

Drowning in the Riverland (South Australia)

*A 20-year analysis of drowning
deaths in the Riverland region
(2002/03 to 2022/23)*



ROYAL LIFE SAVING
AUSTRALIA

ABOUT ROYAL LIFE SAVING

Royal Life Saving is focused on reducing drowning and promoting healthy, active and skilled communities through innovative, reliable, evidence-based advocacy; strong and effective partnerships; quality programs, products and services; underpinned by a cohesive and sustainable national organisation.

Royal Life Saving is a public benevolent institution (PBI) dedicated to reducing drowning and turning everyday people into everyday community lifesavers. We achieve this through: advocacy, education, training, health promotion, aquatic risk management, community development, research, sport, leadership and participation and international networks.

© 2024 Royal Life Saving Society – Australia

This publication is copyright. Except as expressly provided in the Copyright Act 1968 and the Copyright Amendment Act 2006, no part of this publication may be reproduced, stored in any retrieval system or transmitted by any means (including electronic, mechanical, micro copying, photocopying, recording or otherwise) without prior permission from Royal Life Saving Society – Australia. For enquiries concerning reproduction, contact RLSSA on: Phone 02 8217 3111; Email: info@rlssa.org.au

Every attempt has been made to trace and acknowledge copyright, but in some cases this may not have been possible. Royal Life Saving apologises for any accidental infringements and would welcome any information to redress the situation.

Please contact:

PO Box 558 Broadway

NSW 2007 Australia

Phone: 02 8217 3111 Email: info@rlssa.org.au

Royal Life Saving Society – Australia

The drowning prevention research of the Royal Life Saving Society – Australia is proudly supported by the Australian Government.



Australian Government

royallifesaving.com.au

Suggested citation - Pidgeon S, & Cherfils, B. (2024) South Australia Riverland Region Drowning Report: 20-year analysis of drowning deaths. Royal Life Saving – Australia. Sydney, Australia.

Royal Life Saving Society - Australia acknowledges the Traditional Custodians of Country throughout Australia and recognises their continued connection to land, waters and communities. We pay our respects to Aboriginal and Torres Strait Islander cultures; Elders past and present.

TABLE OF CONTENTS

ABOUT ROYAL LIFE SAVING 2

BACKGROUND 4

METHODS 8

RESULTS 10

CASE STUDY 14

KEY INSIGHTS 17

RECOMMENDATIONS 19

CONCLUSION 20

REFERENCES 21

APPENDIX A – SURVEYING AND BREATHALYSING STUDY OF RIVER USERS 22

BACKGROUND

DROWNING STATISTICS

On average, 285 people fatally drown and many more non-fatal drowning incidents occur in Australia each year. Males account for approximately 80% of drownings, and those aged 25 – 34 years record the highest numbers for drowning overall, 29% of total drowning deaths in Australia are adult migrants.^{1 2} For every 1 fatal drowning, there are 3 non-fatal drowning incidents. This increases for children aged 0-4 years to 8 non-fatal drowning incidents for every fatal drowning among this age group.³

The Australian Water Safety Strategy 2030 identifies priority areas for reducing drowning by 50% by 2030. Rivers/lakes and regional/remote communities have been identified as two of 15 focus areas to target drowning prevention efforts.⁴

More Australians drown in inland waterways than any other aquatic location with consistently high numbers of drowning deaths in inland waterway locations over the last 20 years. On average 75 people drown at rivers/creeks and lakes/dams each year, 81% are male, 15% are flood-related and 28% of

drowning deaths at inland waterways record a blood alcohol content of $\geq 0.05\%$.^{1 4}

Royal Life Saving research shows that the risk of drowning increases in regional and remote areas. Compared with major cities, the drowning rate in remote areas is eight times higher and in very remote areas up to 13 times higher. Risk factors for drowning in regional/remote locations include changeable conditions and geographical remoteness. Risk-taking behaviour involving poor-decision making, such as alcohol consumption, not wearing a lifejacket and swimming alone, all compound this risk.^{1 4}

The top 10 river drowning blackspots for drowning across Australia are:

- Murray River (NSW, VIC, SA)
- Yarra River (VIC)
- Hawkesbury River (NSW)
- Brisbane River (QLD)
- Murrumbidgee River (NSW)
- Swan River (WA)
- Parramatta River (NSW)
- Clarence River (NSW)
- Georges River (NSW)
- Ross River (QLD)

RIVERLAND LGA COMMUNITY PROFILES

Berri and Barmera (SA)

The Berri Barmera Council area is located in the Riverland Region of South Australia, about 230 kilometres north-east of the Adelaide CBD. The Berri Barmera Council area is bounded by Unincorporated South Australia in the north, the Renmark Paringa Council area in the east, the District Council of Loxton Waikerie area in the south-east, Unincorporated South Australia in the south-west, and the District Council of Loxton Waikerie area in the west.

The original inhabitants of the Berri Barmera Council area were the Ngarrindjeri Aboriginal people.^{5 6}

Estimated 2021 population: 10,747⁵

- 16% were children aged 0 to 14 years
- 11% were aged 15 to 24 years
- 11% were aged 25 to 34 years
- 11% were aged 35 to 44 years
- 13% were aged 45 to 54 years
- 14% were aged 55 to 64 years
- 24% were aged 65 years and over
- 5% identified as Aboriginal and Torres Strait Islander
- 19% were born overseas

Demographics⁵

Weekly household income

- 25% <\$650 per week
- 10% ≥ \$3000 per week
- Median household income \$1,169

Employment status

- 94% were employed (people aged 15+ years)
- 6% unemployed

Housing status

- 66% own their own home
- 29% were renting
- 65% tenure unknown

Aquatic Facilities

Berri and Barmera has one public swimming pool, Hayden Stoeckal Swimming pool, which is open seasonally and is operated by Belgravia leisure. Swimming pool entry fees are available on the facebook page.

Renmark Paringa (SA)

The Renmark Paringa Council area is located in the Riverland Region of South Australia, about 250 kilometres north-east of the Adelaide CBD.

The Renmark Paringa Council area is bounded by Unincorporated South Australia in the north, the Victorian border in the east, the District Council of Loxton Waikerie area in the south, and the Berri Barmera Council area and Unincorporated South Australia in the west.

The original inhabitants of the Renmark Paringa Council area were the Naralte Aboriginal people.^{5 6}

Estimated 2021 population: 10,009⁵

- 16% were children aged 0 to 14 years
- 10% were aged 15 to 24 years
- 11% were aged 25 to 34 years
- 10% were aged 35 to 44 years
- 13% were aged 45 to 54 years
- 15% were aged 55 to 64 years
- 23% were aged 65 years and over
- 3% identified as Aboriginal and Torres Strait Islander
- 14% were born overseas

Demographics⁵

Weekly household income

- 23% <\$650 per week
- 11% ≥ \$3000 per week
- Median household income \$1,226

Employment status

- 95% were employed (people aged 15+ years)
- 5% unemployed

Housing status

- 68% own their own home
- 26% were renting
- 5% tenure unknown

Aquatic Facilities

Renmark Paringa has one public swimming pool, which is open seasonally and operated by Belgravia leisure.

Loxton Waikerie (SA)

The District Council of Loxton Waikerie area is located in the Riverland Region of South Australia, about 250 kilometres north-east of the Adelaide CBD. The District Council of Loxton Waikerie area is bounded by Unincorporated South Australia, the Beri Barmera Council area and the Renmark Paringa Council area in the north, the Victorian border in the east, the Southern Mallee District Council area and the District Council of Karoonda East Murray area in the south, and the Mid Murray Council area in the west. The original inhabitants of the District Council of Loxton Waikerie area were the Ngawait Aboriginal people.^{5 6}

Estimated 2021 population: 11,922⁵

- 17% were children aged 0 to 14 years
- 10% were aged 15 to 24 years
- 11% were aged 25 to 34 years
- 10% were aged 35 to 44 years
- 13% were aged 45 to 54 years
- 15% were aged 55 to 64 years
- 27% were aged 65 years and over
- 3% identified as Aboriginal and Torres Strait Islander
- 9% were born overseas

Demographics⁵

Weekly household income

- 24% <\$650 per week
- 11% ≥ \$3000 per week
- Median household income \$1,169

Employment status

- 97% were employed (people aged 15+ years)
- 3% unemployed

Housing status

- 70% own their own home
- 23% were renting
- 7% tenure unknown

Aquatic Facilities

Loxton Waikerie has two public swimming pools, both seasonal pools open from the end of October or dependant on temperatures about 24 degrees. Swimming pool entry fees are available on the Loxton Waikerie Council website.

METHODS

This data is derived by Royal Life Saving Society – Australia from the Royal Life Saving National Fatal Drowning Database. Data from the RLSSA Database have been collated from the National Coronial Information System (NCIS), State/Territory Coronial offices and media monitoring. Information contained within the NCIS is made available by the Victorian Department of Justice and Community Safety.

Drowning deaths as a result of suicide or homicide, deaths from natural causes, shark and crocodile attacks, or hypothermia are excluded. All data in this report relates to drowning as a contributory cause of death. Figures may change depending on ongoing coronial investigations and findings. Numbers of drowning where there are less than 5 cases cannot be reported due to ethical constraints and potential of identification of the person/s.

This report covers the financial year period 2002/2003 to 2022/2023 and presents data on drowning deaths that occurred within the Riverland region in South Australia.

Data is correct as of 01 April 2024; 90% of cases in this study were closed.

Definitions for activities are coded as per the Royal Life Saving Drowning Database Definitions manual and include the following: Swimming and recreating: swimming, floating, playing, wading. Boating: water-based wind or motor-powered vessels, boats, ships and personal watercraft. Fall: when a person unintentionally entered the water; Jumped in: when the person intentionally jumped into the water e.g. from a height. Due to small numbers, all other activities were grouped together into 'other'.

The Local Government Areas included in this report were identified in consultation with Royal Life Saving South Australia. Information for all the community profiles, including population demographics, household income and employment status was based on the most recent 2021 census data from the Local Government area QuickStats pages.⁵ Additional information was sourced from the Profile ID website⁶.

RLSSA has undertaken a mapping project of key aquatic locations across Australia to better understand visitation and exposure trends and where we could be targeting education and prevention strategies. Data is sourced from Roy Morgan People Movement Dashboards and the information provided in this report is only for the locations specific to the Riverland region in

South Australia. There is a limitation that this visitor data only includes the period of 01 December 2021 to 31 January 2023, and does not reflect visitor numbers from the most current 12 months.

Aims

- Conduct an overview of drowning across the Riverland Region in South Australia
- Identify drowning trends and risk factors for drowning in this region
- To inform the development of a Riverland region water safety plan

RESULTS

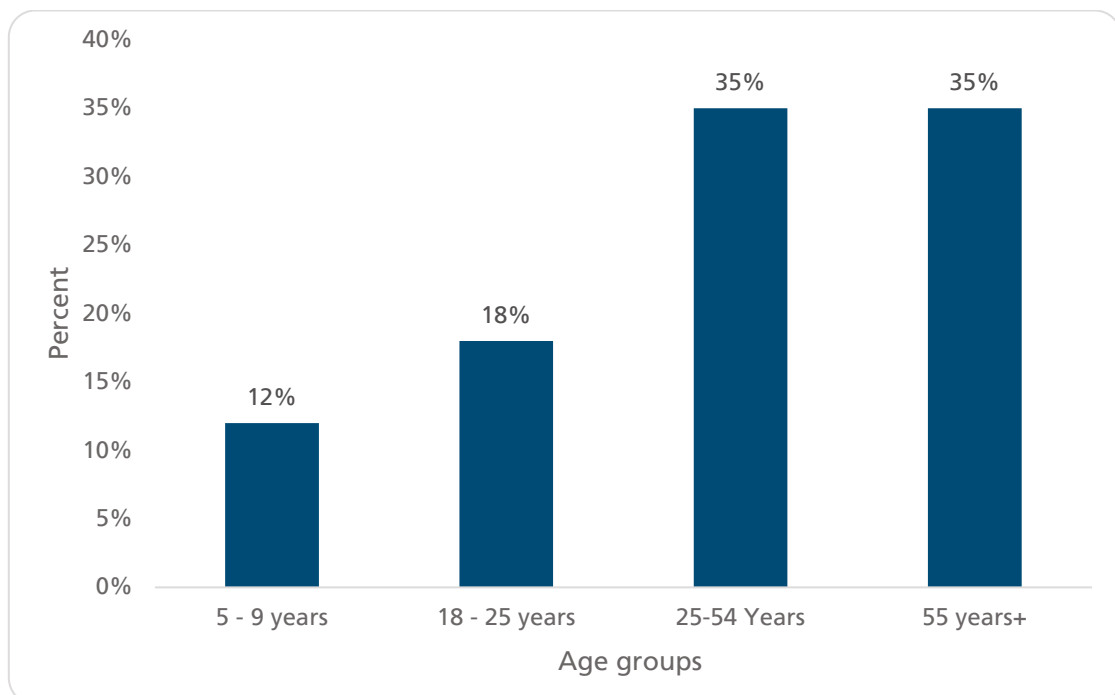
BETWEEN 2002/03 to 2022/23

17 PEOPLE HAVE FATALLY DROWNED IN THE RIVERLAND REGION, SOUTH AUSTRALIA

Approximately 51 people would have experienced a non-fatal drowning incident



In comparison, males account for approximately 80% of drowning deaths nationally



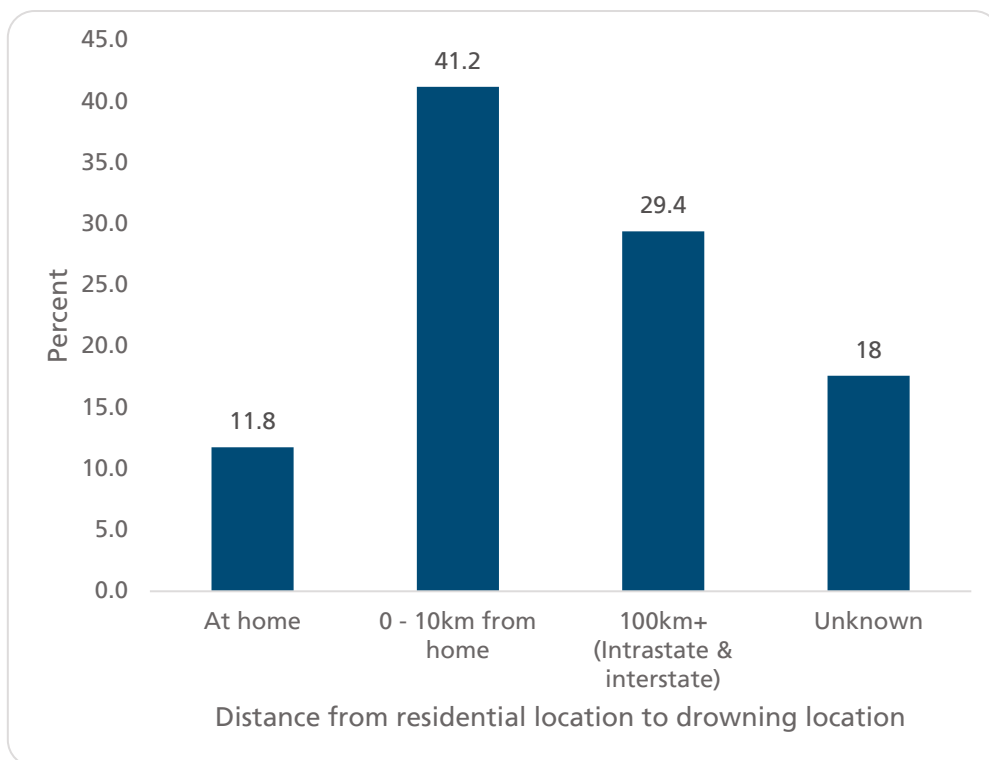
- 35% were aged 25 – 34 years
- 35% were aged 55 years and over

WHERE and HOW DO PEOPLE DROWN?



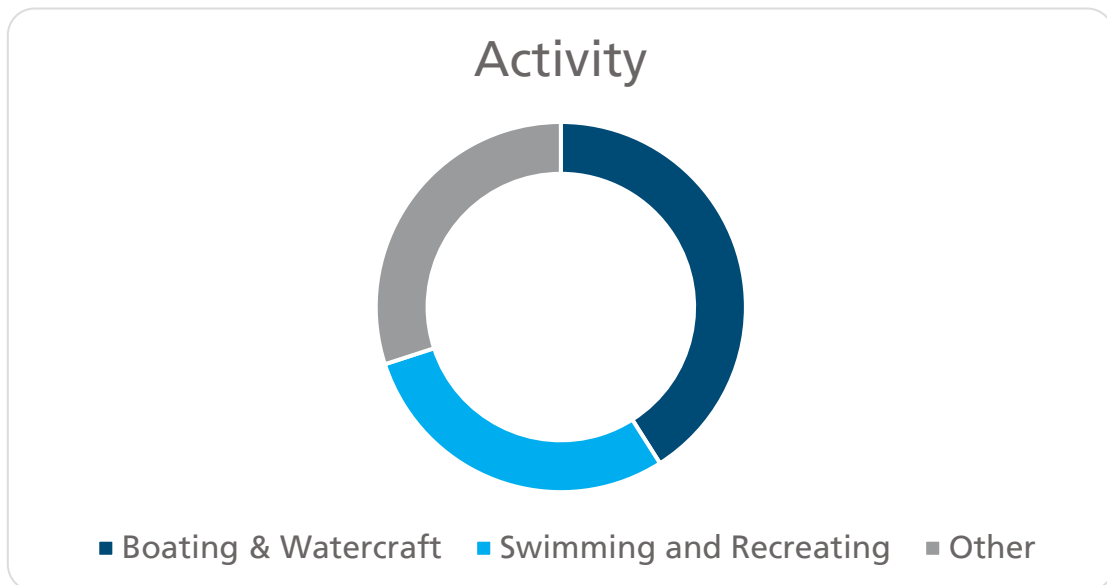
94% occurred in a river/creek

All except one occurred in the River Murray



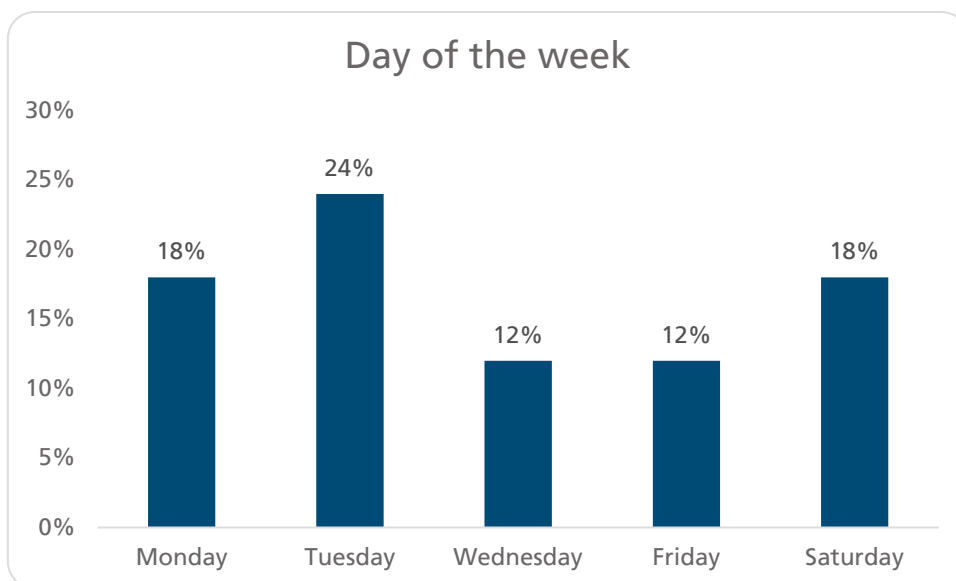
- 53% of drowning deaths occurred within 10km of where the person lived, including their home environment, indicating they were locals and likely to have been familiar with the location where they drowned.
- 29% of drowning incidents were people who lived 100km or further away (both intra- and inter-state visitors).
- Four people were known to be born overseas; none were known to be international visitors or international students.

ACTIVITY BEING UNDERTAKEN PRIOR TO DROWNING



WHEN DOES DROWNING OCCUR?

- 41% in the summer
- 41% in the spring
- 53% occurred in the afternoon (12:01pm – 6pm)
- Drowning most frequently occurred on a Tuesday (24%)



RISK FACTORS

Where known



29% recorded a pre-existing medical condition



36% recorded presence of alcohol



18% occurred at night (evening or early morning)



100% of boating and watercraft drowning deaths:
100% were not wearing a lifejacket
29% occurred when on a houseboat



Swimming ability was unknown in all cases, except 1, thought to be a strong swimmer

CASE STUDY 2: Exposure to high-risk locations for drowning in the Riverland (South Australia only)

Royal Life Saving has been undertaking a visitor analysis project at key aquatic locations around Australia to better understand the types of people who go there (locals versus other visitors), how often and what people do to better target drowning prevention strategies.

These capture the people using the waterways and adjacent areas e.g., parks or walkways. The following locations presented are specific to the Riverland region and were chosen in consultation with Royal Life Saving South Australia staff and were informed by drowning data. For the purposes of this project, **visitor** refers to any person who attended that specific location during the time period e.g., local visitors in comparison to intra- or inter- state visitors.

Data for this project was sourced from Roy Morgan People Movement Dashboards. The data covers the period from December 2021 to 31 January 2023 to indicate visitor trends over these two summer periods following the Covid-19 period.

1. River Murray, Renmark – Paringa



Most people who go to this location are aged between 25 and 64 years



23% of people were born overseas



65% are intra-state visitors who travelled at least 100km+ to the location

The top LGAs where people come from to this location

| LGA of visitors | % |
|-----------------------|-----|
| Renmark Paringa | 16% |
| Onkaparinga | 6% |
| Salisbury | 5% |
| Tea Tree Gully | 4% |
| Charles Sturt | 4% |
| Port Adelaide Enfield | 4% |

How long do they spend there and what are they doing?

- 2.3 hours average hours spent
- Most people go in the afternoon between 12pm and 6pm
- The most popular time of year for visiting this location is during December and January in comparison to other months

2. Lake Bonney, Barmera, Riverland



Most people who go to this location are aged between 25 and 64 years



23% of people were born overseas



78% are intra-state visitors who travelled at least 100km+ to the location

Top LGAs where people come from to this location

| LGA of visitors | % |
|-------------------|-----|
| Berri and Barmera | 18% |
| Onkaparinga | 8% |
| Salisbury | 6% |
| Playford | 6% |
| Charles Sturt | 6% |

How long do they spend there and what are they doing?

- 2.6 hours average hours spent
- Most people go in the afternoon between 12pm and 6pm
- Visitor numbers were highest during December, January and April, reflective of the school holiday periods.

KEY INSIGHTS

This report provides an overview of drowning trends across the Riverland region, South Australia. Several key trends were identified that can be used to inform future drowning prevention strategies in the Riverland region.

Men aged 25 and 54 years accounted for one of the highest groups (35%) drowning in the Riverland and surrounding areas. Research has found that adults, particularly young men, tend to overestimate their skills and underestimate the risks around water.^{7 8 9} Several campaigns over the past five years have focused on men and alcohol, with a specific focus on inland waterways in regional areas and have been promoted via local radio stations and targeted social media platforms.

The other group of concern are men aged 55 years and older. More Australians are living longer and more active lives, however this study highlights that older residents need to take precautions to keep themselves safe when around water, especially in locations where environmental conditions can rapidly change.

Over half of people who drowned in the Riverland were local people who lived within 10km distance to where they drowned, dispelling the myth that drowning deaths are of visitors. This suggests that some people may be relying on their experience, skills and familiarity of the environment to keep them safe around water. The increase in drowning deaths over the last two years of the study support these findings, given the Covid-19 travel restrictions in 2020 and 2021.

Unsurprisingly, most drowning deaths in the area occurred in the Murray River. Swimming in rivers is different to being in a swimming pool. People may not be aware that rivers also can have strong currents, uneven surfaces, sudden drop-offs, murky water (especially after flooding and heavy rain) and the risk of cold-water shock occurring. The difference is many river locations can be remote and isolated, without the supervision of lifeguards as at beaches and pools. The 'Respect the River' campaign was launched in October 2015 at Noreuil Park boat ramp on the banks of the Murray River to increase public awareness of river safety and continues to be promoted across the country. A specific focus on safety at key locations along the River Murray may be one strategy to help increase awareness of river safety in the Riverland region.

Overall, summer and spring is the most common time for drowning, in the Riverland region, consistent with national drowning trends. However, it is important to remember that drowning occurs year-round, in all waterways and while undertaking a range of activities, with swimming and boating being the leading activities prior to drowning.

Key factors for drowning include alcohol and lack of wearing lifejackets. In this study, alcohol was recorded in 36% of people who drowned in the Riverland region. A lifejacket was not worn in 100% of boating-related drowning deaths in this study. Furthermore, around a third of drowning deaths occurred at night. Many parts of the River Murray are very remote and isolated, with limited mobile phone coverage and access for emergency services. The risk of drowning increases in regional and remote locations, and at night as there are less people around as it may take longer to raise the alarm and provide life saving assistance if an incident occurs.

The majority of drowning deaths occurred while boating. Unique to the River Murray, houseboats are a popular activity for locals and tourists alike. While lifejackets are not required for houseboats, it is still important for hirers to be aware of the safety precautions when using houseboats, especially at night and when under the influence of alcohol, and supervising children in this environment.

Swimming and water safety skills were not well recorded. Research has found that 1 in 4 adults in Australia consider themselves to be poor or non-swimmers, and some adults may never have learnt to swim in childhood, particularly those who were born overseas. There are seasonal public swimming pools across the Riverland, however some communities have limited access to year-round swimming pools which may encourage people to swim in locations along the Murray River, without testing their ability in a supervised location such as a public swimming pool.

While the majority of drowning deaths involved locals, visitation data shows that people from across South Australia (and further afield) are visiting key locations around water in the Riverland, it is important that water safety messages are promoted to both locals and visitors alike while still encouraging people to enjoy the variety of aquatic environments and activities that the Riverland offers.

RECOMMENDATIONS

- Continue to promote and evaluate existing river and inland waterway drowning prevention initiatives and awareness campaigns, specifically targeting men and boaters.
- Promote water safety at popular locations, venues and activities along the River Murray where people frequently visit for leisure, recreation and social activities.
- Undertake risk assessment and compliance activities at identified hotspots along the River Murray
- Boat and watercraft hirers, including Houseboat hire operators should include safety information to prospective hires and upon commencement of hire.
- Increase availability of swimming times for adults and the general public.
- Increase awareness of the dangers of mixing alcohol around water, and enforcement of alcohol to prevent drowning, especially among young males.
- Continue to promote active supervision messages for parents and careers of young children.

CONCLUSION

This report provides a snapshot of drowning deaths that have occurred in the Riverland region, South Australia over the past twenty years (2002/03 to 2022/23). The majority of drowning deaths occurred in the River Murray. This report has highlighted that drowning prevention initiatives should be targeting men of all ages, in addition to visitors to the Riverland region. Risk factors for drowning identified include alcohol, not wearing a lifejacket and boating at night. Any future drowning prevention strategies should take a multi-pronged approach focusing on high-risk populations activities and behaviours in order to effectively address drowning in the Riverland Region.

REFERENCES

1. Royal Life Saving Society - Australia. Royal Life Saving National Drowning Report 2021. Sydney: Royal Life Saving Society - Australia, 2021.
2. Willcox-Pidgeon S, Franklin RC, Leggat PA, et al. Epidemiology of unintentional fatal drowning among migrants in Australia. *Australian and New Zealand Journal of Public Health* 2021;45(3):255-62. doi: <https://doi.org/10.1111/1753-6405.13102>
3. Mahony A, Barnsley P, Peden A, et al. A thirteen year national study of non-fatal drowning in Australia: Data challenges, hidden impacts and social costs. Sydney: Royal Life Saving Society - Australia, 2017.
4. Australian Water Safety Council. Australian Water Safety Strategy 2030. Sydney: Australian Water Safety Council, 2021.
5. Australian Bureau of Statistics. 2021 Census data All persons Quickstats. Local Government areas. Available from: <https://abs.gov.au/census/find-census-data/search-by-area>
6. Profile ID. RDA Murraylands and Riverland 2022. Available from: <https://profile.id.com.au/rda-murraylands-riverland>.
7. Regional Development Victoria. Regional City of Mildura: Regional Development Victoria; 2021. Available from: <https://www.rdv.vic.gov.au/victorias-regions/mildura2022>.
8. Mahony A, Peden AE. Young men and drowning: An analysis of drowning deaths among men aged 25-34 years. Sydney: Royal Life Saving Society - Australia, 2016.
9. Abercromby M, Crawford G, Nimmo L, et al. "I never had a thought about drowning". Exploring water safety attitudes and practices among older adults in Western Australia. *Health promotion journal of Australia* 2021;ePub(ePub):ePub-ePub.
10. Duane Alex Quistberg EB, Linda Quan, Beth E. Ebel. Low life jacket use among adult recreational boaters: A qualitative study of risk perception and behavior factors. *Accident Analysis and Prevention* 2014;62:276– 84. doi: 10.1016/j.aap.2013.10.015

Appendix A – Surveying and breathalysing study of river users

Two researchers from Royal Life Saving Australia and James Cook University spent a week in January 2018 (including Australia Day 2018) at along the Murray River at Noreuil Park, Albury surveying and breathalysing river users.

A summary of the findings of the study specific to the Murray River are below (this was supplied to Albury Council later in 2018). This activity was replicated in three other locations in NSW and QLD and generated lots of community and media interest. The findings from this study were used to inform targeted river safety messages and a new men and alcohol water safety campaign.

MURRAY RIVER, ALBURY, NSW



The published academic articles from this study can be found here:

- Peden AE, Franklin RC, Leggat PA. (2018) Breathalysing and surveying river users in Australia to understand alcohol consumption and attitudes towards drowning risk. BMC Public Health 18:1393. Doi:10.1186/s12889-018-6256-1
- Peden AE, Franklin RC, Leggat PA. (2018) Exploring visitation at rivers to understand drowning risk. Injury Prevention Published Online First: 06 June 2018. doi:10.1136/injuryprev-2018-042819



ROYAL LIFE SAVING
AUSTRALIA

www.royallifesaving.com.au