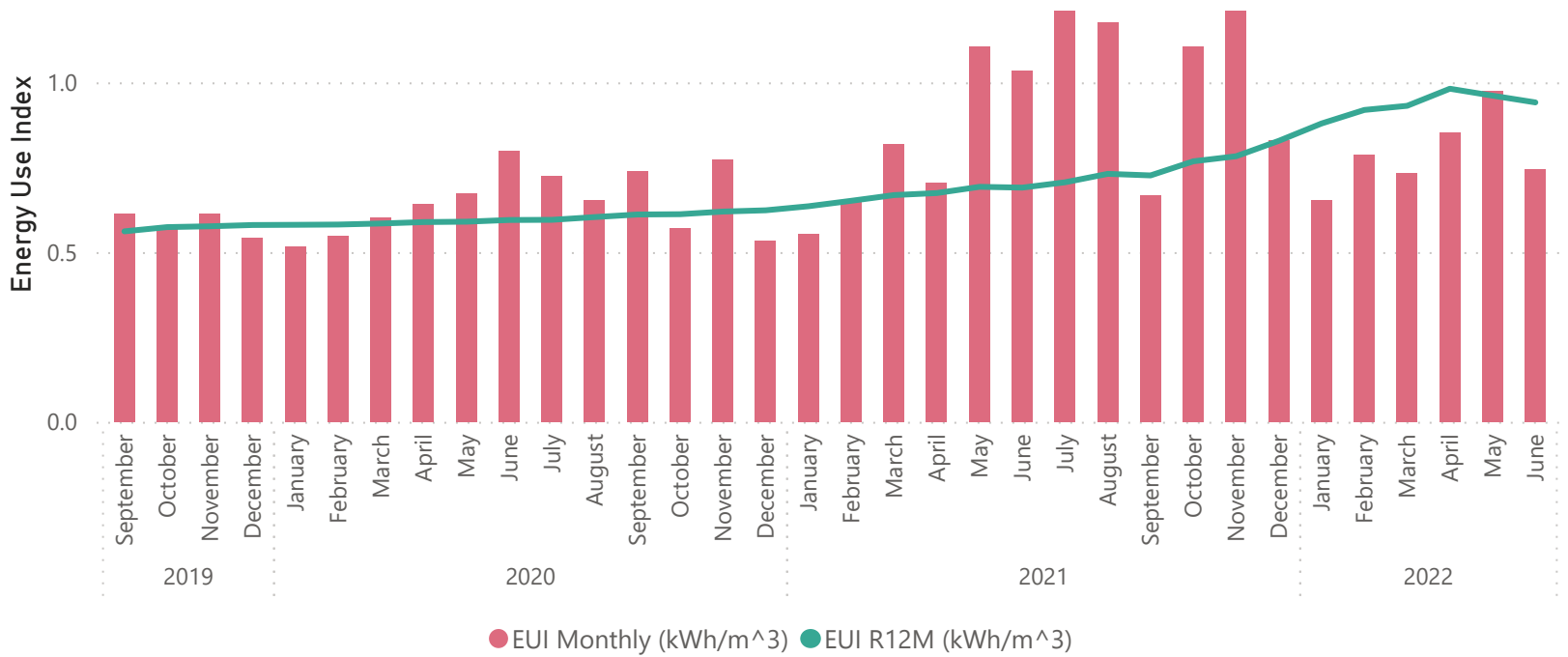


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

# 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

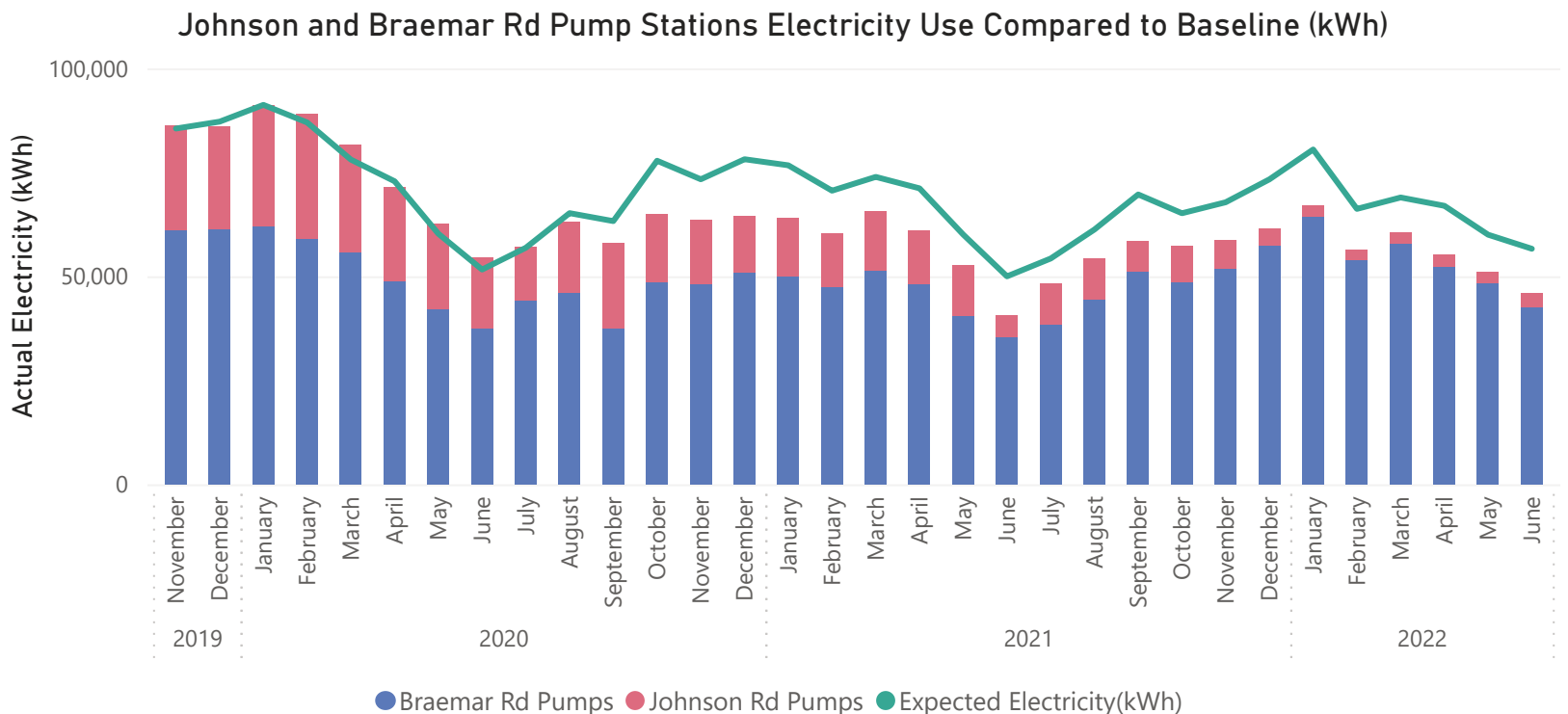
## Johnson and Braemar Rd Pump Stations

<p><b>\$2,441</b> Monthly Energy Cost Savings</p>	<p><b>10,679</b> Elec. Savings (kWh/mo)</p>	<p><b>19%</b> Elec. Savings (%)</p>	<p><b>116,238</b> R12M Electricity Savings (kWh/yr)</p>	<p><b>1,458</b> CO2e Savings (kg/mo)</p>
<p><b>\$17,967</b> R12M Energy Cost Savings</p>				<p><b>15,297</b> R12M CO2e Savings (kg/yr)</p>

### Comments:

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

Johnson Rd and Braemar Rd pump stations both achieved savings independently from one another. When viewed as a network of pumps, savings achieved over the past year are consistent.



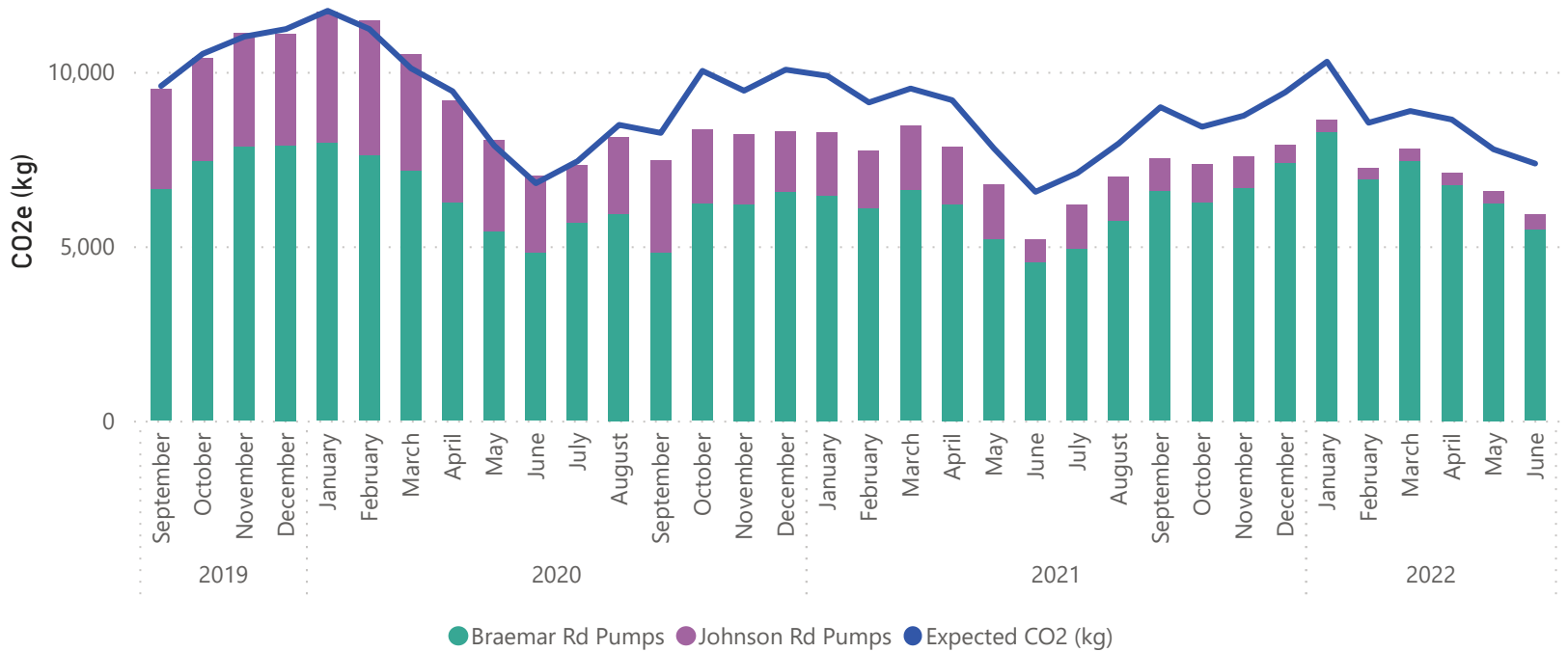
**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time



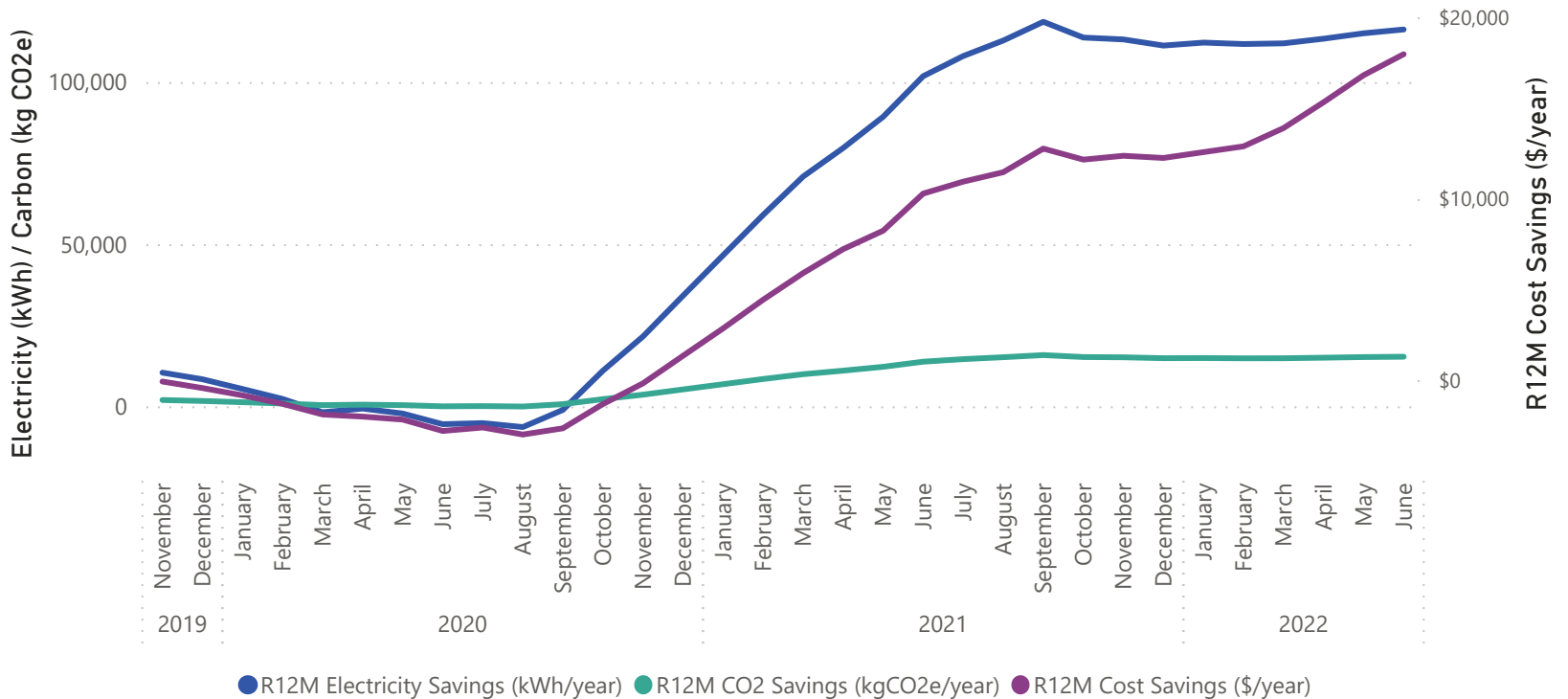
# Whakatane District Council

## 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

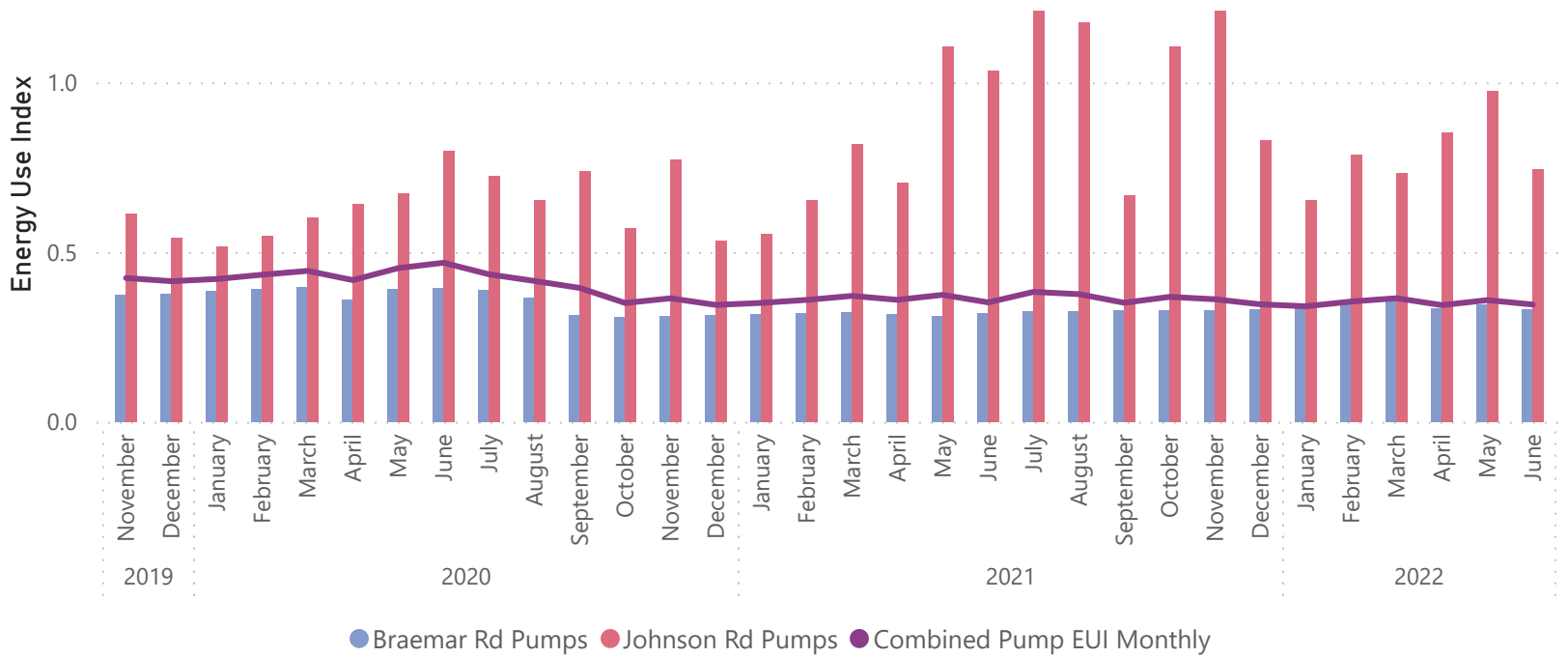


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

# 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

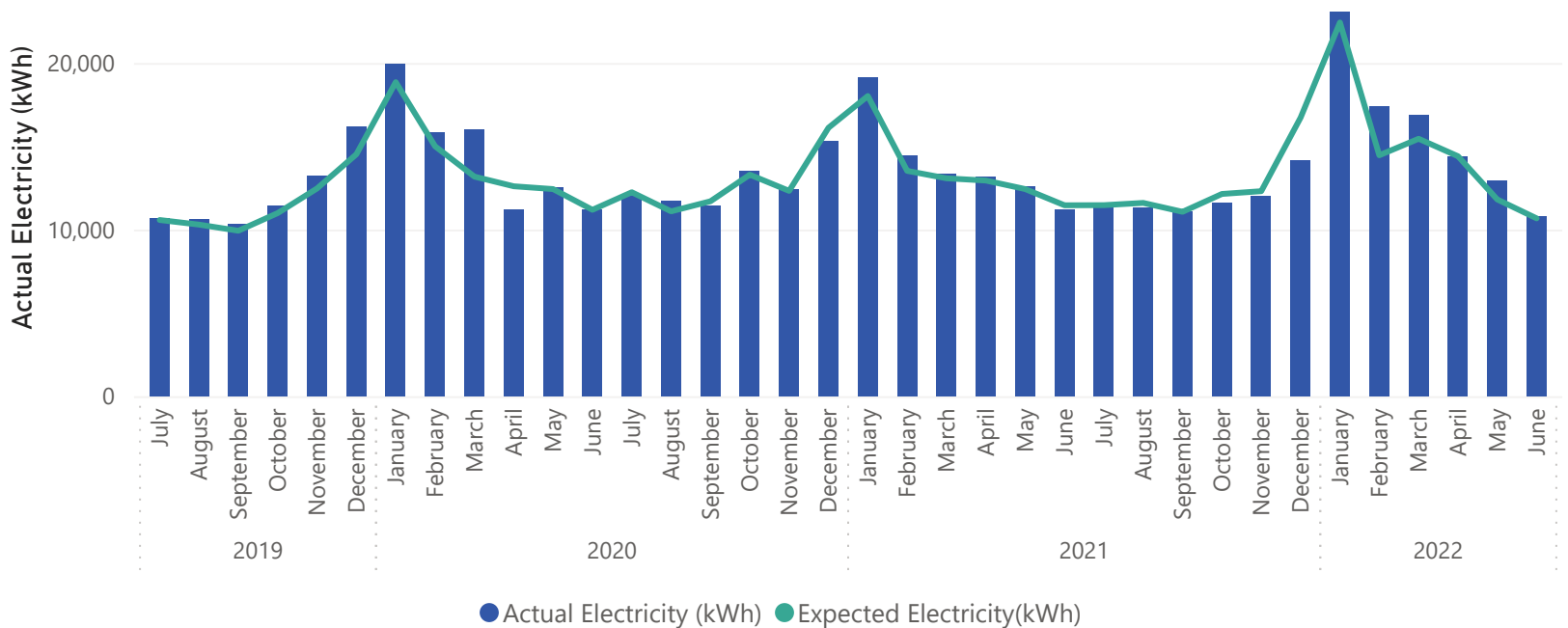
## Bridger Glade Pump Station

<p><b>-\$24</b> Monthly Energy Cost Savings</p>	<p><b>-128</b> Elec. Savings (kWh/mo)</p>	<p><b>-1%</b> Elec. Savings (%)</p>	<p><b>-2,459</b> R12M Electricity Savings (kWh/yr)</p>	<p><b>-16</b> CO2e Savings (kg/mo)</p>
<p><b>-\$452</b> R12M Energy Cost Savings</p>				<p><b>-317</b> R12M CO2e Savings (kg/yr)</p>

**Comments:**

Electricity demand in June 2022 has reduced further from peak demand in January 2022. Months of high demand have typically used more electricity than expected. This may indicate that during periods of high demand the pump station is operating outside of its best efficiency point.

Bridger Glade Pumps Electricity Use Compared to Baseline (kWh)

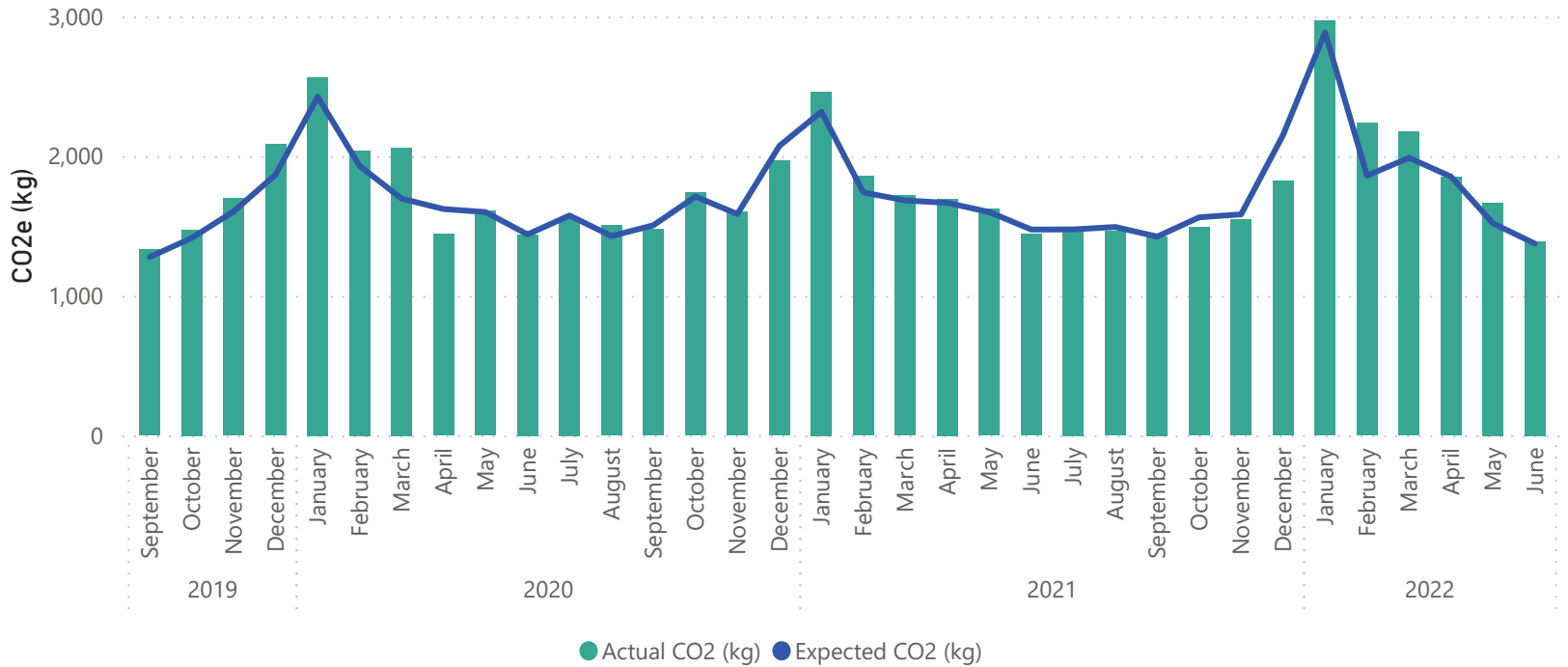


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

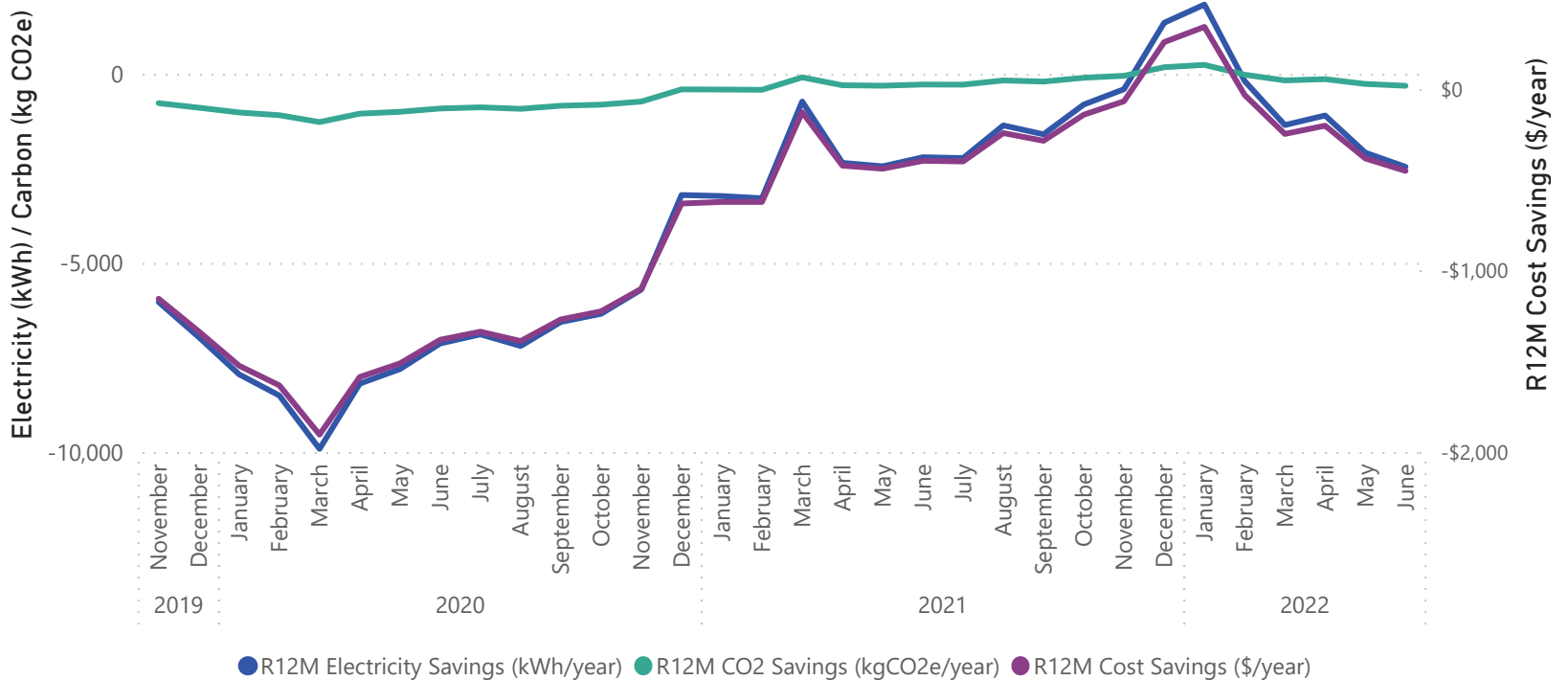
# Whakatane District Council

## Bridger Glade Pump Station

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



Bridger Glade Pumps Rolling 12 Month Savings

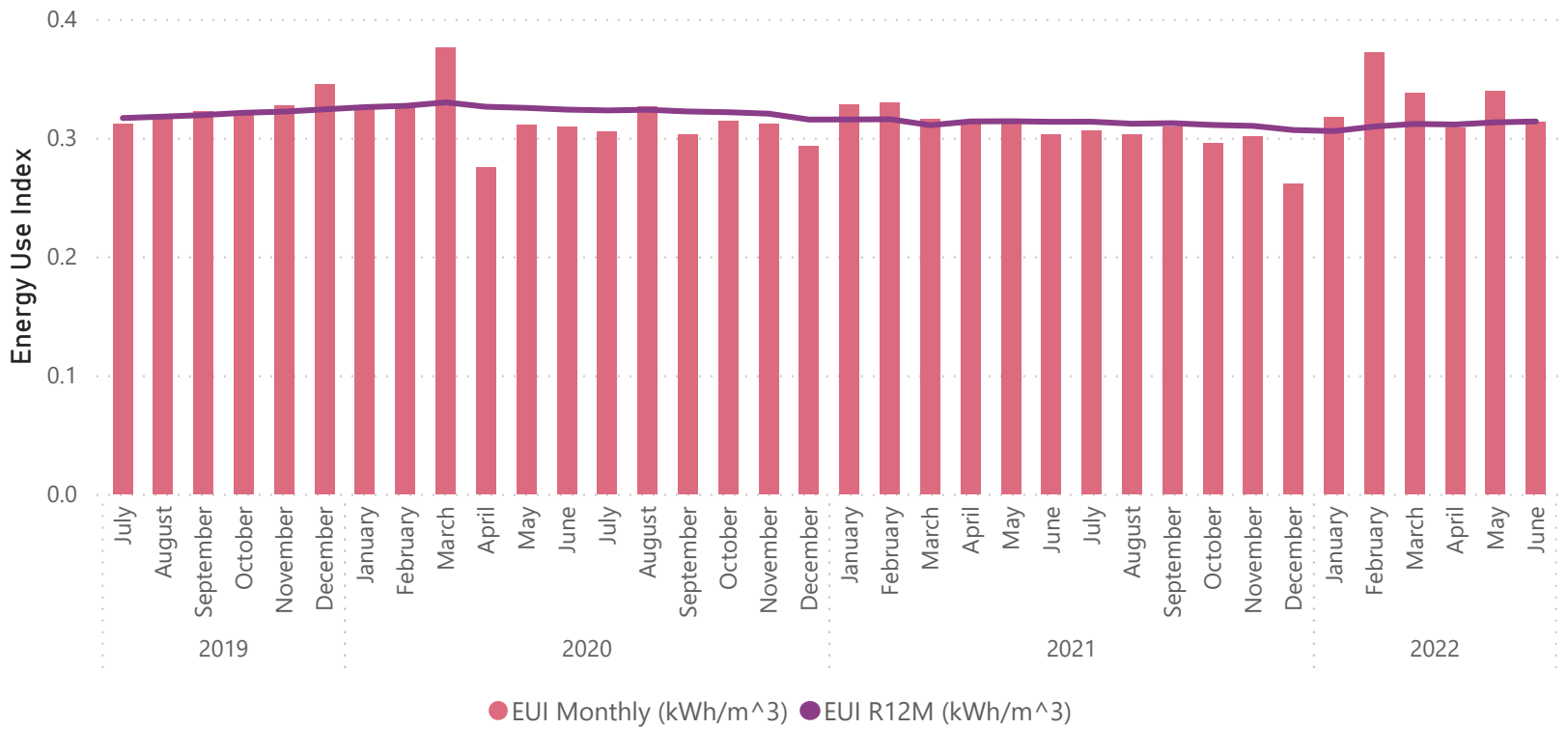


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

# 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

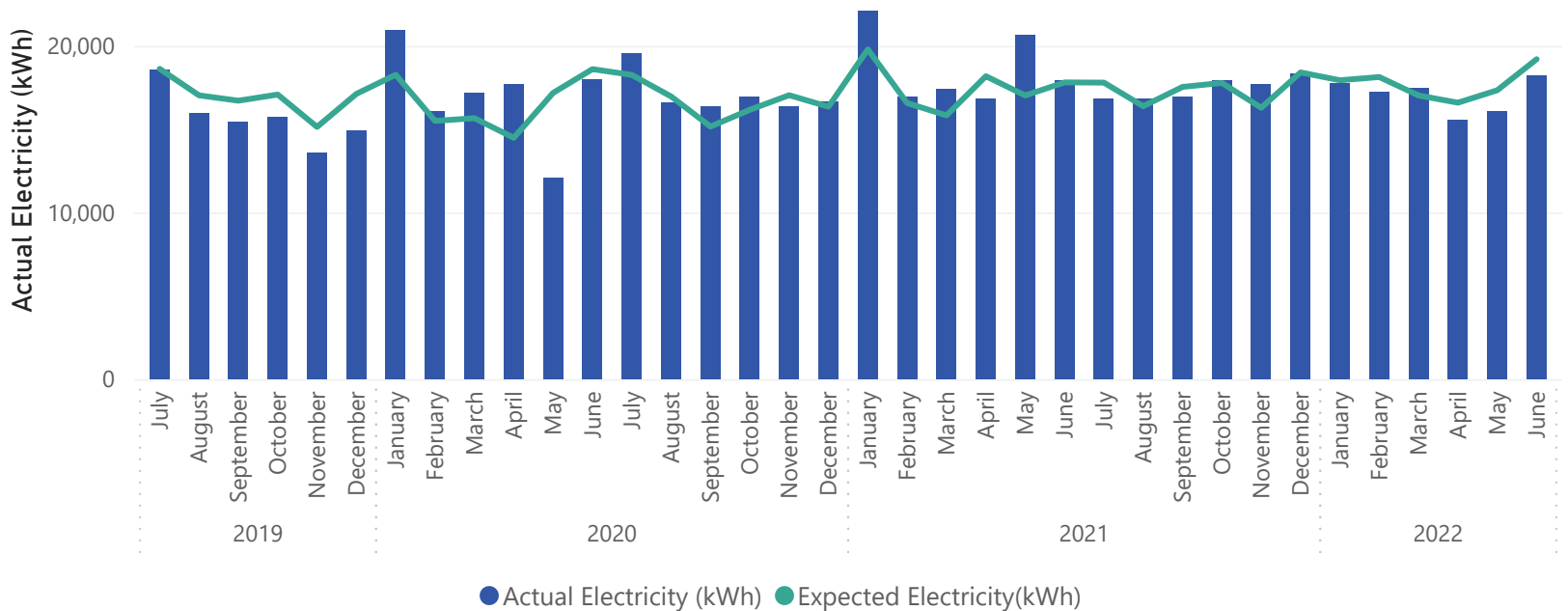
## Ohope Oxidation Ponds

<p><b>\$174</b> Monthly Energy Cost Savings</p>	<p><b>970</b> Elec. Savings (kWh/mo)</p>	<p><b>5%</b> Elec. Savings (%)</p>	<p><b>3,395</b> R12M Electricity Savings (kWh/yr)</p>	<p><b>125</b> CO2e Savings (kg/mo)</p>
<p><b>\$610</b> R12M Energy Cost Savings</p>				<p><b>437</b> R12M CO2e Savings (kg/yr)</p>

**Comments:**

Ohope oxidation pond electricity use was less than baseline in June 2022. The monthly EUI (kWh/m<sup>3</sup>) was lower than the average over the past 12 months.

Ohope Oxidation Ponds Electricity Use Compared to Baseline (kWh)

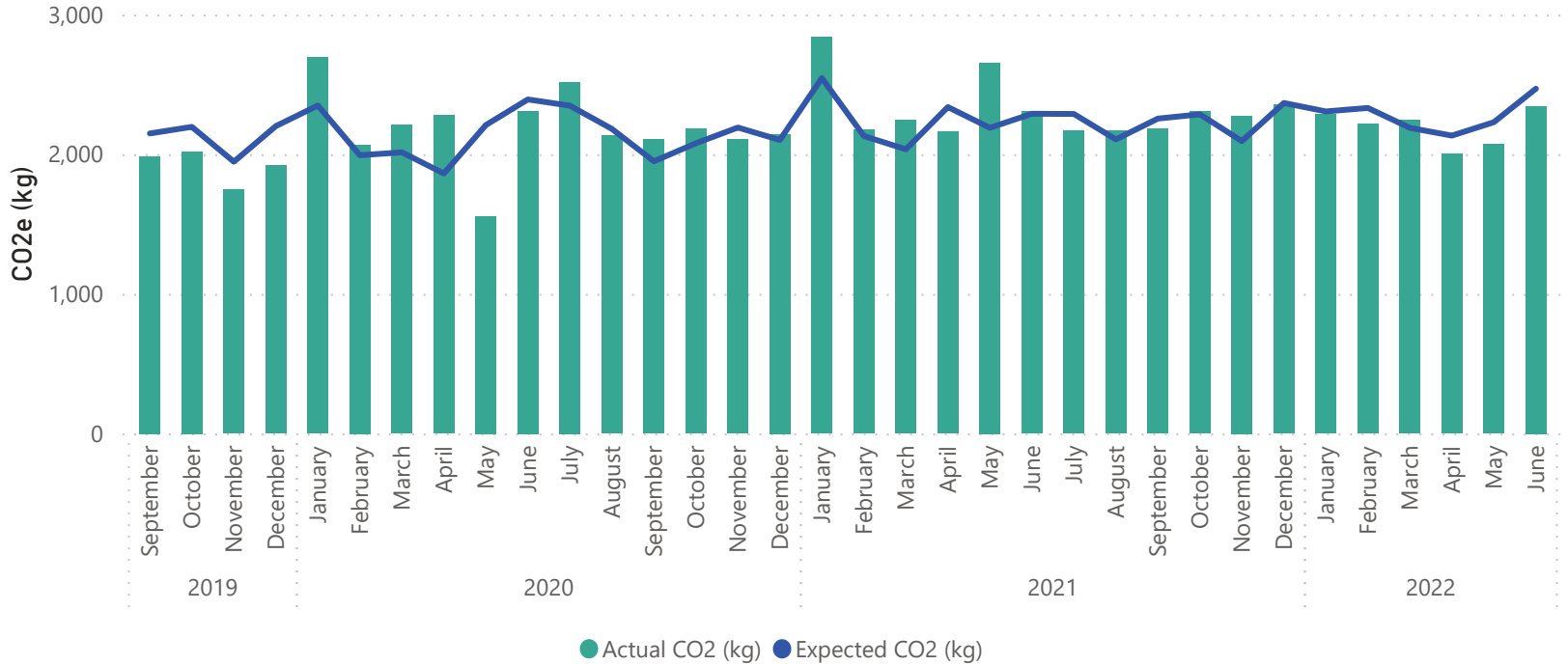


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

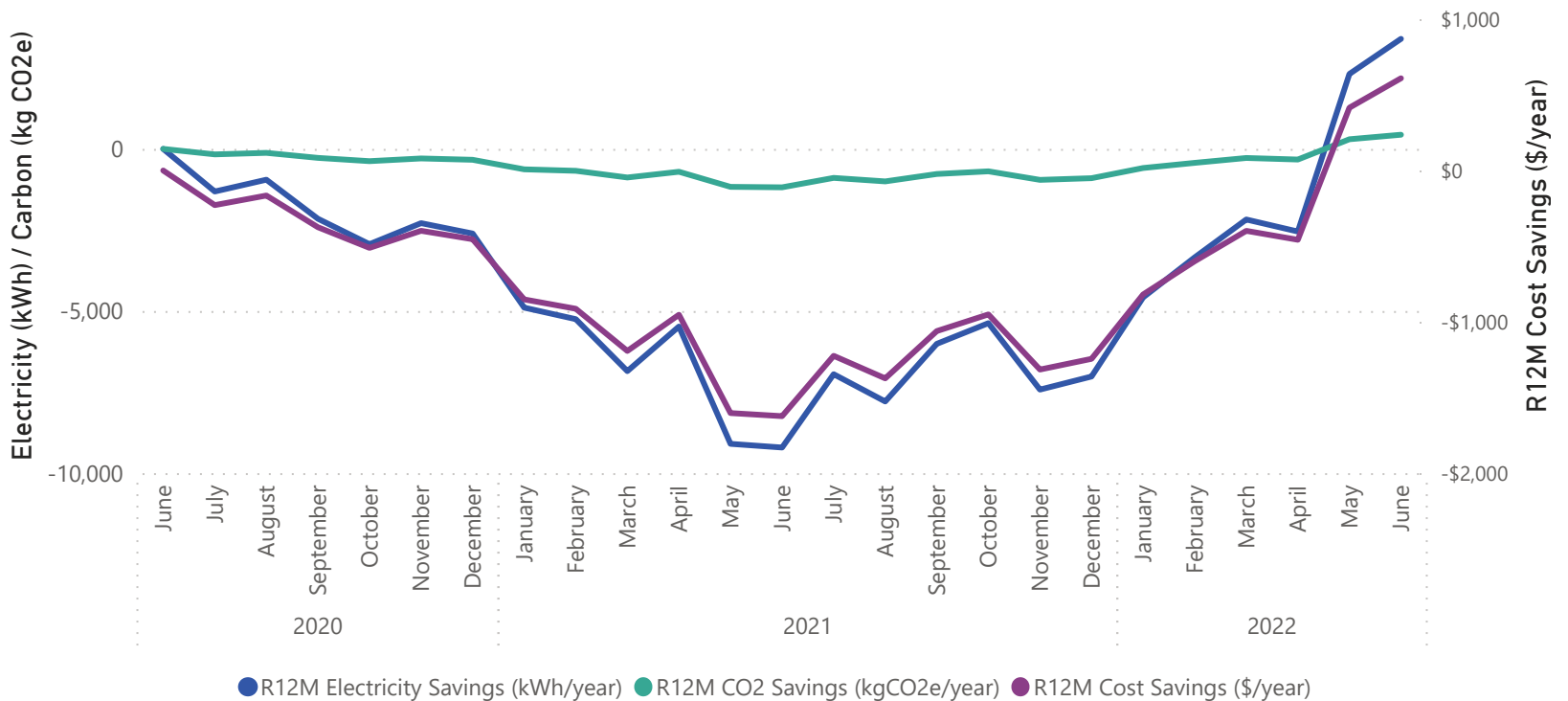
# Whakatane District Council

## Ohope Oxidation Ponds

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



Ohope Oxidation Ponds Rolling 12 Month Savings

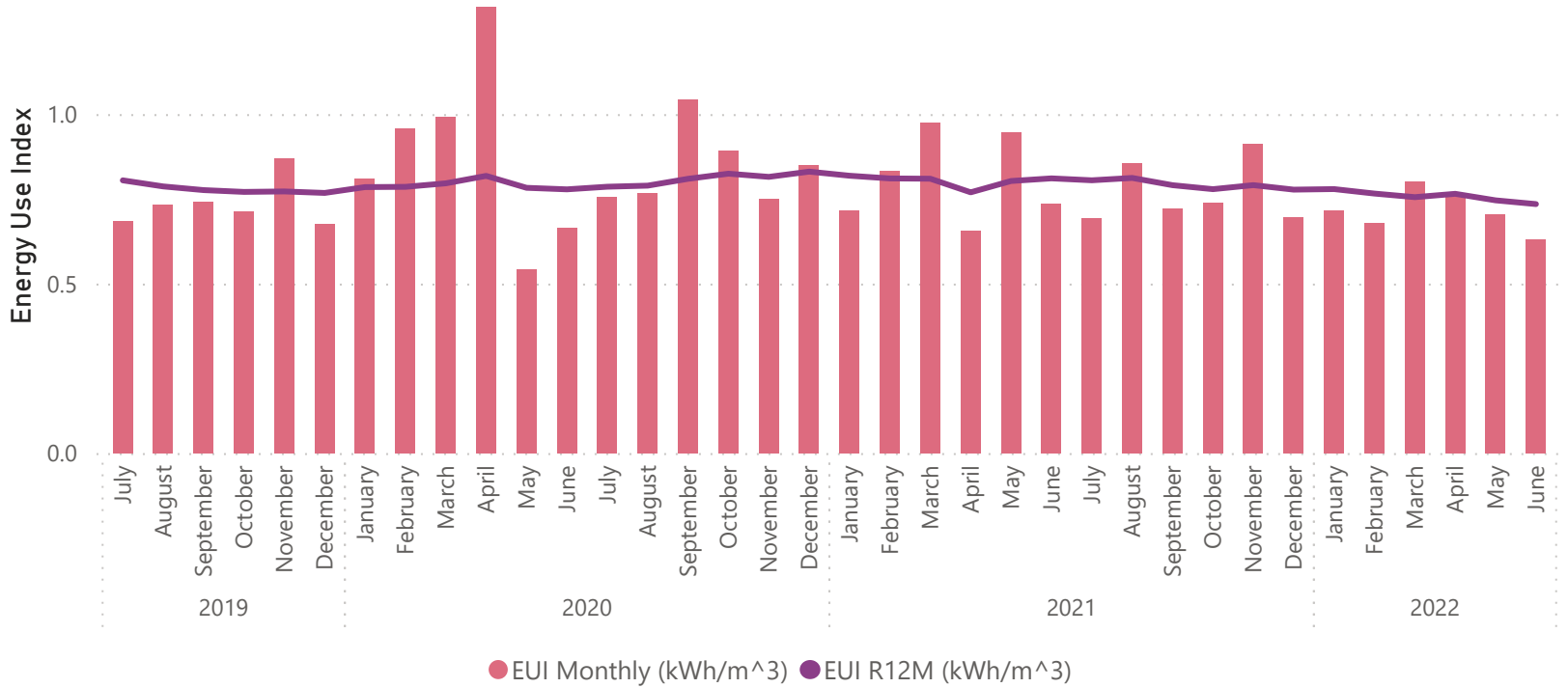


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

# Whakatane District Council

## 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

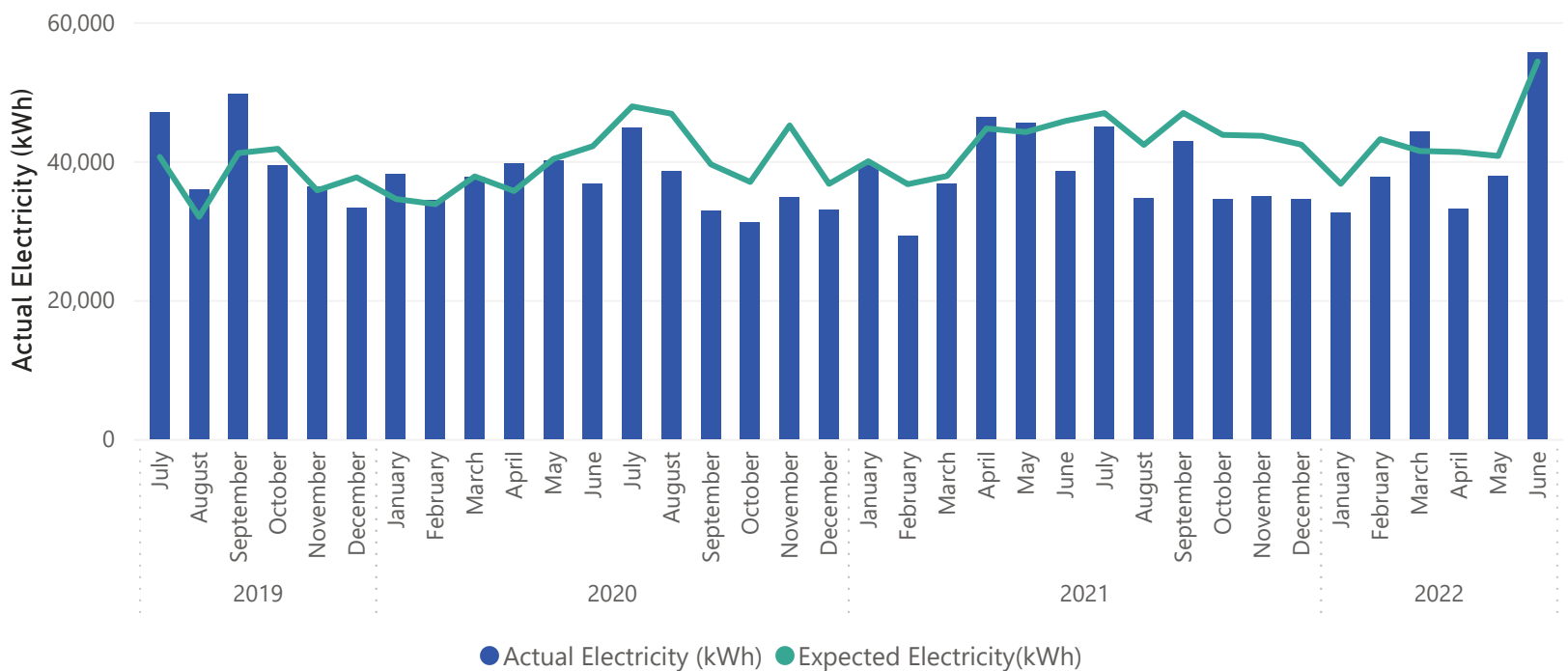
<p><b>-\$255</b> Monthly Energy Cost Savings</p>	<p><b>-1,299</b> Elec. Savings (kWh/mo)</p>	<p><b>-2%</b> Elec. Savings (%)</p>	<p><b>55,896</b> R12M Electricity Savings (kWh/yr)</p>	<p><b>-167</b> CO2e Savings (kg/mo)</p>
<p><b>\$8,405</b> R12M Energy Cost Savings</p>				<p><b>7,194</b> R12M CO2e Savings (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). The variability in electricity is largely attributed to the non-TOU account. Aerators are supplied by the TOU account and generally run for similar amounts of time each month.

Electricity demand in June 2022 is more than baseline. The rolling 12 month EUI has been decreasing, which is good. Expected electricity was high in June 2022 due to higher volumes of effluent.

Whakatane Oxidation Ponds Electricity Use Compared to Baseline (kWh)

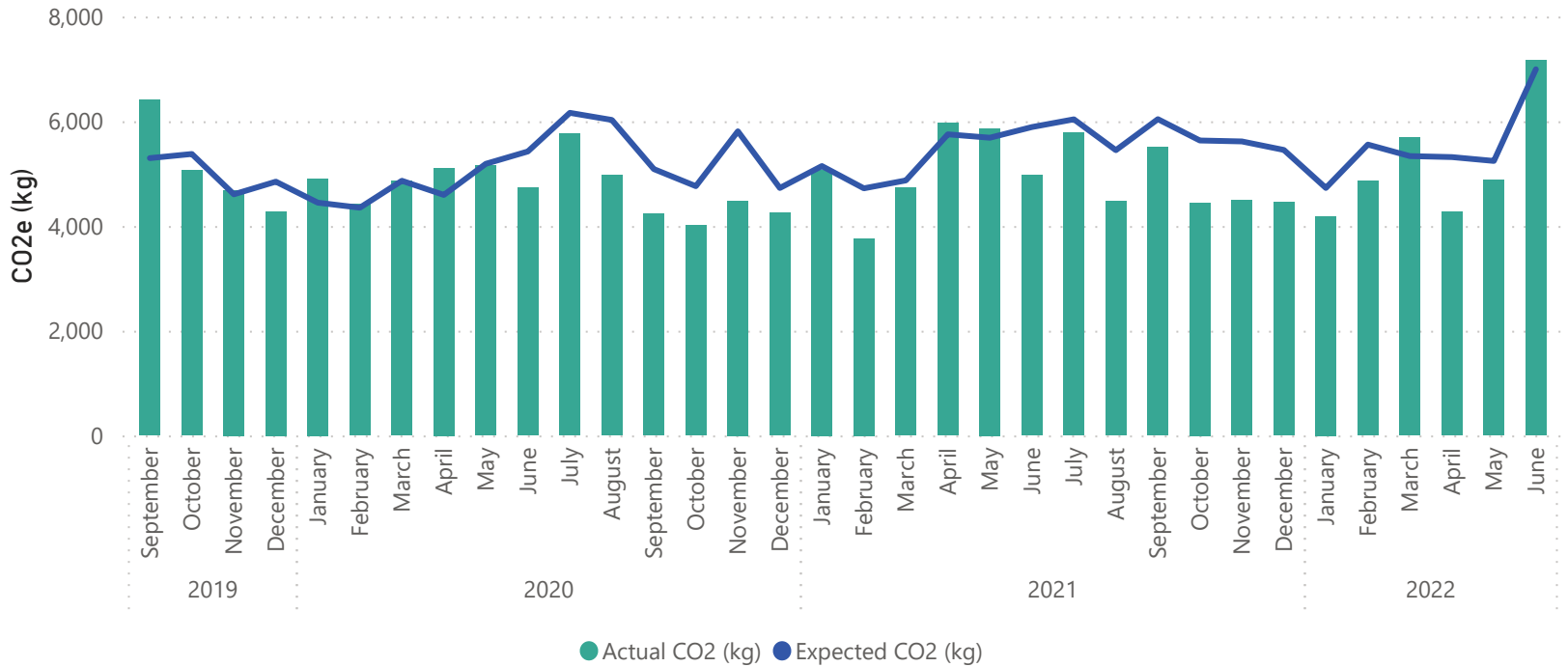


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

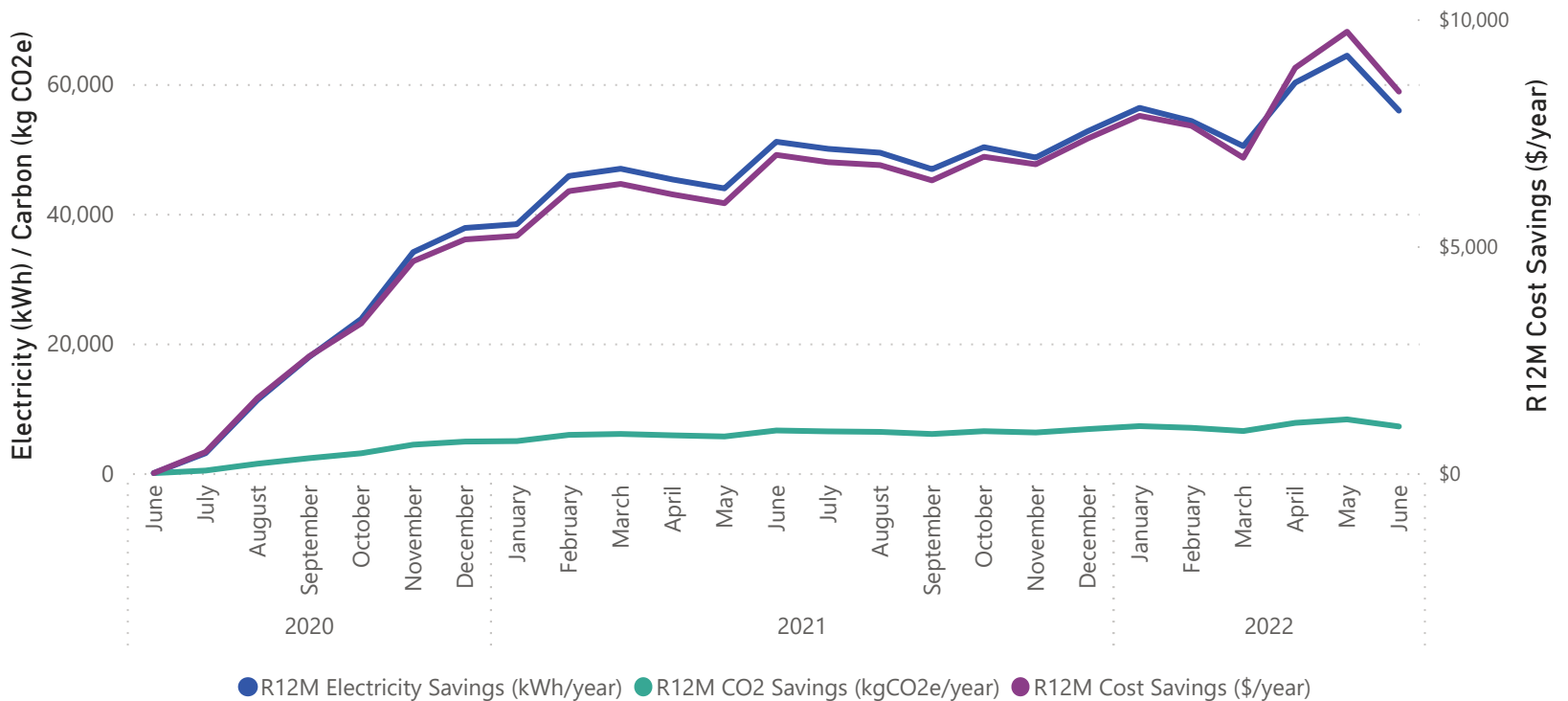
# Whakatane District Council

## Whakatane Oxidation Ponds

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



Whakatane Oxidation Ponds Rolling 12 Month Savings

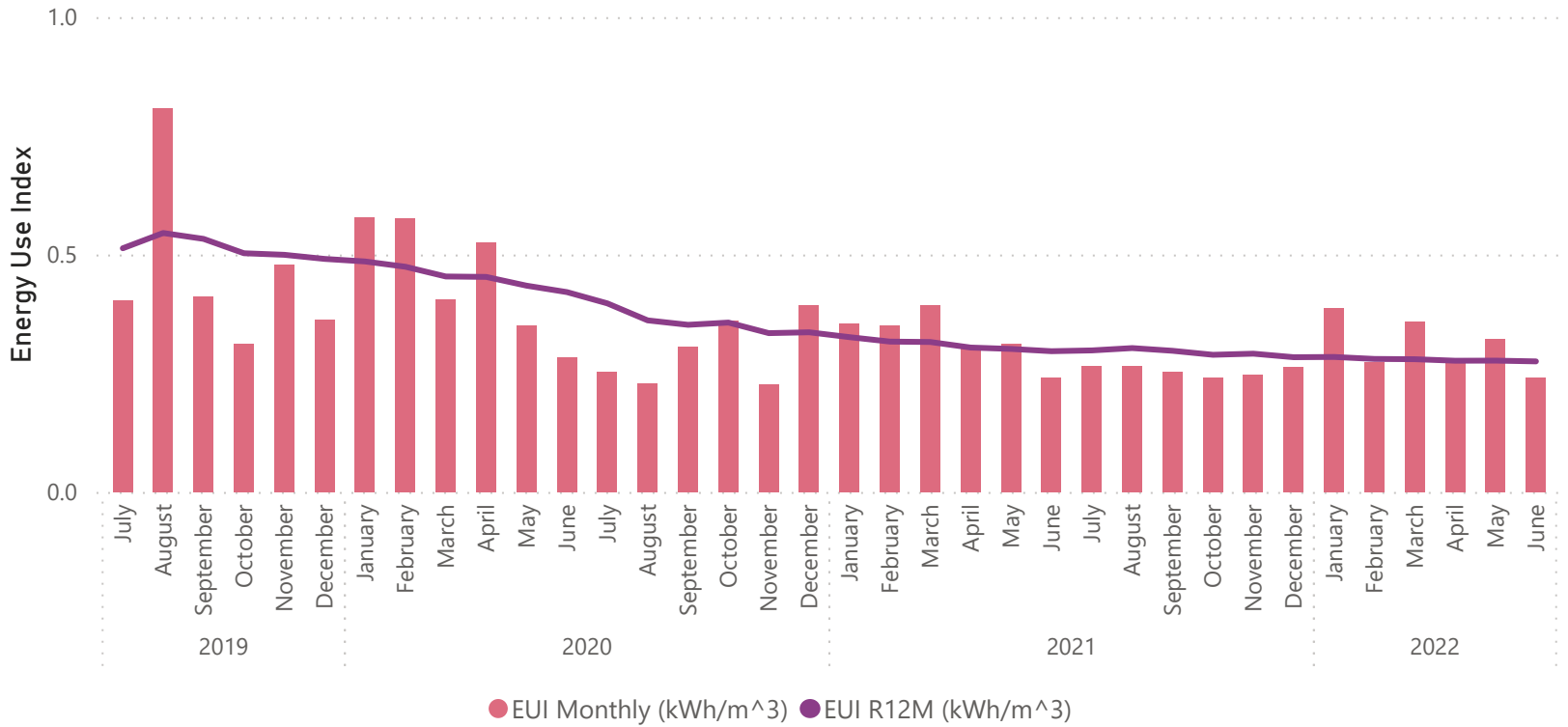


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

# Whakatane District Council

## 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

# Whakatane District Council

## McAlister Street and Rose Garden Pump Stations

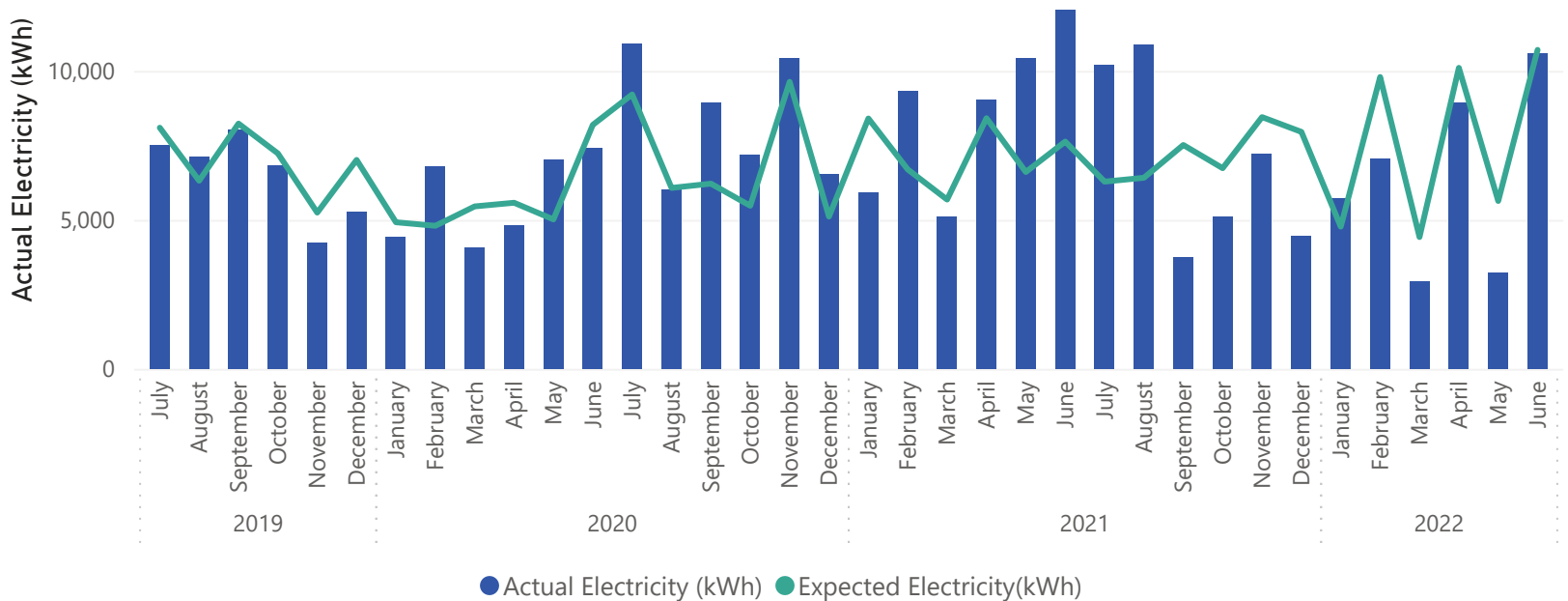
<p><b>\$529</b> Monthly Energy Cost Savings</p>	<p><b>126</b> Elec. Savings (kWh/mo)</p>	<p><b>1%</b> Elec. Savings (%)</p>	<p><b>8,663</b> R12M Electricity Savings (kWh/yr)</p>	<p><b>16</b> CO2e Savings (kg/mo)</p>
<p><b>\$4,581</b> R12M Energy Cost Savings</p>				<p><b>1,115</b> R12M CO2e Savings (kg/yr)</p>

### Comments:

A baseline for McAlister St and Rose Garden Pumps was created that 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 Jan 2019 to Dec 2020.

Rainfall was significant for the month, twice as much rain fell in June 2022 compared to May 2022. The pump stations used approximately three times more electricity in June 2022 compared to May 2022.

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

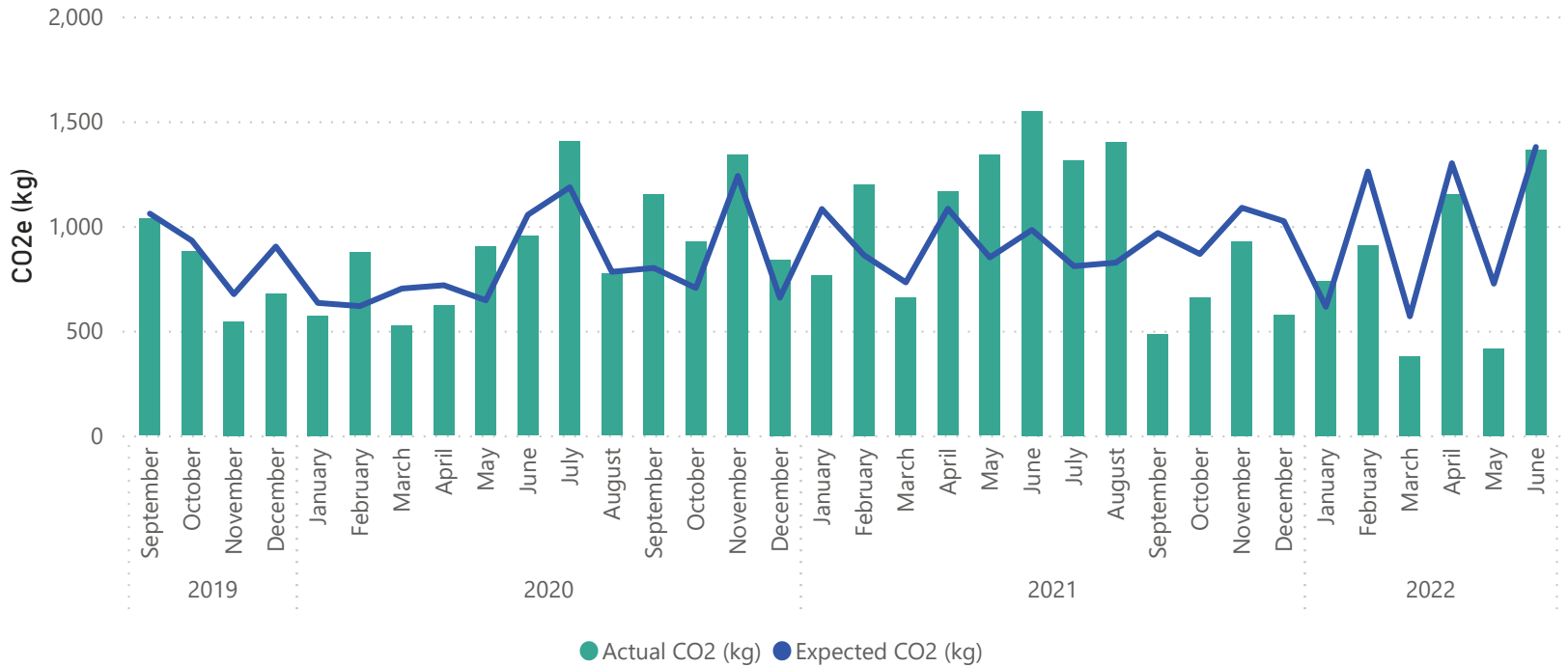


**Note:** New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

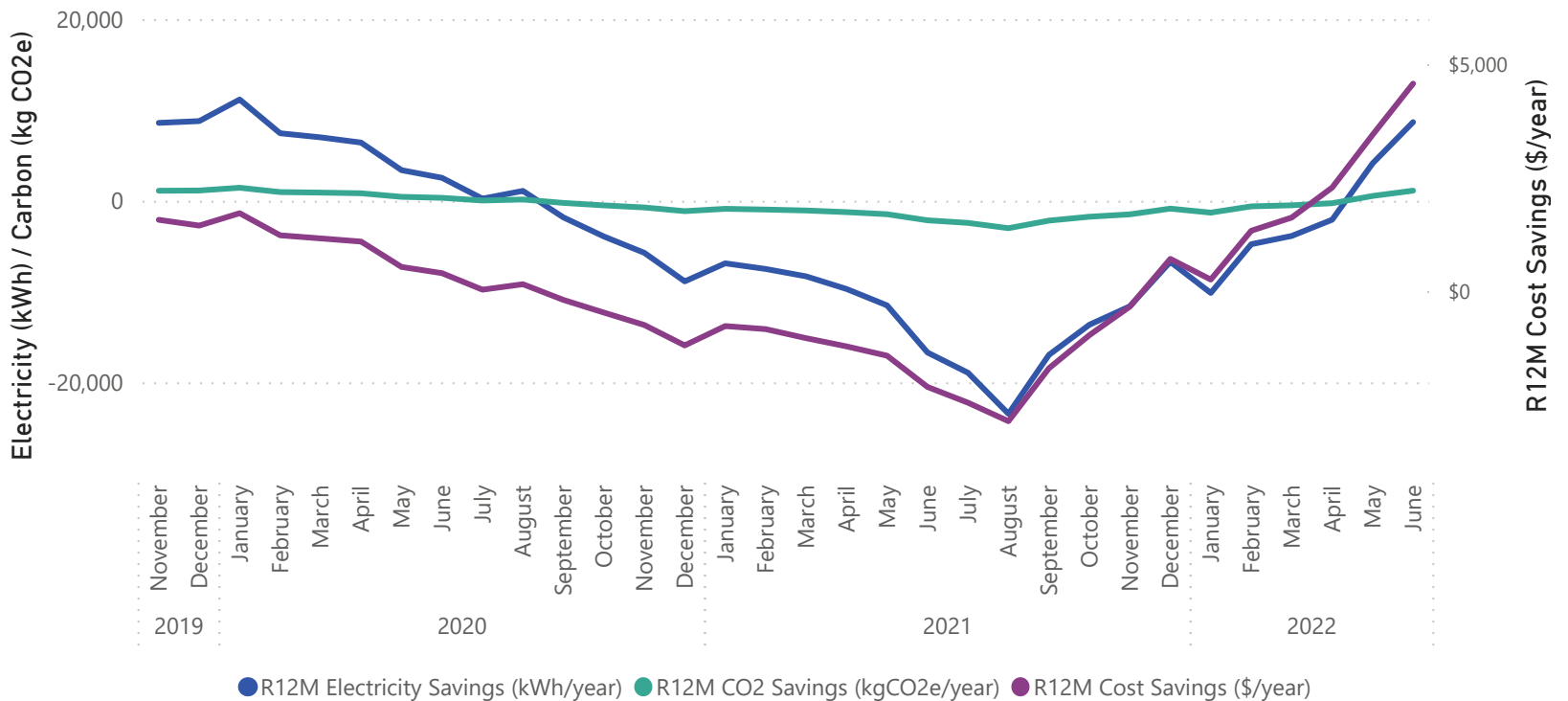
# Whakatane District Council

## McAlister Street and Rose Garden Pump Stations

McAlister and Rose Garden Pumps Carbon Emissions Compared to Baseline (kg CO2e)



McAlister and Rose Garden Pumps 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