

Riverina Eastern Regional Organisation of Councils

Regional Waste Management & Resource Recovery Strategy 2022 - 2027



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WASTE STRATEGY 2022 - 2027

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Availability



The Waste Strategy is available on the REROC website
<https://reroc.com.au/>

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Photo by Thomas Parker

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Acknowledgement of Country

The Riverina Eastern Regional Organisation of Councils acknowledges the Wiradjuri Aboriginal Nation as the traditional custodians of the land, seas, skies and waterways on which we reside, work, travel and meet.

We recognise and acknowledge the connection Wiradjuri people have to their land, their waters and surrounding communities and their history on the lands.

We pay respect to Elders past and present as well as to the young Indigenous leaders of tomorrow.

Acknowledgement of the NSW Environment Protection Authority

This program is funded and supported by the NSW EPA through the Waste and Sustainable Materials Strategy 2041.

Executive Summary

The Riverina Eastern Regional Organisation of Councils (REROC) is a voluntary association of seven local government bodies located in the eastern Riverina region of NSW. Originally formed in 1992 the aim of the organisation is to assist councils to operate more efficiently and effectively through working together to achieve economies of scale and scope and to provide members with a single representative voice.

REROC established the REROC Waste Forum in 1997 to undertake regional projects to address waste management and resource recovery issues. Since then the Waste Forum has developed a series of four and five-year strategies to direct its activities. The NSW Government's continuing investment in waste management, resource recovery and the circular economy is driving positive outcomes across our Region. It is providing new opportunities for councils and regional groupings of councils to implement new and innovative responses to waste management, resource recovery problems and challenges and allowing us to explore ways we can deliver circular economy outcomes. The REROC Regional Waste and Management Resource Recovery Strategy 2022-2027 responds to those opportunities.

The REROC Regional Waste and Management Resource Recovery Strategy 2022-2027 was developed in consultation with the Member Councils. The Strategy revisits and builds

on the Waste Forum's 2017-2021 Strategic Plan and aligns with the NSW Waste and Sustainable Materials Strategy 2041 Stage 1 2021-2027 focus areas:

1. meet future infrastructure and service needs
2. reduce carbon emissions through better waste and materials management
3. protect the environment and human health from waste pollution.

With this in mind, our Vision and Mission are outlined below:



Vision

Building a resilient and sustainable region through developing and encouraging initiatives in waste management, resource recovery and the circular economy.



Mission

Achieve efficiencies in waste management, resource recovery and the circular economy by working collaboratively with all levels of government, our communities and business for sustainable outcomes.

Distance, high transport costs and small population centres continue to present barriers and challenges to the implementation of sustainable waste management and resource recovery solutions. Consequently, this requires the Waste Forum to identify innovative solutions and this approach is evidenced in many of the projects already implemented by the Forum and those that will be implemented in the future.

The REROC Regional Waste and Management Resource Recovery Strategy focuses on four Key Themes, all of which mirror the themes contained in the NSW Waste and Sustainable Materials Strategy 2041 Stage 1 2021-2027 and the NSW Plastics Action Plan which provide the actions, policies and targets the NSW Government will take to address waste reduction and plastic pollution across the state.



Theme 1: Avoid and Reduce Waste Generation



Theme 2: Recover Resources



Theme 3: Protect the Environment



Theme 4: Strategic Collaboration

I Executive Summary

The REROC Waste Forum's Strategic Objectives for each theme are as follows*:



1. Avoid and Reduce Waste Generation

- 1.1 Contribute to the reduction of total waste generated by 10% per person by 2030.
- 1.2 Continue to reduce organic waste sent to landfill by 50%.
- 1.3 Investigate and support innovative circular solutions to regional waste management.
- 1.4 Encourage sustainable procurement practices.



2. Recover Resources

- 2.1 Contribute to the reduction of total waste generated by 10% per person by 2030.
- 2.2 Contribute to the average recovery rate of 80% for all by 2030.
- 2.3 Continue to reduce organic waste sent to landfill by 50%.
- 2.4 Investigate and support innovative circular solutions to regional waste management.
- 2.5 Support the implementation of the NSW Plastics Plan.
- 2.6 Encourage sustainable procurement outcomes.
- 2.7 Support future waste and resource recovery and circular economy infrastructure needs.



3. Protect the Environment

- 3.1 Support the NSW Government to meet their target of Net Zero Emissions by 2050 through better waste and materials management.
- 3.2 Encourage the community to correctly dispose of problem and hazardous waste.
- 3.3 Support the implementation of the NSW Plastics Plan.
- 3.4 Reduce the impact of litter and/or illegal dumping on the environment.
- 3.5 Facilitate regional collaboration to improve disaster resilience and waste management planning.



4. Strategic Collaboration

- 4.1 Actively encourage equity in waste and resource recovery programs within Member Council communities
- 4.2 Support future waste, resource recovery and circular economy infrastructure needs.
- 4.3 Facilitate regional collaboration to improve disaster resilience and waste management planning.
- 3.4 Continue to foster effective communication and collaboration with all stakeholders.
- 3.5 Continue to advocate and contribute to policy decisions on behalf of Member Councils.

Introduction

The Strategy will inform the direction of the REROC Waste Forum and its individual Member Council activities with regard to waste management, resource recovery and the circular economy within the eastern Riverina region from 2022-2027. The REROC Waste Forum's Region, which covers over 42,000 sq kms (making it slightly larger than Switzerland), has a low population density, resulting in very real challenges for managing waste and providing viable and sustainable resource recovery and circular economy solutions.

The NSW Government's development and investment in the NSW Waste and Sustainable Materials Strategy 2041 Stage 1 2021-2027, the NSW Waste and Sustainable Materials Strategy – A guide to future infrastructure needs (WASM) and the NSW Plastics Action Plan will drive increased activity in waste management, resource recovery and the circular economy. This will provide opportunities for councils and regional groupings of councils to implement new and innovative responses to waste management, resource recovery problems and challenges and the circular economy. This Strategy responds to those opportunities, encouraging Member Councils to find new ways to rise to the challenge of managing waste, providing resource recovery solutions and developing circular economy opportunities for the communities they represent.

The REROC Waste Forum was created in 1997 to undertake regional projects that address waste management and resource recovery issues. The Forum has been very successful in designing and implementing a range of projects that have addressed infrastructure issues, waste avoidance measures and improved opportunities for resource recovery in the eastern Riverina.

The importance of working collaboratively has been evidenced in the number of regional projects delivered by REROC, from the implementation of a regional e-waste collection, the establishment of Community Recycling Centres (CRC) and the delivery of numerous environmental education programs.

REROC supports the guiding principles of the NSW EPA and the Strategy has been developed with reference to these. The guiding principles aim to protect the environment and human health from waste pollution. The target areas are the circular economy, sustainable development goals, net zero emissions and the waste hierarchy.

The availability of hard data on waste management and resource recovery remains a challenge for the Region and this impacts on decision-making, however this situation is improving. Consequently REROC engaged Talis Consultants to assist in compiling statistics and benchmarks to support us to meet our goals and targets. The results of their work can be found in Appendix 2.

Population projections for the region have been included in Appendix 3.

In order to facilitate the planning process, the Strategy was discussed at Waste Forum meetings with Councils providing input to the planning process. The REROC Board has adopted the Regional Waste Management and Resource Recovery Strategy to ensure there is a high level of commitment to its implementation.



| Background

The Riverina Eastern Regional Organisation of Councils is a voluntary association of local government bodies located in the eastern Riverina region of NSW. **Originally formed in 1994** the aim of the organisation is to assist councils to operate more efficiently and effectively through working together to achieve economies of scale and scope and to provide members with a single representative voice.

REROC Waste Forum commenced in 1997, its membership is comprised of eight General Purpose councils and one Water County Council. Our members are the councils of: **Bland, Coolamon, Cootamundra-Gundagai, Greater Hume, Junee, Lockhart, Temora and Wagga Wagga as well as Goldenfields Water County Council.** The Waste Forum serves a population base of approximately **114,275 and encompasses an area in excess of 42,000 square kilometres.**

REROC's Waste Forum comprises of membership from Bland, Coolamon, Cootamundra-Gundagai, Greater Hume, Junee, Lockhart, Temora and Wagga Wagga local government areas.

The Region encompasses Wagga Wagga, the largest inland city in NSW, and some of the smallest communities in the state in the Coolamon, Lockhart and Junee Local Government Areas. Land use across the Region is greatly varied and includes residential, agricultural, mining, industrial, health, educational and defence. This means Members must identify solutions which can be adapted for these communities and businesses. Waste management and resource recovery solutions developed for the Region must, therefore, be adaptable to work across a very diverse membership.

The vast distances the region covers means transport is a significant consideration in many of the activities REROC undertakes. There is virtually no public transport in most of the local government areas which means services generally need to be close to population centres. Consequently, aggregating services is often not a viable solution for the Region as it results in the services being inaccessible for many residents. REROC is committed to ensuring access and equity for all the services offered in the region. This is evidenced by the implementation of the regional e-waste project in every local government area, commitment to ensuring all councils have accessible Community Recycling Centres and community education activities being delivered into all local government areas. Not all residents have appropriate access to a Container Deposit Scheme (Return and Earn) facility and we will work with the EPA and Tomra to improve access for our residents.



About the Region: Overview

The **Median age for most of the LGAs** in the Region is **over 40 years** of age while the median for **NSW is 37.9 years**. This indicates the aging nature of the population. Only Wagga Wagga has a median age that is significantly lower, and this can be attributed to the City being home to Charles Sturt University, as well as having Kapooka Army Base to the south of the City and a RAAF Base at Forest Hill in the east of the City providing training to young recruits.

The median wage for every LGA in the Region is below the NSW median wage of \$53,291, with Wagga Wagga again being closest to the State average. This City is home to a large number of public sector jobs, including a large health and education sector along with defence employment which would contribute to this result. The balance of the Region is heavily dependent on agriculture with health and retail providing the majority of the rest of the employment opportunities.

*At a Glance**

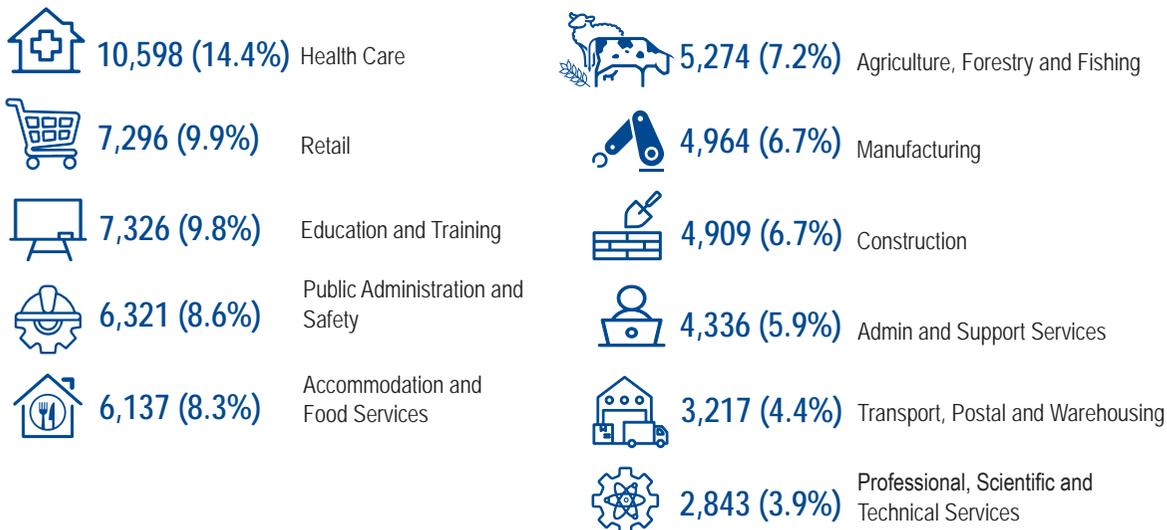
REROC Councils	Area (km)	Population	Pop. Density Person/km ²	Number of Households	Median Age	Median Wage (\$**)
Bland	855,765	5,547	0.60	2,151	43.3	43,716
Coolamon	243,090	4,385	1.80	1,649	45.2	47,630
Cootamundra - Gundagai	398,142	11,403	2.90	4,490	48.4	44,178
Greater Hume	574,939	11,157	1.90	3,936	43.9	45,329
Junee	203,002	6,754	3.20	2,103	40.8	48,547
Lockhart	289,580	3,319	1.10	1,202	47.6	43,519
Temora	280,202	6,034	2.10	2,393	47.1	42,186
Wagga Wagga	482,449	67,609	14.10	24,776	35.0	52,408

* All data based on 2021 ABS Data except **

** Median Wage is Employee Income as reported in the 2019 ABS Data

Employment

The biggest industries from an employment perspective:



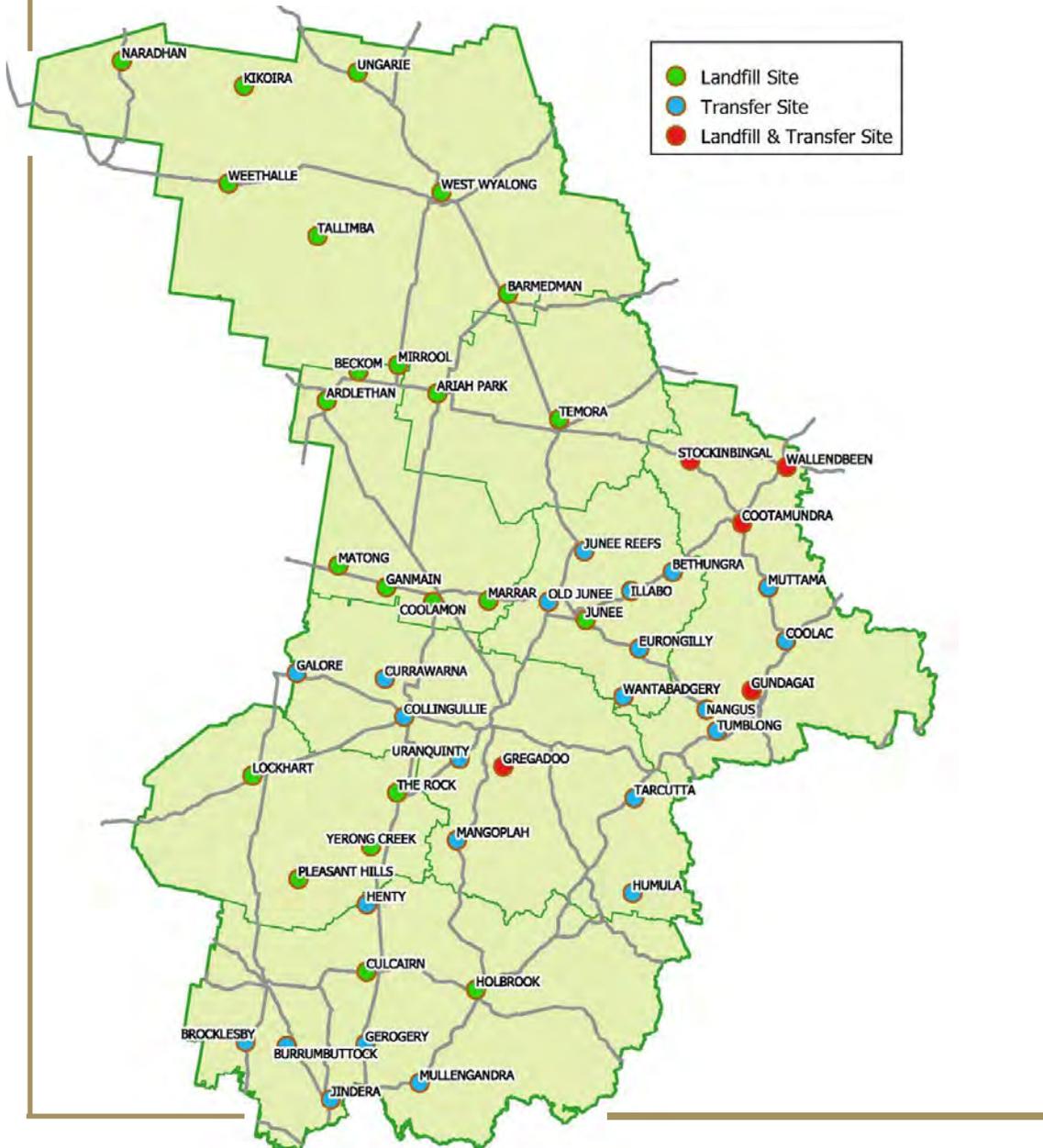
The largest occupational groups in the Region are **Professionals with 9,636** describing themselves as working in this area in the 2021 Census, the next largest occupation is **Managers with 8,408** persons, followed by **Technicians and Trades Workers 7,796** and then **Community and Personal Service Workers with 7,217** people working in this occupation.

When Wagga Wagga is removed from the analysis.

The largest occupational groups in the Region are **Managers 4,342 (21%)** persons employed, **Technicians and Trades Workers 2,800 (14%)** employed, **Professionals with 2,735 (13%)** employed, **Labourers with 2,721 (13%)** and **Community and Personal Service Workers with 2,394 (12%)** people working in this occupation.

Landfills and Transfer Stations

The landfills and transfer stations in the REROC Waste Forum Region are mapped below:



Regional Arrangements

Landfills

Two landfills in the region receive waste from outside their Local Government Area: the landfill operated by Wagga Wagga City Council takes waste from Junee Shire Council while the Bald Hill facility, located in the Hilltops Local Government Area, is used by Cootamundra-Gundagai Regional Council in an arrangement with two other non-REROC councils, Yass Valley Council and Hilltops Council. The Bald Hill facility is privately operated; however, the licence is held by the Hilltops Council.

Waste Management and Resource Recovery in each Local Government Area

The individual arrangements for each local government area are contained in Appendices 1 and 2.



Regional Arrangements

Regional Contracts

REROC manages regional contracts for the collection of the following waste:

Metal Waste



REROC has been letting regional contracts for the collection of metal waste for 20 years. During that time over 25,000 tonnes of metal has been collected. The real value in the regional approach lies in the capacity of the arrangement to ensure even the smallest council in the Region has its metal collected and receives an income stream from.

Ten percent of the income raised through each contract is directed to the REROC Waste Forum where it is ring-fenced to assist with the delivery of regional waste management projects.

E-Waste



REROC has been providing a free e-waste collection for the Member Councils since 2012. While the National Television and Computer Recycling Scheme (NCRS) is supposed to fund these collections, the reality is services have not effectively extended to rural areas and this has meant Local Government has had to meet the service delivery gap. REROC has an ongoing relationship with Kurrajong Recyclers

who process the e-waste delivered directly from councils to their site in Wagga Wagga. Over the last 3 years REROC has collected 588,000 kilograms of e-waste for processing by Kurrajong Recyclers.

Waste Oil



REROC applied for and received funding from the Federal Government to establish waste oil collection facilities at 29 landfills which were part of the REROC Region at that time. Initially, REROC also contracted regionally for the collection of the waste oil however over time this arrangement has not continued with Member Councils making individual arrangements.



Used Lead Acid Batteries

REROC tenders for collection of used lead acid batteries. As with metal waste there is significant value in applying a regional approach where collectively the number of batteries offered is of interest to recycling businesses ensuring smaller councils can participate and offer this service to residents and businesses. Without this collaboration, it is unlikely recyclers would be interested in travelling to some of the councils therefore leaving used lead acid batteries as a hazardous waste problem.



Community Recycling Centres

Our residents have access to 23 community recycling centres located in the REROC region, including 15 small drop off stations. In 2021-2022 REROC secured an additional 6 small drop off community recycling centres for placement around the REROC area. The REROC Waste Forum has been very proactive with education across the Member Councils resulting in a decrease in the level of by-catch (toxic waste normally not captured by CRCs such as arsenic, pesticides) collected at Community Recycling Centres which is very encouraging. Ongoing education regarding what can and cannot be left at Community Recycling Centres has been committed to by the Waste Forum. An education plan for 2022-23 has been developed and approved by the NSW EPA.

Vision, Mission, Guiding Principles and Strategic Themes

The REROC Regional Waste and Management Resource Recovery Strategy 2022-2027 was developed in consultation with the Waste Forum's Member Councils. The Strategy revisits and builds on the Waste Forum's 2017-2021 Strategic Plan and aligns with the NSW Waste and Sustainable Materials Strategy 2041 Stage 1 2021-2027 focus areas: 1. to meet future infrastructure and service needs; 2. reduce carbon emissions through better waste and materials management; and 3. protect the environment and human health from waste pollution. The Plan reflects the EPA's seven Guiding Principles.

Guiding Principles

The REROC Regional Waste and Management Resource Recovery Strategy 2022-2027 has been developed with reference to the seven guiding principles established and communicated by the EPA.

These guiding principles, which have been used as the foundation for the Strategy, are summarised as:

1. Creation of a relatable strategic plan to be used across councils, communities and stakeholders;
2. Provision of evidence-base data;
3. A strategic plan which is responsive to council and community requirements;
4. Alignment of strategic objectives with the WASM priority areas;
5. Ability for the strategic plan to be adapted to policy and external changes as well as consideration of strategies to strengthen resilience in the face of natural disasters;
6. Identification of efficiencies such as procurement, training and marketing to optimise opportunities, resources and funding; and
7. Consideration of developing and improving opportunities for circular economies across the region.

The REROC Waste Forum meets on a regular basis and works together to identify opportunities for sharing human resources, infrastructure, training, procurement and the implementation of solutions that address common problems across the Member LGAs.



Vision

Building a resilient and sustainable region through developing and encouraging initiatives in waste management, resource recovery and the circular economy.



Mission

Achieve efficiencies in waste management, resource recovery and the circular economy by working collaboratively with all levels of government, our communities and business for sustainable outcomes.



Strategic Themes

We have developed Strategic Objectives for each theme:



1. Avoid and Reduce Waste Generation

- 1.1 Contribute to the reduction of total waste generated by 10% per person by 2030.
- 1.2 Continue to reduce organic waste sent to landfill by 50%.
- 1.3 Investigate and support innovative circular solutions to regional waste management.
- 1.4 Encourage sustainable procurement practices.



2. Recover Resources

- 2.1 Contribute to the reduction of total waste generated by 10% per person by 2030.
- 2.2 Contribute to the average recovery rate of 80% for all by 2030.
- 2.3 Continue to reduce organic waste sent to landfill by 50%.
- 2.4 Investigate and support innovative circular solutions to regional waste management.
- 2.5 Support the implementation of the NSW Plastics Plan.
- 2.6 Encourage sustainable procurement outcomes.
- 2.7 Support future waste and resource recovery and circular economy infrastructure needs.



3. Protect the Environment

- 3.1 Support the NSW Government to meet their target of Net Zero Emissions by 2050 through better waste and materials management.
- 3.2 Encourage the community to correctly dispose of problem and hazardous waste wastes.
- 3.3 Support the implementation of the NSW Plastics Plan.
- 3.4 Reduce the impact of litter and/or illegal dumping on the environment.
- 3.5 Facilitate regional collaboration to improve disaster resilience and waste management planning.



4. Strategic Collaboration

- 4.1 Actively encourage equity in waste and resource recovery programs within Member Council communities
- 4.2 Support future waste, resource recovery and circular economy infrastructure needs.
- 4.3 Facilitate regional collaboration to improve disaster resilience and waste management planning.
- 3.4 Continue to foster effective communication and collaboration with all stakeholders.
- 3.5 Continue to advocate and contribute to policy decisions on behalf of Member Councils.





Theme 1: Avoid and Reduce Waste Generation

- 1.1 Contribute to the reduction of total waste generated by 10% per person by 2030
- 1.2 Continue to reduce organic waste sent to landfill by 50%
- 1.3 Investigate and support innovative circular solutions to regional waste management
- 1.4 Encourage sustainable procurement practices

REROC Waste Forum wants to build on our success in reducing waste to landfill. The Talis Study (Appendix 3) identified that “when examining the change of the material streams during the four year period. Over two thirds of the materials are disposed of in 2017/18 while just over half of the materials are disposed in 2020/21. This shows a significant improvement in landfill diversion” which unfortunately is partly nullified by increased waste generation. We recognise the importance of constantly educating the community about waste avoidance and minimisation, constant reinforcement of the message creates behavioural change.

We will continue to identify ways to conduct localised education campaigns building on the State initiatives of promoting waste avoidance and minimisation. In addition, we will identify specific behaviours that can be effectively addressed on a regional level. We will also be looking for opportunities to partner with other organisations to get the “reduce waste” message out.

The NSW Plastics Plan should assist with reducing waste and we will support this using State/EPA advertising and education collateral to ensure consistent messaging. To educate our community about organic waste we have previously engaged with schools, primarily using the King and Queen of Green shows. In addition, we will increase the promotion of our Food and Green Keep it Clean messaging by updating the dedicated website and introducing media advertising. The campaign aims to reduce contamination in the FOGO kerbside collections. Changes in the items that can be placed in organic waste has created some confusion and this will require, website updates and additional targeted education across the communities where FOGO kerbside collections are occurring.

Three of the Waste Forum councils do not offer a kerbside FOGO collection. Over the period of the Strategy we will work with those councils to implement organic waste options to reduce landfill. We will also work with those councils where separate organic waste collection is already in place, to both improve the volume and the quality of the waste collected.

To encourage circular economy solutions in our Region we will ask our Member Councils to provide information regarding business and council activities being undertaken to develop circular economies. The *No Time To Waste* which is delivered annually by REROC will include opportunities to showcase circular economy solutions. In 2023 this will include visits to business in the Region that have embraced the circular approach and are producing products from waste materials.

The continuing growth and acceptance of industrial ecology provides opportunities for businesses to become more waste aware and in doing so improve their bottom line. Online tools such as the CSIRO’s ASPIRE provide opportunities for businesses to explore ways in which their waste could be re-used by other businesses as well as access other business’ waste products for reuse. The Forum will explore ways in which these types of initiative can be implemented in the Region.

The Forum has previously implemented Bin Trim in the region, and we will continue to consider ways we can build on the gains already made and seek opportunities to implement further initiatives in this area.



Theme 1: Avoid and Reduce Waste Generation

It is important to have quality resource materials available for businesses both in hard copy and online to assist them to make informed choices about how they manage waste. The Regional Waste Management and Resource Recovery Strategy includes provision for the development of these resources which will be made available to businesses through our Member Councils and downloadable from the REROC Waste Forum website: www.reroc.waste.com.au.

We will continue to work on the implementation of best practices in the operation of the Region's waste facilities. Members have committed to improving the operation of their

landfills, particularly their small rural landfills. The Members have developed a strategy for that purpose with the goal of reaching best practice outcomes for their operation. The implementation of the strategy will be a priority for this Planning period.

Critical to the delivery of projects in this area is improved data collection and we will explore ways REROC can work with its Member Councils and the EPA to improve data collection.

The strategies and actions to be implemented for Theme One are as follows:

Strategic Objective 1.1	Contribute to the reduction of total waste generated by 10% per person by 2030
Action 1.1.1	Implement community education campaigns that promote waste minimisation and avoidance.
Action 1.1.2	Form alliances and partnerships that assist in the promotion of best practice waste management, resource recovery and circular economy.
Action 1.1.3	Encourage the commercial and industrial sector to more effectively manage waste and resource recovery.
Action 1.1.3	Investigate and implement regional solutions for problem wastes including solar farm waste.

Strategic Objective 1.2	Continue to reduce organic waste sent to landfill by 50%
Action 1.2.1:	Work with and support the Member Councils to introduce or enhance financial and environmentally sustainable organics collections.
Action 1.2.2:	Raise the awareness of the benefits of organics recycling and home composting.
Action 1.2.3:	Reduce the levels of contamination in organics collections.

Strategic Objective 1.3	Investigate and support innovative circular solutions to regional waste management
Action 1.3.1:	Identify businesses in the Region that are engaged in the delivery of circular solutions.
Action 1.3.2:	Investigate opportunities to partner with providers of circular solutions to identify and implement regional solutions.

Strategic Objective 1.4	Encourage sustainable procurement practices
Action 1.4.1:	Work with Member Councils to embed sustainable procurement practices in policy documents.



I Theme 2: Resource Recovery

- 2.1 Contribute to the reduction of total waste generated by 10% per person by 2030
- 2.2 Contribute to the average recovery rate of 80% for all streams by 2030
- 2.3 Continue to reduce organic waste sent to landfill by 50%
- 2.4 Investigate and support innovative circular solutions to regional waste management
- 2.5 Support the implementation of the NSW Plastics Plan
- 2.6 Encourage sustainable procurement outcomes
- 2.7 Support future waste, resource recovery and circular economy infrastructure needs



Waste Forum Member Councils are committed to reducing the amount of waste both generated and recovered in our Region. To do this we aim to develop methods to reduce waste going to landfill, increase recovery rates for certain waste types (such as solar farm waste) and increase the level of organic waste being processed and as a consequence decrease the amount of waste going to landfill.

As a result of the Region's proximity to the Transgrid lines, the development of solar farms is significant. The construction of the farms generates significant waste, including pallets, cardboard and plastics. We will work with Member Councils, solar farm developers and recyclers to develop strategies to reduce and reuse waste. We will advocate for State planning consents to include stringent waste management requirements.

We will continue to run the Recycle Night? Recycle Right campaign which is aimed at reducing contamination entering the recycling stream. The campaign reminds residents that in our Region their recyclables are sorted by hand. The campaign, which runs on radio, television, print and cinemas, has been very successful with both material recovery facilities advising that when the ads run, they witness a downturn in the levels of contamination. We will continue to update the website that supports the promotion to ensure that the latest information is readily available for residents.

Most of our Member Councils have significant businesses situated within their LGAs, include mining, farming, manufacturing, retail, education, health and defence.

It is imperative we engage with these businesses and organisations to enable discussion and develop viable and sustainable approaches to recover resources and meet the targets set by the NSW Government.

The Waste Forum Members recognise the importance of sound and viable Food Organics and Garden Organics (FOGO) waste collections and processing to achieving significant reductions in waste to landfill. The Waste Forum has a high level of commitment to FOGO and this is demonstrated in the statistics that show a quadrupling of collections between 2017/18 and 2022/21 (see Appendix 3). We will be seeking to build on this success by finding ways that we can partner with agencies like Murrumbidgee Local Health District, clubs and aged care to collect food waste from their operations for processing at council composting facilities.

The NSW Plastics Plan aims to reduce the total amount of non-recyclable waste generated. The NSW Government ban on single use plastics was introduced on 1st November 2022 and REROC will work with the NSW EPA to continue to educate our communities and support businesses.

Regional collection and processing facilities are important to reducing the cost of transporting waste for recycling and increasing opportunities to recycle. The Region currently has several recycling and reprocessing facilities in operation including Renewed Metal Technologies, Southern Oil, Australian Native Landscapes and Kurrajong Recyclers.

Theme 2: Resource Recovery

The strategies and actions to be implemented for Theme Two are as follows:

Strategic Objective 2.1	Contribute to the reduction of total waste generated by 10% per person by 2030
Action 2.1.1:	Implement community education campaigns that promote waste minimisation and avoidance.
Action 2.1.2:	Form alliances and partnerships that assist in the promotion of best practice waste management, resource recovery and circular economy.
Action 2.1.3:	Encourage the commercial and industrial sector to more effectively manage waste and resource recovery.
Action 2.1.4:	Investigate and implement regional solutions for problem wastes including solar farm waste.

Strategic Objective 2.2	Contribute to the average recovery rate of 80% for all streams by 2030
Action 2.2.1:	Raise the awareness of households about the importance of separating, recovering and reusing waste.
Action 2.2.2:	Promote the use of Return and Earn and ensure every Member Council local government area has an operating Return and Earn collection point.
Action 2.2.3:	Investigate the viability of extending organics collections of food waste to large commercial and non-commercial entities in the region (with a focus on hospitals and aged care facilities should these entities be responsive to approaches).
Action 2.2.4:	Encourage and support councils and community organisations to run EnviroSmart Events.
Action 2.2.5:	Investigate the viability of introducing public place collections for items including recyclables and organics.
Action 2.2.6:	Ensure every Member Council has access to an e-waste collection to accept materials delivered to Member Council waste facilities.

Strategic Objective 2.3	Contribute to reduce organic waste sent to landfill by 50%
Action 2.3.1:	Work with and support the Member Councils to introduce or enhance financial and environmentally sustainable organics collections.
Action 2.3.2:	Raise the awareness of the benefits of organics recycling and home composting.
Action 2.3.3:	Reduce the levels of contamination in organics' collections.
Action 2.3.4:	Investigate the viability of introducing public place collections for items including recyclables and organics.

Strategic Objective 2.4	Investigate and support innovative circular solutions to regional waste management
Action 2.4.1:	Identify businesses in the Region that are engaged in the delivery of circular solutions.
Action 2.4.2:	Investigate opportunities to partner with providers of circular solutions to identify and implement regional solutions.
Action 2.4.3:	Facilitate and assist with implementation of joint procurement for regional collections for waste recovery and to support circular economy.

Strategic Objective 2.5	Support the implementation of the NSW Plastics Plan
Action 2.5.1:	Support the implementation of the NSW Plastics Plan.

Strategic Objective 2.6	Encourage sustainable procurement outcomes
Action 2.6.1:	Work with Member Councils to embed sustainable procurement practices in policy documents.
Action 2.6.2:	Advocate and promote waste as resource outcomes.

Strategic Objective 2.7	Support future waste and resource recovery and circular economy infrastructure needs
Action 2.7.1:	Investigate the viability of establishing micro-factories and micro-processing opportunities.



| Theme 3: Protect the Environment

- 3.1 Support the NSW Government to meet their target of Net Zero Emissions by 2050 through better waste and materials management
- 3.2 Encourage the community to correctly dispose of problem and hazardous waste
- 3.3 Support the implementation of the NSW Plastics Plan
- 3.4 Reduce the impact of litter and/or illegal dumping on the environment
- 3.5 Facilitate regional collaboration to improve disaster resilience and waste management planning

Our Member Councils are committed to improving waste and materials management to provide a better, healthier environment for the residents of our communities, visitors and our flora and fauna. The Members support the NSW Government's target of Net Zero Emissions by 2050 and will support initiatives that REROC develops through its Energy Management Technical Group to reduce emissions.

The remoteness of many of the landfills in the REROC region make them prime targets for the illegal dumping of problem wastes like asbestos. Consequently our Members believe it is important we are pro-active in identifying solutions for these wastes to ensure they are disposed of properly.

REROC facilitates regional collections of problem wastes including used lead acid batteries, ewaste and metals. It is anticipated these collections will continue with television and cinema advertising to support the activity and work towards increasing the collection levels and maintaining the low levels of overall contamination.

Over the last few years REROC has championed the construction of Community Recycling Centres. There are Community Recycling Centres (CRCs) operating in every Member Councils LGA that are well utilised, however this can always be improved and we will continue to support and promote the operation of the CRCs and seek ways to increase their patronage.

The CRCs are limited to collecting low toxic waste, making it important to continue to offer a disposal solution to residents for highly toxic wastes. We will work with the EPA on solutions to capture this waste safely.

Since 2012 REROC has operated a regional collection service for e-waste for the Member Councils. E-waste is collected from landfills and then transported to Kurrajong Recyclers in Wagga Wagga for processing. The cost of the service is met by the REROC Waste Forum. REROC receives no support for the service from the NTCRS however will continue to investigate support during this funding period.

REROC will also continue to lobby for e-waste collection targets for rural and regional communities. We remain concerned that without targets there is no requirement for liable parties to actually collect waste from regional areas, instead for small communities the legislation requires that a collection point be provided within 150kms of their community.

The Forum members have specifically identified sharps and asbestos as problem wastes. We will be working on approaches to address these and other problem wastes. These methods will include monitoring statewide/EPA developments, advertising and education, working with others to determine whether there are opportunities to develop regional contracts, regional storage solutions or regional processing solutions for these types of waste.



Theme 3: Protect the Environment

Sharps are a waste item which falls through a gap between State government agencies. Launched in July 2011, Safe Sharps, which provided details of disposal locations via a website and app, was a great success. It was actively promoted by the NSW Ministry of Health, the NSW Diabetes Council, local government, diabetes health educators and community health organisations. The website is no longer available so we will work to have this re-established. Ideally, Safe Sharps should be a national resource and to that end we will continue to seek opportunities to partner with State-based organisations and businesses to find viable and sustainable solutions to fund its on-going operation.

We will work to support the implementation of the *NSW Plastics Plan* and will work to support the implementation of the plan and promote the initiative to our community. We intend to work with the NSW EPA and other agencies to ensure the plastic ban message is consistent.

The Forum recognises it has a role in reducing illegal dumping in the region. Identifying hotspots for illegal dumping is an important way of assisting councils to address the problem in their own LGAs. We will also continue to promote the RID site and encourage Member Councils and the community to report illegal dumping.

The REROC Litter Prevention Strategy, developed in 2019 will be reviewed during 2023 with a new strategy to be developed that aims to reduce the impact of litter on our environment. The successful implementation of the Return and Earn Scheme in the Region is important in addressing litter issues. There is concern that a reliance on small businesses in rural communities to provide Container Deposit refunds is not sustainable in the long-term as the costs of providing the service outweigh the financial returns.

Our Members recognise the importance of forming partnerships to deal with illegal dumping and we will be looking to collaborate with other owners of public lands such as Local Land Services and Crown Lands along with community groups such as Landcare to implement regional initiatives to address illegal dumping. The Waste Forum will also be seeking opportunities through Stage 1 of the WaSM funding to implement those initiatives.

After the natural disasters of fires and floods across NSW, improving disaster resilience and waste management planning is a priority. We will work with Recovery NSW and the REROC Disaster Risk Recovery Project to develop appropriate and workable plans to improve the management of waste when future natural disaster occurs.



Theme 3: Protect the Environment

The strategies and actions to be implemented for Theme Three are as follows:

Strategic Objective 3.1	Support the NSW Government to meet their target of Net Zero Emissions by 2050 through better waste and materials management
Action 3.1.1	Identify initiatives that could be implemented regionally to assist in meeting the target.
Strategic Objective 3.2	Encourage the community to correctly dispose of problem and hazardous waste
Action 3.2.1	Investigate the viability of re-launching and promoting the Safe Sharps website and app.
Action 3.2.2	Implement community education campaigns for Community Recycling Centres.
Action 3.2.3	Raise awareness with households on the importance of disposing of asbestos waste safely.
Action 3.2.4	Raise the awareness with households on the importance of disposing of problem and hazardous waste correctly.
Strategic Objective 3.3	Support the implementation of the NSW Plastics Plan
Action 3.3.1	Support the implementation of the NSW Plastics Plan.

Strategic Objective 3.4	Reduce the impact of litter and/or illegal dumping on the environment
Action 3.4.1	Implement education campaigns to address the problems of rural dumping and on-farm tips.
Action 3.4.2	Collaborate with other owners of public lands to implement illegal dumping initiatives.
Action 3.4.3	Promote the Container Deposit Scheme (Return and Earn).
Action 3.4.4	Education campaign on litter and facilitate the expansion of infrastructure to support litter collection.
Strategic Objective 3.5	Facilitate regional collaboration to improve disaster resilience and waste management planning
Action 3.5.1:	Develop local and regional waste management plans that can be implemented in the event of a natural disaster.



| Theme 4: Strategic Collaboration

- 4.1 Actively encourage equity in waste and resource recovery programs within Member Council communities
- 4.2 Support future waste, resource recovery and circular economy infrastructure needs
- 4.3 Facilitate regional collaboration to improve disaster resilience and waste management planning
- 4.4 Continue to foster effective communication and collaboration with all stakeholders
- 4.5 Continue to advocate and contribute to policy decisions on behalf of Member Councils

Strategic collaboration is the key to achieving the aims of the Waste Strategy. REROC is a small enterprise, therefore finding ways to work co-operatively with our Member Councils and collaboratively with others who share the same aims is vitally important to our success.

We are acutely aware of the need to ensure that our local communities no matter how small, have equitable access to waste and resource recovery initiatives. REROC's commitment to this goal is clearly demonstrated through the operation of our regional e-waste collection and our determination to provide every LGA in the Region with a local CRC service.

Viable and sustainable service delivery is likely to rely on the Waste Forum and its Member Councils collaborating with local organisations and businesses to provide resource recovery and circular economy solutions. Where these solutions require infrastructure to succeed we will look to provide support for those needs. The Waste Forum previously provided strong support for the glass crushing infrastructure that was constructed at Kurrajong Recycling.

We will continue to identify ways to conduct localised education campaigns building on the State initiatives of promoting waste avoidance and minimisation. In addition, we will identify specific behaviours that can be effectively addressed on a regional level. We will also be looking for opportunities to partner with other organisations to provide regional solutions for local problems.

An important role for the Waste Forum is to encourage the professional development of council staff and councillors to ensure they improve and build on their waste management, resource recovery and circular economy knowledge.

Opportunities for professional development can be provided through field days, visits to waste and resource recovery facilities, workshops and Conferences. REROC's No Time To Waste Conference, held annually, is an important vehicle in delivering professional development opportunities for councillors and council staff. The combination of speakers and trade stands plus the networking the event provides allows people from across regional NSW to advance their knowledge and understanding in all areas of waste management.

A key activity for REROC is advocacy and lobbying to ensure that the needs and wants of our Member Councils and the communities they represent are voiced. We are committed to providing responses to legislative and policy changes at both State and Federal levels ensuring that our responses are robust and representative.

The Waste Forum will participate in regional platforms where information is shared and opportunities for collaboration are found. We will continue to support the RENEW NSW group and promote the work of other Voluntary Regional Waste Groups.



Theme 4: Strategic Collaboration

The strategies and actions to be implemented for Theme Four are as follows:

Strategic Objective 4.1	Actively encourage equity in waste and resource recovery programs within Member Councils communities
Action 4.1.1:	Monitor service provision across the Region to ensure all residents have reasonable access to waste and resource recovery programs.
Action 4.1.2:	Monitor and respond to policy decisions made at State and Federal level that are likely to result in inequitable results for communities within the REROC region.

Strategic Objective 4.2	Support future waste, resource recovery and circular economy infrastructure needs
Action 4.2.1:	Investigate the viability of establishing micro-factories and micro-processing opportunities.
Action 4.2.2:	Work with council staff, and other key stakeholders, in planning and economic development to further developments in circular economy infrastructure.
Action 4.2.3:	Increase trials with private enterprise to explore innovative ways to deal with waste.

Strategic Objective 4.3	Facilitate regional collaboration to improve disaster resilience and waste management planning
Action 4.3.1:	Develop a waste management plan that can be implemented in the event of a natural disaster.

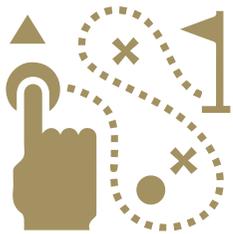
Strategic Objective 4.4	Support future waste, resource recovery and circular economy infrastructure needs
Action 4.4.1:	Increase councillor and council staff awareness and participation in sustainability initiatives.
Action 4.4.2:	Disseminate information about Waste Forum activities, initiatives and outcomes to the REROC Board, Member Councils, councillors and staff.
Action 4.4.3:	Facilitate and encourage participation in professional development on waste management, resource recovery and circular economy.

Strategic Objective 4.5	Continue to advocate and contribute to policy decisions on behalf of Member Councils
Action 4.5.1:	Monitor policy initiatives, changes and decisions at State and Federal level and provide robust responses and comment.

| How are we going to get there?



We will deliver this strategy by working co-operatively with our Member Councils and collaboratively with RENEW NSW and our other stakeholders to develop an action plan.



We have identified the overarching actions that will be targeted to deliver our strategies. The identification of the overarching actions will inform the Waste Forum's investment decisions until such time as a detailed action plan is created.





no time to waste
Rural & Regional
Waste Management Conference

Showcasing innovative responses
to the challenges of rural and
regional waste management
and resource recovery



REROC
REGIONAL
COUNCILS

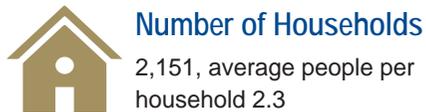


APPENDIX 1: REROC Waste Forum Member LGA Profiles (Source: ABS 2021 Quick Stats)

Bland Shire Council

Major Town: West Wyalong

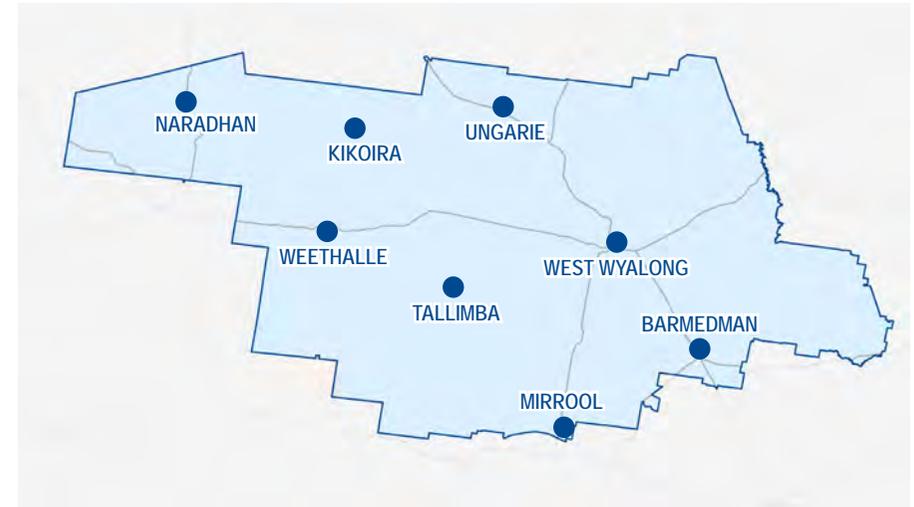
Other Towns and Villages: Barmedman, Tallimba, Weethalle, Kikoria, Ungarie, Naradhan



Employment



● LANDFILL SITE ● TRANSFER SITE ● LANDFILL & TRANSFER SITE



Waste and Resource Recovery

Kerbside Collections

Residual
West Wyalong Landfill

Green and Food Waste
No Collection

Residual
No kerbside collection. Source separated drop-off at the landfill. Recyclables are processed at the MRF in Orange

Waste Processors and Services

None Operating

Landfills and Transfer Stations

See map opposite

Total Waste to Landfill p.a: 5,302 tonnes (as at 30 June 2021)

E-waste – free drop off at CRC at Bland Landfill

Waste oil – waste oil collection facility at Bland Landfill CRC at Bland Landfill

Coolamon Shire Council

Major Town: Coolamon

Other Towns and Villages: Ardlethan, Beckom, Ganmain, Marrar, Matong



Area
2,494 sq kms



Median Age
45.2 years



Population
4,385 people



Number of Households
1,649 average people per household 2.5



Median Household Income
\$1,310 per week



Major Industries
Agriculture and farming

Employment



6.5% Other Grain Growing



5.7% Cattle Farming



3.6% Local Government Admin

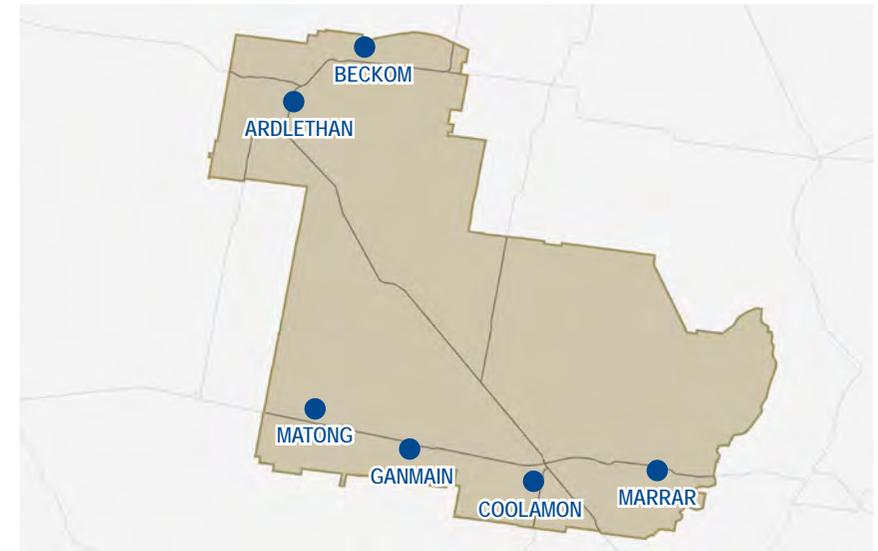


3.5% Hospitals



2.5% Primary Education

● LANDFILL SITE ● TRANSFER SITE ● LANDFILL & TRANSFER SITE



Waste and Resource Recovery

Kerbside Collections

Residual

Murrar Landfill, Ardlethan Landfill, Ganmain Landfill

Green and Food Waste

Coolamon Landfill

Recyclables

Processed at Elouera MRF in Cootamundra

Waste Processors and Services

Composting Facility – operated by Coolamon Shire Council at the Coolamon Landfill
Coolamon Lions Club – cardboard, paper recycling and CDS

Landfills and Transfer Stations

See Map above

Total Waste to Landfill p.a: 700 tonnes

E-waste – free drop off at Coolamon Landfill

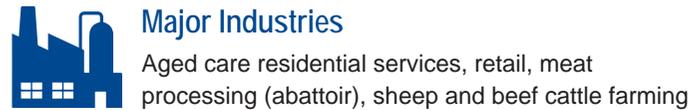
Waste oil – waste oil collection facility at Coolamon landfill

CRC at Coolamon landfill

Cootamundra-Gundagai Regional Council

Major Towns: Cootamundra and Gundagai

Other Towns and Villages: Stockinbingal, Wallendbeen, Coolac, Muttama, Nangus, Tumblong



● LANDFILL SITE ● TRANSFER SITE ● LANDFILL & TRANSFER SITE



Employment



Waste and Resource Recovery

Kerbside Collections

Residual
(Cootamundra & Gundagai)
Bald Hill Landfill

Green and Food Waste
Cootamundra: No Collection
Gundagai: processed at Gundagai Waste Facility

Recyclables
(Cootamundra & Gundagai)
Processed at the Elouera MRF at Cootamundra

Landfills and Transfer Stations

See map above
Total Waste to Landfill p.a: 5,302 tonnes (as at 30 June 2021)
E-waste – free drop off at CRC at Bland Landfill
Waste oil – waste oil collection facility at Bland Landfill CRC at Bland Landfill

Waste Processors and Services

None Operating

Greater Hume Shire Council

Major Towns: Culcairn, Holbrook, Henty, Jindera

Other Towns and Villages: Morven, Gerogery, Walla Walla, Brocklesby, Walbundrie



Area
5,939 sq kms



Median Age
43.9 years



Population
11,157 people



Number of Households
3,936 average people per household 2.5

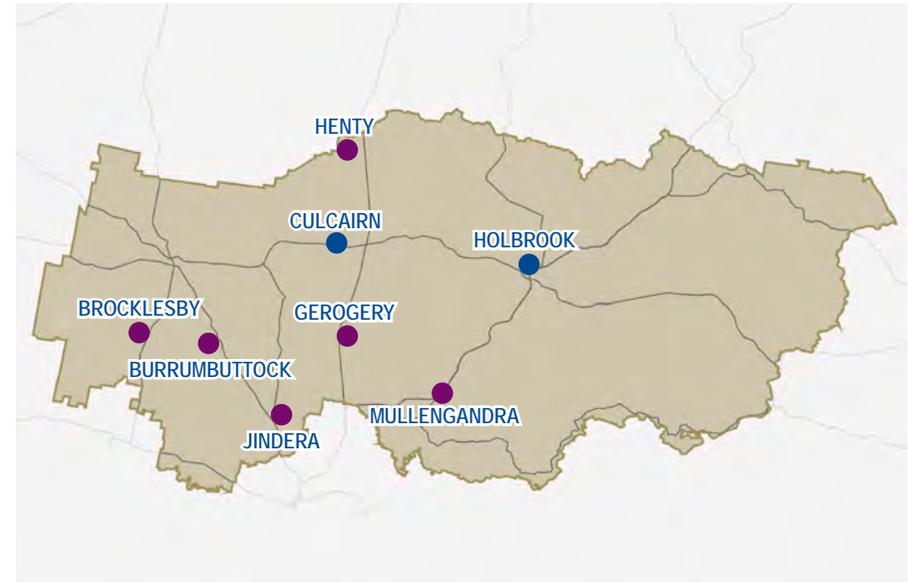


Median Household Income
\$1,420 per week



Major Industries
Agriculture and farming, health care and transport

● LANDFILL SITE ● TRANSFER SITE ● LANDFILL & TRANSFER SITE



Employment



4.8% Beef Cattle Farming



3.7% Grain-Sheep or Grain-Beef Cattle



3.6% Hospitals (Excluding Psychiatric)



2.9% Sheep Farming



2.8% Transport

Waste and Resource Recovery

Kerbside Collections

Residual

Culcairn Landfill and Holbrook Landfill

Green and Food Waste

No Collection

Recyclables

Cleanaway MRF in Albury

Waste Processors and Services

None operating

Landfills and Transfer Stations

See Map above

Total Waste to Landfill p.a: <5,000 tonnes

E-waste – free drop off at all waste facilities

Waste oil – waste oil collection facility at Culcairn Landfill, Holbrook Landfill, Burrumbuttock Transfer Station, Gerogery Transfer Station, Jindera Transfer Station,

CRC at Culcairn Landfill

Junee Shire Council

Major Town: Junee

Other Towns and Villages: Old Junee, Illabo, Bethungra, Wantabadgery



Area
2,030 sq kms



Median Age
40.8 years



Population
6,754 people



Number of Households
2,103 average people per household 2.4

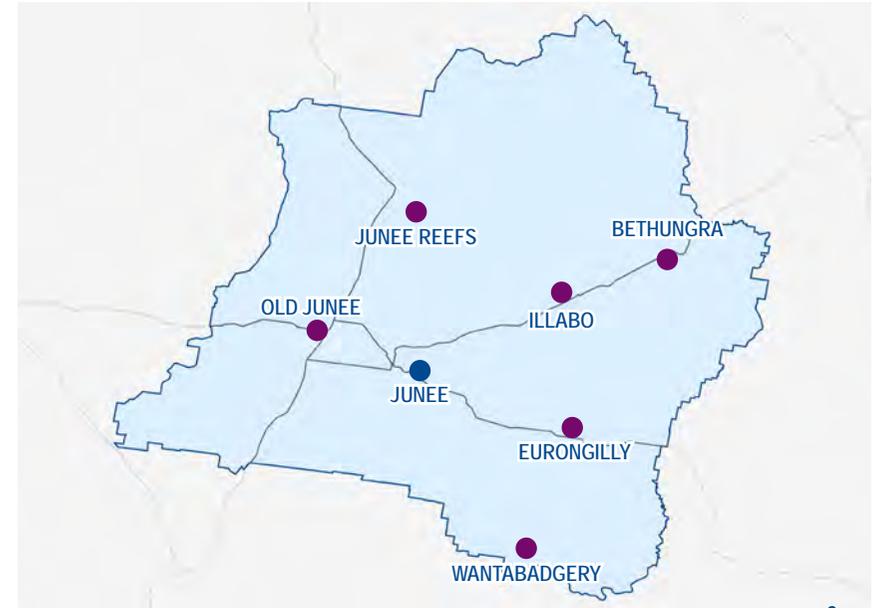


Median Household Income
\$1,398 per week



Major Industries
Agriculture and farming, correctional and detention services, meat processing and health care

● LANDFILL SITE ● TRANSFER SITE ● LANDFILL & TRANSFER SITE



Employment

 **7.0%** Meat Processing

 **5.6%** Correctional and Detention Services

 **4.1%** Grain-Sheep or Grain-Beef Cattle Farming

 **4.1%** Sheep Farming

 **3.6%** Hospitals (Excluding Psychiatric)

Waste and Resource Recovery

Kerbside Collections

Residual

Gregadoo Landfill, Wagga Wagga

Green and Food Waste

collected from Junee and processed at the Junee Landfill (to be in place by end of 2023)

Recyclables

processed at the Elouera MRF at Cootamundra

Waste Processors and Services

Composting Facility – composting of kerbside collected FOGO only

Landfills and Transfer Stations

See Map above

E-waste – free drop off at Junee Landfill

Waste oil – waste oil collection facility at Junee Landfill

CRC at Junee Landfill

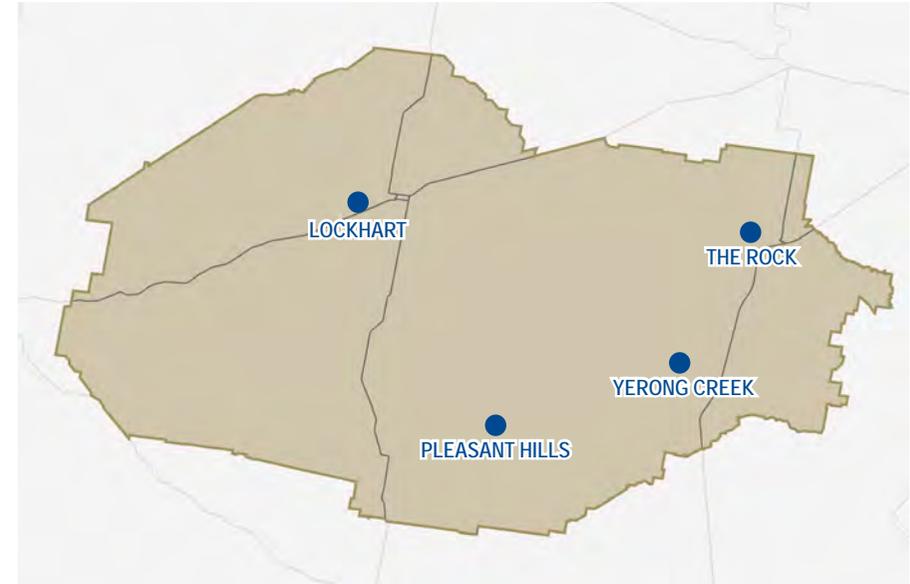
Lockhart Shire Council

Major Town: Lockhart

Other Towns and Villages: The Rock, Yerong Creek



● LANDFILL SITE ● TRANSFER SITE ● LANDFILL & TRANSFER SITE



Employment



Waste and Resource Recovery

Kerbside Collections

Residual
Lockhart Landfill and The Rock Landfill

Green and Food Waste
Processed at Lockhart Landfill and The Rock Landfill

Recyclables
Processed at Kurrajong Recyclers' MRF at Wagga Wagga

Waste Processors and Services

None operating

Landfills and Transfer Stations

See Map above

Total Waste to Landfill p.a: 600 tonnes

E-waste – free drop off at Lockhart Landfill

Waste oil – waste oil collection facility at Lockhart Landfill

CRC at the Lockhart Landfill

Temora Shire Council

Major Town: Temora

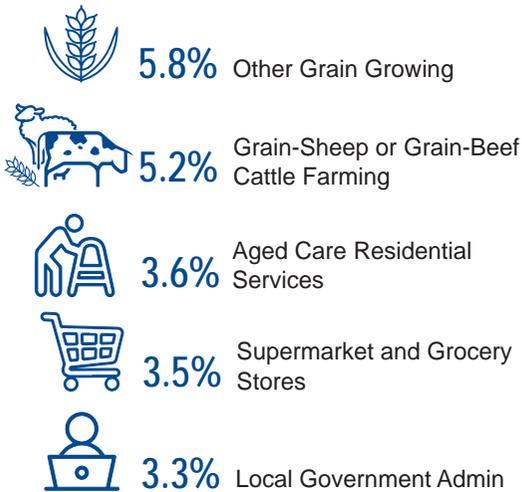
Other Towns and Villages: Aria Park, Springdale



● LANDFILL SITE ● TRANSFER SITE ● LANDFILL & TRANSFER SITE



Employment



Waste and Resource Recovery

Kerbside Collections

Residual

Temora Landfill

Green and Food Waste

No Collection

Residual

No collection, cardboard pick up once per month which goes to Visy at Tumut. 24 hour Drop off service operated by Temora Lions Club (glass, cardboard, paper, plastics, aluminium cans)

Waste Processors and Services

- **W.J. and M.A McShane** - collection and processing of scrap metal

Landfills and Transfer Stations

See Map above

Total Waste to Landfill p.a: 3,600 tonnes

E-waste – free drop off at Temora Landfill

Waste oil – waste oil collection facility at Temora Landfill

CRC at Temora Landfill

Wagga Wagga City Council

Major Town: Wagga Wagga

Other Towns and Villages: Uranquinty, Ladysmith, Collingullie, Tarcutta, Mangoplah, Currawarna, Humula, Galore



Area
4,824 sq kms



Median Age
35.0 years



Number of Households
24,776, Average people per household 2.5



Population
67,609 people



Major Industries
Health services, education, defence, social services, retail, food manufacturing, meat processing



Median Household Income
\$1,638 per week

Employment



5.7% Hospitals



4.3% Defence



3.4% Other Social Assistance Services

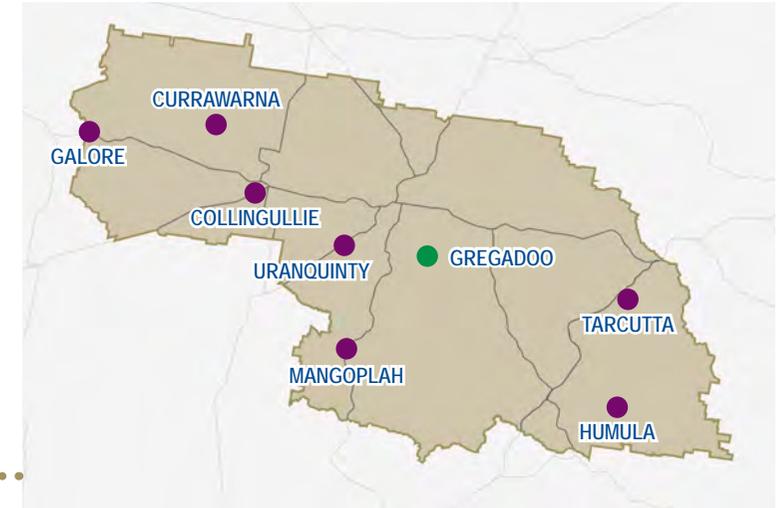


2.5% Primary Education



2.4% Retail (Supermarket and Grocery Stores)

● LANDFILL SITE ● TRANSFER SITE ● LANDFILL & TRANSFER SITE



Waste and Resource Recovery

Kerbside Collections

Residual

Gregadoo Waste Management Centre

Recyclables

Processed at the Kurrajong Recyclers MRF, Wagga

Green and Food Waste

Delivered to Gregadoo Waste Management Centre and then transferred to Wormtech at Carathool for processing

Waste Processors and Services

- **Carbon Mate** – green waste processing, located at Gregadoo Waste Management Centre
- **Immix Integrated Metal Management** – collection and processing of scrap metal
- **Kurrajong Recyclers** – operates an MRF, e-waste recycling and glass crushing in Wagga Wagga.
- **M & S Metals** – collection and processing of scrap metal

Landfills and Transfer Stations

Total Waste to Landfill p.a: 70,000 tonnes

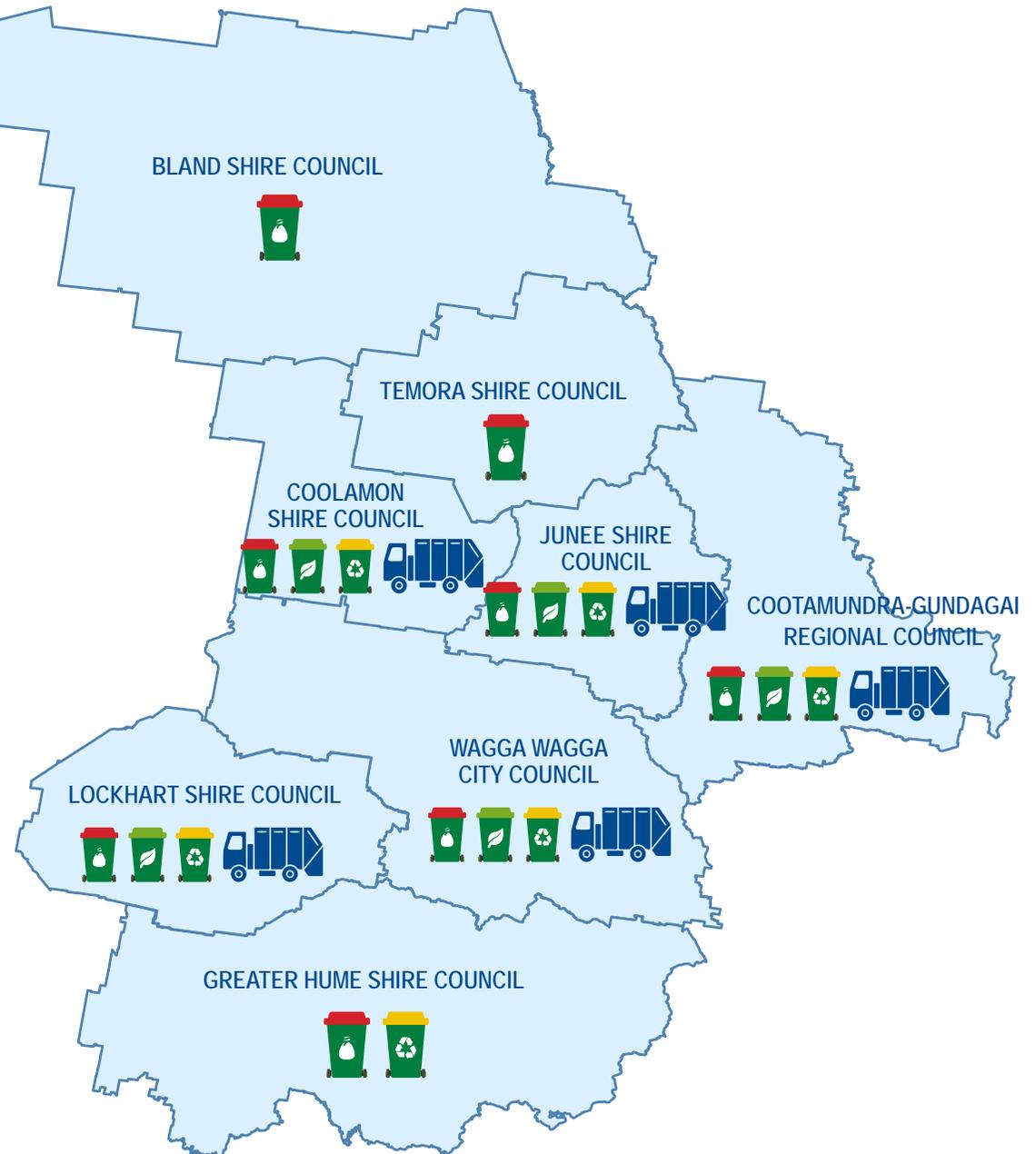
The following occur at Gregadoo Waste Management Centre:

- **Free drop off** - Cardboard and paper, E-waste, Waste Oil, Styrene foam, Automotive battery collection, Paint collection
- **Fee charged** - Refrigerated goods degassing, Mattress drop off, Scrap metal separation

- **Orbitas Resource Recovery** – specialised transport of waste, particularly ULABs based at Bomen
- **RMT** – processes Used Lead Acid Batteries (ULABs) at Bomen
- **Southern Oil Refining** – processes used oil at Bomen
- **Wagga Scrap Metals** – collection and processing of scrap metal

APPENDIX 2: Waste and Resource Recovery: Overview

Kerbside Waste Collection



Waste and Recycling Data

Material generated within the REROC Waste Forum Member Councils has been categorised into three streams: recyclables, organics and residual. The Region has begun to recover nearly as much material as that being landfilled which is evidence of improving practices by all councils within the Region. However, diversion still remains short of the 80% recovery and diversion goal set by the *NSW Waste and Sustainable Materials Strategy Stage 1 2021-2042*, which suggests further room for improvement is possible.

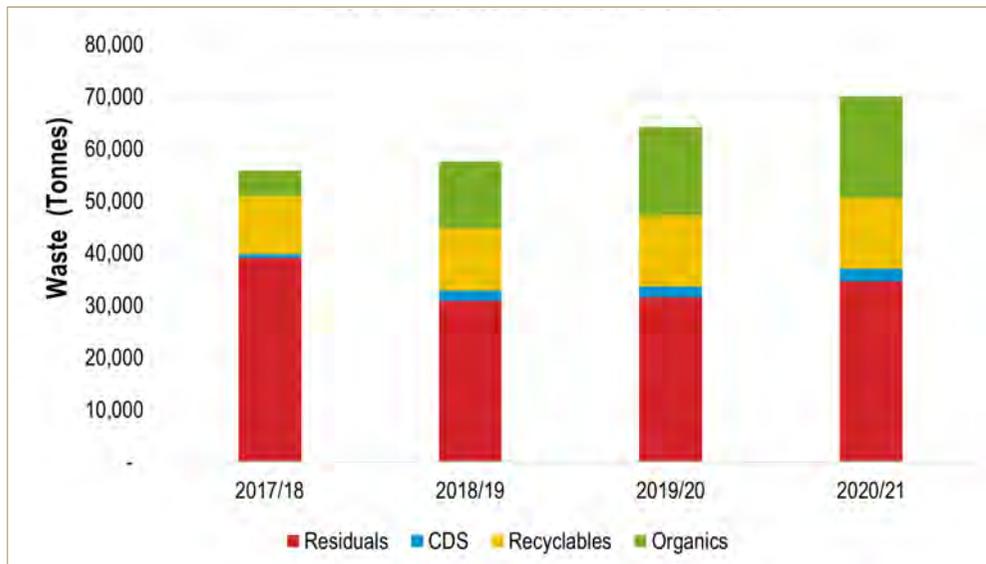
The following section provides an outline of the total waste managed within the Region, a breakdown of the three waste streams including tonnes of Container Deposit Scheme (Return and Earn) recycling, the anticipated growth of material across the next 20 years and a comparison of similarly sized councils from adjacent regional groups.

Material Trends

The graph below displays the combined recyclables organics, Container Deposit Scheme (Return and Earn) and landfill residual managed within the REROC area over the past four years of NSW EPA Waste and Resource Recovery (WARR) data.

In the analysis, all material streams consider kerbside collection, drop off and clean up materials. Kerbside organics is inclusive of both GO and FOGO bins and additionally, disposal is inclusive of contamination from the recyclables and organics streams.

REROC HISTORICAL WASTE TRENDS



Across the period shown in the graph, all material streams have had various degrees of change.



Organics

Organics have had a continued and notable increase across the examined period by more than quadrupling the 2017-2018 values in 2020-2021.



Recycling

Recycling has remained relatively consistent however, there was a notable increase in 2019-2020. The Container Deposit Scheme collection more than doubled in 2018-2019 however, has since remained relatively steady experiencing only a minor increase.



Residual Waste

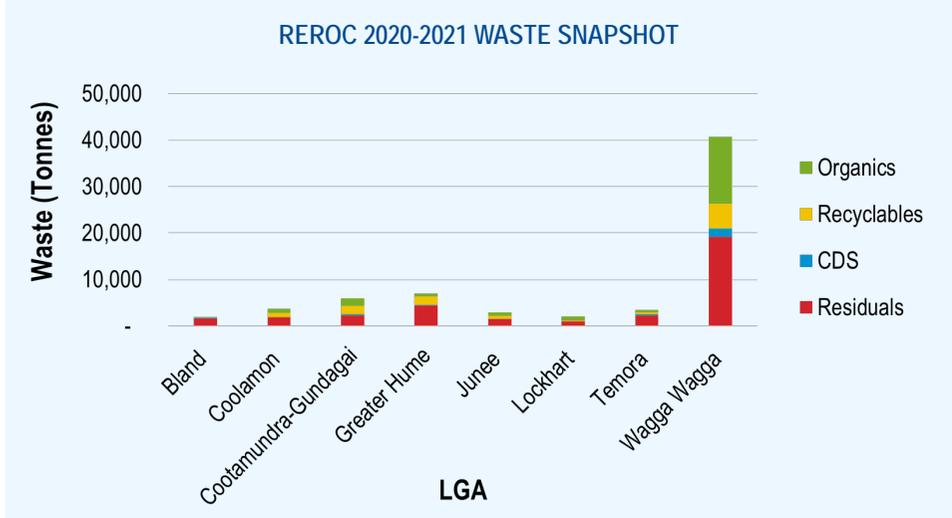
Following a substantial decline in 2018-2019, the residual disposal stream, which comprises approximately 50% of the total material generated, has steadily increased and continues to be landfilled within the Region.

When examining the change of the material streams during the four-year period, over two thirds of materials are disposed of in 2017-2018 while just over half of materials are disposed in 2020-2021. This shows a significant improvement in landfill diversion and/or resource recovery during this time however, these improvements are partly nullified by the overall generation of material continuing to increase.



2020-2021 Waste Snapshot

The graph below displays the combined recyclables organics, Container Deposit Scheme (Return and Earn) and landfill residual managed within the REROC area over the past four years of NSW EPA Waste and Resource Recovery (WARR) data.



Due to the significant influence Wagga Wagga has on waste data in the region, a second graph excluding Wagga Wagga is included.

The breakdown of material streams for each REROC Waste Fourm council in the graphs left are seen to differ considerably. Wagga Wagga manages 40,000 tonnes of waste (more than 5 times the next largest council) and along with Cootamundra-Gundagai, the material managed consists more of recyclables and organics while Bland and Temora have much smaller amounts of recovered materials.



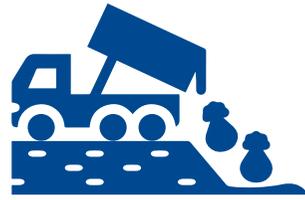
Recovery Rate and Landfilling

Of the waste occurring within the Region during the 2020-2021 period, the split between waste landfilled and diverted was marginal with just under half (49%) being recovered while just over half (51%) is sent to landfill.



49%

of Waste Recovered

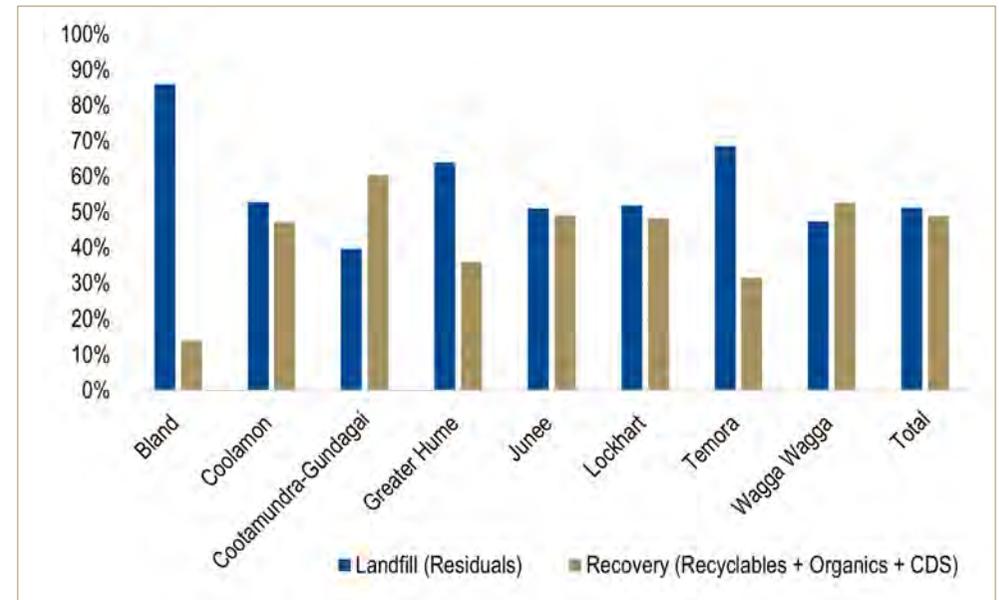


51%

of Waste sent to Landfill

At a more localised level, it can be seen in the table below that while the Region is largely balanced in terms of waste recovered versus disposed, some individual councils differ substantially.

WASTE LANDFILL AND DIVERSION RATE IN REROC

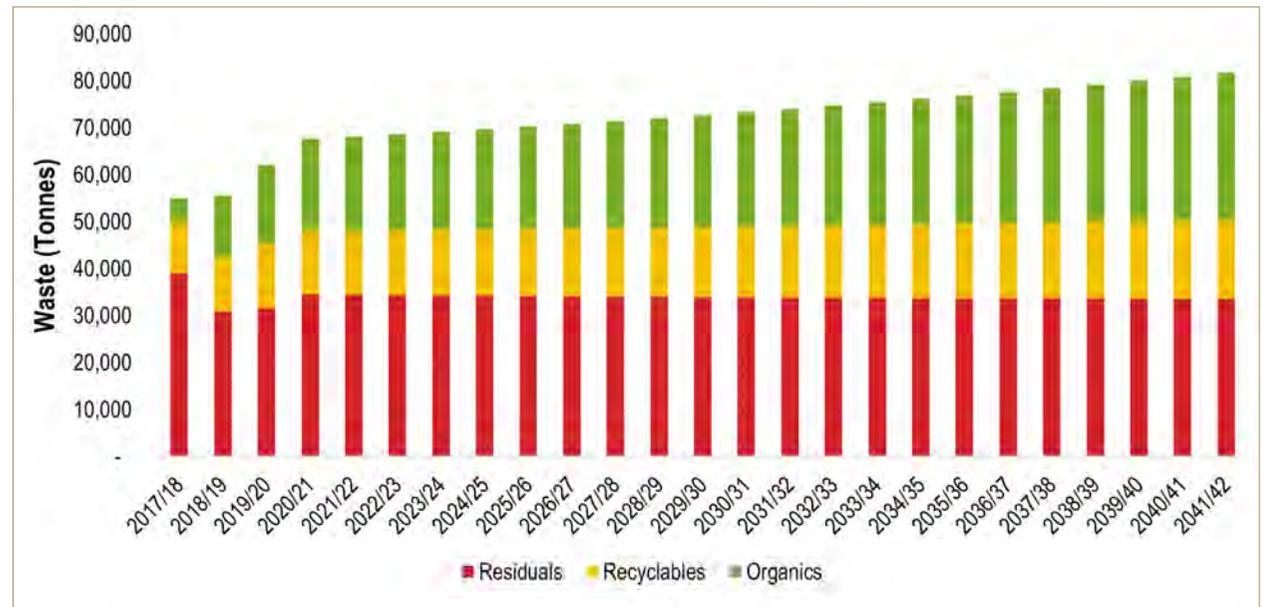


Projections

From the material trends based on the four most recent years of WARR data, material growth and/or declining trends were investigated to understand and forecast material data for the next 20 years. Rates of change between each of the four years of WARR data were averaged and applied to the 2020-2021 data set and projected to 2041-2042 as show in the graph.

The projection demonstrates an increase in total material generation within REROC for the next 20 years. However, it must be noted this appears to be a result of increasing recoverable materials as landfilling appears to decrease over the projected period. This regional decrease in disposal is largely influenced by Wagga Wagga experiencing a decreasing trend. While Temora and Junee also have a projected decrease in landfilling, the decline is likely to be balanced out by the projected increase of the other five councils.

REROC WASTE PROJECTIONS



Benchmarking

In order to compare the generation per household within the Region for recyclables, organics, container deposit schemes and residual waste, a series of benchmarking analyses utilising tonnes per household (T/HH) were undertaken with councils from Canberra Region Joint Organisation (CRJO) and Riverina and Murray Joint Organisation (RAMJO). Due to the notable difference in size between some councils (such as Wagga Wagga and the other REROC councils), rather than conduct a comparison between all councils, larger and smaller councils from each of the selected regional Joint Organisations were grouped and examined against each other.

The household values for the residual, recyclables and organics streams utilise the number of households with that service while container deposit schemes and total waste utilise the total number of households within that council area. Furthermore, differing from previous analyses where clean up and drop off data were included, each analysis only utilises waste captured in the kerbside collection system, or in the case of container deposit schemes, return points.

The benchmarking analyses included all waste and recycling generated within each LGA including kerbside collections, drop-off, clean-up materials or in the case of container deposit schemes, return points. Therefore, it was assumed that all households within each LGA had access to the waste management services.



Smaller Councils

For councils categorised as smaller within the Region, the tonnes per household for each material stream is outlined the table below:

		Tonnes per household per annum					
Region	Council	Households	Residual	Recycling	Organics	CDS	Total
REROC	Bland	4,515	0.36	0.00	0.03	0.03	0.42
	Coolamon	3,046	0.64	0.29	0.28	0.01	1.22
	Cootamundra-Gundagai	6,213	0.38	0.29	0.25	0.03	0.96
	Greater Hume	6,690	0.67	0.27	0.08	0.02	1.04
	Juneec	3,087	0.50	0.21	0.25	0.02	0.97
	Lockhart	2,642	0.40	0.06	0.32	0.00	0.77
	Temora	3,827	0.61	0.10	0.12	0.05	0.89
RAMJO	Balranald	1,624	0.38	0.00	0.00	0.01	0.40
	Berrigan	5,029	0.41	0.16	0.08	0.03	0.68
	Carrathool	1,343	0.58	0.16	0.29	0.01	1.04
	Edward River	5,003	0.94	0.08	0.00	0.09	1.11
	Federation	9,078	0.26	0.16	0.46	0.12	1.01
	Griffith	13,653	0.71	0.12	0.00	0.05	0.88
	Hay	1,799	2.01	1.31	1.98	0.03	5.32
	Leeton	4,170	0.72	0.12	0.00	0.07	0.90
	Murray River	8,982	0.20	0.08	0.09	0.13	0.50
	Murrumbidgee	2,613	0.46	0.04	0.02	0.00	0.52
	Narrandera	2,575	1.13	0.33	0.00	0.05	1.51
	Wentworth	2,913	0.81	0.00	0.00	0.29	1.10
CRJO	Bega	17,575	0.67	0.45	0.88	0.05	2.05
	Hilltops	11,454	0.60	0.22	0.42	0.04	1.28
	Snowy Monaro	10,506	0.54	0.26	0.10	0.05	0.95
	Snowy Valleys	6,530	1.18	0.73	0.02	0.07	2.01
	Upper Lachlan	6,397	0.71	0.09	0.06	0.02	0.88
	Yass	7,781	0.75	0.53	0.10	0.04	1.43
Average REROC		4,289	0.51	0.17	0.19	0.02	0.90
Average RAMJO		4,899	0.72	0.21	0.24	0.07	1.25
Average CRJO		10,041	0.74	0.38	0.26	0.05	1.43

Relative to averages of the smaller CRJO and RAMJO councils, smaller REROC councils are found to generate notably less residual waste with only 0.51 T/HH in comparison to 0.72T/HH from RAMJO and 0.74T/HH for CRJO. Similarly, less recyclables, organics and container deposit scheme materials are found to occur on average in REROC households with the rates being uniformly less than those in RAMJO and CRJO.

Larger Councils

Six councils were categorised as larger within the respective regional groups; one from REROC, one from RAMJO and four from CRJO. The tonnes per household for each waste stream and council area is outlined below:

		Tonnes per household per annum					
Region	Council	Households	Residual	Recycling	Organics	CDS	Total
REROC	Wagga Wagga	25,631	0.75	0.21	0.56	0.07	1.59
RAMJO	Albury	25,318	0.46	0.29	0.76	0.09	1.60
CRJO	Eurobodalla	24,402	0.50	0.27	0.32	0.05	1.14
	Goulburn Mulwaree	16,761	1.04	0.16	0.17	0.04	1.42
	Queanbeyan Palerang	22,370	0.72	0.24	0.31	0.07	1.33
	Wingecarribee	20,791	0.55	0.39	0.52	0.03	1.49
Average REROC		25,631	0.75	0.21	0.56	0.07	1.59
Average RAMJO		25,318	0.46	0.29	0.76	0.09	1.60
Average CRJO		21,081	0.70	0.26	0.33	0.05	1.34

It can be seen that Wagga Wagga (REROC Waste Forum) is found to generate the most residual waste with 0.75 T/HH in comparison to the lower value of 0.46 T/HH in Albury (RAMJO) and 0.70 T/HH across the larger CRJO councils (average of four larger CRJO councils). Notably, this is inverted for the remaining waste streams with the T/HH for recyclables, organics and the container deposit scheme for Wagga Wagga being uniformly less than Albury while compared to the four CRJO councils only the T/HH of recycling is less.

Comparing the Small and Large Councils (REROC, CRJO and RAMJO)

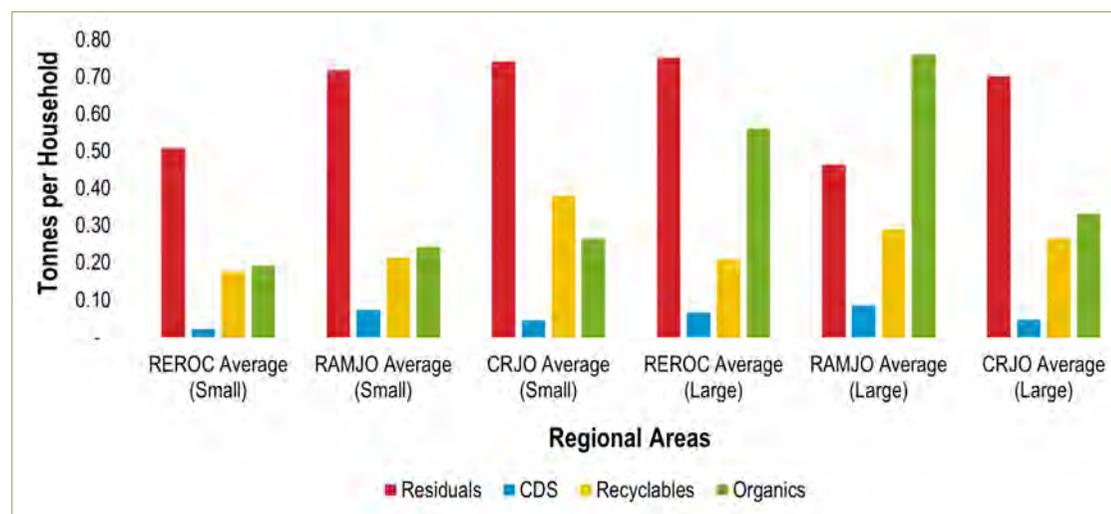
When comparing the average generation rates of the small and large councils from each regional group it can be seen the average of the residual waste is consistent between the majority of the groupings with 0.05 T/HH separating the large and small CRJO councils, the small RAMJO Councils and the large REROC Council (Wagga Wagga). The small REROC Councils and the large RAMJO Council (Albury) are outliers from this grouping being 0.19 T/HH and 0.24T /HH less respectively.

Interestingly, the smaller REROC councils generate the least amount of organics, recyclables and container deposit scheme materials per household compared with the other smaller councils (or larger councils for that matter). This may suggest recovery rates could improve. However, the smaller REROC Councils also generate the least amount of residual waste in general with the closest being small RAMJO councils. Therefore, while small REROC councils are outperformed in recovery, they are outperforming the other regional groups in avoiding the generation of waste all together.

Wagga Wagga residents generate the largest quantity of residuals per household out of any group yet are comparative with recycling and container deposit scheme materials from the other larger councils differing by no more than 0.08T/HH. Wagga Wagga's Organics recovery amounts to the second highest quantity of the larger councils and while this suggests it is a widely adopted and well utilised service, room for improvement exists.

Therefore, although performing well, improvements can be made for both the smaller and larger REROC councils by diverting more waste from landfill and continuing to promote and implement the avoidance of waste generation within the region.

COMPARISON OF REROC, RAMJO AND CRJO





1250
BUILT BY
WAGGA WELDING SHOP

1500
BUILT BY
WAGGA WELDING SHOP

WAGGA WELDING SHOP

120
BUILT BY
WAGGA WELDING SHOP

120
BUILT BY
WAGGA WELDING SHOP

APPENDIX 3: Regional Services and Processors



Access Recycling

- 1 Mandamah Road, Barmedman
- Collection of metal waste over 10 tonnes

Carbon Mate

- Gregadoo Waste Management Centre, Ashfords Rd, Wagga Wagga
- Composting green waste

Elouera Recycling

- Turners Lane, Cootamundra
- Municipal Recycling Facility

Enirgi Power Storage

- Unit 2, 142-144 Hammond Avenue, Wagga Wagga
- Collection and transport of ULABs

Immix Integrated Metal Management

- 236 Copland Street, Wagga Wagga
- Metal waste collection and processing

Kurrajong Recycling

- Chaston St, Wagga Wagga
- Municipal Recycling Facility
- Secure document destruction
- E-waste recycling and drop-off
- Selected plastics
- Glass crushing
- Container deposit scheme materials processing

Renewed Metal Technologies

- Bomen Rd, Wagga Wagga
- Used lead acid battery recycler

Sims Metals

- 8 Lawson Street, Wagga Wagga
- Metal waste including motor vehicles and non-ferrous scrap

Southern Oil Refineries

- Lewington St, Wagga Wagga
- Used oil reprocessing and refining

Wagga Scrap Metals

- 165 Fernleigh Road Glenfield Park, Wagga Wagga
- Recovery and recycling of metal waste

W.J. and M.A McShane

- 173 Twynam St, Temora
- Collection and processing of scrap metal

WKJ Metal Recycling

- Unit 14, 20 Hereford Street Bomen, Wagga Wagga
- Metal waste products, and all non-ferrous products, such as copper, aluminium, stainless steel, batteries, cars etc

REROC

RIVERINA EASTERN REGIONAL
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