

State of the Environment Snapshot 2021-22

BATHURST REGIONAL COUNCIL



The local community helped develop the <u>"Our</u> <u>Region, Our Future" Bathurst 2022 Community</u> <u>Strategic Plan</u> which includes an agreed pathway to help protect our environmental values.

The Community Strategic Plan identifies five strategies which underpin the objective to Strengthen Environmental Stewardship:

- Protect and improve natural areas and ecosystems, including the Macquarie River
 Wambuul and other waterways.
- Minimise the City's environmental footprint, live more sustainably and use resources more wisely.
- Protect and improve the region's biodiversity.
- Increase resilience to natural hazards and climate change.

The 2021-22 State of the Environment Report helps us track our progress towards this objective.

• Improve water security.



Water



Bathurst town water supply comes from Chifley Dam. Chifley Dam's volume stayed around 100%, for the year and was at approximately 100.2% at the end of the reporting period. Water use by households is strongly correlated to rainfall. The easing of water restrictions to Level 2A resulted in a slight increase in supplied water use, despite the highest annual rainfall since 1985-86.





Waste to landfill per resident



18% of kerbside collected material and waste delivered to the Waste Management and Transfer stations was diverted from landfill Recent increases in waste to landfill volumes has been attributed to large increases in development activities in the past two reporting periods.

Council received **97 complaints** regarding illegal waste disposal, a 21% reduction on the previous four-year average.

Council works with other agencies including the NSW Environment Protection Authority, Forestry Corporation and NSW Police and the local community to **monitor** activity, and to **identify** and **penalise** illegal

dumpers or litterers.







size

of energy powered by solar

Council's Renewable Energy profile



Energy

RENEWABLE ENERGY ACTION PLAN

Adopted June 2020

- Target of 15% improved electricity efficiency 2018-19 by 2023
- 25% of Council operations powered by Renewable Energy by 2023 and 50% by 2025

Bathurst Regional Council has already achieved a 15% improvement by 2021-22 from 2018-19 levels.

1.12 tonnes carbon dioxide (equivalent) emissions per resident, a 20% increase on the previous year.

Did you know?

The distance a single person can travel before releasing the same emissions of 1.12 tonnes depends upon the type of transport:

- Metro train: 375,667 km
- Light rail: 287,750 km
- Bus: 80,500 km
 - Passenger car: 6,125 km

Total electricity use for the whole of the Bathurst Regional Council Local Government Area is slowly declining 2013-14 to Residential use declined in 2020-21 for the first 2020-21. time in the period. Energy exported to the grid from small scale solar continues to increase.

Did you know?

An electric vehicle, driven by the average Australian, would cost about \$600 per year to charge. That is much less than the average \$2,160 that an equivalent petrol car costs to refuel in a year. Adding cheaper maintenance costs, an electric vehicle will save the owner around \$2,400 per year.

Council has purchased an all-electric Hyundai Kona for trial as a pool vehicle to determine its fit for daily operational use. As part of the plan, investigations into other lightpassenger and medium vehicles will be undertaken and implemented as deemed appropriate.

Due to concerted efforts to reach adopted targets. energy use at Council facilities per resident continues to decline. This year it equated to 1,393 Megajoules per resident. Council spend on electricity and gas was \$2.98 million. The 2020-21 decline can be partly attributed to reduced water pumping due increased rainfall and a reduction in facility use during COVID-19 restrictions.

Helpful hint: One MW = 1 Megawatt or one million watts

National energy use 2021-22

27% of Australia's electricity came from renewable sources.

Transport emissions were 6% higher, an increase due to relaxing of covid restrictions.

Renewable energy generation grew 18%.

53% of Australian Energy was from Coal.

Energy from fossil fuels declined 5% in the last year and 15% since 2012.

80000 4000 70000 3500 60000 3000 50000 2500 40000 2000 1500 30000 1000 20000 10000 500 0 0 GJ Total — MJ/person — \$ 000's G| Tota Cost & MJ/person **Facility Energy Use**



6,016 small solar systems = 38.6 MW = 17.6% increase from 2020-21.

49.9MW

is the average sized large solar farm in NSW

Weather conditions (cold and hot temperatures and drought) influence energy use of Council operations by the need to pump the town water supply and to heat and cool Council facilities.

Whole of Bathurst Region energy use and solar exports (MWh) (Source Essential Energy)

-50000

Did you know?

A warming climate results in more extremes of weather. For every degree of warming, the atmosphere can hold 7% more moisture and more storm energy which increases the risk of intense rainfall events and dangerous storms.

Net WMC Landfill Emissions

Wastewater Treatment Plant

35077

398

1174

Street Lighting

Fleet

2509

Gas

1028

8828

Electricity

Emissions from whole of Council operations have increased in recent years. This can be attributed to increased waste being deposited to landfill due to increased construction activities. Emissions from energy and fuel continues to fall due to concerted efforts to improve efficiencies and reduce consumption.

Climate

Weather is the daily temperature, wind, rain that we experience.

Climate is the trend or average over a long period of time.



BRC CO₂ emissions

Weather

The long-term trend is for increasing average maximum temperatures. Temperature data, recorded at the Bathurst Agricultural Research station since 1908, demonstrates that there has been a clear shift in average temperatures. Since around 1996 the average annual maximum temperatures have been higher than the period 1908-1995.





Temperatures during 2021/22, were cooler than the previous two years, consistent with the previous 30 years of records but still above the long-term average since 1908. Rainfall was significantly higher than normal with November 2021 (242.4mm) and January 2022 (143.4mm) at least twice the monthly average. The annual total rainfall was 1017mm, 377mm above the longterm average.

Biodiversity

Protecting our Waterways

The three-year NSW Environmental Trust-funded Queen Charlotte's Vale Creek Royal Rehabilitation Treatment Project is nearing completion with 1.2 km of wildlife friendly fencing installed, 2,500 locally occurring native trees, shrubs and groundcovers planted by contractors and community and school volunteers, and 1.5ha of woody and herbaceous weed control undertaken along the banks of Queen Charlotte's Vale Creek.

The Queen Charlotte's Vale Creek Royal Rehabilitation Treatment Project commenced in March 2020 and aims to establish native riparian vegetation along 700m of Queen Charlotte's Vale Creek by undertaking woody and herbaceous weed control, the installation of wildlife friendly rural fencing, and the planting of locally occurring native trees, shrubs and grasses.

> Each year, Bathurst residents participate in the annual Aussie Bird Count which runs for one week each October as part of a national citizen science project. Council has coordinated the local effort since 2015.

River Connections

The project "River Connections - knowing and caring for the Macquarie Wambull River" is an engaging nature-based program to connect students at local schools with the river and its catchments. Students are involved in a learning program including Wiradyuri cultural perspectives, science, art and inquiry-based exploration as well as fieldbased "Big River Days" at local rivers. To date 300 hundred students from four schools have been directly involved in the program which was a collaboration with Wiradyuri Elders and Council environmental education staff.



15,481 birds counted in the October 2021 count