2023 – 24
Life Saving Victoria

Drowning report

Life Saving Victoria

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- Ambulance Victoria
- Coroners Prevention Unit, Coroners Court of Victoria
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- Emergency Management Victoria
- National Coronial Information System
- Royal Life Saving Society – Australia
- Surf Life Saving Australia
- Victorian Injury Surveillance Unit

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™Life Saving Victoria: Melbourne.

Acknowledgement of Traditional Owners

Life Saving Victoria respectfully acknowledges the Traditional Owners of the Lands and waterways in which we swim, explore, play, meet and live. We pay our respects to Elders past and present and celebrate the stories, culture and traditions of Aboriginal and Torres Strait Islander peoples of all communities who also work and live on these Lands.

We wish to specifically acknowledge the Bunurong People of the South Eastern Kulin Nation as the Traditional Owners of the Lands on which this report was compiled.

Acknowledgement of Data Sources

Information presented in this report is from the Life Saving Victoria Drowning Databases, which rely on data collated from the National Coronial Information System (NCIS), the Coroners Prevention Unit at the Coroners Court of Victoria, Ambulance Victoria, the Victorian Injury Surveillance Unit, and year-round media monitoring. Information contained within the NCIS is made available by the Department of Justice and Community Safety Victoria.

Contents

Glossary

10-year average	Unless otherwise specified, the 10-year, or decade, average is the period between 1 July 2013 – 14 and 30 June 2022 – 23.
Aquatic industry	The aquatic industry comprises Council-owned aquatic facilities, learn to swim centres, and early childhood care, secondary, tertiary and higher education venue swimming pools, as well as associated trades and services.
Bathing	The act of cleaning/washing oneself.
Culturally and linguistically diverse (CALD)	For the purpose of this report, being of CALD background is defined as people born outside of Australia and/or having a multicultural background.
Coastal waterways	Includes beaches, oceans, bays, harbours, inlets or rocky outcrops.
Disaster and/ or extreme weather	This includes flooding events or heatwaves, and natural disasters.
Drowning	"The process of experiencing respiratory impairment from submersion/immersion in liquid"[1]. Outcomes can be fatal, or non-fatal with potential for varied resulting morbidities.
Drowning rate	The frequency of drowning per 100,000 population, determined by most recent ABS population numbers[2].
Fishing	Unless otherwise stated, includes fishing for abalone (typically snorkelling or diving), rock fishing and fishing from a boat.
Inland waterways	Includes rivers, lakes, public dams, creeks or streams.
Private pool	An in- or above-ground pool within a residential property.
Public pool	Public pools include those which are Council-owned, learn to swim, early childhood care, tertiary education, and higher education venue pools. Pools are also considered public where swimming lessons are conducted for the duration of the lesson/s and any pool offering access on a pay-per-usage basis for the duration of the pay-per-usage access[3].
Water bodies around the home	Includes but is not limited to baths, home pools, dams or any item around the home filled with water (paddle pools, buckets).

[1] van Beeck, E., & Branche, C. (2014). Definition of drowning: A progress report. In J. J. L. M. Bierens (Ed.), Drowning Prevention, rescue, treatment (2nd ed., pp. 85 – 89). Springer.

[2] Australian Bureau of Statistics. (2022). Australian National, state and territory population statistics, Mar 2024. Cat. No. 31010, Australian Bureau of Statistics: Canberra.

[3] Department of Health. (2020). Public aquatic facilities key compliance requirements. Victorian Government. Retrieved from: *www.health.vic.gov.au/water/public-aquatic-facilities-key-compliance-requirements*

Introducing the 2023 – 24 Life Saving Victoria **Drowning Report**

Catherine Greaves
CEO, Life Saving Victoria

We had 27 drownings over summer, the highest number on record for any summer.

The 2023 – 24 Life Saving Victoria Drowning Report reflects the many challenges our volunteer lifesavers, paid lifeguards, pool lifeguards, emergency services first responders and LSV staff have faced over the previous 12 months.

In total, there were 54 fatal drowning incidents across Victoria and 132 non-fatal drowning incidents requiring paramedic attendance.

There were record numbers of fatal drowning over summer and among Victoria's multicultural communities, and unacceptably high drowning figures across all ages, genders and geographic locations.

The 15 to 24-year-old age group experienced the largest increase in drownings, with 10 fatalities—double the 10-year average. Meanwhile, the 25 to 44-year-old cohort recorded the highest number of drownings, with 17 fatalities, making it the most affected age group, and the highest number of fatal drownings for this age group in two decades

I have no doubt our community collectively shudders at seeing this sharp increase in drowning deaths of teenagers and young adults. This will require a community-wide effort to reach out to our young people on the issue of water safety to curtail this disturbing trend.

The confronting numbers in this report, unfortunately, don't end there.

We had 27 drownings over summer, the highest number on record for any summer.

While there are many factors at play in these incidents, the major takeaway must be that all these drownings occurred in areas not patrolled by our volunteer lifesavers and paid beach and pool lifeguards. Any body of water can be deadly, and swimming at all beaches, waterways and pools carries an element of risk. This is particularly true at Victoria's surf beaches, which are among the most dangerous in the country.

Each one of these tragic incidents is a reminder that water safety should be at the forefront of all our minds, whether we're visiting a beach, river or lake to simply enjoy a walk, looking after grandchildren in our backyard pool, or taking a boat trip out in Port Phillip Bay. The safest place to swim is always where lifesavers and lifeguards can keep an eye on you, be that at one of our patrolled beaches or public swimming pools.

Tragically, this year saw the highest number of drownings among multicultural populations in Victoria on record, with 21 drownings recorded among people from culturally and linguistically diverse backgrounds.

We know there are many people hurting from the loss of loved ones, friends and fellow community members to drowning. Please know that all of Victoria, along with everyone at Life Saving Victoria and the broader lifesaving community, share in your sorrow following these tragic events.

Breaking down language and cultural barriers; building swimming and water safety abilities; and creating water safety role models in our multicultural communities are key to ensuring all Victorians can enjoy the water safely.

And we must confront head-on, the fact that so many of these barriers lead back to one major factor – socioeconomic disadvantage.

Regardless of where someone might live, their age, gender, background or level of personal wealth, we fundamentally believe everyone should have access to safe and enjoyable aquatic environments.

This is integral to empowering people through swimming and water safety education, to be able to safely enjoy the water in the company of their fellow Victorians. The statistics in this report make for difficult reading. Behind these numbers are people whose lives have been cut short, or impacted by non-fatal drowning, and many more families, friends and communities left with the heartbreak that follows a drowning incident.

This report must harden our resolve as a community to arrest these growing drowning numbers.

Here at Life Saving Victoria, this report provides us with vital insights so we can target our resources to best effect and redouble our efforts to save lives and empower communities to safely enjoy water.

This won't happen overnight. Swimming and water safety skills are a lifelong learning experience, and how to stay safe in the water is a never-ending conversation with the Victorian community. And we can't do this alone. We also rely on all levels of government, our industry partners and the general public to do their part in keeping our community, each other and themselves safe in the water.

Our sights are set firmly on working together to build a future where no one has to experience the trauma and anguish of drowning, because ultimately, anyone can drown but no one should.

Overview

	10-year average	2023 – 24	Difference 2023 – 24 to 10-year average
OVERVIEW	Summary	Summary	%
Number (rate) of fatal drownings	47 (0.74)	54 (0.79)	+15% (+8%)
Number (rate) of fatal drowning – males	35 (1.11)	46 (1.36)	+30% (+22%)
Number (rate) of fatal drowning – females	12 (0.36)	8 (0.23)	-32% (-36%)
Number (rate) of non-fatal drownings	83 (1.28)	132 (1.94)	+60% (+52%)
PEOPLE AND POPULATIONS	Rate	Rate	%
0 – 4 years	0.89	0.77	-13%
5 – 14 years	0.20	0.24	+20%
15 – 24 years	0.64	1.17	+82%
25 – 44 years	0.66	0.84	+27%
45 – 64 years	0.77	0.75	-1%
65+ years	1.26	0.89	-29%
High-risk populations[4]	0.81	1.01	+25%
PLACES	Frequency	Frequency	%
Inland waterways	17	15	-9%
Coastal waterways	17	26	+50%
Water bodies around the home	11	11	-4%
Aquatic industry[5]	1	<5	0%
ACTIVITIES AND RISK FACTORS	Frequency	Frequency	%
Alcohol and drug-related[6]	13	7	-48%
Boating, watercraft, fishing and diving/snorkelling	11	12	+14%
Disaster and/or extreme weather	1	<5	+54%

4 Includes Aboriginal and Torres Strait Islander peoples, people from culturally and linguistically diverse (CALD) backgrounds, international tourists, and international students. Statistics are primarily determined from country of birth data.

5 Figures include drowning deaths at public swimming pools.

6 Toxicology reports to confirm alcohol and/ or drug involvement are available only once a case is closed; therefore, numbers may be subject to change.

21 fatal drownings among culturally and linguistically diverse peoples – the most on record.
See page 20.

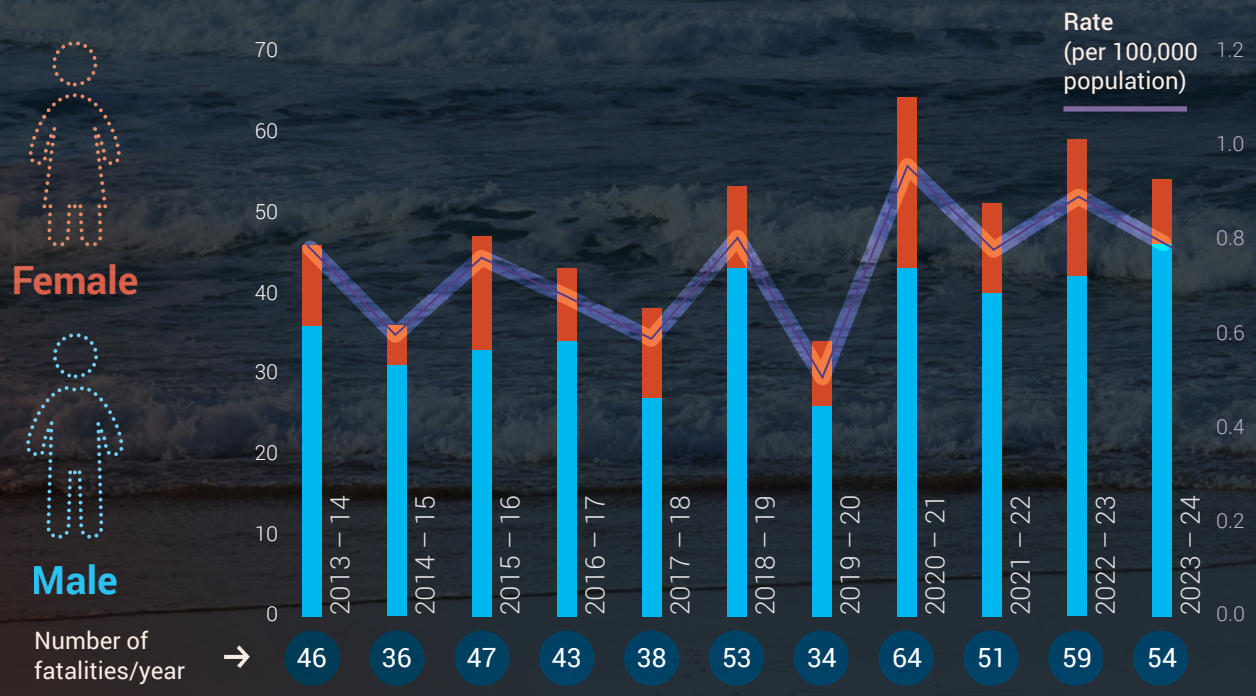
Summary
of fatal drowning incidents

Drowning fatalities 2023 – 24

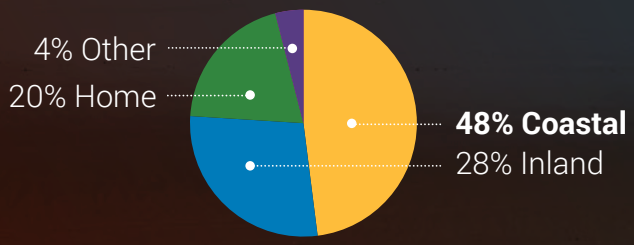
54 (+15%*)
fatal drownings

0.79
rate per 100, 000

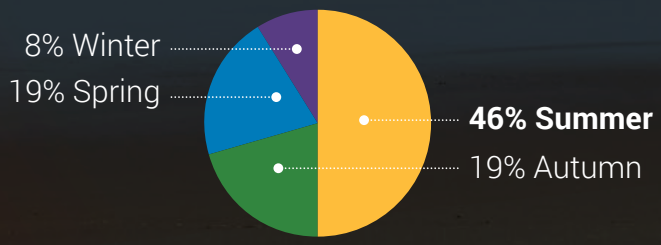
$291.6M^
direct cost to society of lives lost



Fatal drowning by waterway type



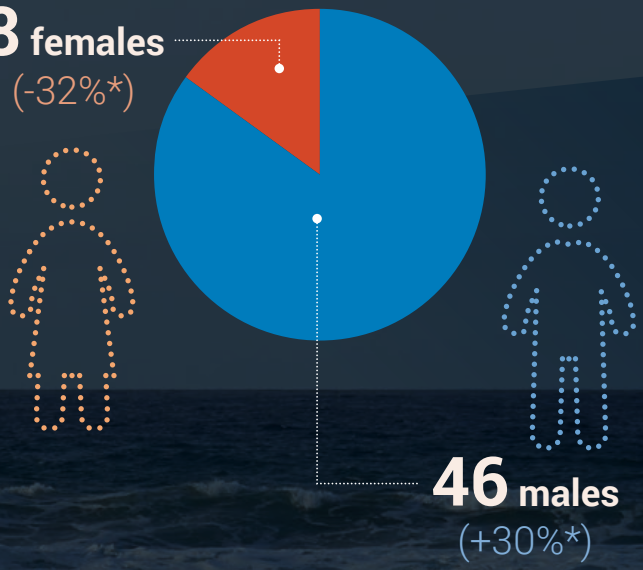
Fatal drowning by season



* Compared to the 10-year average

^ Office of Impact Analysis. (2023). Value of statistical life. Australian Government. Retrieved from *oia.pmc.gov.au/resources/guidance-assessing-impacts/value-statistical-life*

People and populations



28% aged **0 – 24 years**

15 – 24 year olds recorded the highest drowning rate:

1.17

39% of fatalities this year involved people from **CALD communities**

Places

28%

of people drowned within their **residential postcode**

1.5x

Regional residents were 1.5 times **more likely to drown** than metropolitan residents

Activities and risk factors

14%

of fatal drownings involving people over **15 years old** were known to involve alcohol and/or drugs (86% unknown)

50%

of those who fatally drowned from a **boating** or **rock fishing-related** incident were **not wearing a lifejacket**

24

fatalities while **swimming**, **paddling** or **wading**

14%

decrease in incidents from **boating**, **fishing** and **craft riding***

OVER 2x

the number of fatal drownings from **diving** or **snorkelling***

* Compared to the 10-year average

Summary
of non-fatal drowning incidents

Ambulance attendance 2023 – 24

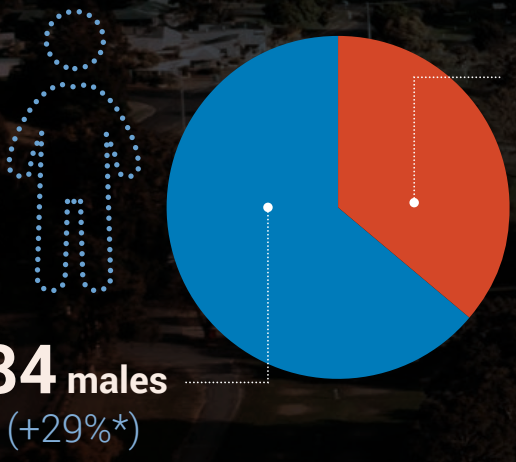
132 (+60%*)
non-fatal drownings

1.94
rate per 100,000

People and populations

38%
aged **0 – 14 years**

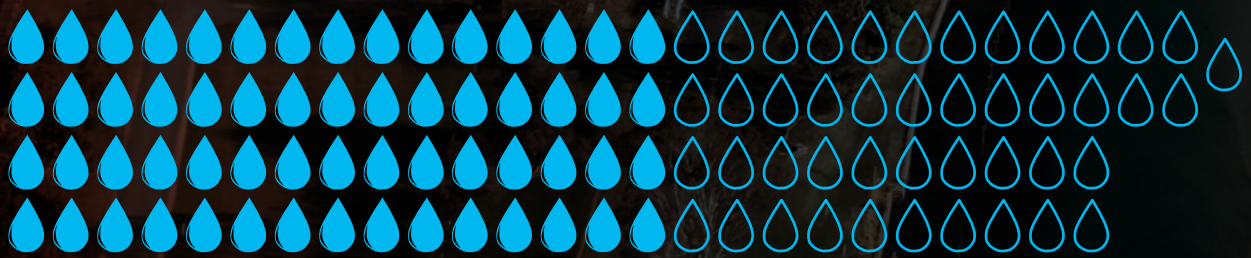
0 – 4 year olds
recorded the highest non-fatal drowning rate: **6.96**



48 females (+27%*)

84 males (+29%*)

Adults **Children 0 – 14**



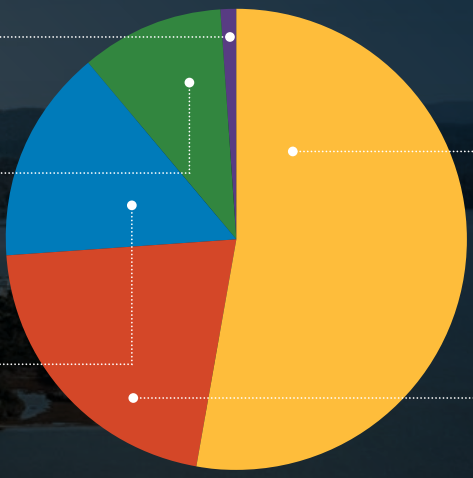
* Compared to the 10-year average

Places

1%
Other/unknown

10%
Inland
(19% increase*)

15%
Public pool
(12% increase*)



53%
Coastal
(100% increase*)

21%
Home
(21% increase*)

Activities and risk factors

61%
of incidents from **swimming**, **paddling** or **wading**

15
incidents from **general leisure activities** (53% increase*)

58%
of incidents occurred in **summer**

11%
of incidents from **attempting a rescue** (3 times the 10-year average)

* Compared to the 10-year average

Hospital admissions
2013 – 14 to 2022 – 23

1,113 **hospital admissions** for non-fatal drowning over the previous decade

111 average per year

1.74 rate

People and populations

755
68% males

0 – 4 year olds
recorded the highest average hospitalisation rate: **6.52**

65+ year olds
recorded the lowest average hospitalisation rate: **0.99**

Places

19%
natural waterways

23%
water bodies **around the home**

Activities and risk factors

36%
sporting activities

44%
swimming

32%
craft riding

Emergency department presentations
2013 – 14 to 2022 – 23

1,178
emergency department (ED) presentations for non-fatal drowning over the previous decade

118
average per year

1.83
rate

People and populations

749
64% males

0 – 4 year olds
recorded the highest average hospitalisation rate: **12.96**

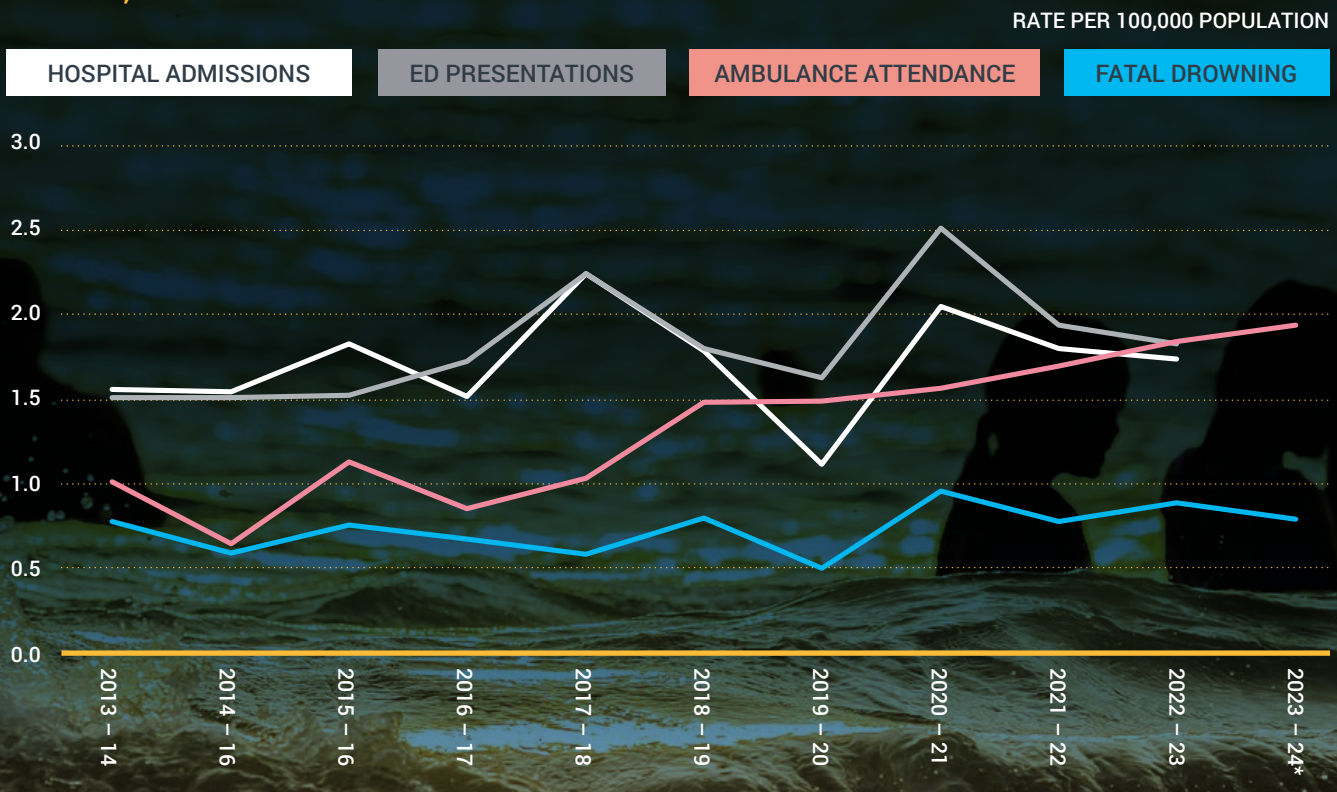
45 – 64 year olds
recorded the lowest average hospitalisation rate: 0.47

Places

25%
swimming pools

31%
water bodies **around the home**

Overall drowning rate per 100,000 persons in Victoria, 2013 – 14 to 2023 – 24



* Hospital admission and ED presentation data not available

There is likely an overlap of data from ambulance attendance, hospital admissions and ED presentations.

People and populations

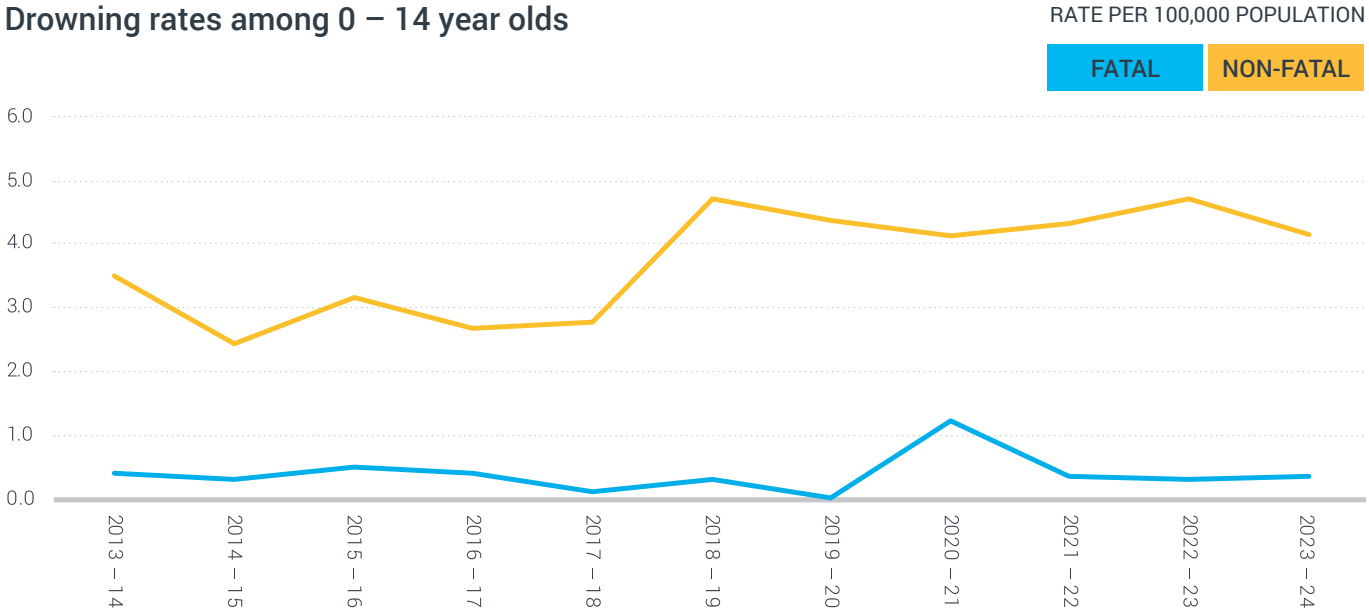
People aged 0 – 14 years

5
fatal drownings among 0 – 14-year-olds in 2023 – 24, a rate of 0.41 and a 5% decrease on the 10-year average rate.

50
0 – 14-year-olds experienced a non-fatal drowning requiring ambulance attendance in 2023 – 24: (27 incidents among 0 – 4-year-olds; 23 incidents among 5 – 14-year-olds), a combined rate of 4.14 and an increase of 13% on the 10-year average rate.

6.96
0 – 4-year-olds recorded a non-fatal drowning rate of 6.96 in 2023 – 24, the highest recorded among all age groups.

Drowning rates among 0 – 14 year olds



Common trends for drowning incidents in 2023 – 24 compared to previous years

	Fatal drowning		Non-fatal drowning	
	10-year average	2023 – 24	5-year average	2023 – 24
Males	63%	80%	56%*	50%
Females	37%	20%	43%	50%
Key activity	Walking or playing near water	Walking or playing near water	Swimming, paddling or wading	Swimming, paddling or wading
Key location	Private swimming pools	Around the home	Swimming pools: public & private	Swimming pools: public & private
Key season	Summer	Summer	Summer	Summer
Key time of day	Afternoon (12 – 6pm)	Afternoon (12 – 6pm)	*Data not available*	*Data not available*
Were they supervised?	No active supervision	Alone, no supervision	Yes, distracted	Yes, distracted

* 1% unknown

People and populations

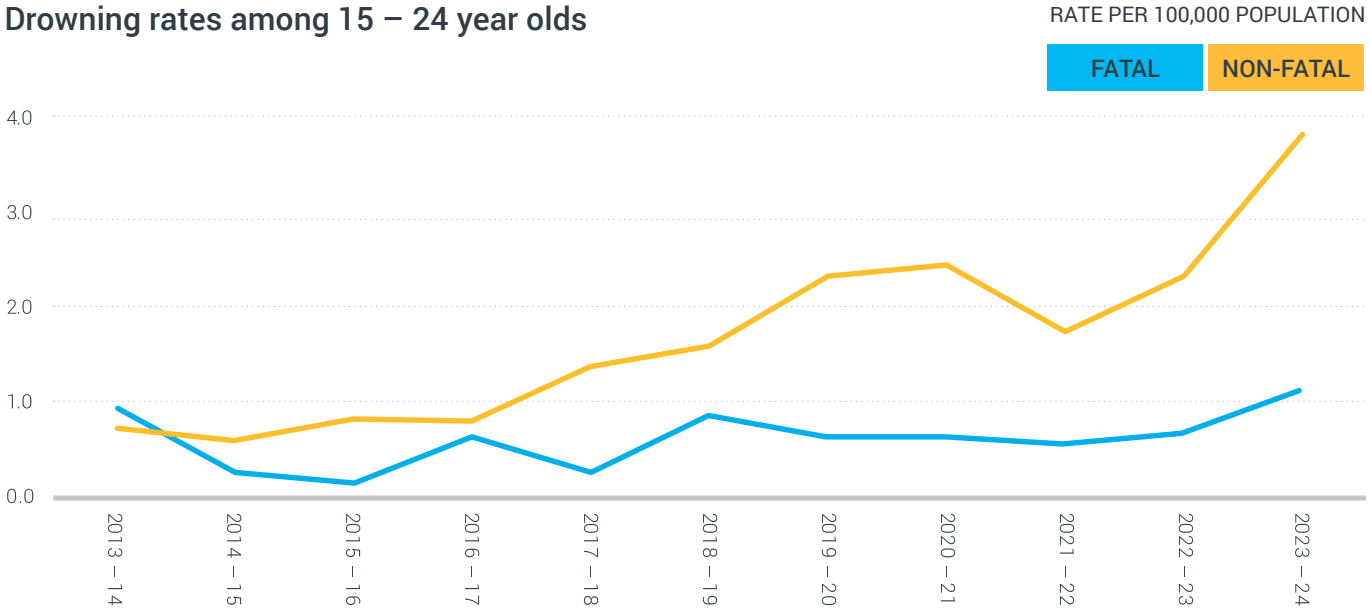
People aged 15 – 24 years

10
people aged 15 – 24 years fatally drowned in 2023 – 24, a rate of 1.17 and an 82% increase on the 10-year average rate.

1.81
males aged 15 – 24 years recorded a fatal drowning rate of 1.81 in 2023 – 24, the highest among all groups and 92% higher than the decade average for this group.

33
15 – 24-year-olds experienced a non-fatal drowning requiring ambulance attendance in 2023 – 24: a rate of 3.85 and more than double the 10-year average rate.

Drowning rates among 15 – 24 year olds



Common trends for drowning incidents in 2023 – 24 compared to previous years

	Fatal drowning		Non-fatal drowning	
	10-year average	2023 – 24	5-year average	2023 – 24
Males	75%	80%	69%	61%
Females	25%	20%	31%	39%
Key activity	Swimming, paddling or wading	Swimming, paddling or wading	Swimming, paddling or wading	Swimming, paddling or wading; attempting a rescue
Key location	Beach	Beach	Bay, ocean or sea	Bay, ocean or sea
Key season	Summer	Summer	Summer	Summer
Key time of day	Afternoon (12 – 6pm)	Afternoon (12 – 6pm)	*Data not available*	*Data not available*
Key day	Weekend	Weekday	Weekday	Weekday
Incident within or outside home postcode?	Outside home postcode	Outside home postcode	*Data not available*	*Data not available*

People and populations

People aged 25 – 44 years

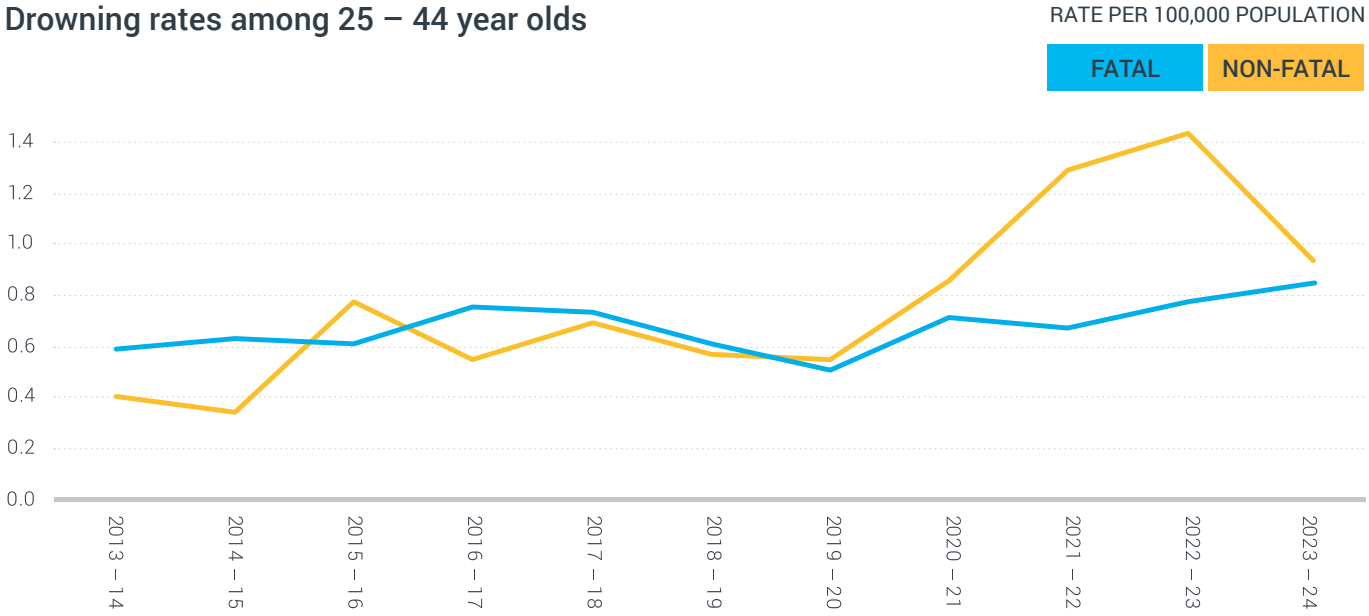
17

people aged 25 – 44 years fatally drowned in 2023 – 24, the most fatalities this year among all age groups, and the highest number of fatal drownings for this age group in two decades. This equated to a rate of 0.84 and a 27% increase on the 10-year average rate.

19

25 – 44-year-olds experienced a non-fatal drowning requiring ambulance attendance in 2023 – 24: a rate of 0.93 and a 25% increase on the 10-year average rate.

Drowning rates among 25 – 44 year olds



Common trends for drowning incidents in 2023 – 24 compared to previous years

	Fatal drowning		Non-fatal drowning	
	10-year average	2023 – 24	5-year average	2023 – 24
Males	85%	80%	74%	79%
Females	15%	20%	26%	21%
Key activity	Swimming, paddling or wading	Swimming, paddling or wading	Swimming, paddling or wading	Swimming, paddling or wading; attempting a rescue
Key location	River, creek or stream	Beach	Bay, ocean or sea	Bay, ocean or sea
Key season	Summer	Summer	Summer	Summer
Key time of day	Afternoon (12 – 6pm)	Evening (6pm – 11pm)	*Data not available*	*Data not available*
Key day	Weekday	Weekday	Weekend	Weekend
Incident within or outside home postcode?	Outside home postcode	Outside home postcode	*Data not available*	*Data not available*

People and populations

People aged 45 – 64 years

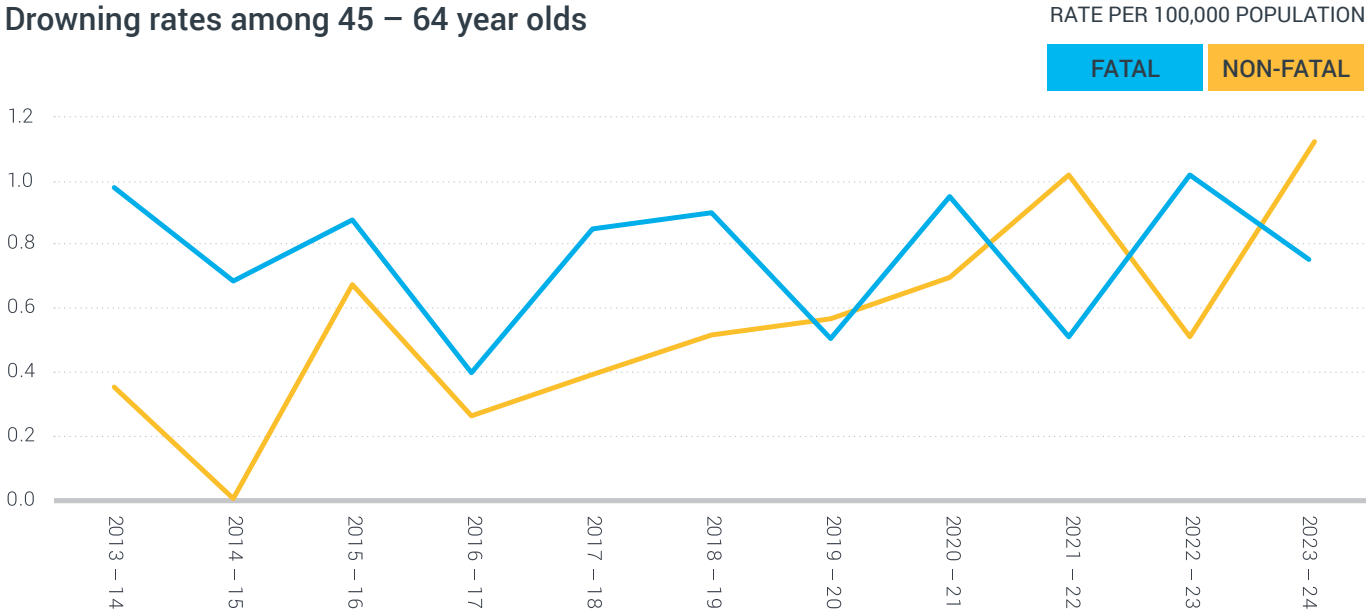
12

people aged 45 – 64 years fatally drowned in 2023 – 24, a rate of 0.75 and a 1% decrease on the 10-year average rate.

18

45 – 64-year-olds experienced a non-fatal drowning requiring ambulance attendance in 2023 – 24: a rate of 1.13 and double the 10-year average rate.

Drowning rates among 45 – 64 year olds



Common trends for drowning incidents in 2023 – 24 compared to previous years

	Fatal drowning		Non-fatal drowning	
	10-year average	2023 – 24	5-year average	2023 – 24
Males	74%	63%	77%	78%
Females	26%	37%	23%	22%
Key activity	Swimming, paddling or wading	Swimming, paddling or wading	Swimming, paddling or wading	Swimming, paddling or wading; attempting a rescue
Key location	River, creek or stream	Beach	Bay, ocean or sea	Bay, ocean or sea
Key season	Summer	Summer	Summer	Summer
Key time of day	Afternoon (12 – 6pm)	Afternoon (12 – 6pm)	*Data not available*	*Data not available*
Key day	Weekday	Weekend	Weekday	Weekend
Incident within or outside home postcode?	Outside home postcode	Outside home postcode	*Data not available*	*Data not available*

People aged 65+ years

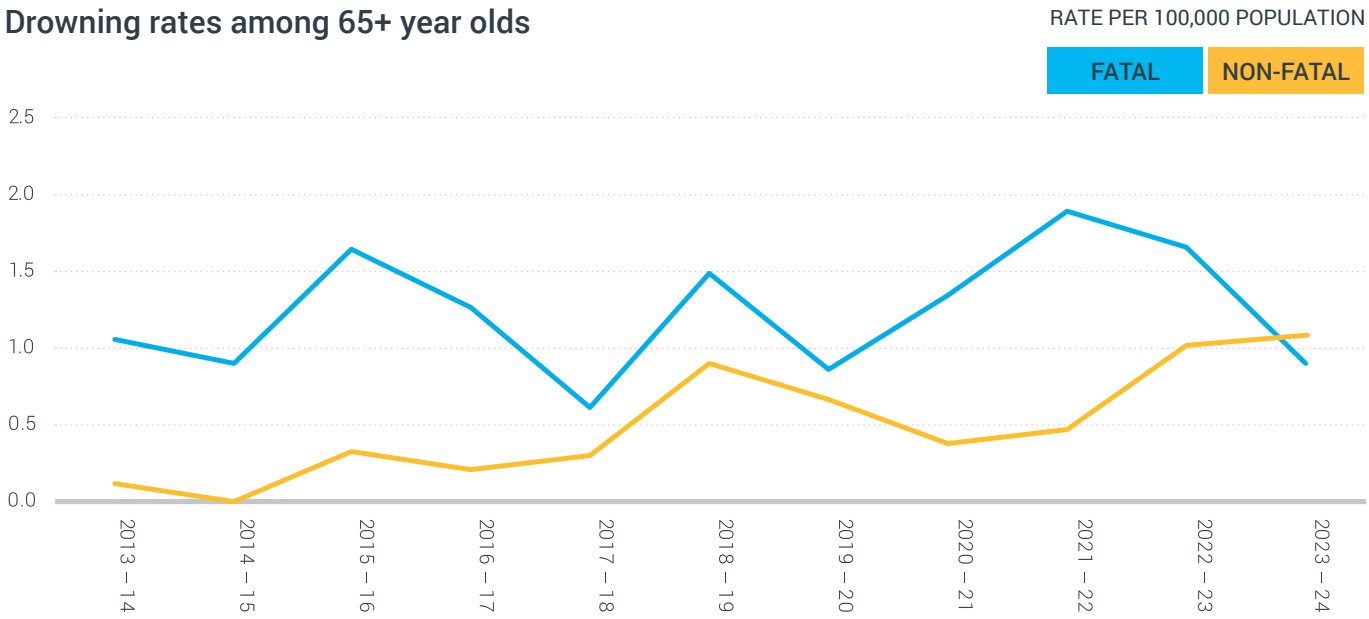
10

people aged 65 years and older fatally drowned in 2023 – 24, a rate of 0.89 and a 29% decrease on the 10-year average rate.

12

65+ year-olds experienced a non-fatal drowning requiring ambulance attendance in 2023 – 24: a rate of 1.06 and more than double the 10-year average rate.

Drowning rates among 65+ year olds



Common trends for drowning incidents in 2023 – 24 compared to previous years

	Fatal drowning		Non-fatal drowning	
	10-year average	2023 – 24	5-year average	2023 – 24
Males	74%	67%	69%	83%
Females	26%	33%	31%	17%
Key activity	Walking near water	Swimming, paddling or wading	Swimming, paddling or wading	Swimming, paddling or wading
Key location	Beach	Private swimming pool	Bay, ocean or sea	Bay, ocean or sea
Key season	Summer	Summer	Summer; autumn	Summer; autumn
Key time of day	Afternoon (12 – 6pm)	Morning (6 – 11am)	*Data not available*	*Data not available*
Key day	Weekday	Weekday	Weekday	Weekday
Incident within or outside home postcode?	Within home postcode	Within home postcode	*Data not available*	*Data not available*

Victoria's multicultural populations

54%
of all fishing-related deaths since 2014 – 15 involved people of CALD backgrounds

21
people known to be of CALD background fatally drowned in 2023 – 24, the highest on record and 39% of all fatalities this year

156
people known to have been born overseas fatally drowned in Victoria in the past decade – a rate of 0.82 per 100,000 population and 32% of all drowning deaths

People and populations

78%
MALE

39%
AGED 25 – 44 YEARS

21%
AGED 45 – 64 YEARS

42 years
MEAN AGE

82%
RESIDED IN MAJOR CITIES IN VICTORIA

21 years
MEAN LENGTH OF TIME LIVING IN AUSTRALIA

Places

31%
BEACHES

27%
RIVERS, CREEKS OR STREAMS

53%
DROWNED IN A METROPOLITAN WATERWAY

Activities and risk factors

34%
SWIMMING, PADDLING OR WADING

19%
WALKING OR RECREATING NEAR WATER

17%
FISHING (INCLUDING ROCK FISHING, FISHING FROM A BOAT, SNORKELLING/ DIVING FOR FISH)

32%
KNOWN ALCOHOL AND/OR DRUGS PRESENT

Places

Fatal drowning

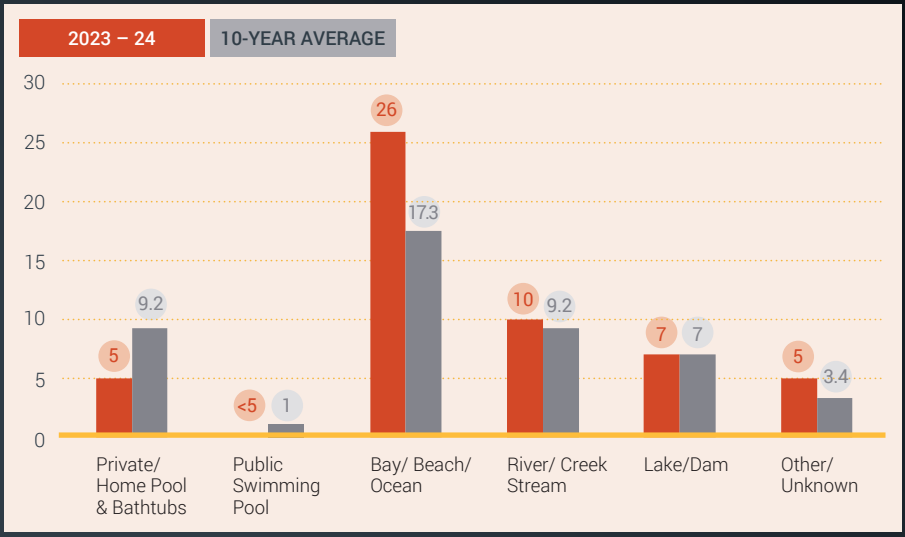
10

more drowning deaths at beaches in 2023 – 24 compared to the decade average; one more in rivers, creeks and streams; and four fewer in private pools and bathtubs.

28%

of people fatally drowned at a waterway within their residential postcode this year, less than the decade average of 42%.

Frequency of fatal drowning by location, 2023 – 24 compared to decade average



Non-fatal drowning

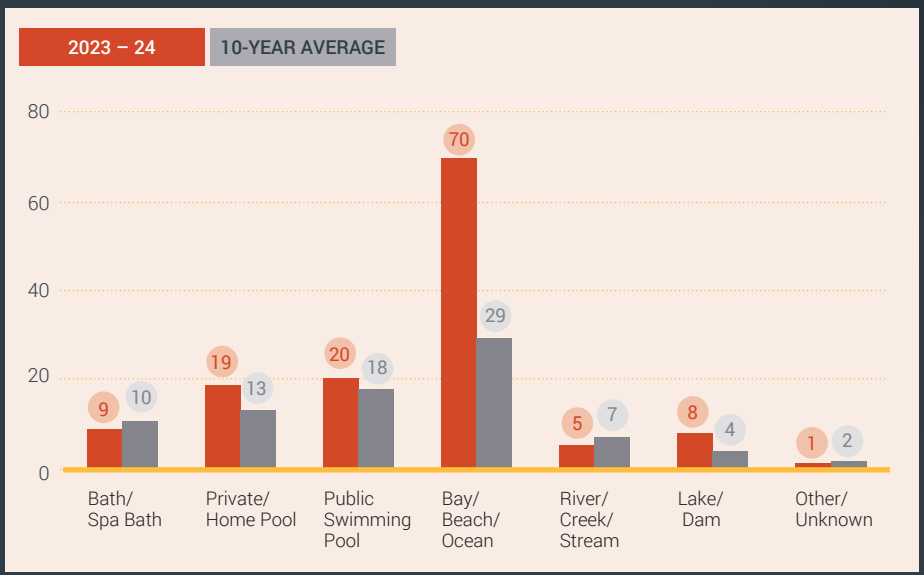
over 2x

the number of non-fatal drownings recorded at bay, beach or ocean locations compared to the decade average.

6

more non-fatal drownings in private/ home pools compared to the decade average.

Frequency of non-fatal drowning by location, 2023 – 24 compared to decade average



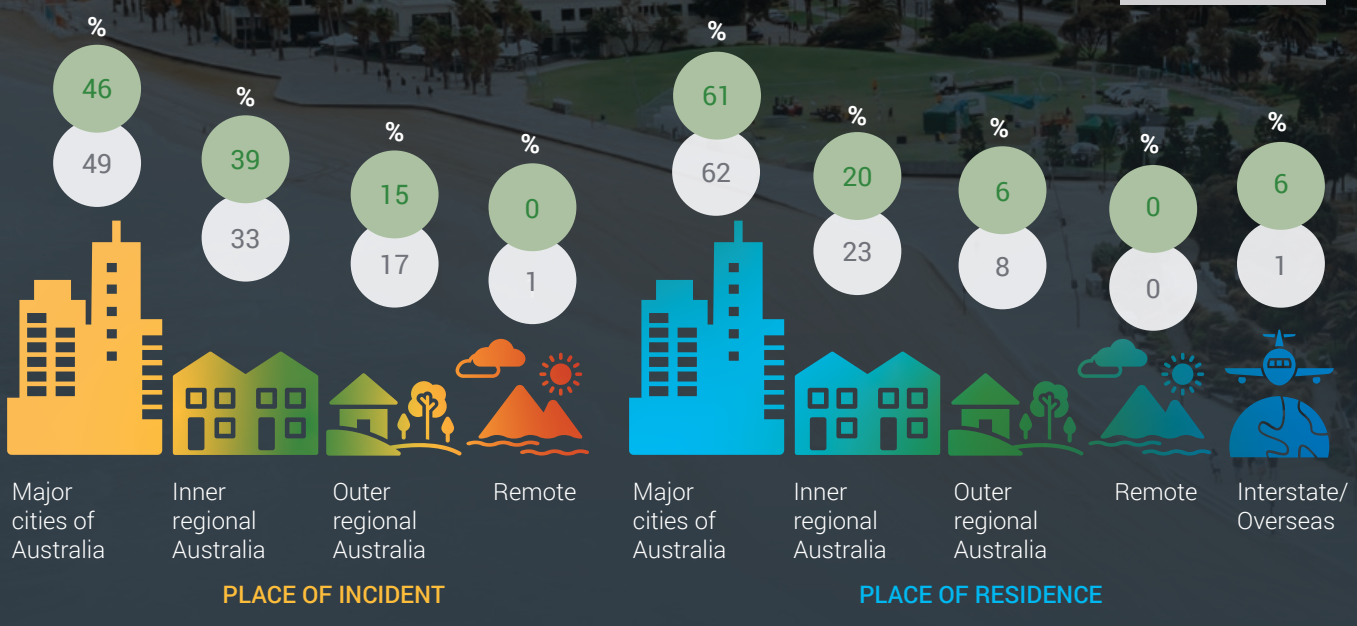
Region

25 (46%)
fatalities occurred within metropolitan areas,
two more than the 10-year average

61%
of fatal incidents **involved metropolitan residents**

Regional residents were **1.5x**
more likely to **fatally drown than metropolitan residents**

% Percentage of fatal drowning by remoteness of area of incident and residence in Victoria, 2013 – 14 to 2023 – 24



The Murray River

40%
of Murray River drowning fatalities were Victorians

State government legislation requires drowning incidents in the Murray River to be reported within the New South Wales jurisdiction; however, Victorians made up 19 (40%) of the 48 Murray River drowning incidents over the previous decade (2014 – 15 to 2023 – 24).

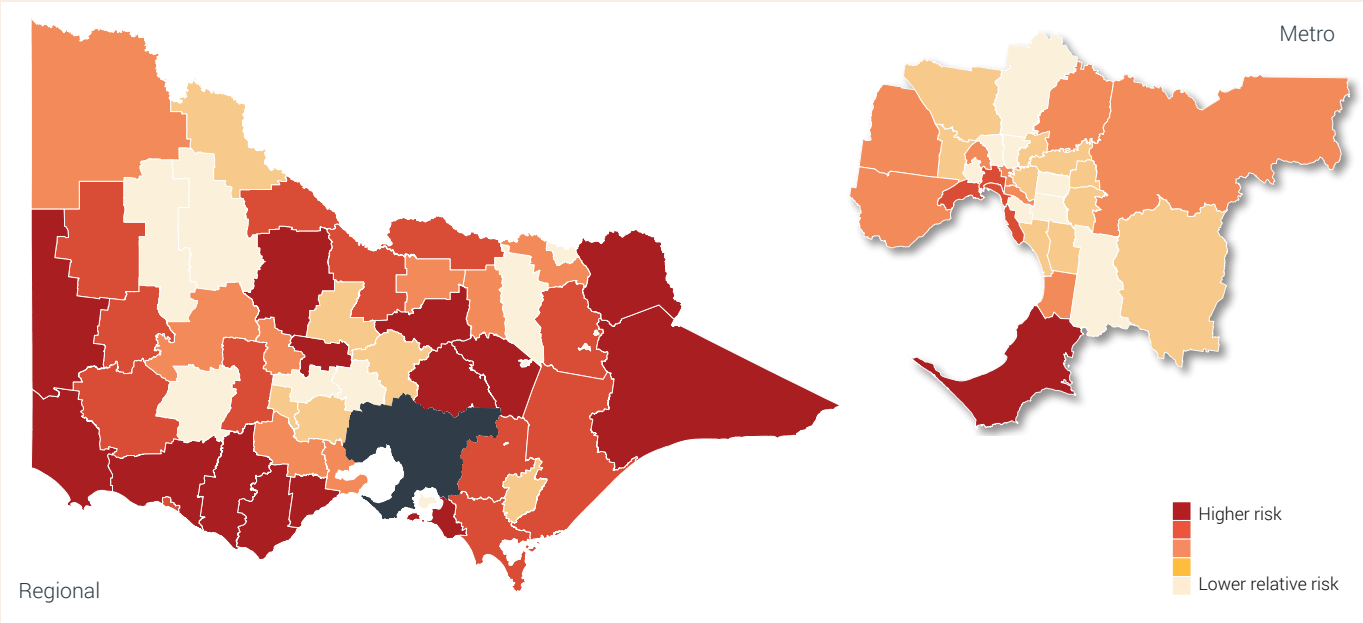
Among these 48 drownings, 94 per cent were males, the majority were aged 18 – 44 years (48%, 23), 46 per cent were affected by alcohol and 33 per cent of incidents were preceded by swimming and/or recreating in the water.

Relative fatal drowning risk by location and residence
2014 – 15 to 2023 – 24

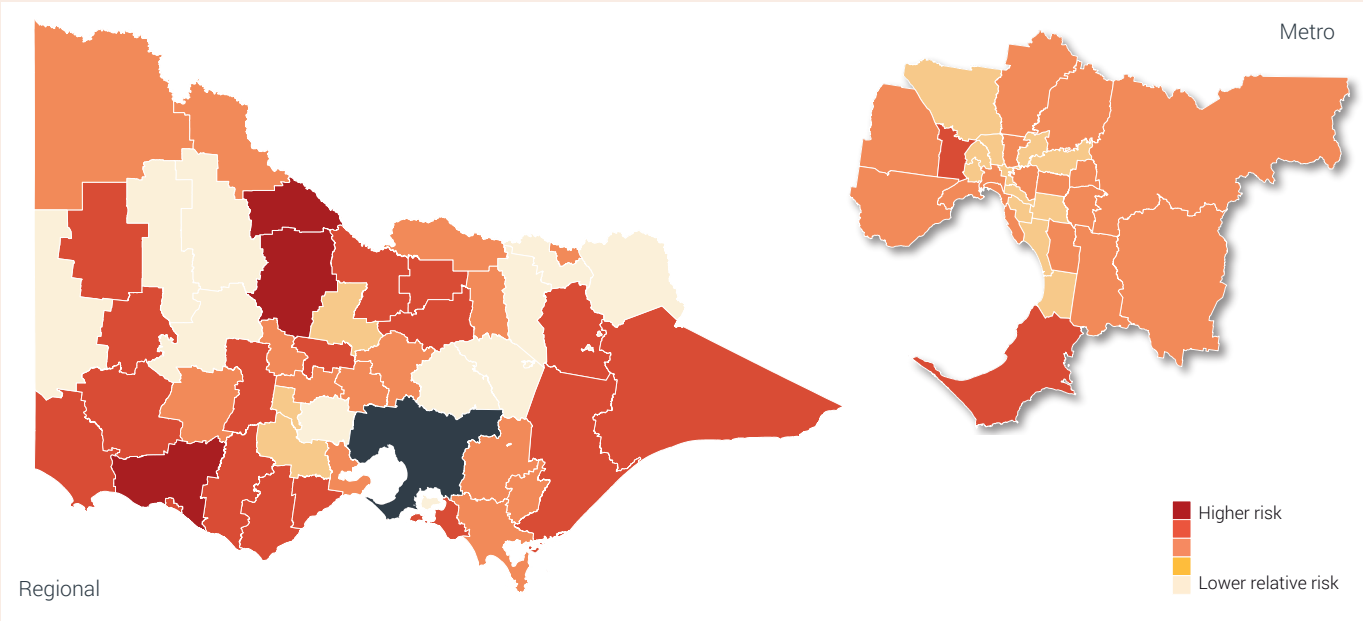
These maps show drowning risk in Local Government Areas (LGAs) over the past decade by place of a) incident, and b) residence.

Colours range from light yellow (low risk) to dark red (high risk). They highlight relative risk levels, based on underlying population counts within each Victorian LGA.

Incident location relative risk, based on postcode



Place of residence relative risk, based on postcode

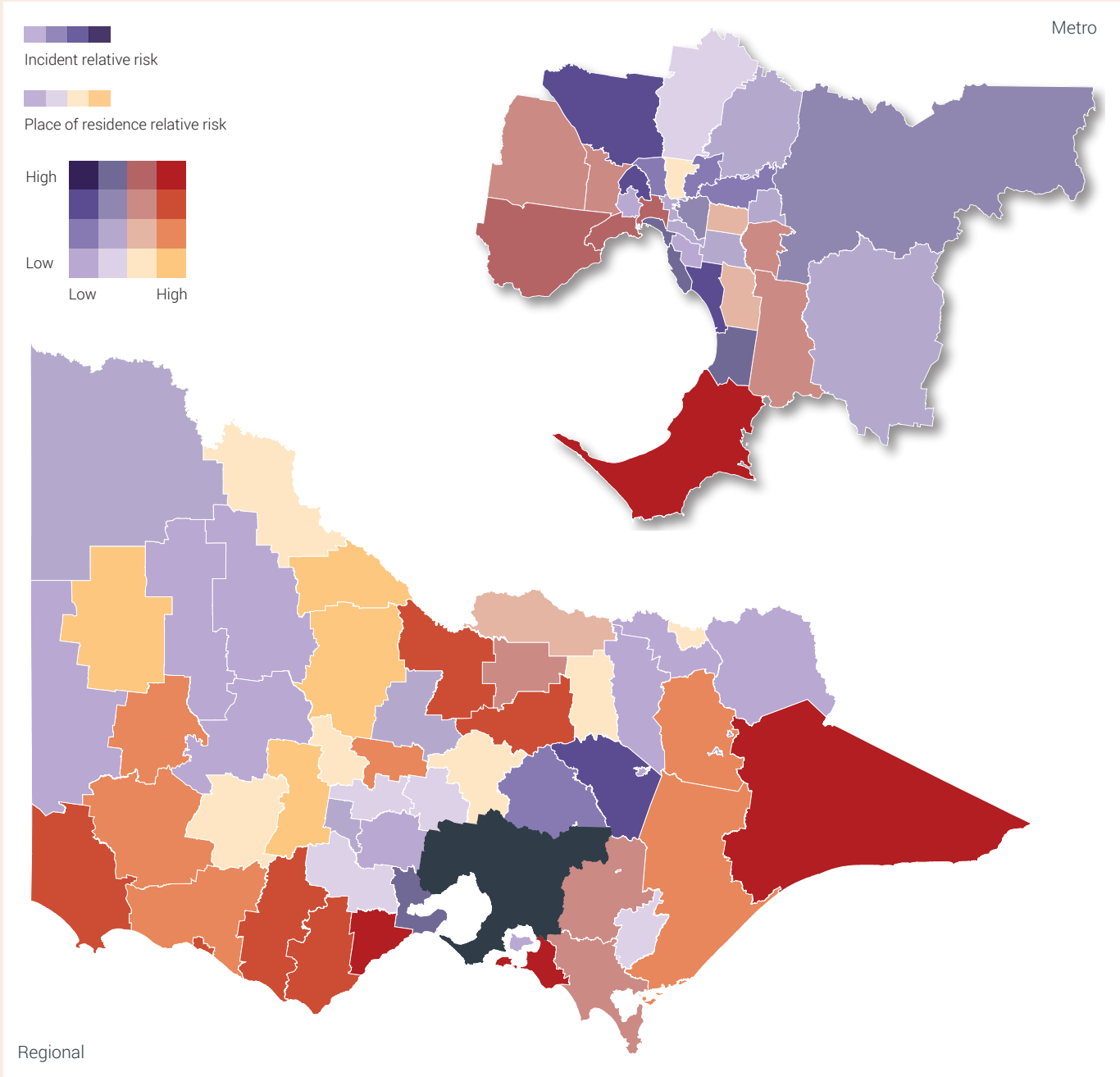


Combined relative fatal drowning risk
2014 – 15
to 2023 – 24

This map provides insights into the combined geographical relative risk of drowning across Victoria.

The visualisation provides a dual relative risk perspective by incorporating both incident location and place of residence. The red-shaded areas indicate elevated risk for both incidents and residence. Light purple shows low risk for both. Dark purple highlights high incident risk but low residence risk. Pale orange/yellow colour signifies higher residence risk but lower incident risk.

Combined incident and place of residence relative to risk, based on postcode



Fatal drowning summary
by LGAs 2014 – 15 to 2023 – 24

This table summarises fatal drowning incidents since 2014 – 15 within Victorian LGAs where more than five incidents have occurred. Trends are not necessarily related and should be interpreted independently of one another. LGAs are listed by the number of fatal drownings in descending order, from most to least incidents recorded.

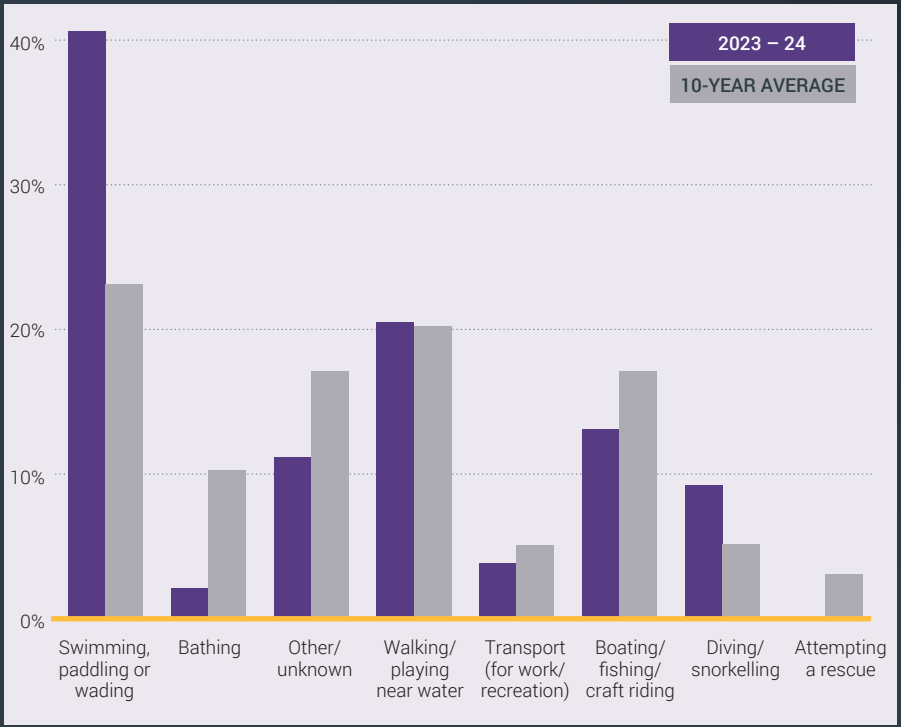
Rank	LGA	Key age group	Key waterway	Known key activity	Percentage of drownings involving LGA residents	Likelihood of 1 or more drowning fatality within this LGA
1	Mornington Peninsula	25 – 44 years	Beach	Swimming, paddling or wading; walking/ playing near water	39%	99%
2	Bass Coast	25+ years	Beach	Swimming, paddling or wading	19%	96%
3	Greater Geelong	45+ years	Beach; river, creek or stream	Swimming, paddling or wading	55%	90%
4	East Gippsland	45 – 64 years	Beach; river, creek or stream	Swimming, paddling or wading	50%	86%
5	Melbourne	25 – 64 years	River, creek or stream	Swimming, paddling or wading; walking/ playing near water	22%	83%
6	Surf Coast	45 – 64 years	Rocky outcrop; beach	Swimming, paddling or wading	31%	78%
7	Hobsons Bay	25 – 44 years	Beach; harbour, bay or inlet	Snorkelling for fish	20%	78%
8	Port Phillip	25 – 64 years	Harbour, bay or inlet; Beach	Fishing from a boat	29%	75%
	Wyndham	65+ years	River, creek or stream	Walking/playing near water	79%	75%
9	Bayside	65+ years	Beach	Swimming, paddling or wading	42%	73%

Rank	LGA	Key age group	Key waterway	Known key activity	Percentage of drownings involving LGA residents	Likelihood of 1 or more drowning fatality within this LGA
10	Campaspe	45 – 64 years	River, creek or stream	Walking/playing near water	70%	63%
	Frankston	15 – 24 years	Beach	Swimming, paddling or wading	50%	63%
11	Brimbank	0 – 4 years, 45 – 64 years	River, creek or stream; bathtub or spa bath; private swimming pool	Walking/playing near water	89%	59%
	Corangamite	25 – 44 years	Rocky outcrop	Attempting a rescue	44%	59%
	Warrnambool	45+ years	Ocean	Motorised water craft	78%	59%
12	Glenelg	45 – 64 years	Rocky outcrop	Rock fishing; walking/playing near water	38%	55%
	Mansfield	25 – 44 years	Lake	Swimming, paddling or wading	0%	55%
	Yarra Ranges	45 – 64 years	River, creek or stream	Walking/playing near water	88%	55%
13	Baw Baw	25+ years	River, creek or stream	Transport (for work/ recreation); bathing	57%	50%
	Casey	65+ years	Bathtub or spa bath; river, creek or stream	Walking/playing near water	71%	50%
	Greater Shepparton	65+ years	Dam; river, creek or stream	Walking/playing near water	86%	50%
	Hume	25+ years	Bathtub or spa bath	Walking/playing near water	86%	50%
	Kingston (Vic.)	65+ years	Beach	Swimming, paddling or wading	57%	50%
	South Gippsland	25 – 64 years	Beach	Swimming, paddling or wading	14%	50%
14	Colac-Otway	25 – 44 years	Beach	Swimming, paddling or wading	0%	45%
	Knox	45 – 64 years	Lake	Craft riding; walking/ playing near water	67%	45%
	Stonnington	25 – 64 years	Bathtub or spa bath; river, creek or stream	Bathing	67%	45%
	Strathbogie	25 – 44 years	Lake	Walking/playing near water	17%	39%
15	Greater Bendigo	65+ years	Dam; lake	Walking/playing near water	60%	39%
	Greater Dandenong	0 – 4 years, 45 – 64 years	River, creek or stream	Walking/playing near water	60%	39%
	Manningham	25 – 44 years, 65+ years	River, creek or stream	Swimming, paddling or wading	60%	39%
	Monash	65+ years	Bathtub or spa bath	Bathing	100%	45%
	Wellington	25 – 44 years	Ocean	Sailing	100%	39%
	Yarra	25 – 44 years, 65+ years	River, creek or stream	Bathing	60%	39%

Activities and **risk factors**

Proportion of **fatal drowning** by activity, 2023 – 24 compared to decade average

Fatal drowning | Activities



2x

fatal drowning from swimming, paddling or wading compared to the decade average.

14%

increase in boating (including craft riding) and fishing-related fatal drownings compared to the decade average.

79%

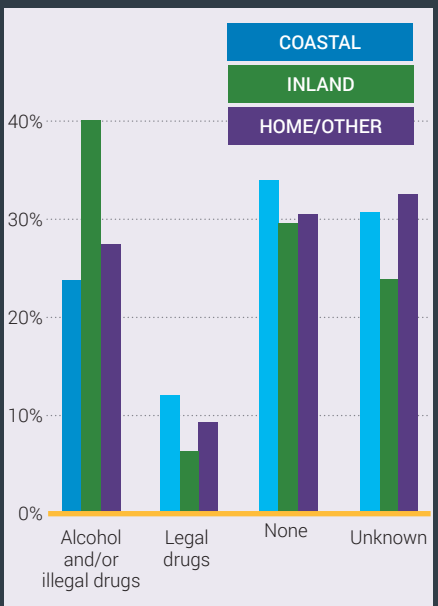
fewer fatalities from bathing compared to the decade average.

11

people fatally drowned after walking or playing near water: 17% higher than the decade average.

Proportion of **alcohol and drug involvement in fatal drowning** 2014 – 15 to 2023 – 24, by waterway type

Fatal drowning | Risk factors



Alcohol and/or drugs

30%

Over the past decade (2014 – 15 to 2023 – 24), **alcohol and/or drugs have been recorded in 30% of fatal drownings** among people aged **15 years and above**.

40%

of all drowning fatalities within inland waterways since 2014 – 15 recorded a presence of **alcohol and/or illegal drug use** (24% presence unknown).

Lifejackets

54%

of the **51 people who fatally drowned in a boating-related incident** in the past decade **were not wearing a lifejacket**, and 27% had an ill-fitting or incorrect jacket for the activity or conditions.

Extreme weather

2

Over the past 10-years, approximately **two fatal drownings each year are the result of extreme weather**, such as heatwaves and flooding.

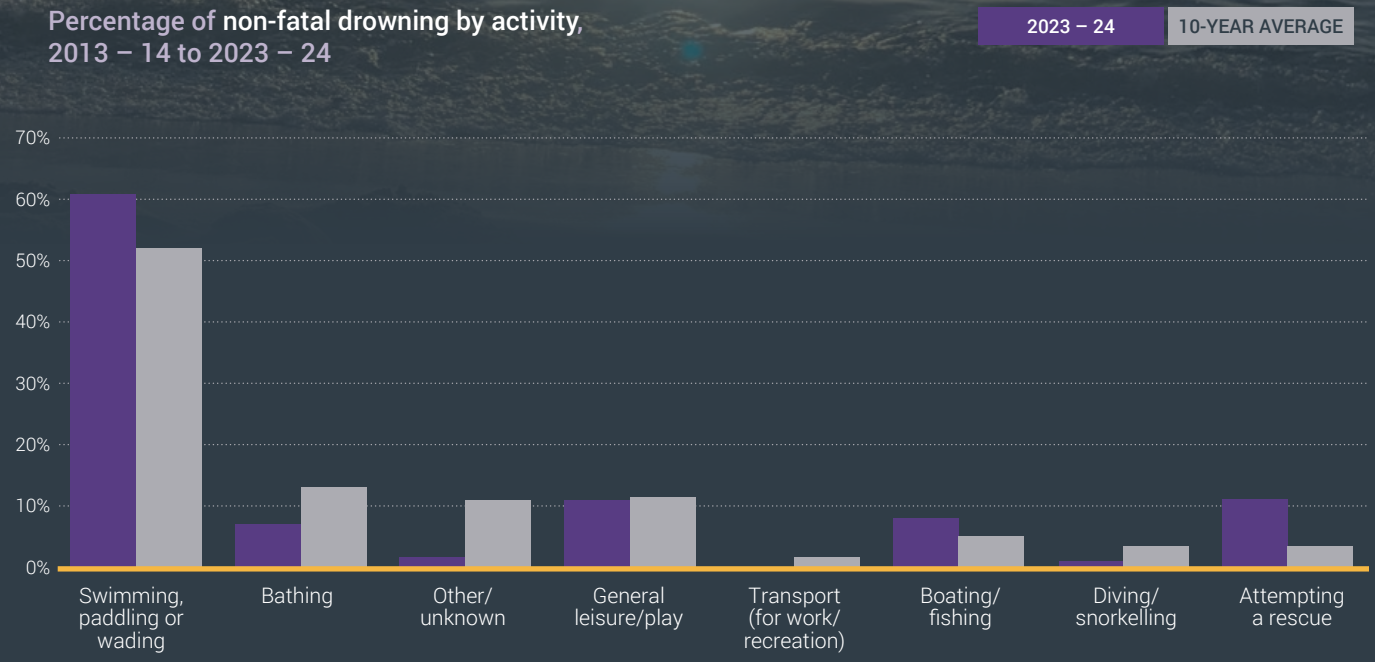
Activities and **risk factors**

Non-fatal drowning | Activities

61%
of non-fatal drownings were **preceded by swimming, paddling or wading** in 2023 – 24.

3x
the number of incidents involving attempted rescues this year compared to the decade average.

Percentage of **non-fatal drowning by activity**, 2013 – 14 to 2023 – 24



Coronial recommendations

Life Saving Victoria recognises that every life lost to drowning is a tragedy and causes devastation to all who are impacted. We pay our heartfelt respects to those who have lost their lives and send our condolences to their loved ones.

The role of the coroner in Victoria is to investigate reportable deaths, which include drowning, to determine the identity of the person who died, the cause of the death and, in some situations, the circumstances surrounding the death. As part of this process the coroner may recommend ways to help prevent similar deaths in the future. The following is a summary of nine coronial findings released in 2023 – 24 where a recommendation or relevant comment was made relating to a drowning death. The summaries have been grouped based on the primary recommendation made. These are not an exact replication of the findings, which can be accessed from the Coroners Court of Victoria website.

Signage – inland waterways

Refan Abdulrhman M Al Moarfeg 3 years old

On 30 June 2021, Refan attended a lunch with her parents and their friends at Footscray Park, where she played inside a fenced playground – her mother Sarah sat near the fenced gate to supervise. When Refan did not return with her friend, Sarah and Refan's father searched for Refan and tragically found her unresponsive in a nearby pond. Despite significant efforts by emergency and health services personnel, Refan passed away on 5 July 2021.

Meeram Bano 2 years old

On 27 December 2021, Meeram was playing at a gathering with family and friends at Footscray Park when she was found unconscious, floating face down in an algae-covered pond. Despite best resuscitation efforts by bystanders and emergency services, tragically, Meeram passed away on 30 December 2021.

Due to the similarities in the tragic deaths of both Refan and Meeram, their deaths were investigated concurrently. In both instances, the fence and gate of the playground were found to be in various states of disrepair and there had been no action by the Maribyrnong City Council in response to 11 previous reports of malfunctioning locks and fencing within the playground.

According to coroner Audrey Jamieson, *"Refan's parents had a reasonable expectation that she would be safe within the fenced, gated playground"*. They further remarked in both cases that *"...the lack of signage alerting the public to the ponds, and the vegetation obscuring them, meant that their parents were unaware of the potential deadly hazard in close proximity, which may have influenced their level of supervision"*.

Recommendations

The coroner *"determined that there were sufficient similarities in manner and place between the deaths [of Refan and Meeram], and what appeared to be an ongoing and significant safety risk to the public."* Therefore, these incidents were investigated concurrently and the following recommendations were made.

1. In the interests of promoting public health and safety and preventing like deaths, I recommend that the Maribyrnong City Council implement the recommendations of SafeT Now, NTT Australia and LSV into any ongoing and future works within Footscray Park.
2. In the interests of promoting public health and safety and preventing like deaths, I recommend that the Municipal Association of Victoria share with other Victorian local councils the actions taken by Maribyrnong City Council in response to the tragic deaths of Refan Al Moarfeg and Meeram Bano, and encourage other councils to implement similar actions where appropriate, with a view to preventing like deaths in waterways within public parks.

Signage – inland waterways

Joyce Elizabeth Tyndall 66 years old

On 27 March 2022, Ms Tyndall was kayaking with her partner Mr Baker on Broken Creek in Nathalia, where she was a long-term resident. Ms Tyndall was a competent swimmer, kayaked regularly and always wore a lifejacket, including on the day of the incident. As they approached the weir, the couple attempted to paddle to the waterfall; however, at the weir, the kayak filled with water, became submerged and flipped, causing the pair to be trapped under water in strong currents. Mr Baker surfaced and located Ms Tyndall unresponsive in the water. Despite best efforts of Mr Baker, bystanders and emergency services to revive Ms Tyndall, she passed away at the scene. Inspections of her lifejacket and kayak showed no mechanical or other issues with either item.

Recommendations

1. That Goulburn-Murray Water (GMW) consider erecting appropriate safety and warning signage along the banks of Broken Creek that is visible to water users as they approach the Nathalia town weir from downstream.
2. That GMW reiterates the grave dangers posed to water users by weirs in their annual public awareness campaigns.
3. That Safe Transport Victoria consider the publication of a factsheet, which warns water users of the significant dangers associated with weirs.

Signage – coastal waterways

Ahedah Hamed 45 years old

On 13 January 2021, Ahedah and four friends visited Bushrangers Bay, a highly hazardous and unpredictable coastal location. Despite initial conditions being sunny with calm waters, it became extremely windy, and large waves caused four members of the group to lose their footing on the rocks, pulling them into the water. Unfortunately, Ahedah was unable to swim. Attempts to call emergency services were made, but poor telecommunications coverage slowed this process; additionally, emergency service arrival was further delayed due to the remoteness of the location. Beachgoers, including an off-duty lifeguard, attempted to rescue the group in the water. Tragically, despite best efforts from a significant multi-agency response and three of the group being successfully rescued, Ahedah was pronounced deceased at the scene.

Recommendations

With the aim of preventing like deaths and promoting public health and safety, I recommend that Parks Victoria consider the installation of signage at Bushrangers Bay that clearly and concisely warns visitor of the hazards present in the area and the need for caution around the water.

Investigation

Nihal Singh Hundal 3 years old

On Sunday, 19 March 2023, Nihal and his mother, father and younger sister attended a housewarming prayer function. Nihal was playing in the front yard, which was in view of a family friend; however, later when his mother went to find Nihal, she was unable to locate him. After another child tripped on the lid of septic tank, and partially fell through, Nihal was discovered floating face down in the septic pit. Despite emergency service intervention and resuscitation efforts, Nihal was sadly verified deceased. Upon inspection, it was determined the septic tank had no screws to fix the lid to the pipe, and the lid was light and easily moved. It was determined that tragically Nihal had likely stepped on the loose lid and fallen through.

Recommendations

Pursuant to section 72(2) of the Act, the coroner made the following recommendations:
I recommend the Victorian Building Authority investigate how they might introduce a Certificate of Compliance system for all septic tanks in the state. As part of this investigation, I further recommend that the Victorian Building Authority consider mandating the installation of child resistant screen devices on all septic tanks in Victoria.

JV 18 years old

On 7 October 2023, JV, his younger brother (LV) and best friend (RH) decided to go swimming at the Tyers Pumping Station at Wirilda Environment Park in Yallourn North. This is an open, unfenced waterway, with a weir/dam wall accessible from the gravel path. Despite the currents and rough conditions, the three friends decided to enter the water by jumping from the wall. JV was reported to lack swimming ability, and after jumping into the water became caught in strong currents. JV was dragged into the slipway, which resulted in him being repeatedly submerged in a 'back eddy' (where water pushes against the normal flow of the river). Eventually, JV resurfaced face down on the far bank. Emergency services were contacted, however Air Ambulance had difficulty arriving due to tree coverage. When JV was finally reached by LV, he was reported as not having a pulse and was sadly declared deceased by paramedics on-site.

Recommendations

Pursuant to section 72(2) of the Act, the coroner made the following recommendations.

The Tyers River at Tyers River Pumping Station is reportedly a popular local swimming location. The conditions there on the day of JV's death were hazardous. Detective Acting Senior Sergeant Shane Wakker observed the turbulence and a strong back eddy. Senior Constable Bradley Prior noted that the area around Tyers River Pumping Station was freely accessible, with no signage to indicate potential danger relating to swimming or the water current. With the intention to prevent similar deaths, I recommend that the Secretary, Department of Energy, Environment and Climate Action undertake a review of water safety at the Tyers River proximal to Tyers River Pumping Station to establish whether any new countermeasures could be put in place to reduce the risk to swimmers of drowning. While I do not prescribe the form of the review, I note that organisations such as Victoria Police and Life Saving Victoria may have expertise and insights to contribute.

Commentary

Master H 1 year, 9 months old

Note: Several details of this finding were redacted, including date and location.

In 2022, Master H was playing in an outdoor fenced area on his parents' property. A short time later, Mrs H went to check on Master H, but could not locate him. Following an extensive search by his parents, emergency services personnel, neighbours and civilians, Master H was located under water approximately two hours later in a small dam in a neighbouring paddock, approximately 120 metres from the residence. Despite paramedic intervention and subsequent hospitalisation, Master H was later pronounced deceased.

While the coroner did not make any formal recommendations, they noted for broader prevention purposes that this case highlights the importance of active parental supervision, even when there is fencing to contain children to a particular area.

Kanady Moo 13 years old

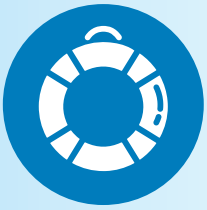
Kanady Moo moved to Australia in 2018 with his family and had never been swimming or had swimming lessons. On 3 November 2020, Kanady visited the Werribee River with friends, where he jumped from a tree into the river and immediately got into difficulty. Despite bystanders assisting with response, including attempting in-water rescues, they were unable to locate Kanady. A significant multi-agency search was launched, and he was subsequently located deceased in six-metre-deep water. While the coroner did not make any recommendations, they reiterated the importance of the work being undertaken by LSV and the Department of Education to increase targeted communication and provision of funding for water safety programs for refugee, new arrival migrant and CALD communities.

AJ 30 years old

Mr AJ was born in Egypt but moved to Australia as an infant and was described as a "keen surfer who was confident in water". Mr AJ and his eight friends rented an Airbnb in Tootgarook on the Mornington Peninsula. The property had an in-built deck pool and spa, which were compliantly fenced. Throughout the evening, the group consumed alcohol and inhaled nitrous oxide cannisters provided by Mr AJ. In the early hours of 15 October 2022, Mr AJ and Mr ML entered the pool/spa area and continued using the nitrous oxide cannisters. Mr AJ subsequently lost consciousness; however, Mr ML – who was in the spa – was unaware of this. Mr AJ was found approximately half an hour later at the bottom of the pool, and despite attempts at resuscitation and intervention from emergency services, was pronounced deceased.

The coroner did not make any formal recommendations, and instead provided commentary around nitrous oxide use, including: the dearth of related deaths, the various symptoms associated with its use, its current regulatory practice, and need for education around use.

Our **preventative efforts**



849

Rescues by lifesavers and lifeguards on patrolled beaches, inland waterway sites and event lifeguard services in 2023 – 24.

20

Rescues per 100,000 beachgoers on average per year from 2014 – 15 to 2023 – 24.

1,321

First aids performed by volunteer lifesavers, lifeguards and state services on patrolled beaches in 2023 – 24.

44,969

Life saving club members, patrolling our coastlines and inland waterway locations while providing education and training in lifesaving activities, to ensure the safety of waterway users in Victoria.

Volunteer proficiencies

7,708

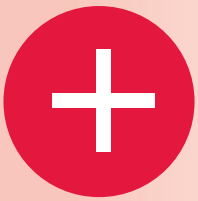
Bronze Medallion qualifications

1,855

Surf Rescue Certificates (CPR Endorsed)

2,011

Advanced Resuscitation Techniques Certificates



1,134

First aid qualifications

3,320

Inflatable Rescue Boat (IRB) Certificates

1,887

Silver Medallion Inflatable Rescue Boat (IRB) drivers

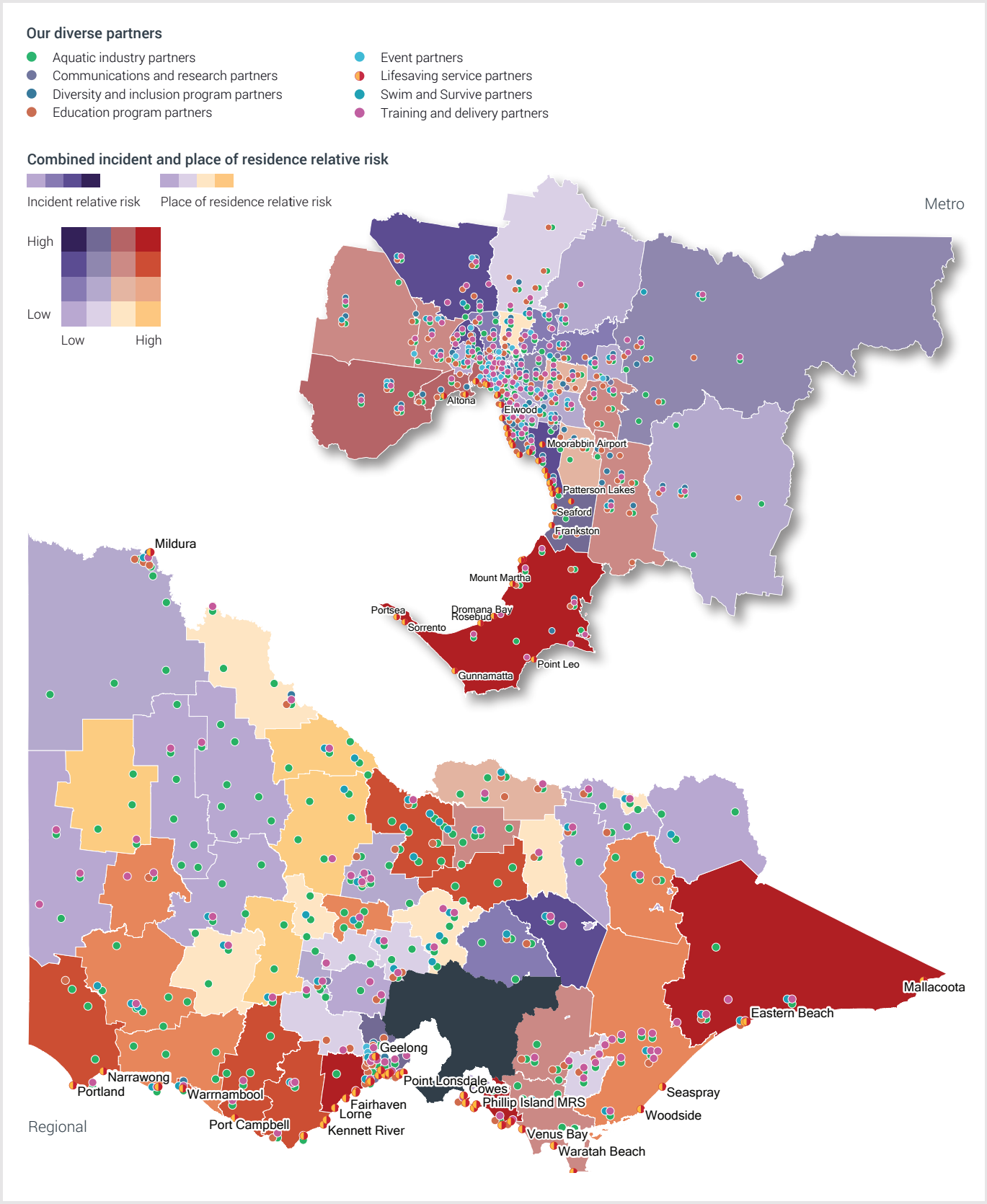
$6.5 billion

Estimated **value of coastal safety and lifesaving services** per year in Australia*

*Deloitte Access Economics. (2020). *Between the red and yellow flags: The social and economic value of Surf Life Saving Australia* Deloitte Access Economics: Sydney.

These maps illustrate how LSV programs and services are positioned in response to fatal drowning risks, considering both incident and resident locations.

LSV programs and services and relative risk of drowning by incident location and place of residence



Water safety tips

From every day to the waterway!


Never leave your child alone in the bath, or in the care of an older child.
Remove floating objects that may attract children to water and remove climbable objects near the pool fence.
Prevent falls in your bathroom, for example by installing handrails and alert systems.
Always empty baths, buckets, portable pools, sinks and eskies immediately after use.
Understand how your child's swimming ability might change in different environments.
Before you leave
If you're not confident in the water, choose to swim at a public pool.
If you are renting, understand your property rights for pool/spa/dam barriers.
Swim between the red and yellow flags, where lifesavers and lifeguards can help in an emergency.
Read the water safety signs to understand dangers.
Keep children under five years within arms' reach, and children under 10 within constant eyesight.
Take care around the water's edge, including crumbling and slippery surfaces.
Look after your friends by encouraging safe decisions in, on and around water, including not entering water if they have been drinking alcohol.
Enter the water safely, slowly and feet first to check depths and retreat quickly if you need to.

What can **you** do?

Aquatic facilities	• Display key information from this report in your facility and discuss it with your staff. • Encourage patrons to transfer safe aquatic behaviours around all waterways. • Use the key messages from this report to help develop your programs, implement and run programs for people who have been identified as at risk of drowning.
Government entities (including councils and land managers)	• Promote shared responsibility and empower communities to better assess and respond to local water safety risks. • Work with local partners to manage local risk. • Improve coordination and collaboration between agencies and with community members. • Refer to the Victorian Water Safety Strategy 2021 – 25[7] and the Australian Water Safety Strategy 2030[8] for specific actions.
Healthcare practitioners and community service organisations	• Educate patients on the importance of water safety, particularly to parents/carers, people with disabilities or medical conditions. • Inform people of the impacts that medication, health conditions and physical ability can have on their capabilities in, on and around water; especially older adults. • Assist older adults and their families to install handrails in their bathrooms.
Life saving clubs	• Print out key pages of this report to display around your club. • Circulate the report to your members. • Use the key messages and drowning information in this report to help develop, implement and run programs and activities.
Media outlets and journalists	• Prioritise reporting drownings of underrepresented groups, such as older people, through traditional and social media. • Promote key drowning prevention messages in accessible and inclusive ways.
Parents and carers of children	• Contact your local aquatic centre and enrol your child in swimming lessons. • Discuss the importance of water safety with other parents/carers, including making supervision plans. • Discuss water safety risks and safe aquatic behaviours with your child. • Share this report with your child's school, and advocate for water safety lessons to be delivered in, and out, of the classroom.
School principals and teachers	• Sign up for Life Saving Victoria's lifesaving education programs at waterways and in the classroom. • Ensure the swim school where your students attend integrates the competencies of the Victorian Water Safety Certificate. • Encourage parents to adopt constant and focussed supervision of children around water.
Water safety agencies	• Distribute this report within your organisation and to wider audiences. • Use the key messages and drowning information in this report to help develop, implement and run programs and activities. • Promote opportunities for subsidies, funding and grants to at-risk communities.

[7] Department of Justice and Community Safety. (2021). Victorian Water Safety Strategy 2021 – 25. Department of Justice and Community Safety: Melbourne.

[8] Australian Water Safety Council. (2021). Australian Water Safety Strategy 2030. Australian Water Safety Council: Sydney.

Victorian **water safety** industry

Government entities

- Ambulance Victoria
- Department of Education
- Department of Energy, Environment and Climate Action
- Department of Government Services
- Department of Health
- Department of Jobs, Skills, Industries and Regions
- Department of Justice and Community Safety
- Department of Premier and Cabinet
- Department of Transport and Planning
- Emergency Management Victoria
- Fire Rescue Victoria
- Municipal Association of Victoria
- Parks Victoria
- Safe Transport Victoria
- Triple Zero Victoria
- Victoria Police
- Victoria State Emergency Service
- Victorian Fisheries Authority
- Victorian Multicultural Commission

Agencies (Play it Safe by the Water)

- Aquatics & Recreation Vic
- Belgravia Leisure
- Fisheries Victoria
- Kidsafe Victoria
- Maritime Safety Victoria
- Outdoors Victoria
- Paddle Victoria
- Rowing Victoria
- Surfing Victoria
- Triathlon Australia
- VR Fish
- Worldwide Swim School
- YMCA Victoria

Local government area and land manager contributors to the Victorian Lifeguard Service

- Barwon Coast
- Bass Coast Shire Council
- Borough of Queenscliffe
- City of Greater Geelong
- Colac Otway Shire Council
- East Gippsland Shire Council
- Glenelg Shire Council
- Great Ocean Road Coastal and Parks Authority
- Mornington Peninsula Shire Council
- Moyne Shire Council
- Parks Victoria Wilsons Promontory
- South Gippsland Shire Council
- Surf Coast Shire Council
- Warrnambool Council
- Wellington Shire Council
- Wyndham City Council

Methods

This report includes unintentional fatal and non-fatal drowning incidents reported in Victoria, Australia.

An overview of fatal and non-fatal drownings for 1 July 2023 to 30 June 2024 is provided and compared with 10-year averages from drowning data from 1 July 2013 to 30 June 2023.

Fatal incidents

Information collected from the Coroners Court of Victoria, and the National Coronial Information System (NCIS). Deaths due to natural causes, suicide or homicide were excluded from this report.

Coronial information relates to both open and closed cases. While all care is taken to ensure that the results are as accurate as possible, these figures are provisional only as coronial investigations and findings relating to open cases may alter the reported drowning figures. At the time of compilation, all suspected unintentional drowning cases in 2023 – 24 remained open on the NCIS.

Information of Victorians who drowned in the Murray River from 2014 – 15 to 2023 – 24 was collected from the Royal Life Saving National Fatal Drowning Database and the NCIS, as part of the Inland Waterways Drowning Prevention project by Royal Life Saving Society – Australia, funded by the Australian Government.

Non-fatal incidents

Information on non-fatal drowning in 2023 – 24 was provided by Ambulance Victoria (AV). Cases of non-fatal and immersion related injuries attended by AV paramedics were extracted from the VACIS® clinical information system. Potential drowning data for this report were identified via a database search for all drowning related dispatch codes identified at the emergency call-taker level, as well as cases in which paramedics reported a final assessment of 'post immersion'. Only patients reported as suffering respiratory compromise or vomiting as a result of immersion were included in analyses.

Information on non-fatal drowning from 2013 – 14 to 2022 – 23 was provided by the Victorian Injury Surveillance Unit (VISU). Data included non-fatal, and immersion related injuries extracted from the Victorian Emergency Minimum Dataset (VEMD) and Victorian Admitted Episodes Dataset (VAED) for the period 1 July 2013 to 30 June 2023.

The VEMD is a dataset containing records of emergency department presentations in Victorian hospitals with 24-hour emergency services. One hundred percent statewide coverage of these hospitals applied from 2004. Data was selected if the cause of injury was 'drowning/near drowning' or the terms 'drown', 'submerged', 'immersion' and their variations were included in the "Description" variable. Further, all injuries with an injury coded to 'drowning' or 'immersion' were also selected. Finally, any injury coded to a drowning or non-fatal drowning cause

code with the mention of 'decompression illness' in the description was also chosen.

These cases were then manually screened to ensure that they were submersion or non-fatal drowning cases. Cases were retained if the "human intent" was coded to "non-intentional harm".

Cases were limited to incidence (excludes return visits and pre-arranged admissions).

The VAED is a record of all hospital admissions in the state of Victoria. VAED data is coded to the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modifications (ICD-10-AM). VAED records were initially extracted if the principal diagnosis was a community injury (S00-T75 or T79 ICD 10 AM code). Cases were then extracted if there was a drowning injury diagnosis (ICD 10 AM code of T75.1 "Drowning and non-fatal submersion") anywhere in the 40 diagnosis codes or the external cause code was in the range W65-W71 (accidental drowning and submersion) or V90 (accident to watercraft causing drowning and submersion) or V92 (water-transport-related drowning and submersion without accident to watercraft).

Admissions as a result of transfer from another hospital or due to a statistical separation from the same hospital were excluded. Re-admissions for day-treatments within 30 days of initial admission were excluded.

Drowning deaths from either AV or VISU data were excluded to avoid an overlap with LSV fatal drowning data.

Incidence calculations

Incidence calculations were performed using population figures published by the ABS[9].

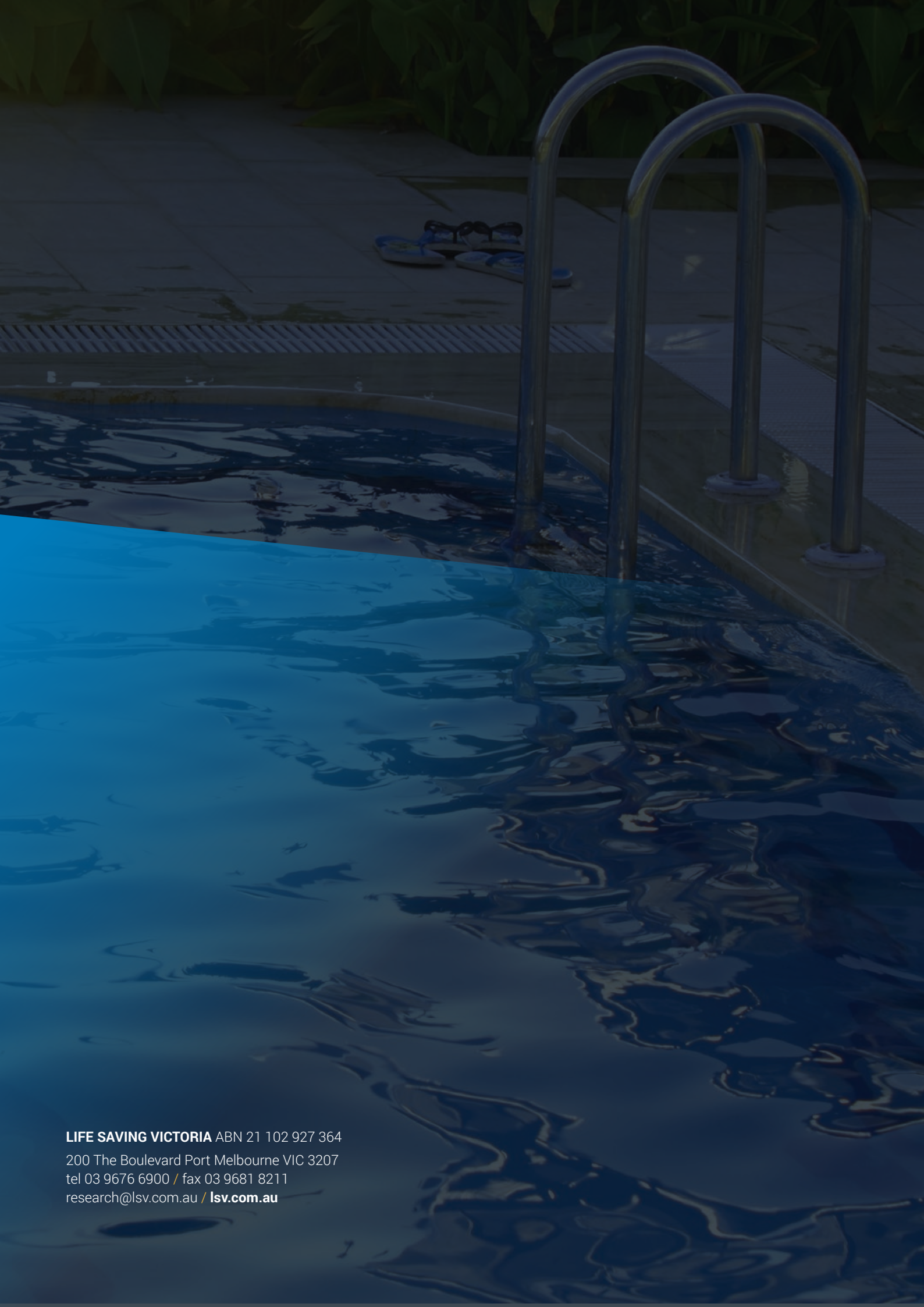
Relative risk maps

Choropleth maps depict drowning risk across Victoria, using incident location, place of residence, and a collective representation map combining the two (bivariate map). These maps focus on drowning counts within Victorian LGAs[10]. The compiled maps indicate areas with higher or lower risk compared to the overall Victorian drowning ratio. Risk ratios were calculated using grouped incident and residence counts, initially aggregated from postcode locations into LGA counts based on location. As event counts extend over a 10-year period (2014 – 15 to 2023 – 24), LGA time-series population counts (2011, 2016 & 2021) were used and averaged as the denominator exposure population value[11].

[9] Australian Bureau of Statistics. (2022). Australian National, state and territory population statistics, Dec 2022. Cat. No. 31010, Australian Bureau of Statistics: Canberra.

[10] Australian Bureau of Statistics. (2021). Digital boundary files (Edition 3) [GeoPackage]. https://www.abs.gov.au/statistics/standards/australianstatistical-geography-standard-asgs-edition-3/jul2021-jun2026/access-and-downloads/digital-boundary-files

[11] Australian Bureau of Statistics. (2022). Census DataPacks (Time Series Profile) [CSV]. https://www.abs.gov.au/statistics/standards/australianstatistical-geography-standard-asgs-edition-3/jul2021-jun2026/access-and-downloads/digital-boundary-files



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