

SURF LIFE SAVING NSW
COASTAL SAFETY REPORT 2018



SURF LIFE SAVING
NEW SOUTH WALES



INTRODUCTION



On behalf of the Board of Surf Life Saving NSW, it's a pleasure to present the 2018 NSW Coastal Safety Report.

Our fundamental rationale for releasing this report is that as an organisation, we felt it important to continue to provide NSW-specific data and analysis. This will continue to inform policy makers and other stakeholders, as we work together toward reducing the coastal drowning death toll.

It has been another busy year for our volunteer surf lifesavers. During the course of the season our members performed:

- 4,377 rescues
- 145,454 preventative actions
- 11,972 first aid treatments
- 564 ambulances were tasked to attend incidents

Despite what felt like a never-ending summer, with the hot weather extending deep into April, there was a slight fall in both rescues and first aid treatments this season.

Correspondingly there was an increase in preventive actions, suggesting that intervening in situations before they escalate is proving to be a smart tactic.

The spike in coastal drowning deaths this season, which has seen us reach 39, is slightly above the ten-year-average. What is particularly concerning for us as lifesavers was the increase in two demographics.

Tragically the amount of female drowning victims almost doubled this season in comparison to the 10 year average as well as a surge in the number of youth fatalities with three high profile cases throughout the year.

It's too early to tell if this is an anomaly or a changing long-term trend, but what it does reinforce, is the need for us, as surf lifesavers, to push surf safety messages throughout our communities and on patrol duties.

We should be open to our families about the dangers of the ocean, and strive to model safe practice on the beach. It's an important and timely conversation to have, as it's very clear that more people than ever are looking to enjoy recreational water activities and make the most of our beautiful coastline.

We believe that this edition of the Coastal Safety Report will prove to be a valuable resource for our members, government, sponsors, partners, researchers, water safety agencies, community groups, and the media, to inform them about key drowning data and prevention initiatives being undertaken by Surf Life Saving NSW.

As lifesavers we pride ourselves on our ability to assess, improve and innovate the ways in which we fulfil our duty of saving lives, both between and beyond the flags.

I know that every member of our organisation is committed to playing their part in saving lives and protecting the community against the tragic consequences of coastal drowning deaths in NSW. We thank them for their vigilance and service, and look towards another season on patrol.

A handwritten signature in black ink, appearing to read 'Stuart Harvey'. The signature is stylized and fluid.

Stuart Harvey

Director of Lifesaving
Surf Life Saving New South Wales

COASTAL DROWNING DEATHS

Volunteer lifesavers have been an iconic part of the beaches in Australia for over 100 years, maintaining a watchful eye over the sand and surf and jumping into action when the need arises.

The red and yellow flags planted by our volunteers have always marked the designated place to swim, and we focus on these areas to keep the people inside them safe. However, there are more and more incidents occurring beyond these flags, where the lifesaving teams have to respond outside their traditional scope of operation.

There is an increase in the number of people motivated to get away from the crowded beaches, which is where the patrol flags are typically set up. These people are lured away from the supervised areas and can put themselves in hazardous situations. Surf Life Saving NSW is increasingly looking to solve this dilemma by expanding the area that we can monitor. New technologies and patrolling methods are being developed to help increase the scope of our operations, such as expanding the use of Unmanned Aerial Vehicles.

Not only are volunteers rescuing people from our oceans, they are often first on scene providing critical first aid, or involved in search and rescue operations in our coastal environment.

Unfortunately, in the 2017/18 season we saw an increase in the state's coastal drowning death toll from the previous season. There were 39 coastal drowning deaths this season, six more than were recorded last year.



39

Coastal Drowning Deaths 2017/18

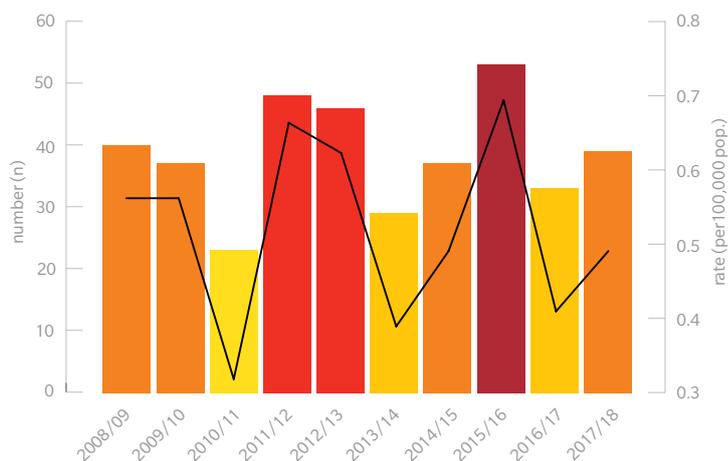


Figure 01

10-year Drowning Death Trend

New South Wales coastal drowning death numbers and crude drowning rates 2008-2018. The 10 year average rate per 100,000 population is 0.52 (n=39), while the rate for 2017/18 is 0.49 (n=39).



CASE STUDY: SUMMER DROWNING SPIKE

In addition to an increase in the 2017/18 coastal drowning death toll, a major concern for the lifesaving community has been a specific spike in recorded fatalities over the last two summers.

The coming of summer is a highly anticipated time in Australia. Holidays are looming, barbeques are on the menu and long hot days at the beach beckon. Sadly though, the dangers of the beach are not always fully appreciated, with a number of coastal drowning deaths recorded during peak season.

From December 2017 until the end of February this year, 22 people lost their lives on the state's coastline. This is an increase on the 14 recorded in the corresponding period of the previous year. December is usually a challenging month for surf lifesavers with large numbers of people making the most of their time off from work, and hot conditions attracting people to cool off at beaches they aren't necessarily familiar with.

There were 10 coastal drowning deaths last December, a small increase on 2016 where seven were recorded, with people getting into difficulty in rip currents remaining a major concern despite an ongoing education campaign. The following story is an edited example of how surf lifesavers are never off duty, and while this incident a happy outcome, it demonstrates just how quickly things can escalate on the beach.

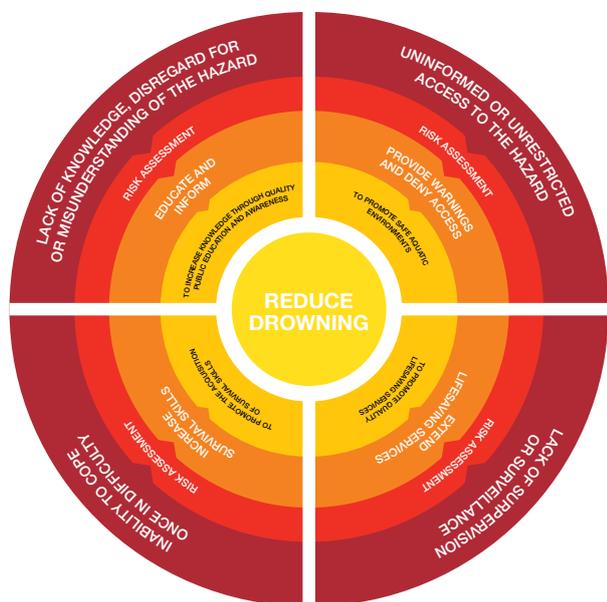


Figure 02

The International Life Saving Federation Drowning Prevention Chain

Depicting the four factors recognised as contributing to accidental drowning deaths and the broad mitigation strategies that should be applied to reduce drowning deaths.

“Cronulla Teen Pulls Off Twilight Rescue”

Years of training and local knowledge of the conditions paved the way for an off-duty Cronulla lifesaver to rescue a swimmer caught in a powerful rip current.

At around 7:30pm on Wednesday 6 December, 17-year-old Darcy Macpherson was about to have a shower after an afternoon surf at Cronulla Beach. Conditions weren't the best with inconsistent waves and fading light prompting the decision to head to shore.

“I was just about to jump in the shower; I was outside the clubhouse chatting to another member when out of the corner of my eye I noticed a lone swimmer who appeared to be caught in a rip.

“After watching him for a few seconds it was obvious he wasn't making any headway, so we came to the conclusion that he might need to be rescued as he didn't look in the best shape,” said Macpherson.

The teenager dropped his surf gear and rushed to the shed to grab a rescue board.

He raced into the surf and was at the middle-aged swimmer's side within minutes. All of the skills and training Darcy Macpherson had done since becoming a Nipper seven years earlier, kicked in to help him negotiate the tricky conditions.

The incident is a timely reminder of how lifesavers can be called on anytime, even when they are off-duty, and how well maintained and easily accessible gear can be crucial in times of need.

WHO IS DROWNING?

A coastal drowning death is a terrible occurrence. To help prevent additional deaths from occurring, it is important to collect and analyse data from each incident. By analysing information such as age, gender and cultural background, demographic trends can be discovered which informs who needs to be the focus of future drowning prevention strategies.

Age: Historically the highest risk age groups are the 20-29 year olds 24% (n=91) and the 40-49 year olds 17% (n=65). The 2017/18 season was no exception with 20-29 year olds accounting for 26% (n=10) of coastal drowning deaths and 40-49 year olds accounting for 23% (n=9). On average these two age demographics have accounted for the highest number of drownings in the last 10 years.

A positive change is the reduction in coastal drowning deaths in those over the age of 50 years. The 10 year average for this demographic is approximately 40% (n=155), however for the 17/18 season this was down to 28% (n=11).

Gender: One of the most consistent trends in the last 10 years is the high percentage of male drowning victims (88%, n=340). In the 2017/18 season males accounted for 82% (n=32) of total drownings and whilst this is a reduction on the 10 year average, it is more a reflection on the increased number of female drowning victims (18%, n=7) this season. The number of males who drowned this season has actually risen since the 2016/17 season, but they made up a smaller proportion of the overall figure. Men still account for a vast majority of the coastal drowning deaths however female drowning rates need to be monitored to ensure they do not continue to rise. Should trends continue to develop action and strategies will need to be put in place.

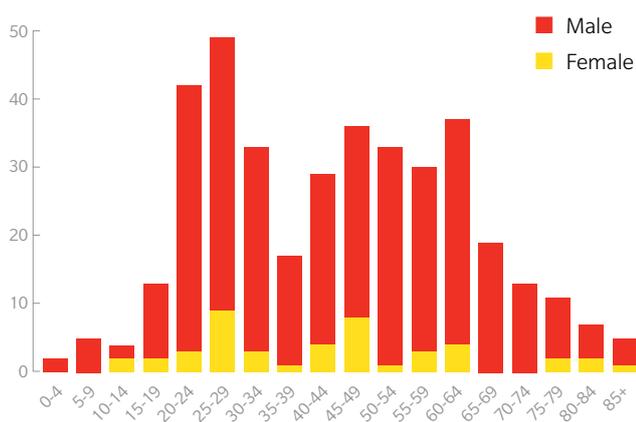


Figure 03

10-year Drowning Death by Age and Sex

Between 2008-18, the age group representing the highest rate of fatalities is 25-29 years (n=49), followed by 20-24 years (n=42). 88% of total drowning deaths (n=340) were male.

Cultural Background: Of the 39 coastal drowning deaths that occurred this season 67% (n=26) have been confirmed as residents of Australia, 10% (n=4) were confirmed as international tourists and 23% (n=9) of victims still have unknown residential status. Despite the gaps in this year's data, what is demonstrable is that a majority of coastal drowning victims live in Australia. This is reinforced by the 10 year drowning data where 86% of victims are Australian residents.

While it's safe to say that most victims are Australian residents, Australia has a wide range of cultures with varying levels of surf safety knowledge. By identifying those cultures at higher risk of drowning, we can ensure our education programs are targeted at the right people. Interestingly, over the past 10 years 43% (n=167) of coastal drowning victims were Australian born, a trend that stayed consistent for the 2017/18 season (44%, n=17). Australian born people make up the largest percentage of coastal drowning victims and it's important to recognise this fact by ensuring that we continue to educate and train Australians about surf safety.

People born in Asian countries are the second most likely to drown accounting for 27% (n=105) of all victims in the last 10 years. This is likely a result of the comparatively high number of Asian people who come to visit or live in the country, which increases the likelihood of the risk of drowning. A positive trend in the 2017/18 season is that only 10% (n=4) of drowning victims have been identified as having an Asian country of birth, however there are still 16 (41%) cases where the victim's birth country is unknown.

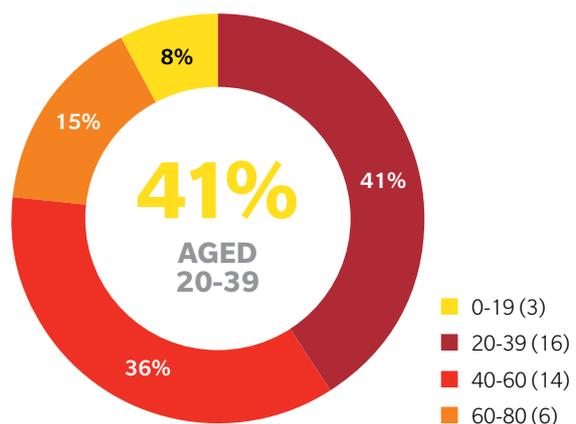


Figure 04

2017/18 Drowning Death by Age

In 2017/18 the 20-39 year age bracket represented 41% (n=16) of drowning deaths. This is an increase on the 10-year average of 37% (n=141) and is the highest risk age demographic.

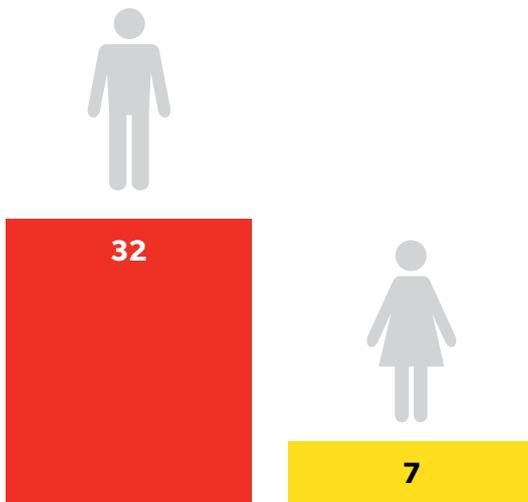


Figure 05

2017/18 Drowning Death by Sex

In 2017/18, 82% (n=32) of fatalities were male, a decrease on the 10 year average. Women in the 40-49 year age bracket represented 10% (n=4) of all coastal drowning deaths this season.

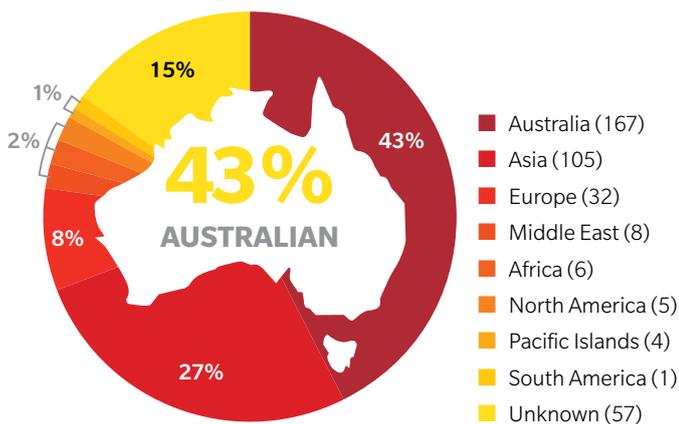


Figure 06

10-year Drowning Death by Country of Birth

43% (n=167) of coastal drowning victims were Australian born. The birth country of 15% (n=93) of fatalities have not been confirmed.

CASE STUDY: DROWNING DATA REVEALS CHANGING DEMOGRAPHICS

The spike in coastal drowning deaths this season is naturally a concern to all those involved in the surf lifesaving community, while an increase in fatalities in two demographics in 2017/18 has researchers asking if this is an anomaly or the start of a long-term trend.

This season there was a significant rise in the number of female drowning victims.

On average women account for about 12% of drowning deaths but for the 2017/18 season this number was up to 18% with seven fatalities. Four of these victims were in the 40-49 age bracket, while six incidents occurred within 1km of a patrolled location but outside of patrol hours.

Sadly in 2017/18 there has also been a large spike in coastal drowning deaths in the youth age group, which is defined as those under the age of 15 years. Since 2008 there have been 11 fatalities in this age group accounting for 3% of total coastal drowning deaths, however this season there have been three, or 8% of this season's total.

Of these incidents all were aged between 10-14 years old, with two occurring as a direct result of getting caught in a rip current.

What is reinforced from these tragedies is the importance of continuing to educate young people about their safety at the beach and to ensure everyone has the skills and knowledge needed to help them survive.

"Lifesavers Work Load Increase"

In addition to the drownings off our beaches, there have been a further 21 fatalities this season that have been ruled a coastal death.

On many of these occasions surf lifesavers have assisted emergency services by responding to the incident to provide local knowledge or first aid support. Often these have occurred out of hours and in remote and inaccessible locations, adding to an already heavy workload for the volunteers.

As a result of having to respond to these situations on top of their normal patrol duties, it has become clear that ensuring the mental well-being of our members is crucial. SLSNSW will continue to investigate best-practice and make member welfare a priority.

"Selfie Phenomenon Sparks Warning"

In recent months there have been a number of high profile incidents where a person has been seriously injured or even killed while attempting to take the perfect photograph.

This sadly includes the death of a foreign national who slipped in an effort to photograph migrating whales from a popular lookout.

Other areas of concern are people standing near the edge of cliffs to take staged photographs for their social media accounts.

"While the drive to get that perfect picture is understandable we certainly encourage everyone to respect their surroundings and warning signs as it's sometimes impossible to tell the true condition of the environment.

"No photograph is worth risking your life," said SLSNSW CEO Steven Pearce.

DROWNING DEATHS BY LOCAL GOVERNMENT AREA

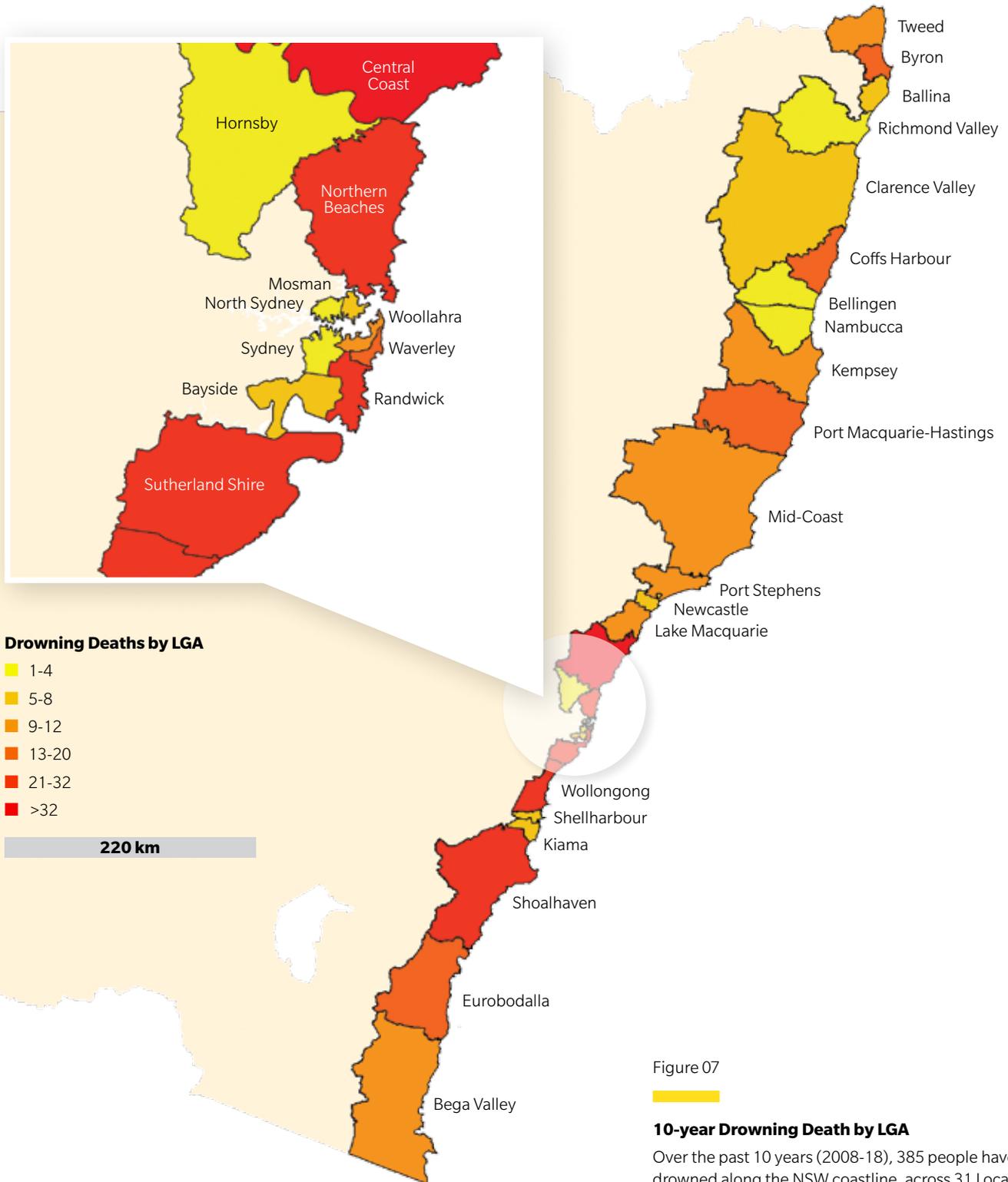


Figure 07

10-year Drowning Death by LGA

Over the past 10 years (2008-18), 385 people have drowned along the NSW coastline, across 31 Local Government Areas. 33% (n=128) of fatalities have occurred within the Sydney Metropolitan Area.

WHEN ARE THEY DROWNING?

Identifying times when the risk of drowning is highest is vital in the allocation of lifesaving resources, and is key to efficiently mitigating risks associated with using the coastal environment. There is a strong correlation between the amount of people who use the coastline and the number of coastal drowning deaths that occur.

Over the past 10 years 37% (n=143) of coastal drowning deaths have occurred between December and February. This trend is heightened in the 2017/18 season with over 55% (n=22) of drowning deaths occurring in these months. The month of December alone accounted for 26% (n=10) of drownings, more than double the 10 year average.

Unsurprisingly, the weekends account for the highest number of drowning deaths with 44% (n=170) over the last 10 years occurring on these days. In the 2017/18 season this increased to 54% (n=21) with eight deaths (21%) on Saturdays and 13 deaths (33%) on Sundays. During weekdays the distribution of drowning deaths over the past 10 years is consistent with about 11% (n=42) occurring on each day. This data shows that continuing to target weekends as the highest risk period of each week is the best option, and our primary prevention strategies should take place on weekends.

A greater number of incidents often occur during periods of increased beach visitation including the summer season, holidays and weekends. This is reflected in the drowning figures with four coastal drowning deaths occurring between Christmas and New Year's Day which contributed to one of the worst summers for coastal drowning in 10 years.

Over the last 10 years a majority of drowning deaths have occurred in the afternoon between 12pm and 6pm accounting for 47% (n=181) of drownings. This was also true for the 17/18 season where 49% (n=19) of incidents occurred during these times.

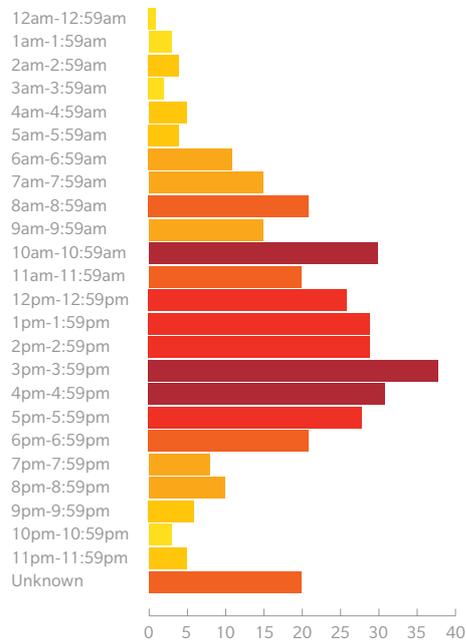


Figure 09

10-year Drowning Death by Time

From 2008-18, 47% (n=181) of the total coastal drowning deaths occurred between the hours of 12pm and 6pm.

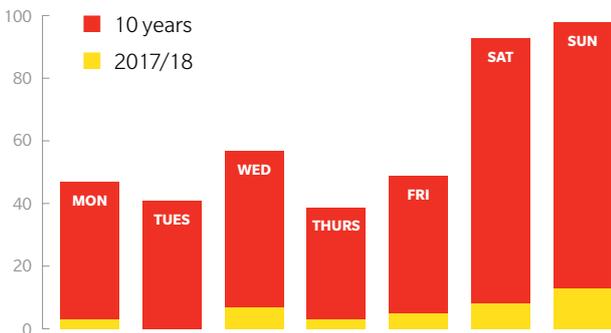


Figure 08

10-year vs 2017/18 Drowning Death by Day

Over the past 10 years (2008-18), the majority of coastal drowning deaths have occurred on Saturday and Sunday (44%, n=170). In 2017/18 this figure rose to 54% (n=21). No coastal drowning deaths occurred on a Tuesday last season.

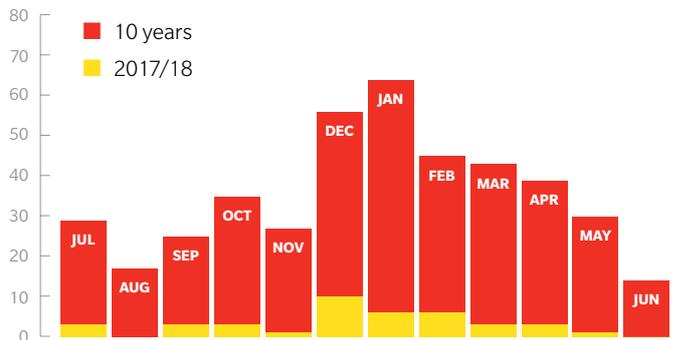


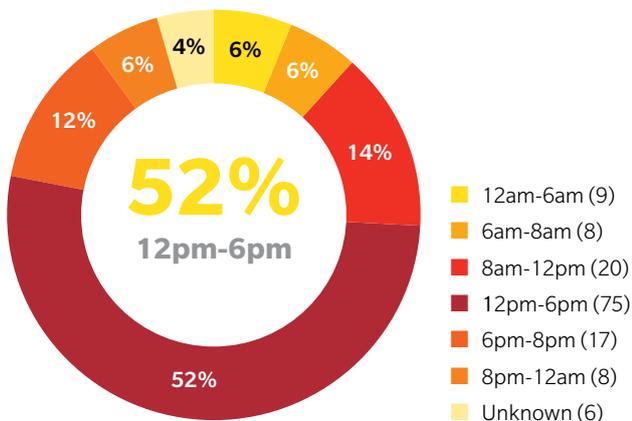
Figure 10

10-year vs 2017/18 Drowning Death by Month

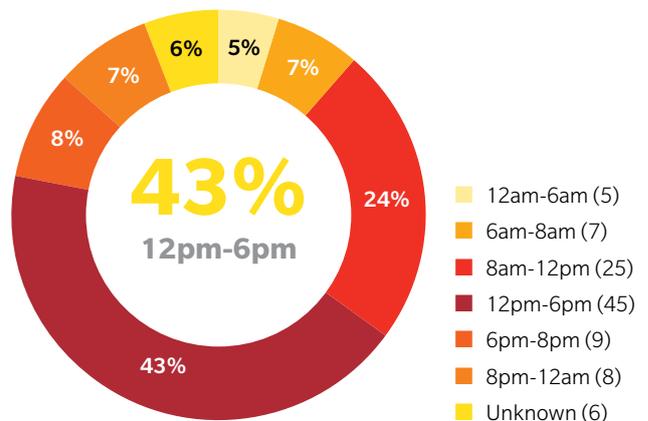
The highest number of coastal drowning deaths in the last 10 years (2008-18) occurred in the month of January (n=58); followed by December (n=46) then March (n=40). No drowning deaths occurred in August or June last season.

SEASONAL BREAKDOWN

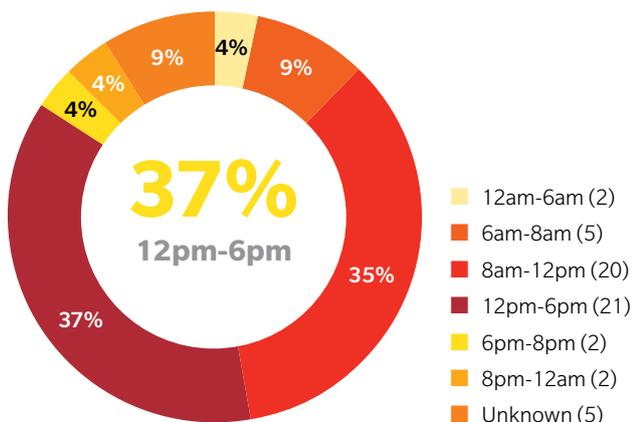
Surf Life Saving NSW is constantly reviewing data to see if there is a need to adjust or enhance the way we patrol our coastline. The data below shows the number of coastal drowning deaths that have occurred in the last 10 years, broken down by season and key time periods of the day. The key periods of time that have been identified are; early mornings (12am – 6am), morning shoulder period (6am to 8am), morning (8am – 12pm), afternoon (12pm – 6pm), evening shoulder period (6pm – 8pm) and night (8pm – 12am).



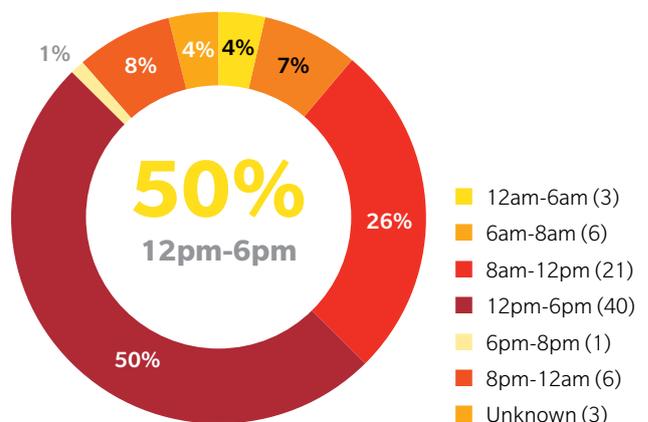
Summer: As expected a large majority (52%) of coastal drowning deaths have occurred in the afternoon (12pm-6pm) when the beaches are usually at their busiest and this is apparent for all seasons. There is consistently a significant number of incidents that occur during the evening shoulder period (6pm-8pm), almost as frequently as the morning period (8am-12pm). It is not uncommon for lifesaving patrols to sign off at 6pm and this could indicate that there is a need to investigate further solutions to mitigate this risk.



Autumn: We see a similar pattern in autumn compared to summer with the highest percentage (43%) of drowning deaths occurring in the afternoon period (12pm-6pm). There is also a high percentage (24%) of drowning deaths in the morning period (8am-12pm).



Winter: During winter, incidents have mostly occurred during the afternoon period (12pm-6pm) and morning period (8am-12pm) with 37% and 35% of drowning deaths respectively. There are very few drowning deaths in the early morning and evening shoulder period in winter.



Spring: Again in spring we see a high percentage of drowning deaths occurring in the afternoon (50%) followed by the morning period (26%). We see very few drowning incidents in the evening shoulder period (6pm-8pm) during spring in comparison to summer and autumn.

CASE STUDY: DRONES SAVING LIVES

The adoption of cutting edge technology is becoming increasingly crucial and the surf lifesaving community is no exception, with the organisation utilising drones for a variety of activities.

Last summer SLSNSW and the NSW Department of Primary Industries (DPI) committed to a partnership program of aerial surveillance as part of the State Government's \$16 million shark mitigation strategy.

Lifesavers and lifeguards flew daily operations throughout the summer at nine locations across Northern NSW and Port Macquarie, with the data gathered to be utilised by the DPI as part of their research programs.

While shark surveillance is one task these drones have performed remarkably effectively, an incident in January underscored the potential of the technology in other areas of lifesaving operations.

"Drone Pulls Off World First Rescue"

Lennox Head on the state's Far North Coast made history on Thursday 18 January when the first ever drone rescue pod was deployed in a real-life rescue operation.

Lifeguards from the Australian Lifeguard Service were preparing for a training session to familiarise themselves with the drone when a call came through of two distressed swimmers.

At about 11:30am, two men were swimming in powerful surf conditions approximately one kilometre north of the patrolled area when a member of the public noticed that they were having difficulty in the three-metre swell.

Lifeguard Supervisor Jai Sheridan, the 2017 NSW Lifeguard of the Year, who was piloting the drone at the time, immediately responded and was able to locate the swimmers within minutes of the initial alert.

In a world-first, real life situation, he dropped the rescue pod to the swimmers who were able to cling onto it and make their own way to shore. They were met by lifeguards from Lennox Head who had raced to the scene in an ATV.

The pair were fortunately unharmed from their ordeal apart from showing signs of fatigue.

"The UAV certainly proved itself as it is an amazingly efficient piece of lifesaving equipment and a delight to fly," said Jai Sheridan

"I was able to launch it, fly it to the location, and drop the pod all in about one to two minutes. On a normal day that would have taken our lifeguards a few minutes longer to reach the members of the public," he said.

"Do drones have a role in lifesaving?"

What is rapidly becoming clear is that drones do have a place in the surf lifesaving arsenal but they are not designed to replace the work of frontline volunteers.

Drones can be utilised for a variety of roles on the beach and helping our members achieve the qualifications to fly them can help inspire them for future careers in a field which is experiencing rapid growth.

In the coming seasons SLSNSW will continue to explore how to best use this exciting technology and complement the fantastic job lifesavers do on the frontline.

Figure 11

10-year Drowning Death Seasonal Time

The time period in which the last 10 years of coastal drowning deaths have occurred within a season.

HOW ARE THEY DROWNING?

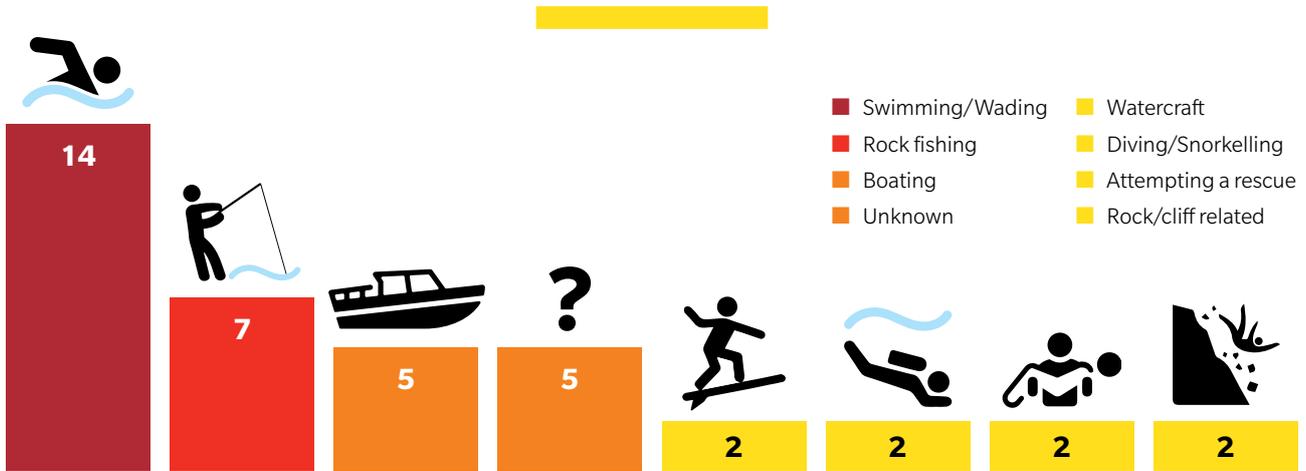


Figure 12

2017/18 Drowning Death by Activity

In the 2017/18 season, swimming/wading was the most common activity being undertaken at the time of death 36% (n=14). Rock fishing accounted for 18% of activities (n=7). This was a reduction on the 10-year average of eight incidents per year.

When combined with other information, identifying which activity is linked to each drowning incident helps to determine who is at the highest risk in the coastal environment. This shapes the way lifesaving agencies approach drowning prevention strategies by focusing on these activities in our education, surveillance and supervision methods.

The most common activity that results in coastal drowning death is swimming which accounts for 31% (n=121) of incidents in the past 10 years. In the 2017/18 season this trend continued with 36% (n=14) of drownings as a result of swimming. It's unfortunate to see that swimming is consistently one of the most common activities resulting in drowning. It should be acknowledged that a vast majority of the population that visit the coast are swimmers and bathers, so the likelihood of an incident occurring is magnified by the quantity of people who participate in that activity.

Rock fishing is the second most common activity that results in drowning with 22% (n=84) of coastal drowning deaths in the last 10 years. Again, this figure was similar in the 2017/18 season with 18% (n=7) of the coastal drowning deaths occurring while rock fishing. Whilst these figures are lower than swimming, if we compared the number of people who participate in rock fishing versus those who swim, the per capita rate of drowning is higher in among rock fishers.

The next highest activity is boating and accounts for 10% (n=40) of the drowning deaths in the last 10 years. The 2017/18 season matches this with 13% (n=5) of the drowning deaths.

Overall there was very little discrepancy when compared to the 10-year average, perhaps what is concerning is the lack of any indication that the rates of drowning are declining across any category.

Figure 13

10-year Drowning Death by Activity

Activity	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	Total
Swimming/Wading	11	14	9	14	11	7	15	15	11	14	121
Rock Fishing	9	12	4	11	8	8	7	10	8	7	84
Boating	4	3	3	4	6	3	6	5	1	5	40
Unknown	6	0	1	2	4	2	2	1	1	5	24
Watercraft	1	1	4	5	5	1	3	5	2	2	29
Diving/Snorkelling	2	2	1	5	4	2	3	7	4	2	32
Attempting a rescue	3	4	1	2	2	4	0	3	2	2	23
Rock/cliff related	1	1	0	4	4	1	1	5	4	2	23
Other	1	0	0	1	2	1	0	2	0	0	7
Fishing	2	0	0	0	0	0	0	0	0	0	2
Total	40	37	23	48	46	29	37	53	33	39	385

A photograph of a person standing on a dark, jagged rock formation overlooking the ocean. The person is wearing a red shirt and dark shorts, and is holding a fishing rod. The ocean is blue with white waves crashing against the base of the rock. The sky is a pale, clear blue.

CASE STUDY: ROCK FISHING DEATHS CONTINUE

Over the past decade the recreational activity of rock fishing consistently continues to be in the top two activities that are the leading cause of coastal drowning death.

It remains a source of frustration for the lifesaving community that these deaths, many of which are preventable, continue to happen.

Research completed by Surf Life Saving NSW, where key rock fishing locations in Randwick were surveyed across 30 randomly selected days in 2018, found that on average only 47% of rock fishers were wearing lifejackets whilst on the rock platform.

Since August 2015 there have been 25 coastal drowning deaths attributed directly to rock fishing, largely as a result of people either slipping off exposed platforms, or being washed into the sea. Of these, 11 occurred during autumn or winter, as many recreational fishers take advantage of the conditions at this time of the year.

In almost all of these incidents, the fishers were not wearing a flotation device, and the victims were overwhelmingly male.

“Lifesavers Welcome New Legislation”

After several coronial enquiries in 2016, it was recommended that a trial of mandatory life jackets take place in the Randwick Local Government Area, a known black spot for rock fishers.

A 12-month moratorium was announced during which fishers would be cautioned if they didn't comply with the edict to wear an Australian approved lifejacket, but would not be fined.

Following the completion of the trial, the NSW Government confirmed that it would be implementing the Rock Fishing Safety Act 2016, but it would be up to the local councils themselves to opt-in with the new law.

Surf Life Saving NSW CEO Steven Pearce welcomed the announcement in April, believing this marked a positive first step to changing the behaviour and attitudes towards lifejackets, as well as hopefully increasing safety around rock fishing.

“As first responders, lifesavers see the devastating impact on families and communities when rock fishing accidents occur,” said Steven Pearce.

“In so many of these incidents, a tragedy could well have been averted if the rock fisher had been wearing a simple flotation device.”

At this stage many coastal councils are deferring their position on whether to adopt the legislation, however the lifesaving community is standing by it with the unequivocal position that lifejackets save lives.

“We understand that the debate will continue as it evokes much discussion among all the stakeholders.”

“Our position is that we will support any initiative that will help make the sport of rock fishing safer.”

WHERE ARE THEY DROWNING?

The NSW coastline is primarily comprised of beaches, headlands and rock platforms however, the majority of visitation and recreation along the coast occurs at beaches. It is there we see the highest levels of attendance resulting in an increased likelihood of drowning. This is reflected in the 49% (n=189) of drownings that have occurred at beaches in the last 10 years. In the 2017/18 season 19 of the 39 drownings occurred at beaches (49%), equal to the 10 year average.

The next most common location type for a coastal drowning deaths to occur was at a rock platform or headland accounting for 33% (n=126) of all coastal drownings. This figure demonstrates the hazardous nature of these locations as the rate of injury in relation to visitation numbers is high in comparison to beach visitation. It must be noted that entry into the water in these incidents is not usually intentional. Caution needs to be advised for those people visiting our rocky coasts whether they are rock fishing, walking or taking photographs.

In the last 10 years 44% (n=168) of the coastal drowning incidents occurred within 1km of a patrolled location including incidents both within and outside of patrolled hours. Of the incidents that occurred within 1km of a patrolled area, 55% (n=92) occurred outside of patrol hours and the remaining 45% (n=76) occurred during patrol hours. 56% (n=217) of coastal drowning deaths occurred where a patrolled location is more than 1km away. This illustrates the point that members of the public are making decisions, intentionally or not, to swim at unpatrolled locations and putting themselves in situations where a fast response is unlikely.

In the 2017/18 season there was a concerning rise in the number of drowning incidents that occurred within 1km of a patrolled location, accounting for 62% (n=24) of drowning deaths which is much higher than the 10 year average of 44%. Of the 24 incidents that occurred within 1km of a patrolled location, 12 occurred during patrol hours and 12 occurred outside of patrol hours.

Given that 31% (n=12) of coastal drowning incidents occurred within 1km of a patrolled location during patrol hours, this means 69% (n=27) of incidents in 2017/18 occurred when the victim was either more than 1km away from a patrolled location or was swimming outside of patrol hours.

Drowning deaths that occur in the vicinity of patrolled beaches can often feel like they are preventable if only there was someone in the right place at the right time, however there are still a large proportion of drowning incidents where a fast response is impossible because the victim has chosen to swim at a location that is well outside the range of supervision that can be provided.

It's important that members of the public are aware of patrolled locations and that beaches are only under surveillance at certain times. The risk of drowning or injury increases dramatically when there is no service to assist if beach users find themselves in trouble.

This data on when and where incidents are occurring help to guide decisions on patrol times, distribution of resources and education initiatives in the hope of reducing drowning deaths in the future.

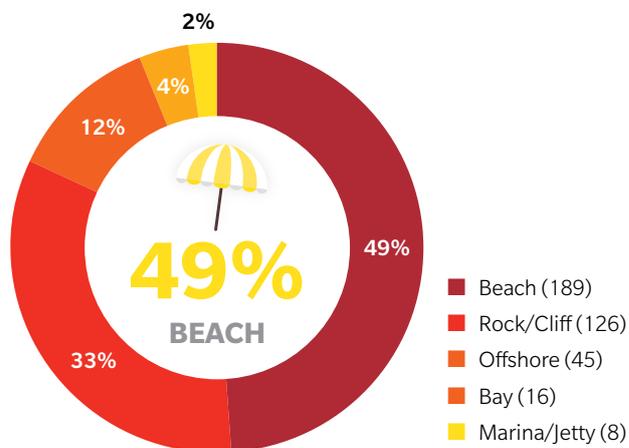


Figure 14

10-year Drowning Death By Location Type

In the last 10 years, the majority of coastal drowning deaths occurred at a beach (49%, n=189), followed by rock/cliff locations (33%, n=126).

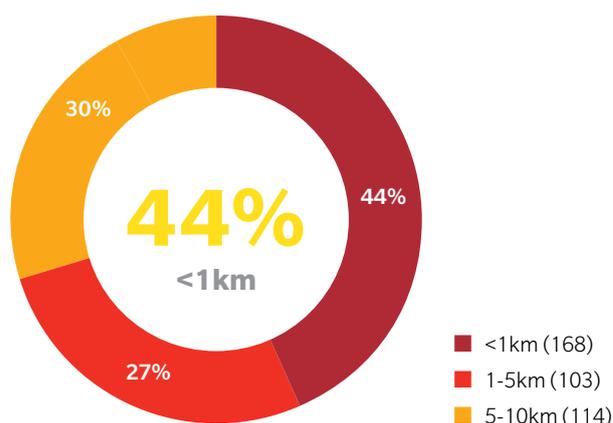


Figure 15

10-year Drowning Death By Distance from Lifesaving Service

In the past 10 years (2008-18), 44% (n=168) of coastal drowning deaths have occurred within 1km of a patrolled location irrespective of the time of day. 29% (n=114) of coastal drowning deaths occurred further than 5km from a patrolled location.



CASE STUDY: LABOUR OF LOVE

For the state's 21,000 active lifesavers, each patrol day is a labour of love. They do it for a variety of reasons, but fundamentally it's because they have a passion for helping their community.

In recent seasons the workload on our members has increased. This has been attributed to more people visiting the beach than ever before.

With the coastline proving an attractive place to visit and escape the heat, surf lifesavers are being asked to perform rescues outside their normal zone of operation.

This makes services such as the Offshore Rescue Boat, Surf Rescue 30, based out of Randwick, an integral asset to lifesaving both now and into the future.

"Speeding To The Rescue"

The summer of '69 isn't just an iconic lyric, it was also the first year of operation for what is now known as the Offshore Rescue Boat.

In the 40 years since, it has been tasked to respond to some of the most dramatic incidents on the Sydney coastline, the crew are on-call ready to respond every day of the year.

In the 2017/18 season the group were tasked and responded to 35 emergency situations.

The whole operation is backed by an amazing team of 50 volunteers who perform roles including skipper, crew person and trainee crew.

It is an inclusive organisation, and two seasons ago history was made when the first all-female patrol was conducted.

"Moving Towards The Future"

This year Surf Rescue 30 received a Surf Club Facility Grant to help renovate their base at Malabar.

"Currently our rescue base is poorly configured, which delays our response time to an emergency by up to 25 minutes," said Treasurer and Skipper Karl Solomonson

"This funding will allow us to build an extension to store the boat and towing vehicle all in one line with extra head room, so we can simply exit the shed with no delay when we are tasked.

"It will speed up our response time significantly, while we also intend to upgrade our facilities," he said.

With a new state-of-the-art base in the pipeline, world class equipment and a team of passionate and dedicated volunteers behind them, Surf Rescue 30 will be making a difference for many seasons to come.

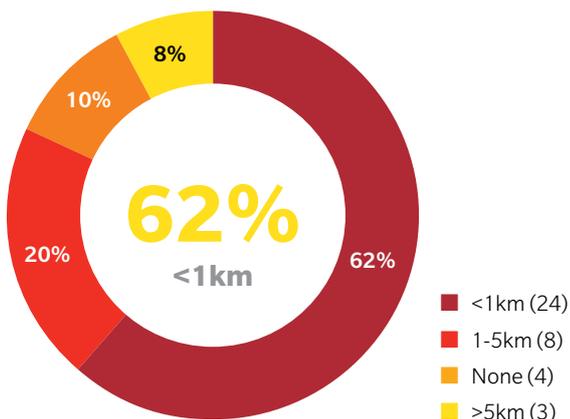


Figure 16

2017/2018 Drowning Death Distance From Lifesaving Service

In the 2017/18 season 62% (n=24) of coastal drowning deaths occurred with 1km of a patrolled location irrespective of the time of day.

CASE STUDY: OUR MEMBERS ARE LIFESAVERS

Every season 21,000 members pull on the red and yellow to actively patrol beaches from Pambula in the south through to Fingal Beach near the Queensland Border. While they all have their own stories and backgrounds, fundamentally they do what they do because they believe in our philosophy of saving lives, creating great Australians, and building better communities.

With over a century of tradition as guardians of the surf, the sight of these dedicated members on beaches throughout summer is a reassuring part of our national culture, and it's important that we acknowledge their efforts.

One way of acknowledging their efforts on the beach is the NSW Rescue of the Month Award which recognises club members who go above and beyond the call of duty while effecting a rescue.

All 11 branches are eligible and encouraged to nominate great rescues, with the recipient each month in contention for the National Award.

As the following example from earlier this year highlights, the training that our youngest members receive from the time they join the movement as Nippers, gives them the confidence to successfully negotiate the marine environment and perform remarkable rescues.

"Nipper Training Pays Off"

Black Head teenager Lucas Kloosterhof was making the most of a summer holiday, enjoying an afternoon with a friend at Forster's Tuncurry Beach in early January. What the 14-year-old didn't know was that his lifesaving skills were about to be called on in dramatic fashion.

At around 6pm three local residents became caught in a powerful rip current. Two of the group scrambled their way to the safety of the shore, but the third was unable to do so.

Instinct took over and Lucas rushed into the surf to help.

On the southern break-wall was another visitor, a swimming school instructor, Aimee Carlin who also witnessed the incident.

She too raced out into the ocean to offer her assistance.

Lucas was the first to reach the man with his main priority to ensure that the man's head didn't go under the water.

The pair were able to work together and get the man safely to shore where, with the help of adults, they got him into a recovery position and monitored him until help arrived.

Speaking after the event, Lucas was modest about his achievements and quick to praise Aimee's assistance as well as the lifesaving movement for giving him the skills and confidence to act so decisively.

"I really enjoy Nippers and have done so since I was young. For me it's about learning how to read the surf and how to stay safe and help when I can.

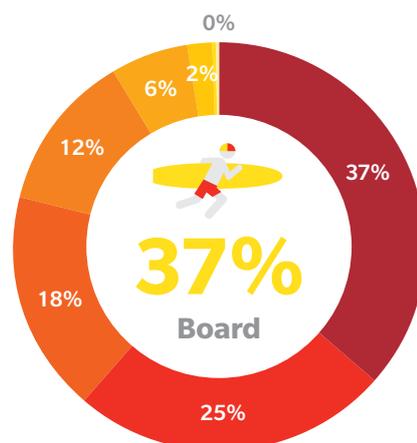
"It's just a good group of people to be around," he said.



Figure 17

2017/18 Rescues

In 2017/18, 37% (n=1,596) of rescues performed by surf lifesavers were conducted using a rescue board. 25% (n=1,093) of rescues were completed with a rescue tube and 18% (n=773) were conducted using no gear at all.



- Board (1,596)
- Tube (1,093)
- No Gear (773)
- IRB (543)
- RWC (263)
- Other (85)
- JRB/ORB/RIB (18)
- Surfboard (5)
- Helicopter (1)



663,607

**Volunteer Patrol
Hours 2017/18**



4,377

**Rescues Completed
2017/18**

RESCUES PER LOCAL GOVERNMENT AREA

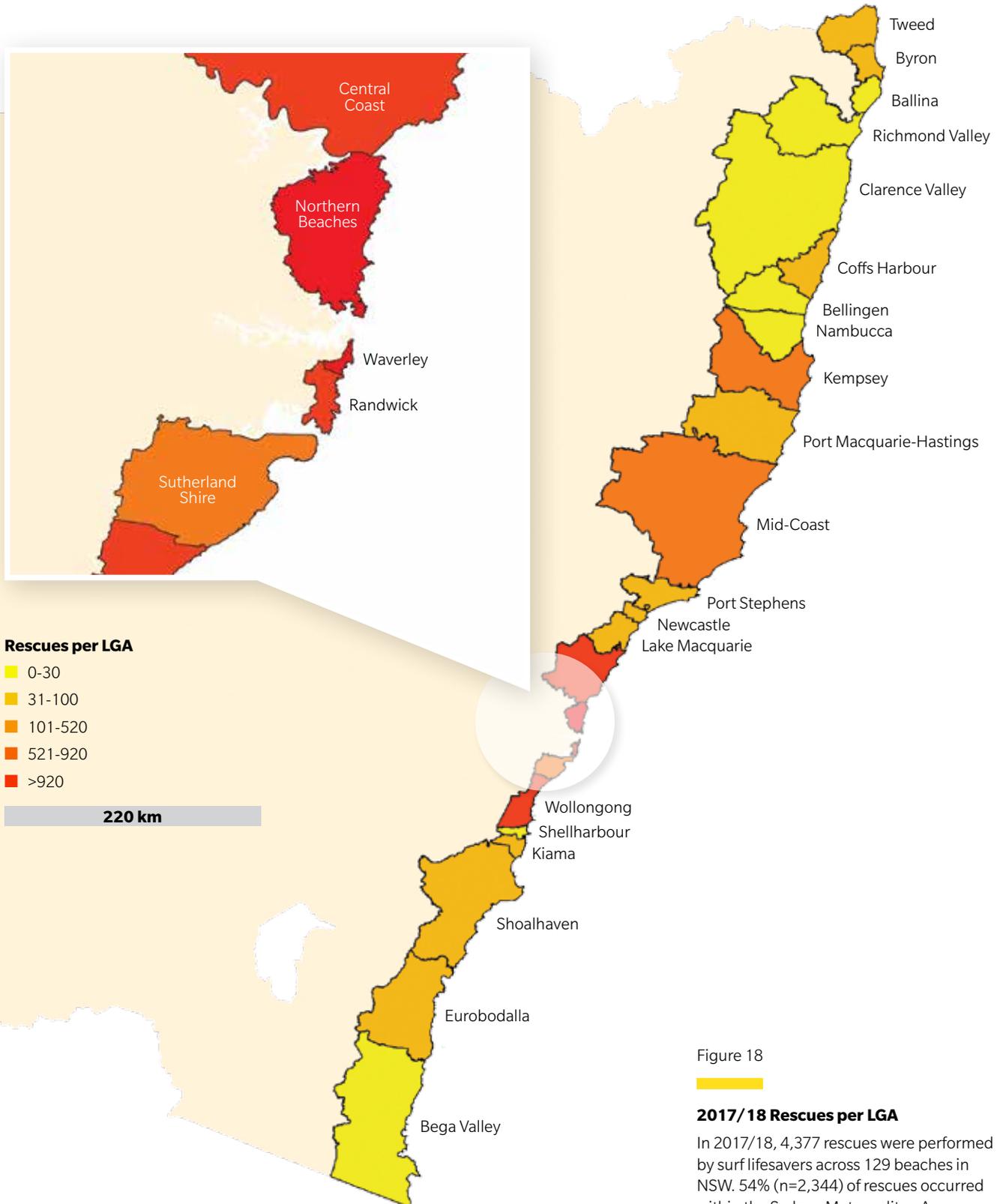


Figure 18

2017/18 Rescues per LGA

In 2017/18, 4,377 rescues were performed by surf lifesavers across 129 beaches in NSW. 54% (n=2,344) of rescues occurred within the Sydney Metropolitan Area.

NON-FATAL DROWNINGS

A drowning fatality has a clearly defined outcome, where the result of the drowning incident leads to the death of the victim. There are, however, a number of incidents where a person is saved or resuscitated before they completely succumb to the effects of drowning. There is growing concern for this portion of people who are involved in what has been dubbed **non-fatal drowning** incidents. These victims can often experience physical, psychological and financial burdens that can affect them for the rest of their lives.

Unlike a drowning fatality, a non-fatal drowning victim has a spectrum of potential severity where the negative effects can range from breathing difficulty escalating all the way up to severe brain damage. This makes it hard to accurately record and measure the full impact a non-fatal drowning incident has on an individual, and on the wider community.

Research completed by Royal Lifesaving using hospitalisation data from the Australian Institute of Health and Welfare investigated the rates of non-fatal drowning in Australia. The research in this report looked at non-fatal drowning incidents that occurred between July 2002 and June 2015 which required hospitalisation whereby the first reported external cause of morbidity was accidental Drowning and Submersion (Mahony et al. 2017).

They found that in NSW there were on average 155 non-fatal drowning incidents each year, however this includes data for inland waterways, bathtubs and swimming pools, as well as coastal waters. To gain an approximate figure that reflects the number of non-fatal coastal drownings in NSW, predictive conversion factors were applied to this data.

Over the 13 years of the study it was found that there were, on average 32 non-fatal drowning incidents in coastal waters per year in NSW. Whilst the average per year is lower than drowning fatality figures, it is a significant number of incidents where the victim required rescue from an emergency situation and was in a condition which required hospitalisation, and additional treatment. This does not take into account any of the incidents that occurred where a patient was not deemed to require further treatment, however it's possible these people can suffer some effects from their non-fatal drowning incident.

Overall, the cost of fatal drowning incidents outweighs that of non-fatal drownings considering the loss of life. In a small percentage of cases where the victim suffers from extensive disability, the cost to the economy and family is significant. Given the extended period of time where the victim requires care (versus a fatality); the costs associated with providing this care escalate. A lifetime of care and treatment can also have life changing impacts on the families of the victim who end up dedicating their life to the care of the victim. Over a lifetime the cost to the economy is larger than an individual drowning fatality.

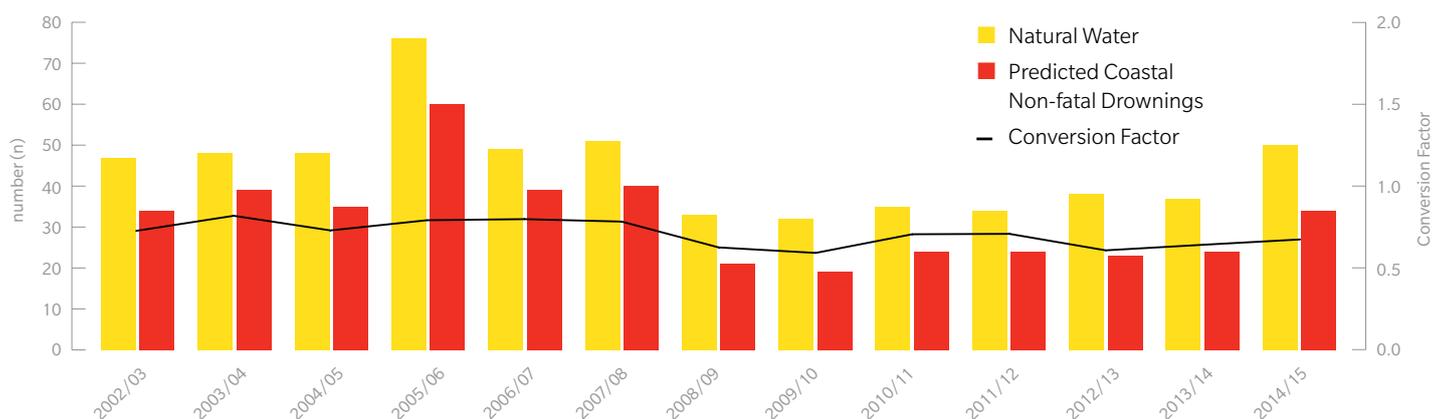


Figure 19

2002-15 Predicted Non-fatal Drownings

Conversion factor applied to the number of recorded non-fatal drownings that occurred in natural water (including coastal waters) and the predicted number of non-fatal coastal drownings as a result (data from Mahony et al. 2017)

AMBULANCE REQUESTS PER LOCAL GOVERNMENT AREA

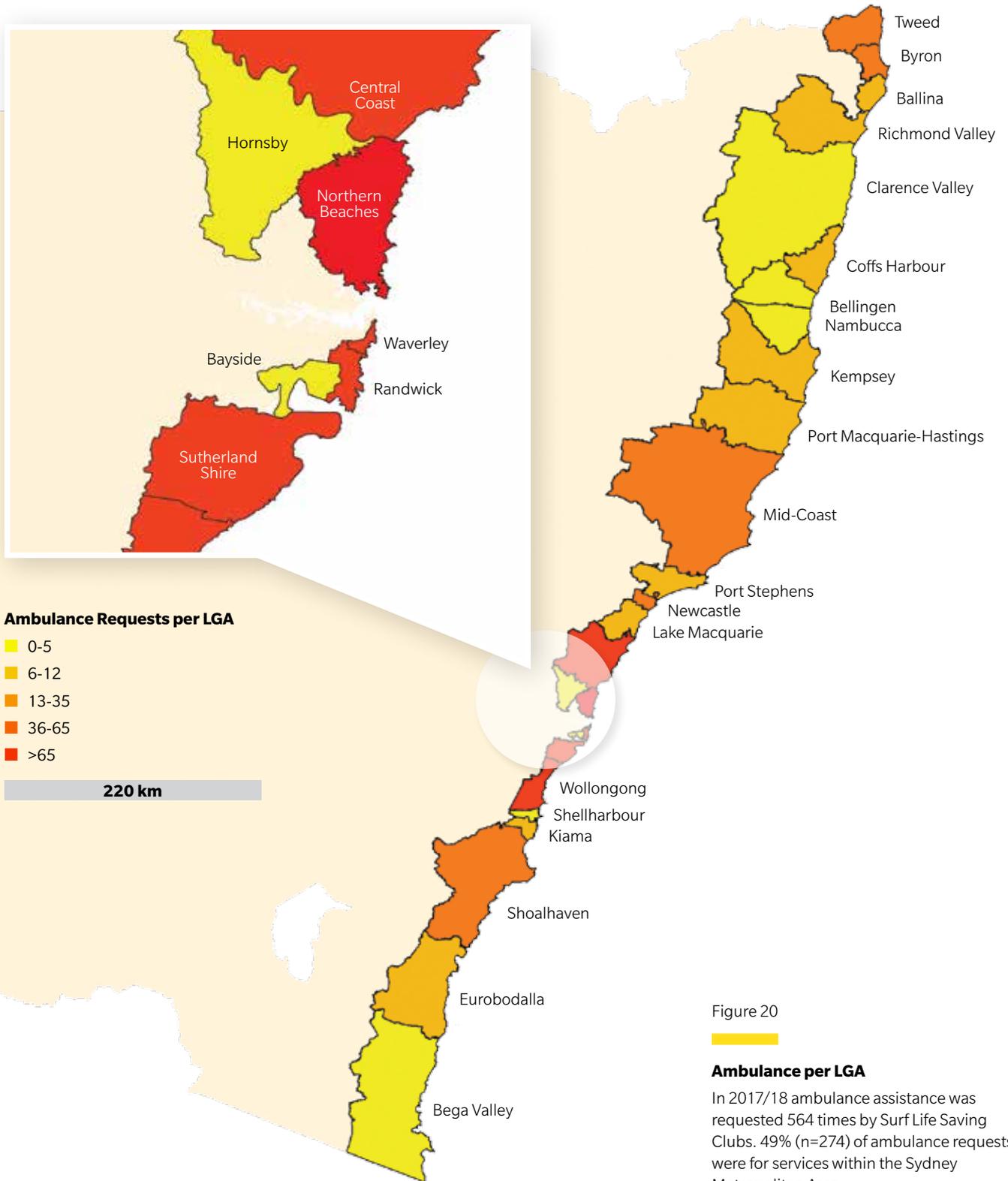


Figure 20

Ambulance per LGA

In 2017/18 ambulance assistance was requested 564 times by Surf Life Saving Clubs. 49% (n=274) of ambulance requests were for services within the Sydney Metropolitan Area.

CASE STUDY: FOCUSSING ON INTER-AGENCY COOPERATION

The 2017/18 season was another successful one for the State Operations Centre (SOC) based at SLSNSW Headquarters on Sydney's Northern Beaches.

The SOC plays a vital and ever expanding role in keeping the public safe. The team are charged with the responsibility of monitoring the status and location of all surf lifesaving assets, as well as co-ordinating communications with both frontline services on the beach and other emergency services.

Over the season the SOC received 588 requests for assistance, dispatched 564 ambulances, and handled tens of thousands of radio calls.

In order to further enhance inter-agency relations, SOC personnel made a visit to the Toll Helicopter Base to participate in a number of training courses. This ensured a greater understanding of both organisations' capabilities and responsibilities.

"Developing Key Relationships"

A key focus in recent years has been ensuring that relationships between agencies including Lifeguards, Police, Ambulance, Fire, SES and Surf Life Saving continue to grow.

When an incident occurs at a beach it doesn't happen in isolation, and multiple agencies and their assets can be involved.

Just this season, the SOC has been involved in co-ordinating lifesaving responses to major search and rescue operations, cliff falls, stranded vessels and on several occasions assisting in evacuations due to bushfires in the Royal National Park and at Tathra.

The diversity and complexity of these responses underscore just how important relationships are in the field.

"For us as an organisation it is crucial that we build strong relationships with our colleagues in the Emergency Services," said State Operations Coordinator Andrew Ugarte.

"We do a lot of training so that everyone is on the same page when it comes to real-world situations.

One area we really focussed on over the last 12 months was developing a relationship with the Water Police to the extent we now embed a Duty Officer at their Command Centre for major incidents and events as well as some of the busiest days over summer.

As a result we are able to hear the information first-hand and work closely with the Police from the initial call for help," he said.

"Future Proofing Infrastructure"

For the first time this year, Duty Operations Officers were given access to Coastal Radio Network tablets. The tablets provided mobile access to critical Surf Life Saving applications for enhanced communication and integration with the State Operations Centre.

Portable access to the SurfCom radio network has provided greater connectivity; allowed operators to work off-site, such as at Marine Area Command and; acts as a mobile backup headquarters for SurfCom operations.

In the past, one of the limitations to the network was that it ran on an analogue signal. This meant there were some areas where coverage was limited, which was an issue during emergencies.

SLSNSW has, and continues to make, significant investment in the digital network with upgrades the Central Coast and Sydney Northern Beaches equipment completed over the last financial year.

This means more than half the state is now covered by the digital radio network. Additionally, there are plans for further upgrades, reinforcing the commitment Surf Life Saving NSW has made to the beach going public, in ensuring it maintains a state of the art operations centre for emergency taskings, ultimately saving lives.



FIRST AID INCIDENTS

Surf lifesavers are often the first on scene to treat various injuries that are sustained by coastal users. There is however, a limit to what can be treated with the training and resources available to these lifesavers. For serious incidents, paramedics will be called to assist as required, and with 564 total Ambulance call-outs, this occurs frequently. Of the 564 callouts, 62% (n=352) required transportation and further treatment in hospital.

This is similar to the previous season where there were 546 Ambulances called and 335 patients transported to hospital.

During the 2017/18 season there were 87 calls for assistance in the month of December, which accounted for 15% of all callouts. Of the 87 calls, 65 were transported to hospital which accounts for 18% of total transportations for the season. In January there were 114 (20%) calls for assistance of which 60 (17%) required transportation. In February 106 (19%) calls were made of which 56 (16%) required transportation (16%). In total, summer accounted for 54% of the season's call-outs and 51% of the state's total transportations required of patients.

To put it in perspective, the autumn months had the second highest number with 27% (n=150) of total callouts and 98 (28%) transportations. The month of March actually had more Ambulance callouts than December with 96 (17%). This emphasises the importance of having increased supervision over summer and the necessary continuation of lifesaving services well into the year, even as winter approaches.

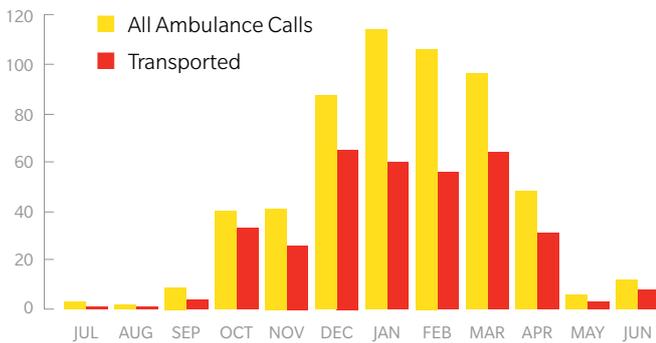


Figure 21

2017/18 Ambulance Calls by Month

The 2017/18 season breakdown of the number of Ambulance callouts and transportations by month in NSW.

A majority of Ambulance callouts occurred on weekends with Saturdays accounting for 32% (n=178) and Sundays for 42% (n=236). The most common time of day for an ambulance to be called was in the early afternoon between 12pm and 3pm, with 35% of calls (n=195), which was almost matched by the number of calls made in the morning between 9am and 12pm with 34% (n=192). Between 3pm and 6pm there were 143 (25%) call outs made and this is an indication that incidents can occur at any time during the day, and of the importance of ensuring patrolling services stay alert during these key periods.

Coogee was once again the busiest beach with 26 Ambulance callouts, 18 of which required further treatment in hospital. This is however a positive figure, as there has been a reduction in call-outs at this location for the third year in a row, despite an overall increase in call-outs in the state for the season. The second and third locations with the most Ambulance callouts are Bondi Beach (n=23) and Maroubra Beach (n=18). These locations have some of the highest rates of visitation in the state so it is more likely people will suffer injury, and this is reflected in the Ambulance callout statistic.

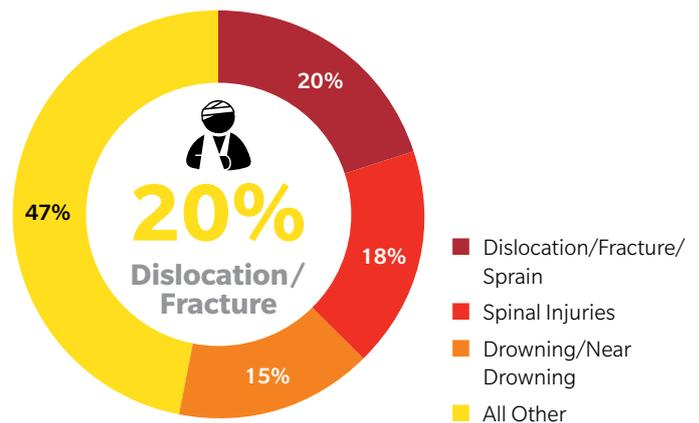


Figure 22

2017/18 Ambulance by Injury Type

Dislocations/fractures/sprains (20%, n=113) were the most common injury requiring Ambulance assistance in the 2017/18 season. Suspected spinal injuries (18%, n=100) were the second most common.

2017/18 PREVENTATIVE ACTIONS

Injury Type (2017/18)	
Dislocation/Fracture/Sprain	113
Spinal Injuries	100
Drowning/Near Drowning	87
Laceration/External Wounds	51
Other	45
Sting/Bite	38
Fainting/Collapse	20
Asthma/Breathing Difficulties	19
Chest Pain/Heart Attack	16
Head Injury/Concussion	14
Heat Exhaustion/Hypothermia	13
Fit/Siezure	12
Allergic Reaction	10
Intoxication/Overdose	8
CPR	7
Possible Internal Injury	5
Stroke	3
Penetrating Injury	2
Shock	1
Total	564

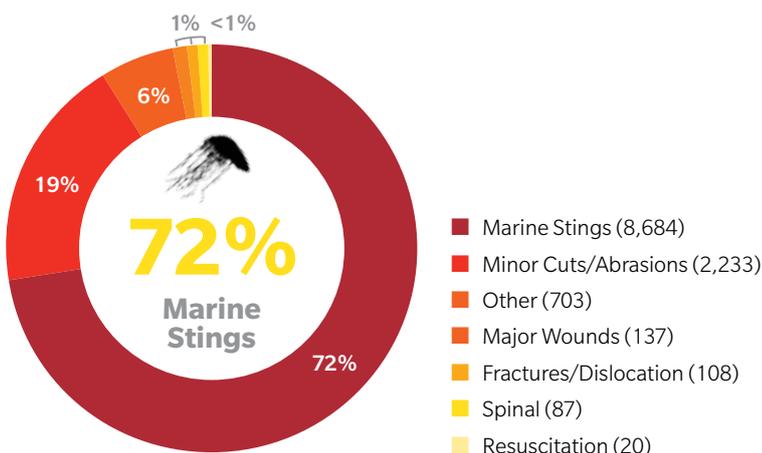


Figure 23

2017/18 First Aids

In the 2017/18 season 72% (n=8,684) of first aid actions performed by surf lifesavers were for marine stings, the second most common treatment was for minor cuts/abrasions (19%, n=2,233).

145,465
PREVENTIONS



1,319
LOST CHILDREN



210
SEARCHES



575
EVACUATION ALARMS

SURF EMERGENCY RESPONSE SYSTEM

There are hundreds of lifesaving assets across NSW that can be used in response to emergency incidents. Given the time-critical nature of coastal rescues, choosing the most efficient asset is vital. The Surf Emergency Response System (SERS) is used by emergency services to task the most appropriate lifesaving assets to serious coastal incidents.

In the 2017/18 season there were 588 SERS callouts made. Fortunately, 313 cases did not require any action by the tasked resource due to false alarms or the patient managing to get themselves out of trouble without intervention.

Of the 588 callouts in the 2017/18 season, 28% (n=165) were for swimmers, 22% (n=131) were for people on various forms of watercraft and 18% (n=106) were for boating. These are the top three activities which require SERS activation and remain consistent with the five year trend. Interestingly, over the past five years, rock fishing incidents only make up 4% of total callouts, whilst being the second highest cause of drowning deaths in NSW. Of the 18 callouts in the 2017/18 season, 30% (n=5) of these resulted in fatal drowning. This is a reflection on the isolated environments rock fishers visit which makes it hard to initiate timely emergency response. Through 18 callouts, 12 patients were able to be rescued which shows there is a need to maintain or expand this response system to help save more lives.

The summer months accounted for 43% (n=252) of total callouts for the year. With higher attendance there is higher risk of incident. Summer in particular sees people swimming earlier in the morning and later in the evening, when a patrol may not be on duty, and so the SERS is more likely to be activated in an emergency. Autumn and spring account for 21% (n=121) and 20% (n=119) of callouts respectively, and even in winter there were 96 (16%) callouts. This is a service that sees year round use and has saved hundreds of lives.

Over the past five years there has been 2,832 callouts through SERS, of which 43% (n=1,207) have occurred on a weekend. We still see 57% (n=1,625) of callouts occurring across weekdays, with an even distribution across each day. This trend has continued in the 2017/18 season with 45% (n=265) of calls on the weekend.

The highest periods of visitation correlates to the highest number of callouts required. In the 2017/18 season the time period between 12pm-6pm accounted for 55% (n=322) of all callouts, 29% (n=170) of callouts occurred between 6am to 12pm. 10% (n=56) of callouts occurred between 7pm-6am and illustrates the need for the SERS to be active 24/7, although only eight callouts occurred from 12am-6am in the 17/18 season.

Of the 588 callouts, 57% (n=337) occurred at an unpatrolled location. Of the 251 that occurred at a patrolled location, 99 occurred during patrols hours. This mean 83% (n=489) of callouts occurred at unpatrolled locations or after patrol hours. This shows the need to have lifesaving services that can respond to incidents outside of the normal scope of their patrolling duties. Rescue Water Craft (jet skis), Inflatable Rescue Boats (IRBs), club callout teams, helicopters, drones as well as the people who man them are all vital parts of these emergency responses.

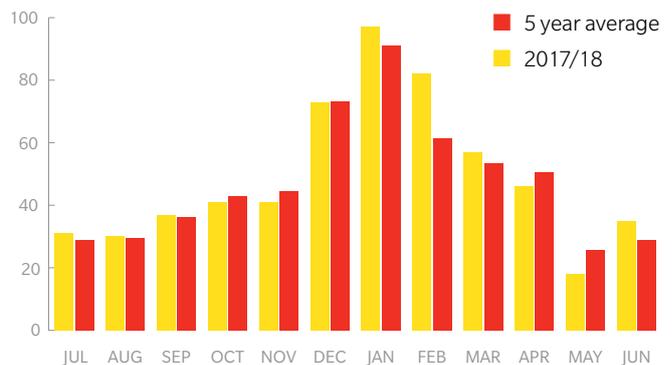


Figure 24

2017/18 vs 5-year Average SERS Month

On average the most frequent month of SERS activations is January with 91 (16%) followed by December with 73 (13%). In the 2017/18 season the summer months accounted for 252 (43%) of SERS activations.

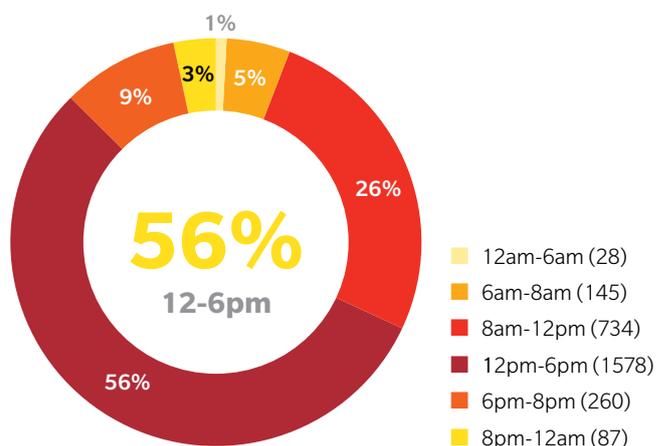


Figure 25

5-year Average Activations Key Time Periods

Breakdown of the key times of day when SERS activations occur in the past 5 years.

28%



SERS Callouts Involving Rock Fishing Incidents Resulted in a Drowning Fatality

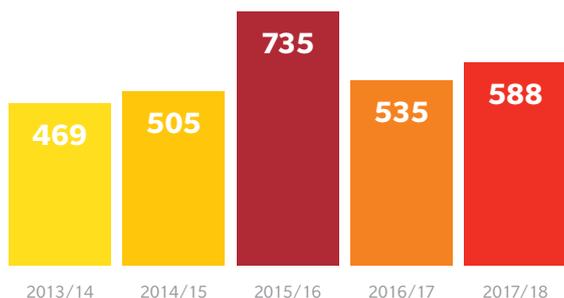


Figure 26

5-year SERS Trend

In the 2017/18 season the SERS system was activated 588 times, slightly above the 5 year average of 566.

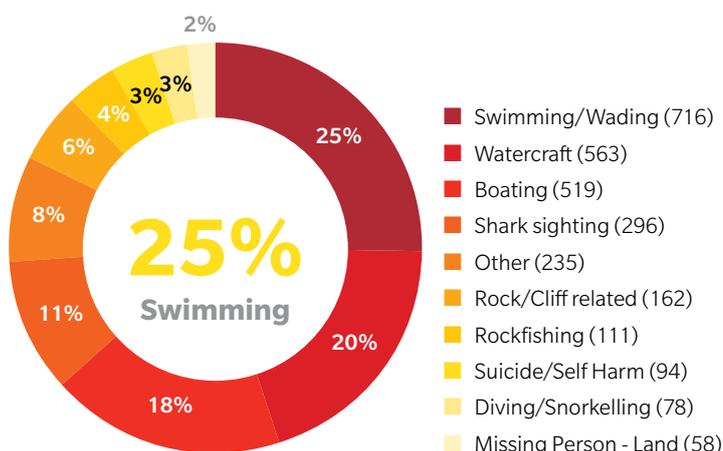


Figure 27

5-year SERS Activity

Between 2013-18, swimming/wading incidents were the most common activity responded to through the SERS (25%, n=716). Watercraft (20%, n=563) and Boating (18%, n=519) were the next most common activities responded to through the SERS.

CASE STUDY: MAKING A DIFFERENCE AFTER TRAGEDY

Coastal drowning deaths are a tragedy to all involved. In the immediate aftermath of a critical incident, the significant impact on family and friends of the victim, the lifesavers and emergency responders who attend, and the general public who happen to be present on the day can be overlooked.

There have been 39 such incidents on the NSW coastline in season 2017/18, and they remain undoubtedly a stressful situation for all concerned.

Sometimes, however, in the midst of the worst day of their lives, the families want to make a contribution to stop this drowning tragedy from being repeated.

Such a story happened earlier this year in the Illawarra area, after 33-year-old-father-of-three Nhan Lam, tragically passed away after getting into difficulty while swimming at the unpatrolled MM Beach, near Port Kembla.

Mr Lam was visiting the beach from his South Western Sydney home with his young family on Sunday January 7.

He was out for a swim when he got into difficulty at around 1pm. A member of the public was able to pull him out of the water as emergency services rushed to the scene to administer treatment.

He was taken to hospital in a critical condition where he sadly passed away two days later.

Mr Lam was the third person to drown on that weekend in the Illawarra/South Coast area, capping a tragic period for the surf lifesaving community.

"A Fitting Tribute"

Despite struggling with the loss of their beloved relative, Mr Lam's family expressed a sincere wish for better education around the importance of swimming at patrolled locations.

They pledged half of the proceedings from a Go Fund Me page to Surf Life Saving NSW, with the other half to support Mr Lam's wife and young children.

Through their efforts, two surf rescue boards have been donated to Port Kembla SLSC, a public access defibrillator has been purchased, and there has been a club scholarship founded in Mr Lam's honour.



SERS CALL-OUTS PER LOCAL GOVERNMENT AREA

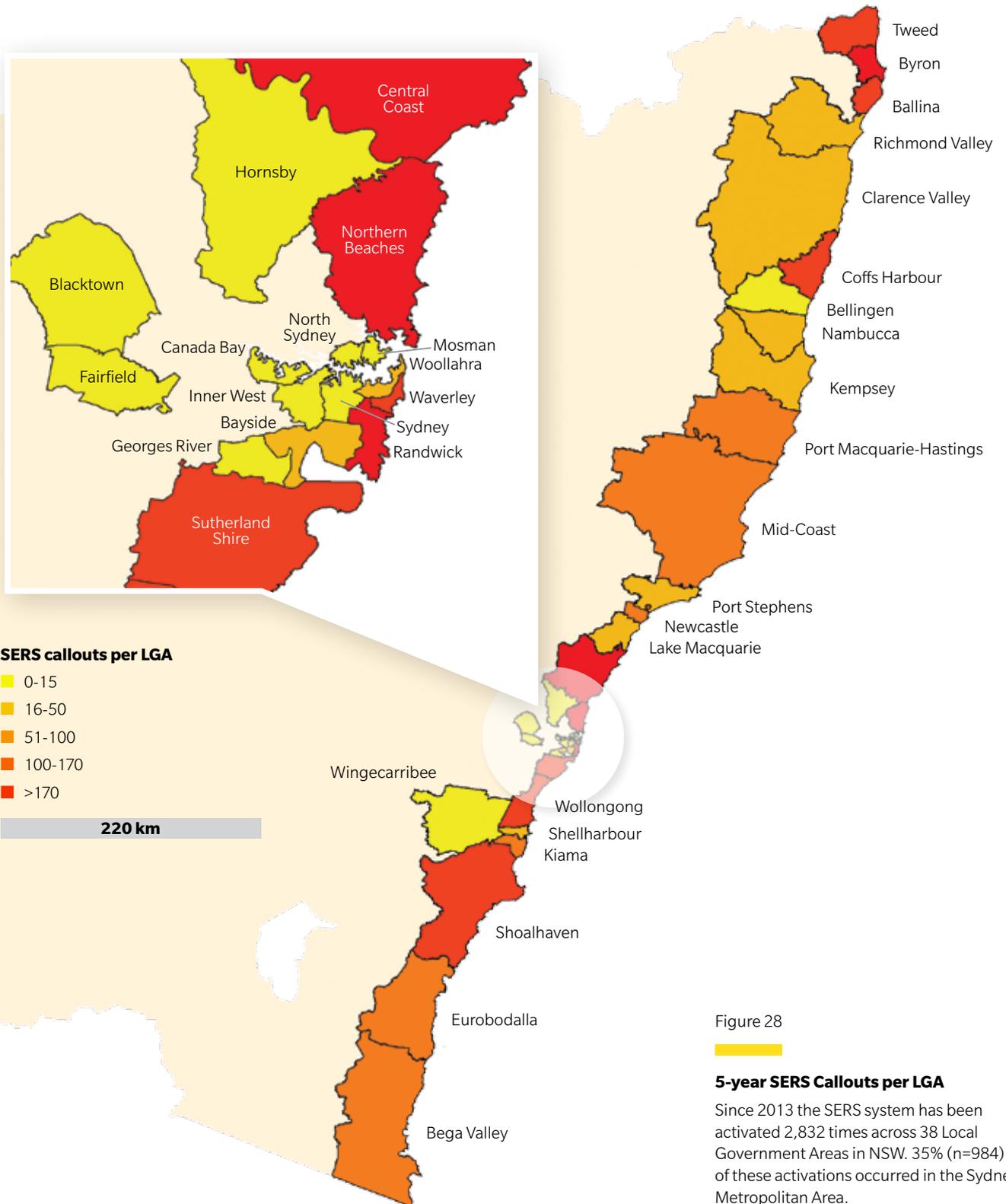


Figure 28

5-year SERS Callouts per LGA

Since 2013 the SERS system has been activated 2,832 times across 38 Local Government Areas in NSW. 35% (n=984) of these activations occurred in the Sydney Metropolitan Area.

CASE STUDY: TECHNOLOGY SAVING LIVES

Technology is playing an ever increasing role for lifesaving as the movement looks for new ways to improve efficiency, streamline operations and make the lives of those on patrol easier.

Over the last 12 months, four temporary Emergency Response Beacons (ERBs) have been installed at beaches across Wollongong and the Sutherland Shire.

SLSNSW is continuing to work with other stakeholders to improve the technology with the long term aim of installing them at hazardous and isolated locations across the state.

The second generation machines are lighter, easier to deploy, and have a longer battery life.

The installation of ERBs has been made possible with the financial support of the NSW Government Office of Emergency Management and Surf Life Saving Australia's Black Spot Program.

"Emergency Response Beacon to Save Lives at Corrimal"

Surf Life Saving NSW has delivered new innovative technology that will help reduce emergency response times at one of Illawarra's most popular beaches.

The Minister for Emergency Services, Troy Grant, joined Surf Life Saving NSW to launch the state's newest Emergency Rescue Beacon (ERB) at Corrimal Beach on Monday 26 March.

Funded through a NSW Government Water Safety Fund Community Grant, the ERB is the third to be deployed in the Illawarra region, with the others located at Coniston and Puckeyes beaches.

Weighing in at just under 20 kilograms and utilising a 3G voice intercom, SMS functionality and camera, the unit will be located at an unpatrolled section of beach to the north of Corrimal SLSC and will enable lifeguards and lifesavers to respond rapidly in the event of an emergency.

With the press of a button, the beacon allows users to instantly connect with the SLSNSW State Operations Centre and local lifeguards. The unit at Coniston has already been activated a number of times, and has resulted in improved response times.



CASE STUDY: COMMUNITY EDUCATION

One of the key objectives of the Australian Water Safety Strategy 2016-2020, is to continue to expand drowning prevention programs aimed at Culturally and Linguistically Diverse (CALD) communities.

Surf Life Saving NSW is committed to supporting this objective, with surf lifesavers working hard to ensure that everyone has the skills to enjoy the beach safely.

There has been an explosion of new programs to help educate newcomers to Australian shores over the last 12 months. Almost 23,000 people have been directly reached by the Community Education team who are working closely with partner Surf Life Saving Clubs.

“Beach Safety Touches Down”

A unique program was implemented last season to help new arrivals understand the importance of beach safety from the moment they set foot on Australian shores.

Working closely with StudyNSW, international students participated in an innovative pathway program to become a Beach Safety Advisor. This program equipped them to man the “NSW International Student Welcome Desk” located at Sydney International Airport throughout the summer as a representative of SLSNSW.

One participant was Sujana Gurung who later travelled to the CISA (Council of International Students Australia) conference in Cairns to share their experience of the program with hundreds of other international students.

“When working as Beach Safety Advisor at the International Airport, it is a challenge to approach an international student/ visitor who has just arrived from long distance, jetlagged, tired, nervous and anxious, with different concerns,” said Sujana Gurung.

“For me, participating in this initiative not only enriched my knowledge about beach safety, signs and precautionary measures, but also the growth in presentation and interaction skills.

“Beach Safety is important not only for people who go to beaches, it is important for everyone,” she concluded.

“Tamarama, A Model Of Success”

Each month new migrants are invited to spend a day at Tamarama SLSC to participate in what is proving to be an amazing success story.

The collaborative partnership between SLSNSW and Tamarama SLSC helps facilitate the delivery of beach safety information to new arrivals to the beach community.

This initiative originally set out to increase water safety awareness among CALD communities, highlighted through research as an ‘at-risk’ group. Pre-program surveys showed that:

- 45% did not know what red and yellow flags on the beach meant;
- 60% did not know what a rip was;
- 65% did not know who to ask for help at the beach ;
- 75% had never heard of volunteer lifesavers;
- 75% did not know the difference between a patrolled and an unpatrolled beach.

More than 1,000 people have participated in the program since its inception.

Our vision is to grow the number of partnership models we have in place, supporting other local clubs with a passion for community education to embrace their unique position of being able to engage with at-risk communities.



3,200

Western Sydney Participants



22,730
CALD
Participants



8,686
Beach to Bush
Participants

AUSTRALIAN LIFEGUARD SERVICE PATROLLED LOCATIONS

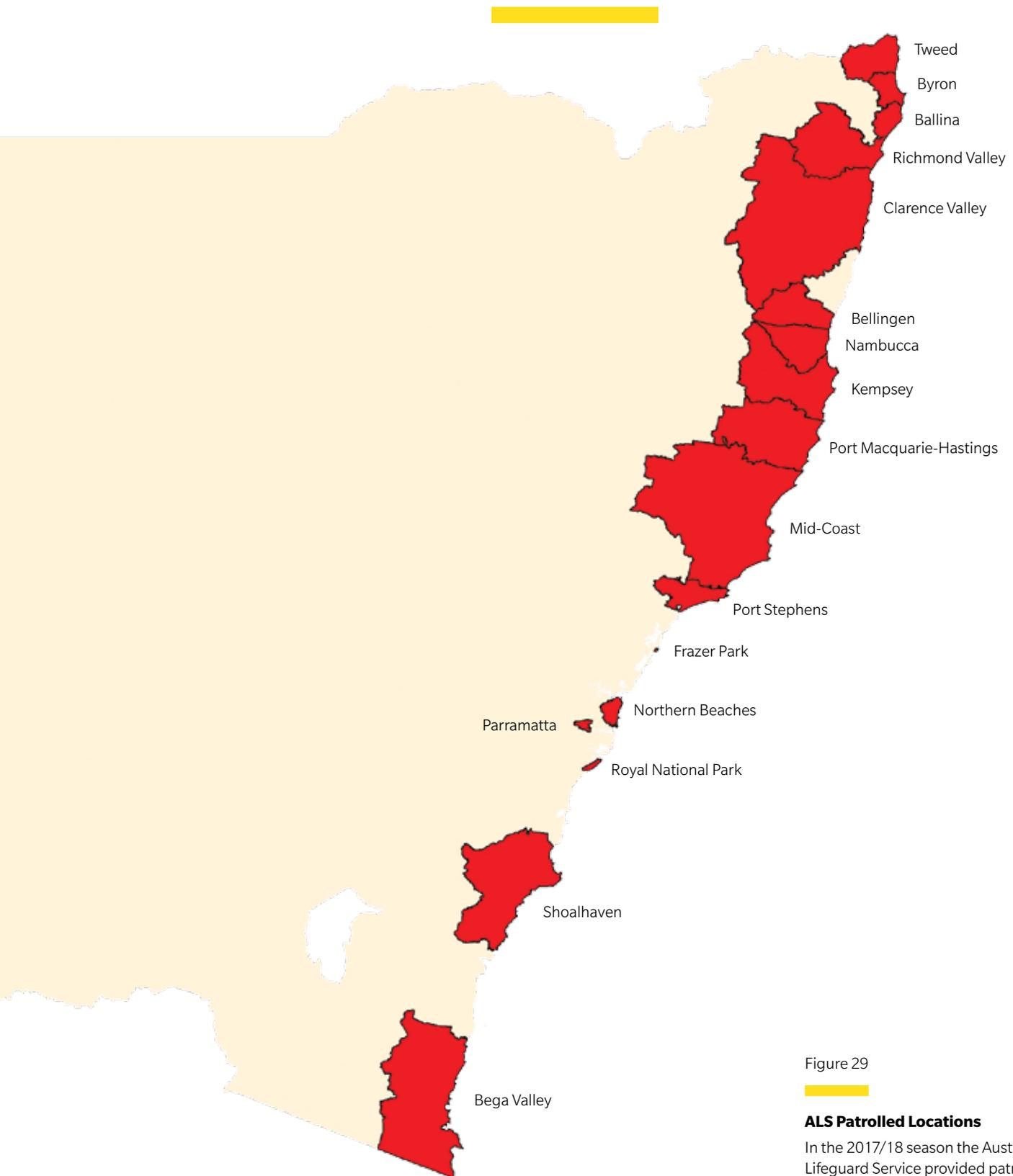


Figure 29

ALS Patrolled Locations

In the 2017/18 season the Australian Lifeguard Service provided patrols at 90 individual locations.

AUSTRALIAN LIFEGUARD SERVICE

The Australian Lifeguard Service (ALS) NSW provides professional lifeguard supervision and water safety services for a range of organisations across 15 Local Government Areas. This includes councils, national parks, private corporations and sporting organisations across 90 individual patrolled locations in NSW.

During the 2017/18 season at patrolled locations the ALS performed 922 rescues, 354,685 preventative actions and 7,385 first aids. Across the season there were 370 nationally accredited lifeguards employed by the ALS.

Lifeguards are typically employed at locations that are known for having high visitation numbers. This means they may only be contracted to be on patrol at key periods of the year such as during school holidays or over summer. In some cases when a person gets in trouble there can be a lifeguard service available to respond extremely quickly. In other cases an immediate response may not be possible as a result of the incident occurring a significant distance from a lifesaving service or outside of patrolled hours. This can often be the difference between life and death as was seen in the early months of this year.

CASE STUDY

“The thin line between life and death”

On 18 January 2018 lifeguards on the Far North Coast at Fingal Beach were notified that a male and female were caught in a rip at the nearby Dreamtime Beach and were being washed around the headland in a strong current. Despite the large and powerful surf, ALS lifeguards were able to quickly locate and collect the male patient from the water, while the female was found shortly after safely on the beach. Initial reports for the two distressed patients came in at approximately 2:50pm and by 3:03pm ALS lifeguards had reported that they had safely retrieved the male patient from the water. ALS lifeguards were less than 1km away from the incident and were able to reach the patient within 10 minutes preventing another coastal drowning death.

This contrasted with an incident that occurred almost three weeks later at the same location on 7 February 2018 where police notified the State Operations Centre of a male struggling to stay afloat off Fingal Headland. Once again, multiple assets were tasked to the incident however in this case, the nearest lifeguard service was now more than 5km away, as the Fingal Beach lifeguards were no longer on patrol at that time of the year. The initial call for assistance occurred at 3:15pm and despite lifeguards arriving by 3:35pm the patient had already disappeared under the water. Paramedics managed to arrive on scene first and had visibility of the patient until approximately 3:30pm. Without any way to perform the rescue, paramedics could only wait for additional assets to arrive. Despite an extensive search by lifeguards, club callout teams, the Westpac Helicopter and police, the patient was unable to be located until approximately 4:40pm and tragically showed no signs of life.

Although there is no guarantee that lifeguards in closer proximity would have saved the patient on the day, there was a significantly higher chance of rescue if they had been able to retrieve the patient earlier.

These two incidents illustrate how a small amount of time can mean the difference between a rescue and a drowning death. It also shows the importance of having lifesaving services distributed strategically along the coastline.



CONCLUSION

Unfortunately after the corresponding period last year where coastal drowning deaths were well down on the average, we have seen this number again spike to the 10 year average of 39 drownings a season.

In many ways, the 2017/18 season was all about averages and medians, with fairly standard figures across all categories of drownings. Once again the two highest-risk age groups were the 20-29 year olds and 40-49 year olds.

There were worrying increases in coastal drowning deaths in two demographic groups with a spike recorded in fatalities for those aged under 15 and for females. These two demographic areas need to be monitored closely to ensure these are not new trends. Males still make up the majority of overall coastal drowning victims, and it is recommended that surf safety programs should continue to target this audience.

In last year's Surf Life Saving NSW Coastal Safety Report, the age group of 50-59 year olds was identified as a demographic to monitor. This season we saw a large reduction in the number of older drowning victims, which is a fantastic outcome and we hope to continue seeing reductions in this age group.

Australian residents and people born in Australia still account for the most drowning fatalities. Our training and education programs should continue to ensure we are teaching all Australians about surf safety.

Rock fishing remains one of the highest risk activities that takes place along our NSW coastline. As a key stakeholder, Surf Life Saving NSW will continue to advocate for compulsory lifejacket use at all rock platform locations while rock fishing.

Another statistic that needs to be noted is that during this summer season (December – February), NSW witnessed its highest number of coastal drowning deaths in the last 10 years.

Clearly it is more important than ever that our lifesavers and lifeguards are on our beaches, and that the beach going public are aware of where the patrol methods are located and their hours of duty.

With 44% of the drownings happening within 1km of a patrolled location (both inside and outside patrol hours) over the last 10 years, this is a topic that needs continual focus and discussion about how the traditional patrols can meet the ever increasing beach usage trends and needs of the community.

Surf Life Saving NSW will continue to explore evolving technologies to help increase the scope of our operations.

As an organisation we are evolving to become more flexible and contemporary in our patrolling methods. We strive to meet the community's ever changing safety needs and expectations along our beautiful and diverse coastline.



REFERENCES

Methodology

Contained within Surf Life Saving NSW's 2018 Coastal Safety Report is information obtained by Surf Life Saving's internal database, SurfGuard, the Incident Report Database (IRD), the SurfCom Management System, Surf Life Saving Australia and by monitoring media reports. This information has been verified with the National Coronial Information System (NCIS).

While all care has been taken to ensure that statistical information included within this report is accurate, please note that data may be amended over time following the outcome of Coronial investigations, which are ongoing at time of print.

Data illustrated in figures may not always add up to 100% due to rounding. Some Local Government Areas amalgamated on 1 July 2016. To be able to compare this year's data to previous years when council amalgamations had not yet occurred we combined the data of previously independent LGAs to match them as they existed at the time of this report. The council areas that this affected are; Mid-Coast Council (previously Greater Taree and Great Lakes), Central Coast Council (previously Wyong and Gosford) and Northern Beaches Council (previously Pittwater, Warringah and Manly). Names and boundaries are accurate for the reporting period (1 July 2017 - 30 June 2018).

Drowning data analysis

SLSNSW collects incident data from SurfGuard, the IRD, the SurfCom Management System, Surf Life Saving Australia, the National Coronial Information System (NCIS) and by monitoring media reports for drowning death incidents. This information is verified and compiled for analysis by SLSNSW's Lifesaving Department. The following variables are used to match drowning death cases from more than one data source: incident date; location; age; sex; and incident description. The NCIS is considered the 'gold standard' when there is a discrepancy in the detail collected from different data sources. Deaths are excluded if they are reported as 'intentional deaths', they are inland/ocean location drownings, or drowning/immersion is not a primary cause of death.

Drowning data limitations

As part of the NCIS process, some cases are amended prior to their closure, resulting in changes to the classification of cases in our datasets. Therefore, the number of coastal drowning deaths published in this report may be different from annual totals previously reported within other reports (e.g. SLSA). In an effort to produce a timely report on our current year's data we acknowledge that these figures will change. Each year, the changes that occur in the previous year's report will be made transparent.

Capability and rescue analysis

SurfGuard, the Incident Report Database and SurfCom Management System are web-based applications making up part of a suite of applications that enable members, clubs, branches and SLSNSW to enter and access Surf Life Saving data including operational (including rescues and first aids), capability (including assets and services) education and administrative information.

Suggested citation

Surf Life Saving New South Wales (2018) New South Wales Coastal Safety Report 2018. SLSNSW: Sydney.

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GLOSSARY

Advanced resuscitation techniques: A certification providing the skills and knowledge required to use specialised equipment in the provision of resuscitation in line with the Australian Resuscitation Council (ARC) guidelines.

ALS: Australian Lifeguard Service.

Provide first aid: A certification providing the skills and knowledge required to provide a first aid response to a casualty.

Aquatic environment: Areas such as coastal and inland beach and waterways, swimming pools and their facilities, and other bodies of water, slurry and other agricultural and industrial liquids storage.

Attempting a rescue: An effort to retrieve a person in distress and deliver them to a place of safety.

AWSC: Australian Water Safety Council—also Australian Water Safety Conference. **AWSS:** Australian Water Safety Strategy.

Bay: A body of water partially enclosed by land but with a wide mouth, affording access to the sea.

Beach: A beach is a wave-deposited accumulation of sediment – usually sand, but ranging in size up to boulders – deposited between the upper swash limit and wave base.

Black spots: An area with a concentration of coastal/ocean incidents and a high probability/risk of ongoing reoccurrence.

Boating: Individuals using either a powered vessel or sailing boat for pleasure and/or fishing.

Coastal: The foreshore, seabed, coastal water and air space above a large body of water (harbour/bay/inlet), including areas up to 3NM offshore and of which the landward boundary is the line of mean high water, except that where that line crosses a river/inlet, the landward boundary at that point shall be the point upstream that is calculated by multiplying the width of the river/inlet mouth by 5. (Adopted from the Resource Management Amendment Act 1993- New Zealand).

Coastal death: Where the location of the death is on the coast, in the ocean up to 3NM offshore or inland up to five times the width of the inlet/river. A fatality arising from various circumstances (e.g. boating, fall, shark attack, rock fishing, drowning, medical, diving).

Coastal drowning death: Where the location of the drowning is on the coast, in the ocean up to 3NM offshore or inland up to five times the width of the inlet/river.

COD: Cause of death.

Crude drowning rate: The crude drowning rate is a comparative rate of drowning deaths to the size of the population in that area.

Cultural And Linguistic Diversity (CALD): Refers to individuals that identify as having a specific cultural or linguistic affiliation by virtue of their place of birth, ancestry, ethnic origin, religion, preferred language, language(s) spoken at home, or because of their parents' identification on a similar basis. This definition of CALD does not include individuals who identify as Aboriginal and/or Torres Strait Islander.

Dangerous surf warning: An alert issued by the Bureau of Meteorology indicating that surf conditions in an area are unsafe for coastal activities. The warnings are calculated based on wave height, swell direction and swell period and must exceed the pre-determined limitations to be in effect.

Drowning: The process of experiencing respiratory impairment from submersion/immersion in liquid; outcomes are classified as death, morbidity and no morbidity. (WHO, 2005)

Drowning death: A fatality arising from the process of respiratory impairment as a result of submersion/immersion in liquid.

Duty Officer: A person that represents the organisation at a coordination centre or site control point (forward command). Maintains communications with and conveys directions/requests to surf lifesaving services, and provides advice on the status, capabilities, actions and requirements.

Emergency response: An action taken by an SLS entity in response to a call for assistance from an emergency management organisation.

Falls (trips/slips): An event, which results in a person coming to rest inadvertently on the ground or other lower level.

First aid: Immediate or emergency assistance given on the spot to people suffering from illness or injury.

Fishing: The act of attempting to catch fish.

Foreign ethnicity: Individuals who identify with a cultural group other than Australian based on heritage, language or shared customs. This identification is extrapolated from reported data such as the individuals' country of birth and the main language spoken at home.

Hazard: The source of potential harm.

HRS: Helicopter rescue service.

ILS: International Life Saving Federation.

Inland: An area that is beyond the line of mean high water or beyond a landward distance of 5 times the width of the coastal inlet/river mouth.

Inland drowning death: A fatality arising from the impairment of respiratory function as a result of immersion in liquid, where the location of the drowning death is not considered coastal but occurs in an inland body of water such as a river, lake, creek or dam.

International: An individual who is confirmed to reside overseas and/or is a temporary visitor to Australia.

IRB: Inflatable Rescue Boat.

IRD: Incident Reporting Database.

Jetty: A man-made structure that projects out into water from land.

JRB: Jet Rescue Boat.

Jump(ing): The activity of launching off a cliff, rock platform, pier, jetty. AKA tombstoning (UK/Europe/North America).

Lake: An inland body of water surrounded by land.

Leisure activity: An activity commenced on land such as play, walking, jogging or cycling.

Lifeguard: An individual that undertakes patrols at a beach or another aquatic environment. This is typically a salaried member, qualified in public safety and aquatic rescue.

Lifejacket: A buoyant or inflatable garment or device designed to keep a person afloat in water and increase their likelihood of survival.

Lifesaving service: A coordinated group that exists to provide aquatic safety services to the public. This includes Surf Life Saving Clubs, lifeguards, SurfCom, Rescue Water Craft, Rigid Hull Inflatable Boats, Jet Rescue Boats, Offshore Rescue Boats, Helicopters and 4WD units.

Local Government Area (LGA): Also known as local councils, LGAs include cities, towns, shires, municipalities or boroughs. Note some amalgamations occurred on 1 July 2016.

Marina: A boat basin offering dockage and other service for small craft.

NCIS: National Coronial Information System.

Non-fatal drowning (no morbidity): Drowning is the process of experiencing respiratory impairment from submersion/immersion in liquid; outcomes are classified as morbidity and no morbidity.

Ocean drowning death: Where the location of the drowning death is in the ocean further than 3NM offshore but no further than 12NM.

Offshore: Beyond the surf zone.

Open ocean: The seabed, water and air space above the water between 3NM and 12NM (the Australian territorial waters limit) offshore.

ORB: Offshore Rescue Boat.

Other: An uncommon known activity not otherwise listed (e.g. paragliding, aircraft crash, fall from pier).

Patrol: Service undertaken to monitor activities in/around an aquatic environment and respond accordingly through either preventative actions or rescue operations.

Patrolled location: A location supervised by a surf lifesaving service.

Preventative action: Direct action taken to reduce or eliminate the probability of a specific rescue, first aid or other reportable incident from happening in the future. Where intervention by a surf lifesaving resource averts a person/s from getting into a potentially life-threatening situation.

Rescue: Retrieving a person in distress, delivering them to a place of safety and the application of first aid and basic life support as may be required.

Resuscitation: Preservation or restoration of life by establishing and maintaining a person's airway, breathing and circulation.

Rip current: A seaward flowing current of water moving through a surf zone.

River: A natural stream of water flowing into an ocean or bay.

Rock/cliff: A rock platform that may or may not have a high steep face.

Rock/cliff related: An activity besides fishing that is performed on a rock platform or off a groyne.

Rock fishing: The act of attempting to catch fish from a coastal rock platform.

Rock-fishing death: A fatality arising from various circumstances occurring (e.g. wave motion, loss of footing) where the victim was participating in fishing activities on a rocky coast immediately prior to or during the incident.

RWC: Rescue Water Craft – sometimes called a Personal Water Craft.

Scuba diving: Engaging in recreational or commercial scuba diving.

SERS: Surf Emergency Response System.

Service season and hours: Vary between branches due to climatic factors but in the context of this report, the season is for the period July 2017 to June 2018.

Snorkelling: Swimming with a snorkel and face mask.

Suicide: The act of deliberately killing oneself.

Support operations: Rapid response rescue units, not affiliated to any specific Surf Life Saving Club.

Surf lifesaver: An individual that undertakes patrols at a beach or another aquatic environment. This is typically a non-salaried member, qualified in public safety and aquatic rescue.

SurfCom: SLS radio communications centre which assists in managing the communications of surf lifesaving operations and data collection.

SurfCom Management System: Surf Life Saving web-based system used to log operational information about Surf Life Saving assets and incidents.

SurfGuard: Surf Life Saving database for membership information and operational statistics.

Surf Life Saving Club: An SLS affiliated non for profit organisation which has volunteer members who provide coastal safety services to the community.

Swimming: To move through water by moving the body or parts of the body.

Sydney Metropolitan Area: Local Government Areas bordered by the Hawkesbury River to the north, the Royal National Park to the south and Lower Blue Mountains to the west.

Territorial Sea: The seaward limits of Australia's maritime zones, from the coastline to 12NM from the low tide line.

Total Service Plan: An assessment of current and future surf lifesaving resources, trends, national black spots and coastal safety issues combined with evidenced-based mitigation strategies to address these issues.

Undetermined: Cases that are not associated with a closed coroner's report on NCIS are often left 'undetermined' until an official cause of death has been determined. Some examples are cases where bodies have been found washed up on the beach, reports of individuals struggling in coastal environments are made and the bodies are not found/ missing persons reports are not made, or a suspected heart attack in a coastal environment rather than death due to immersion. These deaths will all be followed up on and the incident category updated once coroner determinations are made accessible.

Wading: To walk through water while partially immersed.

Watercraft: A piece of non-powered recreational equipment used in the water. Examples include surfboards, stand-up paddle boards, boogie boards, windsurfers or kayaks.

COASTAL DROWNING 2017/18 SNAPSHOT

39
COASTAL
DROWNING DEATHS



21
COASTAL
FATALITIES



82%
MALE



18%
ROCK FISHING



36%
SWIMMING / WADING



26%
20-29 YEAR OLDS



588
EMERGENCY
CALLOUT ACTIVATIONS



11,972
FIRST AIDS



4,377
RESCUES
COMPLETED



663,607
VOLUNTEER
HOURS

