



**Renmark
Paringa
Council**

Water Stewardship Plan

Committed to a sustainable future.

Acknowledgements

We acknowledge that the lands surrounding and containing the Renmark Paringa Council district are the traditional lands for the First Peoples of the River Murray and Mallee Region and we respect their spiritual relationship with their country.

We also acknowledge the First Peoples of the River Murray and Mallee Region as the custodians of the greater River Murray and Mallee region and that their cultural and heritage beliefs are still as important to Traditional Owners, the living Ngaiawang, Ngawait, Nganguruku, Erawirung, Ngintait, Ngaralte, and Ngarkat people today. The First Peoples of the River Murray and Mallee Region (First Peoples) are recognised as native title holders of approximately 260 square kilometres of land and waters in the Riverland, South Australia.

The River Murray and Mallee Aboriginal Corporation (RMMAC) is the prescribed body corporate (PBC) that has been established to manage and administer all matters on behalf of the First Peoples of the River Murray Mallee Region.

Renmark Paringa Council acknowledges The First Peoples as the Traditional Owners and that according to their traditions, customs, and spiritual beliefs its lands and waters remain their traditional country. Renmark Paringa Council also acknowledges and respects the rights, interests, and obligations of The First People to speak and care for their traditional lands and waters.

Version Control Table

Version	Date	Author	Rationale
0.1	26 April 2021	M Fauser	Final draft for Council endorsement
0.2	7 May 2021	M Fauser	Update with grammatical corrections, and minor amendments identified at the 26 April Council meeting. Additional figures added to illustrate site and catchment details.
0.3	26 July 2021	M Fauser	Update to defining the sphere of influence outlined in the 2.2 stakeholder table and adoption of new formulae and data errors in 2.3.3. Additional figures and tables to elaborate on catchment and site details.

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1. Introduction

This Water Stewardship Plan has been developed in conjunction with Water Stewardship Australia Limited (WSA), using the Alliance for Water Stewardship (AWS) International Water Stewardship Standard (IWSS) as a basis
(see www.allianceforwaterstewardship.org/aws-standard-system.html#aws-standard).

The Site Water Stewardship Plan sets out the catchment and site challenges in our Council district as well as the objectives and actions to deal with these challenges. The plan will be communicated to our stakeholders and reviewed regularly – at least annually.

As Water Stewards, the Renmark Paringa Council, is committed to sustainable water management for our site as well as contributing to efforts within our catchment and region.

AWS International Water Stewardship Standard (AWS Standard) is a globally applicable framework for major water users to understand their water use and impacts, and to work collaboratively and transparently for sustainable water management within a catchment context. The Standard is intended to drive social, environmental, and economic benefits at the scale of a catchment.

It achieves this by engaging water-using sites in understanding and addressing shared catchment water challenges as well as site water risks and opportunities. It asks water-using sites to address these challenges in a way that progressively moves them to best practice in terms of five outcomes:



1.1 Leadership Commitment

We aim to achieve the outcomes of water stewardship, ensuring security of water supply to our operations without compromising access for other users or the environment. This will be achieved through good water governance, good water balance, good water quality, and a commitment to the conservation of our important water related areas.

We will strive to build the capacity and capability of the community and key stakeholders to address personal and public community water related issues. We will do this whilst keeping the community informed and openly and proactively engaging with the community in order to formulate future directions or improve water related services. We will maintain community infrastructure and assets for the benefit of the broader community, ensuring they are sustainably built, maintained, and utilised.

We will ensure all employees have access to clean drinking water and gender-appropriate sanitation and hygiene facilities at their workplace.

The Renmark Paringa Council is committed to the safe and efficient operation of all systems through compliance with all statutory legislation and will respect legal and water-related rights. We will attempt to work in partnership with others to achieve common goals, deliver projects or provide community services; engaging with catchment stakeholders in an open and transparent manner.

We commit to continually improve and adapt its water stewardship actions and plans and ensure that there is sufficient organisational capacity to successfully implement the AWS Standard. Lastly, we commit to disclosing material water-related information to all relevant audiences in an appropriate format.



Neil Martinson

Mayor



Tony Sivior
Chief Executive Officer

This commitment is publicly available on our website.

1.2 Water Stewardship Policy

We recognise the rights of all people to clean water and sanitation; and we support initiatives that minimise our impact on climate, biodiversity, and water resources. Renmark Paringa Council is committed to continual improvement of its water performance, and to provide sound stewardship of water consistent with the needs of our community and our natural systems. As a result, Renmark Paringa Council is committed to water stewardship through:

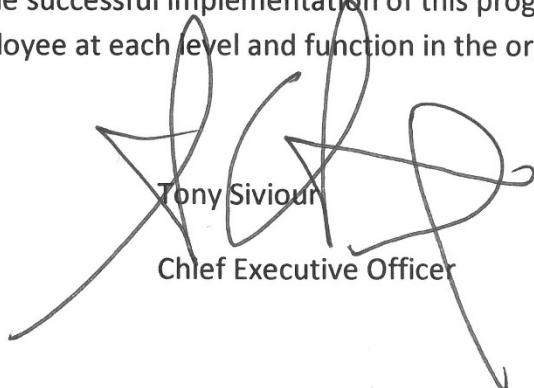
- Understanding the local conditions and water scarcity risks in areas where we operate.
- Meeting water quality standards and guidelines consistent with applicable legal and regulatory requirements and complying with local regulations on water withdrawal.
- Exploring innovative solutions to improve water efficiency and reduce the environmental impact of our direct operations through process changes, water conservation programs, recycling, reuse, education, and awareness.
- Providing direction and strategy that addresses water management risks and challenges that considers water sustainability concepts.
- Providing leadership in environmental protection, including areas of high conservation value.
- Monitoring and measuring our water use and maintaining our commitment to transparency through external reporting initiatives.
- Striving to prevent pollution and promote reduction, reuse, recycle and proper disposal of waste.
- Working together with stakeholders and the community to better understand their current and future needs, and any opportunities within the local water catchment.

We are committed to this Water Stewardship Policy which is owned and endorsed by the Renmark Paringa Council. Responsibility for the successful implementation of this programme belongs with every Renmark Paringa Council employee at each level and function in the organisation.



Neil Martinson

Mayor



Tony Sivouri
Chief Executive Officer

2. Site and Catchment Details

2.1 Physical Scope

2.1.1 Site Boundaries

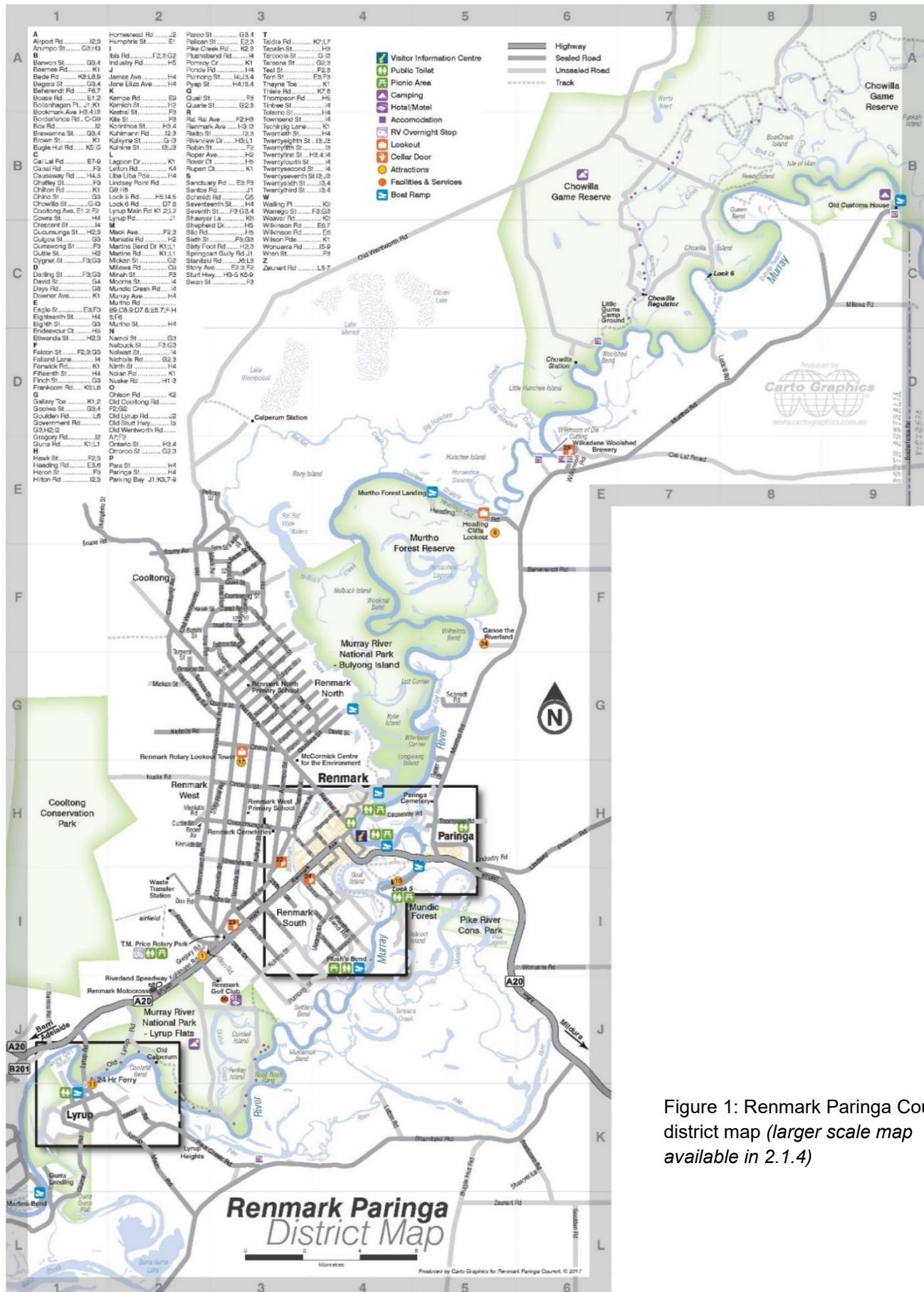


Figure 1: Renmark Paringa Council district map (*larger scale map available in 2.1.4*)

2.1.2 RPC Water Related Infrastructure and Sources

RPC Site	Site Address	Site Water Source
Civic Centre	61 Eighteenth Street, Renmark, 5341	SA Water, Treated Water (Gardens)
Library	James Ave, Renmark	SA Water
Visitor Information Centre	84 Murray Ave, Renmark	SA Water
Alan Coulter Recreation Centre	Fifteenth St, Renmark	SA Water
Swimming Pool	Fifteenth St, Renmark	SA Water
Industry Road Depot	24 Industry Road, Paringa, 5340	SA Water
Cowra Street Depot	36 Cowra Street, Renmark, 5341	SA Water
Renmark Waste Transfer Station	750 Government Road, Renmark, 5341	RIT
Renmark Wastewater Treatment Plant	Nineteenth Street, Renmark, 5341	Wastewater and RIT (water source for operation), SA Water
Paringa Wastewater Treatment Plant	Sturt Highway, Paringa, 5340	Wastewater and RIT (water source for operation), SA Water

2.1.2.1 Staff and Office Facilities

2.1.2.2 Irrigation

RPC Site	Site Address	Site Water Source
Renmark Cemetery	267 Arumpo Street, Renmark	RIT Irrigation
Coolibah Court	Coolibah Cres, Renmark	Treated Water
Dix Street Park	Dix street, Renmark	RIT Irrigation
Renmark Pool	Fifteenth Street and Cowra St, Renmark	RIT Irrigation
Madigan Reserve	Wattle St, Renmark	Treated Water
Tea Tree Crescent	Tea Tree Cres, Renmark	Treated Water
Industry Park	Calperum	RIT Industrial
Woodlot	Jane Eliza Renmark	RIT Jane Eliza
Jane Eliza (Public)	Jane Eliza Renmark	RIT Jane Eliza
Jane Eliza (Private)	Jane Eliza Renmark	RIT Jane Eliza
Tower Tavern	New Landing Way, Renmark	RIT Jane Eliza
James Avenue Riverfront	James Ave, Renmark	(DEW) Licence 759
Rotunda	James Ave, Renmark	(DEW) Licence 759
Renmark Ave- Murray Ave to 15 th St	Renmark and Murray Ave, Renmark	(DEW) Licence 759
Fountains: BankSA – Westpac	Murray Ave, Renmark	(DEW) Licence 759
Ral Ral Avenue	Ral Ral Ave, Renmark	(DEW) Licence 759
Murray Avenue to Murtho Street		
Ral Ral Avenue	Ral Ral Ave, Renmark	Treated Water
Murtho Street to Cowra Street		
Murray Avenue	Murray Ave, Renmark	(DEW) Licence 759
Bert Dix Park	Lock 5 Road, Paringa	(DEW) Licence 759
Paringa Oval	Stuart Hwy, Paringa	Treated Water
Middleton Park	Middleton Ave, Paringa	(DEW) Licence 759
Paringa Main St	Murtho Rd, Paringa	(DEW) Licence 759
SS Ellen Park	Thayne Tce, Lyrup	(DEW) Licence 759
Club Lawns	Murray Avenue	(DEW) Licence 759

Lyrup Oval	Downer Ave, Paringa	CIT
Oval 1	Paringa St, Renmark	Treated Water
Oval 2	Paringa St, Renmark	Treated Water
Oval 3	Paringa St, Renmark	Treated Water
Pitch 1	Paringa St, Renmark	Treated Water
Pitch 2	Paringa St, Renmark	Treated Water
Front courts	Paringa St, Renmark	Treated Water
Back Courts	Paringa St, Renmark	Treated Water
Oval surrounds	Paringa St, Renmark	Treated Water
Renmark Ave 15 th ST to 19 th ST	Renmark Ave, Renmark	Treated Water
Darnley Taylor Park	Renmark Ave, Renmark	Treated Water
Tucker Court Park	Tucker Crt, Renmark	Treated Water
Streetscape	From 19 th to 23 rd street Renmark	Treated Water
Plantation 25 th – 28 th Street	Sturt Hwy, Renmark	Treated Water
Price Park	Sturt Hwy, Renmark	Treated Water
Dog Park	Paringa Street, Renmark	Treated Water

2.1.2.3 Public Toilets

RPC Site	Site Address	Site Water Source
Community and Civic Centre	61 Eighteenth Street, Renmark	SA Water
Library	James Ave, Renmark	SA Water
Visitor Information Centre	84 Murray Ave, Renmark	SA Water
Chaffey Community Centre	86 Nineteenth St, Renmark	SA Water
Airport Terminal	Aerodrome Road, Renmark	RIT Industrial
Paringa Depot	Industry Road, Paringa	SA Water
Soldiers Memorial Hall	Ral Ral Ave, Renmark	SA Water
Renmark Avenue	Renmark Ave, Renmark	SA Water
Price Park	Sturt Hwy, Renmark	RIT
Darnley Taylor Park	Renmark Ave, Renmark	SA Water
Paringa Town	Pauline Street, Paringa.	SA Water
Renmark Cemetery	Arumpo Street, Renmark	RIT
Renmark Kindergym	Renmark Oval Complex	SA Water
Bert Dix	Lock 5 Road, Paringa	SA Water
New Landing Way	New Landing Way, Renmark	SA Water
Patey Drive	Patey Drive, Renmark	SA Water
James Avenue	James Ave, Renmark	SA Water
SS Ellen Park	Thayne Tce, Lyrup	(DEW) Licence 759
Plush's Bend	Crescent	RIT
Renmark Grandstand	Renmark Oval Complex	SA Water

2.1.2.4 Ultimate Water Sources

Site Water Source	Water Supply	Offtake Address
SA Water	River Murray	SA Water Pumping Station, 38 James Avenue, Renmark, SA, 5341
RIT	River Murray	RIT Main Pumping Station, Lot 91 James Ave, Renmark, SA, 5341
(DEW) Licence 759	River Murray	(9 offtake sites) Paringa Oval (Section 257 Sturt Highway Paringa 5340), Rotunda Jarrett Gardens (72 James Ave, Renmark SA 5341),

		Murray Avenue Lawns (50 Murray Ave, Renmark SA 5341), Bert Dix Park (Lock 5 Rd, Paringa SA 5340), Renmark Club Lawns (160 Murray Ave, Renmark SA 5341), Lions Park (Patey Dr, Renmark SA 5341), Riverfun Marina (Lock 5 Rd, Paringa SA 5340), Warriuka Marina (Lock 5 Road Paringa SA 5340) and SS Ellen Park (Thayne Terrace, Lyrup SA 5343)
CIT	River Murray	CIT Lyrup Pumping Station, 1 Thayne Terrace, Lyrup, SA, 5343
Treated Water	Renmark Paringa Council District (households utilizing various water sources).	Renmark Paringa Council District (Community Wastewater Management System as illustrated in 2.3.1)
Rainfall	Rainfall from rainwater tanks	Various Renmark Paringa Council sites (undocumented, as the rainwater is not utilized at any site, and all storage is full and overflows into stormwater).

2.1.2.5 Stormwater

Asset Category	Dimension
Box Culvert	1,695 m
Concrete Pipe	23,661 m
Earthenware Pipe	2 m
Poly Pipe	4,907 m
PVC Pipe	1,692 m
Side Entry Pits	394
Grated Inlet Pits	94
Sumps	179
Outlet Structures	73
Gross Pollutant Trap	3

2.1.2.6 Effluent and Wastewater

There is approximately 70km of pipe assets, including 14.5km of rising mains, 676 flushing points, 2305 inspection points, 9 maintenance pits, 3 sumps and 33 pumping stations within the Renmark Paringa Council area.

Council also own and maintain two Wastewater Treatment Plants (WWTP), one in Renmark, and one in Paringa.

Wastewater Collection System Details				
System	Services	Gravity Drains	Pumping Mains	Pump Stations
Renmark	2354	55.5 km	14.5 km	All pumping stations consist of storage holding sumps with submersible pumps.

Paringa	475			Major PS - 22 Minor PS - 11
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The 33 pumping stations in the Renmark effluent collection area deliver approximately 0.8ML/day (or 292ML pa) to the WWTP. The Renmark WWTP, which was upgraded in 1997 to produce Class B quality treated water, provides treated wastewater to 22 hectares of Council public open space (with SA Health and EPA approvals). Council also supplies 150ML per year to the Renmark Golf Club and 5ML to the Renmark Primary School (on a commercial basis).

Wastewater Regulatory and Operational Standards

The Renmark Paringa Council operations and associated installations also comply with the following codes, standards, criteria and guidelines:

- Guidelines, Design Criteria and Standards for Community Wastewater Management Schemes (Local Government Association of South Australia)
- Sewerage Code of Australia (WSA 02) and any SA Water supplementary documentation
- Sewage Pumping Station Code of Australia (WSA 04).
- AS/NZS 3500: Plumbing and drainage.
- AS/NZS 2031: Water quality - Sampling for microbiological analysis (ISO 19458:2006).
- AS/NZS ISO 3100: Risk management - Principles and Guidelines.
- The National Construction Code (NCC) Volume 3 Plumbing Code of Australia (PCA) including South Australian Variations and/or Additional Provisions as listed in Appendix A.
- Standard Form: Technical Specification-Construction of Septic Tank Effluent Drainage Schemes (DH, LGA).
- Septic Tank Effluent Drainage Scheme Design Criteria (DH, LGA).
- South Australian Bio-solids Guidelines for the Safe Handling, Reuse or Disposal of Bio-solids (EPA).

Renmark Paringa Council has valid approvals and licences as listed in the table below.

Existing Regulatory Approvals		
Organisation	Licence Number	Description
RENMARK		
EPA	2208	Sewage treatment works or septic tank effluent disposal schemes

DHA	WCS 00572 WCS 2359 WCS 2755 WCS 2487 WCS 1556 WCS 2105 WCS 429	Wastewater Treatment Plant and Reclaimed Water Irrigation System Approval for Golf Course Irrigation Approval for Renmark Primary School Irrigation Irrigation of 15 th to 19 th Streets STEDS extension STEDS extension Connect Houseboat Disposal to STEDS
ESCOSA	Issued 4/1/13	Water Industry Retail Licence Class - Intermediate (1) Retailer
PARINGA		
EPA	2053	Sewage treatment works or septic tank effluent disposal schemes
DHA	WCS 2363	Wastewater Treatment Plant and Irrigation System

Wastewater Treatment

The wastewater treatment process at both plants comprises a conventional activated sludge process combined with a sequenced batch reaction process. The treated effluent undergoes chlorine disinfection before transfer to recycled water storage and subsequent irrigation use.

Wastewater is therefore treated to comply with the following criteria:

- A mean value BOD₅ not greater than 20 mg/L
- A mean value of suspended solids not greater than 30 mg/L
- A median thermotolerant coliform (*E coli*) count not greater than 100/100 ml
- A median total chlorine level of not less than 1 mg/L - *Paringa*
- A median combined residual chlorine level of 0.5 mg/L – *Renmark*

Wastewater Treatment System Details				
WWTP	Design Flow	Disinfection	Storage	Disposal
Renmark (<i>Aeroflo Plant</i>)	* Max 1 ML/day * Av 820 kL/day	* Filtered * Chlorination	* Site tanks x 2 * 50 ML lagoon	Irrigation re-use
Paringa (<i>Factor UTB Plant</i>)	* Max 350 kL/day * 80 kg BOD/day	* Filtered * Chlorination * UV Disinfection	* 35 ML lagoon	Irrigation re-use

**Renmark Waste Water Treatment
Plant Site Plan**

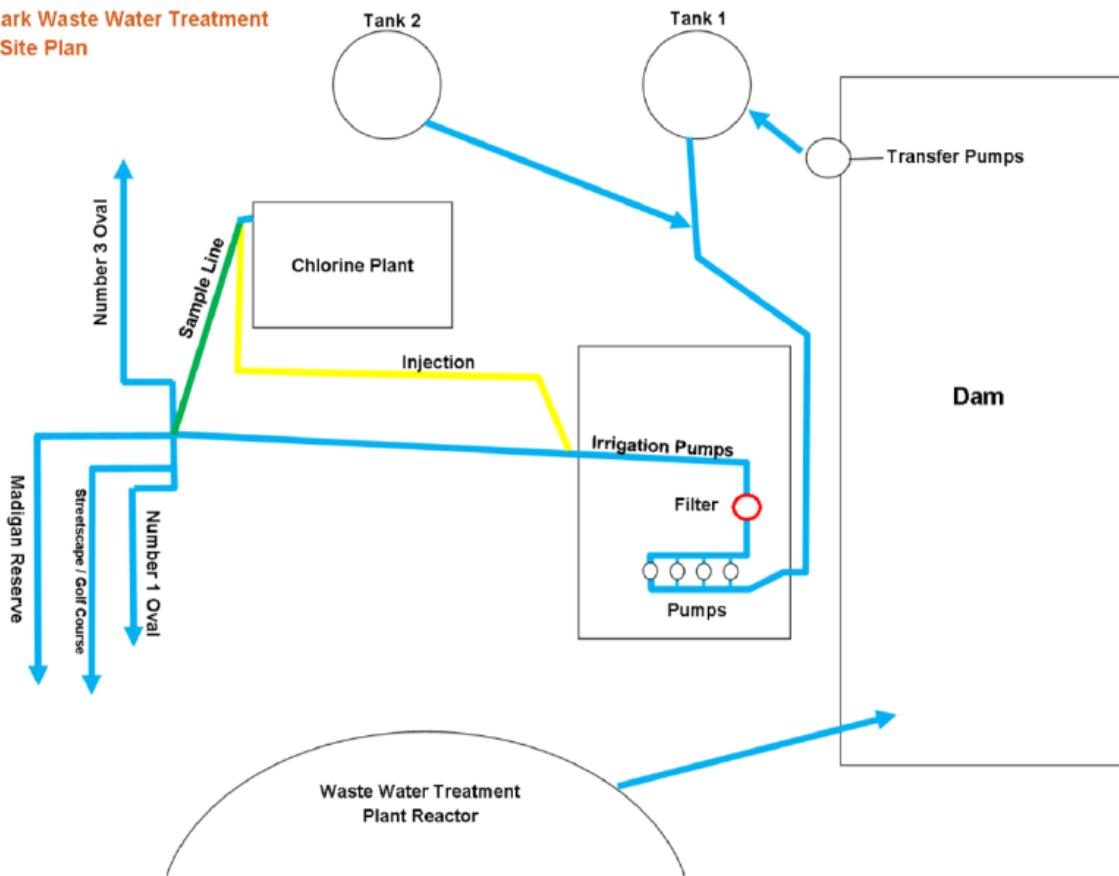


Figure 2: Renmark Waste Water Treatment Plant site plan.

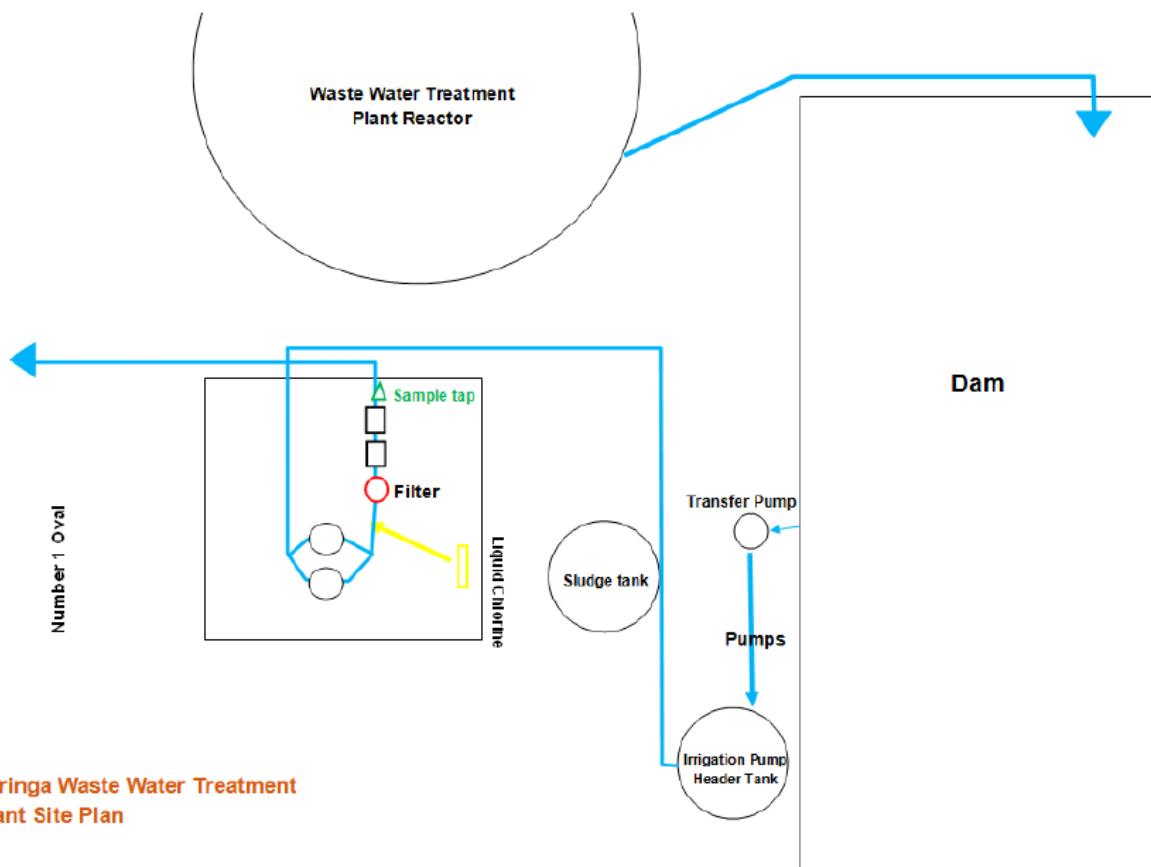


Figure 3: Paringa Waste Water Treatment Plant site plan.

Recycled Water Distribution

Recycled water is provided to the two irrigation systems (Renmark and Paringa) in each case by an irrigation pump set that draws from site storage tanks and/or larger storage lagoons.

In the case of a failure of the Wastewater Treatment Plant and recycled water is not available when required, Renmark Irrigation Trust (RIT) water can be diverted into the recycled water irrigation system.

Recycled Water Distribution Details

System	Recycled Water Users	Details
Renmark	Renmark Golf Club	<ul style="list-style-type: none"> * 150 ML per annum * Spray irrigation grassed surfaces * Land Use Agreement with Council
	Renmark Primary School	<ul style="list-style-type: none"> * 5 ML per annum * Sub-surface irrigation of sporting fields * Water Supply Agreement with Council

	Ovals, tennis courts and surrounds (Council)	* Municipal irrigation on demand * Spray irrigation grassed surfaces
	Streetscape, medium, Price Park, Skate Park (Council)	* Municipal irrigation on demand * Spray irrigation grassed surfaces * Drip irrigation trees & rose beds
	Civic Centre (Council)	* Municipal irrigation on demand * Sub-surface irrigation * Drip irrigation
Paringa	Oval (Council)	* Municipal irrigation on demand * Spray irrigation grassed surfaces

2.1.2.7 Pools

Pool Site	Site Address	Water Source	Pool Size
Alan Coulter Recreation Centre Indoor Pool	Fifteenth St, Renmark	SA Water	151 KL
Renmark Outdoor Pool	Fifteenth St, Renmark	SA Water	2.5 ML

2.1.3 RPC Water Discharges

2.1.3.1 Stormwater Discharge

Council provides stormwater drainage systems in Renmark, Paringa and Lyrup. This enables Council to provide the community with a means to remove and divert stormwater and ensure the quality of stormwater discharge into the creek and river is to a high standard. The stormwater in Renmark and Paringa discharged into the Murray River and Bookmark Creek through outlet structures, some of which are fitted with gross pollutant traps¹.

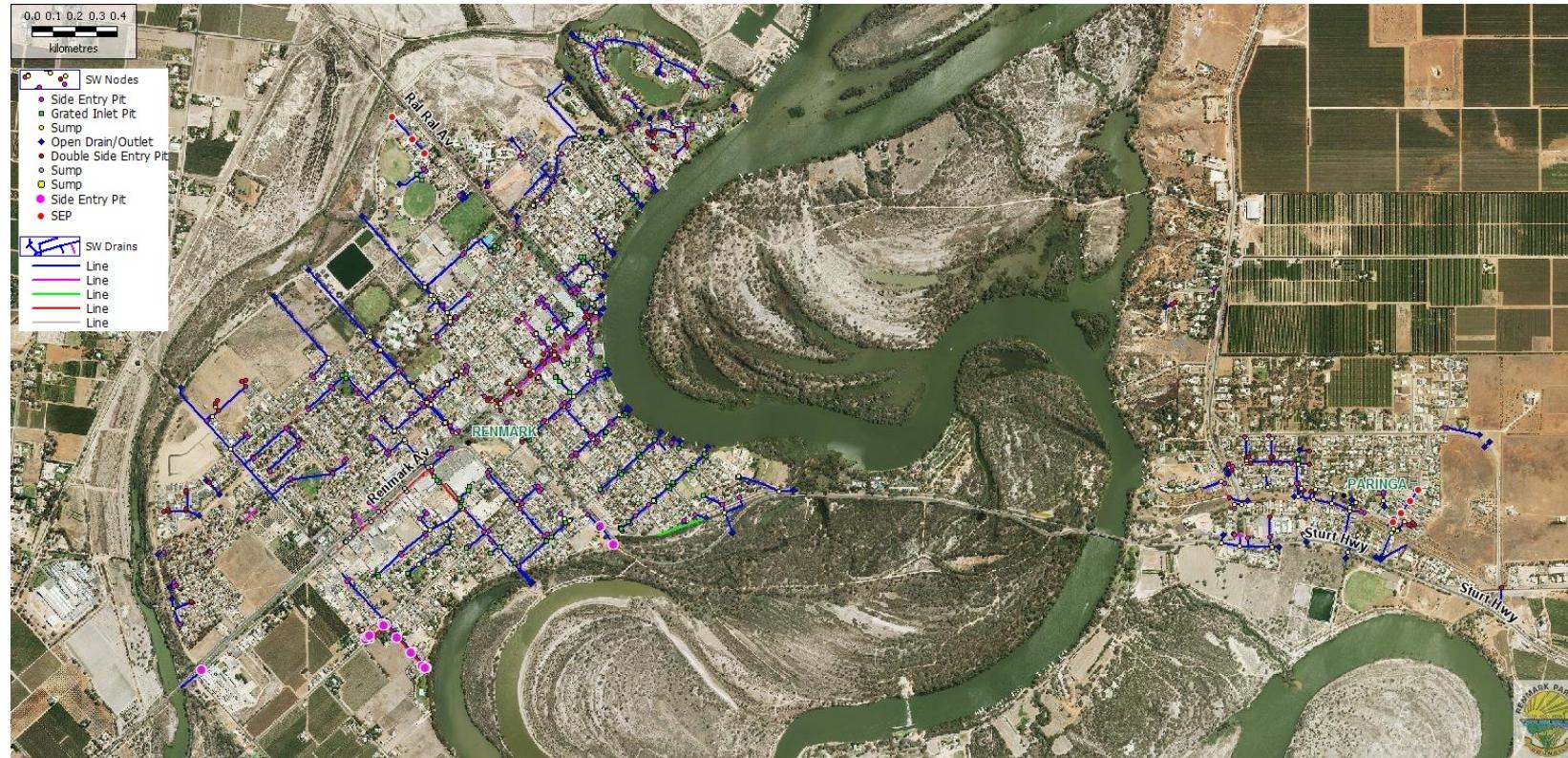


Figure 4: Map of Renmark Paringa Council stormwater network.

¹ Our 3IP Project completed in 2017 has increased the use of the recycled wastewater within the Council area by 22ML per year. The increased use of wastewater greatly reduces our reliance on the Murray River. We have been leaders in the reuse of wastewater being the first regional Council to invest in a wastewater reuse scheme in 1996. Additional Gross Pollutant Traps (GPT) will be installed at strategic locations during the life of the plan, thereby improving the quality of water processed through the Stormwater network.

2.1.3.2 Effluent Discharge

Effluent from properties within the township² of Renmark and Paringa is collected through the Renmark and Paringa Community Wastewater Management Systems (CWMS) to the Renmark and Paringa Waste Water Treatment Plants. The 33 pumping stations in the Renmark effluent collection area deliver approximately 0.8ML/day (or 292ML pa) to the WWTP. The Renmark WWTP, which was upgraded in 1997 to produce Class B quality treated water, provides treated wastewater to 22 hectares of Council public open space (with SA Health and EPA approvals).



Figure 5: Map of Renmark Paringa Council effluent network.

² Properties outside the township of Renmark and Paringa dispose of wastewater through an approved onsite disposal system, typically sub surface soakage trenches or irrigation, or surface irrigation. These types of systems are required to be designed by a wastewater engineer and approval by Council to minimise risks to public and environmental health. These systems are designed and approved in accordance with SA Health's On-site Wastewater Systems Code.

2.1.3.3 Irrigation Discharge

Recycled Water

Treated wastewater is utilised at the Renmark Golf Club, Renmark Primary School, ovals, tennis courts, streetscapes, medians, Price Park, the Skate Park, and the Civic Centre for irrigation purposes.

Wastewater Irrigation (2019/2020)

WWTP	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Total (ML)
Paringa	0.62	0.63	3.31	3.24	3.91	4.13	5.14	1.87	0.01	1.25	0.01	0	24.12
Renmark	13.2	18.83	20.93	35.24	44.65	41.18	44.12	36.02	45.61	22.89	16.63	11.25	350.55
													374.67

Murray River Water

CIT, RIT, and RPC pumped Murray River water is used in other locations where wastewater is not able to be utilised.

2.1.3.4 Sludge Discharge

Sludge is periodically removed from Renmark and Paringa pumping stations and the Paringa Wastewater Treatment Plant and deposited at the Renmark Waste Transfer Station drying lagoons where volumes decrease exponentially as the sludge dries. There has been no need for removal at this stage of the drying lagoon life. There are two lagoons at the Waste Transfer Station, and three at the Renmark Waste Transfer Station that are alternated between to allow for adequate drying. Once per year one lagoon is scraped at the Renmark Waste Transfer Station and placed onto concrete drying pads, until its dust, at which point it is collected and deposited on vacant Council land within the Renmark Waste Transfer Station compound, opposite the drying dam.

2.1.4 Catchment

Catchments relevant to the Renmark Paringa Council are:

- **Water supply catchment:**
 - Lower Murray(-Darling) catchment, Murray-Darling Basin
(see <https://www.mdba.gov.au/discover-basin/catchments/lower-murray> and <http://www.environment.gov.au/water/cewo/catchment/lower-murray-darling>)



Figure 6: The Murray–Darling Basin is one interconnected system of rivers made up of 22 different catchments, the map above shows these 22 catchments (<https://www.mdba.gov.au/water-management/catchments>).

Lower Murray Catchment Governance	
Rural water authority	Central Irrigation Trust (South Australia) Renmark Irrigation Trust (South Australia)
Urban water authority	SA Water (South Australia)
Catchment management authority	Landscape South Australia Murraylands and Riverland (South Australia)
State government water manager	Department of Environment, Water and Natural Resources (South Australia)
Irrigation water allocation	Department of Environment, Water and Natural Resources (South Australia)

- **Physical location:**

- Riverland district, Murraylands Riverland NRM Region
(see <https://www.landscape.sa.gov.au/mr/about-us/our-regions-plan>)

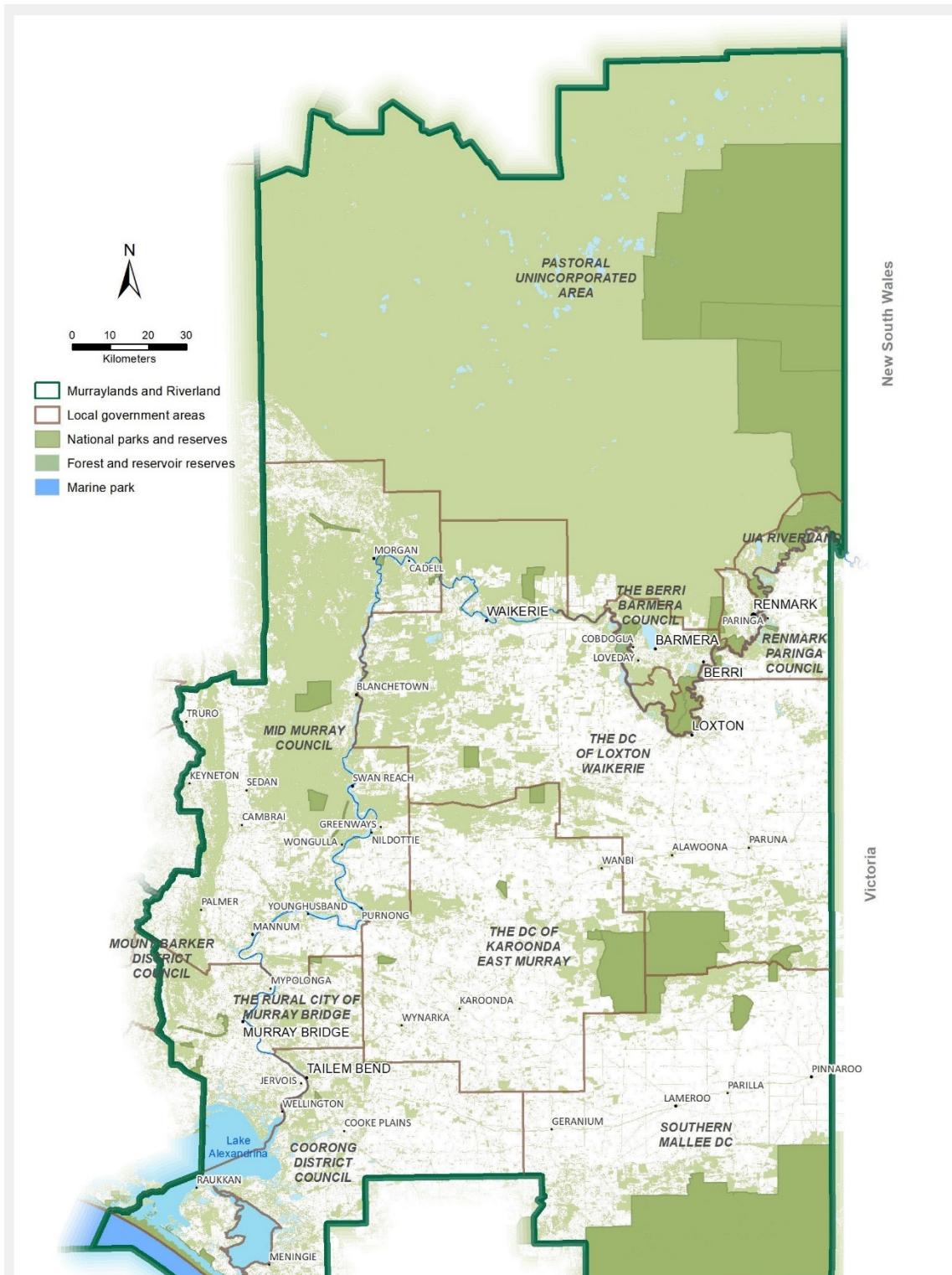


Figure 7: Renmark Paringa Council is 1 of 8 Councils located in the Murraylands and Riverland region (<https://nrmregionsaustralia.com.au/mrls/>)

- Upper Murray sub-region (see <https://www.landscape.sa.gov.au/mrap/Subregions/Upper-Murray>)

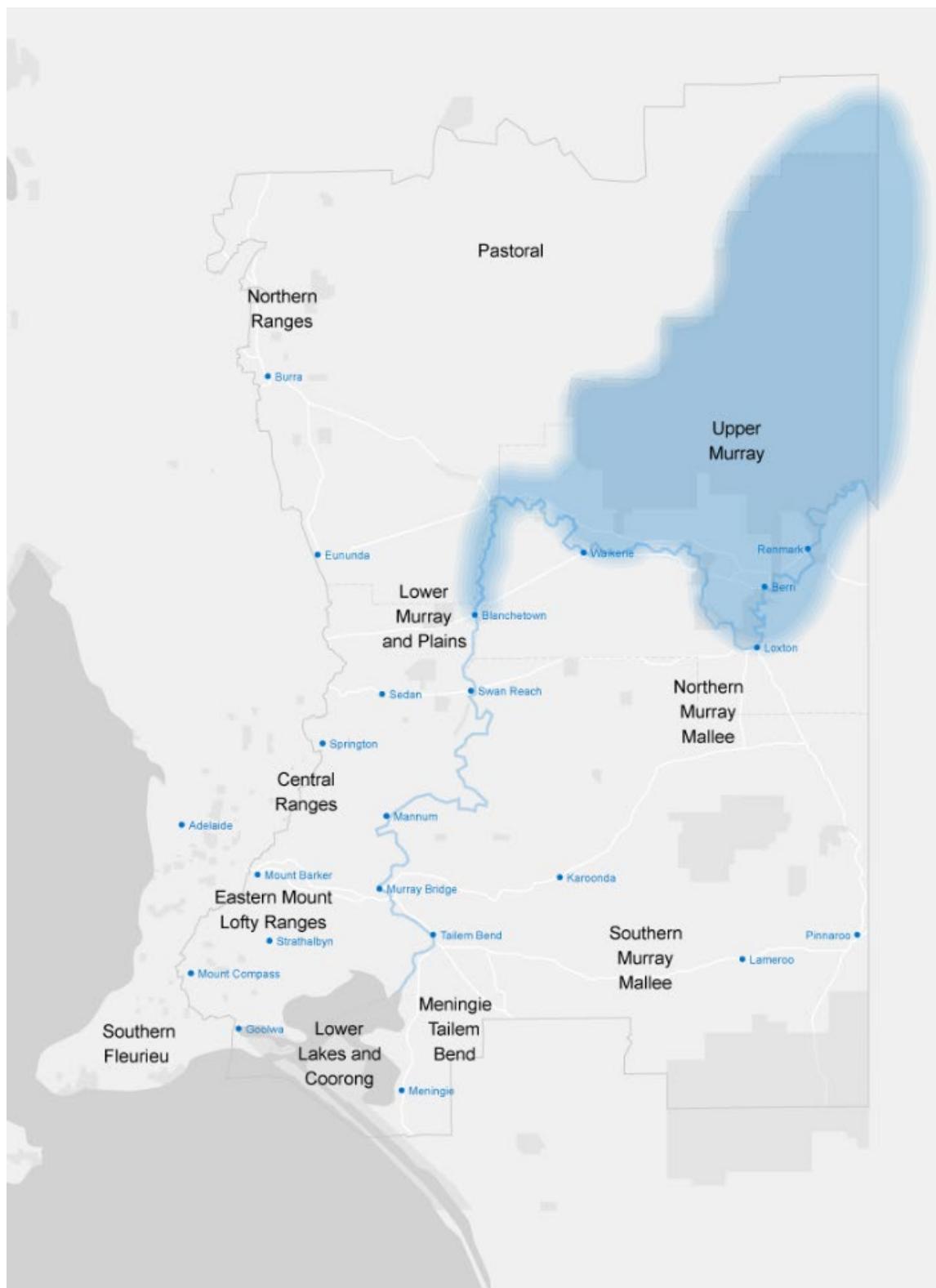


Figure 8: The Upper Murray subregion of the Murraylands Riverland NRM region where Renmark Paringa Council is located.

2.2 RPC Stakeholders Water Related Challenges and Sphere of Influence

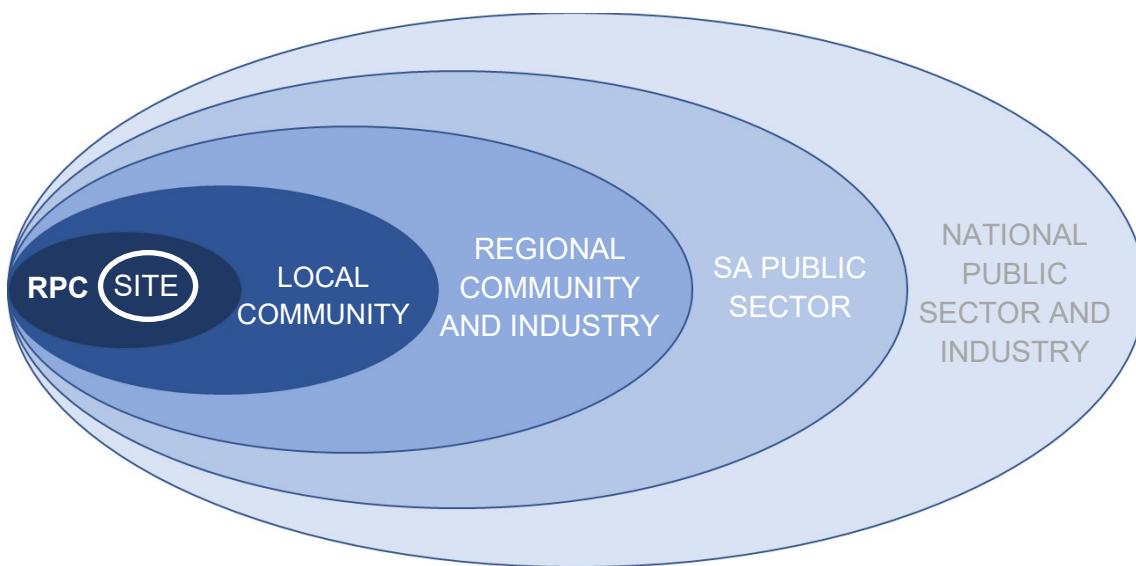


Figure 9: Illustration of RPC Sphere of Influence (adapted from AWS IWWS Figure A5)

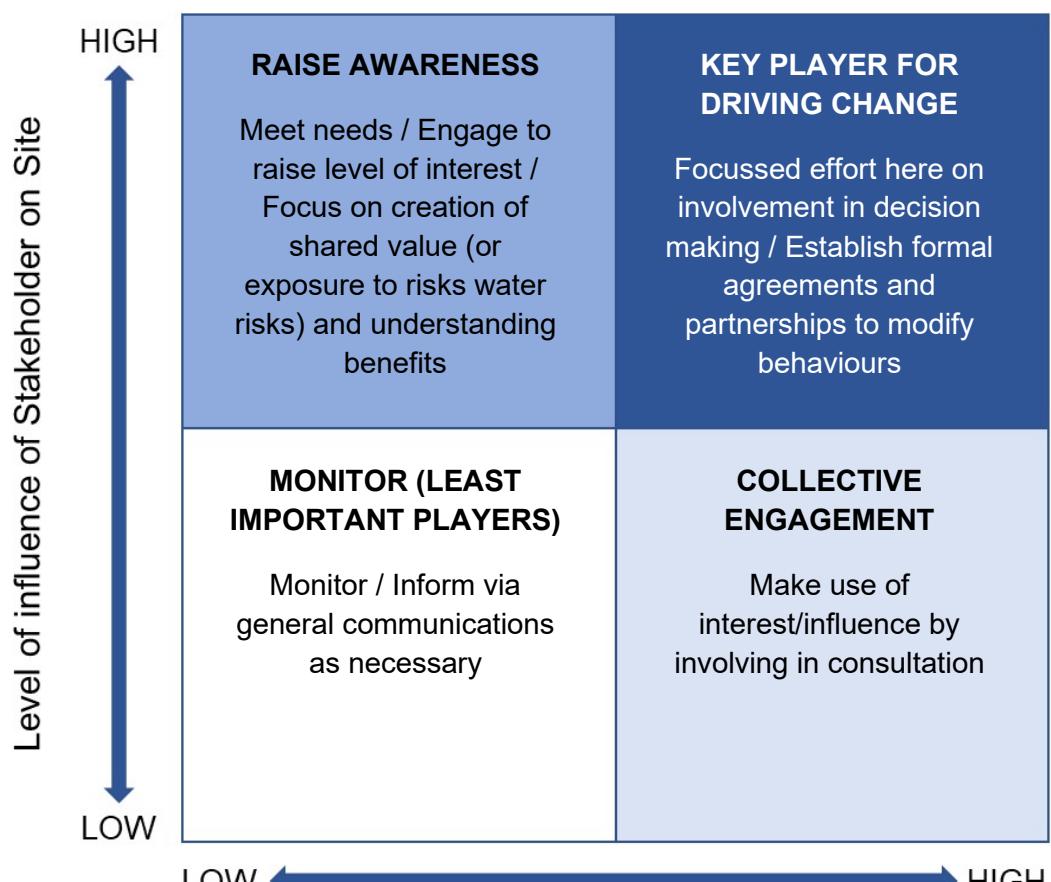


Figure 10: RPC Stakeholder Influence and Engagement Matrix (adapted from AWS IWWS Figures A6 and A7)

Stakeholder	Type of Stakeholder	Water Related Concerns	Ability to Influence and Be Influenced	Engagement to Date	Comments
Renmark Paringa Community	Community	<p>Water access, water scarcity, water quality, sanitation and hygiene, water prices, access to water for recreational activities, climate change, natural resource management, and water for the environment. Being a water smart and sustainable community.</p> <p>Water security was identified as a priority in the Rally for Riverland document and as such Council engaged with the following to understand the priority better and how to advocate to ensure water security for the region.</p> <ul style="list-style-type: none"> • G3 Regional Councils • Federal and State Government including local members, the Department for Environment and Water, and the Federal Environmental Water Holder • Murray Darling Basin Association (MDBA) • Tourism and Agriculture Industries • The Community 	High/High	<p>The community elect representatives every 4 years to guide service and infrastructure delivery to the Renmark Paringa District. This involves a new strategic plan every 4 years, which is formulated by the elected members, and the community is consulted on. Some major projects engaging the broader community include:</p> <p>Council is legislatively required to consult with the community on a suite of strategic documents annually, including Annual Business Plan and Budget, Infrastructure and Asset Management Plan and also the Long-Term Financial Plan.</p> <p>The establishment of an Urban Design Framework (UDF) for Renmark Paringa Council. The UDF sets an overarching vision for the town centre, helps facilitate high-quality and innovative sustainable urban design; and addresses future challenges while seeking to enhance the community's quality of life and economic prosperity. Council engaged the services of</p>	<p>The community elected body of representatives guide how community services such as animal, waste, and emergency management and infrastructure such as roads, bridges, drains, town halls, libraries, recreation facilities, parks and gardens are maintained and delivered.</p> <p>As per the Local Government Act of 1999, Local Government is legislatively required to carry out public consultation on a series of strategic documents for a period of no less than 21 days per document.</p> <p>A two-day 'Enquiry by Design' workshop held in Renmark in December 2016 helped to explore the needs and desires of the community as to how they viewed and interacted with the town centre. The programme allowed stakeholders, community and the</p>

Stakeholder	Type of Stakeholder	Water Related Concerns	Ability to Influence and Be Influenced	Engagement to Date	Comments
				<p>Jensen Plus to undertake the development of the UDF through extensive community consultation in 2016. Following this, the 10-year plan was endorsed by Council and then implemented.</p> <p>180 Murray Avenue community consultation was carried out in December 2020 to investigate whether the community had a desire to explore potential economic opportunities for the prominent site located in the town centre.</p> <p>Developed Rally for Riverland advocacy document using</p>	<p>consultant team to engage and collaborate, as well as technical investigations. Further consultation followed this to gain an understanding of what the priorities were for the community and therefore when Council should deliver each component.</p> <p>Consultation with various stakeholders was undertaken and statistical information was used to develop the Rally for Riverland Document³ which will be used by the three Local Governments in the Riverland to better advocate</p>

³ Rally for Riverland (previously known as the Riverland Social Indicators Project) is an initiative of the three Riverland Councils, Berri Barmera Council, District Council of Loxton Waikerie and Renmark Paringa Council and Regional Development Australia Murraylands and Riverland (RDA). Rally for Riverland enabled the development of a meaningful, evidence-based document which celebrates the Riverland's successes and assists in understanding the issues the region has and which act as barriers to prosperity and growth. The project has created a shared platform which can now be used to advocate collectively for a better future for the Riverland community.

Rally for Riverland received grant funding from the Australian Government, the three Riverland Councils, the RDA and the Australian Drug Foundation. An extensive engagement process was undertaken by the consultants (Fred Consulting) which included work with the project control group (made up of representatives from all Councils and the RDA) forums with stakeholders and elected members and a comprehensive survey of subject matter experts. The Riverland Local Government Forum received the report in full, with further work to be undertaken by the G3 Alliance to develop a program that enables the coordinated pursuit of the Rally for Riverland evidence based priorities.

Stakeholder	Type of Stakeholder	Water Related Concerns	Ability to Influence and Be Influenced	Engagement to Date	Comments
				qualitative and quantitative data.	for priority areas highlighted through the consultation process.
Renmark Irrigation Trust	Community	<p>Partners in rehabilitating Renmark wetlands and floodplains</p> <p>Partner in SEE Renmark 2024: A community's integrated vision for a vibrant future.</p> <p>Water supplier.</p>	<p>High/High</p> <p>High/High</p> <p>Low/High</p>	<p>Renmark Paringa Council and Renmark Irrigation Trust came together (MoU) to share resources to deliver strong environmental outcomes for the local area through a shared resource between the two organisations (Environmental Officer) in an effort to retain professional expertise in the region.</p> <p>Partnership in rehabilitating and restoring health to wetlands and floodplains adjacent to Renmark and Paringa.</p>	RPC and RIT are both community organisations with similar vision when it comes to the sustainability of the Renmark Paringa district, as such, there is a long history of collaboration.
Lyrup Sport Trust	Community	Water supply, amenity irrigation.	High/Low	General support provided as a community group and fields irrigated.	-
Lyrup Village Association	Community	Water supply, amenity irrigation.	High/Low	General support provided as a community group and community planting irrigation.	-
Renmark Lions Club	Community	Water security, access to water for recreational activities.	Medium/Low	Engaged regarding future Renmark Paringa Council Tracks and Trails, and potential rehabilitation projects surrounding these trails. In particular, the group has disclosed an interest in Paringa Paddocks. The club has also	-

Stakeholder	Type of Stakeholder	Water Related Concerns	Ability to Influence and Be Influenced	Engagement to Date	Comments
				catered for many community events organised by Council.	
Renmark Rotary Club	Community	Water security, access to water for recreational activities.	Medium/Low	Engaged Council regarding maintenance around Renmark Cemetery and Rotary Park between Airport Road and Twentyeighth Street	-
Renmark Environmental Watering Committee	Community	Rehabilitating floodplains and wetlands adjacent to the Renmark irrigation district and water related community-based sustainability initiatives.	High/High	A Renmark Paringa Council Elected Member and Environmental Officer sit on the committee. RPC are a major stakeholder in the Committee, along with DEW, RIT, NFSA, CEWH, and Australian Landscape Trust.	The committee was formed to support the rehabilitation of floodplains and Wetlands adjacent to the Renmark irrigation district. Many of these sites are on Council land.
Nature Foundation South Australia (NFSA)	Community	Nature Foundation is an apolitical not-for-profit foundation that invests in conserving, restoring and protecting South Australian landscapes, flora and fauna to ensure their survival. They aim to lead the way in sustainable nature conservation. Their Water for Nature environmental watering project has been a focus for some years.	Medium/Medium	NFSA are a member of the Renmark Environmental Watering Committee and have engaged the services of RPC to support Riverland initiatives such as the Healthy Rivers Toolkit Tour at Plushs Bend. RPC and NFSA have also partnered several times to deliver environmental water to wetland and floodplain sites on Council land (beginning in 2013)	NFSA works with private landholders, irrigators, community groups and local government on smaller sites to complement larger government watering projects, and the first site in the Renmark Paringa district, which was a partnership effort was the Johnsons Waterhole. This Council site was first watered in 2013.
Australian Landscape Trust (ALT)	Community	ALT engages collaborative partnerships between land managers, ecologists and the wider community to support and improve the management of	Low/Low	Members of the Renmark Environmental Watering Committee. Collaborated on a number of community projects including the Mega Murray	ALT and RPC engaged and collaborated on a number of citizen science projects, as both organisations were members of the Murray

Stakeholder	Type of Stakeholder	Water Related Concerns	Ability to Influence and Be Influenced	Engagement to Date	Comments
		regional landscapes and ecologically significant environments.		Darling Microbat Project.	Mallee Science Hub.
Chowilla Community Reference Committee	Community and SA Public Sector	The Chowilla Community Reference Committee is a group focused on the health of Chowilla Floodplain Icon Site. The group provides guidance on DEW operations.	Medium/Low	The Committee actively engages with community members, including RPC elected members and staff. There are yearly tours and updates provided to the members.	The Committee is presented with details related to the operation of infrastructure within Chowilla and project outcomes.
The Healthy Rivers Lower Murray	Community	Environmental sustainability	Low/Low	A staff members participation in the Rivers Fellowship (Australian Conservation Foundation basin community's leadership course)	The Healthy Rivers Lower Murray group was formed by South Australian Rivers Fellows.
Bookmark Creek Action Group	Community	The health of the Bookmark Creek and surrounding waterways and terrestrial landscape.	Medium/Low	The group has been supported through involvement in group working bees, events, general group activities, grant applications, administrative support, improvement and maintenance of amenities in the groups area of concern, and general engagement.	The Bookmark Creek Action Group was formally supported by RPC for many years by the Environmental Officer through a Connecting Communities National Landcare Programme grant. Therefore, there is a strong relationship and history of collaboration and support.
Renmark Paringa Lyrup Bush Friends	Community	The ecological health of the Pike and Murray River and floodplains, wetlands adjacent to Renmark, Paringa, and Lyrup.	Medium/Medium	The group has been supported through involvement in group working bees, events, general group activities, grant applications, administrative support, improvement and maintenance of amenities in the groups area of concern, and general engagement.	-
Whirlpool Corner	Community	The ecological health of the	Medium/Medium	The group has been supported	-

Stakeholder	Type of Stakeholder	Water Related Concerns	Ability to Influence and Be Influenced	Engagement to Date	Comments
Wetland Group		Whirlpool Corner Wetland.		through involvement in group working bees, events, general group activities, grant applications, administrative support, improvement and maintenance of amenities in the groups area of concern, and general engagement.	
Woolenook Wetland Association	Community	The ecological health of the Woolenook Wetlands.	Medium/Medium	The group has been supported through involvement in group working bees, events, general group activities, grant applications, administrative support, improvement and maintenance of amenities in the groups area of concern, and general engagement.	-
First Peoples Groups (River Murray Aboriginal Corporation)	Indigenous Community (including Peramangk and Ngarrindjeri people)	Cultural values, water for the environment.	Low/Low	Engagement surrounding Bookmark Creek Projects. Engagement as a main stakeholder and partner via a third-party agreement and project.	-
Central Irrigation Trust	SA Private Sector	Salinity, water supply, water security, water scarcity	Low/Low	Water supplier.	-
SA Water	SA Public Sector	Salinity drainage and domestic and staff water supply.	Low/Medium	Potable water supplier for Council and the district	-
National Parks Wildlife Service South Australia	SA Public Sector	NPWSA manage South Australia National Parks. Ecosystem health, water for recreational activities and water scarcity are among key concerns.		NPWSA have maintained a close relationship with RPC in recent years with the proclamation of Paringa Paddocks, which was once Council owned, but is now a	-

Stakeholder	Type of Stakeholder	Water Related Concerns	Ability to Influence and Be Influenced	Engagement to Date	Comments
				part of the Murray River National Park.	
Belgravia Leisure	Local Industry	Water supply, water security, and access to water for recreational activities.	High/Medium	Manage the Renmark Paringa Recreation Centre and Outdoor Pool.	-
Renmark Golf Club	Local Industry	Water supply, water security, and access to water for recreational activities.	High/Medium	Supply with water to irrigate the course.	-
Renmark Primary School	SA Public Sector	Water supply, water security, and access to water for recreational activities.	Medium/Low	Council provides a school holiday program to each family whose child attends the school for each school holiday.	Council provides a coordinated calendar of events and activities via a printed booklet which is available to families who reside in the district but also visiting the area.
Renmark North Primary School	SA Public Sector	Water security, and access to water for recreational activities.	Medium/Low	<p>Council provides a school holiday program to each family whose child attends the school for each school holiday.</p> <p>Council provides activities to students participating in the Children's University program to assist with their out of school learning as part of this program.</p> <p>Council has engaged with the school, and supported engagement in the Connecting and Rehabilitating the Lower Ral Ral Floodplain project, involving the students in revegetation.</p> <p>Council has managed several</p>	<p>Council provides a coordinated calendar of events and activities via a printed booklet which is available to families who reside in the district but also visiting the area.</p> <p>The Children's University program aims to provide children with further learning opportunities (out of school), Council as a learning destination coordinates activities and worksheets for local students to participate in.</p>

Stakeholder	Type of Stakeholder	Water Related Concerns	Ability to Influence and Be Influenced	Engagement to Date	Comments
				<p>citizen science projects and engaged with the school, supporting them to participate at a local, national, and international level.</p> <p>Council, and RIT, have engaged with the school, supporting them to engage in and monitor a newly established environmental watering site (2021).</p>	
Renmark West Primary School	SA Public Sector	Water security, and access to water for recreational activities.	Medium/Low	<p>Council provides a school holiday program to each family whose child attends the school for each school holiday.</p>	<p>Council provides a coordinated calendar of events and activities via a printed booklet which is available to families who reside in the district but also visiting the area.</p>
Renmark High School	SA Public Sector	Water security, and access to water for recreational activities.	Medium/Low	<p>Council holds annual planning sessions with the local high school to assist the Student Representative Committee (SRC) to develop common goals and strategies over the school year. Activities/events for high school aged youth either as part of school holidays or National Youth Week have been held and future opportunities are being reviewed.</p>	<p>Council spends one day annually with the SRC students to workshop ideas and concepts and to provide leadership to the group. School Holiday and National Youth Week activities to engage with and provide social opportunities for local youth.</p>
St Joseph's Renmark	SA Private Sector	Water security, and access to water for recreational activities.	Medium/Low	<p>Council provides a school holiday program to each family whose</p>	<p>Council provides a coordinated calendar of</p>

Stakeholder	Type of Stakeholder	Water Related Concerns	Ability to Influence and Be Influenced	Engagement to Date	Comments
				child attends the school for each school holiday. Council provides activities to students participating in the Children's University program to assist with their out of school learning as part of this program. SJSR ran a Bush Discovery program for their Junior Primary students at Paringa Paddock, working with Council's Events Team to submit an Event Application.	events and activities via a printed booklet which is available to families who reside in the district but also visiting the area. The Children's University program aims to provide children with further learning opportunities (out of school), Council as a learning destination coordinates activities and worksheets for local students to participate in.
Murraylands Riverlands Landscape Board	SA Public Sector	The Murraylands and Riverland Landscape Board (the board) is responsible for administering the Landscape South Australia Act 2019 (the Act), which is the new framework for managing the state's land, water, pest plants and animals, and biodiversity, within the new Murraylands and Riverland region.	Low/Medium	Supporting the Renmark Paringa Council Alliance for Water Stewardship Certification project.	There has been a longstanding positive relationship between the board and Renmark Paringa Council, and many initiatives have been supported over the years (formerly NRM board), and strong collaboration has enabled positive outcomes for NRM in the region.
PIRSA	SA Public Sector	Support primary industry activity in SA	Low/Medium	Collaborated with PIRSA on CRC For One Basin project and have actively engaged and supported regarding biosecurity threats in the region.	PIRSA engage with Renmark Paringa industry regularly, providing support and training opportunities, as well as crisis management in the case of fruit fly outbreaks.
Department for	SA Public	The Department for Environment	Low/High	DEW and RPC have been	DEW have had a long

Stakeholder	Type of Stakeholder	Water Related Concerns	Ability to Influence and Be Influenced	Engagement to Date	Comments
Environment and Water	Sector	<p>and Water is a facilitator of community involvement in and taking responsibility for the environment. They are the custodian of public parks, gardens, heritage places and Crown lands for public benefit and enjoyment, and for their intrinsic value. They are also an authority on the state's environment and natural resources to help governments, businesses and individuals make good long-term decisions.</p> <p>Partner in SEE Remark 2024: A community's integrated vision for a vibrant future.</p>	Medium/Medium	<p>involved in collaborative projects over the course of the last decade.</p> <p>DEW constructed major water regulating structures and conducted hydrological earth works in Paringa Paddocks to support environmental watering.</p> <p>DEW have supported the 5 year Connecting and Rehabilitating the Lower Ral Ral Floodplain project as the regional land Partnerships service provider.</p>	history of consulting with, supporting and collaborating with RPC on major water infrastructure related projects in the district.
Essential Services Commission of South Australia	SA Public Sector	The protection of the long-term interests of South Australian consumers with respect to the price, quality, and reliability of essential services, including water.	Low/High	Provide an annual report to the Commission as per statutory requirements.	-
Technical Regulator	SA Public Sector	The Office of the Technical Regulator is responsible for the electrical, gas and plumbing safety and technical regulation in South Australia	Low/High	Develop, approve, and update the Safety Reliability and Maintenance and Technical Management Plan. The document is audited as per the statutory required frequency.	Any upgrades to CWMS would be assessed and approved by.
Department for Health and Wellbeing	SA Public Sector	The department supports the delivery of public health services, formulates health policy,	Low/High	Annual report provided as per licence conditions (WCS 00572) as per section 2.1.2.6.	Any upgrades to CWMS would be assessed and approved by.

Stakeholder	Type of Stakeholder	Water Related Concerns	Ability to Influence and Be Influenced	Engagement to Date	Comments
		facilitates public and consumer consultation on health issues, and monitors the performance of South Australia's health system by providing timely advice, research and administrative support.			
Development Assessment Commission (state planning commission)	SA Public Sector	The Commission independently assesses and determines specified kinds of development applications in South Australia.	Low/High	Engage with DAC in relation to development on the River Murray Floodplain in the approval process.	-
Local Government Association of South Australia	SA Public Sector	The LGA is a membership-based organisation, established to provide a voice for local government in South Australia, and leadership for the sector. The Association works in three key areas: leadership and advocacy, capacity building and sustainability, and best practice and continuous improvement.	Medium/Medium	LGA Climate Commitment Action Plan 2021-2023 which builds upon years of effort supporting councils to help mitigate climate change and adapt to its impacts.	-
Murraylands and Riverland Local Government Association	SA Public Sector	As a Regional Subsidiary of the Member Councils, the Association has as its governing document, a Charter as provided for under the Local Government Act 1999. The purpose for which the Association has been established is to: work with the Local Government Association of South Australia in achieving its aims and	Medium/Medium	Supporting the MRLGA Water Policy Position Paper project.	-

Stakeholder	Type of Stakeholder	Water Related Concerns	Ability to Influence and Be Influenced	Engagement to Date	Comments
		objectives. provide strong advocacy speaking with one voice on what matters most to the communities of the Constituent Councils. work together to make the best use of available resources.			
Regional Development Australia Murraylands and Riverland South Australia	SA Public Sector	Regional Development Australia (RDA) is an Australian Government initiative that brings together all levels of government to enhance the development of Australia's regions. A national network of RDA committees has been established to achieve this objective. Water related concerns pertain to the community each RDA organisation operates in.	Medium/Low	The RDMAR vision is that the Murraylands and Riverland is recognised internationally as a vibrant, world leading circular economy. In doing so, they have and will continue to engage with Renmark Paringa Council and other organisations and businesses in the region.	-
Environment Protection Authority (EPA)	SA Public Sector	The EPA is South Australia's independent environment protection regulator. They protect, restore and enhance the environment through the risk-based regulation of pollution, waste, noise and radiation.	Low/High	Submit an annual return to the EPA as per licence (2208 and 2053) as per 2.1.2.6.	Any upgrades to CWMS would be assessed and approved by.
MDBA	National Public Sector	Implementing MDB Plan	Low/High	Monitoring and evaluation of MDB Plan.	-
CEWH	National Public Sector	MDB Environmental Water Holder, Environmental Watering Partner (RIT)	Medium/High	A member of the Renmark Environmental Watering Committee and have a signed partnership agreement with RIT.	RPC, as a partner in the efforts to rehabilitate the floodplains and wetlands adjacent to the Renmark

Stakeholder	Type of Stakeholder	Water Related Concerns	Ability to Influence and Be Influenced	Engagement to Date	Comments
					irrigation district, have frequently engaged with CEWH regarding the projects.
The Murray Lower Darling Rivers Indigenous Nations (MLDRIN)	National Public Sector (MDBA Indigenous Advisory Group)	Cultural flows, community networks, advisory to MDBA	Low/Medium	-	-
Basin Community Committee	National Advisory Committee	<p>The Basin Community Committee provides a community perspective on a wide range of water resource, environmental, cultural and socioeconomic matters.</p> <p>BCC members are key local contacts for the Authority. They report on community concerns and issues around Basin Plan implementation and provide information to Basin communities on our programs.</p>	Medium/Medium	Mayor Neil Martinson is a member of the Committee.	-
Murray Darling Association	National Association	To provide effective representation of local government and communities at state and federal level in the management of basin resources.	Medium/Low	Cr Peter Hunter was formerly the Chairperson for region 5. Cr Margaret Howie is now a member.	-

2.3 Site Water Related Data

2.3.1 Incident Record, Response Plans, Procedures and Management Plans

The below Renmark Paringa Council incident and emergency record and response procedures and plans cover all Council operations, including those related to water related incidents, hazards, and infrastructure.

Water Related Incident Record, Response Plans, Procedures and Management Plans	
Plan, Process, or Procedure	Responsible Staff Member
Safety, Reliability, Maintenance and Technical Management Plan (SRMTP)	Director Infrastructure and Environmental Services (Tim Tol)
Emergency Response Management	Director Infrastructure and Environmental Services (Tim Tol)
Incident Management, Reporting and Investigation	Manager Infrastructure Delivery (Tarik Wolf)
Hazard Management Procedure	Director Infrastructure and Environmental Services (Tim Tol)
Incident Reporting and Investigation Reporting Procedure	Manager People and Culture (Lindy Leml)

Water Related Incident Response		
Incident	Relevant Plan, Process, or Procedure(s)	Action and Responsible Staff Member
Fuel or chemical spill	As per Emergency Response Management. On Council land from a Council activity there is a risk assessment and work instruction for that activity. On Council land from a non-Council activity, or non-Council land, emergency services would be notified for a response.	Follow the work instruction (Tarik Wolf)
Faulty pump	The Safety, Reliability, Maintenance and Technical Management Plan.	Follow actions required as outlined in SRMTP (Tarik Wolf)
Effluent tank leak	The Safety, Reliability, Maintenance and Technical Management Plan.	Follow actions required as outlined in SRMTP (Tarik Wolf)
WWTP overflow	The Safety, Reliability, Maintenance and Technical Management Plan.	Follow actions required as outlined in SRMTP (Tarik Wolf)
WWTP treated water contamination	The Safety, Reliability, Maintenance and Technical Management Plan.	Follow actions required as outlined in SRMTP (Tarik Wolf)
Stormwater overflow and flooding	The Storm Response Procedure.	When there is a storm event or localised flooding caused by the stormwater system actions as outlined in the Storm Response Procedure (Tarik Wolf)
Irrigation infrastructure damage	There will be a risk assessment and relevant work instruction.	Follow the work instruction (Tarik Wolf)
Breeding of mosquito larvae	Report incident to Council's Environmental Health Officer to action in accordance with the Riverland Integrated Mosquito Management Plan (RIMMP)	Environmental Health Officer (Dara Frankel)

2.3.1.1 Safety, Reliability, Maintenance and Technical Management Plan

This document constitutes the safety, reliability, maintenance, and technical management plan (SRMTMP) associated with the collection and distribution networks for wastewater and recycled water, and the wastewater treatment plants associated with the Renmark Paringa Council's operations.

This SRMTMP has been developed to meet the requirements of the Water Industry Act 2012 and associated Water Industry Regulations 2012 as required by the Technical Regulator. The SRMTMP has been prepared to describe how the operations and maintenance employees ensure the safe and reliable operation of Council's collection networks, wastewater treatment facilities and recycled water use.

The Renmark Paringa Council is committed to the safe and efficient operation of all systems through compliance with all statutory legislation, which is demonstrated by adherence to the elements described in this Plan.

2.3.1.2 Emergency Response Management

The WHS Emergency Management system provides Council's emergency control framework and response guidance, with the intention of preventing injury to workers, visitors, residents, and damage to premises, in emergency situations.

The responsibility for emergency preparedness and response within Renmark Paringa Council rests with the Director of Infrastructure & Environmental Services, and the Emergency Management system provides details of organisational responsibilities adopted during emergency situations.

The plan is communicated to all relevant workers within the organisation, from executive management through to operators and maintenance. It undergoes regular review to maintain relevance.

Emergency Management Procedures have been developed to provide specific response actions for a range of emergency scenarios across Renmark Paringa Council assets and the surrounding area. These procedures are tested on a regular basis.

2.3.1.3 Incident Management, Reporting and Investigation

Renmark Paringa Council has a comprehensive Incident Management process which requires staff to report all incidents and/or hazards on appropriate forms. As part of the reporting process, an investigation is undertaken by the relevant manager or supervisor to ascertain the root cause of the incident and the Work, Health and Safety representative for the specific work area is advised of the incident. The Incident Reporting and Investigation Procedure provides staff with comprehensive guidelines in relation to their responsibilities regarding incidents and near misses.

The Incident Report is then forwarded to the WHS Officer for inclusion within Council's next Safety-First Committee agenda. Where necessary, a risk assessment is completed, and controls put in place to ensure the risk of the incident re-occurring is reduced.

The Correction and Preventative Action Procedure outlines staff responsibilities in relation to capturing, monitoring, and evaluating any control measures implemented to reduce risk within the organisation.

The Management Group monitor all activities relating to WHS issues and receives copies of the Safety-First Committee minutes as well as other WHS monitoring documents such as Types of Incidents Reports, Corrective Action and Prevention Action Reports, WHS Activity Calendar.

Staff are trained in all WHS Policies and Procedures to ensure they are fully aware of their responsibilities in relation to maintaining a safe work environment for all staff.

2.3.1.4 Hazard Management Procedure

The Renmark Paringa Council recognises its obligation to:

- identify reasonably foreseeable hazards that could give rise to risks to health and safety
- eliminate risks to health and safety so far as is reasonably practicable or, if it is not reasonably practicable, minimise those risks so far as is reasonably practicable.

This procedure aims to:

- a) Ensure that the organisation's Work Health and Safety ("WHS") management system conforms with legislative requirements and ReturnToWorkSA's Performance Standards for Self-Insurers ("PSSI");
- b) Achieve the highest levels of (WHS) performance by:
 - i) Providing managers and workers with the information, instruction and training necessary to enable them to manage risks to health and safety effectively.
 - ii) Identifying reasonably foreseeable hazards and eliminating risks so far as is reasonably practicable, or where that is not reasonably practicable, minimising risks so far as is reasonably practicable by implementing the Hierarchy of Controls.
 - iii) Implementing processes to facilitate the monitoring and evaluation of the effectiveness of controls.

2.3.1.5 Incident Reporting and Investigation Reporting Procedure

The Renmark Paringa Council is committed to an incident reporting and investigation process that identifies appropriate corrective and preventative actions and ensures that, once implemented, they are reviewed for effectiveness.

This procedure aims to:

- Implement a process whereby information on the organisation's incident reporting and investigation procedure is provided during induction;
- Provide managers and supervisors with training to enable them to investigate incidents that occur in their areas;
- Provide a process for the reporting of incidents to the relevant manager or supervisor within 24 hours, or as soon as reasonably practicable after they occur;
- Manage statutory reporting in accordance with legislative requirements;
- Allow for the investigation of incidents by managers and supervisors and, where required, consultation with the Health and Safety Representative (HSR) if one exists and/or relevant workers and stakeholders;
- Identify and eliminate hazards or, where that is not reasonably practicable, minimise them, so far as is reasonably practicable, by the application of the Hierarchy of Control;
- Implement a procedure that allows for preventative and corrective actions to be monitored and reviewed for effectiveness; and
- Allow for a review of incident statistics by the Health and Safety Committee (HSC) if one exists and the management team so that trends are identified and planned corrective and preventative actions are completed.

The core components of Council's Incident Reporting and Investigation Procedure aim to achieve the following:

Reporting

- A procedure for the reporting of incidents is in place.
- Staff are trained in the reporting requirements and reporting system.
- The system has a requirement to report (internal).
- The system has a requirement to report (external).
- Immediate corrective action to be taken where required, if reasonably practicable.
- Incident reports are documented, and records kept.

Investigation

- A process for the investigation of incidents is in place.
- Appropriate staff are trained in the investigation process.
- Investigations are undertaken in line with the process.
- The investigation identifies preventative and corrective actions, if required.
- The system requires any investigation to be documented and records kept.
- Appropriate consultation/communication occurs.
- Investigations are appropriately completed (including a review of the findings).

2.3.2 Water Related Incidents, Mitigations and Responses

2.3.2.1 Annual Review Process

An annual review process will occur that will evaluate the impacts of water-related emergency incidents (as defined in the AWS Standard 2.0 Guidance) documenting responses, actions, and outcomes. This will be reported to Council, annually, and reports will be publicly disclosed, included as an appendix to the Renmark Paringa Council Water Stewardship Plan.

2.3.2.2 Preliminary Evaluation of Water Incidents, Mitigations and Responses

Incident	Mitigation	Incident Occurrence and Response
Irrigation filter backflush failure – sludge lagoons overflowing	Backflush line was removed from sludge lagoons which has eliminated this hazard.	Incident occurred 26/05/2013 and was reported 28/05/2013. The irrigation pumps were turned off to stop backflush.
Faulty air valve on sludge tank pipework – sludge overflow	Regular valve maintenance protocol.	Incident occurred 20/12/2013 and was reported 20/12/2013. The sludge valve and irrigation backflush were manually operated and replaced.
Faulty effluent pump relay – effluent overflow	The pump start relays were replaced to safeguard against faults. Dial out telemetry has been installed at the pump station to alert if there is a failure. Electrics have also been simplified and replaced, and a large storage tank installed.	Incident occurred 15/10/2014 and reported 15/10/2014. The pump stations that pump into the sump were turned off to prevent further spillage.
Major wastewater treatment plant infrastructure damage, service interruption, or water contamination – unable to supply and treat water	<p>The two WWTP's are inspected daily, and relevant information is recorded and kept on site and in excel spreadsheets. Inspections and recordings are carried out to monitor free chlorine levels.</p> <p>Pumping stations are inspected in a cyclic fashion during the period of not less than a fortnight.</p> <p>Council has an ongoing maintenance program of desludging and cleaning of the gravity system and pump stations annually. Council regularly drains and assesses areas of the system to ensure that it operates effectively and to assess asset life.</p> <p>Council has an agreement with Trility to service and maintain the chlorination systems, and AWQC to analyse and report on our water samples.</p>	None.
Major damage to water supply infrastructure – unable to supply water	<p>The Infrastructure is mostly underground, and sections can be isolated.</p> <p>An Open Space and Water Services Team member or Manager Infrastructure Delivery is always on duty or on call. The on-call Open Space and Water Services Team member has the authority to call in</p>	None.

Incident	Mitigation	Incident Occurrence and Response
	<p>the Civil Maintenance Team to undertake any required repairs.</p> <p>As part of its core Infrastructure and Environmental Services operations, the Renmark Paringa Council undertakes regular maintenance of plant and equipment to ensure all plant, equipment, and infrastructure is legally compliant, fit for purpose, and resilient to water related risks that would be potentially amplified by poorly maintained plant and equipment.</p>	
Fuel/chemical spill – pollution	<p>Diesel storage at Paringa Depot (Industry Road) is held in 4500 litre storage tank. The Station and tank have been constructed and manufactured to comply with SAI Global's AS1940, AS1692, AS1657.</p> <p>Any Chemicals are stored in the Chemical Shed at the Paringa Depot and used according to Material Safety Data Sheets held in a folder at the Depot. Chemical containers with decanting facilities are stored over bunding designed to contain spills or leaks.</p> <p>Pollution reporting: Any person (including licensee) who is responsible for a pollution incident is required by law to notify the EPA as soon as possible:</p> <ul style="list-style-type: none"> • Telephone: (08) 8204 2004 or 1800 623 445 (non-metropolitan callers) • Fax: (08) 8124 4670 • Email: epainfo@sa.gov.au 	None.
Circuit breaker tripping and sump pump switching off – effluent and stormwater overflow onto track	Dial out telemetry has been installed at the pump station to alert if there is a failure.	The incident occurred 21/04/2015 and was reported 21/04/2015. The overflow was cleaned up and repairs were made to a maintenance pipe.
Effluent tank leak through road surface due to blockage - contamination	Replaced blocked drain and pipe.	Incident occurred 24/12/2017 and reported 24/12/2017. Septic tank pumping services were called, and the area was high pressure cleaned. Temporary fencing was erected in the area to facilitate repairs and prevent access.
Valve on chlorine injection system failing (Wastewater Treatment Plant) – uncontrolled water release inside	Implemented a valve replacement schedule.	Incident occurred 31/10/2019 and reported 01/11/2019. The power and valves were isolated from pumps, and damaged section of injection system was

Incident	Mitigation	Incident Occurrence and Response
chlorine injection plant room		isolated. A contractor was called to vacuum sitting water.

2.3.2.3 Infrastructure Depot Staff Responsibilities

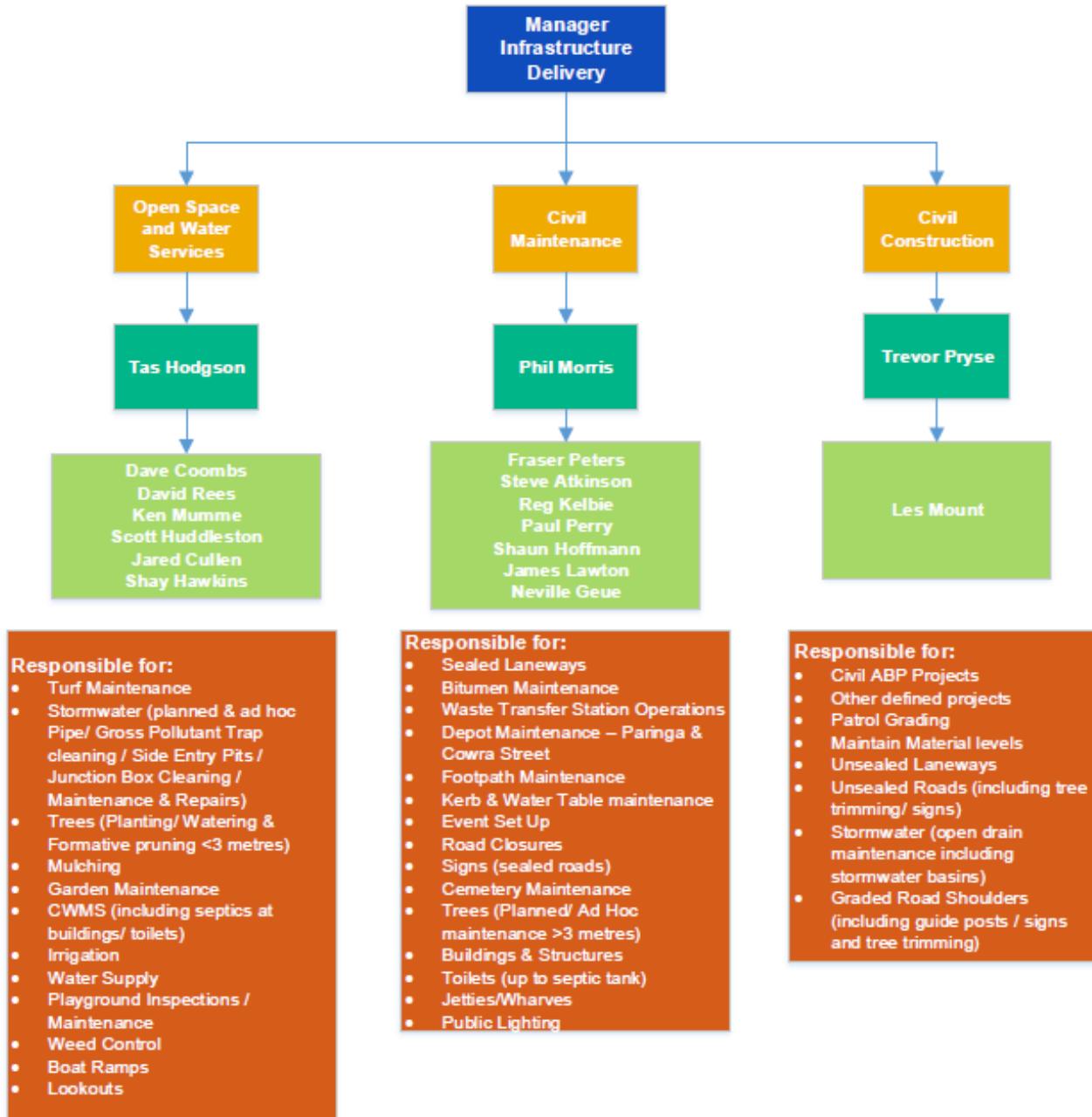


Figure 11: Renmark Paringa Council infrastructure depot staff responsibilities hierarchy.

2.3.2.4 The Water Wastewater Incident Notification and Communication Protocol

The Water/Wastewater Incident Notification and Communication Protocol (the Protocol) was established in 1999 between the Department for Health and Wellbeing (DHW), SA Water and EPA to ensure interagency communication and the development of a coordinated response to water and wastewater incidents that could potentially cause public health or environmental harm. (https://www.epa.sa.gov.au/files/4771365_protocol_ww.pdf)

Priority Type 1 and Type 1 incidents	EPA (where indicated), DHW, SAW	Immediately by telephone and within 24 hrs by email/hard copy
	EPA (where indicated)	As soon as practicable via the SA Water SAAM/fax system
	OTR (where indicated)	As soon as practicable by telephone or by email/hard copy
	LC, NRM, DEW, URE	Within 3 hrs by telephone where public notification required
	QEH (aluminium only)	Advised by DHW as soon as practicable by telephone
Type 2 incidents	EPA, DHW, OTR, SAW,	Within 24 hrs by email/hard copy

Incident Classifications (Water and Sewerage)	<p>Priority type 1 incidents are notifiable and have caused:</p> <ul style="list-style-type: none"> • death or serious impact on health, safety, environment and community (HSEC); • significant facility breakdown (impacting greater than 5000 customers for a major entity or greater than 20% of the customers for minor or intermediate entities); • significant private property damage (greater than \$1M for a major entity or greater than \$100,000 for minor or intermediate entities). <p>Type 1 incidents could cause:</p> <ul style="list-style-type: none"> • death or serious impact on HSEC; • significant facility breakdown (which impacts more than 5000 customers for major entities and/or property damage or greater than 20% of the customers for minor or intermediate entities); • significant private property damage (greater than \$1M for a major entity or greater than \$100,000 for minor or intermediate entities). <p>Type 2 incidents have resulted in:</p> <ul style="list-style-type: none"> • near miss of a HSEC nature; • facility breakdown (which impacts less than 5000 customers for major entities and/or property damage or less than 20% of the customers for minor or intermediate entities); • private property damage (less than \$1M for a major entity or less than \$100,000 for minor or intermediate entities). <p>As set out in the Dept. of State Development: Water and Sewerage</p>
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	Infrastructure Incident Notification and Communication Protocol V5 – January 2019 (https://www.epa.sa.gov.au/files/4771365_protocol_ww.pdf)
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2.3.3 RPC Water Balance

Summary of Water Used from Water Licences (2019/2020)⁴

Licence	2019/2020 Usage (ML)
RIT	326.263
CIT	38.445
DEW (RPC LICENSE WLBC759)	113.311
TOTAL	478.019

Breakdown of Water Used from RIT⁵ (2019/2020)

Supply	Site	Meter	Usage (KL)
RIT	Gregory Way Vegetation	2004	502
	Industrial Estate	4015	113,077
	Old High School	800030	1,100
	Cowra St Depot Plantation	800013	36
	Old Cemetery	504420	1,934
	Renmark Cemetery	504421	9,770
	Road Construction Standpipe	505210	418
	Swimming Pool	306030	9,126
	Price Park	209560	1,166
	Dix Park	110231	4,054
	RIT Feed to Treated Water	306050	107,141
	Jane Eliza	PD03	483
		PD20	3,647
		PD25	20,727
		PD26	18,618
		PD27	34,464
	TOTAL		326,263

⁴ Breakdowns of water used from water licences is provided as 51% of the water Renmark Paringa Council use is from these sources, so it is important to understand where this water is being used. The Wastewater Treatment Plants constitute 41% of Renmark Paringa Council water use, but this water is only used to irrigate public spaces in the district (outside of the River Murray Protection Zone).

⁵ Evidence available at Q:\COMMUNITY SERVICES\RP_Landcare\Grants and Projects\Alliance for Water Stewardship Certification\RPC Water Stewardship Plan\Supporting Evidence\RIT 19-20 Bill

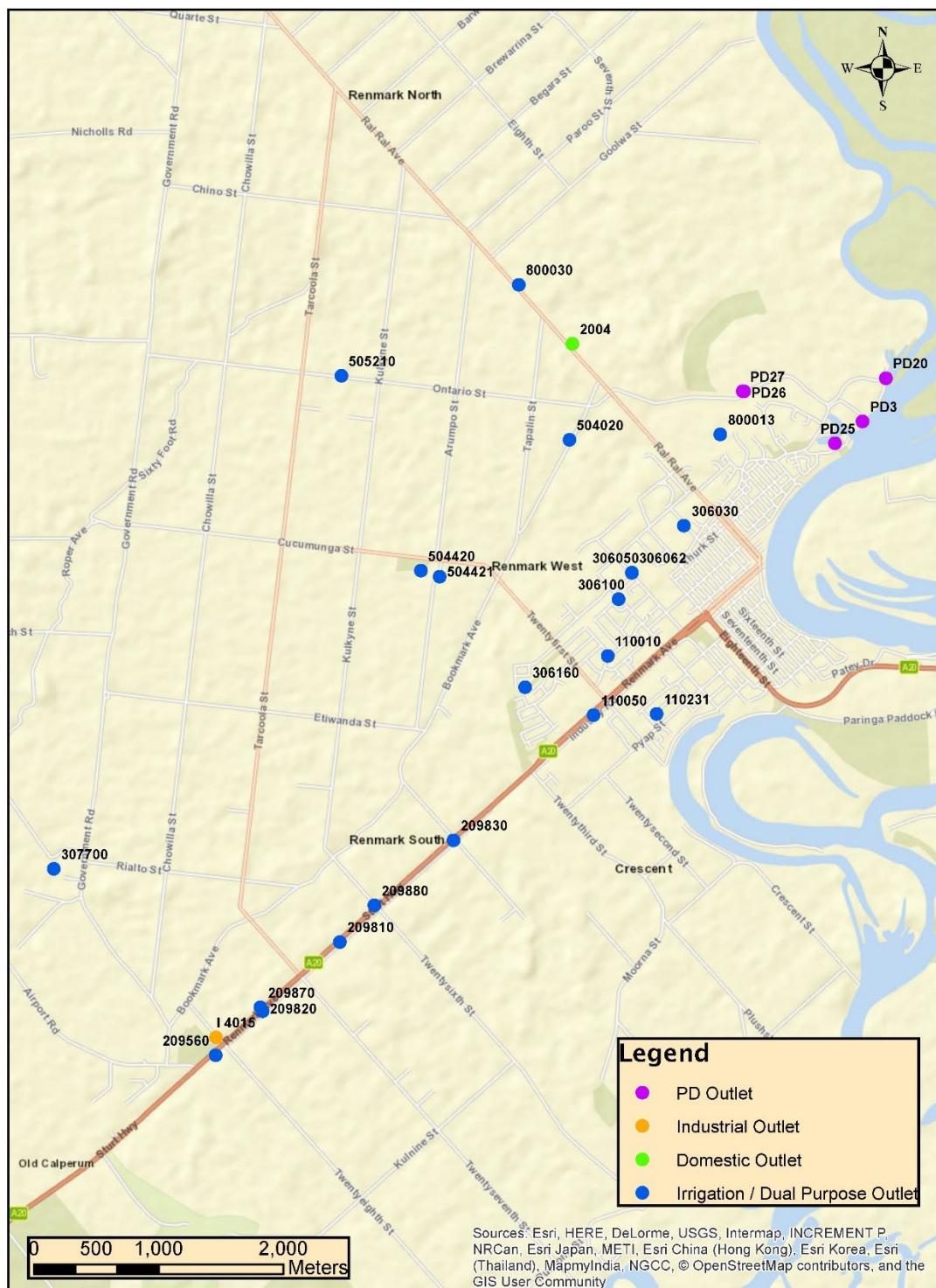


Figure 12: Map of Renmark Paringa Council RIT meter locations.

Breakdown of Water Used from DEW RPC LICENSE WLBC759⁶ (2019/2020)

Supply	Site	Meter	Usage (KL)
DEW (RPC LICENSE WLBC759)	Paringa Pumps	3071	26,479
	Rotunda Lawns	11864	41,026
	Murray Avenue Lawns	3025	10,300
	Bert Dix Park	N06-4354	18,227
	Club Lawns	2113131	2190
	Lions Park (Ski Club Lawns)	2052734	1385
	SS Ellen Park	2102459	11,239
	Riverfun Marina	77764	90
	Warriuka Marina	77800	2375
		TOTAL	113,311

Breakdown of Water Used from CIT (2019/2020)

Supply	Site	Meter	Usage (KL)
CIT	Lyrup Hall	71069	182
	Lyrup Oval	7107	38,263
		TOTAL	38,445

⁶ Latest DEW Water License usage data available at: <Q:\Infrastructure & Environmental Services\PARKS & GARDENS\IRRIGATION METER READINGS>

Renmark Wastewater Treatment Plant (2019/2020)⁷

Month	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTALS
Projected (ML)	8	10	15	20	30	35	35	35	25	20	15	8	256
CWMS In (ML)	18.50	23.46	20.53	20.96	25.52	20.21	26.63	20.79	20.71	20.19	26.71	16.02	260.23
RIT In (ML)	0.53	0.89	0.03	2.17	5.43	3.12	37.73	0.01	41.86	12.61	0.20	0.00	104.58
Out (ML)	13.20	18.83	20.93	35.24	44.65	41.18	44.12	36.02	45.61	22.89	16.63	11.25	350.55

Paringa Wastewater Treatment Plant (2019/2020)

Month	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTALS
Projected (ML)	1	1.25	1.5	2	3	4	4	4	3	2	1.5	1	28.25
CWMS In (ML)	4.34	5.14	4.12	3.91	4.36	3.09	4.37	3.35	3.21	3.37	4.88	3.12	47.26
Out (ML)	0.62	0.63	3.31	3.24	3.91	4.13	5.14	1.87	0.01	1.25	0.01	0.00	24.12

SA Water Potable Water Consumption (2019/2020)

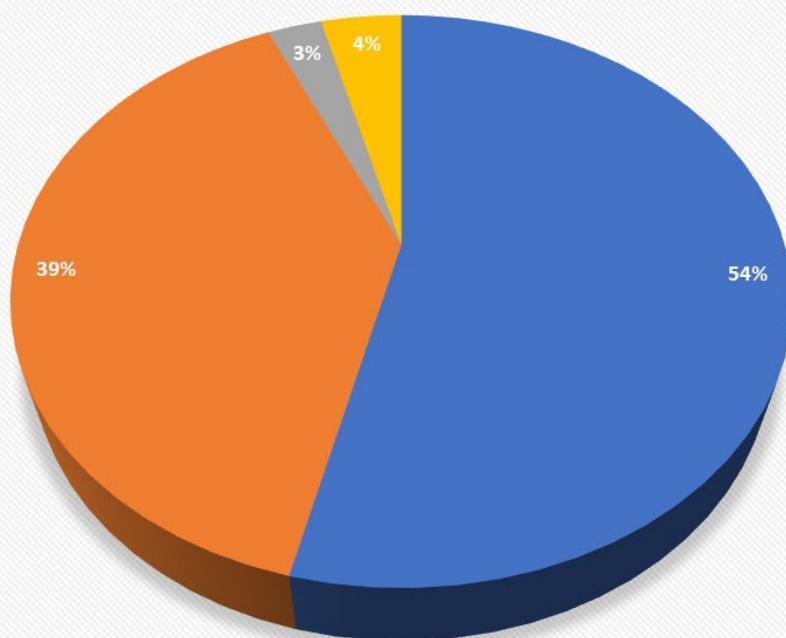
Month	Number of Meters Connected	Potable Water Consumption (ML)
Quarter 1	36	4.07
Quarter 2	36	2.18
Quarter 3	36	17.744
Quarter 4	36	11.74
	TOTAL	35.742

⁷ Latest WWTP data available at: <\\rpdcdc1\\council\\Infrastructure & Environmental Services\\PARKS & GARDENS\\WWTP Readings\\Renmark> and <\\rpdcdc1\\council\\Infrastructure & Environmental Services\\PARKS & GARDENS\\WWTP Readings\\Paringa>

Renmark Paringa Council Overall Water Use (2019/2020)

Water Use Area	Water Use (ML)
Water used from Water Licences	478.019
Renmark Wastewater Treatment Plant Water Use (Irrigation)	350.55
Paringa Wastewater Treatment Plant (Irrigation)	24.12
SA Water Potable Water Consumption	35.742
	888.431

Water Renmark Paringa Council Overall Water Use (2019/2020)



█ Water used from Water Licences
 █ Renmark Wastewater Treatment Plant Water Use (Irrigation)
█ Paringa Wastewater Treatment Plant (Irrigation)
 █ SA Water Potable Water Consumption

Figure 13: The 5 categories of Renmark Paringa Council overall water use in 2019/20 broken down into percentages.

Inflows (ML) (2019/2020)	
Water from Water Licences (Murray River)	478.019
SA Water Potable Water Supply	35.742
Municipal Wastewater	307.49
Rainfall ⁸	2132.556
	2953.807

Outflows (ML) (2019/2020)	
Water used from Water Licences (Murray River)	478.019
Renmark Wastewater Treatment Plant Water Use (Irrigation)	350.55
Paringa Wastewater Treatment Plant (Irrigation)	24.12
SA Water Potable Water Consumption	35.742
Stormwater ⁹	1066.27
Evaporation, Evapotranspiration, and Infiltration.	999.106
	2953.807

Water Balance (ML) (2019/2020)	
Inflows	2953.807
Outflows	2953.807
Balance	0

2.3.4 RPC Water Quality

2.3.4.1 Renmark Wastewater Treatment Plant

The Renmark WWTP is generally operating within limits. The chlorine plant is working effectively with sampling at sprinkler heads returning an average free chlorine of 0.2-0.5 ppm.

Council has a current project in the 2020/21 financial year to carry out major upgrades to the Renmark WWTP following the completion of an asset condition audit in 2018/19. The upgrade, which will be a design and construct project, aims to provide greater operational contingency by way of duplication of the existing plant. In addition to this the existing plant will have all plant and equipment replaced with modern high efficiency items.

Once a contract is awarded the principal contractor will work with Council through the design and approval phase – including DHW assessment and approval - prior to on-site works taking place.

⁸ Rainfall inflows are calculated from Bureau of Meteorology Renmark site mean annual rainfall (1981-2020) http://www.bom.gov.au/climate/averages/tables/cw_024016.shtml multiplied by the area (m²) in Renmark Paringa Council operations in the Council district (catchment capacity) (260.1mm*8,199,000 m²).

⁹ Stormwater runoff calculated by calculating volume of rainfall over the area (260.1mm / 1000) * 8,199,100) multiplied by the runoff coefficient (0.3). Council does not have instrumental measures for stormwater volumes in place.

2.3.4.2 Paringa Wastewater Treatment Plant

The Paringa WWTP is generally operating within limits. The chlorine dosing is working effectively with sampling at sprinkler heads returning and average free chlorine of 0.26-0.5 ppm.

Operators and management have been working through issues affecting the Suspended Solids results at the Paringa plant which we believe are due to low holding dam levels through the warmer parts of the year and issues with the UV filter equipment. Increases in sludge waste disposal durations has lowered suspended solids results, however this remains a challenge for operators.

Council has recently completed a project in the 2019/20 financial year to replace the UV treatment equipment at this site which aims to ensure more consistent E coli readings for this plant.

2.3.4.2.1 Wastewater Treatment Plant Maintenance and Inspections

The two WWTP's are inspected daily, and relevant information is recorded and kept on site and in excel spreadsheets. Inspections and recordings are carried out to monitor free chlorine, pH, SS and Ec levels. Pumping stations are inspected in a cyclic fashion during a period of not less than a fortnight.

Council has an ongoing maintenance program of desludging and cleaning of the gravity system and pump stations annually. Council regularly drains and assesses areas of the system to ensure that it operates effectively and to assess asset life. Council has an agreement with Trility to service and maintain the chlorination systems, and AWQC to analyse and report on our water samples.

2.3.5 Possible Causes of Pollution

Substance	Volume (L)	Storage
Diesel Fuel	4500 (maximum)	4500 litres elevated above ground tank with ladder, measuring devices, and bunding (AS1940, AS1692, AS1657) at Paringa Depot.
Roundup (Glyphosate)	Low Volumes	A compliant bunded chemical shed at the Renmark Sporting Complex.
Other chemicals as per inventory (Chem Alert)	Low Volumes	A compliant bunded chemical shed at the Renmark Sporting Complex and the Paringa Depot.

There is also potential that litter, debris, chemicals, and other residues commonly found in urban areas will find their way into nearby freshwater systems through stormwater. Council provides stormwater drainage systems in Renmark, Paringa and Lyrup. The stormwater in Renmark and Paringa discharges into the Murray River and Bookmark Creek through outlet structures, some of which are fitted with gross pollutant traps (see Section 2.1.3.1).

Additional Gross Pollutant Traps (GPT) will be installed at strategic locations according to the Infrastructure Asset Management Plan.

2.3.6 Important Water Related Areas

Please see 2.4.5 Location, Status and Future Trends of Catchment Important Water Related Areas. The important documents include the Renmark Paringa Council Corporate Plan (2021-2024), the Connecting and Rehabilitating the Lower Ral Ral Floodplain project plan, the Local Action Plan, the Environmental Watering Sites Map, the CEWH Environmental Watering Partnership Agreement, and the Renmark Environmental Watering Management Guidelines.

2.3.7 Annual Water Related Costs, Revenues and Value Generations

2.3.7.1 Community Wastewater Management Systems Forecast Expenditure

Operating: Operating budget includes costs associated with operating the asset and includes costs such as insurance, electricity, revaluation, and minor administrative costs. The current forecast Operating expenditure over the next 10 years is \$3,369,306.

Maintenance: Maintenance includes costs associated with maintaining the asset. Council currently has a contract in place to desludge septic tanks. The current forecast Maintenance expenditure over the next 10 years is \$2,030,213.

Capital – Renewal: Capital – Renewal is capital costs associated with renewing or replacing current assets and infrastructure (restoring to original service level). The current forecast Capital - Renewal expenditure over the next 10 years is \$2,518,750. The current forecast includes renewal of the Renmark Wastewater Treatment Plant in 20/21 for (\$1.6m).

Capital – New: Capital - New is capital costs associated with upgrading or creating new assets and infrastructure (above original service level). The current forecast Capital - New expenditure over the next 10 years is \$300,000.

SA Water Potable Water Consumption (2019/2020)				
Month	Potable Water Use Charge	Base Potable Water Charge	Sundry Charges	Totals
Quarter 1	\$11,918.39	\$3,201.00	\$109.90	\$15,229.29
Quarter 2	\$5,703.15	\$3,052.10	\$116.00	\$8,871.25
Quarter 3	\$13,488.01	\$3,126.55	\$116.00	\$16,730.56
Quarter 4	\$18,248.25	\$3,351.80	\$116.00	\$21,716.05
Totals	\$49,357.80	\$12,731.45	\$457.90	\$62,547.15

Other Water Related Costs		
Cost Description	Year	Expenditure
Right to take water	2019/2020	\$1,105.84

Annual Water Related Costs, Revenues and Value Generation (2019/2020)			
Water Related Cost	Operating Expenditure	Operating Income	Capital Expenditure
Renmark Wastewater Treatment Plant	\$891,918.31	\$1,289,467.55	\$0.00
Paringa Wastewater Treatment Plant	\$162,169.06	\$227,728.72	\$0.00
Renmark Industrial Estate ¹⁰	\$30,238.10	\$17,395.10	\$0.00
Renmark Irrigation Trust	\$36,431	\$0.00	\$0.00
Central Irrigation Trust	\$2,990.85	\$0.00	\$0.00
SA Water	\$62,547.15	\$0.00	\$0.00
Stormwater and Drainage	\$215,654.78	\$0.00	\$0.00
Irrigation Maintenance, Operation and Renewal ¹¹	\$85,004	\$0.00	\$0.00
Other Water Related Costs	\$1,105.84	\$0.00	\$0.00
Total	\$1,488,059.09	\$1,306,862.65	\$0.00

2.3.8 RPC Wash Access and Adequacy

2.3.8.1 Water

The Renmark Paringa drinking water is supplied by SA Water and comes from the River Murray. It is filtered and treated using chlorine and ultraviolet light at the local water treatment plant and fluoride is added for public health before being supplied to taps. SA Water manage South Australia's drinking water quality in line with our robust Drinking Water Quality Management System which ensures people are supplied with good quality, safe drinking water treated to meet the strict national standards set by the Australian Drinking

¹⁰ Renmark Paringa Council supplies water to the Renmark Industrial Estate. The water is pumped from an RIT meter into RPC water holding tanks, which is then utilised for industrial properties.

¹¹ The total forecast expenditure required to provide the Irrigation service in the next 10 years is estimated at \$716,827 in the Infrastructure and Asset Management Plan 2020 - 2030 (this incorporates maintenance, operating, capital - renewal and capital - new). This is an average of \$71,683 per annum.

Water Guidelines 2011 (ADWG)¹².

SA Water provide data from water quality testing across the state from a range of sources including reservoirs, treatment plants, tanks and in the community near homes and businesses that can be accessed at: <https://www.sawater.com.au/water-and-the-environment/safe-and-clean-drinking-water/your-tap-waters-quality-and-testing/your-drinking-water-profile>

2.3.8.2 Sanitation

The Renmark Paringa Council, and other private and public organisations in the Council region, from schools to shopping centres, provide access to toilets and sanitation facilities where fresh water, basins, toilets, and in some cases, showers, changerooms, and sharps disposals are available. As a result, the practice of defecating in the open (such as in fields, bushes, or by bodies of water) is very uncommon. A list of public toilets can be found in section 2.1.2.

2.3.8.3 Hygiene

In the Renmark Paringa region, the public facilities, homes, schools, and health centres have sealed floors and clean water for handwashing is almost always available. It is incredibly uncommon that community members in professional or domestic settings share spaces with domestic animals other than dogs and cats. Free pads and tampons will be made available in every public school across South Australia in 2021 to ensure girls do not miss school because they cannot access sanitary items. The grants will be allocated to schools by the end of the first school term in 2021. (<https://www.abc.net.au/news/2021-02-11/sa-school-sanitary-items/13146612>)

2.4 Catchment Water Related Data

2.4.1 Catchment Plans, Publicly Led Initiatives and Public Policy Goals

- **Department for Environment and Water Corporate Plan and Action Plan (2020-21):** The purpose of the plan is to help South Australians conserve natural resources, native species and natural places for their intrinsic value, and for peoples benefit now and into the future.

¹² The Australian Drinking Water Guidelines (ADWG) provides guidance to water regulators and suppliers on monitoring and managing drinking water quality. The ADWG provides details on the framework for Management of Drinking Water Quality (the Framework), a preventive management approach that encompasses all steps in water production from catchment to consumer, and aims to assure safe, good quality drinking water. The ADWG is used by state and territory health departments, local health authorities and water utilities.

(https://www.environment.sa.gov.au/files/sharedassets/public/corporate/about_us/de_w-corporate-plan-2020-21.pdf)

- **Water programmes in the Murray-Darling Basin**
(<http://www.agriculture.gov.au/water/mdb/programs>)
- **Environment Protection (Water Quality) Policy 2015:** The Environment Protection (Water Quality) Policy 2015 provides the structure for regulation and management of water quality in South Australian inland surface waters, marine waters and groundwaters. The main objective of the Water Quality Policy is linked to the Environment Protection Act 1993 (the Act) which is to ensure that all reasonable and practicable measures are taken to protect, restore and enhance the quality of the environment while having regard to the principles of ecologically sustainable development. The Policy specifically provides support to the Act in terms of:
 - What constitutes environmental harm (section 5 in the Act).
 - What are the general environmental duty requirements (section 25 in the Act).
 - What are the mandatory provisions which constitute offences (section 34 in the Act).

([https://www.legislation.sa.gov.au/LZ/C/POL/ENVIRONMENT%20PROTECTI%20\(WATER%20QUALITY\)%20POLICY%202015.aspx](https://www.legislation.sa.gov.au/LZ/C/POL/ENVIRONMENT%20PROTECTI%20(WATER%20QUALITY)%20POLICY%202015.aspx))
- **Sustainable Rural Water Use and Infrastructure Program:** a national programme investing in rural water use, management and efficiency, including improved water knowledge and market reform, and water purchase for the environment. SRWUIP is the key mechanism to 'bridge the gap' to the sustainable diversion limits (SDLs) under the Murray-Darling Basin Plan
(<https://www.agriculture.gov.au/water/mdb/programs/basin-wide/srwuip>)
- **South Australian River Murray Sustainability Program:** The South Australian River Murray Sustainability Program is administered by the South Australian Department of Primary Industries and Regions. The program aims to increase the efficiency and productivity of South Australian businesses, and secure and return 36 GL of long-term annual average yield 'gap bridging' water to the Commonwealth for environmental water use.
(<http://www.pir.sa.gov.au/sarms-iiip>)
- **MDBA Basin annual environmental watering priorities:** These Basin-wide environmental watering priorities build on local, regional and state priorities and represent annual steps needed to achieve the Basin Plan's long-term goals for native vegetation, waterbirds, native fish, and river flows and connectivity.
(<https://www.mdba.gov.au/publications/mdba-reports/basin-annual-environmental-watering-priorities>)
- **Commonwealth Environmental Water Office Water Management Plan 2020-21:** This document will inform decisions made by the Commonwealth Environmental Water Holder on how to best use the available water to benefit the environment of the Murray–Darling Basin.

(<https://www.environment.gov.au/water/cewo/publications#restoring-17>)

- **Murraylands and Riverland Landscape Plan and Regional Action Plan:** The NRM plan sets out a vision for how we can work together to secure a healthy environment that supports a diverse economy as well as the wellbeing of our communities, ecosystems, soils and water resources. It is a plan for community, business and government. The Regional Action Plan is a 3-5 year plan that provides information that can be used by a range of individuals, groups and organisations with an interest in landscape management, at local and regional scales, to guide investment priorities, inform project planning, form new partnerships, and identify areas of shared interest.
(<https://www.landscape.sa.gov.au/mr/about-us/our-regions-plan>)
- **Waterwatch:** Citizen scientists in schools and community groups, along with landholders and interested individuals have been assessing the health of waterways in the Murraylands and Riverland, and Hills and Fleurieu regions for more than 20 years as part of the community water monitoring program Waterwatch. Data collected by Waterwatchers gives us a better picture of water quantity and quality across the region. (<https://www.landscape.sa.gov.au/mr/get-involved/citizen-science/water-monitoring>)

2.4.2 Catchment Water Related Legal and Regulatory Requirements

- **Landscape South Australia Act (2019):** An Act to promote sustainable and integrated management of the State's landscapes, to make provision for the protection of the State's natural resources, to repeal the Natural Resources Management Act 2004 and to make consequential amendments to other Acts, and for other purposes.
(<https://www.legislation.sa.gov.au/LZ/C/A/LANDSCAPE%20SOUTH%20AUSTRALIA%20ACT%202019.aspx>)
- **Water Allocation Plan (WAP) for the River Murray Prescribed Watercourse:** The WAP provides for the sustainable management of water resources in the River Murray in South Australia, in accordance with the requirements in the NRM Act, and sets out the policies for a range of water allocation provisions. The Plan sets out the way in which the water resources of the River Murray PWC can be managed through principles addressing the take and use of water. Outlined below are the objectives of the Plan:
 - Provide allocations that contribute to the water needs of water-dependent ecosystems (WDEs).
 - Allocate water in a sustainable and equitable manner between different users.
 - Promote efficient use of water from the prescribed watercourse.
 - Contribute to fulfilling South Australia's obligations under Basin-wide plans and legislation.

- Contribute to the prevention of loss of condition, number or extent of refuge habitats and dependent aquatic biota of floodplains, wetlands, and sites of significance.
 - Contribute to the prevention of adverse impacts on water quality.
 - Contribute to the prevention of increased soil salinity and acid sulfate soils, and associated land management issues.
[\(https://www.landscape.sa.gov.au/files/sharedassets/sa_murray-darling_basin/water/allocation_plans/river_murray/2019_river_murray/new_folde/river_murray_wap_adopted_150420.pdf\)](https://www.landscape.sa.gov.au/files/sharedassets/sa_murray-darling_basin/water/allocation_plans/river_murray/2019_river_murray/new_folde/river_murray_wap_adopted_150420.pdf)
 - South Australia's River Murray water access entitlement holders will receive a 100 per cent water allocation in 2020-21
[\(https://www.environment.sa.gov.au/topics/river-murray/latest-news-announcements/water-allocations-and-announcements\)](https://www.environment.sa.gov.au/topics/river-murray/latest-news-announcements/water-allocations-and-announcements)
- **The Environment Protection Act 1993 (SA):** The Environment Protection Act 1993 (SA) is the main state legislation covering pollution and waste. The Act creates an Environment Protection Authority (EPA) - a statutory authority responsible for all aspects of pollution and waste. The EPA is run by a Board appointed by the State Government. The Act sets out a framework for policy development as well as providing for a licensing regime for polluting or potentially polluting activities.
[\(https://www.legislation.sa.gov.au/LZ/C/A/ENVIRONMENT%20PROTECTION%20ACT%201993.aspx\)](https://www.legislation.sa.gov.au/LZ/C/A/ENVIRONMENT%20PROTECTION%20ACT%201993.aspx)
- **Environment Protection and Biodiversity Conservation Act 1999 (the EPBC Act):** The Environment Protection and Biodiversity Conservation Act 1999 (the EPBC Act) is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places — defined in the EPBC Act as matters of national environmental significance.
[\(http://www.environment.gov.au/epbc/\)](http://www.environment.gov.au/epbc/)
- **Safe Drinking Water Act 2011:** The aim of the Safe Drinking Water Act 2011 (the Act) and Regulations is to improve protection of drinking water quality by providing direction to drinking water providers on how to achieve safety and how it can be measured. The Act is designed to provide a practical cost effective approach with requirements tailored to reflect the complexity and size of individual water supplies.
[\(https://www.sahealth.sa.gov.au/wps/wcm/connect/c82785004e88f18496bd9e3a30168144-nwMC5t5\)](https://www.sahealth.sa.gov.au/wps/wcm/connect/c82785004e88f18496bd9e3a30168144/Safe+Drinking+Water+Act+Summary+-public+health-water+quality-20130211.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-c82785004e88f18496bd9e3a30168144-nwMC5t5)

2.4.3 Catchment Water Balance, Future Supply and Demand Trends

- **Murray Darling Basin Authority (MDBA) Weekly River Reports:** The Murray Darling Basin Authority (MDBA) provides updates on operations, river flows, storage inflows, gauge levels, rainfall and salinity data.

(<http://www.mdba.gov.au/river-information>)

- **Department for Environment and Water (DEW) Water Allocations and Announcements:** The amount of water available for users in a year varies according to rainfall, inflows into storages and how water in storage is managed by the Basin states. At the start of each water year (1 July), each Basin state (DEW responsible in SA) makes water allocation announcements based on seasonal availability.
(<http://www.environment.sa.gov.au/managing-natural-resources/river-murray/water-allocations>)

2.4.4 Catchment Water Quality Data, Status and Future Trends

2.4.4.1 Salinity

Overview

- Salt is a natural feature of the Murray Darling Basin. Because of the flat land, low rainfall and high rate of evaporation, the salt has become concentrated within the soil and groundwater. SA Water monitor the River Murray and provide salinity reports daily. Salt Interception Schemes divert saline groundwater and drainage water before it enters rivers. SA Water manage these schemes on behalf of the Murray-Darling Basin Authority in South Australia
(<https://www.sawater.com.au/water-and-the-environment/south-australias-water-sources/river-sources/river-reports-daily-salinity>)

Catchment Management

The MDBA and Basin state governments work together to manage salinity in the Basin.

- The Basin salinity management strategies (currently the Basin Salinity Management 2030 strategy) were developed to ensure that salinity levels are appropriate for the protection of economic, environmental, cultural and social values. The current strategy is being implemented together by the Australian Government and Basin state governments. This strategy will remain in place until 2030.
- The Basin Plan Water Quality and Salinity Management Plan was created to improve water quality and manage salinity in the Basin. It builds on existing rules and sets objectives and targets to improve the water in the Basin, so water is good enough for environmental, social, economic, and cultural uses.
- The MDBA keeps a register of salinity 'credits' and 'debits' to keep track of actions that increase salinity in the river system and how they are offset by actions to decrease river salinity. (<https://www.mdba.gov.au/issues-murray-darling-basin/salinity>)

Regional Management

The Murraylands and Riverland Landscape Board propose to amend the water allocation plan in relation to Environmental Land Management Allocations (ELMA) as well as other minor changes. A draft WAP highlighting proposed policy changes was released for public consultation from 28 September 2020 until 2 December 2020.

(https://www.landscapesa.sa.gov.au/files/sharedassets/sa_murray-darling_basin/water/allocation_plans/river_murray/2020_river_murray/elma_review_sept_2020/website_clean_version_draft_rmwap_0920.pdf).

Since the late 1980s until recently, there was an increased focus on measuring water use efficiency (WUE) of irrigation within the River Murray region, particularly after research linked drainage below the root zone of irrigated crops to increased saline regional groundwater flows into the river floodplains and river channel. WUE efficiency targets (85% for the River Murray Irrigation Management Zone) were included in the previous River Murray WAP (2002) and imposed as a condition on site use approvals (i.e., a compliance mechanism) supported by annual reporting requirements. However, the practicalities of imposing the WUE target as a condition on site use approvals (i.e., a compliance mechanism) was described as “difficult” and so the existing WUE targets were replaced with the following principles in the new WAP for the River Murray Prescribed Watercourse (adopted 3 October 2017) for the River Murray Irrigation Management Zone:

- All site use approvals for the purposes of irrigation are subject to the following condition:
 - A person who has the benefit of a site use approval must use or apply water using water efficient technologies and techniques, appropriate for the circumstance and in accordance with industry best practice standards, and/or consistent with the *Pressurised Irrigation Best Management Practice Guidelines* (Rural Solutions 2013a).
- Annual reporting requirements have been retained:
 - If required by way of notice in writing from the Minister, a person who has the benefit of a site use approval and has used water in the River Murray or Lower Murray Irrigation Management Zones, must provide to the Department by 31 August of each year an annual water use report for the previous water-use year.
 - An annual water use report required by Principle 102 must include the following data:
 - Location, time period or irrigation season dates, rate and volume of water applied;
 - Crop type or purpose for water application;
 - Type of irrigation or other water delivery system;

- Use and type of soil moisture monitoring equipment, where utilised;
- Drainage and groundwater salinity information, where measured;
- Any changes to irrigation systems, equipment, crop type or area, or any other practice change that has contributed to variation in water use;
- Any other information required by the Minister.
[\(<https://www.landscape.sa.gov.au/mr/water/water-allocation-plans/river-murray-wap>\)](https://www.landscape.sa.gov.au/mr/water/water-allocation-plans/river-murray-wap)

2.4.2.2 Quality and Pollutants

The main water quality problem in the River Murray relates to water management and the need to maintain sufficient water levels in the main channel to limit saline inflows upstream and problems associated with Lower Murray Irrigated Reclaimed Area (LMRIA) discharges in the lower weir pool (downstream of Mannum).

The Millennium Drought highlighted that low river levels will exacerbate water quality risks in terms of some metal exceedances of drinking water standards. Modelling and water quality testing undertaken by the EPA and DEW indicated plumes of saline, low pH, metal laden turbid water leaving LMRIA drains into the River Murray and eventually dissipating through dilution within the main channel. The Murray–Darling Basin Authority, DEW, SA Water and EPA have been monitoring these water quality risks since the Millennium Drought and will continue to do so on an ongoing basis.

Other sources of pollution of concern to the EPA include:

- Septic leakage from housing adjacent to the river and floodplain areas.
- Contaminated stormwater runoff from developed land areas.
- Sand dumping from creating beaches (often associated with vegetation removal).
- Managing black and grey water from vessels.
[\(\[https://www.epa.sa.gov.au/environmental_info/water_quality/programs/river_murray\]\(https://www.epa.sa.gov.au/environmental_info/water_quality/programs/river_murray\)\)](https://www.epa.sa.gov.au/environmental_info/water_quality/programs/river_murray)
- **MDBA Water Quality Monitoring:** As a requirement of the Murray–Darling Basin agreement, the River Murray water quality monitoring program was established to monitor water quality on an ongoing basis. The MDBA manages this program on behalf of Basin governments, maintaining a uniform system for measuring, analysing and presenting data to create a picture of current and long-term river health within the River Murray system. Under the program, water samples are collected at regular intervals from 28 sites along the River Murray and across its tributaries in New South Wales, Victoria and South Australia. Samples from each of these sites are analysed for a range of characteristics, including:
 - electrical conductivity (indicator of salinity)
 - pH (indicator of acid or alkali)
 - temperature

- turbidity
 - total phosphorus and total nitrogen
 - soluble organic carbon
 - silica
 - sulphate and bi-carbonate
 - chlorophyll and phaeophytin (indicators of algal health).
(<https://www.mdba.gov.au/water-management/river-operations/water-quality/monitoring>)
 - Snapshot overview of where water quality issues are likely across the Basin.
(<https://www.mdba.gov.au/water-management/mdbas-river-operations/water-quality>)
- **SA Water Drinking Water Profile:** SA Water carry out more than 370,000 water tests in their laboratories each year. Using SA Health approved monitoring programs, they regularly monitor and test drinking water with trained testers producing more than 1000 water test results every day across the state. They provide a search tool to find details about the quality of the tap water at home or at work.
(<https://www.sawater.com.au/water-and-the-environment/safe-and-clean-drinking-water/your-tap-waters-quality-and-testing/your-drinking-water-profile>)

2.4.5 Location, Status and Future Trends of Catchment Important Water Related Areas

The wetlands, floodplains, anabranches, and main river channel of the River Murray are part of the River Murray Prescribed Water Resource. They provide critical ecosystem services to the social, economic and ecological systems of the Riverland district. The relevant regional status, future trends, and associated plans can be found in 2.4.1. The below table outlines Renmark Paringa Council management actions to date in regards to important water related areas in the district:

Ecologically Important Water Related Area	Renmark Paringa Council Management Actions
Ral Ral Floodplain	<ul style="list-style-type: none"> ● Supporting the development of an options analysis paper to support the revival of the Ral Ral Floodplain (2012) ● Partnered with RIT and NFSA to deliver environmental water to Johnsons Waterhole (2013) ● Collaborated with RIT, NFSA and SAMDB NRM to revegetate Johnsons Waterhole and surrounds (90 community members engaged, and 700 trees planted) and install permanent environmental watering infrastructure connected to the RIT mainline (2014) ● Managed a revegetation event at Johnsons Waterhole for National

	<p>Tree Day 140 local primary school students from Renmark West Primary School and St. Joseph's Primary joined Renmark Paringa Council to plant 550 native plants (2017)</p> <ul style="list-style-type: none"> Developed a Ral Ral Floodplain SEB Site Management Plan to support the establishment of a Ral Ral Floodplain SEB area for 226 hectares of the site (2019). Developed the Connecting and Rehabilitating the Lower Ral Ral Floodplain project and secured funding from DEW to support the project for 5 years (2019). Enhanced connectivity across the Lower Ral Ral Floodplain through the construction and enhancement of 2.5 kilometres of flow paths and the construction of a regulating structure (2020) Managed a 2-day event where 830 trees were planted by 60 volunteers, community members, RPC staff, and RIT staff on the Lower Ral Ral Floodplain (2020). Secured additional funding for the Connecting and Rehabilitating the Lower Ral Ral Floodplain Project to conduct extensive upgrades to the Ral Ral Creek and Johnsons Waterhole inlet and road crossing (2021).
Bookmark Creek	<ul style="list-style-type: none"> Managed a viewing platform launch event involving 14 community members (2018). Upgraded Bookmark Creek Wetland Trail and supported a guided community tour event of the Bookmark Creek Wetland Trail (2017). Supported and managed the Bookmark Creek Indigenous Art project (2017). Supported a revegetation day planting 65 trees on the Twenty Third Street Distillery site (2017). Developed a project to establish a canoe trail and install a viewing platform and secured funding (\$20,000 through the Riverine Recovery Project) and successfully implemented the project (2017-2018). Supported the Pitts Regulator removal (barrier to flow in Bookmark Creek) and revegetation of the former site (2018). Managed a community Bookmark Canoe Trail launch event with 20 community members canoeing the creek (2018). Funded and managed the Bookmark Creek Access Rationalisation project (2019) Supporting the Bookmark Creek Action Group by managing grant funding, supporting grant applications, ecological monitoring events, supporting working bees, supporting events and activities, providing a group meeting location, and maintaining communication (2012-2021). Advocated for removal of barriers to flow in Bookmark Creek and improvements to hydrology (2016-2021) and extensively collaborated with DEW and the community to provide feedback, guidance and support for the Sustaining Riverland Environments Bookmark Creek project (2021).
Paringa Paddock	<ul style="list-style-type: none"> Managing the construction of the Paringa Paddocks Trails and the community launch event (2017). Collaborated with National Parks and Wildlife Service SA and DEW in the proclamation and inclusion of Paringa Paddocks in the Murray River National Park (formerly Council land) (2019).
Riverland	<ul style="list-style-type: none"> Supported the Murtho Park Landholders, Templeton Wetland Action

Ramsar site (including Templeton and Woolenook wetlands)	<p>Group, Whirlpool Corner Wetland Group, and Weila Landholders with project development, grant applications, approvals, monitoring, provision of advice, meeting support, and notification of relevant grant and training opportunities (2016-2018)</p> <ul style="list-style-type: none"> • Supporting the Woolenook Wetland Association to deliver environmental water to the Woolenook Wetlands (2017). • Collaborating and supporting the annual Chowilla Twilight Tours (2017-2018). • Maintaining a membership and active engagement in the Chowilla Community Reference Committee. (2012-2021).
The Pike floodplain and anabranch	<ul style="list-style-type: none"> • Supported meetings for the Pike River Land Management Group and provided newsletters to the community on progress with initiatives (2014) • Supported a National Tree Day event where 8 group and community members planted 100 natives adjacent to the Pike Floodplain and Sturt Highway (2017). • Supporting the Renmark Paringa Lyrup Bush Friends group by managing grant funding, supporting grant applications, supporting working bees, supporting events and activities (2012-2021). • Supporting the ongoing rehabilitation and restoration of the Pike floodplain and anabranch through involvement, attendance and contributions at DEW organised events, tours and consultations (2018-2021)
Plushs Bend	<ul style="list-style-type: none"> • Managed the first environmental water delivery to the site through NFSA before permanent RIT delivery infrastructure was able to be installed (2018). • Managed the My Health River Toolkit Tour at Plushs Bend where 15 community members attended and participated in workshops at the environmental watering site (2018) • Supported the construction of the Plushs Bend environmental watering site infrastructure (2020) • Developed and secured funding for the Plushs Bend Environmental Watering Community Monitoring project, supporting community interaction, and understanding of the Plushs Bend site, and the impacts of environmental water (2020)
Dishers Creek	<ul style="list-style-type: none"> • Supported the ongoing engagement with DEW, NFSA, and RIT surrounding environmental water delivery to the Dishers Creek environmental watering sites as identified in the Management Guidelines (2019-2021)
Calperum Station	<ul style="list-style-type: none"> • Supported the North Calperum Volunteer Group with grant applications and reporting (2014). • Assisted ALT running a workshop for Rotary youth, providing a macroinvertebrates lesson (2016). • Supported the Kids on Country program at Calperum Station, providing in-kind staff support (2018)
Floodplains and wetlands adjacent to the Renmark irrigation district	<ul style="list-style-type: none"> • Collaborated with and supported RIT to support the first CEWH Partnership Agreement to deliver water to the Renmark floodplains adjacent to the irrigation district (2016). • Collaborated with RIT to support the CEWH grant to provide permanent infrastructure for 5 watering sites (2017). • Supported a Renmark Floodplain tour with the Environmental Watering Committee, with representatives from partner organisations, locally, and nationally attending (2017).

	<ul style="list-style-type: none"> • Proposed a new method for monitoring and evaluating environmental watering outcomes at sites that would increase ability to adaptively manage the sites, increase ability to engage the community, and reduce FTE requirements (2018). • Developed the Operational Monitoring Plan to guide monitoring activities to meet contractual obligations with the CEWH and enable adaptive management of the environmental watering sites (2018). • Surveyed potential future environmental watering sites providing technical support, information pertaining to Council infrastructure, and guidance on boundaries (2018). • Created an environmental watering monitoring and infrastructure delivery schedule (2019-2024) (2019). • Wrote the 2018/2019 Renmark Environmental Watering Operational Monitoring report for the CEWH which was reviewed and accepted by the CEWH in September 2019 (2019). • Contributed to the development of a 5-year watering schedule that provides for the delivery of 3.7 GL of environmental water between 2020 and 2024 (2019). • Collaborated with and supported RIT in establishing a 5-year CEWH Partnership agreement (2020-2024) and funding for 2 years infrastructure works (2019). • Secured funding for and supported the construction of the Paroo and Begara Street environmental watering sites (2019). • Assisting in the development of an ArcGIS Online portal illustrating Renmark environmental watering sites, monitoring points and projected inundation levels (2019). • Contributed to updating the Management Guidelines for the Environmental Watering Sites Adjacent to the Renmark Irrigation District by AM and MJ Harper (2019) • Conducted ecological monitoring at active environmental watering sites to meet CEWH Partnership Agreement contractual obligations and enable adaptive management (2018-2020). • Secured funding for and supported the construction of the Warrego Street environmental watering site (2021). • Supported the construction and establishment of the Bookmark Creek Wetlands Main Basin and Bookmark Creek Wetlands North East Basin environmental watering sites (2021).
Council land, land under Council care and control, and other sites of ecological significance in the Renmark Paringa Council District	<ul style="list-style-type: none"> • Secured funding for and managed a project to release 50,000 Murray Cod fingerlings into the River Murray (2017) • Managed community project releasing 75,000 Murray Cod fingerlings into the River Murray across 3 Riverland locations (2018). • Managed the Renmark Paringa MEGA Murray Darling Microbat Project, facilitating citizen scientists gather data on bat populations in the district (2018). • Developed, managed, and secured funding for the first Riverland BioQuest, supporting community members to make 492 sightings and 2,123 identifications, and 195 species mapped in the region (2018). • Developed, managed, and secured funding for the Renmark School Holiday BioQuest project, supporting local school children connect with the natural environment and contribute to biodiversity data in the district (2020).

General activities to support the above management actions:

- Developed a 10-year Local Action Plan to guide local NRM efforts which was developed through extensive consultation with local community, industry, and all levels of government (2014)
- Engaged and supported 16 NRM focused community groups and supported them in achieving their goals, provided in-kind support, assistance with grants, events, projects, meetings and working bees as necessary (2014-2018)
- Maintained membership on and support for the Renmark Environmental Watering Committee, which has included in kind contributions of the RPC Environmental Officer to drive initiatives, and has included an elected member (Cr Peter Hunter) (2016-2021)
- Employed an Environmental Officer in a permanent full time position to deliver on NRM projects and initiatives for the community (2019).
- An MoU was signed between Renmark Paringa Council and Renmark Irrigation Trust to share resources to deliver strong environmental outcomes for the local area and the Renmark Paringa Council Environmental Officer position became a shared resource between the two organisations (2019).
- RPC sent a delegate to attend the 2019 World Water Week in Stockholm to network, exchange ideas, foster new thinking and develop solutions to the most pressing water-related challenges to the Renmark Paringa community (2019).
- Development of a Water Stewardship Plan, and pursuit of AWS certification (2021)

Aboriginal values:

This region supported large populations of Aboriginal people, who flourished with fertile hunting grounds. The lakes, rivers, wetlands were highly valued as a food source and lifeline for Aboriginal people. Along these areas are traditional hunting and camping grounds and, the abundance of good food and water allowed for rich cultural practices to develop. The animals in this region are significant to traditional owners through a totem connection, there are many middens, burial sites, scar trees and gathering sites throughout the region.

2.4.6 Reports or Plans Assessing Catchment Water Related Infrastructure

- **SA Water Domestic supply infrastructure**
[\(https://www.sawater.com.au/community-and-environment/water-quality/in-your-area-whats-in-your-water/renmark\)](https://www.sawater.com.au/community-and-environment/water-quality/in-your-area-whats-in-your-water/renmark)

2.5 Indirect Water

Electricity is the primary input for Renmark Paringa Council, which provides an opportunity for engagement and impact with providers¹³:

Input	Input Usage by RPC (2019/20)
Infigen Energy ¹⁴	421,423.40 kWh
Origin Energy ¹⁵	772,624 kWh
Input	Input Usage by RPC (2019/20)
Diesel	88,584.46 litres
Petrol	6685.74 litres
Chemicals	An estimated 350 litres per year (the majority of which is glyphosate)

2.5.1 Outsourced Water

Service	Contractor	Service Usage by RPC (2019/20)	
Waste Management	Cleanaway PTY LTD	Waste Type	Tonnes
		Concrete and Rubble	542.46
		Council Transfer Station Waste	430.92
		Kerbside Putrescible Waste	2,129.81
		Mattresses and Gas Cylinders	0.02
		Mixed Waste	27.99

¹³ Per the AWS IWSS defined as: “The materially important product(s) or service(s) that a site consumes to generate the product(s) or service(s) it provides as its primary function. This can be thought of as the “main ingredients” that a site needs to run (e.g., aluminium, sugar (cane), CO₂, water and oranges, as well as an outsourced “cleaning service” for a site producing a canned orange drink with bubbles). Note: primary inputs do not include infrastructure. Primary inputs should include any externally procured goods or services that account for over 5 per cent of the total weight of the goods generated, or 5 per cent of the costs of a site. For example, lumber, energy and water likely would be some of the primary inputs for a pulp and paper facility. Aggregate, energy and water likely would be the primary inputs for a mineral smelter. Fertilizer, seeds and water likely would be the primary inputs for a vegetable grower. Note: In the case that there is an input that does not meet this generic threshold (e.g., it is only 3 per cent by cost) but is significant in its water use these should be included (if known).”

¹⁴ Infigen Energy generation portfolio: <https://www.infigenenergy.com/for-customers/knowledge-centre/analyse-our-electricity-generation/>

¹⁵ Origin Energy generation portfolio: <https://www.originenergy.com.au/about/who-we-are/what-we-do/generation.html>

		Tyres	0.03
		Kerbside Recycling	617.20
Cleaning	Corporate Cleaning Property Services	Daily cleaning at the Civic Centre 3x weekly at the Visitor Information Centre Weekly at the Airport Terminal Building Weekly at the Depot Building Daily at the Soldiers Memorial Hall Daily at the Renmark Avenue Toilets 3x Weekly at the Paringa Town Toilets 3x Weekly at Bert Dix Park Toilets 2x Weekly at Patey Drive Toilets 2x Weekly at Plushs Bend Toilets 3x Weekly at Price Park Toilets 2x Weekly at the Renmark Cemetery Toilets Daily at the James Avenue Toilets 3x Weekly at the Renmark Oval Grandstand Toilets Daily at the Darnley Taylor Park Toilets 2x Weekly at the Kindergym Building Toilets 3x Weekly at the New Landing Way Toilets 2x Weekly at the SS Ellen Park Toilets	

2.6 Catchment Shared Water Related Challenges

The Catchment Shared Water Related Challenges were formulated at the 14 April 2021 Stakeholder Workshop. The Catchment Analysis (Section 2.4) was provided as a guide for discussions. The feedback from this workshop led to the development of the 6 priorities below. Renmark Paringa Council have established an annual process for stakeholders to review efforts to address these shared water challenges (as per target 1.10 in the Water Stewardship Plan).

Based on the Catchment Analysis (Section 2.4) and stakeholder engagements to date (Section 5 and 6), the shared water-related challenges affecting the catchment(s) are:

Priority	Challenge	Catchment-level Management	Site-level Management
1	Water security	MDBA MDB Plan, DEW water allocations, SA Water	<p>Licence compliance (see section 2.1.2)</p> <p>Water security for irrigated agriculture, which underpins our local economy, is going to be challenged. This is addressed through Council's support for innovation and diversification in the Corporate Plan (2021-2024):</p> <p>Goal 2.1.1¹⁶: To have agility and resilience in our traditional industries:</p> <ul style="list-style-type: none">• Continue to collaborate with the Renmark Paringa Network to support the development of existing businesses and attract new businesses. <p>Goal 2.1.2: To have growth, diversification and industries that attract skilled people:</p> <ul style="list-style-type: none">• Pursue opportunities on Council land that have the potential to attract economic opportunities.• Actively support the development of market development opportunities and encourage inward investment.• Proactively promote the region to industries that require centralised access to southern and eastern markets. <p>Goal 2.3.1: To have development and greater economic value generated</p>

¹⁶ Outcomes and goals in this table are a reference from the Renmark Paringa Council Corporate Plan (2021-2024).

		<p>from tourism.</p> <p>Goal 2.4.1: To have regional access to technology that assists in improving industry competitiveness.</p> <p>Goal 3.2.2¹⁷: To advocate for better water quality and security.</p> <ul style="list-style-type: none"> • Work proactively with the State and Federal Government to advocate for improved water security and quality for the benefit of industry, the natural environment, and the community. <p>Improving water use efficiency and maintaining a sustainable water balance at local level and industry wide will be essential. This includes reducing indirect water usage, and is addressed in the Corporate Plan (2021-2024)</p> <p>Goal 3.1.2: To have investigated and implemented further renewable and energy efficiency opportunities.</p> <ul style="list-style-type: none"> • Complete Renmark wastewater treatment plant upgrades. • Investigate methods of further expanding Council's productive recycling of wastewater and reducing reliance on the River Murray. • Complete the roll out of the LED streetlight program. • Review the energy efficiency of Council's assets. • Set a target for energy efficiency savings and renewable energy use and commence implementing opportunities with the greatest return. <p>This is also supported through projects and initiatives which address key water security:</p> <ol style="list-style-type: none"> 1. Completion of the '3IP Project' to increase the reuse percentage of treated effluent waste water in the community 2. Reducing the amount of River Murray water used to irrigate public open space by upgrading existing waste water treatment facilities. 3. Maintaining, renewing, and upgrading the Community Wastewater Management System. 4. Maintaining, renewing, and upgrading the stormwater drainage system. 5. Maintaining, renewing and upgrading Irrigation system assets.
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¹⁷ Outcomes and goals in this table are a reference from the Renmark Paringa Council Corporate Plan (2021-2024).

2	Water quality	EPA, MDBA MDB Plan, DEW, SA Water, Murtho SAS, Pike River SAS, RIT and CIT linkage to SAS.	<p>Water availability and quality will be negatively affected in coming years as The Murray-Darling Basin annual flow is likely to fall 10 to 25 percent by 2050, and 16 to 48 percent by 2100, which is projected to correlate with a 16 to 19 percent salinity increase by 2050. In addition, it is projected that heavy metals, fluoride, chlorine, pesticides, herbicides, plastics, pharmaceuticals, and other contaminants that are not actively measured will continue to pollute the Murray-Darling Basin. Good water quality is supported in the Corporate Plan (2021-2024):</p> <p>Goal 3.2.2¹⁸: To advocate for better water quality and security.</p> <ul style="list-style-type: none"> • Work proactively with the State and Federal Government to advocate for improved water security and quality for the benefit of industry, the natural environment, and the community. <p>Good water quality is also supported through compliance, projects, and initiatives:</p> <ol style="list-style-type: none"> 1. Compliance (EPA, DHA, ESCOSA and wastewater regulatory and operational standards as per 2.1.2) 2. Management and operation of the Community Wastewater Management System and Stormwater Drainage System. 3. Pollution control through the maintenance, renewal, and upgrades to the stormwater drainage system (including gross pollutant traps) 4. Compliant chemical and fuel management. 5. Test treated water, maintain chlorination systems, and have water samples independently analysed and reported on.
3	The declining ecological health of floodplains and wetlands and natural resource	MDBA MDB Plan, CEWH, DEW, Murraylands and Riverland Landscape Board Plan	<p>The natural environment surrounding Renmark Paringa has been degraded through human influence, predominantly through agriculture and economic development. This also includes the regulation of the river and historical practices such as floodplain irrigation. The declining ecological health impacts social and economic outcomes, and as such, is recognised as a key issue, and addressed in the Corporate Plan (2021-2024):</p> <p>Outcome 3.4: We are advocating for positive environmental outcomes.</p>

¹⁸ Outcomes and goals in this table are a reference from the Renmark Paringa Council Corporate Plan (2021-2024).

	management		<p>Goal 3.4.1: To have a clean, healthy and thriving natural environment.</p> <ul style="list-style-type: none"> • Continue to support environmental watering activities. • Advocate for State and Federal funding to support regional environmental outcomes. • Undertake proactive education campaigns with local schools and the broader community in regard to environmental management. • Work proactively with the State Government in regard to biosecurity outcomes. <p>This is also supported through projects and initiatives that address ecological decline in the RPC district:</p> <ol style="list-style-type: none"> 1. Collaboration with and support provided to RIT for environmental watering activities. 2. RIT Commonwealth Environmental Watering Partnership Agreement. 3. Connecting and Rehabilitating the Lower Ral Ral Floodplain Project (5-year project) 4. RPC Corporate and Community Plan commitment to have a clean, healthy, and thriving natural environment. 5. Support and collaboration for the Sustaining Riverland Environments Bookmark Creek project. 6. Implementation of the Renmark Paringa Landcare Action Plan, and support for the committee (<i>historically</i>) 7. Support for local NRM groups and organisations. 8. Educate and involve local schools and the broader community in natural resource management activities (especially those related to environmental watering). 9. NRM levy payment.
4	Adapting to a hotter and drier future	MDBA MDB Plan, CEWH, DEW Climate Change Action Plan 2021–2025, Murraylands and Riverland Landscape Board Plan	<p>It is important to adapt operations and assets to a changing climate and build adaptive capacity and resilience into the community considering climate change and a future that is very likely to be warmer and drier. Public infrastructure and plantings will need to be considered within the context of a hotter and drier climate and the welfare of more vulnerable members of the community during extreme heat.</p> <p>This is addressed through Council's commitment to sustainability in its Corporate Plan (2021-2024) through building resilience and adaptability into the community:</p>

		<p>Outcome 3.1¹⁹: We are planning for and adapting to a changing climate.</p> <p>Goal 3.1.1: To have assets and operations that are designed to account for less rainfall, higher temperatures, and extreme weather variation.</p> <ul style="list-style-type: none"> • Develop a Tree Strategy (<i>otherwise known as an urban forestry strategy</i>) • Implement Tree Strategy. • Develop a policy position in relation to climate change adaptation. • Embed climate adaptation policy principles through the Infrastructure and Asset Management Plan and all other plans for new capital works and asset management. <p>Goal 3.1.2: To have investigated and implemented further renewable and energy efficiency opportunities.</p> <ul style="list-style-type: none"> • Complete Renmark wastewater treatment plant upgrades. • Investigate methods of further expanding Council's productive recycling of wastewater and reducing reliance on the River Murray. • Complete the roll out of the LED streetlight program. • Review the energy efficiency of Council's assets. • Set a target for energy efficiency savings and renewable energy use and commence implementing opportunities with the greatest return. <p>This is also supported through projects and initiatives supporting climate change adaptation and mitigation:</p> <ol style="list-style-type: none"> 1. Collaboration with and support provided to RIT for environmental watering activities rehabilitating RPC and RIT land, reducing the heat island effect and influencing microclimate. 2. Supporting the RIT Commonwealth Environmental Watering Partnership Agreement which enables environmental water delivery to RIT and RPC land. 3. Connecting and Rehabilitating the Lower Ral Ral Floodplain Project (5 year project)
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¹⁹ Outcomes and goals in this table are a reference from the Renmark Paringa Council Corporate Plan (2021-2024).

5	Waste management	<p>Waste management will continue to become a more significant and more expensive problem, particularly as the international market for recycling becomes smaller. The challenge exists to lead the community to reduce, reuse and recycle and prevent contamination and pollution in waterways. This is addressed in the Corporate Plan (2021-2024):</p> <p>Outcome 3.5²⁰: We are pursuing innovative waste solutions.</p> <p>Goal 3.5.1: To have waste volumes reduced.</p> <ul style="list-style-type: none"> • Proactively educate the community on waste reduction, reuse, recycling and the correct use of the waste streams. • Review commercial waste contracts and implement the regional 2020-2025 Waste and Resource Recovery Strategy. <p>Goal 3.5.2: To have circular economy opportunities investigated.</p> <ul style="list-style-type: none"> • Investigate commercial waste to resource opportunities that are viable for Council or the private sector to implement. • Partner to implement opportunities where it is commercially viable to do so. <p>This is also supported through projects and initiatives:</p> <ol style="list-style-type: none"> 1. Management and operation of the Community Wastewater Management System and Stormwater Drainage System. 2. Pollution control through the maintenance, renewal, and upgrades to the stormwater drainage system (including gross pollutant traps) 3. Investigating the feasibility of a waste disposal facility both locally and regionally.
6	Public amenity	<p>The River is a significant attraction in Renmark Paringa, offering a unique and diverse outdoor experience for family activities and is the biggest drawcard for intrastate travellers. The public green spaces and sporting and recreational facilities are important to the community and its way of life, but demand water for maintenance and operation. The challenge to provide this</p>

²⁰ Outcomes and goals in this table are a reference from the Renmark Paringa Council Corporate Plan (2021-2024).

		<p>amenity and experience considering water related concerns and limitations has been addressed through the Corporate Plan (2021-2024):</p> <p>Goal 3.3.1²¹: To have community infrastructure and assets that are well maintained, actively utilised and fit-for purpose.</p> <ul style="list-style-type: none"> • Continually review the condition and the use of our infrastructure and assets. • Develop and implement asset management plans that ensure that infrastructure and assets are fit-for-purpose and meet community expectations. <p>Sustainable, high-quality, innovative urban design and amenity is also supported through projects and initiatives:</p> <ol style="list-style-type: none"> 1. Urban Design Framework (make Renmark the place to relax and enjoy the Riverland lifestyle, bringing life and activity to the town centre, and reviving its economy through a series of transformative projects) 2. Upgrades to the Renmark Outdoor Swimming Pool that will see the installation of a walk-in access ramp, installation of a wet deck and vital pumping and filtration infrastructure upgrades resulting in water efficiencies and reduced operating costs. 3. Management and operation of the Community Wastewater Management System which provides recycled water for use in these spaces, accounting for 350.55 ML (35% of all RPC water use) in 2018/2019.
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²¹ Outcomes and goals in this table are a reference from the Renmark Paringa Council Corporate Plan (2021-2024).

2.7 Site Water Related Risks and Opportunities

The Renmark Paringa Council Community Plan (2020-2030) is informed by long term evidence based social, economic, and environmental trends. These trends constitute the Council's Long Term Strategic Directions and provide an outline of the key emerging trends that are likely to influence the Renmark Paringa community. It offers an indication of what the plausible future may look like and what the evolving challenges and opportunities may be. The Long-Term Strategic Directions is designed to be a live document that is constantly evolving²².

Although these challenges and opportunities are not all water related, there are some key areas that have a significant indirect relationship with water, such as economic dependency on water intensive agriculture. As such, the following are some major high-level challenges and opportunities related to water relevant to the Renmark Paringa Council:

Economic Trends

Key Points:

- Renmark Paringa's economic growth is currently occurring at a faster rate than state or national averages.
- Renmark Paringa is highly reliant on the agriculture sector, which is the most productive sector and the sector with the greatest exports.
- The local reliance on agriculture supports two of the largest South Australian exports; wine and fruit/vegetables.

Community Challenges & Opportunities:

- Renmark Paringa's local economy is comparatively strong. While there is a number of different product segments that form the local agriculture sector, the high degree of reliance on one industry does carry some risk. It would be highly advantageous for our community to collectively work towards having greater diversity in the local economy.
- The three highest performing industries are all reliant on maintaining efficient transport linkages.
- Renmark Paringa is geographically well placed in south-eastern Australia from a logistics perspective.

²² While the document is developed by Renmark Paringa Council, it is developed for our broader community. Many of the big picture trends that are considered within the document are broader than the remit of the Council to individually address, but it provides the necessary context to understand the broader scope in order to provide the direction for Council.

Climate and Water Trends

Key Points:

- The Murray Darling Basin will be facing a hotter and drier future.
- Water availability and quality will be negatively affected, which will have a detrimental effect on irrigated agriculture.
- Climate change adaptation, as opposed to mitigation, will be essential.

Community Challenges & Opportunities:

- Water security for irrigated agriculture, which underpins our local economy, is going to be challenged. Longer droughts and warmer temperatures may challenge the viability of some crops. Improving water use efficiency at local level and industry wide will be essential.
- Public infrastructure and plantings will need to be considered within the context of a hotter and drier climate.
- The welfare of more vulnerable members of the community during extreme heat.

Waste Trends

Key Points:

- Waste management will continue to become a more significant and more expensive problem, particularly as the international market for recycling becomes smaller.

Community Challenges & Opportunities:

- The challenge exists to lead the community to reduce, reuse and recycle.
- An opportunity exists to create new industries, specialising in waste to resources and the circular economy, that generate resources from waste.

In addition, In 2009, the RIT undertook an Irrigation Modernisation Plan study that sought to provide a blue-print for the future of irrigated horticulture in Renmark. It highlighted several key issues facing RIT (and therefore Renmark), including:

- The influence of climate change on water salinity and water security.
- The escalating incidence of pipeline breakages in the irrigation water supply system.
- The outdated water ordering system, which restricts water supply availability during peak summer demand periods.
- A short-term reduction in irrigation area due to irrigator attrition caused by financial pressures arising from the current drought.
- The identification of more suitable economic and environmentally sustainable alternative irrigation areas.
- The need to reconfigure the irrigation areas in the district to provide irrigators with access to better soils.

- The ability to access private and/or Government funding to modernise irrigation infrastructure to ensure a sustainable future through efficient irrigation and horticultural practices.

	Helpful	Harmful
Internal	<p>Strengths</p> <ul style="list-style-type: none"> • Council is well respected in the community, with 82% of Community Survey respondents rating Council's performance as good or excellent. • With minimal debt, Council has a moderate capacity to borrow for long term capital. • Council has the capacity to exhibit good leadership from both an elected member & staff perspective. 	<p>Weaknesses</p> <ul style="list-style-type: none"> • Council is financially constrained, with operating deficits forecast until 2029. • Council has historically raised less revenue than specified in the Long Term Financial Plan in order to operate sustainably.
External	<p>Opportunities</p> <ul style="list-style-type: none"> • Council has the opportunity to more closely collaborate with other Councils in order to achieve regional benefits. • Our enviable lifestyle as well as quality infrastructure and open space is attractive for net positive migration. • The local economy is growing faster than State/National averages. • Geographically central location & transport accessibility to Eastern/Southern Australian markets. • Tourism has the potential to further grow & economically contribute. • Uplift in technology access & inclusion. • Waste management challenge can present a significant opportunity. 	<p>Threats</p> <ul style="list-style-type: none"> • Our population is aging quickly. • Most health outcomes are less favourable than in the City. • While criminal offences have slightly reduced, perception of safety has declined. • High reliance on agriculture, with other sectors represented but much smaller. • A comparatively small number of higher skill jobs in the local economy. • Loss of school leavers for higher education opportunities. • The region will experience a hotter and drier climate in the future. • A number of trends (eg related to demographics and climate) consider challenges that have the potential to compromise the viability of the region.

Figure 3: a high-level overview analysis of Renmark Paringa Councils overall strengths, weaknesses, opportunities, and threats.

Based on the status of the Renmark Paringa Council, and the catchment challenges identified in Section 2.6, the current water risks and opportunities affecting the site are:

2.7.1 RPC Water Related Risks

Priority	Risk	Likelihood	Consequence	Site-level Management	Potential Saving/Value Creation
1	Pesticides contaminating soils, watercourse, and food, - impacts on human and ecosystem health	High	High: substantial unintended consequences affecting human health, industry, and the environment. High: financial and regulatory.	Use is avoided in windy conditions and blanket spraying is avoided where possible.	Opportunity to develop an integrated pest management policy that promotes environmentally sensitive pest management practices while preserving assets, protecting the environment and the health and safety of the public, and council employees.
2	Fuel, chemical, herbicide or pesticide spill – watercourse, and soil contamination	Medium	High: environmental impact due to watercourse and soil contamination High: financial and regulatory	All fuel and chemicals are handled and stored in compliance with all Australian guidelines and regulations.	Investigate opportunities to improve processes related to storage and use beyond compliance towards best practice.
3	Contaminated stormwater runoff in developed areas - watercourse, and soil contamination	Medium	High: contributing to decreasing health of the Murray River, connected freshwater systems, and dependent flora, fauna, and communities.	Gross pollutant traps installed at some outlets.	Opportunity to investigate contaminant profile of urban runoff and respond appropriately to findings.
4	Damage to Community Wastewater Management System damage – watercourse, and soil contamination and inability to treat effluent	Low	High: effluent may cause contamination if damage leads to spillage. Medium: financial costs associated with temporary measures required.	Telemetry monitoring on the CWMS network and a 24/7 callout response availability.	Identifying problematic pieces of infrastructure with high failure rates and replacing with innovative new technology that decreases operating and maintenance

Priority	Risk	Likelihood	Consequence	Site-level Management	Potential Saving/Value Creation
					costs and increases water efficiency.
5	Increasing average temperatures and decreasing rainfall – stress on the natural environment, assets, infrastructure, and community viability	High	Medium: financial costs associated with adaptation. Medium: increased demand for water resources and associated stress on environmental systems.	Long-Term Strategic Directions and Corporate Plan that consider and address these risks.	Positive economic, social and environmental outcomes due to enhanced sustainability and liability.
6	Increasing salinity – impacts on agriculture and the natural environment	Medium	High: community viability is compromised, and declining biodiversity is an inevitability.	Community support (RIT, CIT) for Murtho and Pike salt interception schemes (SA Water, MDBA and DEW).	Ability to assess water related activities interactions with salinity and address issues at a site level where viable and appropriate.
7	Degrading natural environment due to human impacts and lack of environmental water	High	High: economic and social viability is closely entangled with environmental health.	Projects, initiatives, and strategies as outlined in 2.4.5 and 2.6.	Support for continued commitment to ecological rehabilitation and restoration.
8	Wastewater pollution through illegal discharge – watercourse, and soil contamination	Low	Low: financial Medium: environmental impact due to watercourse and soil contamination.	Ensure all wastewater generated from properties in the Council area are discharged through an approved system. New developments required to connect to Council's CWMS system. When a CWMS connection is not available, onsite wastewater disposal will be permitted subject to design by a wastewater	Promote Community Wastewater Management System (CWMS) services.

Priority	Risk	Likelihood	Consequence	Site-level Management	Potential Saving/Value Creation
				engineer and Council approval to reduce environmental pollution risks.	
9	Damage to water delivery infrastructure – not able to supply water	Low	Low: financial	Infrastructure mostly underground. An Open Space and Water Services Team member or Manager Infrastructure Delivery is always on duty or on call. The on-call Open Space and Water Services Team member has the authority to call in the Civil Maintenance Team to undertake any required repairs.	Identifying problematic pieces of infrastructure with high failure rates and replacing with innovative new technology that decreases operating and maintenance costs and increases water efficiency.
10	Damage to stormwater infrastructure – flooding and potential pollution and watercourse contamination	Low	Low: financial Medium: environmental impact due to watercourse and soil contamination	As per priority 8.	Identifying problematic pieces of infrastructure with high failure rates and replacing with innovative new technology that decreases operating and maintenance costs and increases water efficiency.
11	Inadequate flows and poor hydrology in Jane Eliza development – stagnant water, hypoxic blackwater and associated dangers to nearby residents	Medium	Medium: impacts on human health and wellbeing as the water provides a breeding ground for mosquitoes, parasites, and bacteria.	A transfer pump has been installed to transfer water from the main lagoon to the back lagoon, and water quality is ad hoc monitored in response to issues.	Investigate and support initiatives that improve hydrological conditions in the Jane Eliza development, increasing liability.
12	Damage to irrigation	Low	Low: financial	As per priority 8	Identifying problematic

Priority	Risk	Likelihood	Consequence	Site-level Management	Potential Saving/Value Creation
	infrastructure – unable to irrigate ovals, tennis courts, streetscapes, verges, and surrounds		Medium: damage to amenity dependent on irrigation, and potential loss of use for community.		pieces of infrastructure with high failure rates and replacing with innovative new technology that decreases operating and maintenance costs.
13	Power outage (pumps) exceeding 24 hours – not able to supply water	Low	Low: financial	Telemetry is installed at pumps to monitor condition.	Investigate alternative and back-up energy supply.
14	Inappropriate black and grey water disposal - watercourse, and soil contamination	Low	Medium: environmental impact due to watercourse and soil contamination	RV dup point located at the swimming pool car park.	Opportunity to support community understanding and knowledge of the Community Wastewater Management System (CWMS) services.
15	Extreme rain event – flooding	Low	Low: risk to stormwater infrastructure	Action as per the Storm Response Procedure.	RPC can supply, source, and operate portable pumps for the community.
16	Exceed allocation	Low	Low: financial and regulatory	Monthly and annually recorded monitoring (allocation is excess of needs).	Reduce dependency on River Murray water.
17	Low river – not being able to pump water	Low	Medium: Not able to maintain assets and infrastructure dependant on pumped water Low: financial	Government managed: water allocations.	Support implementation of MDB plan.
18	Increasing indirect water use as climate changes.	High	Low: financial Medium: impact on sustainability and efficiency.	Corporate and community plan focus on increasing energy efficiency.	Incentive to sustainable use of resources reducing operating costs.
19	Lack of transparency, public	Low	Low: lack of community buy in and support.	Legislative requirements for reporting that	Opportunity to improve information,

Priority	Risk	Likelihood	Consequence	Site-level Management	Potential Saving/Value Creation
	knowledge of initiatives, and collaboration and coordination of efforts to address water related challenges.		Medium: missed opportunity to achieve mutually beneficial outcomes through collaboration.	ensure good governance and transparency.	knowledge sharing and transparency beyond baseline legislative requirements.
20	Weir pool manipulation and environmental watering impacts on mosquito populations	High	High: Transmission of mosquito-borne diseases within the community that are fatal or a serious risk to public health	<ul style="list-style-type: none"> • Implement the Riverland Integrated Mosquito Management Plan (RIMMP) • Undertake environmental watering activities with consideration given to potential mosquito breeding potential. • Apply control measures when required to reduce mosquito larvae numbers 	Protection of the community from serious public health diseases

2.7.2 RPC Water Related Opportunities

Priority	Opportunity	Potential Saving/Value Creation
1	Become Alliance for Water Stewardship certified.	<p>Certification involves creating a Water Stewardship Plan which provides guidance for Council on water related practices based on identified risks and opportunities. This invariably leads to economic, social and environmental benefits which flow on from water and energy efficiencies.</p> <p>Certification tiers will incentivise Council to be more invitational to educational groups and conduct more community engagement surrounding water stewardship. This has been shown to increase community support, innovation uptake and water efficiently at a household level.</p> <p>Social license through independent certification that would give Council voice,</p>

Priority	Opportunity	Potential Saving/Value Creation
		and a seat at a table (educational groups, politicians, media, committees, and trials for innovation).
2	Eliminate and reduce causes of soil and waterway contamination and pollution through the use of pesticides in routine Renmark Paringa Council operations: Develop an integrated pest management policy.	Develop an integrated pest management policy that promotes environmentally sensitive pest management practices while preserving assets, protecting the health and safety of the public, and council employees
3 (ongoing)	Facilitate change in communities across the MDB by demonstrating how to commit to the responsible use and management of water resources and promote the responsible use of water that is socially, economically, and environmentally beneficial to all.	Support positive change in other communities, which will enable enhanced collaboration and information sharing opportunities. Opens opportunities for RPC to trial new technologies and secure funding to continue innovating in the water space due to reputational gains.
4 (ongoing)	Adapt operations and assets to a changing climate through the integration of Water Sensitive Urban Design (WSUD) into planning and development processes. Build adaptive capacity and resilience into the community considering climate change and a future that is very likely to be warmer and drier.	A community and infrastructure that is prepared for the future. This creates a resilient community and reduces costs associated with reactive adaptation.

Priority	Opportunity	Potential Saving/Value Creation
5 (ongoing)	Social license to operate (positive perception and buy in from stakeholders and community) and continued maintenance and implementation of water related infrastructure aligned with best practice for water quality and water balance.	Employment of staff, social, economic and environmental initiatives, and degree of engagement with and integration into the Renmark Paringa and Riverland Community.
6 (ongoing)	Restoration and rehabilitation of Renmark Paringa wetlands and floodplains	<p>Improved amenity, community wellbeing and increased tourism. Tourism is increasing in the Renmark Paringa region and the Councils commitment to rehabilitating the natural environment is a contributor.</p> <p>In 2017/18, the total tourism and hospitality sales in Renmark Paringa Council area was \$38.0m, the total value added through the local tourism industry has increased from \$18.6m in 2011/12 to \$21.2m in 2017/18.²³</p>

²³ See: <https://economy.id.com.au/rda-murraylands-riverland/tourism-value>. Value-add is defined as the value of sales generated by the tourism industry, minus the cost of its inputs to production (including labour, materials, services purchased, depreciation etc).

3. Water Stewardship Plan

3.1 RPC Water Related Legal Compliance System

RPC Legal-Compliance Manager: Tim Pfeiffer (Director Corporate and Community Services)

The below water-related compliance requirements overview will be updated annually upon compliance verifications from external regulators:

Regulation (Regulatory Body)	Compliance System	Person Responsible	Compliance at last check?
Office of the Technical Regulator	Creation, review, and update of a Safety, Reliability, Maintenance and Technical Management Plan.	Tarik Wolf	Yes
Water Licence (DEW)	Monthly and annually recorded monitoring and quarterly meter read submissions to DEW.	Tas Hodgson	Yes
Water Act 2007 water market rules (ACCC)	Annual Report to ACCC.	Tarik Wolf	Yes
Infrastructure Works Planning Approval (Local Government)	Obtain planning approvals prior to works.	Tarik Wolf	Yes

3.1.1 Water-related Legal and Regulatory Requirements

Area of Regulation	Legal and Regulatory Requirements	Verification of Legal and Regulatory Requirement Compliance and Other Information
Water Quality, Wastewater Treatment Plant and Discharge Standards	<p>Wastewater irrigation and stormwater discharge: The Renmark Paringa Council operations and associated Wastewater Treatment installations and stormwater infrastructure complies with the following codes, standards, criteria, and guidelines:</p> <ul style="list-style-type: none"> • Guidelines, Design Criteria and Standards for Community Wastewater Management Schemes (Local Government Association of South Australia) • Sewerage Code of Australia (WSA 02) and any SA Water supplementary documentation. • Sewage Pumping Station Code of Australia (WSA 04). • AS/NZS 3500: Plumbing and drainage. • AS/NZS 2031: Water quality - Sampling for microbiological analysis (ISO 19458:2006). 	<p>The Electricity Act 1996, Gas Act 1997 and Water Industry Act 2012 require Renmark Paringa Council to prepare and periodically revise a safety, reliability, maintenance and technical management plan (SRMTMP) at the request of the Technical Regulator and/or the Essential Services Commission of SA.</p> <p>Renmark Paringa Council is also required by the Office of the Technical Regulator (OTR) to prepare and periodically revise an SRMTMP.</p> <p>The Renmark Paringa Council SRMTMP describes how it complies with the requirements</p>

Area of Regulation	Legal and Regulatory Requirements	Verification of Legal and Regulatory Requirement Compliance and Other Information
	<ul style="list-style-type: none"> • AS/NZS ISO 3100: Risk management - Principles and Guidelines. • The National Construction Code (NCC) • Volume 3 Plumbing Code of Australia (PCA) including South Australian Variations and/or Additional Provisions. • Standard Form: Technical Specification- Construction of Septic Tank Effluent Drainage Schemes (DH, LGA). • Septic Tank Effluent Drainage Scheme Design Criteria (DH, LGA). • South Australian Bio-solids Guidelines for the Safe Handling, Reuse or Disposal of Bio-solids (EPA). 	<p>of legislation as well as relevant standards and codes. These standards and codes form the technical framework for ensuring high levels of safety and reliability in the operation of the electricity, gas and water industry entities. It provides a mechanism to compare safety and reliability expectations with actual performance. It also provides an auditable quality approach to each industry's safety</p> <p>Renmark Paringa Council are required to comply with the approved SRMTMP and conduct annual audits to ensure compliance with the plan. The results of these audits are be reported to the OTR. The OTR may also independently audit the entities to confirm compliance with the SRMTMP.</p> <p>A Technical Regulator Field Audit for Renmark Paringa Council was conducted 11 March 2021 and an audit assessment report has been produced. A workplan has been developed to address any requirements or recommendations. Existing regulatory approvals documented in the Renmark Paringa Council SRMTMP are also listed in 2.1.2.6.</p> <p>Renmark Paringa Council is a water retailer that has ongoing monitoring and reporting obligations to the Essential Services Commission of South Australia (ESCOSA) in respect of three areas: Compliance Reporting, Operational Performance Reporting and Financial Reporting. An annual compliance report is required, which has been signed off and approved for 2019/2020, and is due in December 2021 for 2020/2021 period.</p>

Area of Regulation	Legal and Regulatory Requirements	Verification of Legal and Regulatory Requirement Compliance and Other Information
	<p>The EPA is responsible for the control of stormwater pollution through the Environment Protection Act 1993 (EP Act). It provides the regulatory framework to protect the South Australian environment and is supported through a suite of subordinate legislation and regulatory tools including the Environment Protection (Water Quality) Policy 2015 (the Water Quality Policy).</p>	<p>Each year a licensee is required to submit an annual return to the EPA 90 days before the anniversary date of the licence.</p> <p>The annual return provides information used to calculate the annual licence fee and confirms licensee details such as registered name and contact details. The Renmark Paringa Council EPA Licence Numbers are 2206 and 2053, which have had 2020 returns submitted and accepted for.</p>
Water volume limits	<p>RPC DEW Licence 759: Division 2, 52 of the Landscape South Australia Act 2019 outlines that a regional landscape board must prepare a water allocation plan. The current Water Allocation Plan for the River Murray Prescribed Watercourse (the water allocation plan WAP) is in place to manage and protect the river for all water users, and to make sure that water use is sustainable. Water is allocated to South Australian entitlement holders (<i>RPC DEW Licence 759</i>) according to the rules in the WAP. A water allocation is the percentage of a licensed water user's entitlement available to them in a given year.</p>	<p>The WAP provides for the sustainable management of water resources in the River Murray in South Australia, in accordance with the requirements in the NRM Act, and sets out the policies for a range of water allocation provisions. The Plan sets out the way in which the water resources of the River Murray PWC can be managed through principles addressing the take and use of water.</p>
WASH requirements	<p>The provision of save, accessible and hygienic public toilet facilities: The Code of Practice for the Provision of Facilities for Sanitation and Personal Hygiene under the South Australian Public Health Act 2011 and the National Construction Code (NCC) provides guidance for building owners to ensure that facilities for sanitation and personal hygiene are appropriate and compliant.</p> <p>The provision of clean and safe water: The Renmark Paringa drinking water is supplied by SA Water and comes from the River Murray. It is filtered and treated using chlorine and ultraviolet light at the local water treatment plant and fluoride are added for public health before being supplied to taps. SA Water manage South Australia's drinking water quality in line with our robust Drinking Water Quality Management System which ensures people are supplied with good quality, safe drinking water treated to meet the strict national standards set by The Australian Drinking Water Guidelines (ADWG).</p>	<p>The provision of safe, accessible, and hygienic public toilet facilities is an important function of local government. As an Authorised Officer under the Public Health Act, the Renmark Paringa Council Environmental Health Officer applies the Code of Practice for the Provision of Facilities for Sanitation and Personal Hygiene. If a complaint regarding the standard of public toilet facilities is made, this Code is applied.</p> <p>Renmark Paringa Council maintains these facilities but does not inspect them to ensure compliance after initial construction, it is only on a complaint basis. The Public Health Wastewater Regulations ensure these facilities are built to the plumbing standards, which are verified by the Environmental Health Officer at the time of</p>

Area of Regulation	Legal and Regulatory Requirements	Verification of Legal and Regulatory Requirement Compliance and Other Information
		construction.
Water trade	RPC water trade: Any RPC water trade is governed by the Water Act 2007 water market rules (ACCC).	An annual report is submitted to the ACCC.
Environmental regulations to protect water bodies and conservation areas from pollution	<p>Natural resource management: The Landscape South Australia Act 2019 supports and enhances ecologically sustainable development by establishing an integrated scheme to promote the use and management of the natural resources that make up or contribute to our State's landscape in an integrated manner.</p> <p>Environmental regulations and protections: The Environment Protection Act 1993 (SA) is the main state legislation covering pollution and waste. The Act creates an Environment Protection Authority (EPA) - a statutory authority responsible for all aspects of pollution and waste.</p> <p>The Environment Protection and Biodiversity Conservation Act 1999 (the EPBC Act) is the Australian Government's central piece of environmental legislation</p>	The EPA is run by a Board appointed by the State Government. The Act sets out a framework for policy development as well as providing for a licensing regime for polluting or potentially polluting activities. The EPBC Act provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities, and heritage places — defined in the EPBC Act as matters of national environmental significance. Each year an EPA licensee (as RPC is) is required to submit an annual return to the EPA 90 days before the anniversary date of the licence.
First peoples water rights	<p>First Peoples of the River Murray and Mallee are recognised native title holders in the Riverland region of South Australia (SAD6026/1998 determined 18 November 2011) and entered into the River Murray and Crown Lands Indigenous Land Use Agreement (ILUA) with the Crown of South Australia in 2012. A native title determination was made in favour of the Ngarrindjeri (SAD6027/1998) on 14 December 2017. The current Water Allocation Plan for the River Murray Prescribed Watercourse (the water allocation plan WAP) accounts for and acknowledges these rights, and integrates aboriginal water related cultural objectives and outcomes.</p>	<p>For thousands of generations Aboriginal people of the river nations have cared for Murrundi (River Murray). The lands and water were formed by creation ancestors and is the cultural responsibility of the river nations of First Peoples of the River Murray and Mallee, Peramangk and Ngarrindjeri. The management of water sources shaped this cultural landscape that sustained Aboriginal culture and economy.</p> <p>The WAP acknowledges this connection and associated rights and integrates that into objectives and outcomes. Renmark Paringa Council is subject to the WAP and water licence conditions through DEW.</p>

3.2 RPC Water Stewardship Strategy

To achieve continued improvement of Renmark Paringa Council water performance, and to provide sound stewardship of water consistent with the needs of our community and our natural systems, Renmark Paringa Council will embed water stewardship into its Corporate Plan (2021-2024) ensuring that:

1. A Water Stewardship Plan is developed.
2. AWS certification is pursued.
3. Certification is maintained or improved.

The Renmark Paringa Council Water Stewardship Plan will be endorsed by Council and formally adopted to guide water related projects and operations. The Water Stewardship Plan will include a Leadership Commitment and Water Stewardship Policy to support continuity in the commitment to water stewardship at all levels of the organisation.

3.3 RPC Water Stewardship Plan

Objective	Target	Metric(s)	Action/Implementation	Cost/Benefit	Link(s) to catchment/site risks/opportunities (Section 2.6, 2.7)	Responsible Staff	Start Date	End Date
Good water governance	(1.1) Development of a Water Stewardship Plan that evaluates water related risks, opportunities and provides clear actions.	A Water Stewardship Plan adopted by Council and made available on the Council website.	Continue to update the Water Stewardship plan and make it publicly available and update, as necessary.	Costs: Staff resourcing. Benefits: Creating a plan that will enable the sustainable and responsible use of water that is socially, economically, and environmentally beneficial to all. Understanding water related challenges, risks, and opportunities and creating a plan to address them.	Catchment challenge priority: all Site risk priority: all Site opportunity priority: all	Environmental Officer	October 2020	July 2021
	(1.2) Development of a water stewardship policy in the light of a water stewardship commitment.	A one-page policy drafted, endorsed, signed, and made available on the Council website.	Continue to display policy and make it publicly available, and update if necessary.	Costs: \$41,392. and staff resourcing. Benefits: Provides a consistent and clear message across the organisation and to the community regarding water	Catchment challenge priority: all Site risk priority: all Site opportunity priority: all	Environmental Officer	October 2020	July 2021

Objective	Target	Metric(s)	Action/Implementation	Cost/Benefit	Link(s) to catchment/site risks/opportunities (Section 2.6, 2.7)	Responsible Staff	Start Date	End Date
				stewardship. Assists with decision-making in routine situations and enables consistent and clear responses to related issues.				
(1.3) Publicly disclose the general governance structure of the Council, including the names of those accountable for legal compliance with water-related laws and regulations.		1. The Councils Annual Reports shows the current responsible directors and organisational chart. 2. The Councils website shows show the current responsible directors and organisational chart.	Continue to disclose general governance structure and the names of those accountable for legal compliance with water-related laws and regulations.	Costs: \$8,500 production of Annual Report. Benefit: Clearly communicates the governance structure of the Council, supporting accountability and its commitment to good water stewardship.	Catchment challenge priority: - Site risk priority: 17 Site opportunity priority: 1,3,5	Environmental Officer	2021	Ongoing

Objective	Target	Metric(s)	Action/Implementation	Cost/Benefit	Link(s) to catchment/site risks/opportunities (Section 2.6, 2.7)	Responsible Staff	Start Date	End Date
	(1.4) Nominate an RPC representative for the Murray Darling Association (if no current representative)	Nomination submitted	Nominate if no current representative	Cost: Representative's time and travel. Benefit: Representation of Renmark Paringa Council at state and federal level on water related matters	Catchment challenge priority: - Site risk priority: 17 Site opportunity priority: 3,5	Councillor	2017	Ongoing
	(1.5) Nominate an RPC representative for the Basin Community Committee (if no current representative)	Nomination submitted.	Nominate if no current representative	Cost: Representative's time and travel. Benefit: Effective representation of Renmark Paringa Council at a federal level on water related matters.	Catchment challenge priority: - Site risk priority: 17 Site opportunity priority: 3,5	Mayor, Councillor	2019	Ongoing
	(1.6) Collaborate with local and regional groups and organisations in creating and delivering an initiative that	1. Implementation and delivery of agreed upon projects and initiatives. 2. Created a project closure and achievement	Implement projects and initiatives, create project closure and achievement report.	Costs: Staff costs. Benefit: A more economically, socially, and environmentally resilient community that uses less water, is more connected to	Catchment challenge priority: all Site risk priority: 5,6,16,17 Site opportunity priority: 3,4,5,6	Chief Executive Officer, Director Corporate and Community Services, Environmental Officer	2013	Ongoing

Objective	Target	Metric(s)	Action/Implementation	Cost/Benefit	Link(s) to catchment/sit e risks/opportu nities (Section 2.6, 2.7)	Responsible Staff	Start Date	End Date
The Renmark Paringa Shire Council will embrace economic diversification, stewardship of the Murray River and creation of a vibrant, confident healthy community.	embraces economic diversification, stewardship of the Murray River and creation of a vibrant. Confident healthy community.	3. report. Commence a second-round if there is interest from stakeholders.		water, and is better placed to continue innovating.				
	(1.7) Promote AWS Water Stewardship to the wider Renmark Paringa community.	Number of engagements with community members regarding Water Stewardship.	Inform community members about water related activities at Council through social media.	Costs: To be determined following a year of engagement Benefit: Community aware of water related activities and initiatives. Education opportunity. Increased transparency.	Catchment challenge priority: - Site risk priority: 17 Site opportunity priority: 1,3	Environmental Officer	2021	Ongoing

Objective	Target	Metric(s)	Action/Implementation	Cost/Benefit	Link(s) to catchment/site risks/opportunities (Section 2.6, 2.7)	Responsible Staff	Start Date	End Date
	(1.8) Report to Council every 6 months to update on implementation of Water Stewardship Plan	Created a 6 monthly Water Stewardship Plan implementation update.	Update Council every 6 months on progress in implementing the Water Stewardship Plan. Update from the Council meeting will be disclosed to the public and made available on the RPC website.	Costs: Staff time. Benefit: Accountability for implementation and opportunity to communicate and review outcomes with community and communicate them to stakeholders.	Catchment challenge priority: - Site risk priority: 17 Site opportunity priority: 3,5	Environmental Officer	2021	Ongoing
	(1.9) Embed water stewardship in the Renmark Paringa Council Corporate Plan	Corporate Plan includes water stewardship related goals.	Include relevant goals related to water stewardship in the Renmark Paringa Council Corporate Plan	Costs: staff time Benefit: Supports accountability and gives clear direction to staff. Local, state, and federal community recognition, organisational commitment to water stewardship, and long term environmental and economic benefits	Catchment challenge priority: - Site risk priority: 17 Site opportunity priority: all	Director Corporate and Community Services	2020-21 FY	Ongoing

Objective	Target	Metric(s)	Action/Implementation	Cost/Benefit	Link(s) to catchment/site risks/opportunities (Section 2.6, 2.7)	Responsible Staff	Start Date	End Date
	(1.10) Stakeholder review of efforts to address shared water challenges.	Annual feedback form sent to stakeholders to evaluate Renmark Paringa Council efforts to address shared water related challenges.	Send annual feedback form to stakeholders for them to provide evaluation of efforts aimed at addressing shared water related challenges.	Cost: Staff resourcing. Benefit: Ability to gain valuable external input into RPC efforts in addressing shared water related challenges.	Catchment challenge priority: - Site risk priority: 17 Site opportunity priority: 1,3,5	Environmental Officer	2021	Ongoing
	(1.11) Disclose legal and regulatory compliance and provide review of the years water related emergency incidents annually in report to Council (1.8) and update Water Stewardship Plan accordingly.	Disclosed legal and regulatory compliance and years water related emergency incidents in a report to Council annually, and updated Water Stewardship Plan to reflect compliance status.	Disclose legal and regulatory compliance and years water related emergency incidents in a report to Council and update Water Stewardship Plan to reflect compliance status.	Costs: Staff time. Benefit: Accountability for implementation and opportunity to communicate and review outcomes with community and communicate them to stakeholders.	Catchment challenge priority: - Site risk priority: 17 Site opportunity priority: 3,5	Environmental Officer	2021	Ongoing

Objective	Target	Metric(s)	Action/Implementation	Cost/Benefit	Link(s) to catchment/sit e e risks/opportu nities (Section 2.6, 2.7)	Responsible Staff	Start Date	End Date
Sustainable water balance	(2.1) Licence compliance.	Water usage within licenced allocation.	Monitor meters and ensure continued compliance.	Cost: Staff resourcing. Benefit: Sustainable water use and avoidance of fines for exceeding allocations.	Catchment challenge priority: 1,4 Site risk priority: 14 Site opportunity priority: 4,5	Open Space and Water Services Manager	Ongoing	
	(2.2) Maintain, renew, and upgrade the Community Wastewater Management System.	CWMS assets maintained, renewed, and upgraded as per the Infrastructure and Asset Management Plan.	Maintain, renew, and upgrade CWMS assets as per the Infrastructure and Asset Management Plan.	Cost: An estimated \$8,218,299 over 10 years. Benefit: CWMS operated for the benefit of the community. Provision of high-quality amenity, and reductions in River Murray water use.	Catchment challenge priority: 1,2,4,5,6 Site risk priority: 4,7,12,14,15,16 Site opportunity priority: 4,5	Manager Infrastructure Delivery	Ongoing	
	(2.3) Maintain, renew, and upgrade the stormwater drainage system.	Stormwater drainage system maintained, renewed, and upgraded as per the Infrastructure and Asset Management Plan.	Maintain, renew and upgrade stormwater and drainage system as per the Infrastructure and Asset Management Plan.	Cost: an estimated cost of \$1,165,167 over 10 years. Benefit: provide the community with a means to remove and divert stormwater	Catchment challenge priority: 1,2,4,5,6 Site risk priority: 1,3,9 Site opportunity	Manager Infrastructure Delivery	Ongoing	

Objective	Target	Metric(s)	Action/Implementation	Cost/Benefit	Link(s) to catchment/site risks/opportunities (Section 2.6, 2.7)	Responsible Staff	Start Date	End Date
				and ensure the quality of stormwater discharge into the creek and river is to a high standard.	priority: 4,5			
	(2.4) Reduce indirect water use (electricity use).	<ul style="list-style-type: none"> 1. Set a target for Council's use of renewable energy and develop a strategy to achieve that target. 2. Review the energy efficiency of Council's assets. 3. Commence the roll out of LED streetlight program. 	<p>Investigate and implement renewable and energy efficiency opportunities.</p>	<p>Cost: \$250,000 plus staff time.</p> <p>Benefit: Reduced operational costs (~30% energy reduction from the lights), reputational gains and increase community resilience to the impacts of climate change.</p>	<p>Catchment challenge priority: 1,4</p> <p>Site risk priority: 5,12,16</p> <p>Site opportunity priority: 3,4,5</p>	Environmental Officer	2021-22 FY	2021-22 FY

Objective	Target	Metric(s)	Action/Implementation	Cost/Benefit	Link(s) to catchment/site risks/opportunities (Section 2.6, 2.7)	Responsible Staff	Start Date	End Date
	(2.5) Adapt operations and assets to a changing climate accounting for decreasing rainfall and increasing temperatures (increased water scarcity).	1. Developed and implemented a Tree Strategy. 2. Developed a policy position in relation to climate change adaptation.	Develop a tree strategy that focuses on the re-greening of streets and open spaces for cooling and amenity and develop a policy position in relation to climate change adaptation.	Costs: Staff time and unknown amount for strategy implementation. Benefits: Adapting the urban environment to a changing climate to support a viable and thriving community into the future. Increased desirability and liability of township.	Catchment challenge priority: 1,3,4,6 Site risk priority: 5,6,17 Site opportunity priority: 3,4,5,6	Environmental Officer	2021-22 FY	2023-24 FY
	(2.6) Explore water saving initiatives.	Water saving Initiative concepts investigated and developed.	Continue to investigate water saving initiatives and assess implementation viability.	Costs: Staff time. Benefits: Supporting sustainable water balance.	Catchment challenge priority: 1,4 Site risk priority: 5,6,13,14,16 Site opportunity priority: 3,4,5	Environmental Officer	Ongoing	

Objective	Target	Metric(s)	Action/Implementation	Cost/Benefit	Link(s) to catchment/site risks/opportunities (Section 2.6, 2.7)	Responsible Staff	Start Date	End Date
	(2.7) Irrigation system assets maintained at an optimal condition and efficiency and upgraded where deemed beneficial.	Irrigation system assets maintained, renewed and upgrade as per the Infrastructure and Asset Management Plan.	Maintain, renew, and upgrade irrigation system assets as per the Infrastructure and Asset Management Plan.	Costs: an estimated cost of \$716,827 over 10 years. Benefits:	Catchment challenge priority: 1,4,6 Site risk priority: 5,10 Site opportunity priority: 4,5	Open Space and Water Services Manager	Ongoing	
Demonstrate best practice management for water quality	(3.1) Maintain treated water quality.	Test treated water, maintain chlorination systems, and have water samples independently analysed and reported on	Continue to test treated water, maintain the chlorination systems, and seek independent analysis and report on water samples	Costs: Staff resourcing and water quality testing. Benefits: Commitment to Best Practice Management and demonstration of good water stewardship.	Catchment challenge priority: 2,5,6 Site risk priority: 1,2,3,4,6,7,12 Site opportunity priority: 2,3,4,5	Open Space and Water Services Manager	2013	Ongoing

Objective	Target	Metric(s)	Action/Implementation	Cost/Benefit	Link(s) to catchment/site risks/opportunities (Section 2.6, 2.7)	Responsible Staff	Start Date	End Date
	(3.2) Improve Remark Paringa runoff quality through stormwater improvements.	1. Gross pollutant traps installed. 2. options to improve runoff water quality investigated.	Install additional gross pollutant traps, document options to improve runoff water quality.	Costs: An estimated \$181,400 over 10 years. Benefits: Improved water quality for recreation, industry and the environment.	Catchment challenge priority: 2,5,6 Site risk priority: 1,3,8 Site opportunity priority: 2,3,4,5	Manager Infrastructure Delivery	2020-21 FY	Ongoing
	(3.3) Reduce the use of pesticides and herbicides with the potential to harm human and ecosystem health.	Integrated pest management policy developed and implemented.	Develop an integrated pest management policy and implement it.	Costs: Estimated \$3000 staff resourcing. Benefits: Health of the community and ecosystem, and significant reputational gains for applying the precautionary principle in operations.	Catchment challenge priority: 2,3,5,6 Site risk priority: 1,2,3 Site opportunity priority: 2,3,4,5,6	Environmental Officer	2021	2022
	(3.4) Minimise impacts of pump and infrastructure failure related to community wastewater	Contamination, pollution, and major service interruptions avoided.	Routine maintenance and monitoring practices adhered to. Continued roll out of dial out telemetry and infrastructure upgrades.	Costs: \$2,030,213 over 10 years and staff resourcing. Benefits: Water savings, reputational benefits, and amenity	Catchment challenge priority: 2,4,5 Site risk priority: 4,8	Open Space and Water Services Manager	2013	Ongoing

Objective	Target	Metric(s)	Action/Implementation	Cost/Benefit	Link(s) to catchment/sit e risks/opportu nities (Section 2.6, 2.7)	Responsible Staff	Start Date	End Date
	management.			benefits.	Site opportunity priority: 4			
	(3.5) To reduce waste entering waterways and have overall waste volumes reduced	<ol style="list-style-type: none"> 1. Evidence of communication of initiatives and or events supporting community education surrounding waste reduction, reuse, and recycling. 2. Waste data showing decreases in overall waste tonnage and reductions in incidents. 	Proactively educate the community on waste reduction, reuse, recycling, and the correct use of the waste streams.	<p>Costs: Estimated \$6400 staff resourcing.</p> <p>Benefits: Reductions in overall waste, pollution, and costs associated with waste transport. Reputational gains.</p>	<p>Catchment challenge priority: 2,5</p> <p>Site risk priority: 1,2,3,4,7,8,12</p> <p>Site opportunity priority: 2,3,4,5,6</p>	Environmental Officer	2021-22 FY	2023-24 FY

Objective	Target	Metric(s)	Action/Implementation	Cost/Benefit	Link(s) to catchment/site risks/opportunities (Section 2.6, 2.7)	Responsible Staff	Start Date	End Date
	(3.6) 0 fuel spills and fuel contamination in the environment	1. No fuel spills recorded. 2. No undocumented volume loss from above ground fuel tank	Monitor fuel through reconciliation of fuel supplied/used/stored (or condition reports)	Costs: Staff resource or condition report contractor cost Benefits: Safe and clean workspace	Catchment challenge priority: 2,5 Site risk priority: 2,3 Site opportunity priority: 2,5	Manager Infrastructure Delivery	Ongoing	
Improved health of Important Water-Related Areas	(4.1) Support the continued implementation of the Commonwealth Environmental Watering Agreement by CEWH.	Acquittal of Commonwealth Environmental Watering Agreement by CEWH.	Support watering and management actions as outlined in the Agreement (refer to Renmark Environmental Watering Management Guidelines)	Costs: Staff resourcing. Benefits: Reputational gains, amenity value, increased attractiveness of region, ecosystem health, capital grant to RIT, environmental water also used for pipe flushing in off-peak irrigation season (reducing delivery loss for RIT).	Catchment challenge priority: 2,3,4,6 Site risk priority: 6,7 Site opportunity priority: 3,5,6	Environmental Officer	2016-17 FY	Ongoing

Objective	Target	Metric(s)	Action/Implementation	Cost/Benefit	Link(s) to catchment/site risks/opportunities (Section 2.6, 2.7)	Responsible Staff	Start Date	End Date
	(4.2) Rehabilitate and restore ecological health in the Lower Ral Ral Floodplain.	Designed and Implemented a plan, secured funding, and commenced works.	Develop a plan to rehabilitate and restore ecological health to the Lower Ral Ral Floodplain, secure funding, and implement plan.	Costs: Staff resourcing. Benefits: environmental benefit, amenity value and reputational gains.	Catchment challenge priority: 2,3,4,6 Site risk priority: 6,7 Site opportunity priority: 3,5,6	Environmental Officer	2017-18 FY	2023-24 FY
	(4.3) Educate and involve local schools and the broader community in natural resource management activities (especially those related to environmental watering)	1. Engaged local school groups in natural resource management activities related to environmental watering. 2. Undertake proactive education campaigns with local schools and the broader community in regard to environmental management	Undertake proactive education campaigns with local schools and the broader community regarding environmental management and engage local school groups in natural resource management activities related to environmental watering.	Costs: Estimated \$5200 staff resourcing. Benefits: Community sense of ownership, reputational gains.	Catchment challenge priority: 3 Site risk priority: 7 Site opportunity priority: 3,5	Environmental Officer	2018-19 FY	Ongoing

Objective	Target	Metric(s)	Action/Implementation	Cost/Benefit	Link(s) to catchment/site risks/opportunities (Section 2.6, 2.7)	Responsible Staff	Start Date	End Date
	(4.4) To have a clean, healthy and thriving natural environment.	<ol style="list-style-type: none"> 1. Complete review of environmental assets on Council land. 2. Create plan to manage and rehabilitate these assets. 3. Collaborate with DEW on the Bookmark Creek Sustaining Riverland Environments project. 	<p>Undertake a review of the health of the natural environmental assets on Council land and implement a plan for the management and rehabilitation of these assets. Collaborate with the State Government on the delivery of the Bookmark Creek rehabilitation Plan Advocate for State and Federal funding to support regional environmental outcomes.</p>	<p>Costs: Estimated \$3400 staff resourcing.</p> <p>Benefits: Ability to understand environmental assets on Council land and establish a plan to address their management.</p>	<p>Catchment challenge priority: 3,4,6</p> <p>Site risk priority: 1,2,3,6,7</p> <p>Site opportunity priority: 3,5,6</p>	Environmental Officer	2021-22 FY	2023-24 FY
Achieve best practice results on Important Water-Related Areas through restoration and rehabilitation and improve indirect water	(5.1) Achieve best practice results with respect to the site's Important Water-Related targets and complete restoration of non-functioning	<ol style="list-style-type: none"> 1. Evidence of completed restoration of non-functioning or severely degraded Important Water Related Areas 2. Evidence 	<p>Support watering and monitoring as per CEWH and DEW agreements (refer Management Guidelines and Connecting and Rehabilitating the Lower Ral Ral Floodplains Project</p>	<p>Costs: \$30,000 PA and staff resourcing and.</p> <p>Benefits: Accountability and measurable success in activities that lead to improvements in ecology, liability,</p>	<p>Catchment challenge priority: 3,4,6</p> <p>Site risk priority: 7,19</p> <p>Site opportunity: 3,5,6</p>	Environmental Officer	Ongoing	

Objective	Target	Metric(s)	Action/Implementation	Cost/Benefit	Link(s) to catchment/site risks/opportunities (Section 2.6, 2.7)	Responsible Staff	Start Date	End Date
use within the catchment	or severely degraded Important Water-Related Areas.	showing that actions meet best practice expectations. 3. DEW Regional Land Partnerships grant acquittal reports. 4. RIT Annual Reports noting the water volume delivered to environmental watering sites.	Plan)	economic opportunity in tourism, and overall sustainability and reputation.				
	(5.2) Understand Renmark Paringa Councils primary suppliers and water-related service providers' water stewardship stance.	List of suppliers and service providers, along with the actions they have taken as a result of the site's engagement relating to indirect water use	Contact RPC's primary product suppliers and water-related service providers and request that they take actions to help contribute to the desired water stewardship outcomes.	Cost: \$1000 staff resourcing. Benefit: Ensures water is considered in procurement and solidifies RPC's reputation as a leader and proactive participant in good water governance and stewardship.	Catchment challenge priority: 1,4,5 Site risk priority: 18,19 Site opportunity priority: 3,5	Environmental Officer	2020-21 FY	Ongoing

Objective	Target	Metric(s)	Action/Implementation	Cost/Benefit	Link(s) to catchment/sit e risks/opportu nities (Section 2.6, 2.7)	Responsible Staff	Start Date	End Date
	(5.3) Embed water stewardship into procurement policy	Water stewardship is embedded into procurement policy.	Ensure that water is considered when sourcing materials and selecting contractors through an amendment to the procurement policy.	Cost: \$500 (10hrs staff time) Benefit: Water sensitive procurement ensures that RPC is leading the way for the community, making it clear that water use is considered in all aspects of business.	Catchment challenge priority: 1 Site risk priority: 18,19 Site opportunity: 3,5	Environmental Officer	2020-21 2021/22 FY	2022-23 Ongoing

4. Evaluation

4.1 Preliminary Evaluation of Water Stewardship Plan Implementation

As there has been no consolidated Renmark Paringa Council Water Stewardship Plan until this time, formal evaluation of its implementation is challenging. However, as the Water Stewardship Plan has been informed by many projects and plans, and previous assessments, and evaluations. These key contributing elements have been identified.

Project	Year	Outcomes
Upgrade of Wastewater Treatment Plant and Recycled Water Distribution System. <i>South Australian River MURRAY Sustainability Irrigation Industry Improvement Program (SARMS-3IP)</i> .	2015	Engineering and irrigation system design for upgrade of wastewater treatment plant and recycled water distribution network.
	2017	<ol style="list-style-type: none">1. Renmark Wastewater Treatment Plant irrigation pump upgrade.<ol style="list-style-type: none">a. Modification to transfer pump and mainline upgrade to storage tanks.b. New pump shed and electrical room construction and installation.c. Pumps and filtration system.d. Electrical upgrade and plc control system.e. Discharge mainlines and manifold.2. Mainline instillation.<ol style="list-style-type: none">a. 200mm interconnection to 19th street mainline from discharge manifold.b. 200mm connection from discharge manifold to existing mainline.c. Madigan reserve mainline.d. Oval 3 and Ral Ral Avenue mainline.e. Oval 2 mainline.3. Internal irrigation upgrades.<ol style="list-style-type: none">a. Ral Ral sprinkler system upgrade.4. Automation.<ol style="list-style-type: none">a. Upgrade of IRRInet ICC to ICC PRO and installation of IRRInet-ACE control system.b. Automation wastewater treatment pump station and installation of IRRInet-ACE control system.

Project	Year	Outcomes
		c. Automation of Ral Ral Avenue and installation of IRRInet.
Connecting and Rehabilitating the Lower Ral Ral Floodplain. <i>National Landcare Program Phase 2 (administered by the Murraylands Riverlands Landscape Board)</i>	2018/2019	<ul style="list-style-type: none"> 1. Conduct further investigations into the hydrological infrastructure and flow path requirements for environmental water delivery in July and August 2019/20 at the Paroo and Begara Street sites. 2. Install metered supplies including hydrological earth works and infrastructure requirements as determined by investigation at the Paroo and Begara Street sites. 3. Establish a monitoring plan for the site to enable adaptive management, and the identification of opportunities for flow path and infrastructure modifications and revegetation in the future at the Paroo and Begara Street Sites. 4. Establish a staged revegetation plan, beginning with soil health and understory regeneration, followed tube stock.
	2019/2020	<ul style="list-style-type: none"> 1. Investigate channelling to connect the south-eastern floodplain gutters and to breach a disused track and bank on the northern section of the site. 2. Conduct hydrological earth works to connect south-eastern floodplain gutters. 3. Conduct assessment of existing banks and flow paths to ensure that desired hydrological regimes are being achieved and floodwaters have access. 4. Implement enhancement of existing flow paths and banks with recommended valves and pipes. 5. Establish a monitoring plan for the site to enable adaptive management of new implementations, and the identification of opportunities for flow path and infrastructure modifications and revegetation in the future. 6. Implement staged revegetation plan, targeting the newly created and enhanced flow paths.

Project	Year	Outcomes
	2020/2021	<ol style="list-style-type: none"> 1. Conduct further investigations into the hydrological earth works, infrastructure and flow path requirements for environmental water delivery in 2020/21 or 2021/22 at the Warrego Street site. 2. Install metered supplies including hydrological earth works and infrastructure requirements as determined by investigation at the Warrego Street site. 3. Establish a monitoring plan for the site to enable adaptive management, and the identification of opportunities for flow path and infrastructure modifications and revegetation in the future at the Warrego Street site. 4. Establish a staged revegetation plan, beginning with soil health and understory regeneration, followed tube stock. 5. Upgrade the Johnsons Waterhole Ral Ral Creek regulator and roadway structure.
Reviving the Ral Ral Floodplain (<i>SEE (Social Economic Environmental) Renmark 2024 Initiative</i>)	2013	<ol style="list-style-type: none"> 1. A joint initiative between Renmark Paringa Council and the Renmark Irrigation Trust was developed which aimed to rehabilitate 500 hectares of jointly owned floodplains and wetlands. 2. The wetland and part of the adjoining flow path between the Ral Ral and Bookmark Creeks received pumped environmental water for the first time in November 2013
	2014-2021	<ol style="list-style-type: none"> 1. The Management Guidelines to support environmental watering to sites adjacent to the Renmark Irrigation District were prepared for the Renmark Irrigation Trust by AM and MJ Harper, endorsed by the RIT Board, and the Environmental Watering Committee, and implementation supported by the Renmark Paringa Council. 2. The infrastructure to support environmental water delivery to 10 floodplains and wetland sites adjacent to the Renmark Irrigation District has been completed (Plushs Bend, Nelwart Street, Twentyfirst Street Bridge, Bookmark Creek Wetland, Ral Ral Bridge Floodplain, Jane Eliza Woodlot, Paroo Street, Begara Street, Namoi Street, and Warrego Street). 3. Collaborated with and supported RIT to support the first CEWH Partnership Agreement to deliver water to the Renmark floodplains adjacent to the irrigation district (2016). 4. Proposed a new method for monitoring and evaluating environmental watering outcomes at sites that would increase ability to adaptively manage the sites, increase ability to engage the community, and reduce FTE requirements (2018).

Project	Year	Outcomes
		<ul style="list-style-type: none"> 5. Developed the Operational Monitoring Plan to guide monitoring activities to meet contractual obligations with the CEWH and enable adaptive management of the environmental watering sites (2018). 6. Created an environmental watering monitoring and infrastructure delivery schedule (2019-2024) (2019). 7. Contributed to the development of a 5-year watering schedule that provides for the delivery of 3.7 GL of environmental water between 2020 and 2024 (2019). 8. Collaborated with and supported RIT in establishing a 5-year CEWH Partnership agreement (2020-2024) and funding for 2 years infrastructure works (2019).

4.2 Formal Evaluation of Water Stewardship Plan Implementation

As per target 1.8 in 3.3, an update on the implementation of the Renmark Paringa Council Water Stewardship Plan implementation will be provided to Council every 6 months. 4.2 will be updated as objectives and targets are actioned and implemented, and the Water Stewardship Plan will be updated on the Renmark Paringa Council website every 6 months, and agendas, minutes, and the implementation update from the Council meeting will be disclosed to the public and be made available on the Renmark Paringa Council website.

Objective	Target	Action and Implementation	Implementation Dates
Good water governance	Development of a Water Stewardship Plan that evaluates water related risks, opportunities and provides clear actions.	Developed a Water Stewardship Plan that evaluates water related risks, opportunities and provides clear actions. Updated the Water Stewardship plan as per the Changelog on Page 2 of the Renmark Paringa Council Water Stewardship Plan and made the document publicly available at https://www.renmarkparinga.sa.gov.au/council/about-us/water-stewardship .	November 2020 – September 2021
	Development of a water stewardship policy in the light of a water stewardship commitment.	A one-page policy was drafted, endorsed, signed, and made available on the Council website available at https://www.renmarkparinga.sa.gov.au/council/about-us/water-stewardship . The policy is also in the Water Stewardship Plan in section 1.2.	November 2020 – September 2021

Objective	Target	Action and Implementation	Implementation Dates
	Publicly disclose the general governance structure of the Council, including the names of those accountable for legal compliance with water-related laws and regulations.	-	-
	Nominate an RPC representative for the Murray Darling Association (if no current representative)	Councillor Howie is currently the Renmark Paringa Council nominated representative in the MDA Region 5 Committee.	2021
	Collaborate with local and regional groups and organisations in creating and delivering an initiative that embraces economic diversification, stewardship of the Murray River and creation of a vibrant, confident healthy community.	-	-
	Promote AWS Water Stewardship to the wider Renmark Paringa community.	Engaged with community regarding Water Stewardship, and informed community members about water related activities at Council through social media and quarterly Council reports. See section 5. Communication and Disclosure, and 6. Stakeholder Communication log.	2020 – 2021
	Report to Council every 6 months to update on implementation of Water Stewardship Plan.	Quarterly updates have been provided to Renmark Paringa Council on the development of the Renmark Paringa Council Water Stewardship Plan, including the auditing process. See section 5. Communication and Disclosure.	2020 – 2021

Objective	Target	Action and Implementation	Implementation Dates
	Embed water stewardship in the Renmark Paringa Council Corporate Plan.	Goal 3.2.1 was set in the 2021-2024 Corporate Plan, which seeks to have recognition for our stewardship of water resources. Within this goal, targets include completing the initial Alliance for Water Stewardship certification and develop a Water Stewardship Plan and maintain and improve the AWS certification level and promote the responsible use of water. It also makes provision for implementing and evaluating the Water Stewardship Plan over the duration of the Corporate Plan, which is available at: https://www.renmarkparinga.sa.gov.au/_data/assets/pdf_file/0032/885362/Corporate-Plan-2021-2024.pdf	2021
Sustainable water balance	Licence compliance.	Water usage maintained within licenced allocation as per 3.1.1.	2020 – 2021
	Maintain, renew, and upgrade the Community Wastewater Management System.	CWMS assets have been maintained, renewed, and upgraded as per the Infrastructure and Asset Management Plan: <ul style="list-style-type: none"> • Renmark Wastewater Treatment Plant Renewal. • CWMS Renewal. • Storage Capacity Increase at the Renmark WWTP. Increased the storage capacity of our treated effluent water at the Renmark Wastewater Treatment Plant. A 13550sqm dam has been constructed and lined with a high-density polyethylene liner which increases our capacity by 20-30 megalitres. 	2020 – 2021
	Maintain, renew, and upgrade the stormwater drainage system.	Stormwater drainage system maintained, renewed, and upgraded as per the Infrastructure and Asset Management Plan: <ul style="list-style-type: none"> • Evans Street Stormwater. 	-
	Reduce indirect water use (electricity use).	Implemented the roll out of LED streetlight program.	2020 – 2021
	Adapt operations and assets to a changing climate accounting for decreasing rainfall and increasing temperatures (increased water scarcity).	-	-

Objective	Target	Action and Implementation	Implementation Dates
	Explore water saving initiatives.	-	-
	Irrigation system assets maintained at an optimal condition and efficiency and upgraded where deemed beneficial.	<p>Irrigation system assets maintained, renewed and upgrade as per the Infrastructure and Asset Management Plan:</p> <ul style="list-style-type: none"> Irrigation systems in Renmark, Paringa and Lyrup have been maintained, including the open space and sporting fields in these townships. 	2020 – 2021
Demonstrate best practice for water quality	Maintain treated water quality.	Tested treated water, maintain chlorination systems, and have water samples independently analysed and reported on. All CWMS operations have complied with relevant wastewater regulatory and operational standards, producing Class B quality treated water that has met all standards.	2020 – 2021
	Improve Renmark Paringa runoff quality through stormwater improvements.	An additional Gross Pollutant Trap has been installed at Bookmark Creek (Renmano Bridge).	2020 – 2021
	Reduce the use of pesticides and herbicides with the potential to harm human and ecosystem health.	-	-
	Minimise impacts of pump and infrastructure failure related to community wastewater management.	Routine maintenance and monitoring practices adhered to. Continued roll out of dial out telemetry and infrastructure upgrades.	2020 – 2021
	To reduce waste entering waterways and have overall waste volumes reduced.	-	-
	0 fuel spills and fuel contamination in the environment.	No fuel spills recorded and no undocumented volume loss from above ground fuel tank.	2020 – 2021

Objective	Target	Action and Implementation	Implementation Dates
Improved health of Important Water-Related Areas	Support the continued implementation of the Commonwealth Environmental Watering Agreement.	Continued to support watering and management actions as outlined in the CEWH Agreement (refer to Renmark Environmental Watering Management Guidelines), resulting in the establishment of 3 new environmental watering sites and environmental water being delivered to 7 sites.	2020 – 2021
	Rehabilitate and restore ecological health in the Lower Ral Ral Floodplain.	Implemented year 3 of the Connecting and Rehabilitating the Lower Ral Ral Floodplain Project. The 2020/2021 project supported the establishment of a new environmental watering site on the upper Ral Ral Floodplain, adjacent to Warrego Street.	2020 – 2021
	Educate and involve local schools and the broader community in natural resource management activities (especially those related to environmental watering)	Engaged local school groups in natural resource management activities related to environmental watering: <ul style="list-style-type: none"> • Managed a frog identification workshop for Renmark North Primary School students. • Support provided to St Joseph's School Renmark for World Tree Day, planting trees on the Ral Ral Floodplain adjacent to the Jane Eliza Woodlot Environmental Watering site. 	
	To have a clean, healthy, and thriving natural environment.	Collaborated with DEW on the Bookmark Creek Sustaining Riverland Environments project.	2020 – 2021
Achieve best practice results on Important Water-Related Areas through restoration and rehabilitation and improve indirect	Achieve best practice results with respect to the site's Important Water-Related targets and complete restoration of non-functioning or severely degraded Important Water-Related Areas.	<ul style="list-style-type: none"> • An endangered frog species, the Southern Bell Frog has been identified at the Johnsons Waterhole, which was a once saline disposal basin, which is evidence of restoration of non-functioning or severely degraded wetland area. • All sites continue to show excellent ecological responses in terms of vegetation regeneration, bird, and frog diversity, as demonstrated by ecological monitoring data. The Johnsons Waterhole and surrounding Ral Ral Floodplain is responding particularly well with ongoing efforts over the recent years. • RIT Annual Reports and RPC Quarterly reports note the water volume delivered to environmental watering sites. • DEW Regional Land Partnerships grants have been successfully acquitted. 	2020 – 2021

Objective	Target	Action and Implementation	Implementation Dates
water use within the catchment.	Understand Renmark Paringa Councils primary suppliers and water-related service providers' water stewardship stance.	-	-
	Embed water stewardship into procurement policy.	-	-

5. Communication and Disclosure

Date	Activity	Reason for Activity	Notes
13 August 2020	13 August Special Council Meeting	To inform community of intention to become certified under the Alliance for Water Stewardship Standard and seek endorsement to pursue external funding opportunities.	https://www.renmarkparinga.sa.gov.au/_data/assets/pdf_file/0026/729116/Agenda-Special-Council-Meeting-13-August-2020.pdf
22 December 2020	22 December Ordinary Council Meeting	Inform community and stakeholders of Renmark Paringa Councils intention to seek Alliance for Water Stewardship certification and securing of funding to support this initiative.	https://www.renmarkparinga.sa.gov.au/_data/assets/pdf_file/0035/814958/Agenda-OCM-22.12.20-public-copy.pdf
14 April 2021	Stakeholder Workshop	To bring together stakeholders to engage in evidence-based discussion to facilitate understanding of the social, environmental, and economic water priorities for our local community and catchment, and identify opportunities for action, collaboration, and demonstration of best practices.	19 representatives from 11 groups and organisations attended.
16 April 2021	Facebook post on Renmark Paringa Council Facebook	Inform community and stakeholders of 14 April Stakeholder Workshop and RPC intention to be assessed and verified	

Date	Activity	Reason for Activity	Notes
	page	under the AWS standard.	
16 April 2021	LinkedIn post on Renmark Paringa Council LinkedIn page	IBID	
27 April 2021	27 April Ordinary Council Meeting	Final communication and endorsement of the Long-Term Strategic Directions, Community Plan 2021-2030 and Corporate Plan 2021-2024, including relevant strategy, goals, and outcomes related to water stewardship.	The Long-Term Strategic Directions, Community Plan 2021-2030 and Corporate Plan 2021-2024 was endorsed. https://www.renmarkparinga.sa.gov.au/_data/assets/pdf_file/0027/881712/Agenda-OCM-27.4.21.pdf
25 May 2021	25 May Ordinary Council Meeting	To provide the draft Renmark Paringa Council Water Stewardship Plan to the community and elected members for discussion, review, and endorsement before the auditing and certification process.	The Renmark Paringa Council Water Stewardship plan was endorsed. https://www.renmarkparinga.sa.gov.au/_data/assets/pdf_file/0045/899469/Agenda-OCM-25-May-2021.pdf
10 June 2021	Updating Renmark Paringa Council website with water stewardship information and documents	Publicly disclose and communicate the Renmark Paringa Council Water Stewardship project, Plan, Leadership Commitment, and Water Stewardship Policy.	https://www.renmarkparinga.sa.gov.au/council/about-us/water-stewardship
25 June 2021	Communicated environmental watering outcomes with community	To provide a visual environmental watering update for the community.	https://www.instagram.com/p/CQhoRU7NXoH/
27 June 2021	27 June Ordinary Council Meeting	Update community on activities and projects in important water related areas, and status of Water Stewardship Certification.	https://www.renmarkparinga.sa.gov.au/_data/assets/pdf_file/0022/937210/Agenda-OCM-27.7.21-public-copy.pdf
13 August 2021	Communicated environmental watering and NRM engagement activities with community	Communicating the support provided to St Joseph's School Renmark for World Tree Day, planting trees on the Ral Ral Floodplain adjacent to the Jane Eliza Woodlot Environmental Watering site.	https://www.instagram.com/p/CSgbixBDVL/
28 September 2021	28 September Ordinary Council Meeting	Update community on activities and projects in important water related areas, and status of Water Stewardship Certification.	https://www.renmarkparinga.sa.gov.au/_data/assets/pdf_file/0024/1034853/Agenda-Ordinary-Council-Meeting-28-September-2021.pdf

6. Stakeholder Communication Log

Date	Activity	Reason for Activity	Notes
7 September 2021	AWS Stakeholder Audit	To gain feedback on Renmark Paringa Councils engagement to date as a part of a surveillance audit on Renmark Paringa Council for compliance to the Alliance for Water Stewardship Standard Version 2.0.	13 stakeholders attended in person, and through Zoom for a 1-hour meeting.
13 September 2021	Presentation to Murray Darling Association (MDA) Region 5	An invitation to discuss Water Stewardship with the MDA Region 5 and share insights from Renmark Paringa Council in the AWS certification process.	Region 5 made a motion to endorse RPC activities as best practice and supported a presentation to MDA Region Chairs.
22 September 2021	Presentation to Murray Darling Association (MDA) Committee of Region Chairs	An invitation to discuss Water Stewardship with the MDA and share insights from Renmark Paringa Council in the AWS certification process.	The MDA made a motion to endorse RPC as a case study in excellence and advocated for action in this space.
27 September 2021	Presentation to the River Murray Mallee Aboriginal Corporation (RMMAC) directors	To inform RMMAC about water stewardship in our region (RPC and RIT) and seek input and comments on the RPC Water Stewardship Plan and future direction.	RMMAC supported the Water Stewardship initiative and took a particular interest in RPC environmental watering activities, and as such, made a resolution that "The RMMAC Board supports and encourages the rehabilitation of the Disher Creek Flood Plain through the delivery of environmental water."

APPENDIX A

Glossary of Terms, Abbreviations and Acronyms

ALT	Australian Landscapes Trust
AWS	Alliance for Water Stewardship
AWQC	Australian Water Quality Centre
CEWH	Commonwealth Environmental Water Holder
CEWO	Commonwealth Environmental Water Office
CIT	Central Irrigation Trust
CWMS	Community Wastewater Management System
DEW	Department for Environment and Water
DHW	Department for Health and Wellbeing
EC	Electrical Conductivity
EPA	Environmental Protection Authority
GL	Gigalitre
kL	Kilolitre
L	Litre
LGA	Local Government Association
LMRIA	Lower Murray Reclaimed Irrigation Area
MDB	Murray Darling Basin
MDBA	Murray Darling Basin Authority
ML	Megalitre
MLDRIN	The Murray Lower Darling Rivers Indigenous Nations
MRLGA	Murraylands and Riverland Local Government Association
NFSA	Nature Foundation of South Australia
pH	A scale used to specify the acidity or basicity of a solution.
PIRSA	The Department of Primary Industries and Regions
RDA	Regional Development Australia
RIT	Renmark Irrigation Trust
RPC	Renmark Paringa Council
SS	Suspended Solids
UV	Ultraviolet
WSH	Work Health Safety
WWTP	Wastewater Treatment Plant
WSUD	Water Sensitive Urban Design



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Opening Hours

Monday 9am - 5pm

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Wednesday 9am - 5pm

Thursday 9am - 5pm

Friday 9am - 5pm

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