



BIGGER BETTER SAFER REPORT 2017-18

WESTERN AUSTRALIA AQUATIC
INDUSTRY REPORT



ROYAL LIFE SAVING
WESTERN AUSTRALIA



LEISURE INSTITUTE OF WA AQUATIC (INC.)





BIGGER BETTER SAFER REPORT 2017-18

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Acknowledgements

We would like to thank the aquatic centres across the state who completed the industry profile survey this year, without their assistance we would not be able to compile the report.

A special thank you to the aquatic centres who supplied incident and patronage data for the 2017-18 season.

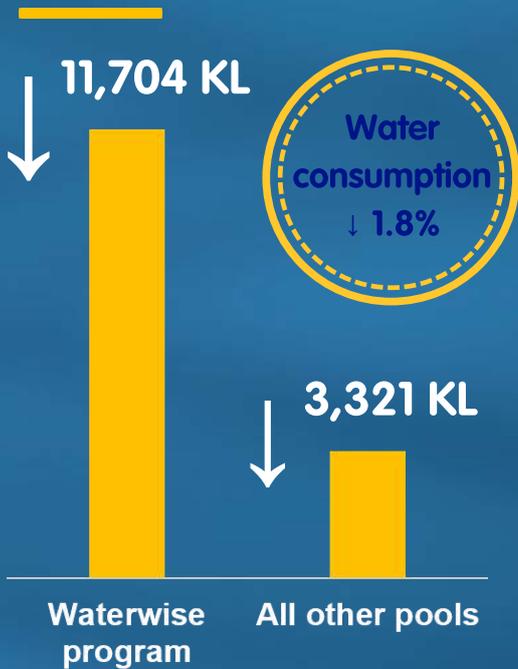
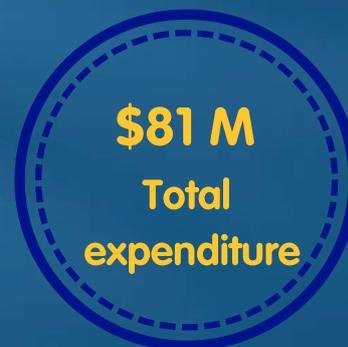
- | | |
|--|------------------------------------|
| Altone Park Leisure Centre | HBF Stadium |
| Balga Leisureplex | Hyden Aquatic Centre |
| Bayswater Waves | Leschenault Leisure Centre |
| Beatty Park | Mandurah Aquatic Centre |
| Bidyadanga Community Swimming Pool | Moora Aquatic Centre |
| Bilgoman Swimming Pool | Mount Barker Swimming Pool |
| Bold Park Aquatic Centre | Mullewa Swimming Pool |
| Cannington Leisureplex | Murray Leisure Centre |
| Carnarvon Aquatic Centre | Onslow Aquatic Centre |
| Cockburn ARC | Paraburdoo Swimming Pool |
| Coorow Aquatic Centre | Riverton Leisureplex |
| Craigie Leisure Centre | Roebourne Aquatic Centre |
| Dalwallinu Aquatic Centre | Scarborough Beach Pool |
| Donnybrook Recreation Centre | Terry Tyzack Aquatic Centre |
| Bay of Isles Leisure Centre | Wanneroo Aquamotion |
| Paltridge Memorial Swimming Pool | Wickham Aquatic Centre |
| Fitzroy Crossing Community Swimming Pool | Wyndham Aquatic Centre |
| Goldfields Oasis | Yandeyarra Community Swimming Pool |
| Gratwick Aquatic Centre | |
| HBF Arena | |

Project partners



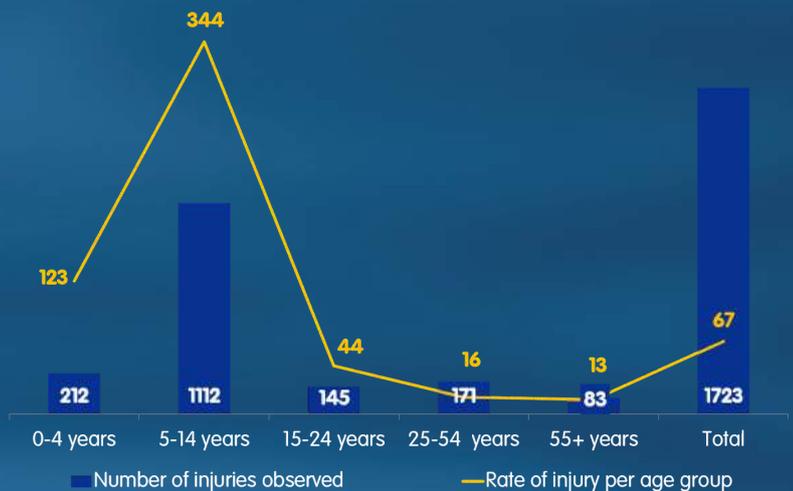
WESTERN AUSTRALIA AQUATIC INDUSTRY REPORT

Total patronage = 11.4 Million



- 614 Pool Operator Positions
- 1176 Pool Lifeguard Positions
- 2404 Swim Instructor Positions

Injury rate
34.5 per 100,000



INTRODUCTION

Public swimming pools are an important and highly valued resource that offer a range of physical and mental health and well-being benefits as well as employment opportunities to their local communities. These facilities are often hubs for community activity and provide opportunities for all sectors of the community to engage in a range of sport and recreation activities. Not only do these facilities assist in providing the community with a safe environment to develop swimming, water safety and lifesaving skills, but they also provide a range of health benefits from increased physical activity and improved social inclusion and cohesion through enhancing positive social interaction amongst an often diverse range of community members. All of these result in reduced health care costs.

There are currently 131 public facilities throughout Western Australia with the majority (90; 70.2%) located in regional Western Australia. There are 33 (25.2%) facilities located within the Perth metropolitan area and six (4.6%) in remote Aboriginal communities in the north-west of the state. These facilities provide the community with a safe place to recreate and participate in aquatic activities, generating over \$300 million per year in value to the community. Operation of these facilities requires substantial resources and specialised aquatic staff creating additional employment opportunities for the community.

The aim of this report is to provide an in-depth insight into the resources that make up the aquatics industry in WA and benchmark safety standards to ensure facilities are operating in line with best practice while continuing to work towards more sustainable practices in relation to water usage.



Industry profile

Given that nearly 40% of the Australian population are classified as “physically inactive” and a weekly visit to the pool is sufficient to move people out of this category, it’s positive to see that the number of visits to public swimming pools in WA has increased by 10.7% in 2017-18. Overall, there were 11.4 million visits recorded in 2017-18, which equals 4.3 visits per head of population. (Figure 1).

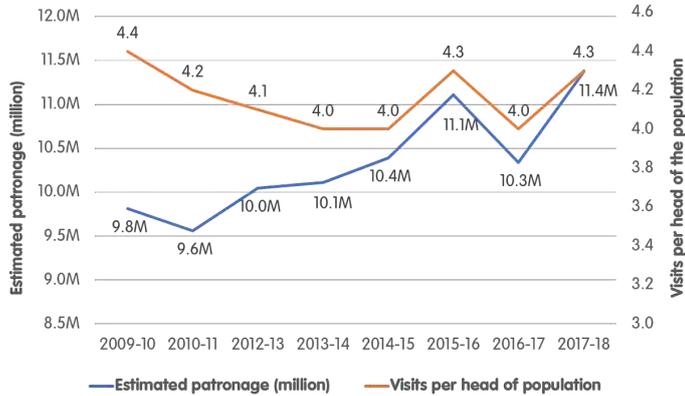


Figure 1: Estimated annual patronage for all public swimming pools in WA

The proportion of patronage across regional and metropolitan areas for 2017-18 were comparable to the 2016-17 results. Regional areas had a higher rate of patronage per head of population than the Perth metropolitan region (4.8 visits versus 4.1 visits, respectively). The highest rate was recorded in Pilbara region with 5.5 visits per patron and lowest in the Kimberley region with 3.7 visits per patron. The overall rates of patronage and patronage recorded at pools located in the Perth metropolitan area were higher than the five-year average (Figure 2).

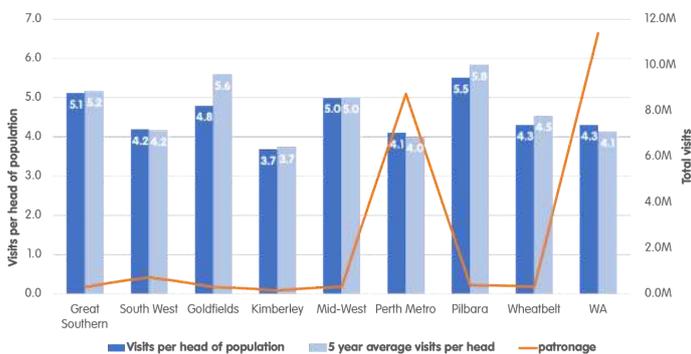


Figure 2: Patron visits by region for 2017-18 compared to the five-year average

Expenditure

Annual expenditure relating to the operation and maintenance of public swimming pools in 2017-18 was \$81,039,700 which was 1.7% higher than 2016-17 and is consistent with annual inflation figures. Despite this increase, expenditure per patron decreased by 7.4% in 2017-18 from the previous year (\$7.13 compared to \$7.70 per patron respectively). Long term trends indicate that there has been a gradual increase in overall expenditure (39.6%) and expenditure per patron (20.8%) since 2009-10 (Figure 3).

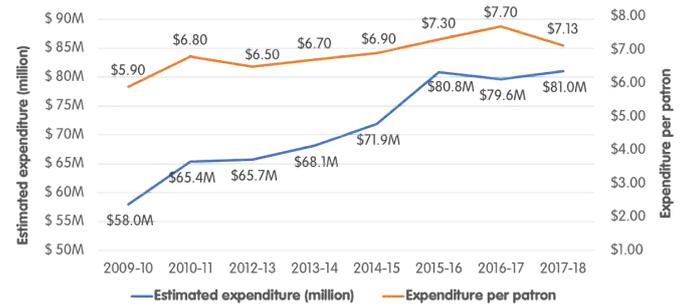


Figure 3: Estimated annual expenditure and per patron visit for all public swimming pools in WA

Recent research by the Royal Life Saving Society Australia reported that every visit to a public swimming pool created an economic benefit worth \$26.39 as a result of the health benefits. This is worth a dollar value equivalent to \$300,064,222 which is almost 3.7 times greater than the expenditure to run aquatic facilities across WA.

Certain areas of the state are more densely populated resulting lower expenditure per patron. The expenditure per patron ranges from \$5.10 to \$23.40, as shown in Figure 4.

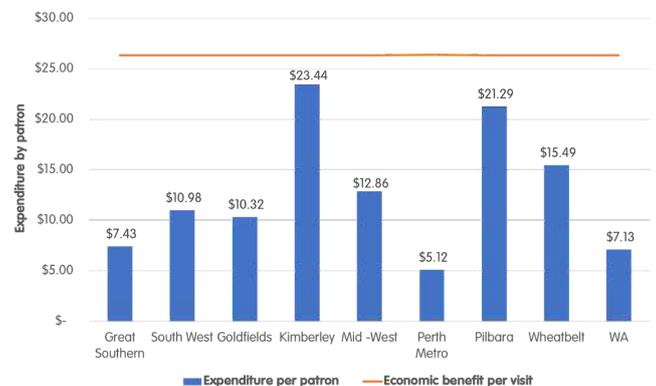


Figure 4: Average expenditure per patron visit by region

Generally pools located in regional areas of WA recorded the highest expenditure per patron compared to those in the Perth metropolitan area. This may be the result of a number of factors including (but not limited to) increased costs relating to transport of supplies, utilities and cost of living. The highest expenditure per patron was recorded in the Kimberley region and the lowest expenditure in the Perth metropolitan region, which is consistent with previous years. On average, the expenditure per patron in regional areas has fallen by 5.2% (\$0.80) in regional areas and by 13.0% (\$0.76) in the Perth metropolitan area. The expenditure per patron is still much less than the economic value of each visit at \$26.39.

Water Consumption

The Water Corporation provided data on total water consumption for over 100 public swimming pools across WA. It is important to consider that it is not possible to separate the water consumption for aquatic use only and therefore data may include groundwater (bore) usage and other centres on the same site. The total water consumption for all pools across WA in 2017-18 decreased by 1.8% from 2016-17 with a total of 1.17 billion litres of water consumed throughout the state, as shown in Figure 5. Overall, water consumption continued to trend downwards with an overall estimated decrease of 99 megalitres (ML) since 2007-2008.

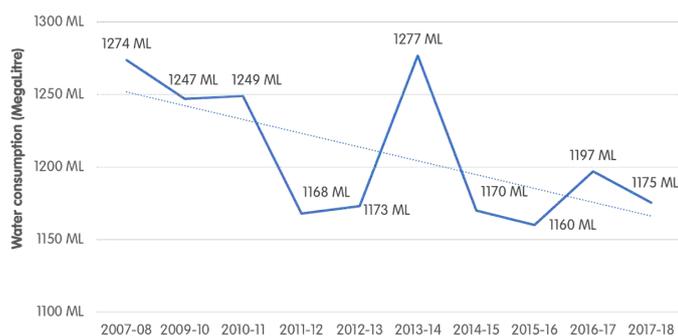


Figure 5: Annual water consumption 2007-08 to 2017-18 (ML)

Water use per patron was calculated by the number of litres used per patron visits and varied greatly by region, as presented in Figure 6. The Great Southern and Perth metropolitan area were the only regions to have water consumption under the WA average of 110 litres per patron visit. The Wheatbelt, Pilbara and Kimberley regions recorded the highest water usage per patron, which was 3-4 times the WA average.

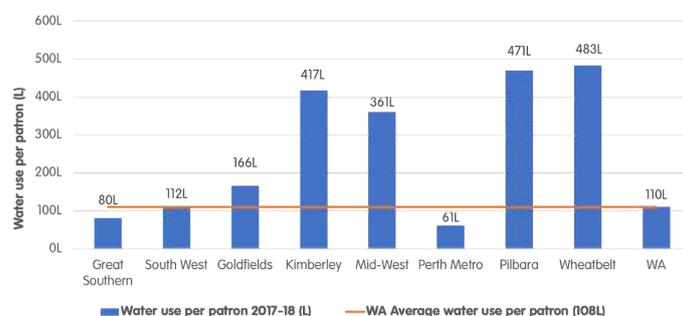


Figure 6: Estimated water consumption in litres per patron visit by region for 2017-18

Changes in water consumption from 2016-17 to 2017-18 varied greatly from -12% to 4% (Figure 7) with the Kimberley and Great Southern regions recording the greatest reductions (11.8% and 9.9% respectively). The Perth metropolitan area was the only region to record an increase in water consumption in 2017-18, however this was only marginal (3.5%).

The Water Corporation and LIWA, have developed the Waterwise Aquatic Centre Program, to recognise aquatic centres commitment to saving water. Pools that were part of the Waterwise program in 2017-18 saw a collective decrease in water consumption that was 3.5 greater than that of pools who were not part of the program (11,704 KL compared to 3,321 KL, respectively).

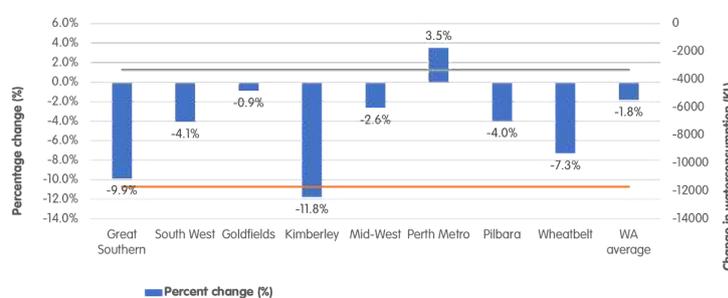


Figure 7: Differences in water consumption (%) by region from 2016-17 and 2017-18 including the change in water consumption between waterwise and non-waterwise pools

Labour Force

Public swimming pools provide a range of employment opportunities with pool operator, pool lifeguard, swimming instructor and aquatic support staff positions available throughout the state. In 2017-18, there were approximately 4,729 staff employed within the WA aquatics industry and this section provides an insight into the current labour force by region for 2017-18.

LIWA Accredited Pool Operators

An integral part of the success of the WA aquatics industry is having adequate numbers of LIWA accredited pool operators to operate and manage public swimming pool facilities in line with current guidelines and best practice. Figure 8 shows the number of LIWA accredited pool operators versus positions in 2017-18.



Figure 8: Number of LIWA accredited versus pool operator positions by region

As shown in Figure 9 there was very little staff turnover and therefore little movement of LIWA accredited pool operators recorded, with the majority already in the area (n=353; 75.8%) and very few LIWA accredited and new to the area (n=2; 2.5%) during 2017-18.

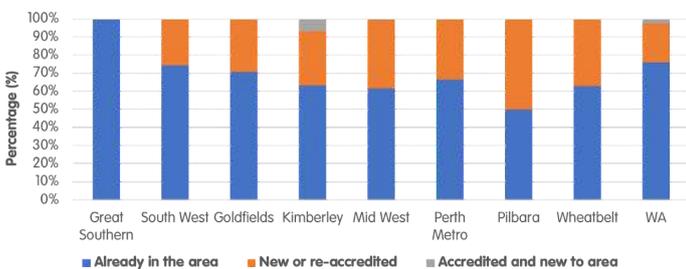


Figure 9: Changes in pool operator qualifications by region

In 2017-18, 5.2% (n=29) of LIWA accredited pool operators lapsed, 62.9% (n=353) maintained their accreditation, 0.4% (n=2) maintained and moved regions, and 17.6% (n=99) became re-accredited. In addition, there were 78 (13.9%) new pool operators accredited joining the industry in 2017-18. (Figure 10).

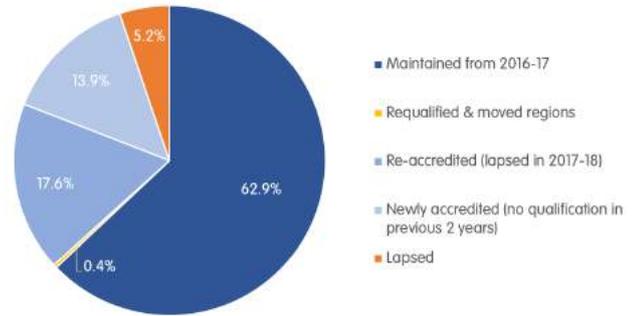


Figure 10: Workforce turnover and mobility - LIWA accredited pool operators, 2017-18

A number of LIWA accredited pool operators also held pool lifeguard qualifications as shown in Figure 11.

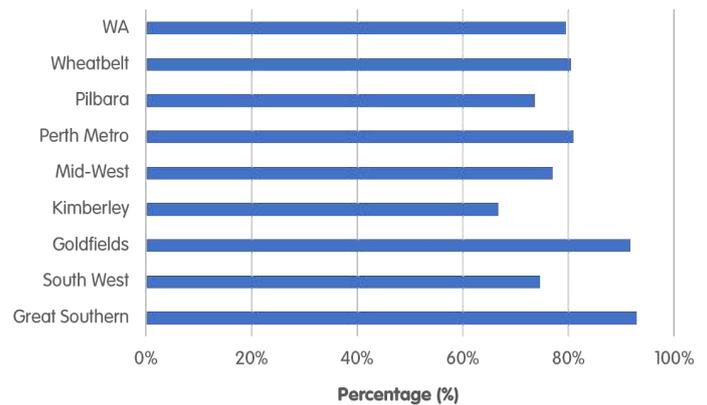


Figure 11: Number of LIWA accredited pool operators also holding pool lifeguard qualifications by region



Pool Lifeguards

In 2017-18, there were 1,176 pool lifeguard positions and 1,613 qualifications, shown in Figure 12.

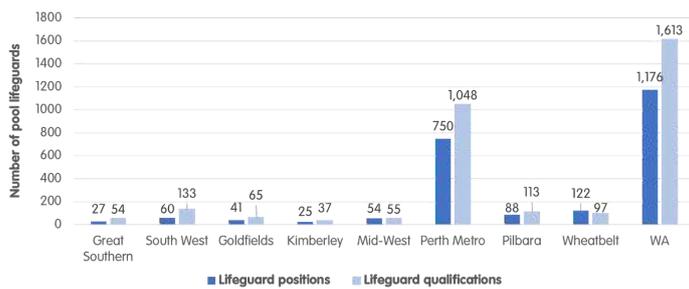


Figure 12: Number of pool lifeguard positions to number of people qualified by region

In terms of turnover and mobility of pool lifeguards, the Perth metropolitan and South West regions had the highest percentage of newly trained and/or requalified lifeguards, as shown in Figure 13.

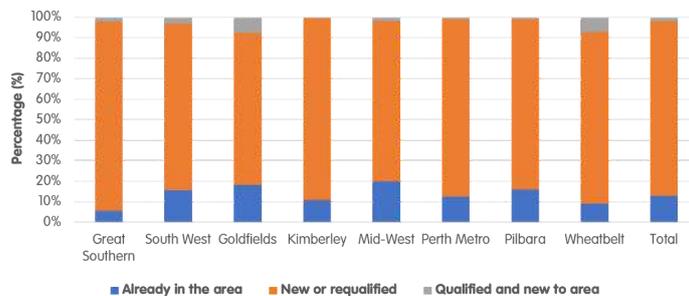


Figure 13: Changes in lifeguard qualifications by region

In comparison to pool operators, there was a much greater turnover of pool lifeguard staff with 22.4% (n=466) allowing their qualifications to lapse in 2017-18 and 300 new pool lifeguards (14.4%) gaining new qualifications and entering the aquatics industry. Overall 10.1% (n=210) maintained their qualifications and 1.3% (n=23) maintained their qualifications and moved regions (Figure 14).

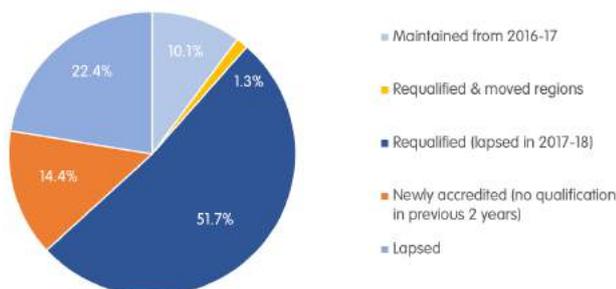


Figure 14: Workforce turnover and mobility - pool lifeguards, 2017-18

Swimming Instructors

In 2017-18, there were 2,404 swim instructor positions and 5,146 qualifications, shown in Figure 15.



Figure 15: Number of swim instructor positions to number of people qualified by region

Based on data provided by Austswim, trends in staff turnover and mobility were similar to pool lifeguards. There was high staff turnover with 2,225 (30.2%) allowing their qualifications to lapse in 2017-18 and 1,212 (16.4%) entering the industry after gaining new qualifications or completing re-qualification. The remaining 53.4% (n=3,934) maintained their qualifications (Figure 16).

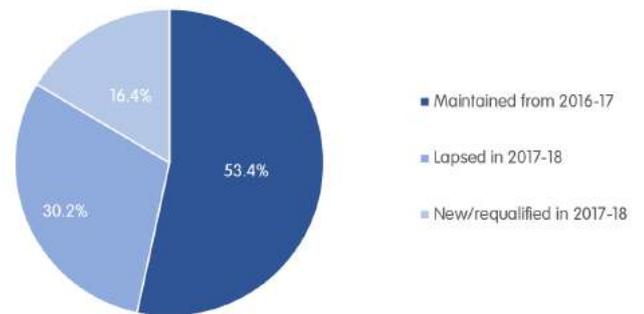


Figure 16: Workforce turnover and mobility - swimming instructors, 2017-18

Labour shortages and needs in the aquatic industry

In addition to the annual aquatics industry survey, this year, an additional survey was conducted specifically looking to gain a more in depth understanding of employment shortages within the aquatics industry. Questions were scored as outlined in the Methodology section. Responses indicated that the Great Southern, Pilbara and Kimberley regions had the greatest shortage of pool operators. Similarly, the Great Southern, Goldfields, Mid-West and Pilbara regions reported the greatest shortage of pool lifeguards and the Kimberley, Pilbara and Goldfields regions the greatest shortages in swim instructors (Table 1).

Table 1: Mean percentages from the labour shortages survey by region and qualification

	Pool operators *	Pool lifeguards *	Swimming instructors *
Great Southern	45.8%	32.4%	56.8%
Southwest	57.3%	68.1%	71.4%
Goldfields	55.6%	52.9%	43.9%
Kimberley	50.0%	64.7%	34.9%
Mid-West	52.1%	52.9%	48.9%
Perth metropolitan	72.9%	85.8%	75.2%
Pilbara	46.7%	54.1%	41.8%
Wheatbelt	57.1%	55.9%	50.5%

*100% = indicates that there are adequate numbers of trained professionals in the region

Other members of the aquatic workforce

In addition to LIWA accredited pool operators, pool lifeguards and swim instructors, a number of aquatic facilities also have alternative employees assisting with day to day duties including volunteers, trainees, work experience students, those completing community service and 'Work for the Dole' participants. Of the pools surveyed, 32 indicated that they hosted at least one or more of the above members of the workforce during 2017-18 which was equivalent to 155 additional aquatic staff. It is important to note that not all pools responded to this question and some pools did not provide exact numbers so total numbers are difficult to determine.

These additional workers were sourced through word of mouth, swim club participants, social media, local schools and TAFEs or through being approached directly by community members seeking experience.

Work experience students and volunteers made up the highest proportion of additional employees in 2017-18 (n=109; 70.0% and n=35; 22.5%, respectively). A comparison of the additional workers by type and average number of workers in 2017-18 and 2016-17 is shown in Figure 17. Volunteers and student work experience roles included supervision during events, administration/kiosk reception duties and assisting with community events. Traineeships included experience as pool operators and lifeguards. Community service workers assisted with mowing lawns, maintenance and cleaning. Unemployed or accessing financial assistance workers assisted with the creche.

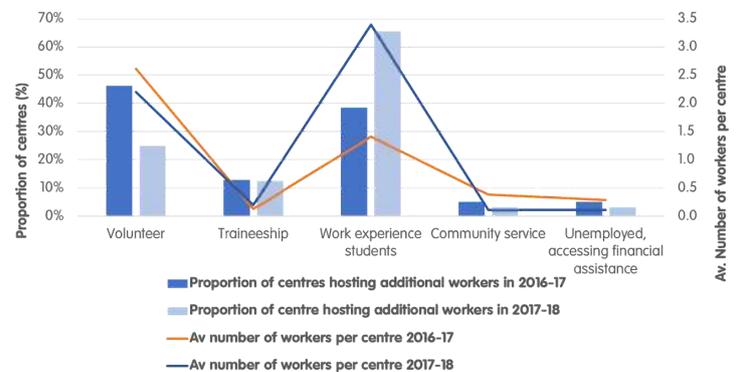


Figure 17: Comparison of aquatic centres with additional workers for 2017-16 and 2017-18 by type and average number of workers



Findings and Recommendations



PATRONAGE CONTINUES TO INCREASE

Public swimming pools a significant investment and while we continue to see increased patronage at these facilities throughout the state, it is important to continue promoting ongoing use of these facilities by members of the public. In addition, every visit creates an economic benefit worth an average of \$26.39 as a result of the health benefits, and one weekly visit is enough to move most people out of the “physically inactive” category.



WATER CONSUMPTION CONTINUES TO TREND DOWNWARDS

For environmental sustainability, continuing to be mindful of water consumption is a significant issue for our aquatic facilities, it's important to continue the downward trend in water consumption. Results indicate that the Waterwise program is successfully reducing water. Based o these results, is important for more pools to join the Waterwise program.



INDUSTRY SHORTAGES

A particular focus of this year's report was to investigate industry shortages. The results highlight the need to address shortages of swim instructors, particularly in regional areas to ensure the availability of swimming and water safety programs in all regions. Whilst there are currently sufficient numbers of pool operators and lifeguards to operate facilities, there is a need to continue to recruit newly trained professionals to the industry to meet the flexible nature of these positions and for ensuring a number of suitable and high quality candidates when positions arise.



INJURIES AT PUBLIC SWIMMING POOLS

The injury rate for 2017-18 was 34.5 per 100,000 patrons which, based on the patronage for this year equates to 2,071 injuries across all WA public aquatic centres. This was a 53.4% increase (n=928) from 2016-17 and a 43.9% total increase in the annual injury rate at WA public swimming pools over the past 12 years (Figure 18). It's important to consider that each year the sample of pools differs with some pools recording all injuries, whereas others only recording moderate and major injuries.



Figure 18: Annual Injury rates per 100,000 patrons: 2005-06 to 2017-18

The season, month, time of day and age groups where most injuries occurred continued to follow the same trends as previous years with the highest number of injuries occurring in summer (n=767; 37.2%), during January (n=336; 16.3%), in the afternoon between 12.00pm and 5.00pm (n=1,004; 53.5%) and most commonly involved patrons aged 5-14 years (n=1,112; 64.5%).

Injuries were more commonly reported at pools located in the Perth metropolitan area in 2017-18. Regional pools had an injury rate of 24.5 per 100,000 which was a 12% decrease from 2016-17, whereas metropolitan pools had an injury rate of 35.8 per 100,000 which was a 45.4% increase from 2016-17. Four regional and eight metropolitan pools had an injury rate for 2017-18 that was above the state average. When comparing the injury rates by the type of facility, facilities with both indoor and outdoor pools had a higher injury rate (39.7 per 100,000) compared to those with only indoor (25.7 per 100,000) and only outdoor (28.6 per 100,000) pools (Figure 19).



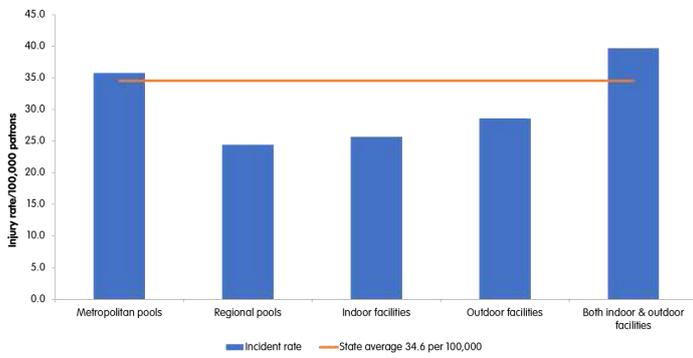


Figure 19: Injury rates for metropolitan and regional pools and by centre type compared to the state average

Results by severity category

Although the overall incident rate increased in 2017-18, the majority of injuries were classed as minor (n=1,896; 91.7%) with 1.2% (n=25) being major injuries. The percentage of major injuries has decreased compared to previous years as shown in Figure 20.

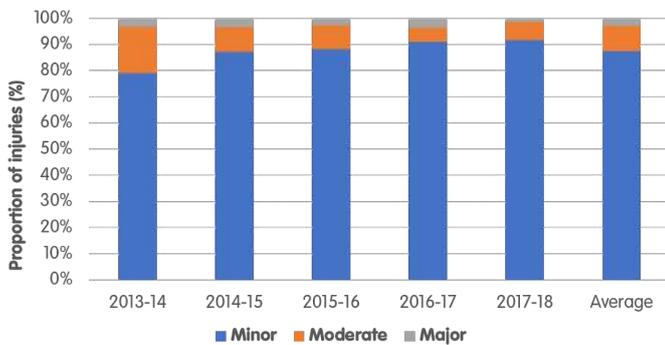


Figure 20: Injuries by severity category

This year most major injuries were a result of a suspected cardiac or cerebrovascular event (n=7; 28.0%) requiring a call to emergency services (n=20; 83.3%) or oxygen to be administered (n=11; 45.8%). Moderate and minor injuries were primarily due to low falls of less than one metre (n=41; 28.7% and n=623; 33.6%, respectively) resulting in superficial wounds (n=31; 21.2% and n=1047; 55.9%, respectively) which required basic first aid (n=88; 61.5% and n=1614; 91.0%, respectively). Across all severity levels most injuries occurred in while swimming in a 25m or 50m pool, as outlined in Table 2.

Results by age group

Data analysed by life-stages was categorised as follows: 0-4 years, 5-14 years, 15-24 years, 25-54 years and 55 years and older.

The younger age groups had the highest injury rate, with a rate of 344 per 100,000 for children aged 5-14 years and 123 per 100,000 for toddlers aged 0-4 years. An estimate of injury rates per age group (per 100,000 population) were based on the WA population, highlighted in Figure 21.

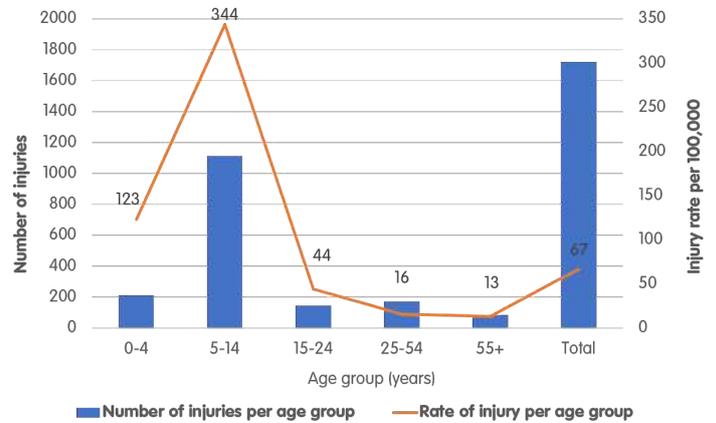


Figure 21: Number of observed incidents and rate of injury per age group

Similar to last year, most minor injuries occurred in the younger age groups, whereas moderate to major incidents were more likely to occur in the older age groups, as highlighted in Figure 22.

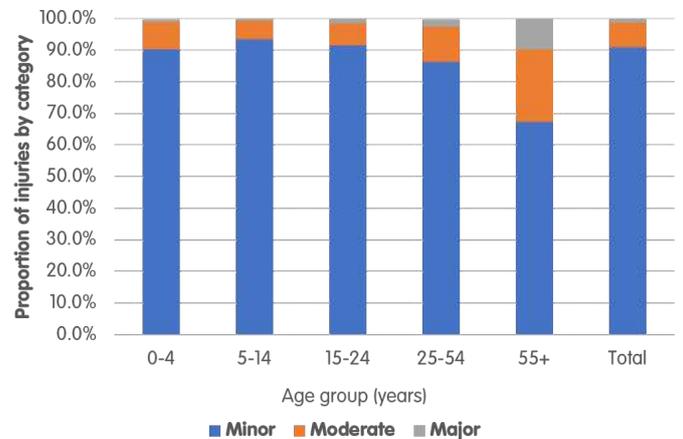


Figure 22: Injury severity by age group

With interpreting this data, it is important to consider that it's possible the older age groups may provide first aid to themselves for minor accidents and therefore may not be recorded. All results are presented in reference to the sample of pools and percentages relate to the number of cases a particular variable was observed in.

There were some similarities in the most common severity, type of injury and required first aid across the different age groups. Key differences between the age groups are outlined in Table 3.

Table 2: Injury and incident details by injury severity 2017-18

	Minor injuries	Moderate injuries	Major injuries
Type of incident	Low fall (33.6%)	Low fall (28.7%)	Suspected cardiac or cerebrovascular event (28.0%)
	Unintentional collision (23.5%)	Unintentional collision (23.1%)	Drowning or submersion (20.0%)
	Sharp object (14.7%)	Drowning or submersion (13.6%)	Asphyxia, headache or low fall (16.0%)
Type of injury	Superficial wound (55.9%)	Superficial wound (21.2%)	Suspected cardiac or cerebrovascular event (32.0%)
	Blow to head (no concussion) (13.2%)	Blow to head (no concussion) (18.5%)	Drowning or submersion (20.0%)
	Insect bite or effect of venom (7.1%)	Drowning or submersion (15.8%)	Asphyxia or fainting or dizzy (12.0%)
Contributing factors	No contributing factor (56.4%)	Slide (10.6%)	No contributing factor (90.5%)
	Wall or edge (9.1%)	Wall or edge (9.9%)	Stairs or steps (4.8%)
	Another patron (5.0%)	Another patron / steps or stairs (4.8%)	Another patron (4.8%)
Location of incident	25m or 50m Lap pool (30.6%)	25m or 50m Lap pool (29.0%)	25m or 50m Lap pool (20.0%)
	Leisure, lagoon or splash pool (24.4%)	Leisure, lagoon or splash pool (18.1%)	Leisure, lagoon or splash pool (15.0%)
	Slide (11.2%)	Slide (9.4%)	Changeroom or toilets (15.0%)
First aid treatments	Basic first aid (91.0%)	Basic first aid (61.5%)	Call emergency services (83.3%)
	Seek further medical attention (7.6%)	Seek further medical attention (32.2%)	Oxygen (45.8%)
	Oxygen (2.6%)	Seek immediate medical treatment (16.8%)	Basic first aid (25.0%)
Contributing factors	Swimming (31.3%)	Swimming (24.1%)	Swimming (31.8%)
	Trip or slip (24.7%)	Trip or slip (19.9%)	Trip or slip (18.2%)
	Running (7.1%)	Lack of supervision (7.8%)	Lack of supervision (13.6%)

*Percentages representative of percent cases

Table 3: Injury trends by age group 2017-18

	Toddlers 0-4 years	Children 5-14 years	Young Adults 15-24 years	Adults 25-54 years	Older Adults 55+ years
Proportion of injuries	12.3%	64.5%	8.4%	9.9%	4.8%
Type of incident	Low fall (60.1%)	Low fall (36.0%)	Low fall (18.1%)	Low fall (26.0%)	Low fall (23.8%)
	Unintentional collision (14.4%)	Unintentional collision (28.8%)	Sharp object (18.1%)	Unintentional collision (21.9%)	Headache or feeling faint (22.5%)
	Sharp object (11.5%)	Sharp object (12.3%)	Unintentional collision (14.6%)	Sharp object (13.0%)	Unintentional collision (11.3%)
Type of injury	Superficial wound (67.6%)	Superficial wound (57.5%)	Superficial wound (42.4%)	Superficial wound (40.2%)	Superficial wound (32.9%)
	Blow to head (no concussion) (21.0%)	Blow to head (no concussion) (15.3%)	Injury to muscle or dislocation (16.0%)	Injury to muscle or dislocation (14.8%)	Fainting or dizzy (22.0%)
	Open wound (7.6%)	Blood nose (7.7%)	Asphyxia (11.1%)	Fainting or dizzy (11.2%)	Injury to muscle or dislocation (14.6%)
Contributing factors	Trip or slip (36.6%)	Trip or slip (26.6%)	Swimming (31.8%)	Swimming (26.8%)	Swimming (32.4%)
	Running (17.5%)	Swimming (26.5%)	Trip or slip (13.2%)	Trip or slip (24.6%)	Trip or slip (18.9%)
	Swimming (10.8%)	Running (7.8%)	Design or construction (10.9%)	Design or construction (9.2%)	Walking (8.1%)
Location of incident	Leisure, lagoon or splash pool (45.4%)	25m or 50m pool (30.2%)	25m or 50m pool (32.3%)	25m or 50m pool (25.2%)	25m or 50m pool (29.6%)
	25m or 50m pool (17.0%)	Leisure, lagoon or splash pool (28.1%)	Slide (16.2%)	Pool concourse (14.8%)	Leisure, lagoon or splash pool (9.9%)
	Pool concourse (10.8%)	Slide (14.6%)	Leisure, lagoon or splash pool (11.5%)	Leisure, lagoon or splash pool (12.9%)	Changeroom or toilets (9.9%)
First aid treatments	Basic first aid (93.7%)	Basic first aid (91.9%)	Basic first aid (82.4%)	Basic first aid (70.6%)	Basic first aid (66.7%)
	Seek further medical attention (9.2%)	Seek further medical attention (9.8%)	Seek further medical attention (12.7%)	Oxygen (11.9%)	Oxygen (16.0%)
	Seek immediate medical treatment (4.3%)	Monitoring (2.8%)	Oxygen (10.6%)	Seek further medical attention (10.6%)	Call emergency services (13.6%)

*Percentages representative of percent cases

Results by region

Regional and metropolitan regions of WA had fairly similar proportions of injuries recorded across the age groups, except for the 15-24-year age group where injuries were higher in regional areas and the 55 years and older age group where incidents were lower in regional areas in comparison to metropolitan areas. There were no differences in the number and proportion of minor injuries recorded at regional and metropolitan pools however, there was a higher proportion of major injuries recorded in metropolitan areas compared to regional areas.

In metropolitan pools, low level falls (n=638; 34.5%) resulting in superficial wounds (n=991; 53.0%) requiring basic first aid (n=1559; 88.0%) were the most common occurrence. The most common incidents in regional pools were an unintentional collision (n=63; 35.6%) resulting in a superficial wound (n=90; 51.1%) requiring basic first aid (n=150; 88.2%). For both metropolitan and regional pools, most injuries occurred whilst patrons were swimming (n=520; 30.9% and n=48; 28.7%, respectively) and in a 25m or 50m pool (n=522; 30.4% and n=47; 30.9%, respectively).



Injuries among aquatic employees

With the WA aquatic workforce made up of over 4,700 staff, ensuring safety in the workplace, and the well-being of employees is of the highest importance for retaining staff, reducing sick leave and the ability to run swimming and water safety programs.

In 2017-18, there were 79 cases where an employee was injured, accounting for 3.8% of total incidents. Of these, 1.3% (n=1) were major and 90.7% (n=68) were minor. Specific injury details are outlined in Table 4.

Table 4: Aquatic Employee Injury Summary 2017-18

Most common factors	
Type of incident	Unintentional collision (21.6%)
	Sharp object (18.9%)
	Low fall (20.3%)
Type of injury	Superficial wound (44.0%)
	Fainting or dizzy (13.3%)
	Asphyxia (12.0%)
Contributing factors	Performing work duties (27.4%)
	Swimming (21.0%)
	Trip or slip (16.1%)
Location of incident	25m or 50m pool (23.9%)
	Pool concourse (14.1%)
	Storeroom or plant room (12.7%)
First aid treatments	Basic first aid (71.6%)
	Seek further medical attention (9.4%)
	Oxygen (16.4%)

*Percentages representative of percent cases

Similar trends in severity were seen among employees and patrons with the majority being minor (n=68; 90.7% and n=1,828; 91.8%, respectively). The proportion of employee injuries that were classified as major were also similar to that recorded amongst the general public (n= 1; 1.3% versus n= 24; 1.2%, respectively).

Findings and Recommendations



INCREASE IN INJURY RATE

This report highlights need for continual monitoring and improvements in safety to decrease the risks of injury among WA aquatic centres. It's important to be aware of those at most risk as well as the most common incidents and injuries so that prevention strategies can be put in place. There is also a need to remind patrons that while public swimming pools are a safe place to recreate, injuries do happen and they cannot become complacent when it comes to safety at these facilities.



PATRONS AGED 0-4 YEARS AND 5-14 YEARS HAVE THE HIGHEST INJURY RATE

For those 0-5 years, this report reinforced the need to continue to promote and education parents on the WAW message. For children aged 5-14 years it's also important to ensure all children have access to swimming programs to improve swimming and water safety skills, to continue to educate parents on supervision and ensure early intervention when risky behaviours are observed by aquatic staff to prevent injury.



PATRONS AGED 55+ YEARS HIGHEST RISK OF MAJOR / MODERATE INJURIES

Staff should be encouraged to ensure that they are familiar with regular patrons' medical conditions, illnesses and skill levels. It is also important that staff have up to date skills by attending regular training that includes practical components on CPR, first aid and emergency response to allow for quicker response times and better outcomes when these situations do arise.



INCONSISTENT REPORTING

To ensure the accuracy of the injury report, it is crucial that injuries are reported on consistently across all pools in WA. It's clear from the data provided that there is a need for industry to educate pool staff on reporting methods and for pools to encourage aquatic staff to complete forms in sufficient details (refer to page 26, Table 12), not only for the accuracy of the report but if there are implications requiring pools to revisit incidents or injuries that have occurred at their centre.



REPORTING ALL INJURIES & UNDER-REPORTING OF MAJOR INJURIES

For the accuracy of tracking injury rates and trends across WA aquatic facilities it's important for all injuries to be recorded including minor injuries and bee stings. Importantly, often major injuries are under reported, which is a missed opportunity to learn, improve protocols and identify training needs to be able to better equip staff to respond to these injuries.



SAFETY ASSESSMENTS AT PUBLIC SWIMMING POOLS

Currently, there are 131 public pools in WA. All pools have been assessed at least once with 65% (n=85) and 94% (n=123) of pools having had their most recent assessment within the last two and five years, respectively. The overall state average safety rating is currently 93.9% with 43.5% (n=57) pools scoring below the state average.

On average, the overall safety rating for the 43 pools assessed in 2017-18 was 95.3%, similar to 2016-17, shown in Figure 23. Of the 43 pools assessed in 2017-18, 44.1% (n=19) pools scored below this year's overall average safety rating with safety ratings ranging from 83.3% to 100%. Eight pools that were assessed in 2017-18 received an overall safety rating below their previous assessment score. The decrease ranged from 0.1% to 11.5%.

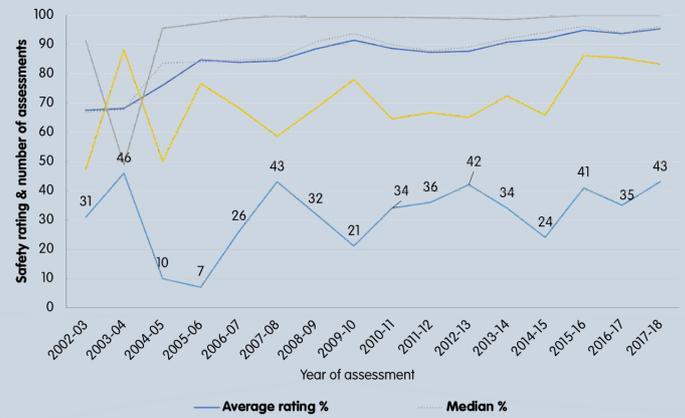


Figure 23: Average overall safety rating for public swimming pools assessed each year

The difference between average overall safety ratings for pools in the Perth metropolitan area and those in regional areas of WA has decreased from 2016-17, with the average recorded at metropolitan pools only 2.9% higher than regional pools (Figure 24). A greater proportion of pools in the Perth metropolitan area scored 90-100% (n=32; 91.4%) compared to those in regional WA (n=74; 77.1%). In addition, all pools based in the Perth metropolitan area scored over 80% and 5.7% (n=2) pools in regional WA scored less than 80%.



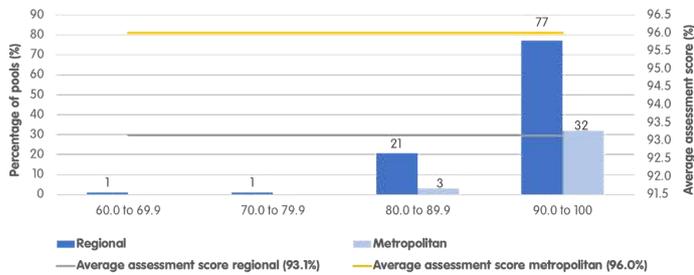


Figure 24: Most recent overall safety ratings by location for all pools

On average, all regions scored an overall safety rating above 90%. The South West region recorded the highest average safety rating of 96.7% followed by the Perth metropolitan region (96.3%). The Wheatbelt (91.3%) and Kimberley (91.4%) regions scored the lowest average. These results were very similar to 2016-17 and appeared to be correlated with patronage, with higher patronage pools achieving with higher safety scores. See Figure 25.

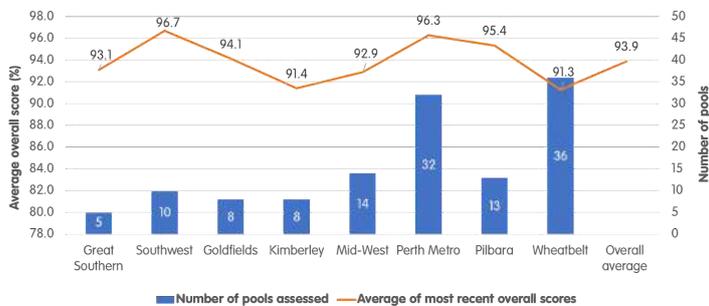


Figure 25: Overall assessment scores by region

Overall safety rating and frequency

Previous trends relating to the number of safety assessments and the overall safety ratings continued in 2017-18, with scores increasing as the number of pool assessments increase. By the 4th assessment, the average safety rating is above 90% and by the 8th and 9th assessments, ratings are within 1-2% of reaching 100% (Figure 26).

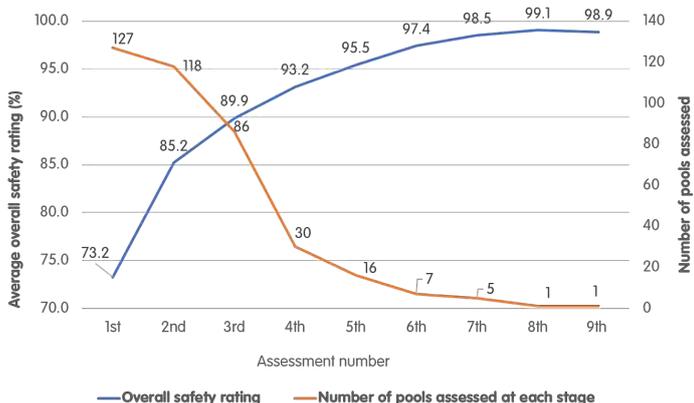


Figure 26: Average overall safety rating at each assessment

The most significant change in assessment scores is seen between the 1st and 2nd assessment with an average increase of 12.0%. The more assessments completed, the lower the percentage of change, which is demonstrated in Figure 27. 2017-18 trends show incremental increase in assessment scores until the 8th to 9th assessment when scores decrease slightly in the 9th to 10th assessment.

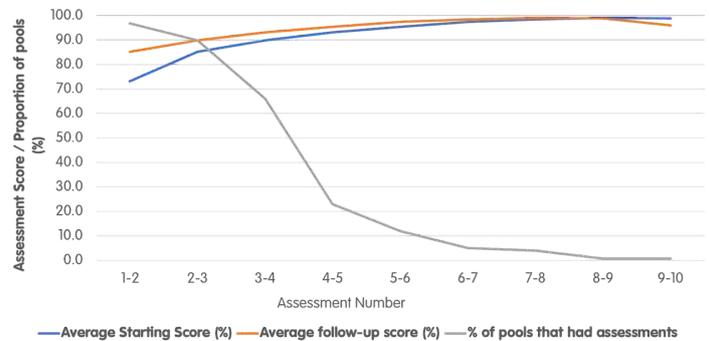


Figure 27: Change in overall safety rating by number of assessments conducted (%)

Overall, pools in the Perth metropolitan area have had a higher number of safety assessments than those in regional WA. At first assessment, pools in the Perth metropolitan area record a higher safety rating than pools in regional WA (83.8% compared to 69.4%), however, scores are similar at the sixth assessment with average scores of 97.6% in the Perth metropolitan area compared to 97.3% in regional WA. See Figure 28.

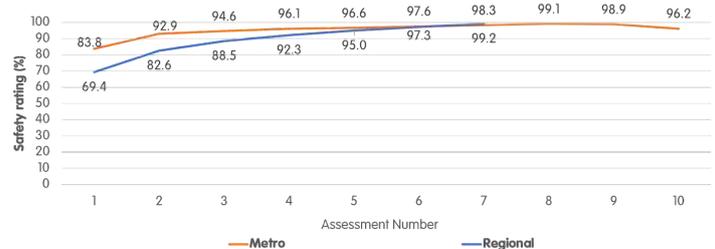


Figure 28: Overall safety rating by assessment number and region

Time between follow-up assessments and overall ratings

Over half of all public pools in WA (n=77; 58.8%) have had their most recent assessment in the past year. Average safety scores tend to decrease as the length of time between assessments increase until 3-4 years. While average scores appear to increase from 3-4 years to 6-7 years, this is likely due to the small number of pools in these categories (Figure 29).

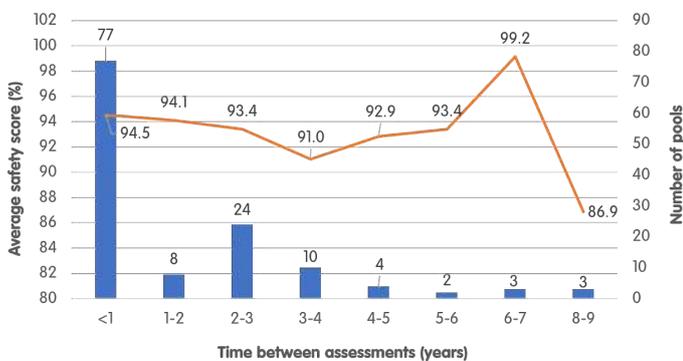


Figure 29: Overall safety rating score by years between follow-up

*The category 7-8 years between follow-up has been excluded as no pools were in this category.

Of the mandatory components assessed, staff qualifications (98.7%), water quality (98.5%) and circulation and treatment (98.3%) recorded the highest average scores in 2017-18. Consistent with previous years, chemical safety (85.9%) and special features (91.3%) continued to be the lowest scoring component for safety. However, safety scores for water slides increased in 2017-18 by 6% from 2016-17 (Figure 30).

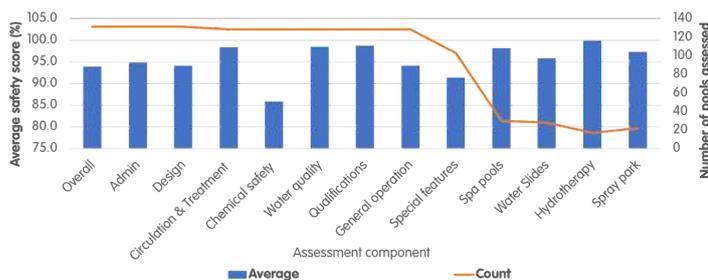


Figure 30: Average rating for each component based on most recent assessment

Safety ratings by individual components of the safety assessment

As well as tracking overall safety ratings and trends over time, it is also important to investigate the individual component criteria scores to provide more detailed information that can inform continual improvement plans and pools can continue to operate at the highest of safety standards. The following section includes data relating to the 43 pools that were assessed in 2017-18. Future reports will continue to track this data to identify trends and specific areas for improvement. The assessment is made up of 12 components which comprise of a series of criteria that is scored either a pass (score of 1) or fail (score of 0).

The assessor can also make an observation which means the pool did not fail the component however, could make improvements to improve safety. Some of the criteria is not applicable for some pools so these pools have been excluded from the analysis for any components or criteria that was not applicable their centre.

1. General Administration (11 points)

The general administration component of the assessment has 11 individual criteria. Overall, pools scored 100% for five criteria (45.5%). The average score in general administration in 2017-18 was higher for pools in the Perth metropolitan area (98.2%) than those in regional WA (96.1%). Generally, pools assessed in 2017-18 were found to be deficient in having a Department of Health 'permit to operate' as a Group one facility. In addition, pools in regional WA were identified to have deficiencies in having an adequate documented site plan, start of season opening protocol or end of season closing protocol (Table 5).

Table 5. Average pass rate for criterion that did not have a 100% pass rate for general administration

	Regional	Metropolitan
Does the centre have a Dept of Health 'permit to operate' as a Group 1 facility?	96.4%	85.7%
Does the centre have a documented site plan?	77.2%	**
Does the centre have a daily opening/closing procedure & checklist?	96.2%	**
Does the centre have a start of season opening protocol?	89.5%	Not Applicable
Does the centre have an end of season closing protocol?	89.5%	Not Applicable
Overall percentage score	96.1%	98.2%

All other criteria not included in table had a 100% pass rate or scored observation (not included)

**Score of 100.0%

2. Design & Construction (46 points)

The design and construction component of the assessment has 46 individual criteria. Overall, pools scored 100% for 16 criteria (34.8%). The average overall score for design and construction was only slightly higher for pools in the Perth metropolitan area (95.3%) than those in regional WA (94.7%).

Pools in the Perth metropolitan area scored 100% for 80.4% (n=37) of criteria compared to 71.7% (n=33) for pools in regional WA. The item with the lowest pass rate within this component of the assessment was "Is there sufficient signage identifying deep water (>1.8m), shallow water particularly at pool entry points?" and "Are emergency exit signs clear in any lighting conditions?". In addition, a number of pools in regional WA didn't have a designated first aid room or area of appropriate size and configuration. Common issues identified for pools in the Perth metropolitan area included depth markers not being clearly visible from within the pool and that pool entry signage that either didn't meet requirements of the Code of Practice Appendix 2 and/or didn't specify the conditions of use of the facility (Table 6). It's important to make improvements in this area particularly as in 5.4% (n=112) of incidence that occurred during 2017-18, design and construction played a role.

3. Circulation & Water Treatment (26 points)

The circulation and water treatment component of the assessment has 26 individual criteria. All pools based in the Perth metropolitan area assessed in 2017-18 scored 100% for the circulation and water treatment component. Overall, pools in regional WA scored 100% for 21 criteria (80.8%) and had an average score of 96.6% for this component. The criteria that recorded the lowest scores were "Is pipe work clearly identified to indicate flow direction and contents of pipe?" and "Is the facility installed with an operational automatic dosing system?" (Table 7).

4. Chemical Safety (20 points)

The chemical safety component of the assessment has 20 individual criteria. Overall, pools scored 100% for seven criteria (35.0%). The chemical safety component had the lowest average score for both pools in the Perth metropolitan area (89.8%) and those in regional WA (87.3%). The most commonly failed criteria for pools in regional WA were in relation to having a risk assessment conducted on the storage and handling of the chlorine gas cylinders and ensuring that all pipes, valves and pumps, controlling water and chemical feeds were clearly labelled to promote correct operation. For pools in the Perth metropolitan area, the most commonly failed criteria related to signage in the plant room and chemical handling areas promoting the use of personal protective equipment (PPE) and ensuring that the plant room has storage and delivery procedures

for hazardous substances stored on site (Table 8).

5. Water Quality & Testing (10 points)

The water quality and testing component of the assessment has 10 individual criteria. All pools assessed in 2017-18 in the Perth metropolitan area achieved scores of 100% for this component. Average scores were also high for pools in regional WA (98.1%) with the only criteria not scoring 100% being related to the water balance not being regularly monitored and not having a dosing procedure for winterising the water body.

6. Qualification for Operators, Supervisors & Emergency Care Personnel (3 points)

The qualifications for operators, supervisors and emergency care personnel component of the assessment has three individual criteria. All pools both in Perth metropolitan area and regional achieved a score of 100% for all criteria in this component.

7. General Sanitation & Operation (25 points)

The general sanitation and operation component of the assessment has 25 individual criteria. Overall, pools scored 100% for 17 criteria (68.0%). The average general sanitation and operation scores were high for both pools in the Perth metropolitan area (97.7%) and those in regional WA (95.3%). Components that had a lower pass rate are shown in Table 9. These included "Do lifeguards use 'Watch – Around-Water' resources and strategies to encourage parental supervision?", "Is the Operations Manual regularly reviewed?" and "Have all parts of the EAP been practised in the last 12 months?".

8. Special Feature Pool (43 points)

The special features component of the assessment has 43 individual criteria. Overall, pools scored 100% for 37 criteria (86.0%). Thirty-five pools (81.4%) assessed in 2017-18 contained special features and pools in regional WA recorded higher average scores for this component (92.1%) than those in the Perth metropolitan area (88.9%). Areas where pools did not pass are outlined in Table 10. The most commonly failed criteria for pools in regional WA were in relation to access to diving boards and platforms when not in use. For pools in the Perth metropolitan area, the most commonly failed criteria related to the use of inflatable devices, in particular having completed a risk assessment of the device and its intended use and having operational procedures for evacuation due to deflation, patron limits, environmental conditions, dress code and activity controls.

9. Spa Pool (16 points)

The spa pool component of the assessment has 16 individual criteria. Only 16.3% (n=7) of pools assessed in 2017-18 contained a spa pool in their centre. All pools in the metropolitan area passed this component, with pools in regional WA recording an average score of 97.5%. This was due to some pools failing to have a minimum of two depth markings at least 450mm from the edge and no more than 7.5m apart.

10. Water Slide (14 points)

The water slide component of the assessment has 14 individual criteria. Overall, 16.3% (n=7) of pools assessed in 2017-18 had water slides and all recorded 100% for this component.

11. Hydrotherapy Pool (4 points)

The hydrotherapy pool component of the assessment has 4 individual criteria. Only 9.3% (n=4) of pools assessed in 2017-18 had a hydrotherapy pool and all of these four pools passed the safety criteria for this component with 100% for both pools in the Perth metropolitan area and those in regional WA.

12. Water Spray Grounds (19 points)

The water spray grounds component of the assessment has 19 individual criteria. Only 11.6% (n=5) of pools assessed in 2017-18 contained water spray grounds. All pools in regional WA scored 100% and pools in the Perth metropolitan area recorded an average score of 96.7%. All pools in the Perth metropolitan area did not pass the criteria relating to "Has the manufacturer provided Certification and a User Manual regarding the design, operation, maintenance, supervision and use of the playground equipment. Particularly in respect to staff training/induction and occupational health and safety?"

Table 6. Average pass rate for criterion that did not have a 100% pass rate for design and construction

	Regional	Metropolitan
Are gutters whether wet decks or integrated with the pool wall sufficiently protected to prevent injury through obstruction, entrapment or tripping?	92.9%	**
Are there sufficient depth markers (max & min depth + 7.5m apart)?	89.3%	**
Are depth markers clearly visible from the concourse and a minimum of 90mm high?	85.2%	**
Are depth markers clearly visible from within the pool (where sides are >125mm)?	72.0%	71.0%
Is there sufficient signage identifying deep water (>1.8m), shallow water particularly at pool entry points?	42.3%	57.1%
In water under 1.8m in depth is "Do Not Dive" signage visible when entering the water body?	82.6%	83.3%
Does the facility have an entry sign in accordance with Code of Practice Appendix 2?	**	75.0%
Is signage present at the entrance to the facility that specifies the conditions of use of the facility?	**	71.4%
Is signage present that encourages responsible behaviour?	96.6%	85.7%
Is signage present that encourages parental supervision in appropriate areas?	80.8%	83.3%
Are aquatic facilities without lighting provided with signage at all access points stating, 'No use of facility allowed after dark'?	93.3%	**
When installed over water less than 2.0m in depth, are starting blocks, isolated when not in use for competition/coaching?	92.8%	**
Are emergency exit signs clear in any lighting conditions?	59.3%	60.0%
Are the rooms or compounds in which the pools are located secured outside opening hours to deter unauthorised entry of persons?	**	85.7%
Is there a designated First Aid room or area of appropriate size and configuration?	79.3%	**
Is the First Aid room or area easily identified with standard signage?	93.1%	**
Overall percentage score	94.7%	95.3%

All other criteria not included in table had a 100% pass rate or scored observation (not included)

***Score of 100.0%*

Table 7. Average pass rate for criterion that did not have a 100% pass rate for circulation and water treatment

	Regional	Metropolitan
Is the filtration system fitted for disinfection satisfactory to the Health Regulations?	96.4%	**
Is the plant and water treatment system operational whenever the facility is open to the public?	96.3%	**
Is pipe work clearly identified to indicate flow direction and contents of pipe?	73.1%	**
Is the facility installed with an operational automatic dosing system?	86.2%	**
Are the staff who are involved in entering the balance tank trained in correct procedures appropriate for confined spaces?	93.3%	**
Overall percentage score	96.6%	100%

All other criteria not included in table had a 100% pass rate or scored observation (not included)
***Score of 100.0%*

Table 8. Average pass rate for criterion that did not have a 100% pass rate for chemical safety

	Regional	Metropolitan
Has a manifest listing all the types and maximum quantities of each chemical stored, been developed and stored in a suitable remote location?	92.0%	85.7%
Are hazardous substances stored in accordance with SDS?	96.6%	**
Has a risk assessment been conducted on the storage and handling of the chlorine gas cylinders?	33.3%	83.3%
Is the gas leak detection system with audible and visual alarms regularly tested?	90.9%	**
Based on the Storage Factor and quantities of Dangerous Goods Stored on the premises has bunding been installed and is it sufficient to retain a spill or leak?	92.0%	85.7%
Is a dump shower and eyewash provided immediately outside the chemical handling and storage area (and tested regularly)?	92.9%	**
Are all pipes, valves and pumps, controlling water and chemical feeds, clearly labelled to promote correct operation?	65.5%	**
Is signage, complying with Australian Standard AS1319, in plant rooms and chemical handling areas promoting the use of PPE displayed?	79.3%	71.4%
Is signage, complying with Australian Standard AS1319, indicating restricted access (e.g. "Staff Only") and prohibiting smoking displayed at entrances to, and inside, the plant room and chemical storage areas?	**	85.7%
Are all chemical storage areas clearly labelled?	89.6%	85.7%
Are general "HazChem" signs posted at entries to the facility?	79.3%	85.7%
Has a risk assessment been conducted on the storage and handling of the chlorine gas cylinders?	74.1%	**
Does the plant room have storage and delivery procedures for hazardous substances stored on site?	92.9%	71.4%
Overall percentage score	87.3%	89.8%

All other criteria not included in table had a 100% pass rate or scored observation (not included)
***Score of 100.0%*



Table 9. Average pass rate for criterion that did not have a 100% pass rate for general sanitation and operation

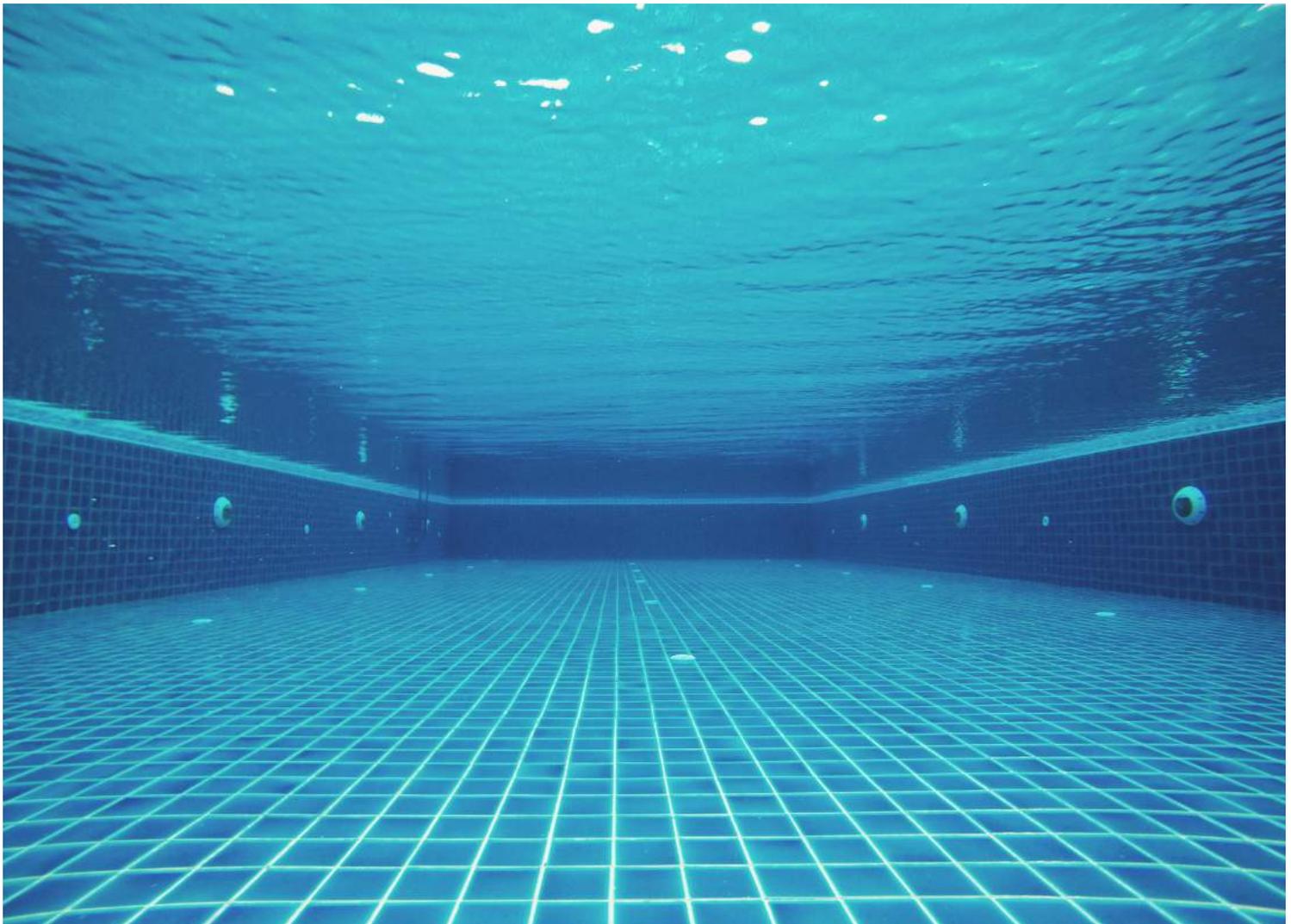
	Regional	Metropolitan
Do lifeguards use 'Watch – Around-Water resources and strategies to encourage parental supervision?	96.4%	66.7%
Has a scanning strategy been developed?	90.9%	**
Is the Operations Manual facility-specific?	87.0%	**
Is the Operations Manual regularly reviewed?	66.7%	**
Has an Emergency Action Plan (EAP) that includes sections for different scenarios and locations been developed?	92.0%	85.7%
Have all parts of the EAP been practised in the last 12 months?	64.0%	**
Are instructors (and program leaders) trained in the Emergency Action Plan (EAP)?	93.8%	**
Is a suitable hire agreement in place for external program organisers?	95.4%	**
Overall percentage score	95.3%	97.7%

All other criteria not included in table had a 100% pass rate or scored observation (not included)
***Score of 100.0%*

Table 10. Average pass rate for criterion that did not have a 100% pass rate for special features

	Regional	Metropolitan
Can access to the diving boards or platforms be prevented when they are not in use?	50.0%	**
Has the manufacturer provided a User Manual and Certification regarding the design and use of the inflatable device? Particularly in respect to staff training/induction and occupational health and safety?	92.6%	80.0%
Has the Centre completed a risk assessment of the inflatable device and its intended use?	76.9%	40.0%
Is a documented inspection process in place for the inflatable equipment?	80.0%	60.0%
Has the centre developed operational procedures for: an evacuation due to deflation, patron limits (including swim ability), environmental conditions, dress code and activity controls?	73.9%	40.0%
Are the inflatable device 'rules of play' displayed at or near to the point of entry?	91.7%	**
Overall percentage score	92.1%	88.9%

All other criteria not included in table had a 100% pass rate or scored observation (not included)
***Score of 100.0%*



Findings and Recommendations



THE NEXT STEP IN ACHIEVING GREATER LEVELS OF SAFETY ACROSS WA PUBLIC SWIMMING POOLS

It is important to work with regions recording average scores lower than the state average to improve safety including the Kimberley, Wheatbelt, Mid-West and Great Southern regions.



INDUSTRY TRAINING AND DEVELOPMENT SHOULD FOCUS ON CHEMICAL SAFETY

Regular chemical safety risk assessments should be undertaken by all public swimming pools to encourage safe practices. In addition, all pools should have up to date storage and delivery procedures for hazardous substances stored on site and ensure that safety signage is clearly placed in all plant room and chemical handling areas in line with current Australian Standards.



IMPROVEMENTS REQUIRED IN GENERAL OPERATIONS AND DESIGN AND CONSTRUCTION

All pools should undertake annual reviews of their operations plans and practical training relating to the Emergency Action Plan. All pools should also actively promote the Watch Around Water program to encourage parental supervision of young children. In addition, pools should ensure that there is sufficient signage identifying deep water (>1.8m), shallow water (particularly at pool entry points) and have emergency exit signs that are clear in any lighting conditions to improve design and construction.



FOCUS ON ENGAGING POOLS WHO HAVEN'T HAD A RECENT ASSESSMENT IN THE PAST 3 YEARS

A total of 12 pools have not had a safety assessment in the past three years, it's important to engage these pools to ensure the highest safety standards are achieved.



BUILDING ON CURRENT SAFETY ASSESSMENTS

Ensuring the assessment criteria is constantly revised and renewed is important for ensuring that it is adding value to pools by incorporating additional assessments such as delivery of WAW, inflatable device risk assessments and in-depth review of operations manual to further improve low scoring components.



METHODOLOGY

Industry profile

Data was collected from public swimming pool facilities in WA which included patronage, expenditure, and staffing. Swim Instructor labour force data was sourced from Austswim and water consumption data from the Water Corporation. This year, 51% (n=66) of public swimming pools in WA completed the industry survey. For the three pools yet to complete the industry survey, along with centres who did not complete the most recent survey in 2017-18 or where water consumption data was not available, data estimates were made based the most recent data provided, or if no data was available, on similar sized centres.

Labour shortages and needs in the aquatic industry

In addition to the end of financial year industry survey, this year an additional survey was conducted specifically looking to gain a more in depth understanding of aquatic industry staff shortages. A sample of 81 pools completed the survey which captured pools in from all regions within WA. For confidentiality reasons, responses from areas that only had one facility are not presented. Pools were asked to what extent they agreed or disagreed with a series of statements relating to the various labour force roles within the facility including pool operators, pool lifeguards and swim instructors. Each response was given a score and the scores were added up for each statement to give a total score. Scores were presented as a percentage of the total score possible (100%) with a score of 100% indicating that there were no staff shortages. Table 11 shows the scoring system that was used to determine the results.



Table 11: Scoring system used to determine labour shortages

Pool Operators	Response scores				
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
If your pool needed to recruit another pool operator for your centre, it would be easy to find another pool operator?	1	2	3	4	5
If a pool operator were to go on a period of leave, it would be easy to find another pool operator to cover the leave period?	1	2	3	4	5
Do you feel there are adequate numbers of trained pool operators in your region?	Yes = 2			No = 1	
Total possible score (the higher the score the less likely there are shortages)					12
Pool Lifeguards	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
If your pool needed to recruit another lifeguard for your centre, it would be easy to find another lifeguard?	1	2	3	4	5
If a lifeguard were to go on a period of leave, it would be easy to find another lifeguard to cover the leave period?	1	2	3	4	5
It is easy to find suitable lifeguards to cover all shifts required at my pool?	1	2	3	4	5
Do you feel there are adequate numbers of trained lifeguards in your region?	Yes = 2			No = 1	
Total possible score (the higher the score the less likely there are shortages)					17
Swim Instructors	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
If your pool needed to recruit another swimming instructor for your centre, it would be easy to find another swimming instructor?	1	2	3	4	5
If a swimming instructor were to go on a period of leave, it would be easy to find another swimming instructor to cover the leave period?	1	2	3	4	5
It is easy to find suitable swimming instructors to run all of the swimming and water safety programs we would like to offer at our pool?	1	2	3	4	5
I have sufficient swim instructors to run swimming and water safety programs at my pool?	1	2	3	4	5
Do you feel there are adequate numbers of trained swimming instructors in your region?	Yes = 2			No = 1	
Total possible score (the higher the score the less likely there are shortages)					22

Labour shortages and needs in the aquatic industry

There are some important limitations that need to be considered when interpreting data relating to LIWA accredited pool operators, lifeguards and swim instructors. There are cases where individuals gain qualifications and do not take up work in the industry they qualified for. This will indicate an oversupply of qualified individuals where there may be shortages. Likewise, individuals who gain a qualification and only work for short period of time in the area they qualified for will only be captured as lapsed once the qualification expires. Records may show an individual's permanent home address for a particular region however, due to a short-term placement or stay, the individual may be working in another location which is not captured in the data (e.g. someone maybe have listed their home address as a regional location but are actually working Perth for short-term whilst they study etc.). This means that it is difficult to determine exact shortage by regions. In order to get a more accurate picture of the aquatics industry, this year an additional survey was conducted to gain a more in depth understanding of the industry shortages. Each pool was asked a series of questions to

help determine whether there are shortages in the industry.

Injuries at Public Swimming Pools

To investigate the injury rate in WA, common causes of injury and identify at risk age-groups, each year data is collected from a sample of WA public swimming pools to collate and assess injury and incident reports. Data from pool was obtained using the following methods;

- 1) summary spread sheets of the data provided by pools,
- 2) copies of their own incident report forms supplied, or
- 3) a RLSSWA staff member attended the centre to collect enter the data.

To maintain confidentiality, no identifying information was collected, data was stored in a secure manner and was disposed of/destroyed upon data entry.

In 2017-18, 38 public swimming pools in WA, including both seasonal and all year round, provided incident and injury data including 21 regional and 17 metropolitan pools. This represented 56.2% of the total annual patronage.

Injuries were classified as major, moderate or minor, similar to previous reports and injuries were only included if they were in the aquatic environment. Any case where emergency services were called, or if CPR, defibrillation or a spine board or collar were used were classified as 'Major'. If a water rescue was performed or if the patron was advised to seek immediate medical attention following the incident, this was categorised as 'moderate'. All other injuries were considered 'minor'.

Majority of participating pools were using data collection tools that captured sufficient information required for RLSSWA records to compile the report. However, there was a number of fields which were incomplete or missing in the reports outlined in Table 12. The types of injuries that were recorded varied greatly between pools with some pools recording every single case where there was an injury regardless of how minor and other pools only recording more moderate and major injuries. For example, some pools recorded for bee stings and others did not.

Table 12: Missing fields in the injury reports

	n	%
Month	10	0.5%
Time of day	192	9.3%
Who was injured (employee or patron)?	16	0.8%
Patrons gender	170	8.2%
Patrons age	347	16.8%
Who was first to recognise the incidence?	281	13.6%
Type of incidence of accident?	37	1.8%
Were there any contributing factors?	221	10.7%
What was the nature of the incidence?	23	1.1%
Whether the incidence was indoor or outdoor?	742	35.8%
Where the incidence occurred?	199	9.6%
Was there an object or structure involved?	200	9.7%
Was first aid was required?	72	3.5%
What first aid was administered?	127	6.1%
Who administered the first aid treatment?	599	28.9%

In some cases, an individual may require multiple types of first aid or have experienced more than one injury. It is important to consider that to adequately represent these statistics, data relating to types of incidents, injuries and first aid performed will be provided based on the percentage of cases the variable occurred in, not the overall percentage out of 100.

Safety Assessments at Public Swimming Pools

Since 2002, RLSSWA has been conducting safety and risk assessments at public swimming pools around WA which are either self-funded by the pool or through financial support provided by the Local Government Insurance Service (LGIS). These assessments are based on the Department of Health Code of Practice for the Operation of Aquatic Facilities, the RLSSA Guidelines for Safe Pool Operations and other relevant Australian Standards.

An overall safety rating is given as a percentage based on the relevant scores for each of the 12 components in the assessment. The first seven components are mandatory to all pools in WA and components 8-12 are only applicable to certain centres, depending on which features they possess. Each year at least 30 pools are assessed and to date over 500 assessments have been completed in total. In 2017-18, a total of 43 public swimming pools were assessed. Of these, 7 (16.3%) assessments were completed at pools in the Perth metropolitan area and 36 (83.7%) at pools in regional WA.

What's next

This report is extremely important for providing an understanding into current resources and forces that make up the aquatic industry, as well as for identifying challenges and strategies to improve the industry. Changes to the data collection methods will be modified in future years to reduce the burden on pools. The industry survey will be collected in two parts, the first part will be collected mid-way through the season and this will collect information on staffing and programming, and the second part will be collected at the end of the season and this will include patronage and expenditure data. It is anticipated that this will improve overall response rates and quality of data presented within the report.



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