Royal Life Saving

THE ROYAL LIFE SAVING SOCIETY WESTERN AUSTRALIA INC

Everyone can be a lifesaver!

LEISURE INSTITUTE OF WA AQUATIC (INC.)

BIGGER, BETTER, SAFER:

A report on the Western Australian Aquatics Industry 2012-13

Saving Lives+

Social Enterprise and Community Service

Report prepared by the Royal Life Saving Society of Western Australia

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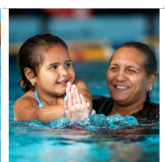


Acknowledgments

Thank you to the 65 aquatic centres across the state who completed the industry profile survey.

A special thank you to the 13 aquatic centres who supplied incident and patronage data for the 2012-13 season.

- Altone Park Leisure Centre
- Arena Joondalup
- Ballajura Aquatic Centre
- Bayswater Waves
- Beatty Park Leisure Centre
- Belmont Oasis Leisure Centre
- Challenge Stadium
- Gosnells Leisure World
- Mandurah Aquatic and Recreation Centre
- South Lakes Leisure Centre
- Bay of Isles Leisure Centre
- Geraldton Aquarena
- Leschenault Leisure Centre

Letter from Peter Leaversuch, General Manager of Planning

Public aquatic centres provide significant benefit in terms of community development, sport, recreation, health and fitness. The Royal Life Saving Society WA and Leisure Institute of WA (LIWA) have collaborated for a number of years on this unique research project in order to;

1. Better understand the industry, its drivers and to quantify key characteristics,
2. Monitor risks to patrons safety and identify trends,
3. Evaluate compliance to industry benchmarks and standard operating procedures.

The report format has three parts corresponding with the above. It has been prepared with an intended audience that includes;

- Pool managers,
- Government both Local and State,
- Local Government Insurance Service.

This project underpins Royal Life Saving's knowledge and expertise. It guides the ongoing development of programs and services ensuring they remain both effective and relevant. It also provides the intelligence both LIWA and Royal Life Saving need to credibly perform their respective leadership and advocacy roles.

Highlights of this year's report include;

- Annual patronage at public pools exceeded 10 million visits,
- Annual expenditure of $65.7 million,
- Over 3,000 full time, part time and casual positions,
- Zero drowning deaths in public aquatic centres for the tenth consecutive year,
- Continued improvement in industry practice and compliance.

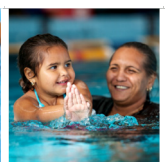
The need for this information will grow into the future. Stakeholders, in particular government (both State and Local), will expect a demonstrable return on investment. Future decisions for funding will also be linked to the capability of the industry to deliver results more effectively than alternatives.

Many people have made a significant contribution to this report. I would like to acknowledge Amanda Juniper in particular.

Peter Leaversuch

General Manager – Planning

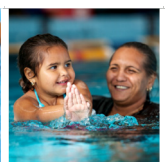
Royal Life Saving Society Western Australia



SUMMARY OF FINDINGS & RECOMMENDATIONS

PART 1: STATE OF THE INDUSTRY

	**1. Aquatic centres are an important resource for the WA community.**	High patronage shows that public swimming pools continue to be an important resource for the WA community in both regional and metropolitan areas.
	**2. Teach high risk groups how to swim.**	A high number of swimming and water safety programs are delivered throughout the state however there needs to be more that are accessible to people with disability and that target at-risk groups such as migrants, Aboriginal people and the elderly.
	**3. Most patrons are children.**	Children are a large proportion of patrons particularly in regional areas (50%) and are the main victims (80%) of incidents at public pools. Therefore carer-to-child supervision ratios and other programs that promote safety in this group such as Watch Around Water should be put in place at all pools.
	**4. Water usage is trending down.**	Overall, water usage by the aquatics industry in WA is trending downwards, however further ways to reduce this, for example the Waterwise Aquatic Centre Program, must be considered and implemented across the industry particularly at centres where water consumption is increasing.
	**5. Train pool operators and lifeguards locally.**	While there appears to be sufficient numbers of qualified Pool Operators and Lifeguards in the metropolitan area, most regional areas have fewer than 1.5 times the number required. Continued efforts need to be made to promote the uptake of training locally such as working with schools to identify potential candidates for traineeships and organising local training courses.
	**6. Promote swim instructors employment opportunities.**	There appears to be sufficient numbers of qualified swim instructors in WA, particularly in the metropolitan area, however ways of engaging these instructors to take up employment in the industry need to be developed.
	**7. More information about the labour force is needed.**	A better understanding of the aquatics labour force in WA is required, such as measuring the rate of staff turnover and determining the number of qualified people who are actively seeking employment in the industry and in which regions. These types of questions should be explored more closely in future research so that effective training, recruitment and retention strategies can be developed.


PART 2: INCIDENTS AT AQUATIC CENTRES

For the Aquatics Industry

1. Incidents at aquatic centres are common.

High patronage shows that public swimming pools continue to be an important resource for the WA community in both regional and metropolitan areas.

2. Children and young adults are at highest risk.

80% of major and minor incidents occur to victims are aged 0 – 19 years and while children are the main users of aquatic centres (30 – 50%) these incident rates are still disproportionately high.

3. Major incidents are rare but require specialised skills.

On the whole, WA aquatic centres are very safe places; however major incidents still happen with 140 occurring in 2012-13 equating to more than one for every centre in WA. This highlights the need for regularly staff training in advanced first aid in order to keep these essential skills up to date.

For the Incident Research Project

1. Increase participation by aquatic centres so that the sample represents 50% of total patronage in WA.

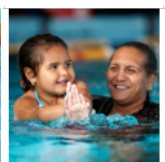
2. Trial new methods of data collection that are less onerous for aquatic centre staff.

3. Collect more detail about the nature of incidents so that more in-depth analysis can be done and reported back to aquatic centres.

For example;

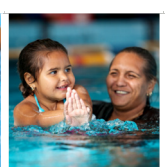
a. What does inappropriate behaviour mean
b. Was the victim an employee or public patron?
c. Where did it occur? In an aquatic area or other?
d. What type of incident was it?
e. What were the causes? How could this incident have been prevented?

4. Implement changes to the report as suggested by aquatic centre staff.


PART 3: SAFETY ASSESSMENT RATING

	**1. Safety Ratings are high at participating centres.**	For the fourth consecutive year, average Safety Ratings have been greater than 85% with the average for the 41 centres assessed in 2012-13 being 87.7% which is considerably higher than the initial average of 65% ten years ago. However, when looking at most recent ratings for all aquatic centres, around 20% of centres have a current rating of less than 80% and should continue to work with RLSSWA to improve their ratings.
	**2. Administration scores are high.**	The average General Administration score has increased dramatically from 45.6% in 2002-03 to 83.9% in 2012-13 with nearly a third of all centres achieving 100% in 2012-13.
	**3. Ongoing assessments lead to improved ratings.**	Safety Ratings appear to increase with every assessment conducted with centres that have had 5 visits achieving an average rating of 99%.
	**4. Assessments should be done at least every 3 years.**	Safety Ratings appear to be maintained above 85% when the length of time between assessments is 3 years or less. This trend is even stronger with the General Administration component of the rating. Just over 20% of public aquatic centres have not had inspections within the last three years and should be encouraged to undergo assessment in the next one to two years.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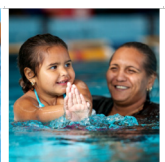


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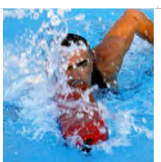


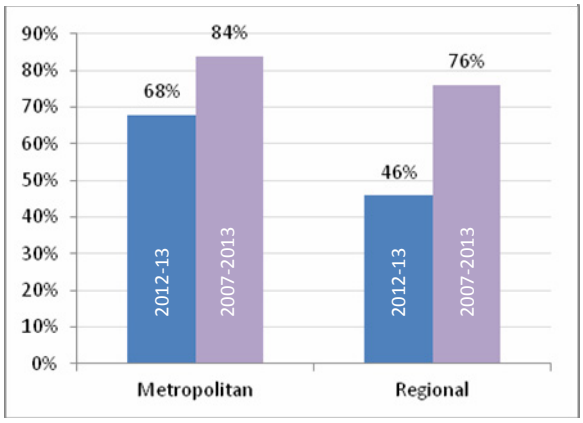
PART 1: STATE OF THE INDUSTRY 2012-13

PART 1: State of the Industry 2012-13

Participation in the Leisure Institute of WA industry survey

This year's LIWA industry survey had a satisfactory response rate with 51% of all public aquatic centres in WA returning a completed survey. This is the highest number (65) of centres since the survey began in 2007-08. The response rate was much higher for metropolitan pools (68%) than regional (46%). This is the fourth LIWA industry survey since 2007-08 and nearly 80% of pools have returned at least one survey in this time. The data from all four surveys has been used to compile this report.

Figure 1: Response rates to the LIWA Industry Survey



Aquatic facility number and type

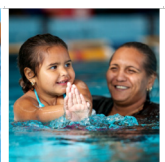
There are 127 public (group 1) aquatic facilities in WA which have been categorised into 3 broad types:

Table 1: Aquatic facility types in WA

Aquatic Facility category	Description	No. in WA
Type 1:	Predominantly lap-swimming pools	86
Type 2:	Have both a lap pool and leisure pool	24
Type 3:	Have multiple lap pools and/or leisure pools	17
		127

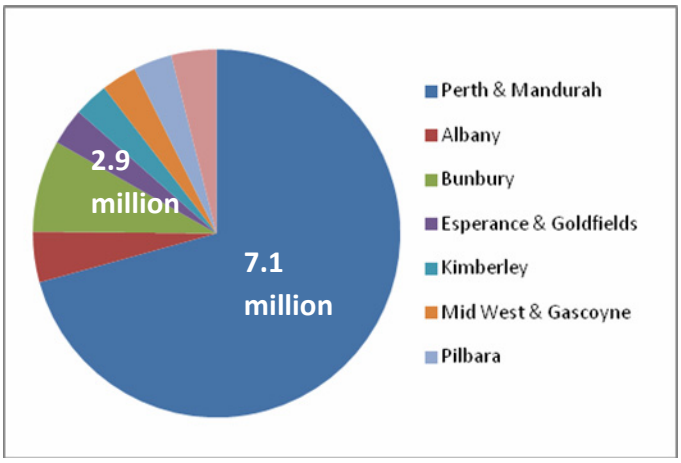
The purpose of making these categories is to allow for more appropriate comparisons between pools, however the characteristics of aquatic facilities e.g. patronage, expenditure and water consumption still vary greatly within these categories.

Most of WA's public aquatic facilities can be found in non-metropolitan areas, however 84% of these regional pools are small Type 1 facilities. Metropolitan aquatic facilities are mainly Type 2 and 3.


Annual patronage

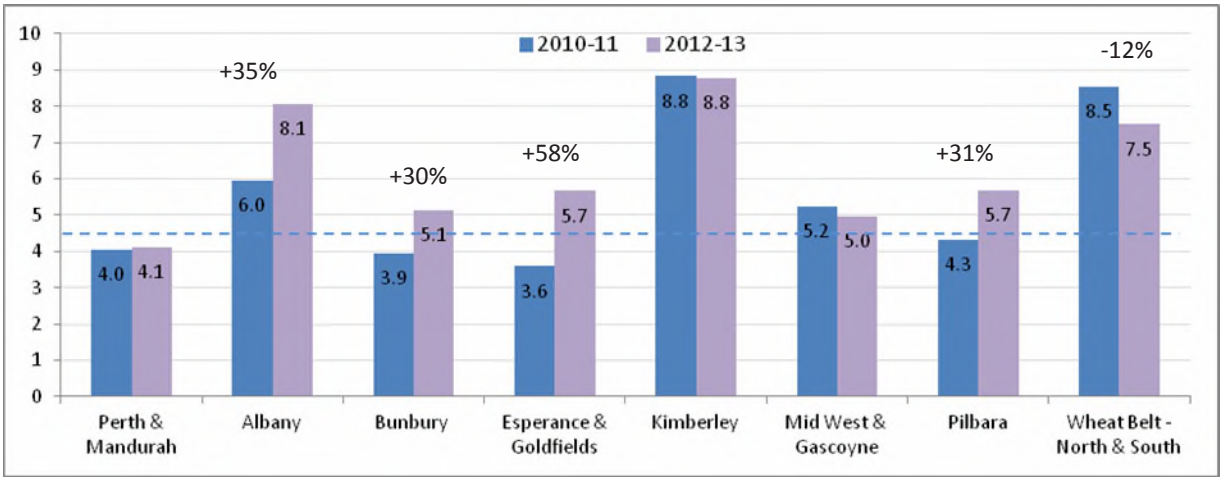
Figure 2: Total Patronage for 2012-13



Public swimming pools continue to be important community facilities that are utilised frequently for leisure, sport and recreation. In 2012-13 the estimated patronage at public pools in WA increased to over 10 million visits a year; this is 6% higher than the 2010-11 estimate and equates to approximately 4 to 5 visits per year per person in WA. Seven million of these visits were to metropolitan pools.

Aquatic facilities in the Albany, Kimberley and Wheat Belt regions receive considerably more visits per head of population than the state average of 4.5. Patronage per head of population increased or stayed roughly the same as 2010-11 in all areas except the Wheat Belt which decreased by one visit a year.

Figure 3: Patronage per head of population by region



Patronage varies greatly within centre type categories particularly when comparing metropolitan and regional areas. Figure 4 shows the range in patronage by aquatic facility type and by area. Not surprisingly, patronage increases by facility type and tends to be higher at metropolitan pools. The larger metropolitan type 3 pools experience the greatest variability in patronage. While categorising WA pools by facility type is useful, Figure 4 highlights that there are still key differences and variability within the categories.

Figure 4: Range in annual patronage by facility type: Metropolitan vs. Regional

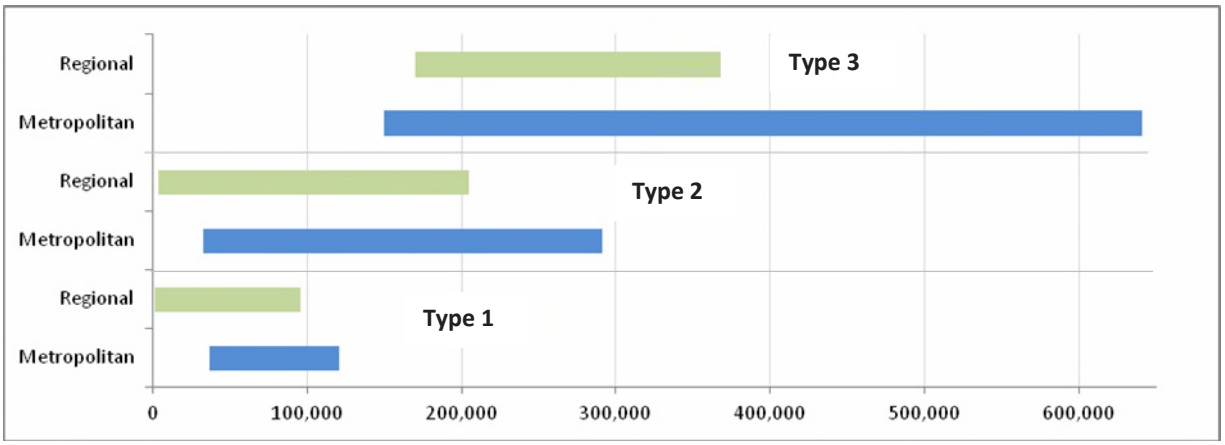
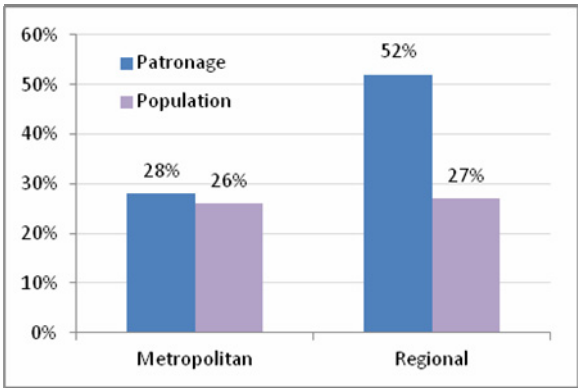
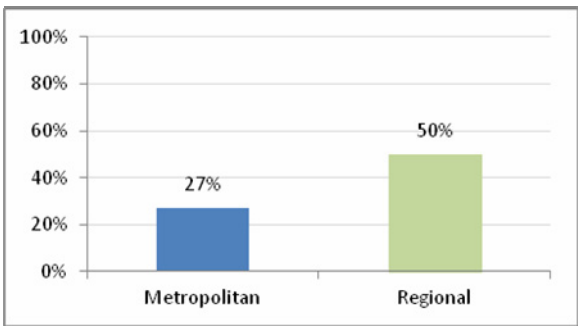


Figure 5: Proportion of patronage and population that are children



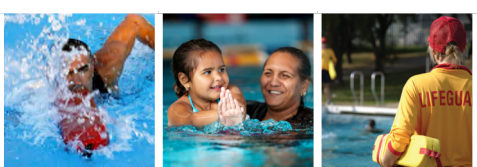
A third of patrons at public aquatic facilities are children making safety programs that target this vulnerable group, such as Watch Around Water, very important. On average, regional pools are visited by a much higher proportion of children than are metropolitan pools; 52% compared with 28%. This is despite similar population percentages of children in metropolitan and regional areas.

Figure 6: Aquatic facilities with a carer-to-child ratio



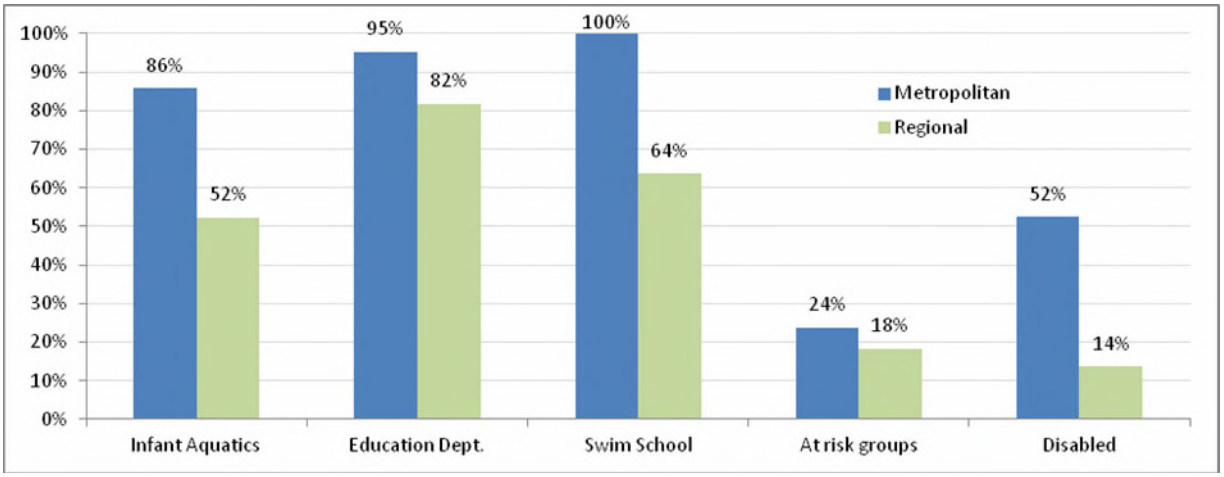
Despite the high percentage of patrons under the age of 18 years, less than half of aquatic facilities surveyed reported having a carer-to-child ratio in place for children under 10 years old. This policy is more common at regional pools than metropolitan. The average ratio was 1:5 but ranged from 1:1 to 1:12. It is important for all public swimming pools to develop a carer to child ratio that is appropriate for their community. As a guide, LIWA recommends a ratio of 1:4 but the number may be adjusted to suit the individual needs of each pool and community. The policy needs to be carefully balanced so that it promotes supervision but does not become a barrier to accessing the pool.

Public aquatic facilities play a pivotal role in teaching WA children swimming and water safety. All metropolitan pools reported having their own swim school (Maylands Waterland excluded). The majority of aquatic centres reported that Education Department swimming lessons (in-term and/or Vacswim) were conducted at their pool. Specific programs for people with a disability were limited in



regional areas and a lower proportion of aquatic centres offered specific learn to swim classes for at risk groups including the elderly and people of Culturally and Linguistically Diverse (CaLD) backgrounds choosing to cater to for these groups via main-stream lessons. Given the increasing diversity of the WA population with more migrants making WA home it is essential that these groups have access to swimming and water safety education programs.

Figure 7: Proportion of aquatic centres delivering Learn to Swim programs



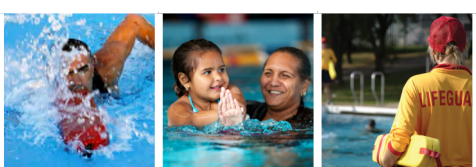
Case study 1: Women-only swimming and water safety lessons

Limited water safety awareness combined with alarmingly low participation levels in swimming and water safety lessons are contributing factors in the over representation of CaLD community members in WA drowning statistics.

The Royal Life Saving Society WA in partnership with the Department of Sport and Recreation, Metropolitan Migrant Resource Centre, Ishar Multicultural Women's Health Centre and Women's Health and Family Services has been conducting women-only swimming and water safety lessons for women from CaLD backgrounds.

The program is in its 4th year and is conducted across the Perth metropolitan area at Balga Leisurepark, The Swim School Merriwa and Cannington Leisureplex. In 2013, 75 women will participate in the program, most for the very first time.

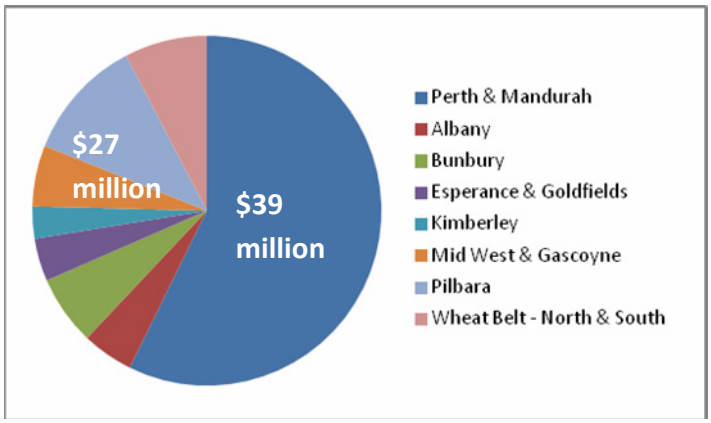
The program format has been specifically designed to overcome barriers to participation such as cost, accessibility, awareness, and cultural constraints. Importantly, the program teaches a range of skills in swimming, water safety, survival and basic rescue; essential skills to safely enjoy the WA climate and lifestyle.



Annual Expenditure

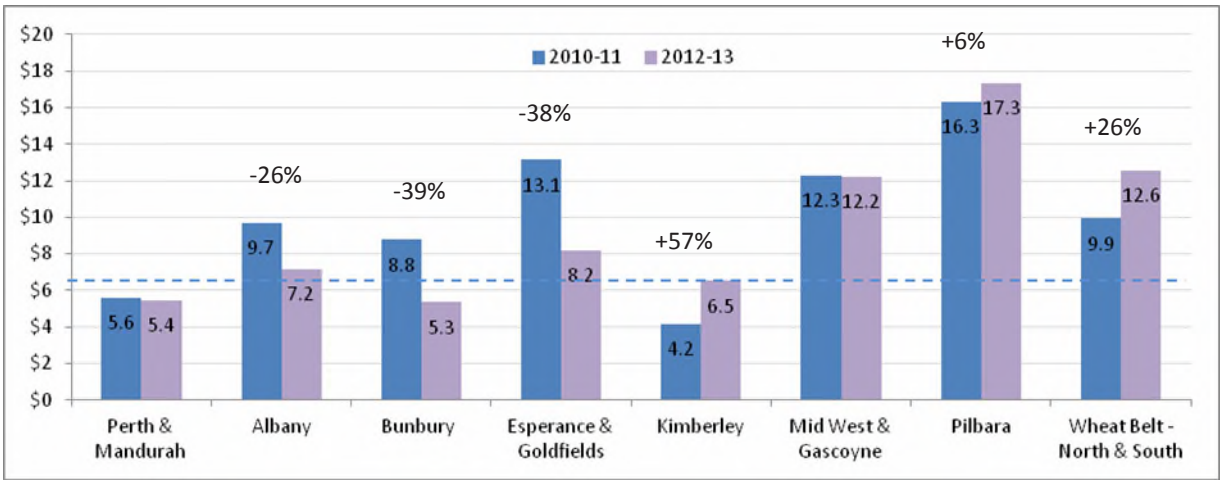
Annual expenditure increased by roughly 4% in 2012-13 taking the total for the aquatics industry to $65.7 million. Over half of this ($39 million) was spent in the metropolitan area (Perth and Mandurah).

Figure 8: Annual expenditure for 2012-13



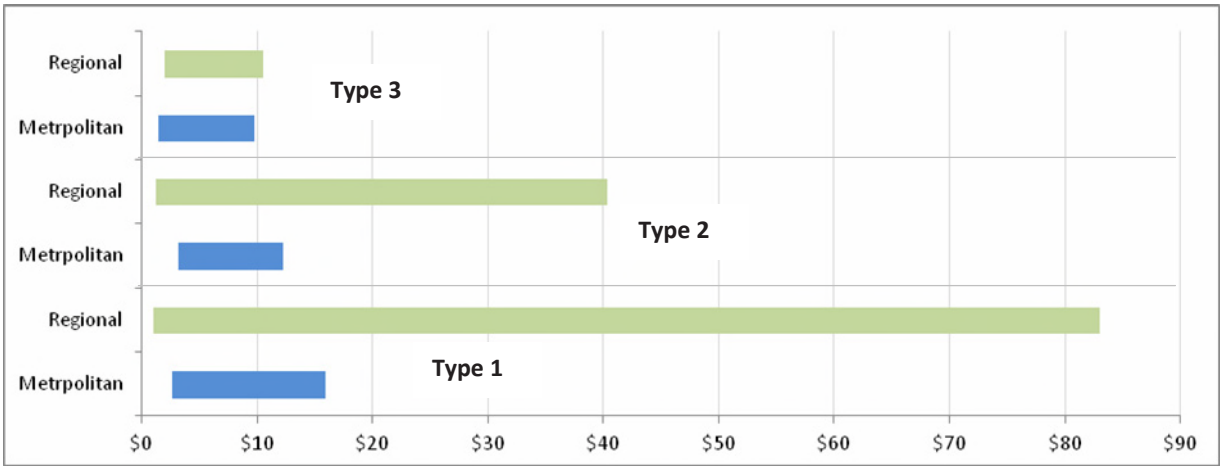
Expenditure per patron was close to the state average of $6.50 for most regions except the Mid West/Gascoyne, Pilbara and Wheat Belt which are considerably higher. All regions reported a decrease in rate of expenditure since 2010-11 except for the Kimberley, Pilbara and Wheat Belt which saw an increase. The Pilbara continues to have the highest rate of expenditure and is now nearly 3 times the state average.

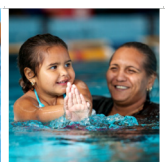
Figure 9: Expenditure per patron by region



Expenditure per patron is very similar across all three types of aquatic facilities in the metropolitan areas. Figure 10 shows the range in expenditure per patron by aquatic facility type and by area. In the metropolitan area expenditure per patron is quite similar for all three pool types but tends to be higher at the small Type 1 pools. Regional Type 3 centres have very similar rates of expenditure as their metropolitan counterparts however expenditure per patron increases dramatically as facility size decreases. This is most likely because smaller aquatic facilities exist in smaller and more remote WA communities therefore decreasing patronage but increasing fixed costs.

Figure 10: Range in expenditure per patron by aquatic facility type and by area



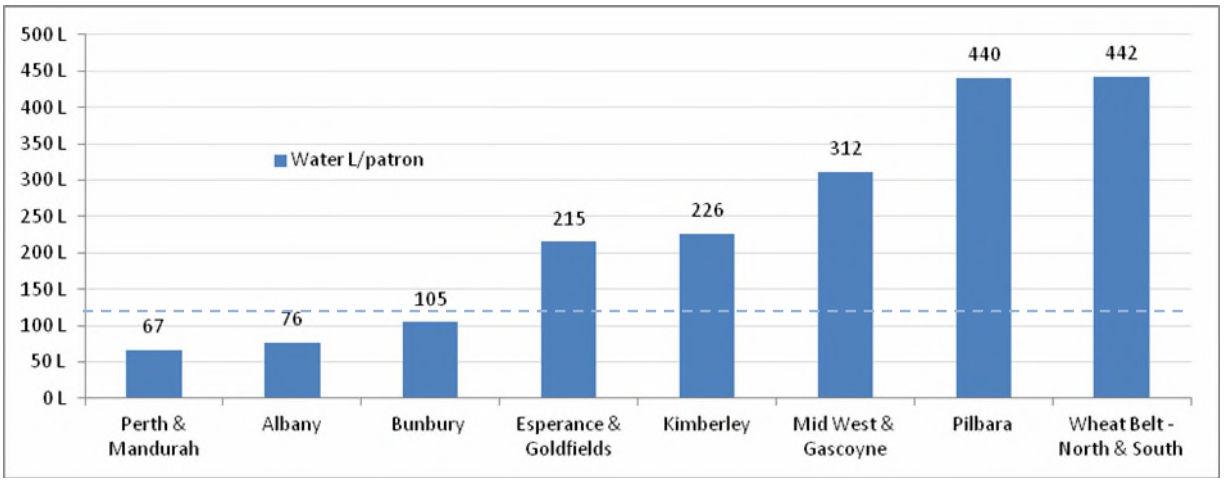


Water consumption

The WA aquatics industry uses a large amount of water every year with roughly 1.2 million kL of scheme water used in 2011-12 which equates to around 115L per patron. This estimate excludes groundwater (bore) which is used by many centres (particularly in the metropolitan area) for irrigation of gardens and landscape so overall water use would be much higher.

Scheme water usage figures for 2012-13 were not available at the time of preparing this report so a measure of actual water consumption per patron could not be done. Instead estimates were done using 2011-12 water figures paired with 2012-13 patronage numbers. These estimates highlight the significant disparity in water consumption per patron between metropolitan and regional areas and suggest that rates of water use can be as much as 6 times higher in regional areas.

Figure 11: Estimates of water consumption per patron



While these levels of water use are high, public pools across the state are making changes to decrease consumption. Nearly all (94%) of the aquatic facilities surveyed indicated that they had implemented some kind of water saving strategy in line with suggestions from the Water Corporation.

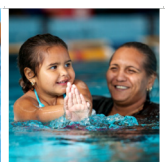
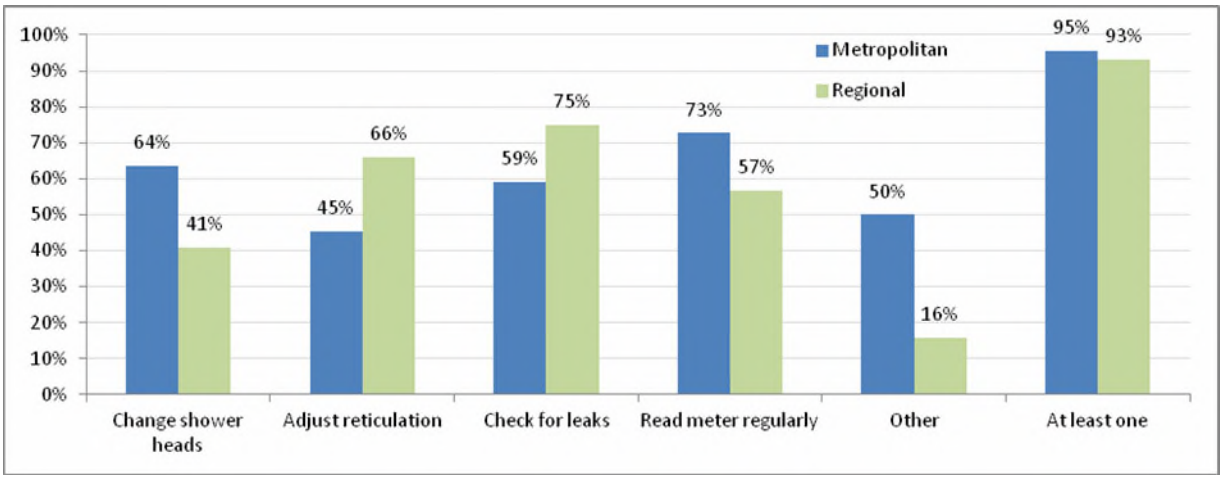



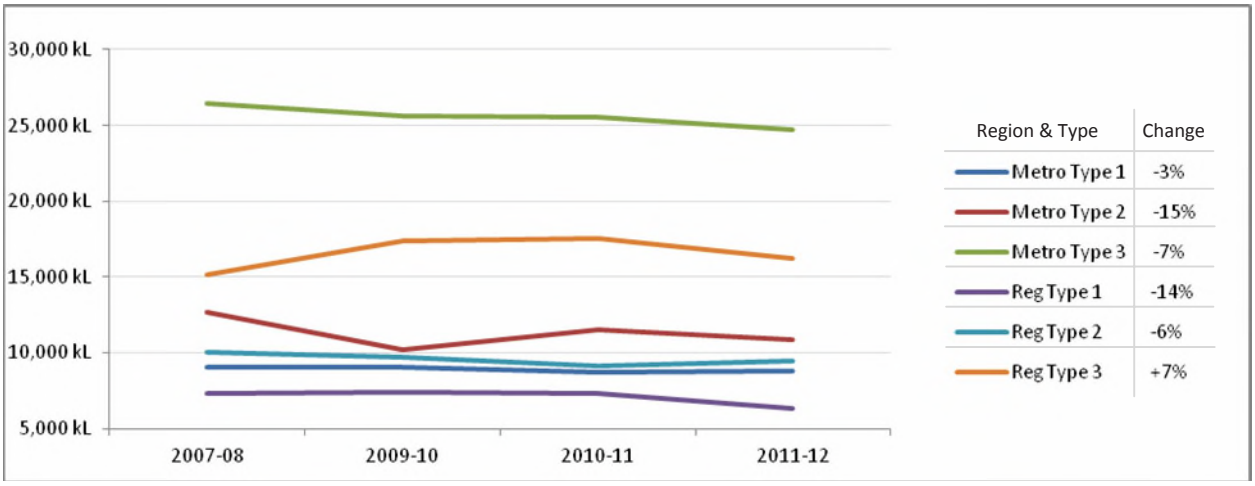

Figure 12: Proportion of aquatic centres that have implemented water saving strategies



These changes appear to be translating into real reductions in total water usage by the aquatics industry with the Water Corporation reporting a 12% decrease in annual water consumption since 2008.

Annual water consumption figures were available for 103 public aquatic facilities between 2007-08 and 2011-12. Amongst this sample, average water consumption has remained fairly consistent since 2007-08 although there does seem to be a trend downwards. Metropolitan Type 2 facilities and Regional Type 1 facilities both saw decreases of over 10%. Average water consumption decreased at metropolitan Type 3 pools but this is most likely due to closures at Beatty Park in 2011-12.

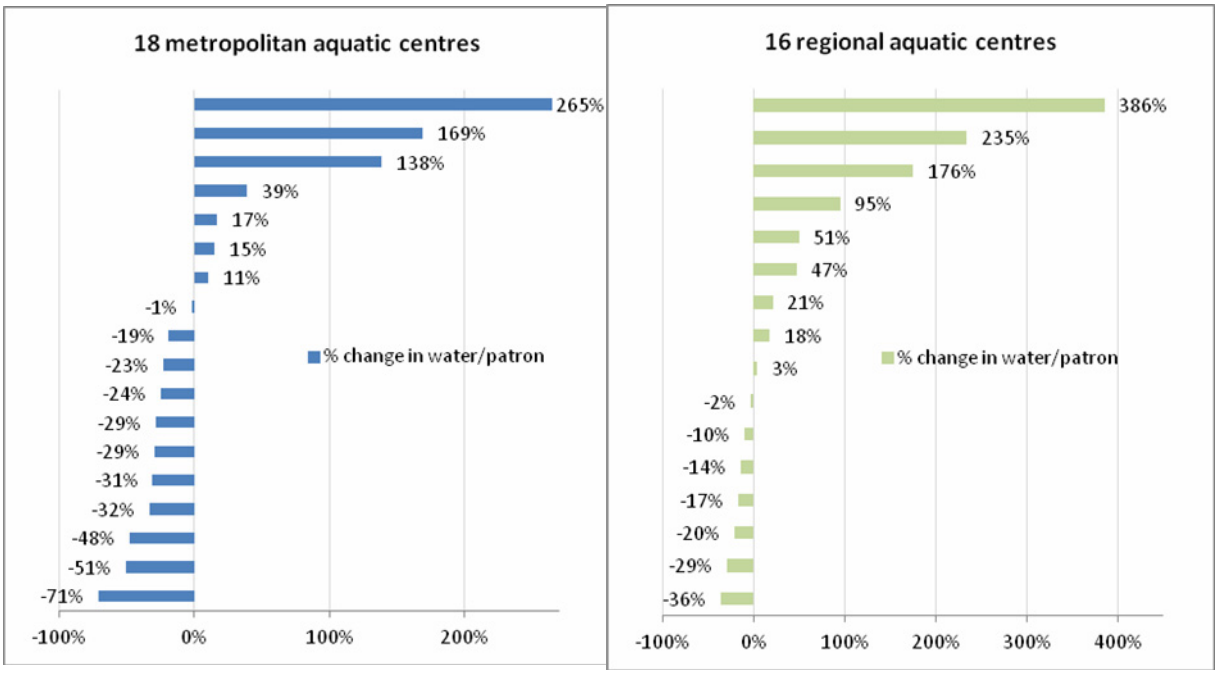
Figure 13: Average annual water consumption at 103 aquatic facilities by facility type and area



Of these 103 aquatic centres, 34 provided total annual patronage at least twice since 2007-08. These patronage figures were matched with corresponding water consumption figures for that year to calculate two snapshots of water usage per patron; an initial and a follow-up. The percentage change between these two water consumption snapshots is shown in Figure 14. Approximately 60% of metropolitan and 40% of regional centres reported a decrease in water use per patron in this time. A considerable number (9) of these pools have made decreases of 25% or more with one centre

decreasing its usage by 71% per patron. The higher number of centres reporting decreases in the metropolitan areas is probably due to recent refurbishments at these facilities that include water saving technology and infrastructure. A number of centres have also reported large increases in water use per patron however in most cases this was due to significant decreases in patronage at the centre.

Figure 14: Change in water use per patron at a sample of metropolitan and regional pools



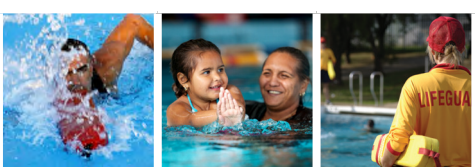
The significant reductions made by some pools (up to 71%) indicate that the industry can continue to decrease the rate of water usage by adopting best practice programs such as the Water Corporation and LIWA Aquatics Waterwise Aquatic Centre Program.

Case study 2: Water reductions at Manjimup Regional Aquacentre

Over the past few years, Manjimup Regional Aquacentre has been making changes to get their water consumption down and their hard work is translating into significant reductions. Since 2007, water used for every visitor to the centre has decreased by nearly 30%.

The biggest reductions in water usage and costs have come through the fixing of leaks. Staff from the Water Corporation visited the centre and detected some significant leaks that were soon fixed. The Aquacentre has also been retrofitted with water saving push button showers.

Power bills will soon be going down too at the Manjimup Aquacentre as they are currently installing a Geothermal Heating system. This technology draws heat from the ground and has fewer losses than existing air source heat pumps making it more energy efficient. The project is expected to be completed in late October 2013 and save the centre $35,000 each year.



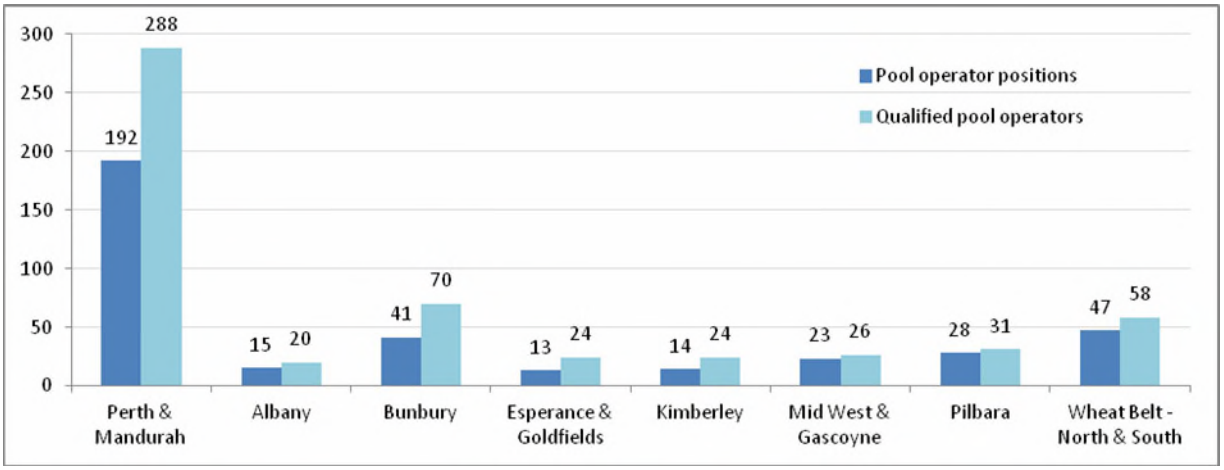
Labour Force

There are over 3000 full time, part time and casual positions in the WA aquatics industry including support staff such as administrators, cleaners, and assistants.

Data on the number of qualified pool operators, lifeguards and swim instructors was provided by LIWA, RLSSWA and AUSTSWIM respectively. These figures are probably an overestimate as they do not account for individuals who may no longer be seeking employment in the aquatics industry. In addition to this the location of these qualified people relates to where they were residing at the time of doing the qualification not their current location so actual figures for each region may be different. Only absolute numbers have been reported here however in future years we hope to explore rates of staff turnover as this has been identified as a common issue in the aquatics industry.

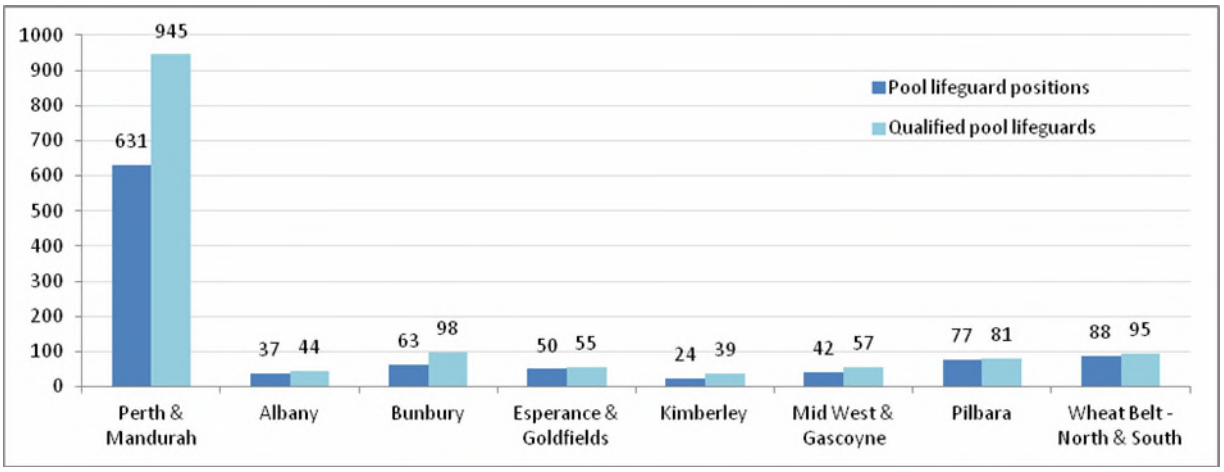
The WA aquatics industry requires an estimated 373 Pool Operators and there is currently 541 registered in WA. The Perth/Mandurah, Bunbury, Esperance/Goldfields and Kimberley regions have close to twice the number of pool operators required while the remaining regions have much fewer.

Figure 15: Number of pool operator positions vs qualified operators by region



There is currently an estimated 1,012 positions for Pool Lifeguards in the WA aquatics industry and there are just over 1,400 qualified lifeguards accredited in WA. Only the Perth/Mandurah, Bunbury and Kimberley regions appear to have sufficient pools of qualified lifeguards while the remaining regions have only slightly more than is required.

Figure 16: Number of pool lifeguard positions vs qualified lifeguards by region



An estimated 1,027 Swim instructors are required each year by the WA aquatics industry and there are currently more than 2,000 qualified in WA. Over 70% of these are from the Perth and Mandurah regions. All of the regions have between 1.5 to 2 times the number of swim instructors required.

Figure 17: Number of swim instructor positions vs qualified instructors by region

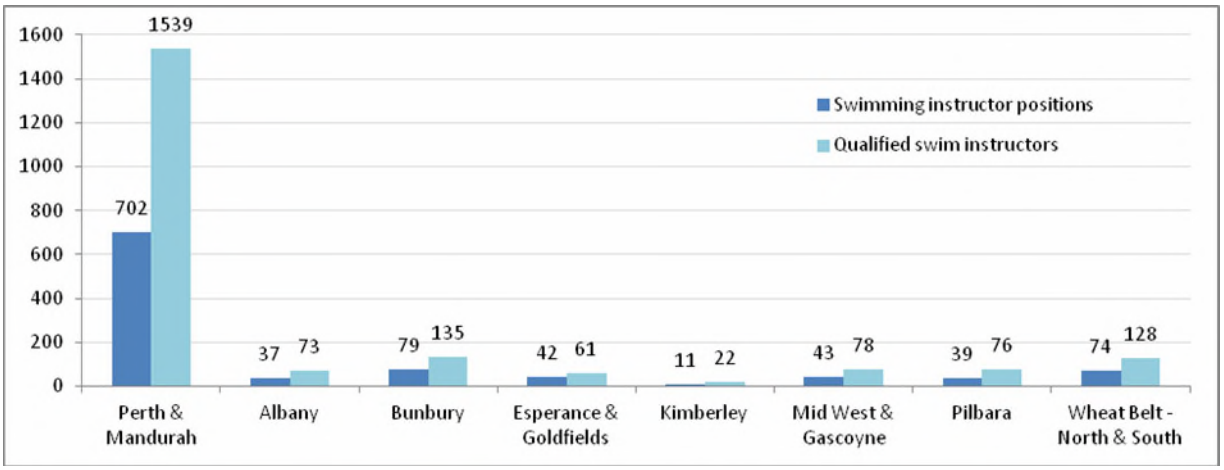
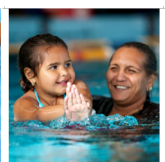


Table 2: Ratio of staff required to Qualified personnel by region

Table 2 shows the ratio of qualified people for each position required by region. The regions with less than 1.5 qualified personnel for each position required have been highlighted. Overall, qualified pool operators and pool lifeguards are quite scarce in most non-metropolitan areas with only a few more than the required positions in these areas. However, qualified swim instructors appear to be relatively abundant with close to twice as many as required positions across all areas of the state.

	Pool operators	Pool lifeguards	Swim instructors
Perth & Mandurah	1.5	1.5	2.2
Albany	1.3	1.2	2.0
Bunbury	1.7	1.6	1.7
Esperance & Goldfields	1.8	1.1	1.5
Kimberley	1.7	1.6	2.0
Mid West & Gascoyne	1.1	1.4	1.8
Pilbara	1.1	1.1	1.9
Wheat Belt	1.2	1.1	1.7
Total in WA	**1.5**	**1.4**	**2.1**


Findings and Recommendations

1. **Aquatic centres are an important resource for the WA community:** High patronage shows that public swimming pools continue to be an important resource for the WA community in both regional and metropolitan areas

2. **Teach high risk groups how to swim**. A high number of swimming and water safety programs are delivered throughout the state however there needs to be more that are accessible to people with disability and that target at-risk groups such as migrants, Aboriginal people and the elderly.

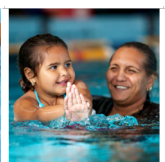
3. **Most patrons are children.** Children are a large proportion of patrons particularly in regional areas (50%) and are the main victims (80%) of incidents at public pools. Therefore carer-to-child supervision ratios and other programs that promote safety in this group such as Watch Around Water should be put in place at all pools.

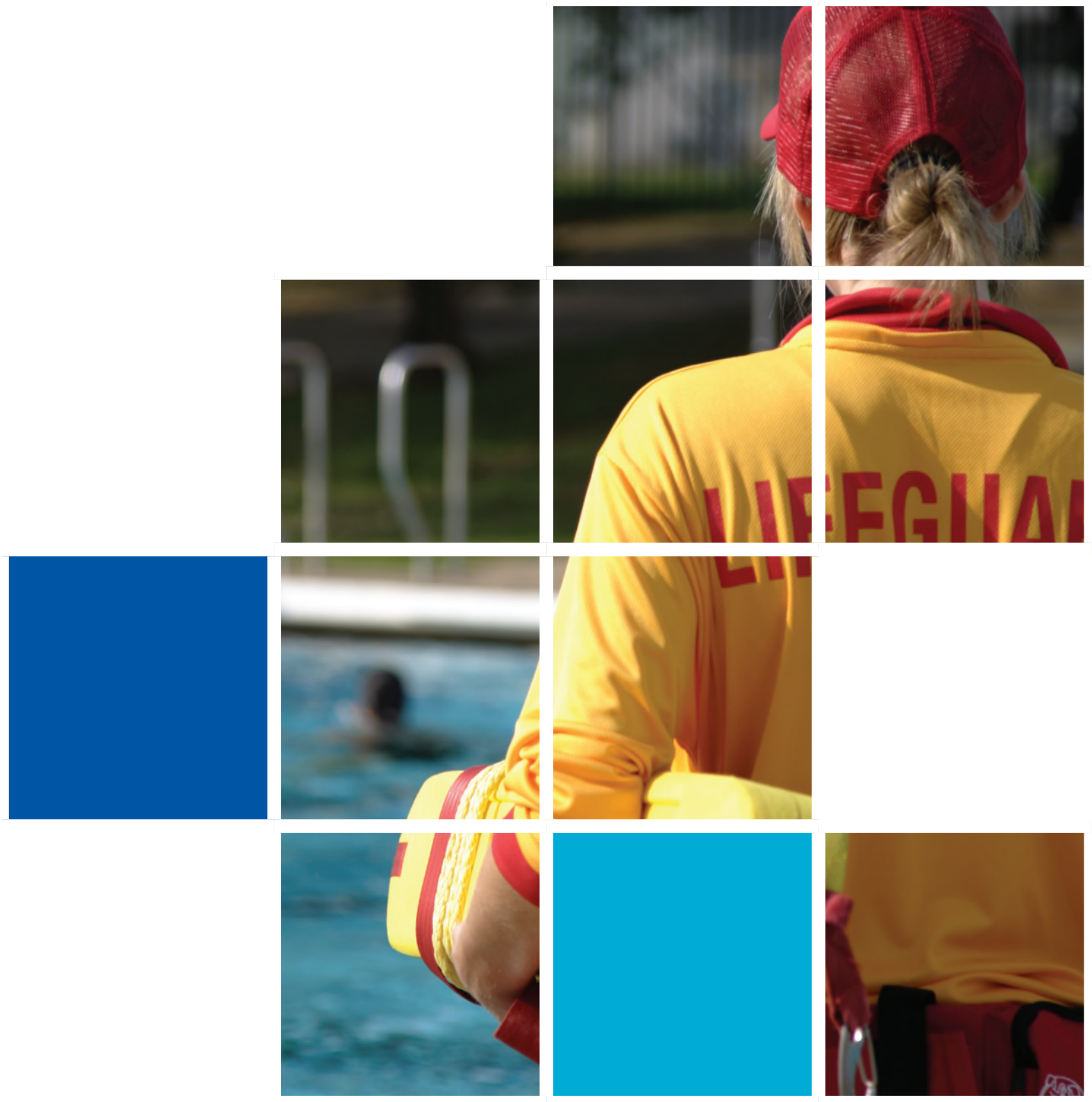
4. **Water usage is trending down.** Overall, water usage by the aquatics industry in WA is trending downwards, however further ways to reduce this, for example the Waterwise Aquatic Centre Program, must be considered and implemented across the industry particularly at centres where water consumption is increasing.

5. **Train pool operators and lifeguards locally.** While there appears to be sufficient numbers of qualified Pool Operators and Lifeguards in the metropolitan area, most regional areas have fewer than 1.5 times the number required. Continued efforts need to be made to promote the uptake of training locally such as working with schools to identify potential candidates for traineeships and organising local training courses.

6. **Promote swim instructors employment opportunities**. There appears to be sufficient numbers of qualified swim instructors in WA, particularly in the metropolitan area, however ways of engaging these instructors to take up employment in the industry need to be developed

7. **More information about the labour force is needed.** A better understanding of the aquatics labour force in WA is required, such as measuring the rate of staff turnover and determining the number of qualified people who are actively seeking employment in the industry and in which regions. These types of questions should be explored more closely in future research so that effective training, recruitment and retention strategies can be developed.

PART 2: INCIDENTS AT AQUATIC CENTRES

PART 2: Incidents at aquatic centres

Participating aquatic centres in 2012-13

A total of 13 aquatic centres provided RLSSWA with incident data for the 2012-13 season (listed below). Data from this sample of aquatic centres is a reasonable representation of all WA pools as these centres received roughly 30% of total patronage for 2012-13, however it includes only 3 regional pools and no small type 1 facilities. Data supplied by these centres through the industry profile survey has also been used to interpret the incident data. One centre did not supply patronage data so had to be excluded from calculations of number of incidents per patron.

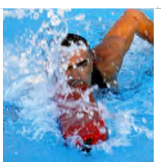
Next year we aim to increase the number of aquatic centres participating in the research so that we have 50% of all visits to WA pools represented.

Table 3: Aquatic centres participating in the 2012-13 incident research

Aquatic Centre Name	Type	Region	Area
Altone Park Leisure Centre	2	Perth - North East	Metropolitan
Arena Joondalup	2	Perth - North West	Metropolitan
Ballajura Aquatic Centre	2	Perth - North East	Metropolitan
Bayswater Waves	3	Perth - North East	Metropolitan
Beatty Park Leisure Centre	3	Perth - Inner	Metropolitan
Belmont Oasis Leisure Centre	2	Perth - South East	Metropolitan
Challenge Stadium	3	Perth - Inner	Metropolitan
Gosnells Leisure World	2	Perth - South East	Metropolitan
Mandurah Aquatic and Recreation Centre	3	Mandurah	Metropolitan
South Lakes Leisure Centre	2	Perth - South West	Metropolitan
Bay of Isles Leisure Centre	2	Esperance	Regional
Geraldton Aquarena	3	Mid West	Regional
Leschenault Leisure Centre	2	Bunbury	Regional

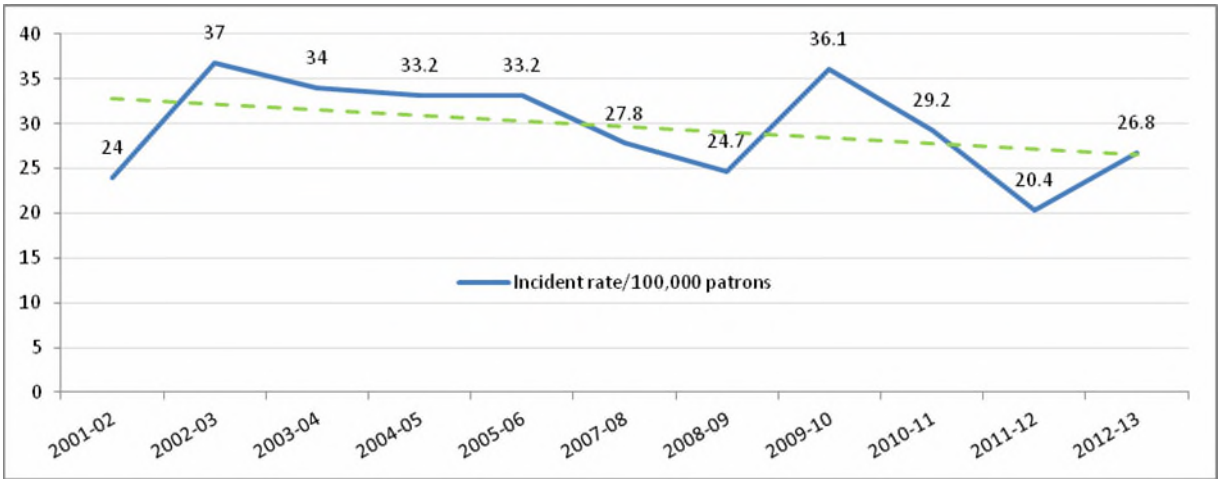
Overall figures

For the tenth consecutive year there have been no drowning deaths in public aquatic centres. The safety of aquatic centres in WA continues to improve with incident rates trending downwards since 2001-02. Despite this, incidents continue to be quite common with the annual incident rate for 2012-13 being 26.8 incidents per 100,000 patrons. Based on the estimated annual patronage of 10 million visits a year this equates to over 2600 minor and major incidents at WA public aquatic centres. Of these incidents 5%



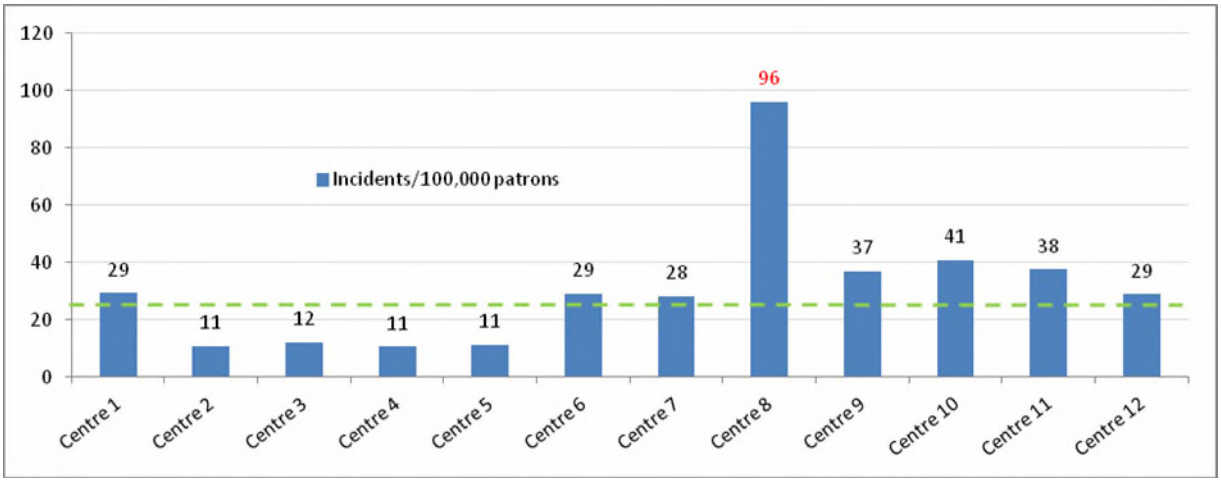
were defined as being major which equates to roughly 140 in WA in 2012-13 (incident rate of 1.4 per 100,000 patrons).

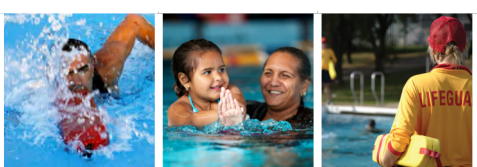
Figure 18: 10 years of aquatic centre incident data



Incident rates varied across participating aquatic centres from 11 to 96 per 100,000 patrons. The majority of the aquatic centres had incident rates around or below the overall incident rate of 26.8, however, one centre (Centre 8) had over three times greater. This is most likely because of differences in reporting, for example, centre 8 could be recording incidents that other centres deem not necessary to report. However more detailed information about each incident needs to be collected as part of the research in order to explore why this centre might have such higher rates compared with other centres.

Figure 19: Annual incident rates at 12 WA aquatic centres

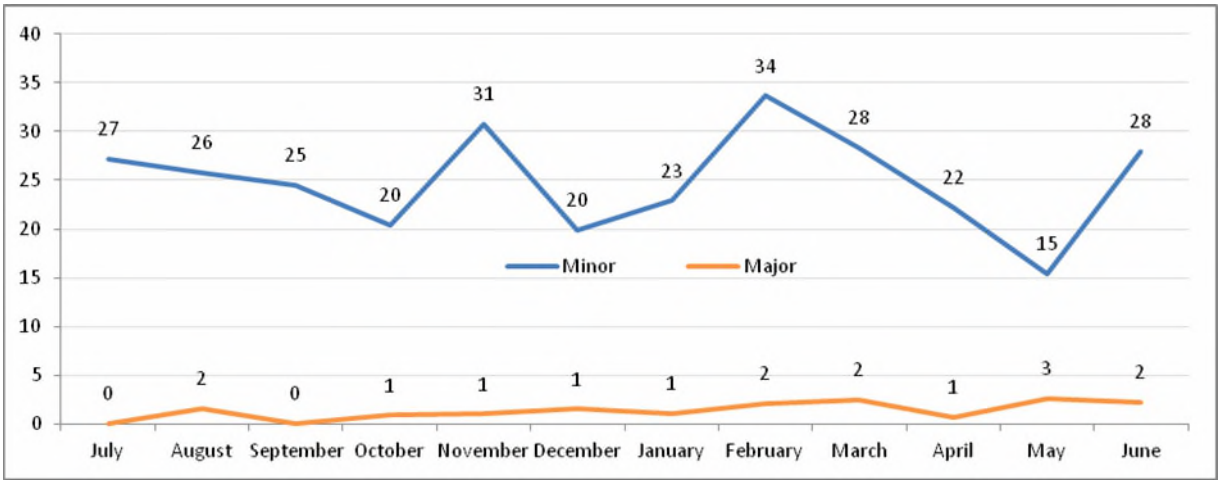




When do incidents occur?

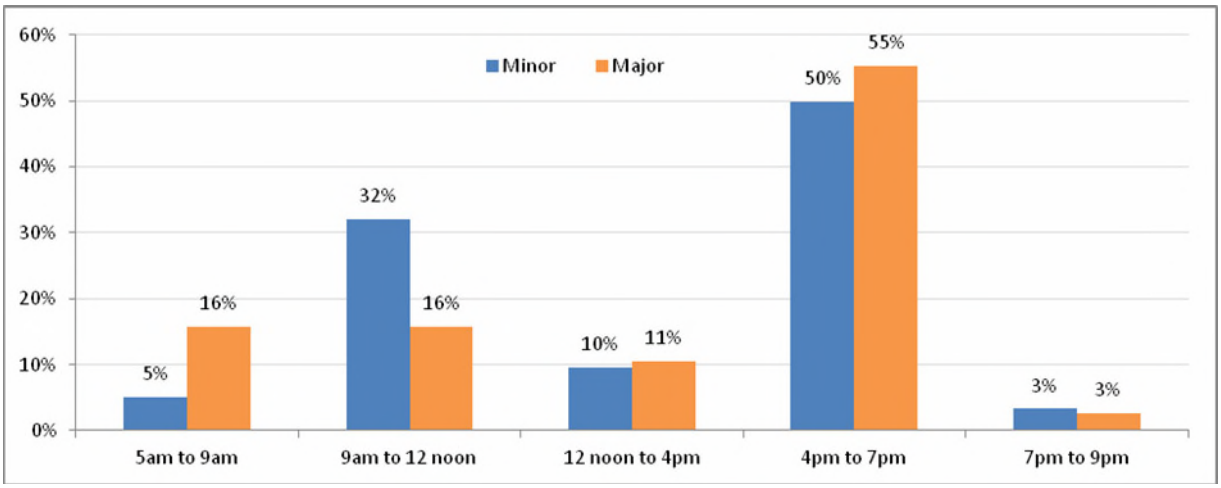
The rates of minor incidents vary throughout the year while major incidents stay consistently low across each month. In 2012-13 the minor incident rate ranged from 15 up to 34 per 100,000 patrons and there appear to be two peaks in November and February. These months relate to the summer school terms 1 and 4 which tend to be the commencement times for aquatic centres in terms of programming and activities.

Figure 20: Rates of minor and major incidents by month



The highest proportion of major and minor incidents occurred in the late afternoon and evening from 4-7pm. The 3 hours before noon was also a busy time in terms of minor incidents. This is a very different picture to what was found in last year's data when the 12 to 4pm time slot was when the most incidents occurred. It is not clear why this difference was observed but needs to be explored more in coming years.

Figure 21: Time of day when incidents occurred



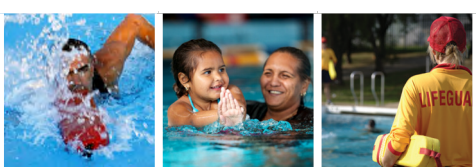
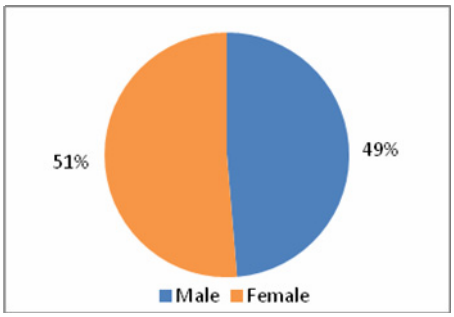


Figure 22: Gender of victim - All incidents

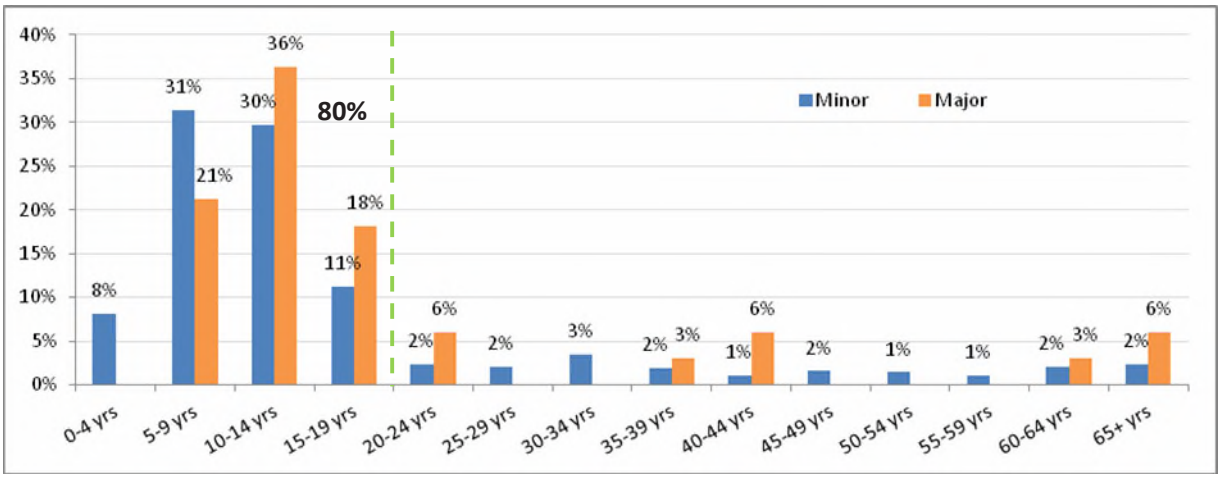
To whom do incidents occur?

Gender of victims was very evenly split between males and females for both major and minor incidents. This is unexpected as males tend to have higher rates of injury than females, particularly in regard to water safety. To thoroughly explore differences in gender it would be necessary to know the proportion of patrons who are female or male. A better understanding of the types of incidents experienced by each gender would also shed light on this data.



The majority (around 80%) of victims were children and young adults (0 – 19 years) however incidents do occur at every age. Children also made up 80% of the major incident victims, however there were none recorded for the 0 – 4 years age group. While children represent a large proportion of the patrons at aquatic centres these incidents rates are still disproportionately high. Data from the industry profile survey showed that only 30-50% of the patrons at the participating aquatic centres were children.

Figure 23: Age of victims: Major vs minor



Case study 3: Watch Around Water

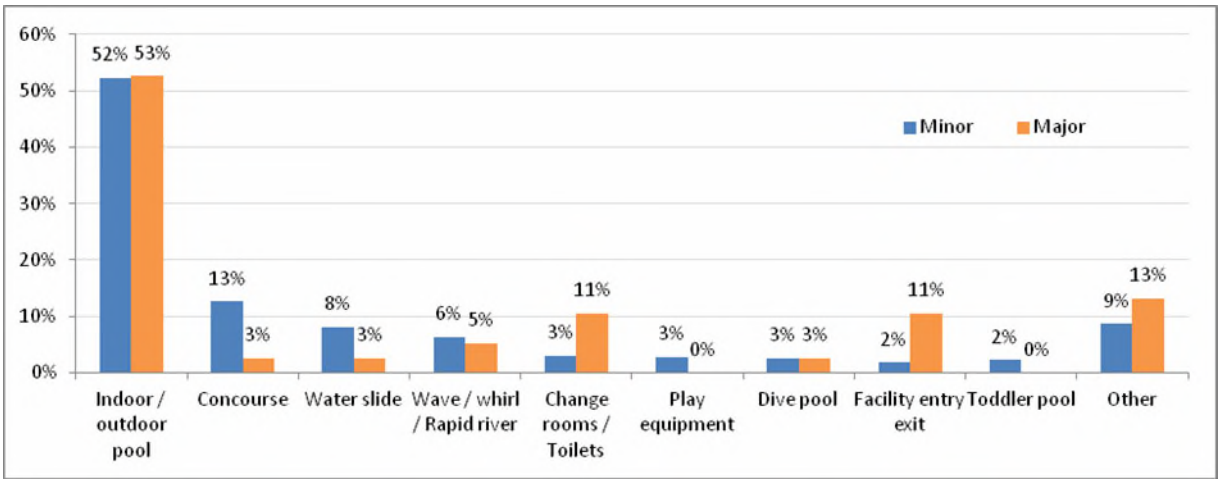
Watch Around Water was initiated by Beatty Park (initially called Pool Watch). The program is an educational and public awareness campaign designed to enhance parental supervision of young children at public pools.

In 2012-13, 90% of pools in WA were involved in the program and for the 10th consecutive year there were no drowning deaths at public pools in WA.

Where do incidents occur?

Over half of all incidents occurred in or immediately next to the water body. The next top four locations after this were the concourse, water slide and wave or whirl pool/rapid river and change rooms/toilets. The 'Other' category incorporates a number of locations with very few incidents, most of which were in non-aquatic areas for example the gym, car park or driveway, and outside areas. Interestingly aquatic centre staff also assisted with incidents (4) that did not actually take place in the centre but at nearby locations; two occurred at a neighbouring skate park, one was a motor vehicle accident on the same road as the centre and one was not specified. While incidents occurring external to the aquatic centre are only a very small percentage of the total incidents that aquatic staff attend it does highlight that because of their lifesaving skills aquatic staff do get called upon to assist in non-aquatic incidents and this needs to be taken into account when training programs are being developed.

Figure 24: Location of incidents: Major vs minor



Case study 4: Pool Super Vision training at Aqualife

Staff safety training has really been stepped up at Aqualife in Victoria Park since Narelle Holt started as Aquatics Coordinator in November last year. Narelle is keen to grow a strong culture of safety and supervision at Aqualife that puts prevention and early detection as the number one goal. In September, the lifeguards at Aqualife completed the brand new Pool Super Vision course.

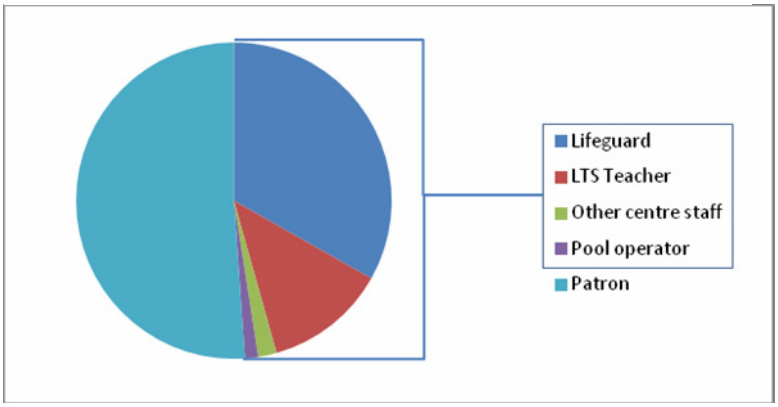
Pool Super Vision introduces advanced techniques to lifeguards on how to identify patrons who require closer attention as well as techniques for improving supervision such as detecting blind or 'dead' spots. Narelle recommends Pool Super Vision to other centres and hopes that prevention of injury will be improved through the new supervision skills learnt.

Who are the first responders to incidents?

Aquatic centre staff were the first to identify 50% of all incidents. The remaining incidents were identified by patrons which include parents/carers, school staff and self-reports by victims. It is difficult to say what proportion of incidents should be expected to be picked up by aquatic staff particularly considering the high ratio of patrons to staff and that our data may not include incidents that may have been pre-empted and prevented by aquatic staff. It will be interesting to see how this statistic changes as the Pool Super Vision training is rolled out to lifeguards in WA.

This 'first to recognise' field was left blank in nearly 20% of incident data collection forms suggesting that aquatic centres do not record who the first responder was or that the answer categories for this question on the RLSSWA form are not suitable. This information is very important when considering lifeguard scanning strategies and how incidents at aquatic centres can be better prevented.

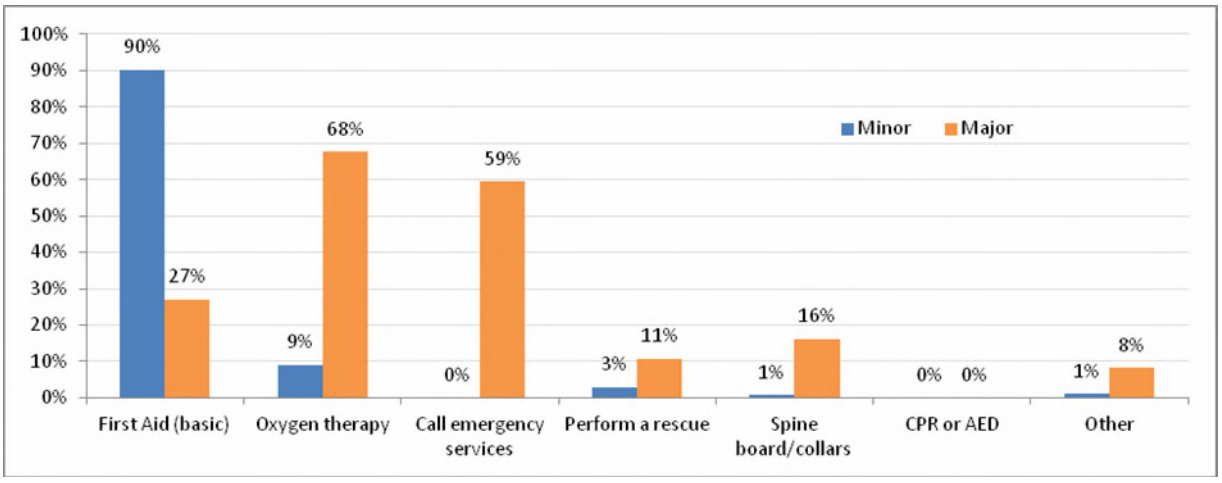
Figure 25: First to Recognise - All incidents



What type of assistance is given?

Nearly all (90%) of the minor incidents required basic first aid while major incidents required a much broader range of assistance. The majority of major incidents required oxygen therapy and/or emergency services to be called. No incident reported as part of the 2012-13 research required CPR or defibrillation. Considering that major incidents are relatively rare, around 140 across 127 aquatic centres in 2012-13, the full range of lifesaving skills need to be practised regularly in order for staff to be prepared for serious incidents should they occur.

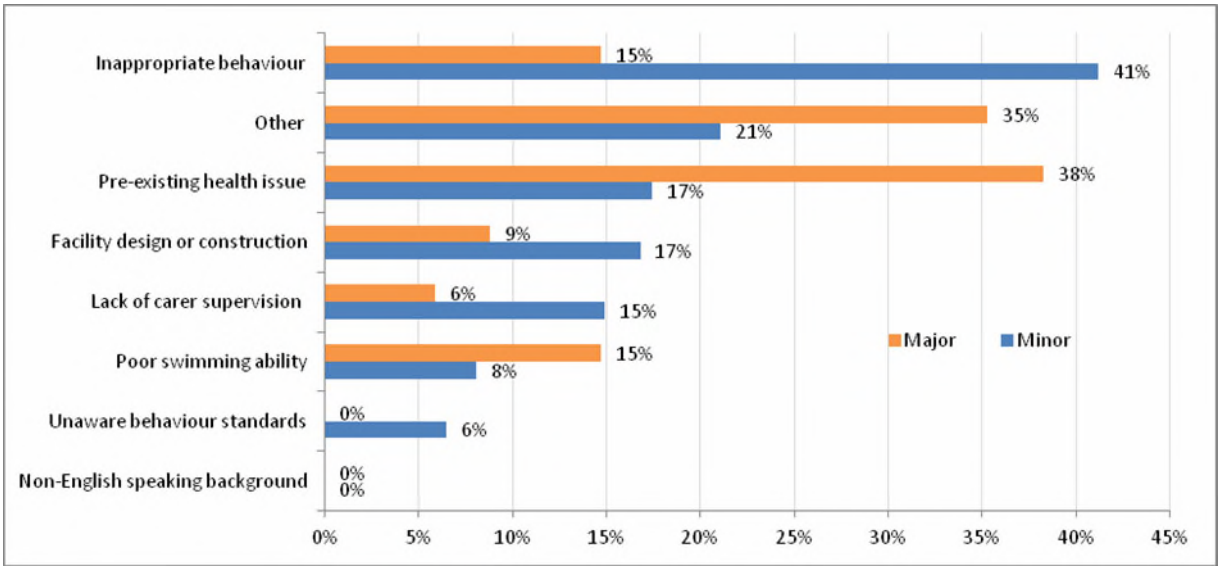
Figure 26: Type of assistance provided: Major and minor



Why do incidents happen?

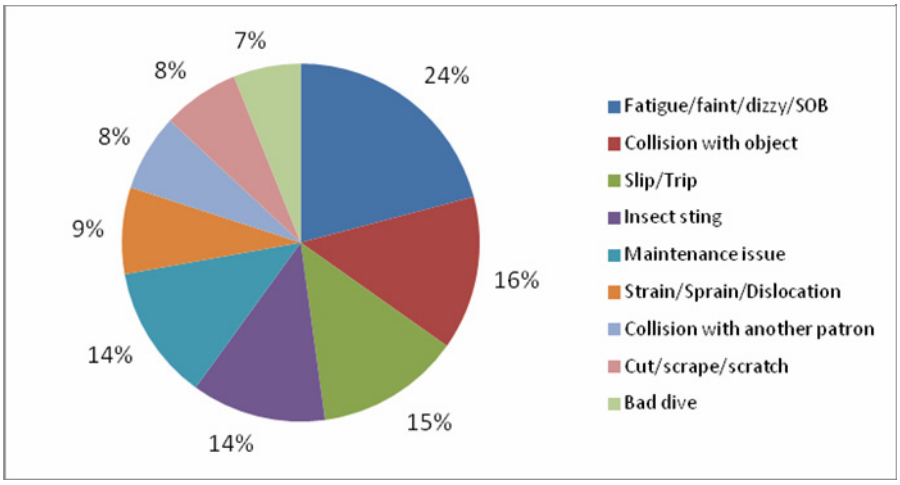
Inappropriate victim behaviour was the leading cause for minor incidents with 41% being attributed to this. The majority of major incidents in 2012-13 came about because the victim had pre-existing health or medical issues.

Figure 27: Causes of incidents: Major and minor



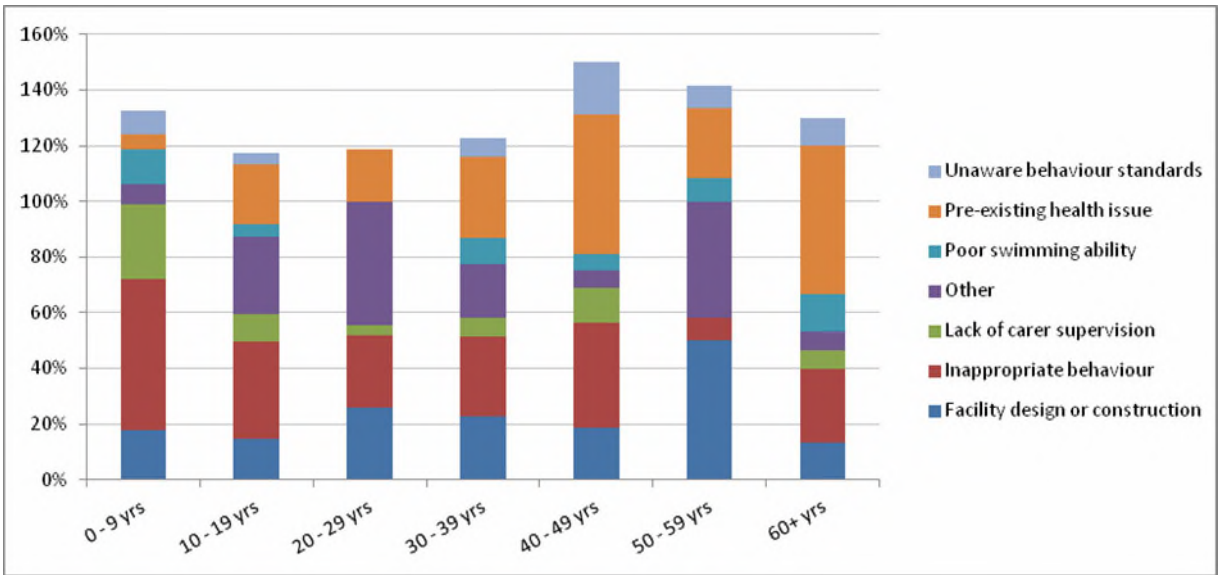
The second leading cause for both major and minor incidents was the category 'other'. This category includes mainly accidental injuries which are outlined in Figure 28.

Figure 28: Other causes of incidents



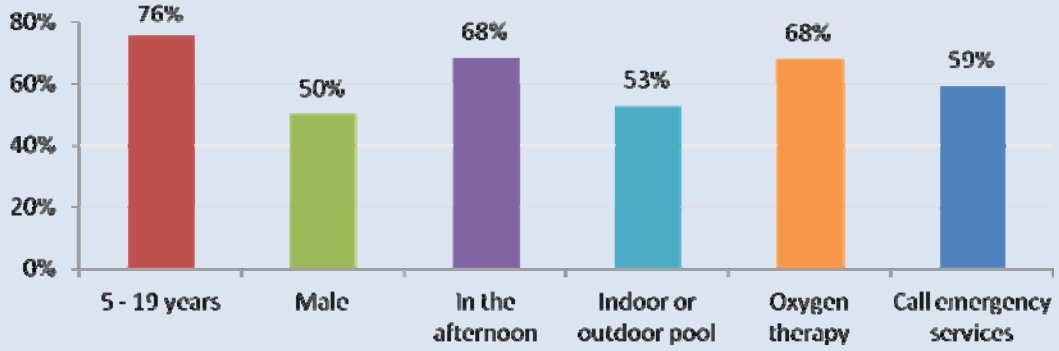
Causes of incidents varied greatly when comparing age groups. Figure 29 highlights which causes played the greatest role for each age group. The percentages exceed 100% because more than one cause could be selected. For the 0 – 9 age group inappropriate behaviour (red) caused the most incidents and this cause continues across the age groups. At the opposite end, a pre-existing health issue (orange) is the major cause for the 60 years plus age group which interestingly also contributes to a considerable amount of incidents down through the younger age groups. Victim unaware of behaviour standards (pale blue), poor swimming ability (aqua) and lack of carer supervision (green) were all relatively low which highlights the effectiveness of promoting awareness of these causes and increased surveillance of these indicators of risk at WA swimming pools.

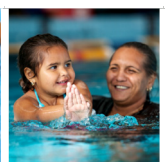
Figure 29: Causes by age – All incidents



Case Study 5: Snap-shot of major incidents

There were 38 major incidents reported in 2012-13 which equates to 5% of all incidents. Based on rates per patron an estimated 140 major incidents would have occurred in WA in 2012-13 across all 127 aquatic centres. Below are the key characteristics of these major incidents.




Improving the Aquatic Facility Injury Research Project

In 2013 RLSSWA conducted surveys with staff at 75 aquatic centres in WA (25 metropolitan and 50 regional) to gather feedback on the Aquatic Facility Injury Research Project. The purpose of this survey was to gain a better understanding of how aquatic centres record information about incidents so that a simpler and less burdensome data collection process can be devised for the injury research project.

Just under 30% of the centres had previously provided injury data to RLSSWA and nearly all (91%) indicated they would be interested in being involved in the future. Overall the response to the injury research project was very positive with many centres saying they considered it an important project for the aquatics industry. However a number of centres also reported that they considered participation in the research project to be too difficult and time consuming.

How do aquatic centres currently record information about injuries and incidents?

Most of the centres have very similar collection processes. In most cases all minor and major injuries and incidents are recorded on forms which are then filed in hard copy at the pool. Most pools are recording more detail on incidents than has previously been requested by RLSSWA for the injury research project.

A few centres also reported the following:

- Staff with 'injury monitoring' roles (13)
- Data collation into spread-sheets or databases (10)
- Reporting of major incidents to LGAs (18)
- Reporting of all incidents to LGAs (9), or to private management bodies (9)

What is the preferred method for providing incident data to RLSSWA?

Overall the data collection method most popular with aquatic centres surveyed is to submit summary incident data in a spread-sheet rather than individual forms. Regional pools also showed a strong preference for submitting copies of their own incident forms.

Nearly 40% of pools indicated that having the option of submitting incident data to RLSSWA electronically or online would be helpful. Two-thirds of centres surveys indicated that submitting data annually would be more suitable than monthly.

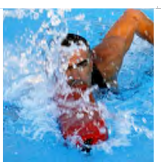
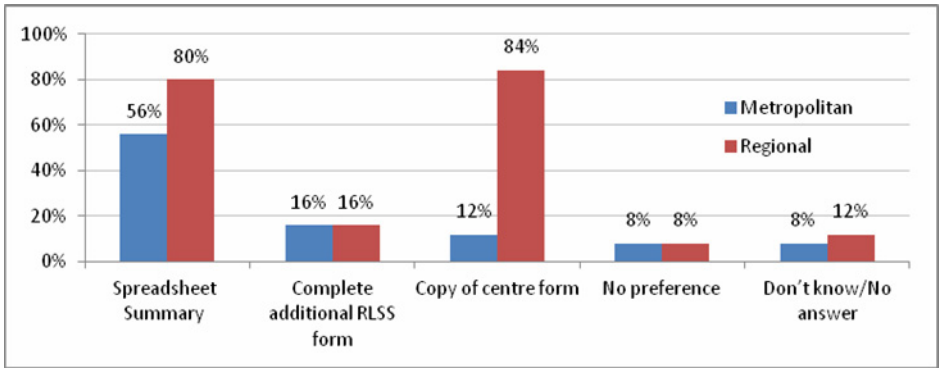


Figure 30: Incident Data collection preferences



Improving the data collection forms

We reviewed incident forms from 43 aquatic centres and compared the information they record with the data fields in the RLSSWA incident research forms. The data fields from the RLSSWA incident research form are listed below with the percentage of aquatic centre forms that contain each item of required information. The orange cells highlight the items where a large percentage of pools do not collect the information that is used in the incident research project.

Table 4: Percentage of centre incident forms that contain the required research information

Data field on RLSSWA form	Full information	Unclear or Minimal	No information
Incident date	43%	54%	2%
Incident time	43%	52%	4%
Definition of Major or Minor	43%	4%	52%
Age category	83%	0%	17%
Gender	26%	0%	74%
Type of assistance	91%	0%	9%
Call Emergency services	43%	24%	33%
Oxygen therapy	46%	11%	43%
SAED (Defibrillation)	15%	0%	85%
Where occurred	85%	0%	15%
Water depth	0%	0%	100%
Design/construction play role	2%	0%	98%
First to recognise	2%	67%	30%
Probable Cause	11%	13%	76%
Medical history	9%	15%	76%

Aquatic centres record much more detail about the nature of incidents than RLSSWA collects. Most pools collect information about the type of injury including where on the body it occurred and the type of accident. Some of the most common items are listed below.

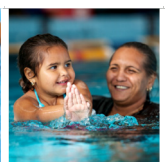




Table 5: Additional information on data incident forms not currently collected as part of the research

Data field on centre form	Full information	Unclear or Minimal
Recommend seek medical advice	48%	22%
On what?	15%	0%
Type of injury	93%	0%
Body location	80%	0%
Type of accident	85%	0%
Type of activity	39%	0%
Recommendations for prevention	39%	0%

Improving the incident research report

The report was generally described as interesting and easy to read and understand. However only 7 people described it as useful and 19 described it as not useful.

One centre said they used the results of the research to make changes at their pool while another said they used it to provide updates to staff.

Small regional pools often described it as not useful.

The following suggestions were made to improve the injury research project:

- **Include site specific information**
    - Summary results and trends
    - Ratings
- **Include comparisons and benchmarking**
    - Rate Audit scores against average
    - Rate Injury trends against average
    - Provide data to allow pools to compare themselves to similar type of facilities, other pools in their region, and against state averages
- **Highlight and forecast major trends**
    - By incident type
- **Provide real life examples**
    - Experiences and learnings
    - Near misses
    - Case studies
    - Major incidents
    - Prevention strategies
- **Make specific and practical recommendations for preventative strategies**
- **Make changes to the research data collection form**

Case study 6: Aquatic Incident research in Victoria goes online

In Victoria, a free web-based training and incident tracking package called Pool Risk Manager has recently been developed by the Victorian Managed Insurance Authority (VMIA) for public pool managers.

The website includes an interactive tour through a virtual aquatic facility that provides examples of potential safety risk areas and behaviours as well as information about how to reduce these risks.

The Pool Risk Manager webpage also offers an incident tracking system for registered users which summarizes the incidents at their centre in the last year including details such as common locations, and incident types. Pool managers log in to upload incident reports to the webpage and can only view data on their own pool.

To check out this webpage go to: www.poolriskmanager.com.au

Findings and Recommendations

For the Aquatics industry

1. **Incidents at aquatic centres are common**: While incident rates appear to be declining they are still a significant issue for centres and their patrons with over 2,600 occurring in WA aquatic facilities in 2012-13

2. **Children and young adults are at highest risk**: 80% of major and minor incidents occur to victims are aged 0 – 19 years and while children are the main users of aquatic centres (30 – 50%) these incident rates are still disproportionately high.

3. **Major incidents are rare but require specialised skills**: On the whole, WA aquatic centres are very safe places; however major incidents still happen with 140 occurring in 2012-13 equating to more than one for every centre in WA. This highlights the need for regularly staff training in advanced first aid in order to keep these essential skills up to date.

For the incident research project

1. **Increase participation** by aquatic centres so that the sample represents 50% of total patronage in WA

2. **Trial new methods of data collection** that are less onerous for aquatic centre staff

3. **Collect more detail** about the nature of incidents so that more in-depth analysis can be done and reported back to aquatic centres. For example;

    a. What does inappropriate behaviour mean

    b. Was the victim an employee or public patron?

    c. Where did it occur? In an aquatic area or other?

    d. What type of incident was it?

    e. What were the causes? How could this incident have been prevented?

4. **Implement changes to the report** as suggested by aquatic centre staff

PART 3: SAFETY ASSESSMENT RATINGS

PART 3: Safety Assessment Ratings

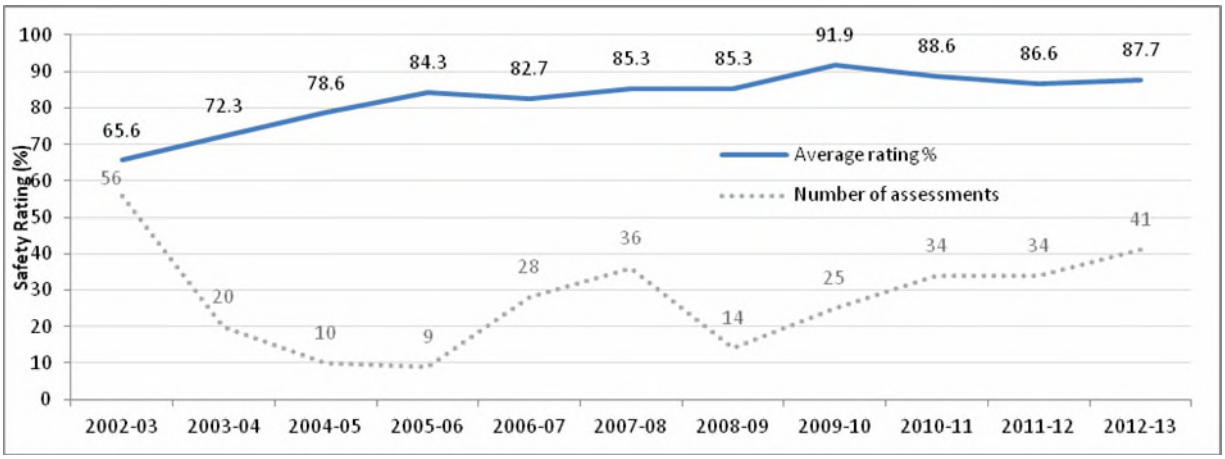
Since 2002 the Royal Life Saving Society WA has been conducting independent assessments of safety and risk at public aquatic centres based on the Department of Health Code of Practice for the Operation of Aquatic Facilities, the RLSSA Pool Safety Guidelines and other relevant Australian standards.

The Safety Assessment is comprehensive covering requirements for;

1. General Administration
2. Design and Construction
3. Circulation and Water Treatment
4. Chemical Safety
5. Water Quality and Testing
6. Qualification for Aquatic Facility Operators, Supervisors and Emergency Care Personnel
7. General Sanitation and Operational
8. Special Feature Pool
9. Spa Pool
10. Water Slide
11. Hydrotherapy Pool

Average overall ratings have trended upward over the 11 years of Royal Life Saving conducting public swimming pool assessments. A total of 41 pools were assessed in 2012-13 with an average rating of 87.7% and a range from 65 to 99%. The average score dips slightly after 2009-10 when the Code of Practice assessment was introduced but is trending upwards again as of this year.

Figure 31: Average Overall Safety Rating by year



Despite these high ratings there are still a number of aquatic centres with safety ratings below 80%. Figure 32 shows the most recent safety ratings for all aquatic centres that have ever undergone an assessment. All centres have scores above 65% however 29 pools have a current rating of less than 80%.

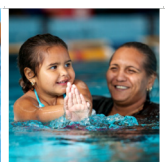
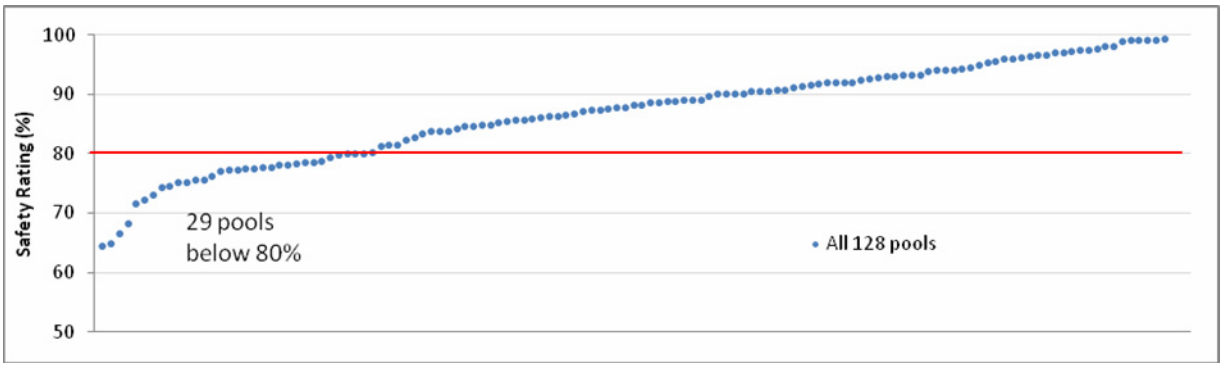
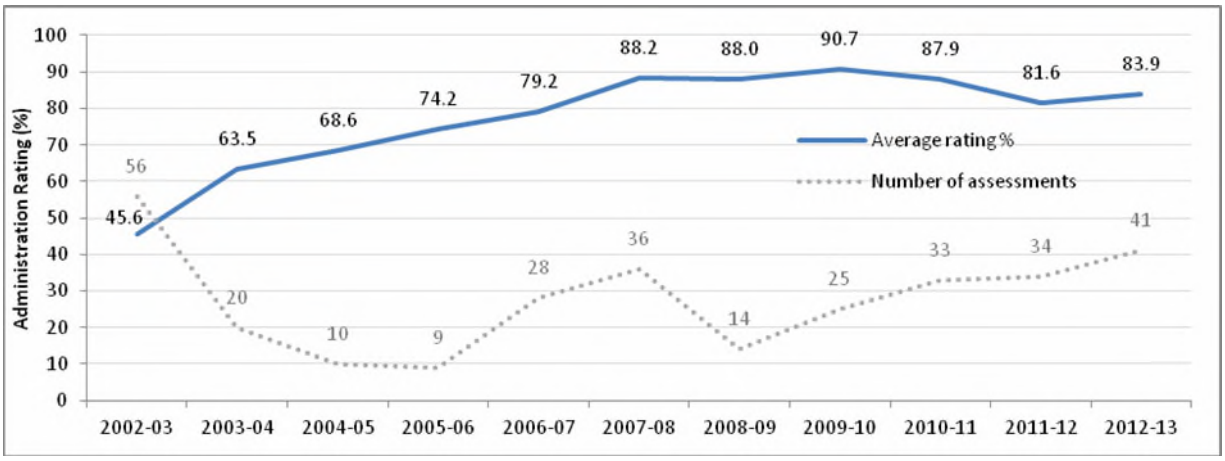




Figure 32: Most recent safety rating score for all aquatic centres



The average General Administration score has increased dramatically from 45.6% in 2002-03 to 83.9% in 2012-13. In 2012-13 the highest scoring pools achieved 100% in the area of administration, with the lowest score achieved being 18.2%. Nearly a third of all pools assessed (13 of 41) achieved 100% in 2012-13.

Figure 33: Average General Administration rating by year



The average score for the Design and Construction element of the aquatic centre assessment process has remained fairly consistently over the past 11 years with a slight increase in the average from 78% in 2002-03 to 86% in 2012-13. This finding is not surprising as design scores are only likely to change when centres undergo refurbishments.

On average, results improve as more assessments are conducted, see Figure 34. The average score achieved at the third assessment is 87% and nearly 94% by the fourth assessment. Metropolitan pools tend to have had more assessments conducted and achieve higher overall scores than pools in regional areas. Pools in the Esperance & Goldfield, Albany, Mid West & Gascoyne, and Wheat Belt regions tend to achieve below average overall ratings.

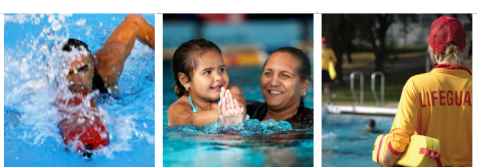
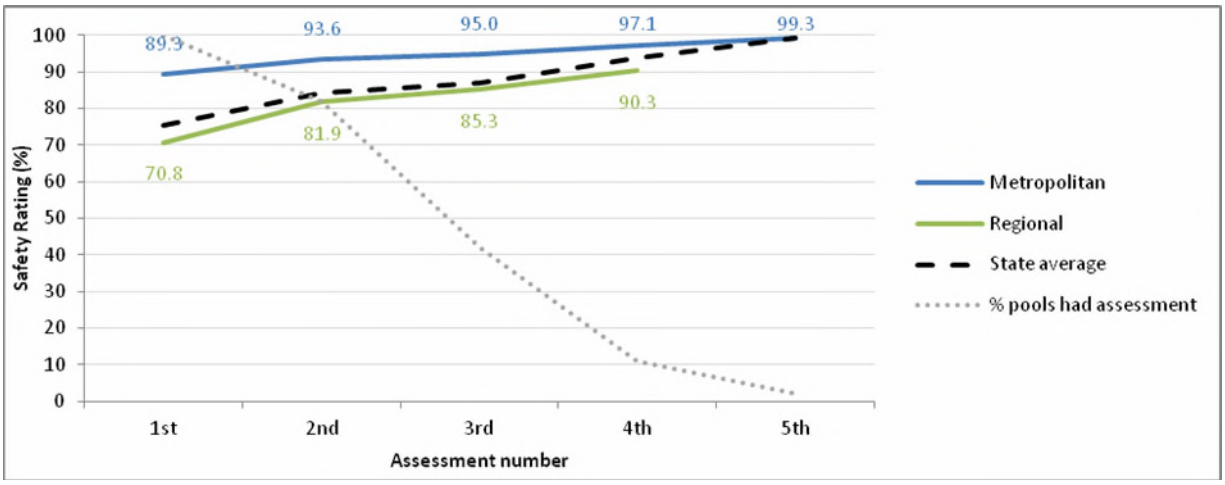


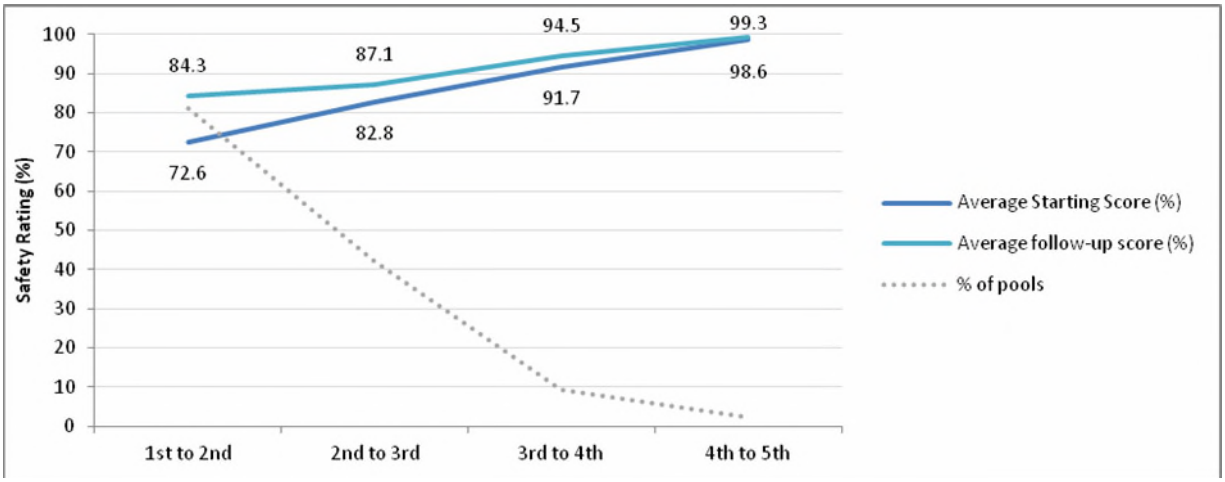
Figure 34: Average Overall Safety Rating at each assessment by area



Safety ratings also vary by facility type. Smaller Type One aquatic centres tend to undergo fewer assessments and consistently achieve below average ratings.

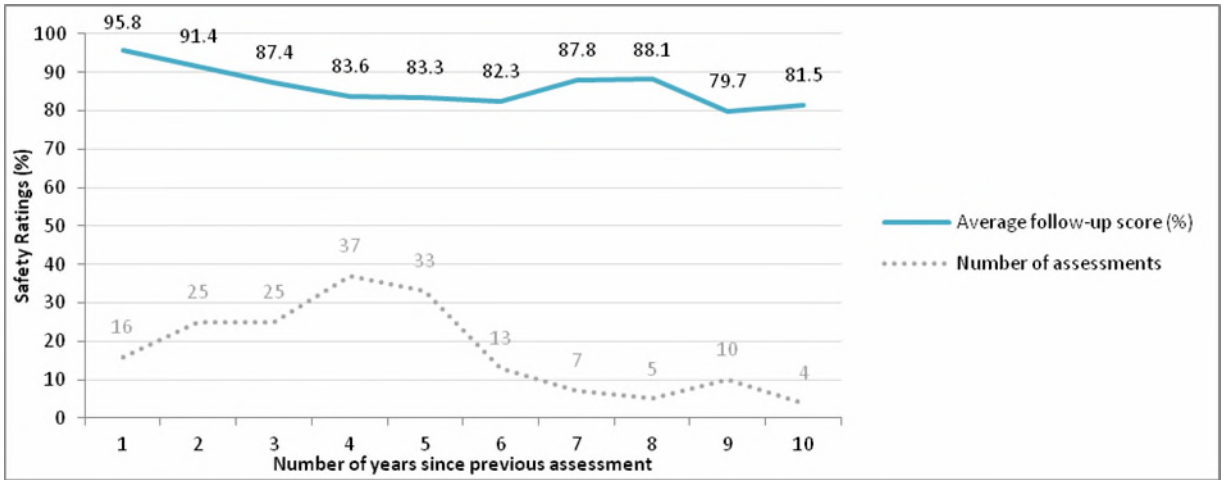
The more assessments an aquatic centre has the closer they get to achieving a 100% safety rating. Figure 35 shows the average changes in scores achieved as subsequent assessments are conducted. The greatest improvements are seen between the 1st and 2nd assessments with scores on average increasing from 72.6% to 84.3%. The gap in overall ratings by the fourth to fifth assessments is very low, with pools on average achieving 99.3% by their fifth assessment (3 metropolitan pools).

Figure 35: Change in overall Safety Ratings by number of assessments conducted



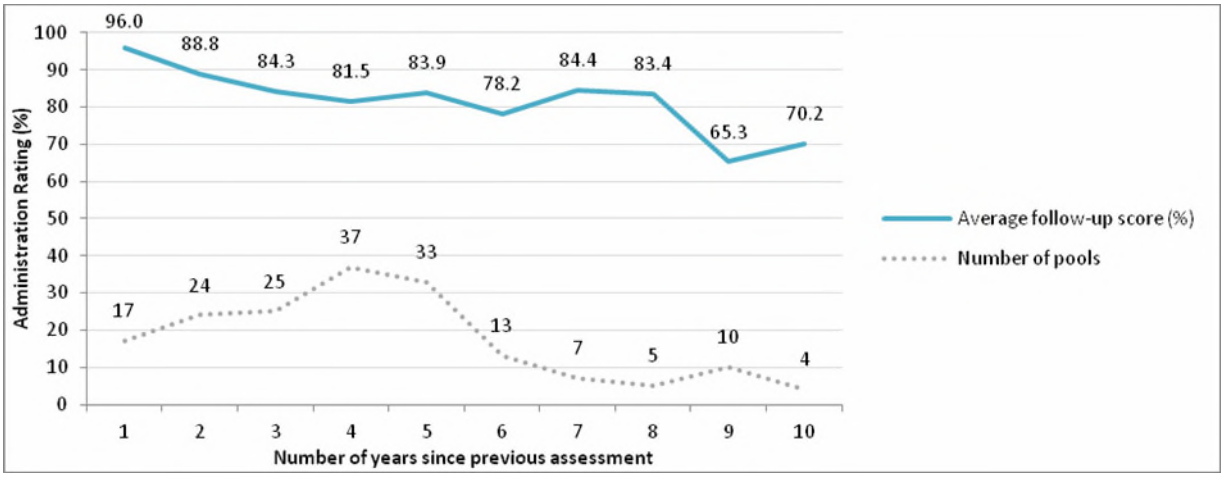
Frequency of Safety assessments also appears to have an effect on overall ratings. Figure 36 shows a strong downward trend in scores with longer lengths of time between assessments. Where an assessment has been conducted one year since the previous, average scores are above 95%. However when an assessment is done 3 years after the last the average score is only 87.4%. By 6 years between assessments the overall scores achieved are only 82.3% (13 pools). This trend suggests that in order to maintain scores at around 90% pools should be assessed at least once every 3 years.

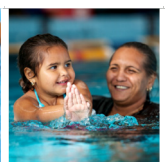
Figure 36: Change in overall Safety Ratings by the number of years since previous assessment



The correlation between length of time between assessments and lower score results is even stronger in the area of administration (See Figure 37). Where an assessment has been conducted one year after the last the average administration score is 96%, well above the current average administration score of 85% for 2012-13. When re-assessment is done after four years the administration scores are below the current average and this trend continues for five and six year intervals.

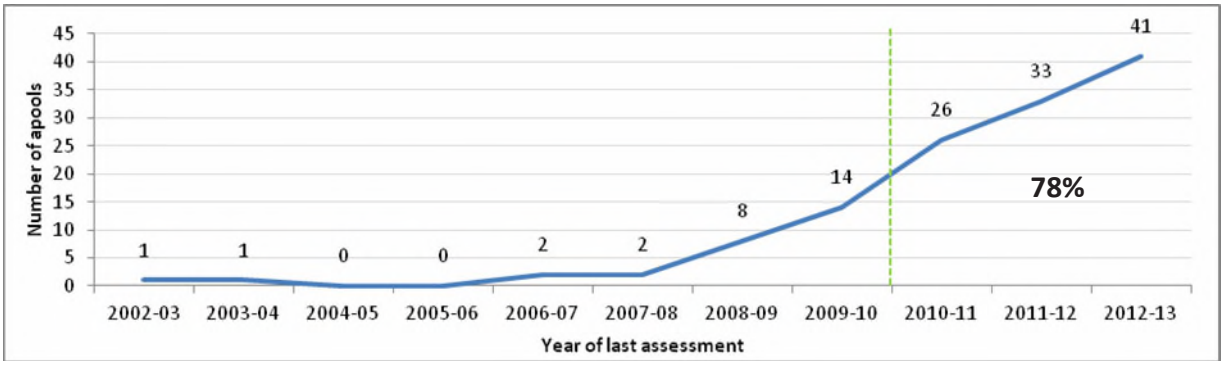
Figure 37: Change in administration ratings by the number of years since previous assessment




The overwhelming majority (78%) of aquatic centres have had safety assessments conducted in the last three years however there are 28 that have not. (See Figure 38)

Figure 38: Year of most recent safety assessment - All aquatic centres



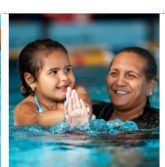
Findings and recommendations

1. **Safety Ratings are high at participating centres.** For the fourth consecutive year, average Safety Ratings have been greater than 85% with the average for the 41 centres assessed in 2012-13 being 87.7% which is considerably higher than the initial average of 65% ten years ago. However, when looking at most recent ratings for all aquatic centres, around 20% of centres have a current rating of less than 80% and should continue to work with RLSSWA to improve their ratings.

2. **Administration scores are high.** The average General Administration score has increased dramatically from 45.6% in 2002-03 to 83.9% in 2012-13 with nearly a third of all centres achieving 100% in 2012-13.

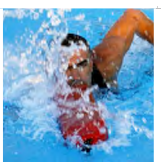
3. **Ongoing assessments lead to improved ratings.** Safety Ratings appear to increase with every assessment conducted with centres that have had 5 visits achieving an average rating of 99%.

4. **Assessments should be done at least every 3 years.** Safety Ratings appear to be maintained above 85% when the length of time between assessments is 3 years or less. This trend is even stronger with the General Administration component of the rating. Just over 20% of public aquatic centres have not had inspections within the last three years and should be encouraged to undergo assessment in the next one to two years.

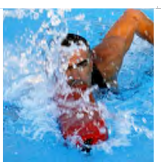




Appendix 1: List of public aquatic centres in WA by ABS region

Area	ABS region	Name of pool	Postcode	Facility Type
Metropolitan	Perth - Inner	Beatty Park Leisure Centre	6006	3
		Bold Park Aquatic	6014	1
		Challenge Stadium	6010	3
		Claremont Pool	6010	2
		Terry Tyzack Aquatic Centre	6052	3
	Perth - North East	Altone Park Leisure Centre	6063	2
		Ballajura Aquatic Centre	6066	2
		Bayswater Waves	6062	3
		Bilgoman Aquatic Centre	6073	1
		Maylands Waterland	6015	1
		Swan Park Leisure Centre	6056	2
	Perth - North West	Arena Joondalup	6027	2
		Balga Leisure Park	6021	3
		Craigie Leisure Centre	6025	3
		Wanneroo Aquamotion	6065	2
	Perth - South East	Aqualife Centre	6101	3
		Armadale Aquatic Centre	6112	2
		Belmont Oasis Leisure Centre	6104	2
		Cannington Leisureplex	6107	3
		Gosnells Leisure World	6108	2
		Kalamunda Water Park	6076	2
		Riverton Leisureplex	6148	3
		St Brigid's College Pool	6076	1
	Perth - South West	Fremantle Leisure Centre	6160	3
		Kwinana Requatic	6167	1
		Melville Aquatic Fitness Centre	6154	3
		Rockingham Aquatic Centre	6168	2
		South Lakes Leisure Centre	6164	2
		Warnbro - Aquajetty - YMCA	6169	3
	Mandurah	Mandurah Aquatic and Recreation Centre	6210	3
		Murray Aquatic Centre	6208	2



Area	ABS region	Name of pool	Postcode	Facility Type
Regional	Albany	Albany Leisure and Aquatic Centre	6330	3
		Gnowangerup Swimming Pool	6335	1
		Katanning Leisure Centre	6317	2
		Kojonup Kevin O'Halloran Memorial Swimming Pool	6395	1
		Mt Barker Swimming Pool	6324	1
	Bunbury	Boyup Brook	6244	1
		Bridgetown Swimming Pool	6255	1
		Bunbury South West Sports Centre	6230	3
		Collie Mine Workers Memorial Olympic Pool	6225	1
		Donnybrook Recreation Centre	6239	1
		Geographe Leisure Centre	6280	2
		Harvey Swimming Pool	6220	1
		Leschenault Leisure Centre	6233	2
		Manjimup Regional AquaCentre	6258	2
		Margaret River Aquatic Centre	6285	2
		Waroona Recreation and Aquatic Centre	6215	1
	Christmas Island	Christmas Island Community Recreation Centre	6798	2
	Gascoyne	Burringurrah Swimming Pool	6705	1
		Carnarvon Aquatic Centre	6701	1
		Exmouth Swimming Pool	6707	1
	Esperance	Esperance Bay of Isles Leisure Centre	6450	2
	Goldfields	Coolgardie Swimming Pool	6429	1
		Goldfields Oasis	6432	3
		Kambalda West Swimming Pool	6442	1
		Laverton Swimming Pool	6440	1
		Leinster Swimming Pool	6437	1
		Leonora Swimming Pool	6438	1
		Norseman Swimming Pool	6443	1
	Kimberley	Bidyadanga Swimming Pool	6725	1
		Broome Aquatic Centre	6725	2
		Derby Memorial Swimming Pool	6728	1
		Fitzroy Crossing	6765	1
		Halls Creek Swimming Pool	6770	1
		Kununurra Leisure Centre	6743	2
		Warmun Swimming Pool	6743	1
		Wyndham Swimming Pool	6740	1
	Mid West	Carnamah Swimming Pool	6517	1
		Coorow Swimming Pool	6515	1
		Eneabba Swimming Pool	6518	1
		Geraldton Aquarena	6530	3
		Meekatharra Swimming Pool	6642	1
		Morawa Swimming Pool	6623	1
		Mt Magnet Swimming Pool	6638	1
		Mullewa Swimming Pool	6630	1
		Perenjori Swimming Pool	6620	1
		Three Springs Swimming Pool	6519	1
		Wiluna Community Pool	6646	1
	Pilbara	Jigalong Aquatic Centre	6753	1
		Karratha Aquatic Centre	6714	1
		Marble Bar Swimming Pool	6760	1
		Newman Aquatic Centre	6753	1
		Pannawonica Swimming Pool	6716	1
		Paraburdoo Swimming Pool	6751	1
		Port Hedland Gratwick Aquatic Centre – YMCA	6712	1
		Roebourne Community Aquatic Centre	6718	1
		South Hedland Aquatic Centre – YMCA	6722	1
		Tom Price Pool	6751	1
		Wickham Swimming Pool	6720	1
		Yandeyarra Swimming Pool	6721	1



Area	ABS region	Name of pool	Postcode	Facility Type
Regional continued	Wheat Belt - North	Beverley Swimming Pool	6304	1
		Bruce Rock Aquatic Centre	6418	1
		Cunderdin Olympic Swimming Pool	6407	1
		Dalwallinu Aquatic and Recreation Centre	6609	1
		Dowerin Swimming Pool	6461	1
		Gingin Iluka Aquatic Centre	6503	1
		Goomalling	6460	1
		Kellerberrin Swimming Pool	6410	1
		Koorda Swimming Pool	6475	1
		Merriden District Olympic Pool	6415	2
		Moora Swimming Pool	6510	1
		Mt Marshall Swimming Pool	6477	1
		Mukindudin Pioneer Memorial Aquatic Centre	6479	1
		Narembeen Memorial Swimming Pool	6369	1
		Northam Olympic Pool	6401	1
		Nungarin Swimming Pool	6490	1
		Quairading Swimming Pool	6383	1
		Southern Cross Public Swimming Pool	6426	1
		Trayning Aquatic Centre	6488	1
		Westonia Swimming Pool	6423	1
		Wongan Hills Swimming Pool	6603	1
		Wundowie Swimming Pool	6560	1
		Wyalkatchem War Memorial Aquatic Centre	6485	1
		York War Memorial Swimming Pool	6302	1
	Wheat Belt - South	Boddington Swimming Pool	6390	1
		Brookton Memorial Swimming Pool	6306	1
		Corrigin War Memorial Swimming Pool	6375	1
		Dumbleyung Swimming Pool	6350	1
		Hyden Swimming Pool	6359	1
		Kondinin Swimming Pool	6367	1
		Kulin Swimming Pool	6365	1
		Lake Grace Swimming Pool	6353	1
		Narrogin Leisure Centre	6312	2
		Pingelly Swimming Pool	6308	1
		Wagin Swimming Pool	6315	1
		Wickepin Swimming pool	6370	1
		Williams Swimming Pool	6391	1

Appendix 2: Data collection methods and Data Limitations

Part 1: State of the Industry

The LIWA Industry Survey 2012-13 (see Appendix 3) was distributed electronically in March 2013 by LIWA to all of its members. All public aquatic centres were then followed-up by RLSSWA by telephone to ensure that they had received the survey. The final response rate to the survey in 2012-13 was 65%.

Data was requested for the months of June 2012 to May 2013 however many pools provided estimates until the end of July 2013. When exact figures were not known aquatic centres provided best estimates.

Data analysis and reporting was primarily restricted to current data provided in 2012-13. However, in order to make total industry estimates for each of the report outcomes (expenditure, patronage, water consumption and labour force) we combined 2012-13 data with data provided in previous LIWA Industry surveys. If an aquatic centre had never before participated in a survey then data from a similar, participating centre was used as the estimate.

Scheme water consumption figures were provided by the Water Corporation in July 2013 for public aquatic centres who have an account with the Water Corporation. Complete 2012-13 water consumption data on regional centres was not available at that time so 2011-12 figures where used instead. These figures exclude groundwater (bore water) which is used by many centres, particularly in the metropolitan area, for irrigation of gardens and landscapes. Aquatic centres that share their account with another facility e.g. a school (multiuse land code) were excluded as it was not possible to verify what proportion of the total water consumption could be attributed to the pool facility. Water use may be overestimated for aquatic facilities that are part of a larger, multipurpose leisure centre as it was not possible to determine what proportion was used by the aquatic area alone.

Estimates of the number of qualified pool operators, lifeguards and swim instructors currently residing in WA were provided by LIWA, RLSSWA and AUSTSWIM respectively; these organisations are the major training providers in WA for each of these qualifications. However, labour force figures used in this report are only a broad estimate of actual numbers as they do not account for people who may have obtained qualifications in another state or through another training organisation, and they will include qualified people who may no longer be seeking employment in the industry or no longer reside in WA.

Part 2: Incidents at aquatic centres

Participation in the incident research project was promoted to public aquatic centres by email, telephone and during visits to facilities. A total of 13 aquatic centres (10%) participated representing 30% of the annual patronage to aquatic centres in WA in 2012-13. The majority of the participating centres were metropolitan (77%), Type 2 (62%) facilities; there were no Type 1 facilities. This means that the incident rates and patterns reported are not necessarily reflective of all pool types and will be least relevant to regional Type 1 pools.



Participating centres submitted Aquatic Incident Research Data Collection Forms (Appendix 4) for incidents that occurred at their centre during 2012-13 as well as monthly patronage figures to RLSSWA. A total of 131 months of incident data was submitted however only 117 months (average 9.8 per pool) had matching patronage figures. One metropolitan pool did not submit any patronage data so had to be excluded from calculations of incident rates.

There are a number of limitations relating to the data collection form that was used (Appendix 4) and these have been outlined in the "Improving the data collection form" section of Part 2 of this report.

Part 3: Safety Assessment Ratings

Since 2002 RLSSWA has provided a Safety Assessment Service to public aquatic centres in WA based on the Department of Health Code of Practice for the Operation of Aquatic Facilities, the RLSSA Pool Safety Guidelines and other relevant Australian standards. The assessment is not mandatory and aquatic centres are charged for the service. Typically the service includes an onsite assessment and observational study, benchmarking against relevant regulations and safety standards, calculation of a Safety Rating score and provision of a Safety Improvement Plan. Since 2002, over 300 assessments have been conducted and a total of 41 were completed in 2012-13.

The Safety Assessment score is comprehensive with over 200 items under the following components:

1. General Administration (11 items)
2. Design & Construction (46 items)
3. Circulation & Water Treatment (26 items)
4. Chemical Safety (20 items)
5. Water Quality & Testing (10 items)
6. Qualification for Operators, Supervisors & Personnel (3 items)
7. General Sanitation & Operational (25 items)
8. Special Feature Pool (48 items)
9. Spa Pool (16 items)
10. Water Slide (14 items)
11. Hydrotherapy Pool (4 items)

Not all items are relevant to every pool meaning that the total possible score differs for each. Safety ratings are therefore given as a percentage (score achieved/possible score) rather than a total score.

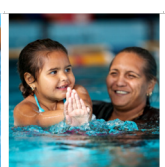
The above 11 categories were introduced in 2009-10 and replaced the old categories of:

1. Administration
2. First Aid
3. Technical Operations
4. Facility Design
5. Supervision
6. Programs
7. Spa Pool(s)
8. Dive Pool(s)
9. Water Slide(s)
10. Wave Pool(s)

11. River(s)

12. Water Feature(s)

These two scoring systems are not directly comparable and this needs to be taken into account when examining trend data. Trend data has only been reported for the categories of General Administration (Administration) and Design & Construction (Facility Design) as these are the only two that have remained relatively consistent between the old and new scoring system.


Appendix 3: LIWA Industry Survey 2012-13

LEISURE INSTITUTE OF WA AQUATIC (INC.)

Department of Sport and Recreation

RESEARCH TO INCREASE KNOWLEDGE AND EXPERTISE IN THE AQUATICS INDUSTRY

Instructions

Centres open all year – report data for June 2012 to end of May 2013

Centres NOT open all year – report data for the full 2012-13 season

If exact figures are not known please report best estimates

Centre Name: _____

Centre Manager: _____

Q1a. *What was your total annual patronage for the 2012-13 season/year (aquatic facility only)?*

Total annual patronage = _____

Q1b. *What were the annual attendance figures for the 2012-13 season/year for the following categories (aquatic facility only)? Complete all relevant*

	Participant Number/Estimate
Adults	
Concession/Pensioner	
Spectator	
Children under 5 years	
Children 6-10 years	
Other	

Q2. *LIWA wants to estimate the total value of the industry as a collective. What was your total annual expenditure for the 2012-13 season/year (aquatic facility only)?*

Total annual expenditure = _____

Q3. *Which of the following learn to swim programs are run in your centre and how many people participated in these in the 2012-13 season/year (estimate if unknown)?*

Program	Yes/No	Participant Number/Estimate
Infant Aquatics (Parent-baby classes)		
Education Department Learn to Swim		
Swim School Learn to Swim		
Specific learn to swim for at risk groups e.g. CALD or Indigenous		
Specific learn to swim for disabled		

Q4. *How many staff are employed within your centre?*

Position	Full time	Part time	Casual	TOTAL
Managers (aquatic supervisors and coordinators)				
Lifeguards				
Swim Instructors				
Other				

Q5. *Does your centre have a policy on the number of children under 10 years of age attending with 1 parent/guardian?*

☐ No

☐ Yes – *what is the ratio?* **1 :** _____ children

Q6. *Has your centre implemented any water saving strategies in line with the Water Corporations suggestions? Tick all applicable*

☐ Change shower heads

☐ Adjust reticulation

☐ Check for leaks

☐ Read meter regularly

☐ Other, *please specify:* _____

Thank you for completeing this survey

LEISURE INSTITUTE OF WA AQUATIC (INC.)

Department of Sport and Recreation

Appendix 4: Aquatic Incident Research data collection form

AQUATIC INDUSTRY INCIDENT RESEARCH PROJECT

Aquatic Centre:_____ Month:_____ Year:_____

Incident Date:_____ Time:_____am/pm

Incident Description: ☐ Major ☐ Minor

Type of assistance provided?

☐ Perform a rescue ☐ Call Emergency Services ☐ CPR ☐ SAED (defibrillation)

☐ First Aid (basic) ☐ Spine Board/Collars ☐ Oxygen Therapy

Victim Age: Gender: M / F

☐ 0-4 yrs ☐ 5-9yrs ☐ 10-14yrs ☐ 15-19yrs ☐ 20-24yrs ☐ 25-29yrs ☐ 30-34yrs

☐ 35-39yrs ☐ 40-44yrs ☐ 45-49yrs ☐ 50-54yrs ☐ 55-59yrs ☐ 60-64yrs ☐ 65+yrs

Where did it occur?

☐ Indoor Pool ☐ Outdoor Pool ☐ Spa ☐ Wave Pool ☐ Rapid River

☐ Dive Pool ☐ Concourse ☐ Plant Room ☐ Facility Entry Exit ☐ Change rooms

☐ Water Slide ☐ Play Equipment Other:_____

How deep was the water? ☐ Less than 1m ☐ Greater than 1m

Did the design/construction of the facility play a role in the incident? ☐ Yes ☐ No

Who first recognised the incident? ☐ Lifeguard ☐ Patron ☐ LTS Teachers Other:_____

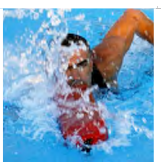
Probable Incident Cause:

☐ Inappropriate victim behaviour ☐ Victim of non-English speaking background

☐ Victim unaware of behaviour standards ☐ Pre-existing health/medical issue

☐ Poor swimming ability ☐ Lack of parental/carer supervision

Please return all incident reports with monthly patronage figures.



Appendix 5: Feedback form for the Aquatic Facility Incident Research project

AQUATIC FACILITY INJURY RESEARCH QUESTIONS

Question 1: Have you ever been involved in the aquatic facility injury research project before?

Yes	
No	

Question 2: Why or why not?

Question 3: Would you be interested in participating in the future?

Yes	
No	

Question 4: How do you currently collect and record information regarding injuries at your facility? E.g. standard form, who completes, who sent to, and how often

Question 5: If you were to be involved, what would be your preferred method of submitting information?

Copy of current form	
Complete additional form	
Online	
Other	

Question 6: Have you seen or read the aquatic facility injury research report?

Yes	
No	

Question 7: If yes, do you find the current information useful and easy to understand? What changes would you make?

Question 8: If no, why and what would make it a more appropriate and useful resource?

**If possible get a copy of their current injury report form for our records