



BIGGER BETTER SAFER 2016-17

Western Australian
Aquatics Industry Report



ROYAL LIFE SAVING
WESTERN AUSTRALIA





BIGGER BETTER SAFER 2016-17

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Acknowledgments

We would like to thank the 79 aquatic centres across the state who completed the industry profile survey this year.

A special thank you to the 24 aquatic centres who provided injury and incident data for the 2016-17 season.

Bayswater Waves
Beatty Park Leisure Centre
Belmont Oasis Leisure Centre
Bilgoman Aquatic Centre
Bold Park Aquatic Centre
Cannington Leisureplex
Claremont Aquatic Centre
Craigie Leisure Centre
Exmouth Leisure Centre
Geographe Leisure Centre
Goldfields Oasis
HBF Arena
HBF Stadium
Kununurra Leisure Centre
Mandurah Aquatic & Recreation Centre
Margaret River Aquatic Centre
Maylands Waterpark
Newman Aquatic Centre
Northam Swimming Pool
Quentin Broad Swimming Pool
Riverton Leisureplex
Vic Hayton Memorial Swimming Pool
Wanneroo Aquamotion
Wyndham Swimming Pool

Project partners



Department of Sport and Recreation

PART 1: STATE OF THE INDUSTRY

Each year, the State of the Industry survey collects data on patronage, expenditure and staffing for 1 July to 30 June from public swimming pool facilities in Western Australia (WA). Water consumption data is provided by the Water Corporation and is also presented within the report.

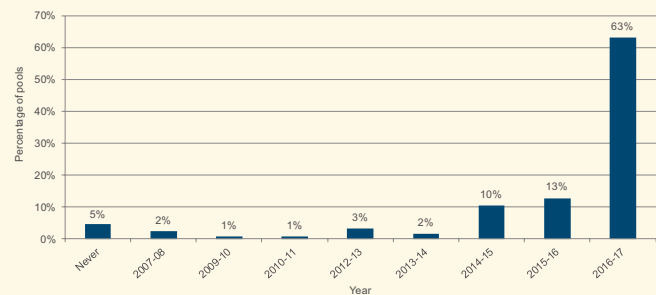
In addition to the standard annual data collected as part of the research, the focus this year was on determining the proportion of centres offering programs for at-risk and minority groups, and the challenges of delivering these programs within the community. This data was used to gain a greater perspective of issues facing the aquatic industry and to determine the impact of these programs on the community. This year, questions relating to the recent concerns regarding employment shortages and its impact on program delivery were also included in the survey.

Since 2007, this survey has been conducted eight times and almost every public swimming pool in WA (n=119; 95.4%) has participated in the survey at least once during this period. The consistent involvement of aquatic centres in the survey over time has allowed for more accurate estimations of data and trends across the years. Six swimming pools are still yet to complete the survey for the first time.

For these pools, along with centres who did not complete the most recent survey in 2016-17, data estimates are made based the most recent data provided, or if no data was available, on similar sized centres.

In 2016-17, 63% (n=79) of public swimming pools in WA completed the survey in full. This was an increase from the past two years, where 46% (n=57) and 61% (n=78) of pools provided data in 2015-16 and 2014-15, respectively. Survey participation increased in both the Perth metropolitan area (19% increase) and regional WA (14% increase) from last year. The year of last participation in the State of the Industry survey for WA pools can be seen in Figure 1.

Figure 1: Year of last participation in the Industry survey for all public swimming pools



INTRODUCTION

Patronage

In 2016-17, an estimated 10.3 million visitations were recorded at public swimming pools in WA, a 7% decrease from 2015-16. Similarly, the rate of patronage also decreased slightly, from 4.3 visits for every person in WA in 2015-16 to 4.0 this year (Figure 2).

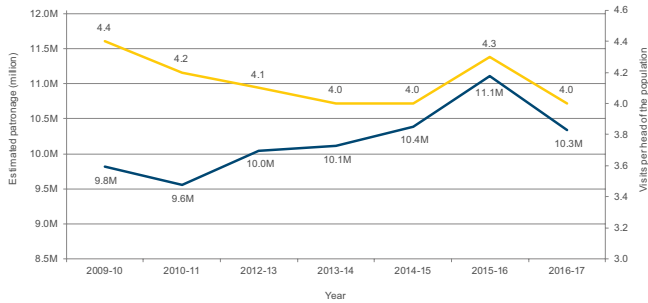


Figure 2: Estimated annual patronage for all public swimming pools in WA

The patronage in regional and metropolitan areas for 2016-17 were consistent with previous years. Regional areas continue to record higher rates of patronage per head of population in WA compared to the Perth and Mandurah region (4.8 compared to 3.9). The Esperance-Goldfields and Pilbara regions recorded the highest rates with 5.8 visits per person and the lowest rate was recorded in the Kimberley region with 3.5 visits per person (Figure 3).

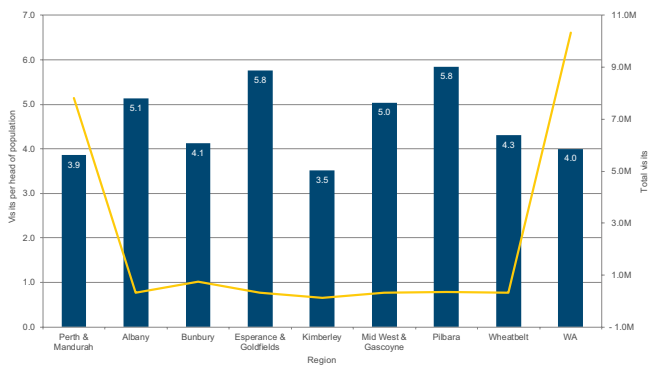


Figure 3: Patron visits by population and region

Expenditure

Annual expenditure declined from the previous year by \$1,177,245. However, since 2009-10, there has been an overall 38% increase in expenditure. Although there was a decline in expenditure, the expenditure per patron has increased from last year from \$7.30 to \$7.70 per patron, and in total has risen by 30% since 2009-10 (Figure 4).

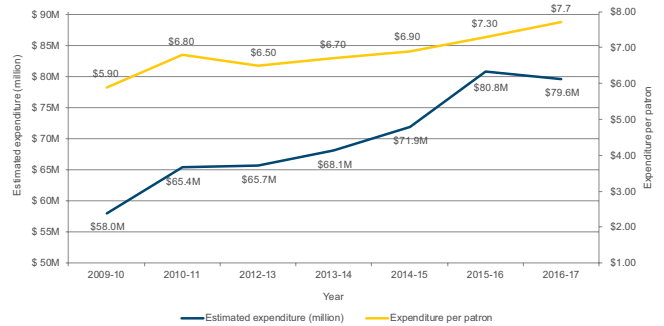


Figure 4: Estimated annual expenditure and expenditure per patron visit for all public swimming pools in WA

The expenditure per patron differed substantially across the different regions from \$5.70 to \$29.10. It's important to consider that some areas of the state are more densely populated resulting in lower expenditure per patron, as shown in Figure 5. Therefore, the highest expenditure per patron is seen in the Kimberley region and the lowest expenditure in the Perth and Mandurah region, which is consistent with previous years. On average, the expenditure per patron in regional areas rose by 12% which equates to an increase of \$1.05 from 2015-16. In comparison, expenditure in the Perth and Mandurah region remained consistent, with an average increase in expenditure per patron of 18c.

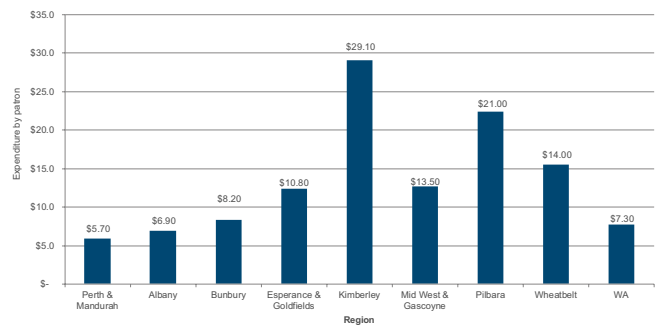


Figure 5: Average expenditure per patron visit by region

Water Consumption

Data is provided by the Water Corporation on total water consumption for over 100 public swimming pools across WA which provides the closest estimates of water usage. However, it does not include groundwater (bore) usage and may include other centres on the same site as it is not possible separate the water consumption for aquatic use only. For the pools where no data was available, estimates were made based on the data provided for similar centres. This allowed for an overall estimate of the water consumption and of trends in consumption from previously reported data of all WA pools across the years of reporting.

The total water consumption for all pools across WA in 2016-17 was 1.19 billion litres of water representing a 3% increase from last year, as shown in figure 6. Overall, water consumption continued to trend downwards with an estimated decrease of 77 megalitres (ML) since 2007-2008.

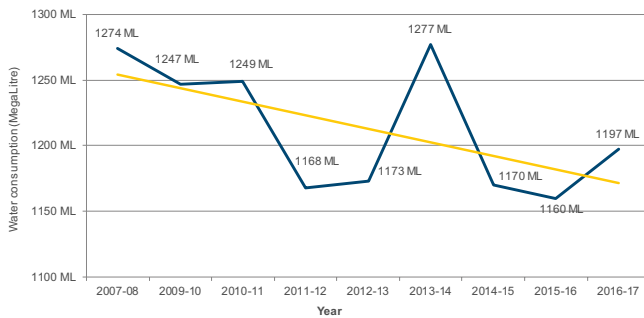


Figure 6: Annual scheme water consumption 2007-08 to 2016-17 (ML)

Water use per patron was calculated by the number of litres used per patron visit and varied greatly by region, as presented in Figure 7. Albany, and the Perth and Mandurah area were the only regions to have water consumption under the WA average of 116 litres per patron visit. The Kimberley, Wheatbelt and Pilbara regions recorded the highest water usage per patron, which was 3-4 times the WA average.

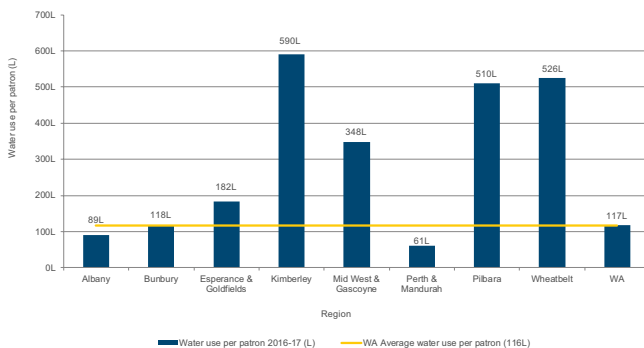


Figure 7: Estimated scheme water consumption in litres per patron visit by region for 2016-17

Over the past five years, overall water consumption per patron has remained relatively stable in WA, with increases seen in the Kimberley, Pilbara and Wheatbelt regions during this time (Figure 8).

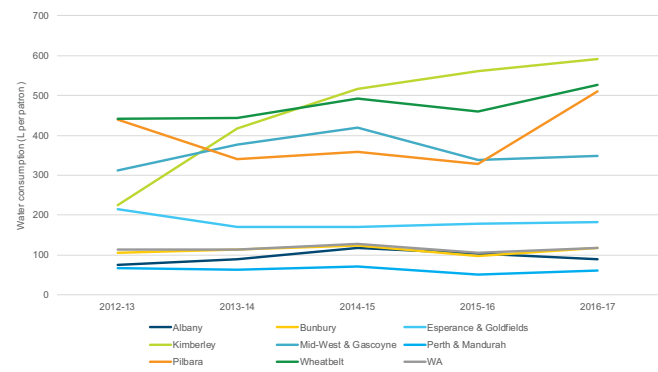


Figure 8: Water consumption (L per patron) trends 2012-13 to 2016-17

Programs delivered by public swimming pools

Providing the opportunities for people of all ages to learn and develop swimming and survival skills is of critical importance in building strong water safe communities. Public swimming pools play a crucial role in the delivery of these programs.

The most common form of swimming and water safety education provided at public swimming pools in WA continues to be swimming lessons coordinated by the Department of Education including In-term and VacSwim lessons. Overall, 54,904 children participated in VacSwim programs and a further 189,185 participated in In-term swimming programs in 2016-17 (Figure 9). Overall 70.7% participated at pools located in the Perth metropolitan area and 29.3% in regional WA. Pass rates were slightly higher at pools located in the Perth metropolitan area compared to those in regional WA (66.6% compared to 62.3%).

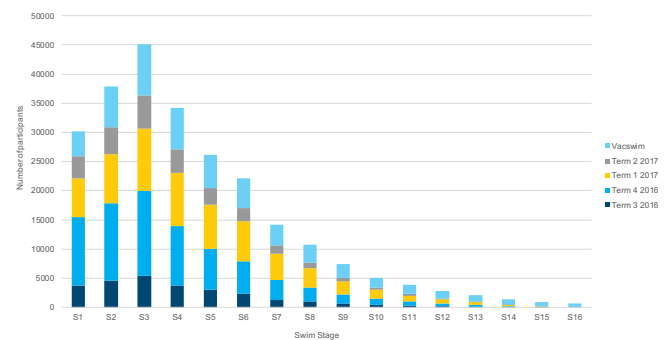


Figure 9: Participation in swimming and water safety programs by stage 2016-17

The data suggests that there are some community groups that are missing out on these programs and are under-represented in participation data. Information regarding Aboriginality, English as a second language and disability status is only available for Vacswim participants. Overall, 1.4% (n=553) of Vacswim participants in 2016-17 were Aboriginal children, 6.8% (n=2,721) were from culturally and linguistically diverse (CALD) backgrounds and less than 1% (n=65) had special needs. To assist in addressing the gaps in service provision, the number of public swimming pools providing specialised programs targeting at-risk groups is assessed each year.

Programs for at-risk community groups

1. People with disabilities

Programs for individuals with disabilities continue to be the most common form of service provision for at-risk groups, with 20% of pools reporting having specialised programs for people with disabilities. In most regions, between 20-30% of pools offered programs for people with a disability (Figure 10).

There were a number of specialist programs available for people with a disability including the MATE program, specialist swimming lessons, private lessons, aqua aerobics, gentle exercise classes, and also non-aquatic programs such as dance ability sessions and gym programs. Some pools specified that their programs were mainly attended by the elderly and those with arthritis, multiple sclerosis, spinal injury, foetal alcohol syndrome and workers compensation injuries. One of the pools that did not offer specific programs, commented that their centre does cater for visitors with disabilities who attended the centre by providing a suitable environment.

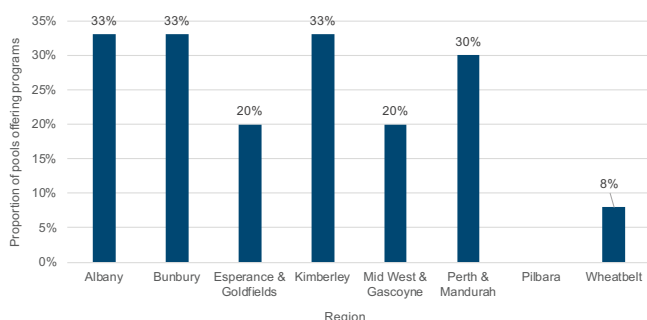


Figure 10: Percentage of public swimming pools offering specialised programs for people with a disability by region

2. Aboriginal Australians

Overall, 18% of pools reported having programs specifically designed for Aboriginal Australians which is consistent with previous years. This figure may be an under-representation as many Aboriginal Australians also participate in mainstream programming. A higher percentage of pools in the Kimberley (67%) and Esperance and Goldfields (60%) regions offered specific programs for Aboriginal Australians compared to other region in WA, which is most likely due to these regions having highest proportions of Aboriginal Australians. In the metropolitan area, only 4% of pools reported running programs specifically designed for Aboriginal Australians (Figure 11).

Specific programs for Aboriginal Australians included swimming lessons, training sessions, aqua aerobics, aquatic sports, Nyungar Wellbeing and Sports program, Swim for Fruit, Swim for Life, and specific events to encourage participation including Noongar sports days and swim carnivals. Some pools also reported that they partnered with local Aboriginal community groups to run programs that had both aquatic and land-based activities.

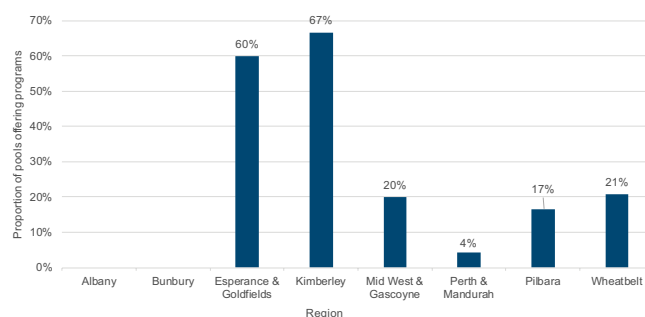


Figure 11: Percentage of public swimming pools offering specialised programs for Aboriginal Australians by region

3. Culturally and Linguistically Diverse (CALD)

Overall, 11% of pools reported having program specifically designed for people from CALD backgrounds, which is consistent with previous years. The Kimberley (33%) region had the highest proportion of pools offering these programs (Figure 12).

Programs for specific cultural groups included Afghan women, Muslim groups and women's only programs for certain cultural groups. In one centre, they reported that a large proportion of their adult swimming classes were people from CALD backgrounds. Other programs offered included swimming lessons, Swim and Survive Access & Equity programs, education such as "Sun Smart" and "hands-out" diving, and non-aquatic activities such as midnight basketball programs, gym sessions, badminton and sporting competitions.

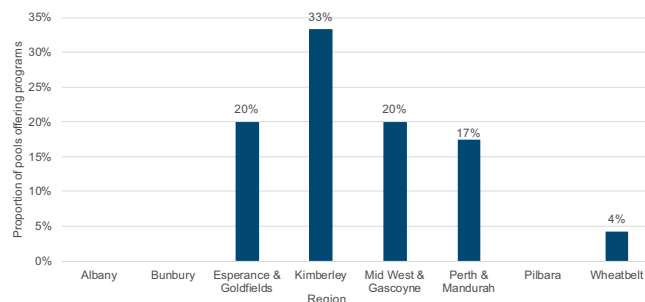


Figure 12: Percentage of public swimming pools offering specialised programs for culturally diverse groups by region

Gaps and Challenges

To better understand the gaps in program delivery within each community, open-ended questions were included in the survey that allowed for swimming pools to elaborate and comment on the gaps and challenges they faced. The 2016-17 survey identified many gaps that limit the ability of centres to provide these programs to disadvantaged and minority groups. Affordability and funding were the most common challenges identified, and this also impacted on costs for patrons which limited participation. A lack of qualified staff also limited the programs that centres could offer and restricted the availability of classes at different times and on weekends. Insufficient aquatic facilities, poor disabled access and no creche were other factors that centres reported that impacted on their ability to offer these types of programs. Other influences that were mentioned included the limited population in their area and language barriers. Although there were several programs available for Aboriginal Australians in some regions, there continues to be challenges with engaging participation, regardless of the cost.

Key factors influencing the delivery of swimming and water safety programs

To gain a better understanding of how peak bodies and the aquatics industry can further assist and support public swimming pools in the delivery of swimming and water safety programs, particularly for at-risk community groups, this year's survey included a section that allowed swimming pools to expand on the factors that influence their program delivery, and the education priorities of their current swimming and water safety programs. Key factors that influenced a centre's ability to provide swimming and water safety programs are outlined in Table 1.

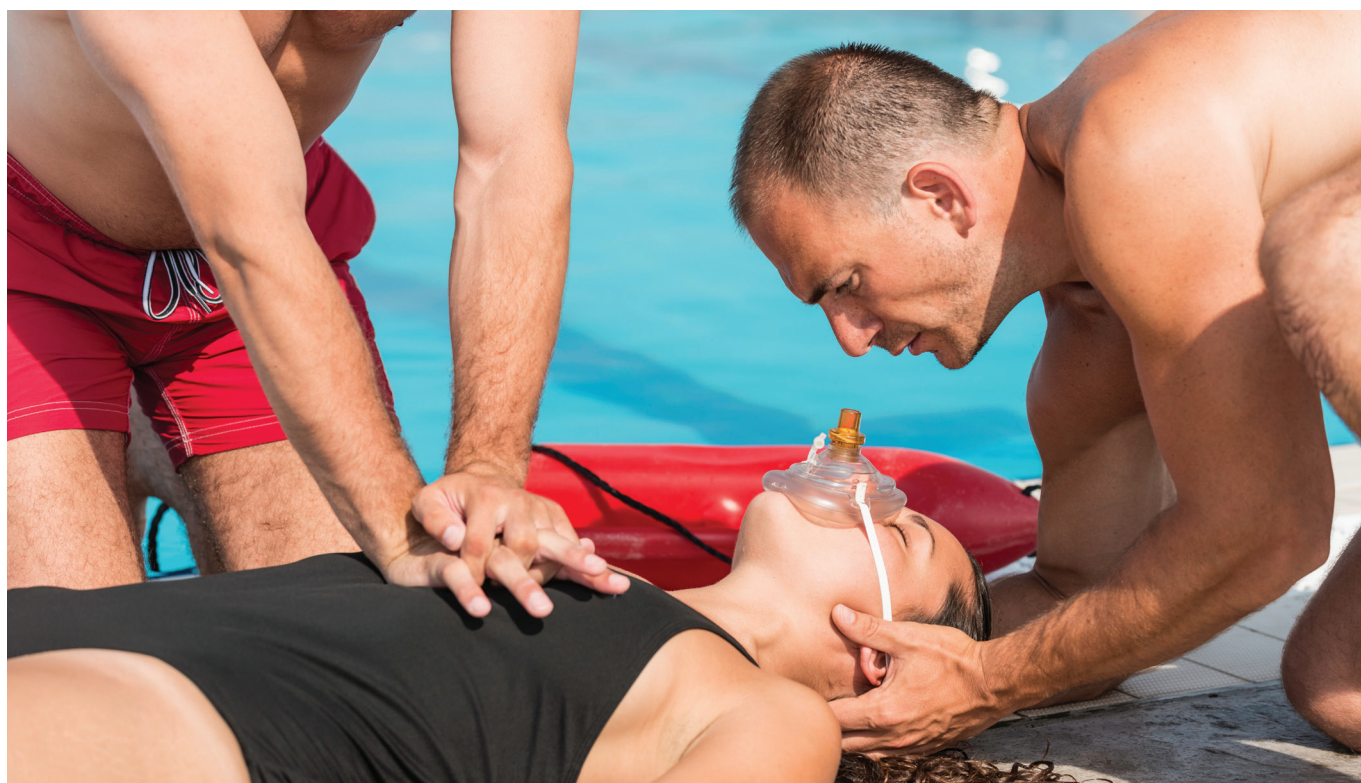
Table 1: Factors influencing the delivery of swimming and water safety programs

Having qualified and experienced staff to deliver programs (including staff retention)
Sufficient funding to deliver the programs on an ongoing basis
Facility design including available pool space and appropriate pool access
Partnerships with other industry bodies, key stakeholder organisations and relevant community groups (including local schools)
Weather
Adequate participation in the programs

Swimming and water safety education - community priorities and needs

Swimming pools identified a number of priority areas for the delivery of swimming and water safety programs including a greater need for specific programs to encourage participation amongst Aboriginal and CALD community groups and also parents with young children. It is important that people of all ages despite their cultural background and aquatic experience have access to culturally appropriate swimming and water safety programs that improve their knowledge and awareness of the dangers associated with local water bodies.

Likewise, improving parents' knowledge and understanding of supervision and the importance of their children learning to swim and survive was identified as a priority. Other priority areas identified included access to VacSwim and In-term swimming programs and addressing the shortage of appropriate and qualified teaching and pool staff was needed in some communities.



Labour Force

The WA aquatics industry comprises of pool operators, lifeguards, swimming instructors, aquatic support staff and many voluntary positions which provides employment opportunities to individuals in each region of the state. In 2016-17, there were approximately 4,300 staff employed within the WA aquatics industry. This section provides an insight into the current labour force by region for 2016-17.

Pool Operators

The number of pool operators required by the WA aquatics industry decreased slightly from 2015-16 with 480 positions available in 2016-17 compared with 517 positions this time last year. There is a slight surplus in the number of qualified pool operators state-wide with 549 individuals holding current accreditations. However as can be seen by the ratios presented in Figure 13, this marginal surplus is differential across the state.

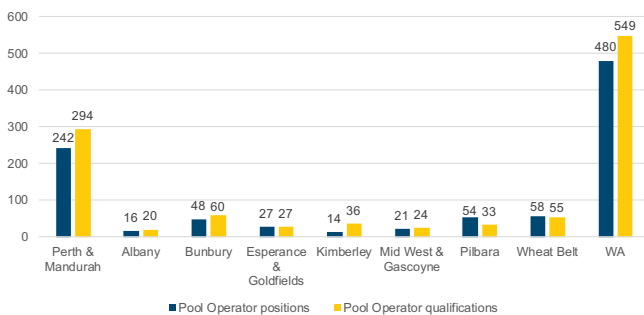


Figure 13: Number of pool operator positions to number of people accredited by region

Workforce turnover and mobility of Pool Operators

The retention of accredited pool operators continues to be an integral part of the success of the WA aquatics industry. Already accredited operators who have remained in their region of work continue to comprise the majority of the workforce; however, this varies across each region. The Albany region recorded the highest rate of retention at 80% followed by the Perth and Mandurah region with 76% retention. As can be seen in Figure 14, the Esperance-Goldfields and Bunbury regions had the highest percentage of newly qualified pool operators with 22% and 20%, respectively. The Pilbara region had the highest percentage of pool operators moving to the area.

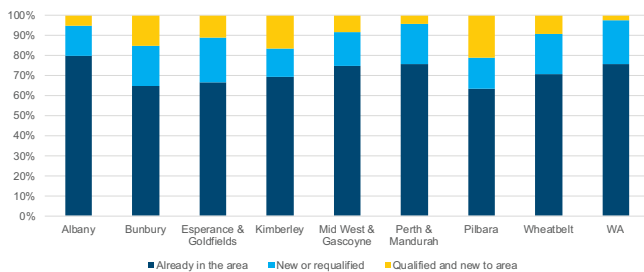
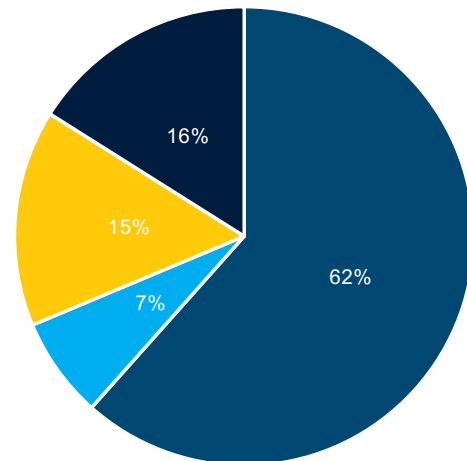


Figure 14: Changes in pool operator accreditations by region

Between 2015-16 and 2016-17, 82 pool operators had their accreditation lapse. At the time of analysis, these had not been renewed. However, during the same period, 104 newly accredited pool operators entered the workforce and an additional 99 new accreditations were issued (Figure 15). This resulted in an overall increase of 20 accredited pool operators, a growth of 14% between years which contributed to the state moving from an overall shortfall of pool operators to a slight surplus.



- Maintained from 2016-17
- Maintained from 2016-17 and moved regions
- Requalified (lapsed in 2016-17)
- New (no qualification in previous 2 yrs)

Figure 15: Pool operator accreditations at June 2017

Pool Lifeguards

In 2016-17, the WA aquatics industry's demand for pool lifeguards remained relative to the demand in 2015-16, with 978 positions and 980 positions, respectively. As with the previous year, the Perth and Mandurah region had the highest demand of 63% and supply of 71% compared to other regions, as shown in Figure 16. Data indicates there are still many regional areas that may have shortages of qualified staff including the Esperance and Goldfields, Mid-West and Gascoyne and Wheatbelt regions.

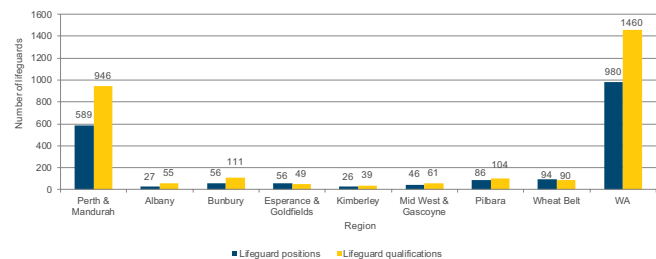


Figure 16: Number of pool lifeguard positions to number of people qualified by region

Additional data was captured this year which showed that the majority (57%) of qualified lifeguards were male and ages ranged from 15 – 76 years old. Aboriginal or Torres Strait Islander lifeguards made up less than 1% of trained lifeguards.

Workforce turnover and mobility of Lifeguards

The Albany, Esperance-Goldfields, Kimberley, and Mid-West and Gascoyne regions had the highest percentage of newly trained and requalified lifeguards, as shown in Figure 17. In addition, the Albany, Kimberley, Perth and Mandurah, Pilbara and Wheatbelt regions gained qualified lifeguards from other areas. However, as noted above this was not sufficient to cover the positions required in the Esperance-Goldfields, and Mid-West and Gascoyne regions.

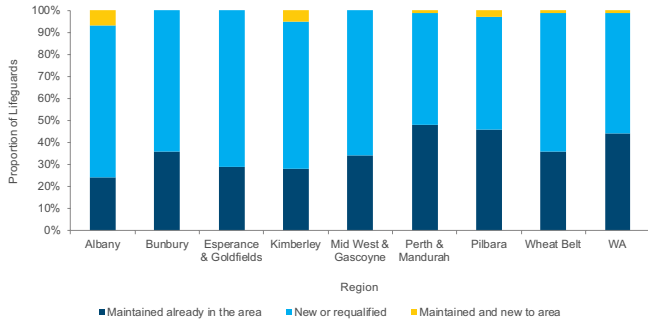
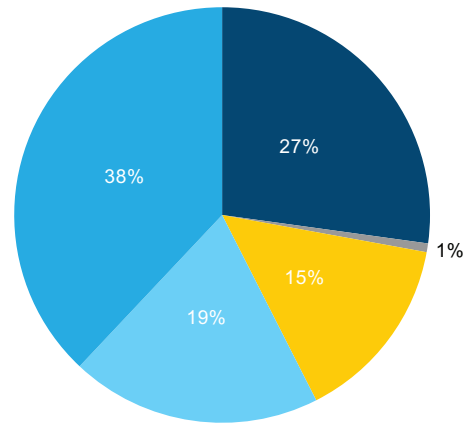


Figure 17: Changes in lifeguard qualifications by region

Of trained lifeguards, 985 retained their qualifications (includes maintained, maintained and moved regions, and requalification) with a retention rate of 43%. A total of 894 lifeguards let their qualifications lapse in 2016-17 equating to 38%, as shown in Figure 18. In comparison to 2015-16, more qualifications lapsed (26% versus 38%, 2015-16 versus 2016-17, respectively), less lifeguards maintained their qualification (44% versus 28%, 2015-16 versus 2016-17, respectively), and there were less newly trained lifeguards (25% versus 20%, 2015-16 versus 2016-17, respectively). There was also less movement across WA with less than 1% of qualified lifeguards moving regions.



- Maintained from 2015-16
- Maintained from 2015-16 & moved regions
- Requalified (lapsed in 2015-16)
- New qualification (No qualification in previous 2 yrs)
- Lapsed qualification

Figure 18: Pool lifeguard qualifications current at June 2017



LIMITATIONS

There are some important limitations that need to be considered when looking at the supply and demand of pool operators and lifeguards in WA. In reality, many of the pool operator and pool lifeguard positions require multiple people to undertake the role due to the largely part-time and casual nature of these positions. The data presented within this report does not account for full-time, part-time or casual positions, therefore an area may appear to be adequately staffed however, most of their staff might be casual or part-time which means that there is an overall shortage.

There are also cases where individuals may gain a qualification, however do not actively seek employment, which will indicate an oversupply of qualified individuals where there may actually be shortages. Likewise, some 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 which again, may result in shortages not visible in this data.

There may also be differences in the actual number of qualified or accredited people in each region. 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 may 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 staff shortages for individual regions.

Employers within the aquatics industry deserve the right to have a choice of who they employ, therefore a reasonable surplus of qualified staff compared to the demand is needed. When taking into consideration these limitations, it appears that only the Perth and Mandurah, Bunbury and Kimberley regions have sufficient numbers of accredited pool operators and the Perth and Mandurah, Albany and Bunbury regions have sufficient pool lifeguards.

Other members of the aquatic workforce

While many pools have higher rates of employees specific to non-aquatic sections (for example fitness centres), only non-paid members of the aquatic workforce have been included in this discussion. These include volunteers, trainees, work experience students, those completing community service and 'Work for the Dole' participants, who can add value and complement the current staffing structure and create a possible talent pool for future employment. Twenty-eight pools indicated that they hosted at least one or more of the above members of the workforce which is similar to previous years. This means that approximately 188 individuals were hosted across aquatic centres in WA however, some pools did not provide exact numbers so total numbers are difficult to determine.

Volunteer staff and work experience students made up the highest proportion of additional employees in 2016-17, with 46% and 38% respectively. Volunteer staff were reported to have provided assistance with running events at the pool (including swimming carnivals, night swims, BBQ's and discos), provided customer service and kiosk attendance, assisted with the delivery of swimming and water safety lessons or completed lifeguard hours. Work experience students assisted with similar duties as well as shadowing lifeguards, and assisting with cleaning, childcare and marketing. Community service and 'Work for the Dole' members made up the lowest proportion of non-paid staff members (5% each). These members helped organise special pool events such as, gardening and ground maintenance, and assisted with the creche. Traineeship roles included pool operations, basic lifeguarding duties, kiosk, reception, gym and creche coverage, and delivery of programs and sports activities.

The proportions from each of the different groups remained similar to previous years, however the actual percentage of non-paid members in each have decreased compared to 2015-16 (Figure 19).

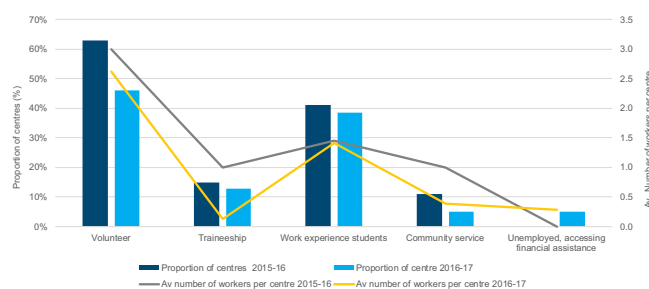


Figure 19: Proportion of centres with additional workers and average number of additional workers per centre 2015-16 vs. 2016-17

Additional workers employed at pools were sourced through partnerships with local high schools, word of mouth, through the local government/council, advertising positions at the centre, local newsletters, Facebook, current staff contacts, the local Department for Child Protection program and through pools being approached by individuals seeking work or industry experience.

FINDINGS AND RECOMMENDATIONS

- **Water consumption at public swimming pools continues to trend downwards.**

Whilst trending downward overall, water consumption in 2016-17 increased by 3%. A focus on water saving strategies at pools, especially those located in the Kimberley, Wheatbelt and Pilbara where usage is highest is recommended.

- **Pools need greater support to target high-risk groups.**

A better understanding of the barriers and enablers to participation amongst at risk groups including Aboriginal Australians, people from CALD backgrounds and people with disabilities is needed to improve engagement and program delivery methods. The provision of cultural awareness training to staff delivering these programs would also be useful to ensure appropriateness of the programs for these community groups.

- **Improved funding to support program delivery.**

Funding was a barrier in the delivery of swimming and water safety programs particularly for CALD people, Aboriginal people and people with disabilities. Creating a repository of successful funding applications, a system to monitor available funding sources for the delivery of these programs and providing assistance to pools applying for funding would be beneficial to improve program delivery.

- **Addressing gaps in participation based on their local population groups.**

There is a growing need for localised programming within individual regions and local government areas to ensure adequate programming. A better understanding of local community demographics and needs is required to ensure that no-one misses out on gaining important swimming, water safety and survival skills.

- **Providing a suitable environment for delivering effective programs.**

A major barrier to delivery of programs for disadvantaged groups was having appropriate facilities. It's important aquatic industry staff, in particular pool managers and those responsible for infrastructure upgrades and design have access to information on facility elements/design that are conducive to effective programming to guide re-development plans.

- **Ensuring adequate aquatic support staff across all regions of WA is crucial to the industry.**

A better understanding of employment trends and shortages is needed to determine the impacts on program delivery. Furthermore, strategies to upskill staff to ensure they have the skills required to deliver effective programs to CALD and Aboriginal participants is advisable.

- **Creating a diverse workforce in the aquatic industry.**

There is a need to diversify the aquatics industry workforce to include a greater proportion of Aboriginal Australians and people from CALD backgrounds. This is particularly important in regional and remote areas. We need to ensure adequate training delivery that is culturally appropriate is available to these community groups and is promoted widely to encourage participation.



PART 2: INJURIES AT PUBLIC SWIMMING POOLS

Each year a representative from RLSSWA and the Leisure Institute of WA (LIWA) Aquatics works with a sample of WA public swimming pools to collate and assess injury and incident reports to determine the rate of aquatic injury, identify those at greatest risk and monitor injury trends to guide industry training. This year, 19% of public swimming pools in WA provided injury data which included 14 pools from the Perth metropolitan area and 10 pools from regional areas. These 24 pools represented 50% of total annual patronage across the state, an increase from previous years. Overall 892 individual injury and incident forms were included within the analysis.

Injury data was again collected using a staggered mode of data collection throughout the pool season which enabled the inclusion of more seasonal pools. Data from pools was obtained using the following methods; 1) summary spread sheets of the data provided by pools, 2) copies of their individual incident report forms supplied, or 3) a RLSSWA staff member attended the centre to collect and 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.

Injuries were classified in the same manner as the previous reports, as major, moderate or minor. 'Major' injuries and incidences included any case where emergency services were called, or if CPR, defibrillation or a spine board or collar were used. Injuries were classified as 'moderate' if a water rescue was performed or if the patron was advised to seek immediate medical attention following the incident. Any other incident not classified as major or moderate was considered 'minor'. Excluded from the analysis were any incidents that occurred outside the aquatic environment such as the gymnasium or sports court. Incidents whereby staff members were victims have been included in this report to determine the rate of injury among this group and to provide recommendations on staff safety and prevention strategies to combat these incidents.

The majority of participating pools were using data collection tools that captured sufficient information required for RLSSWA records to compile the report. Over 90% of incident/injury reports collected details of the date, who was injured, what first aid was provided, the type of incident and nature of the injury. However, variables including who initially provided first aid (n=919; 80%), age (n=346; 30%), contributing factors (n=277; 24%), specific location (n=232; 20%), gender (n=182; 16%) and the time of incident (n=130; 11%) were less frequently noted for each incident.

There was a small increase from 2015-16 (3%) in the proportion of cases where suggestions were made on how to reduce the risk of a similar incident occurring again (16% in 2016-17 and 13% in 2015-16). When analysing more severe incidents, a prevention strategy was identified in 12% (n=6) of moderate and 21% (n=6) of major incidents. This excluded cases where the injury could not be prevented due to unforeseen circumstances such as a pre-existing medical condition or sporting accidents. In minor incidents, it is often very difficult to actively prevent them from occurring and only a few of recorded suggestions were actually achievable.

In interpreting the analysis of injury and incident reports, important conditions should be noted in that incidents may record several variables in the same category. For example, an individual may require three different types of first aid, or have experienced more than one injury. 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.

Annual Incident Rate

An annual incident rate of 22.5 per 100,000 patrons was recorded in 2016-17, a 4% decrease from the previous year. Based on the patronage for 2016-17, this equates to 2,378 injuries across all WA public aquatic centres. This represents a 32% total decrease in the annual incident rate at WA public swimming pools over the past 11 years, as presented in Figure 20.

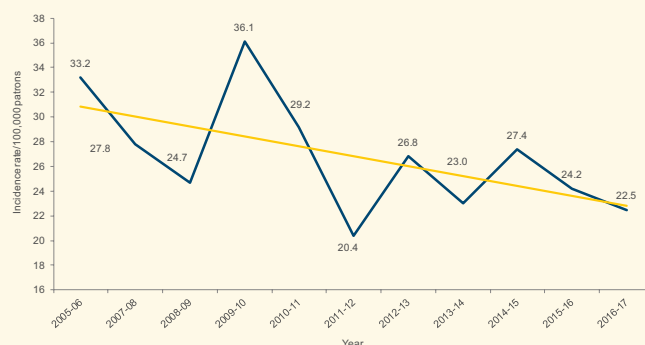


Figure 20: Annual Incident rates per 100,000 patrons: 2005-06 to 2015-16

Similar to previous years, the majority of injuries occurred during summer and spring, accounting for 41% (n=468) and 28% (n=321), respectively. January was the most common month (n=202; 17%) and injuries were most likely to occur in the afternoon between 12.00pm and 5.00pm (n=541; 53%). Children aged 5-14 years continued to record the highest number of injuries making up 55% (n=492) of all injuries for 2016-17.

Injury rates were slightly higher in regional pools compared to pools located in the Perth metropolitan area (27.8 per 100,000 patrons compared to 24.6 per 100,000 patrons). The results for both regional and metropolitan pools decreased overall, with greater decreases observed in pools located in the Perth metropolitan area. When looking at injury rates at individual pools, both metropolitan (n=7; 50%) and regional areas (n=4; 40%) had a similar number of pools with an injury rate above the state average of 22.5 (Figure 21).

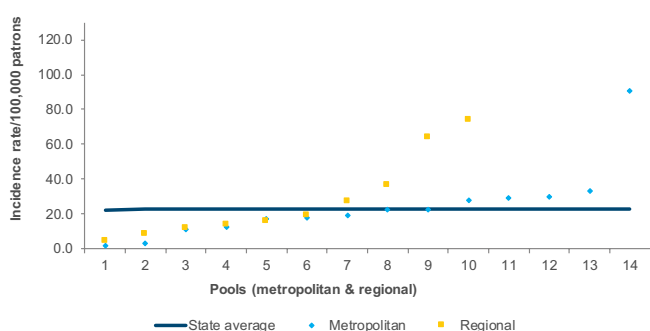


Figure 21: Incident rates for all participating aquatic centres: Metropolitan and Regional

Injuries by severity category

In 2016-17, there were 29 major, 52 moderate and 811 minor injuries. As in 2015-16, the majority (n=811; 91%) of injuries were minor, and major incidents made up the smallest percentage of incidents at 3% (n=29). In comparison to 2015-16, minor incidents increased slightly by 2% and moderate incidents decreased by 3%. Major incidents also increased by 1% in 2016-17 (Figure 22).

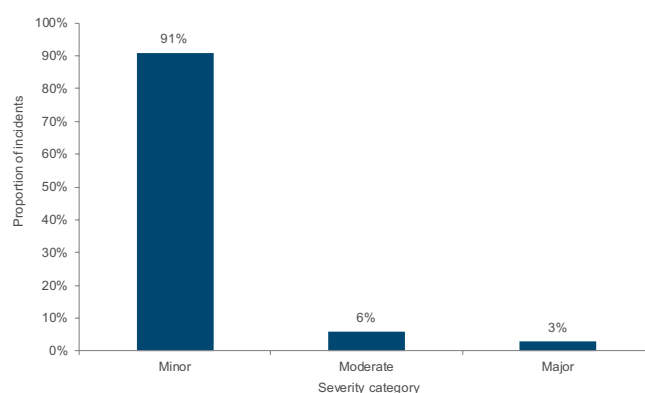


Figure 22: Injuries by severity category

Across all severity categories, trips or slips and participating in water activities were shared contributing factors and low fall to same level or less than 1m and unintentional collisions or being struck by another person were common types of accidents that occurred in each severity. See Table 2.

Table 2 – Injury and incident details by injury severity 2016-17

	Minor injuries	Moderate injuries	Major injuries
Type of incident	Unintentional collision (26%) Low fall (20%) Contact with insect/animal (14%)	Unintentional collision (33%) Low fall (23%) Difficulty in water (19%)	Low fall (40%) Unintentional collision (29%) Dizziness (20%)
Type of Injury	Superficial wounds (36%) Open wounds (17%) Insect bite (14%)	Non-fatal drowning (28%) Open wounds (26%) Concussion (23%)	Dislocation, sprain, strain (24%) Concussion (22%) Fainting/dizziness (19%)
Mechanism of injury	Water activities (18%) Trips or slips (14%) Insect bite (10%)	Trips or slips (16%) Poor swimming skills (18%) Water activities (11%)	Trips or slips (19%) Swimming (12%) Diving into water (12%)
Where incident occurred	50m lap pool (20%) Leisure pool (18%) Slide (7%)	Leisure pool (12%) 50m lap pool (11%) Dive pool (9%)	50m lap pool (23%) Other pool (18%) Slide (5%)
First Aid treatments	Basic first aid (86%) Seek medical advice (20%)	Basic first aid (54%) Seek medical advice (74%)	Oxygen therapy (54%) Monitoring/observation (43%) Emergency services (97%)
High-risk activities	Swimming lessons (54%) Swimming carnival (21%) Underwater sports (7%)	Swimming lessons (55%) Swimming club (9%) Underwater sports (9%)	Swimming club (33%) Swimming lessons (33%) Diving training (11%)

Results by age group

Data was analysed using a life-stages approach with five age group categories: 0-4 years, 5-14 years, 15-24 years, 25-54 years and 55 years and older. These align with RLSSWA reporting methods which allows for accurate analyses across different ages, however, these do differ slightly from the renewed Australian Water Safety Strategy. Overall, children aged 5-14 years recorded the highest rate of injury (259 injuries per 100,000 people) followed by toddlers aged 0-4 years (135 per 100,000 people). Lowest rates were recorded amongst older adults over 55 years of age (18 per 100,000 people). See Figure 23.

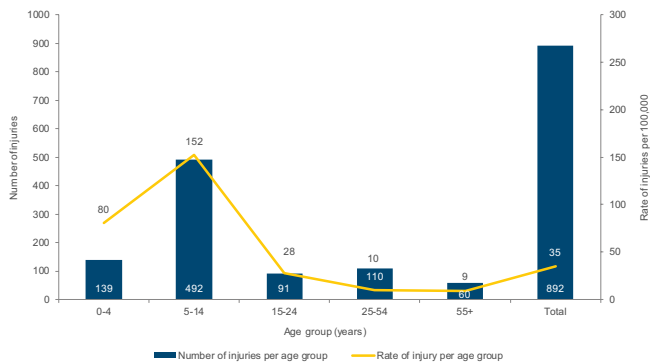


Figure 23: Number of observed incidents and rate of injury per age group

Severity of injury increases with age with younger age groups most likely to experience minor injuries and older age groups more likely to experience major injuries. This is likely to be due to the older age groups exhibiting independence in providing first aid to themselves for minor accidents and are also more likely to have pre-existing medical conditions that lead to more serious injuries. Hence, it is important to take these limitations into account when interpreting the data presented in this report.

Major incidents were most likely to occur in the 25-54 years and 55+ years age groups, and the majority of moderate incidents occurred in the 0-4 years age group, as highlighted in Figure 24.

There were some key differences observed between the age groups which are outlined in Table 3.

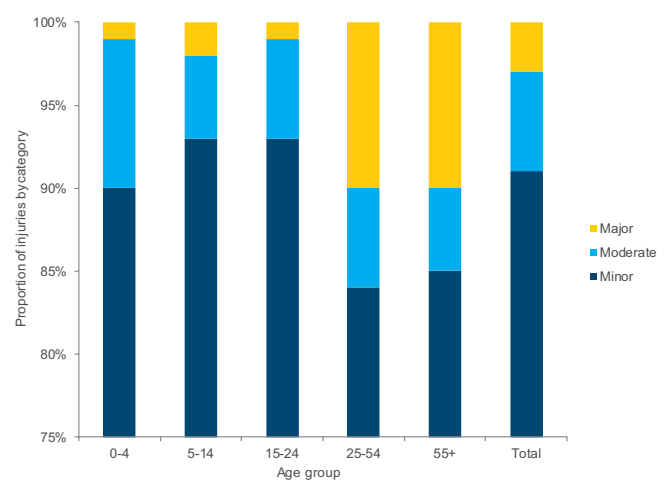


Figure 24: Injury severity by age group



Table 3: Injury trends by age group 2016-17

	Toddlers 0-4 years	Children 5-14 years	Yong Adults 15-24 years	Adults 25-54 years	Older Adults 55+ years
Proportion of injuries	15%	54%	11%	13%	7%
Injury severity	Minor (90%) Moderate (9%) Major (1%)	Minor (93%) Moderate (5%) Major (2%)	Minor (93%) Moderate (6%) Major (1%)	Minor (84%) Moderate (6%) Major (10%)	Minor (91%) Moderate (6%) Major (10%)
Type of incident	Low fall (54%) Contact with insect/animal (25%) Unintentional collision (23%)	Unintentional collision (31%) Low fall (29%) Cutting/piercing object (21%)	Suspected seizure (19%) Unintentional collision (18%) Low fall (16%)	Low fall (28%) Unintentional collision (26%) Cutting/piercing object (18%)	Low fall (50%) Medical condition (18%) Unintentional collision (18%)
Type of Injury	Superficial wounds (36%) Insect bite (19%) Open wounds (17%)	Superficial wounds (38%) Open wounds (18%) Nose bleed (11%)	Superficial wound (23%) Open wound (16%) Threat to breathing (15%)	Superficial wound (28%) Open wound (19%) Dislocation/sprain/strain (15%)	Superficial wound (35%) Open wound (17%) Fainting/dizziness (14%)
Contributing Factors	Trips or slips (25%) Insect bite (15%) Swimming (11%)	Swimming (21%) Trips or slips (12%) Playing (6%)	Swimming (20%) Entering/exiting water (12%) Trips or slips (9%)	Trips or slips (15%) Swimming (13%) Entering/exiting water (9%)	Trips or slips (29%) Swimming (17%) Medical condition (11%)
Where incident occurred	Leisure pool (33%) Slide (14%) 50m lap pool (13%)	Leisure pool (23%) 50m lap pool (23%) Dive pool (8%)	50m lap pool (35%) Leisure pool (12%) Slide (9%)	50m lap pool (22%) Leisure pool (16%) Pool concourse/deck (10%)	50m lap pool (22%) Leisure pool (12%) Pool concourse/deck (13%)
First Aid treatments	Basic first aid (86%) Seek medical advice (28%) Oxygen therapy (6%) Emergency Services (1%)	Basic first aid (88%) Seek medical advice (22%) Oxygen therapy (7%) Emergency Services (2%)	Basic first aid (74%) Seek medical advice (21%) Oxygen therapy (22%) Emergency Services (3%)	Basic first aid (72%) Seek medical advice (25%) Oxygen therapy (14%) Emergency Services (12%)	Basic first aid (68%) Seek medical advice (15%) Oxygen therapy (1015%) Emergency Services (10%)

Results by region

Pools located in both regional and metropolitan regions of WA recorded a similar proportion of injuries across the age groups, except for the 15-24 year age group where incidents were much higher in regional areas. There were no differences in the proportion of minor incidents recorded at regional and metropolitan pools however, moderate incidents were more likely to be recorded in regional areas and major incidents more likely in metropolitan areas.

Low level falls, unintentional collisions and cutting/piercing objects were the most common incidents recorded at pools in the Perth metropolitan area, resulting in either superficial or open wounds needing basic first aid or for the person involved to seek further medical attention. Common contributing factors included trips or slips or swimming and generally these incidents occurred in the 50m lap, leisure, lagoon or splash pool.

In contrast, unintentional collisions, contact with animals, vermin or insects and injuries from cutting/piercing objects were the most common injuries reported at pools in regional WA, resulting in superficial wounds or an insect bite or venom. Basic first aid or further medical attention was required in most cases. The most prevalent contributing factor was swimming and generally the incidents occurred in the leisure, lagoon or splash pool.

Other findings

The majority of injuries occurred outside of a structured event during general play or swimming. Of those that occurred at an event, 71% (n=220) of injuries happened at event run externally to the centre and predominantly occurred at swimming carnivals (n=55; 21%). In terms of severity, the most major injuries occurred during swimming club, squad or surf club training (n=3; 33%) whereas most minor (n=56; 26%) and moderate (n=3; 27%) injuries occurred during swimming lessons.

The most common prevention strategy identified by centres for minor incidents was guest/patron education. Supervision was a key prevention strategy identified for all severity levels including minor, moderate and major. A range of additional strategies were identified to prevent major incidents including ensuring patrons are adequately prepared for exercise, implementing non-slip coating on grandstands, preventing patrons from diving into shallow water, supervision and taking more care when walking on wet surfaces.

Injuries among aquatic employees

Ensuring safety in the workplace, and the well-being of employees working in public swimming pools is crucial to the success of the aquatic industry and in the retention of staff, which was seen as a barrier to delivering community programs among pools in this year's state of the industry survey.

In 2016-17, there were 47 cases where an employee was injured, accounting for 4% of total incidents. Of these, 9% (n=4) were major and 87% (n=41) were minor. The percentage of employee injuries that were classified as major incidents were higher than that recorded amongst the general public (n=4; 8.5% versus n=29; 3.3%, respectively). Specific injury details are outlined in Table 4.

Table 4: Aquatic Employee Injury Summary 2016-17

	Aquatic Staff
Type of incident	Low fall (21%) Contact with insect/animal (13%) Lifting/pushing/pulling/stretching (17%)
Type of Injury	Superficial wounds (26%) Dislocation/sprain/strain (19%) Insect bite (17%)
Mechanism of injury	Undertaking work duties (85%) Insect bite (49%) Trips or slips (11%)
Where incident occurred	In pool (49%) Pool concourse/deck (13%) Plant room (9%)
First Aid treatments	Basic first aid (67%) Seek medical advice (18%) Oxygen therapy (26%) Emergency Services (13%)

FINDINGS AND RECOMMENDATIONS

- **Incident rates are trending downwards.**

Although we continue to see a decline in the number of incidents per 100,000 patrons, it is important that safety practices remain at the highest of standards in regional and metropolitan WA to ensure the wellbeing of all aquatic patrons.

- **Supervision continues to be a factor in children aged 0-14 years.**

There is a need to develop strategies to better engage with aquatic staff to promote the Watch Around Water message, enforce supervision policies and review current practices to ensure consistency. Focus should be on educating parents with young children of the importance of supervision while at the pool and the danger of being distracted during supervision.

- **The 5-14 age group is at the greatest risk of injury.**

The 5-14 year age group continues to account for more than 50% of injuries in WA pools, often due to not following instructions and safety guidelines, or engaging in rough play or inappropriate behaviour. Although higher patronage of this age group influences the risk, ongoing participation in swimming and water safety lessons to raise awareness of the dangers of irresponsible behaviour around water is necessary.

- **Most injuries at structured events were at those run externally to the centre.**

To reduce injuries at structured events such as school swimming carnivals and school holiday programs, there is a need to review current policies, procedures and information provided to external groups using the centre to ensure that adequate strategies are in place to prevent injury including supervision and reporting of pre-existing medical conditions.

- **Aquatic staff remain at high risk of injury.**

Ongoing training of aquatic staff with a focus on safety and injury prevention, particularly relating to duties undertaken in the plant room and performing tasks that involve lifting, pushing or pulling items is recommended. Ongoing reporting and review of any injuries or incidents involving staff during work at the pool is required to mitigate risks and prevent further injuries from occurring.

- **Develop more standardised reporting of major incidents.**

Many injuries are still unreported to the LIWA Aquatics. Accurate and timely reporting of incidents is important for ensuring staff are adequately debriefed and that trends can be monitored and addressed in a timely manner.

PART 3: SAFETY ASSESSMENTS AT PUBLIC SWIMMING POOLS

RLSSWA has been conducting safety and risk assessments at group one public swimming pools around WA for the past 15 years. These assessments are either self-funded by the pool or through financial support provided by the Local Government Insurance Service (LGIS). The Department of Health Code of Practice for the Operation of Aquatic Facilities, the RLSSWA Pool Safety Guidelines and other relevant Australian Standards form the basis of these assessments. In 2010 the requirements were updated to cover the following;

1. General Administration (11 points)
2. Design & Construction (46 points)
3. Circulation & Water Treatment (26 points)
4. Chemical Safety (20 points)
5. Water Quality & Testing (10 points)
6. Qualification for Operators, Supervisors & Emergency Care Personnel (3 points)
7. General Sanitation & Operation (25 points)
8. Special Feature Pool (43 points)
9. Spa Pool (16 points)
10. Water Slide (14 points)
11. Hydrotherapy Pool (4 points)
12. Water Spray Grounds (19 points)

An overall safety rating is given as a percentage based on the combined relevant scores for each item in the assessment. The first seven points are mandatory to all pools in WA and points 8-12 are only applicable to certain centres, depending on features they have. Since 2002, approximately 30 assessments per year have been completed, totalling more than 460 safety assessments at 128 Group One public swimming pools. Since 2008-09, 95% (n=121) of pools have been assessed at least once in the last five years and more than 56% (n=72) have had their most recent assessments completed within the last two years (Figure 25).

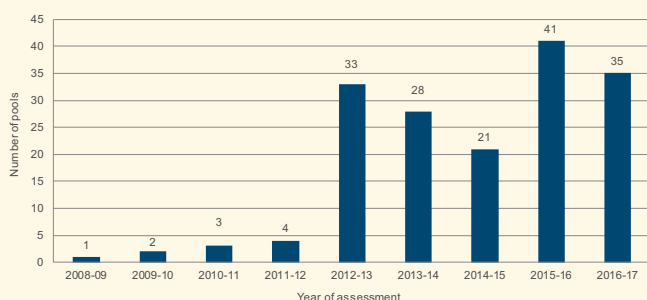


Figure 25: Year of most recent safety assessment

Overall Safety Ratings

This year there has been a 75% improvement in the number of pools scoring above 80% with only three pools scoring under 80% in their most recent overall safety assessment, shown in Figure 26.

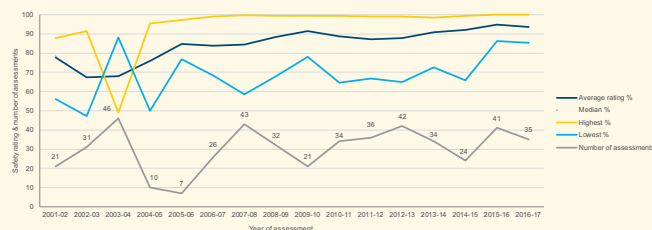


Figure 26: The most recent overall safety ratings of all 128 pools.

In 2016-17, a total of 35 public swimming pools were assessed compared to 41 last year. The average overall safety rating for 2016-17 was 93.7%, which is a slight decrease from 2015-16 where the average overall safety rating was 94.9%. This is likely to be explained by the different sample of pools undertaking assessments each year. Since 2001-02, there has been a 22.7% increase in the average overall safety rating, shown in Figure 27.

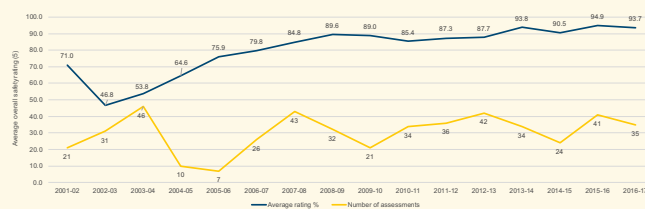


Figure 27: Average overall safety rating for public swimming pools assessed each year

The most recent overall safety ratings for all pools in WA ranged from 65.9% to 100%, with all 35 pools assessed in 2016-17 scoring an overall safety rating above 85%. In 2016-17, three pools had a decrease in rating from their previous assessment, however their ratings remained above 93%. Pools in the Perth metropolitan area continued to have considerably higher average safety scores (96.3%) compared to pools in regional WA (91.9%). See Figure 28. This may be due to a number of factors such as a higher proportion of ageing facilities being located in regional WA. The gap in average ratings between metropolitan and regional pools decreased by 1.5% in 2016-17 compared to 2015-16. All three pools that recorded safety ratings below 80% in their last assessment were located in regional WA, however overall safety ratings have improved in regional areas with two pools receiving 100%.

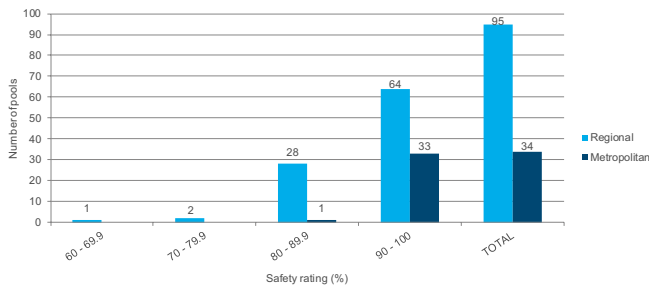


Figure 28: Most recent overall safety ratings by location for all pools

Differences in safety ratings were also seen between the different regions of WA. Similar to previous years, the highest average scores were recorded in the Perth & Mandurah, Bunbury and Albany regions. The lowest ratings were seen in the Wheatbelt region (Figure 29). The average safety rating of pools located further from the Perth metropolitan area tend to be lower, and also appears to be correlated with patronage, with higher patronage pools achieving with higher safety scores.

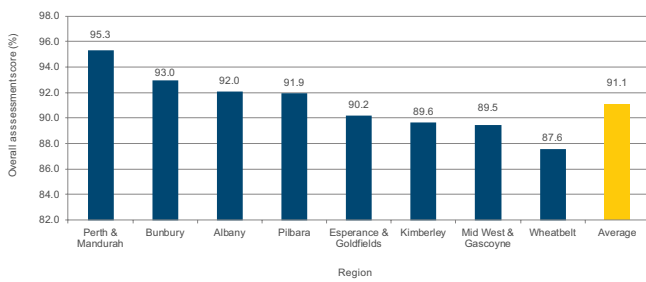


Figure 29: Overall assessment scores by region

Chemical safety (85.1%), water slides (89.5%) and special features (89.2%) continue to record the lowest scoring component for safety as presented in Figure 30. However average ratings have increased from 2015-16 by 1.1% for chemical safety, 1.4% for water slides and 2.0% for special features. The new safety requirements pertaining to inflatable play equipment that have only been included in the assessment in the last two years is likely to have affected the low scores for special features.

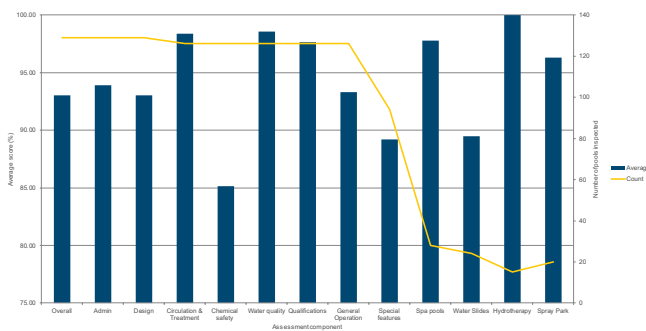


Figure 30: Average rating for each component based on most recent assessment

Overall safety rating and frequency

A reoccurring trend has been noted over the past few years relating to the number of safety assessments and the overall safety ratings, with scores increasing as the number of pool assessments increases. By the 4th assessment the average is above 90% and by the 8th and 9th assessments, safety scores are within 2% of reaching 100% (Figure 31).

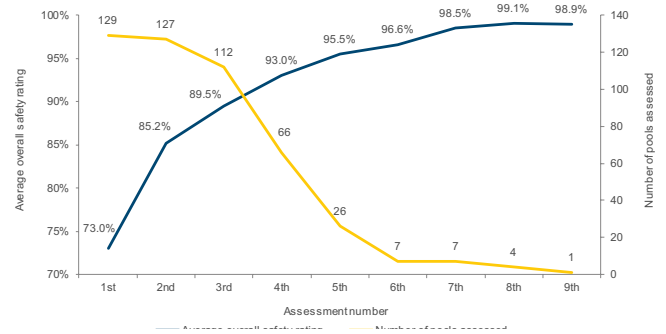


Figure 31: Average overall safety rating at each assessment

The most significant change in assessment scores is seen between the 1st and 2nd assessment by an average improvement of 12.3%. The more assessments completed, the lower the percentage of change (Figure 32).

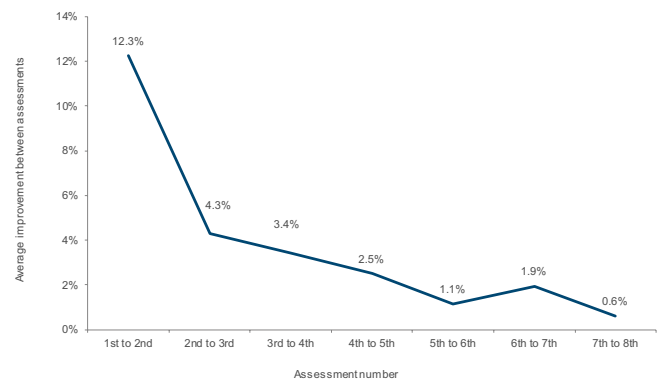


Figure 32: Change in overall safety rating by number of assessments conducted (%)

This year, some pools located in the Perth metropolitan area reached their 9th assessment, whilst regional pools are behind at their 7th assessment. It appears that regional pools tend to see a greater improvement in a shorter number of assessments, reaching on average 99% at their 7th assessment, whereas metropolitan pools on average reach 99% on their 8th assessment. The average increase in safety scores between 1st and 7th assessment was much greater for pools located in regional WA compared to those in the Perth metropolitan area (69.1% to 99.2%, compared to 83.8% to 98.9%, respectively), as presented in Figure 33.

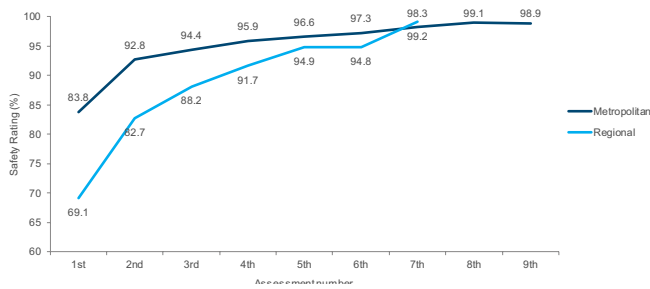


Figure 33: Overall safety rating by assessment number and location

Time between follow-up assessments and overall ratings

The more frequently assessments are performed at public swimming pools, the higher the average overall safety ratings tend to be. At 4-5 years and 7-8 years between assessments, the average follow-up score declines below 90% (Figure 34), which is consistent with previous years. Based on these results, it is recommended that safety assessments be completed at least once every three years to maintain high safety standards above 90%. Currently, 9% of pools have not been assessed in the past four years, five pools haven't been assessed in the past 4-5 years, four pools in the past 5-6 years and three pools have gone 7-8 years without an assessment.

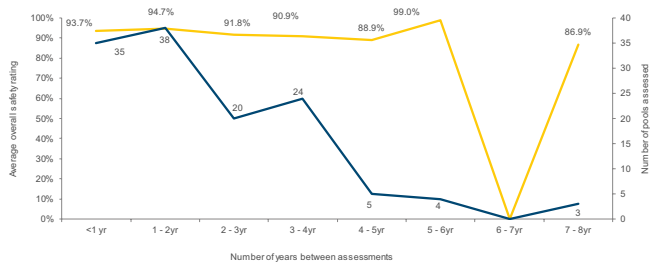


Figure 34: Overall safety rating score by years between follow-up

Administration, Design and Construction scores

Over the years, administration and design scores have remained the most consistent and in 2016-17, 64% of pools scored a perfect 100%. The number of pools scoring 100% decreased from 2015-16 where 73% of pools scored 100% however, 81% of pools in 2016-17 scored above 90%. The average administration scores have continued to increase over the years since the assessments have been performed (Figure 35). However, results have fluctuated across the years. As with the overall safety ratings, administrative scores on average tend to be higher for pools located in the Perth metropolitan area.

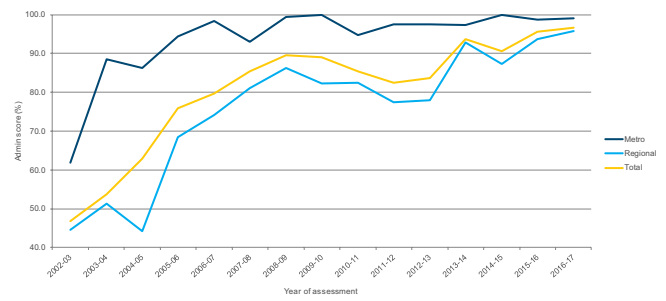


Figure 35: Average administration scores by location and year

As seen with overall safety ratings, the higher the number of assessments performed the higher the administration score. Although pools located in the Perth metropolitan area tend to have average scores higher than those located in regional WA, on the 7th assessment the average scores are equal at 100%. This indicates that despite their overall lower initial scores, pools located in regional WA improve their safety standards at a much quicker rate than those in the Perth metropolitan area, as represented in Figure 36.

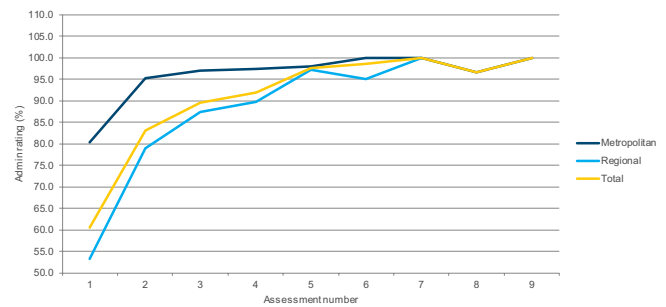


Figure 36: Average administration results by assessment number and location

In 2016-17, eight pools scored 100% for design and construction, with the average score being 93.6%. Based on the most current assessments scores to date, 17% of pools have scored 100% on their most recent assessment and 74% have scored above 90%. Pools located in the Perth metropolitan area record higher scores compared to those in regional WA, however, over time the gap in average scores has decreased (Figure 37).

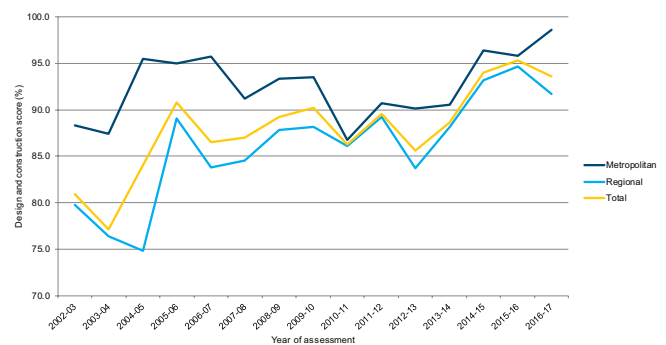


Figure 37: Average design and construction scores by location and year of assessment (%)

Interestingly, when analysed by assessment number, pools located in regional WA have a seen a consistent increase in average scores as the number of assessments performed increases. The average score on the 7th assessment is higher than metropolitan pools by 2.2% (Figure 38).

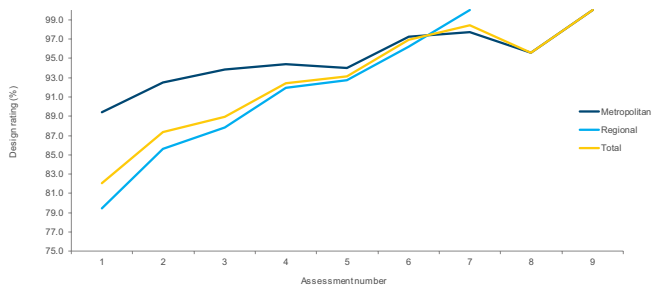


Figure 38: Average design results by assessment number and location

When separating the average scores by region, the Perth & Mandurah area recorded the highest average score for administration (98.8%), and design and construction (95.5%). There have been substantial improvements among average scores in the majority of regional areas with the average administration, and design and construction scores improving from last year.

On average the scores have increased from 2015-16 by 3.7% for administration and 1.6% for design and construction in regional areas. The Bunbury, Pilbara and Albany regions recorded the highest administration scores (95.5%, 95.5% and 94.5%, respectively) of the regional areas, well above the overall average of all pools within WA. The Esperance & Goldfields, Bunbury, and Pilbara regions recorded the highest average scores for design and construction (93.2%, 93.1% and 93.1%, respectively), as shown in Figure 39.

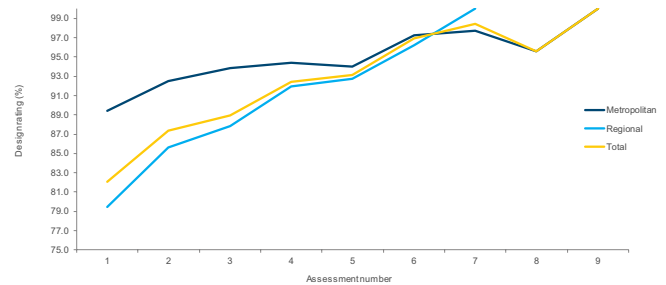


Figure 39: Most recent administration and design and construction score by region



FINDINGS AND RECOMMENDATIONS

- **Public pools are safe, so what's next?**

All swimming pools should aspire to achieve an overall safety score of 100%. The challenge is to sustain and execute this year-round. Compared to 2015-16, there has been a 75% improvement in overall safety ratings and a reduction in the number of pools scoring below 80% which is positive. However there is a need to encourage continued improvement whether in relation to overall safety scores or improvements in other areas to further improve safety. Investigations into additional safety assessment tools (e.g. Watch Around Water program implementation) should be undertaken to assist with this.

- **Water slides and special features.**

These components present additional challenges to centres that have these features. LIWA Aquatics and RLSSWA need to work with centres to ensure that they have a good understanding of the new regulations and assist them to make the necessary changes to improve safety, particularly as these components continue to receive the lowest safety scores.

- **Regular safety audits, at least every three years.**

The continuing focus is on engaging pools that haven't had an assessment in over four years, with a focus on those that haven't been assessed in 7-8 years.

- **All pools across WA to be assessed against the current safety standards.**

A remaining focus is to ensure that all pools are aligned with current safety standards to ensure the wellbeing of the public visiting the pool and its employees. There are currently six pools that haven't had an assessment conducted since 2010-11. These pools should be a priority for the upcoming year.



The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial statements. This includes not only sales and purchases but also expenses and income. The document also highlights the need for regular reconciliation of accounts to identify any discrepancies early on.

In addition, the document provides a detailed breakdown of the accounting cycle, which consists of eight steps. These steps range from identifying the accounting system to preparing financial statements. Each step is explained in detail, with examples provided to illustrate the process. The document also includes a section on the classification of assets and liabilities, which is essential for understanding the balance sheet.

Furthermore, the document discusses the importance of proper documentation and the use of supporting documents. It stresses that every transaction should be backed up by a valid receipt or invoice. This not only helps in verifying the accuracy of the records but also provides a clear audit trail. The document also touches upon the role of the accountant in ensuring compliance with tax laws and regulations.

Finally, the document concludes by emphasizing the value of a well-maintained accounting system. It states that accurate records are crucial for making informed business decisions, managing cash flow, and ensuring the long-term success of the organization. The document serves as a comprehensive guide for anyone looking to improve their accounting practices.



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