The 2016 Queensland Urban Water Industry

Workforce Composition Snapshot

Contents

is a business unit of the Institute of Public Works Engineering Australasia Qld Division (IPWEAQ) and an initiative of Institute of Public Works Engineering Australasia QLD Division Inc , Local Government Association of QLD, Local Government Managers Australia and the Australian Water Association.

This document can be referenced as the ***'Queensland Urban Water Industry Workforce Snapshot 2016'***

1 Overview & Summary

After five years of operation, the Water Skills Partnership has established itself as the only collaborative industry-led skills program for the water industry in Queensland.

1.1 Snapshot Report Background

The 2016 Snapshot Report is the fourth iteration of the Queensland Urban Water Industry Workforce Composition Snapshot Report, with the first published in 2010 (based on 2009 data). There has been reasonable consistency in participation, and minor changes in data captured in all four reports to reflect changing workforce composition. The data now spans seven years and trends are evident.

There are no current national studies which attempt to capture this information, and feedback from industry and government stakeholders has been very positive since the process commenced. While limited in scope, it provides important information to support broad industry workforce planning and investment.

qldwater, through the Water Skills Partnership, intends to continue to improve and publish the report on a two-yearly basis.

1.2 The Queensland Water Skills Partnership

After five years of operation, the Queensland Water Skills Partnership has established itself as the only collaborative industry-led skills program for the water industry in Queensland. The Partnership performs a number of functions in this role including securing skills and training funding for industry, producing reports and workforce planning documentation, coordinating industry-wide skills/workforce development projects, piloting training initiatives, information sharing and collaboration opportunities and representation for Queensland on numerous national industry skills committees. An Industry Leaders Group made up of senior representatives from water and sewerage service providers across the state sets the strategic direction for the Water Skills Partnership.

The members of the Partnership range from small local Councils to very large Council-owned distribution/ retail entities and three state-owned bulk entities and membership has steadily increased each year of operation (currently 44 subscribers). Members at October 2016 are detailed at the back of this publication.

2015-2016 Projects and updates

- A small contract to provide water industry advice on vocational education and training-related activities to the Department of Education and Training (DET). The Department has been very proactive in seeking opportunities to support the industry, through targeted investment, strategic planning, and assistance with national VET issues.
- Assistance to industry with implementation of the new National Water Training Package including regular updates, collating feedback for input and required changes and representation on the new Industry Reference Committee for the training package.
- Updates to online training modules freely available to all members - Introduction to the Queensland Urban Water Industry and Introduction to Queensland Water Industry Legislation Course.

- Secretariat and Chair roles for the Water Industry Skills Taskforce. Through this role a number of key amendments to the Certification Framework for Operators within Drinking Water Systems were completed.
- Pilot project for implementation of the Sewage Treatment Plant Operator Certification Framework.
- Regional Hub Training – coordination of collaborative training arrangements.
- Regular Industry Leaders' Group and Water Industry Worker Technical Reference Group meetings.
- Ongoing partnerships with key agencies and organisations, such as the Water Industry Operators Association of Australia.

1.3 Key differences among the last four Snapshot Reports

Key differences among the 2016, 2014, 2012 and 2010 Snapshots of note are:

- The data collection template for 2016 was modified into a simpler format, using an online survey tool. This included removing some specific job roles and keeping only higher level job categories. The final report data analysis including graphs have focussed on job categories rather than individual job roles, to assist with comparisons against previous Snapshot Reports.
- There have been some changes to the participating organisations for each report, however there is reasonable consistency in the overall participant profile (particularly diversity - organisation size/ total number of employees). 2016 participants are noted under section 1.4.
- The qualification categories were amended slightly for the 2016 report, separating the Certificate III and Certificate IV category and including an additional category for 'no qualification'. Additional data on National Water Training Package qualifications held by water and wastewater treatment operators was also gathered.

1.4 Methodology

The data gathering stage for this Report used a modified and simplified version of the 2014 Snapshot Report data collection instrument. The data collection instrument was distributed (via online survey and Excel format) in June 2016 to Water Service Providers including bulk water entities and known private providers across the state to collect information on job roles, number of employees, age, gender and qualifications held. A total of 11 responses were received from small, medium and large local government providers, SEQ local government owned entities and bulk water providers. The responses received represent 3323 employees which reflects approximately 56.5% of the Queensland water industry workforce.

The organisations that responded to the survey were:

- Banana Shire Council
- Queensland Urban Utilities*
- City of Gold Coast
- Logan City Council
- Mackay Regional Council
- North Burnett Regional Council
- Seqwater
- Toowoomba Regional Council
- Unitywater
- Central Highlands Regional Council*
- Boulia Shire Council*

***New in 2016**

2 Size and Scope of the Qld Water Industry

The total size of the industry is estimated to be around 5,500 employees excluding an average vacancy rate of up to 10% and excluding contractors. There are no indications that this figure has changed significantly and indeed national growth rates for the industry are predicted to be quite slow or stagnant.

2.1 Queensland Urban Water Industry Employers

As of October 2016 in Queensland there were 76 water service providers excluding small private schemes. This figure has slightly changed across the reports due to various sector reforms. These organisations constitute the scope of this report.

- 66 are local governments outside South-East Queensland (SEQ), 17 of these utilities are indigenous councils including two Torres Strait Island councils and 15 Aboriginal councils. Fraser Coast Regional Council resumed providing water and sewerage services previously delivered by Wide Bay Water Corporation in 2016.
- The distribution/sewage collection and retail services for eight SEQ local government areas are managed by two statutory authorities, owned by the councils.
- The remaining three SEQ councils are directly responsible for distribution/sewage collection and retail services.
- There are also two very large, state-owned entities responsible for bulk water supply and transport (along with treatment in SEQ and limited other areas of the state) and an additional two state-owned commercialised statutory authorities (Water Boards) operating in Mount Isa and Gladstone.

Some of these organisations outsource part of their day to day operations to private companies. As in previous years, in 2016 approaches were made to companies providing contract services to water service providers (e.g. treatment operations) to gather data, however no responses were received. The job role category changes in the following sections indicate likely growth in outsourcing and future iterations of this report will seek to provide a measure of this through other means (i.e. directly through the water service providers).

2.2 Total Size of the Queensland Urban Water Industry

For all previous Snapshot reports, ***qldwater*** conservatively estimated the total size of the industry to be 5,500 employees excluding an average vacancy rate of up to 10% and excluding contractors. There are no indications that this figure has changed significantly and indeed national growth rates for the industry are predicted to be quite slow or stagnant. The number of employees working in private and other organisations has been revised upwards, given the number of known outsourcing arrangements and the (limited) data from the survey on outsourced roles.

Table 1 summarises the number of employees working in each of the larger organisations making up the broader Queensland Water Industry.

In Queensland, there appears to be a strong correlation between size of the operations workforce and the number of water connections across the local government-owned utilities (**Figure 1**). This data is based on water/wastewater operations staff only (e.g. water and wastewater treatment plant operators, networks maintenance operators) and does not include management and
administration employees.

Table 1: Size of major employers in the Queensland Urban Water Industry

Business	Estimated Size of the Workforce
Total SEQ local government-owned employers (3 council service providers, Queensland Urban Utilities, Unitywater)	2,735 employees
Local Government service providers outside SEQ	1,900 employees
Bulk water providers	1,070 employees
Private and other organisations	200 employees*
Gladstone and Mt Isa state-owned water boards	70 employees
TOTAL	5,975 (including vacancies)

**This estimate includes operations employees only not capital project employees.*

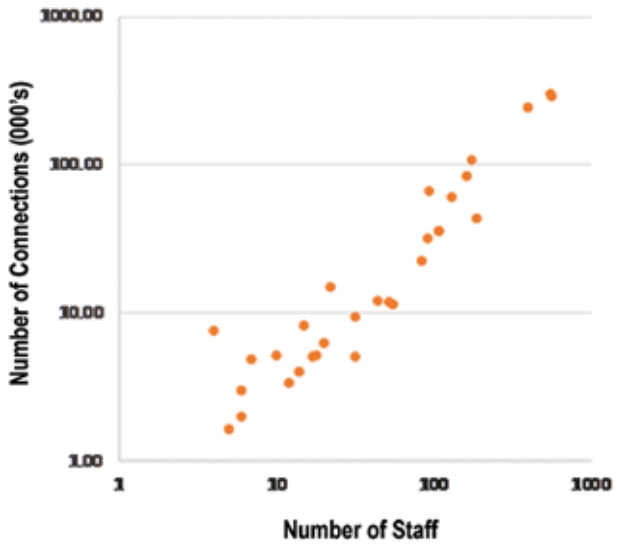

Figure 1: Number of operations staff by number of water connections (000s).

Figure 2 shows the grouped property connections by local government area in Queensland as well as the water supply scheme locations.

The map clearly demonstrates the significant diversity in density of regions in Queensland and large geographic separation between communities with water supplies. This creates challenges in achieving financial sustainability for many service providers, in sourcing skilled staff and delivering industry's preferred face to face training for technical and operational roles.

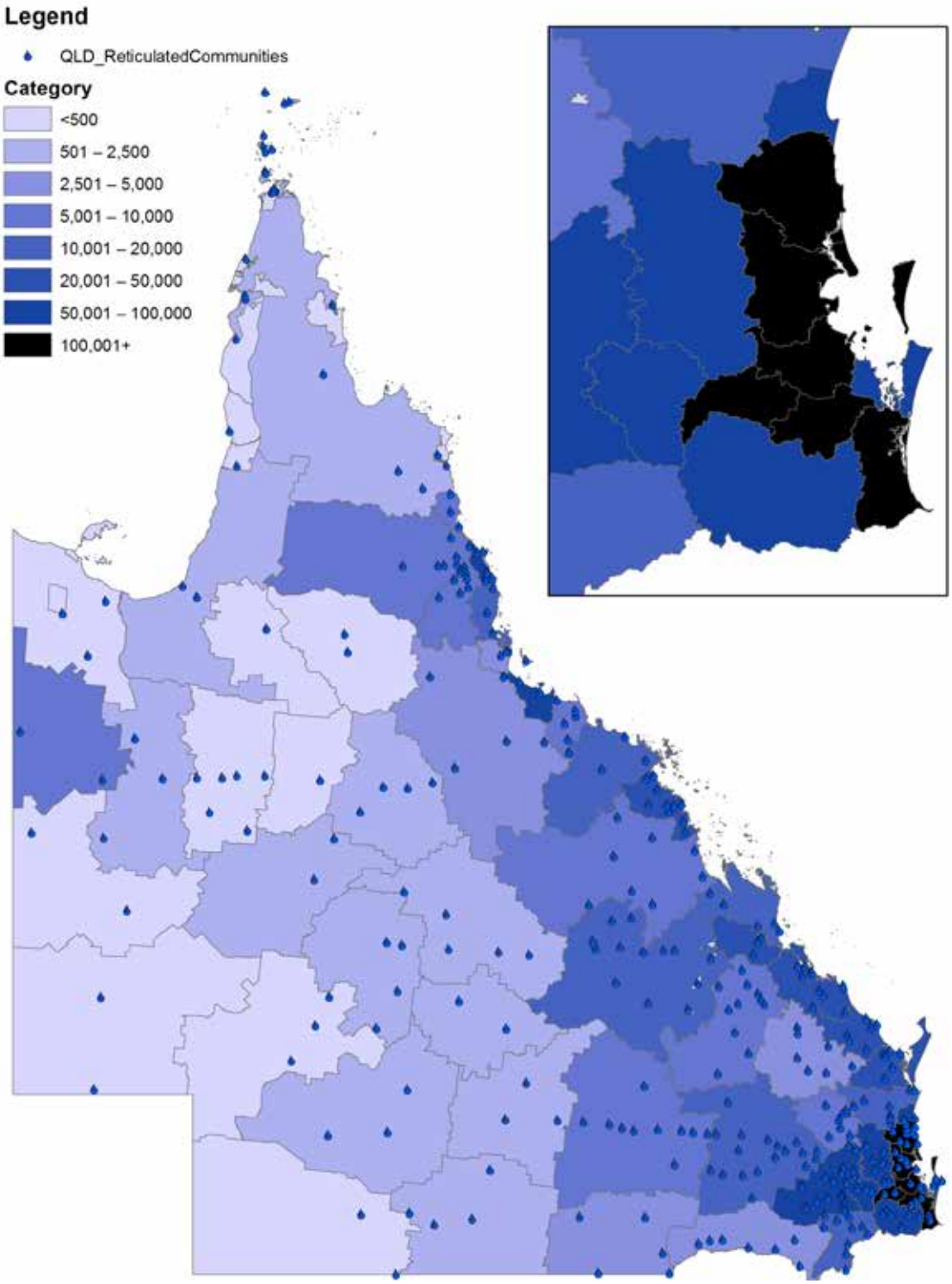

Figure 2: Property connections (water) and water supply scheme locations by Local Government Area

3 Workforce Statistics & Trends

The departure of a number of water industry professionals with significant experience and knowledge can impact an organisation as well as the broader industry significantly with such key employees no longer participating in industry working groups and information sharing processes.

3.1 Job Families and trends

Figures 3 represents the proportion of the workforce employed within each Job Family in 2016. For 2016, the largest job role category was Business Support (29%). This figure includes all support functions (outside of the other job role categories) such as finance, human resources, communications and IT professionals and also includes an estimate of full time equivalent staff for local government Water Service Providers that access these services through departments within a larger council structure. The equal largest combined job role category, at 29%, is the Water Operations job roles which includes Water Operations – Civil (18%), Water Operations – Treatment (10%) and Water Operations – Dam (1%). In 2016, Engineers made up 12% of the workforce, which is higher than previous years.

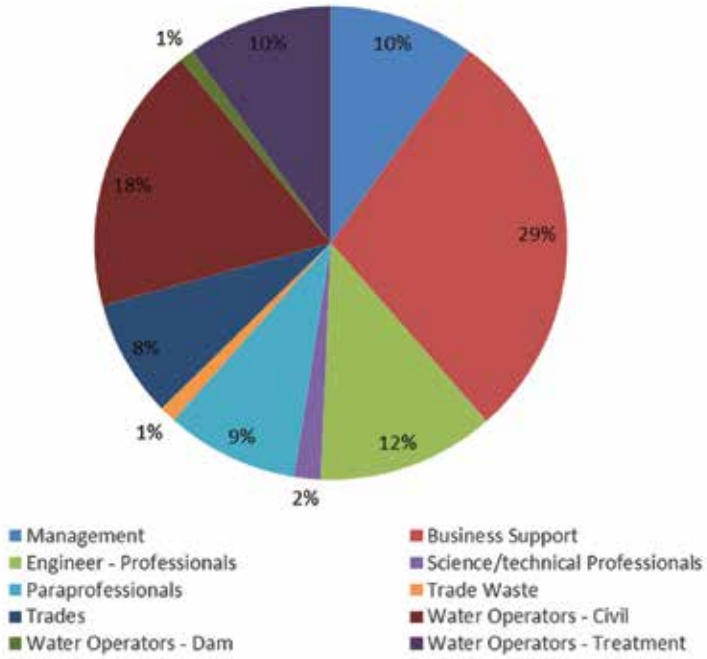

Figure 3. Job Family Categories 2016

Figure 4 provides an analysis of the proportion of employees employed within each Job Family Category across the 2010, 2012, 2014, and 2016 Snapshot Reports, respectively.

This data demonstrates likely changes to workforce composition, beyond potential inconsistencies in data reporting (and differences in participating organisations). In particular, as noted above, the Engineers job role category has demonstrated a gradual increase from 5% in 2010 through to 12% in 2016.

The data for the operations roles (including trades), appears to indicate a downward trend which is represented in more detail in Figure 5. The slight peak in operations roles in 2012 with the significant reduction in trades roles that same year, may point towards discrepancies in data collection and categorisation methods for organisations participating in that year.

Despite this potential discrepancy, between 2010 and 2016 there has been an almost 22.2% reduction in the number of operations staff over the 6 year period. Further, for the Trades job role category there has been a significant decline with the category now comprising 8% of the total workforce in 2016 as opposed to the 19% share in 2010. It appears likely to reflect a trend towards outsourcing, as opposed to a reduction in the need for these job roles. Anecdotal evidence and details on current contractual arrangements support a trend towards greater contracting of civil, plumbing, and mechanical and electrical maintenance activities in particular.

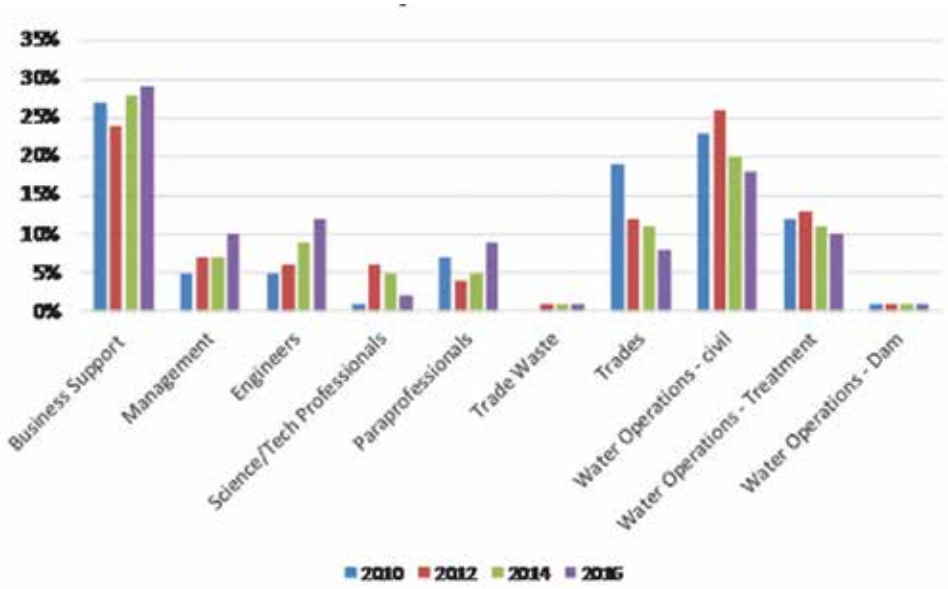

Figure 4. Job Family Category Trends 2010 – 2016

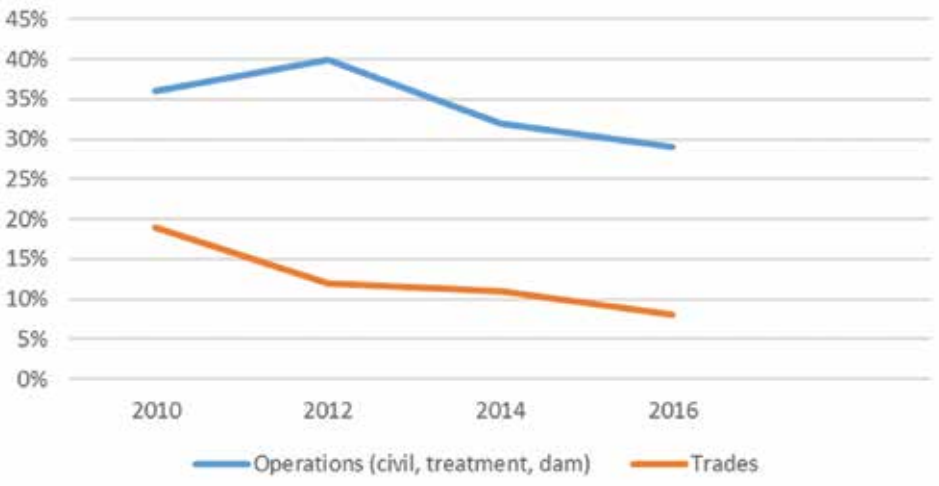

Figure 5. Operations staff Trends 2010 – 2016

The following observations may further explain the of reliability of some of the apparent 'trends':

- Many organisations participating in earlier reports (2010 and 2012) had been through significant organisational change and were dealing with legacy HR systems. The confidence in the data collection was much higher in 2014 and 2016 than in previous years.
- There are differences in participating organisations between 2010 and 2014. Where organisations have been able to participate across a number of snapshot surveys, there are some minor trends in job family composition for several of the participating organisations that reflect those trends outlined above.
- There are significant differences between a council and a standalone entity, especially in the area of business support which is more likely to be an estimate for a council – reflecting a shared service. Different methods used by councils to estimate these roles (due to differences in individual personnel responding each year) may account for some of the variance between reports.

Trends – departure of key roles

The slight decline in the over 60 age category may appear inconsequential, however, anecdotal evidence suggests significant turnover. In the past two years, the Queensland water industry has seen the departure of a number of water industry professionals with significant experience and knowledge.

The loss of such key employees, who have been in the industry for many years and have developed substantial knowledge, can impact an organisation considerably.

Further, there is an impact on the broader industry with such key employees no longer participating in industry working groups and information sharing processes.

3.2 Age Profile

At face value, the 2016 data demonstrates some trends in the aging profile of the industry. **Figure 6** outlines the age profiles across the four Snapshot reports from 2010 to 2016. There are notable gradual decreases in the under 30 year old age group, coupled with minor increases in each of the older age profile categories. There was however a slight decline in the over 60 age group from 2014 to 2016.

While the increases in the 31-40 and 41-50 age groups are gradual, the commensurate decrease in the proportion of staff 30 years and under potentially points to declining recruitment into entry-level roles. Further qualitative research on recruitment strategies and statistics to confirm these assumptions would be of likely value.

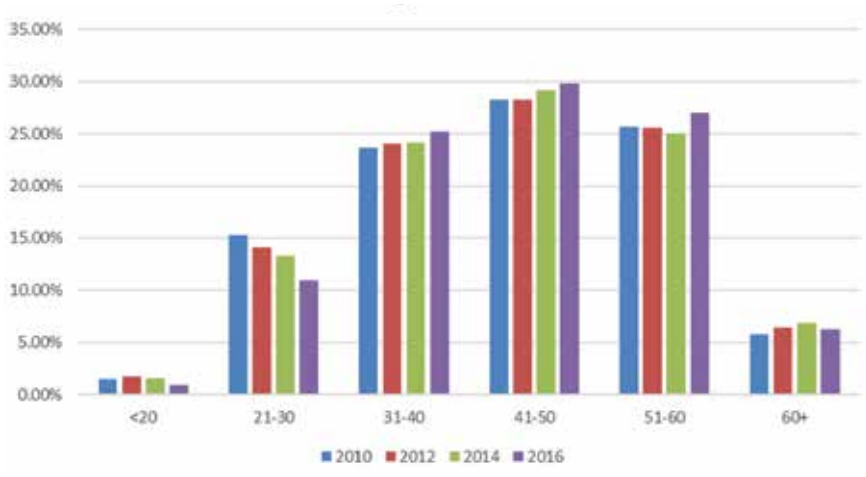

Figure 6: Age profile of Queensland Water Industry - comparison of 2010, 2012, 2014 and 2016 Snapshot Reports

3.3 Age Profile and Job Role Category

Figure 7 represents the different job role categories in the water industry broken into age categories.

The Business Support category has the highest proportion of employees 30 years and under (15.3%) followed by Trades (14.8%). This may be attributed to a higher number of apprentices in the latter job roles. The Professional – Scientific category had the lowest number of employees under 30 (0%) coupled with a high number of employees over 50 (48.9%). This data differs significantly from previous reports (7.5% over 50 in 2012 and 21.7% over 50 in 2014) which may reflect data discrepancies.

In line with previous reports, a large number of wastewater/water treatment supervisors fall within the over 50 years age categories (57.3%). In fact this job role has the highest percentage of employees over 50 across the categories for 2016. As noted in the 2014 report, this may indicate a longer lead time for employees to become skilled in the technical aspects of a water/wastewater treatment operator role before moving into a supervisory-level role.

Civil Construction and Maintenance - Water and Wastewater employees represent the second largest proportion of employees in the overall water industry workforce (after business support roles). The number of employees in these roles over 51 years of age remained relatively high at 42.54% which is consistent with previous reports.

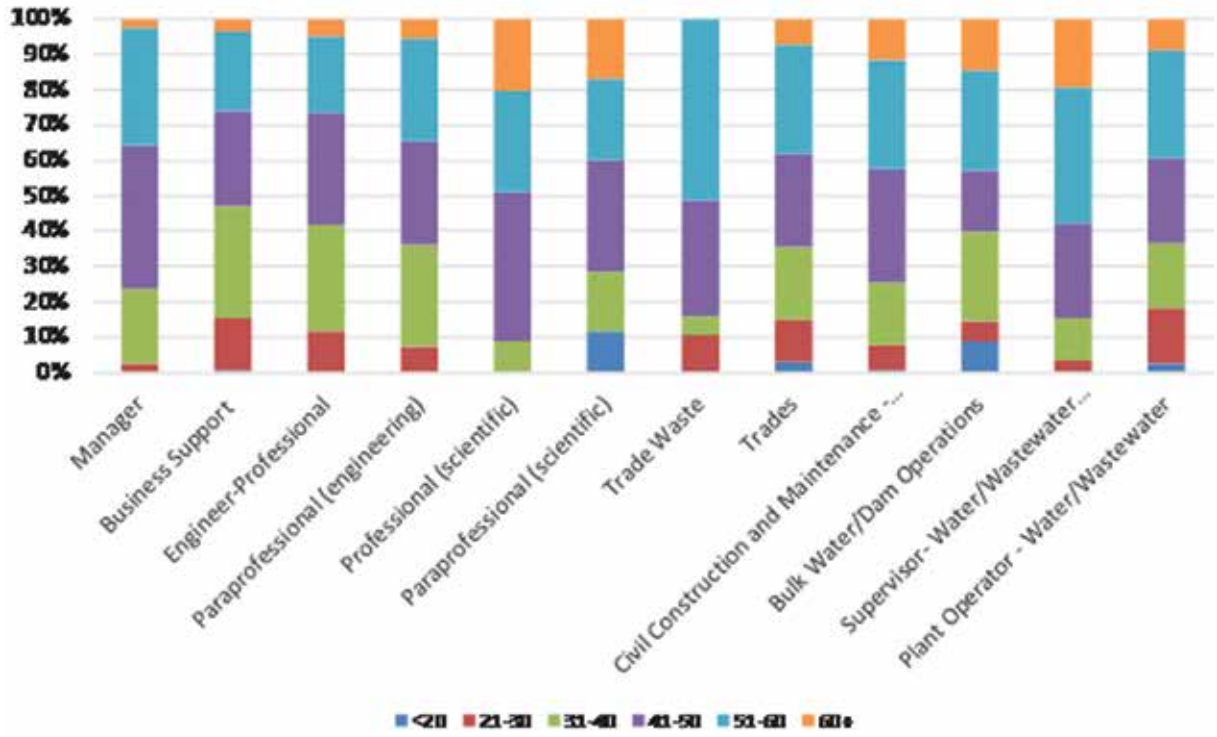

Figure 7: Age profile by job role category

Specialised occupations – a more detailed consideration of key occupations

From the 2012 Snapshot Report onwards, the Water Skills Partnership Industry Leaders Group representatives were asked to consider a range of measurements for identifying 'specialised occupations' such as qualifications, experience and those difficult to recruit. The result was a list of key job roles that the reports would monitor, paying specific attention to the age profiles. Below is a summary of some of these 'specialised occupations' that have been highlighted as potentially 'high risk' due to the associated age profiles.

Job Role	Total Employees	Age Profile	Future Strategy
Operational Manager Water	5.10%	This role was identified in both the 2012 and 2014 as a high risk 'specialised occupation'. The number of employees in the two age categories over 51 combined has been consistently high at 43.40% in 2012, 45.05% in 2014 and 41.23% in 2016. The number of employees in the 60 and over category for 2016 is however relatively low at 3.59%. It appears that retirements will likely have a future impact, however, promotion/ appointment from within organisations makes it a difficult trend to monitor without more detailed data.	Further investigate trends
Trade Waste Officer	1.24%	The number of employees in the 51 and over age categories has increased from 38.46% in 2012 to 48.17% in 2014 and now 56.37 % in 2016. This likely indicates a significant ageing trend. Conversely, the number of employees in the 60+ age group has reduced significantly from 21.65% in 2014 to just over 5% in 2016.	Further investigate trends
Dam Operator	1.07%	Identified as a risk in 2012, there has been a gradual but significant decline in the number of operators 51 and over. In 2012 the figure was 61.54%, in 2014 53.13% and in 2016 42.86%. The number of employees in the 60 and over age group has declined from 18.75% in 2014 to 14.29% in 2016.	Continue to monitor
Supervisor Wastewater Treatment	1.80%	The number of employees in the 51 and over age categories has fluctuated for this job role. In 2012 it was 50%. In 2014 however it reduced to 38.64% and in 2016 this number has increased to 57.63%. The number of employees in the 60+ age category has demonstrated a gradual but significant increase; 7.41% (2012), 9.09% (2014), 19.49% (2016).	Further investigate trends
Professional - Scientific	1.37%	The proportion of staff 51 and over has increased significantly from 7.5% in 2012 to 48.89% in 2016. This is more likely attributed to data discrepancies and differences in survey participants given the relatively large increase. This job role also has the highest proportion of employees in the over 60 age category in 2016 at 20.00%.	Continue to monitor

Table 2. Specialised Occupations and Age Profiles.

3.4 Gender Profile

Figures 8a and 8b compare the gender statistics of the 2010, 2012, 2014 and 2016 Snapshot report data by job category. The 2016 data again supports previous report conclusions that the water industry is male-dominated with males continuing to represent the majority of the workforce. At 71.8% for 2016, this figure is down from the 2014 figure of 75.25% and the 2016 figure of 76.33%.

The 2016 data detailing gender by job role does not appear to suggest clear trends in any one particular job role category, with perhaps the exception of the Science/Technical Paraprofessionals category which has seen a gradual decrease in the number of women in those roles since the 2010 report. The results are less clear for remaining job roles.

There appeared to be a gradual increase in women in Science/Technical professional roles from 2010 – 2014, however this figure is down for 2016 (59.38%), more closely in line with the 2012 figure (60%). The Science/technical professional category along with Business Support remain the only two job role categories with a higher proportion of female employees. Females comprise only 0.35% and 3.95% of the Trades and Water Industry Operations categories in 2016, respectively.

The Management job role category has seen an increase in the number of females since a low of 16.9% in 2012. This increased to 24.7% in 2014 (in line with the 2010 data which was 23.6%) and again to 30.13% in 2016. The results from future surveys will be of particular interest in confirming this trend.

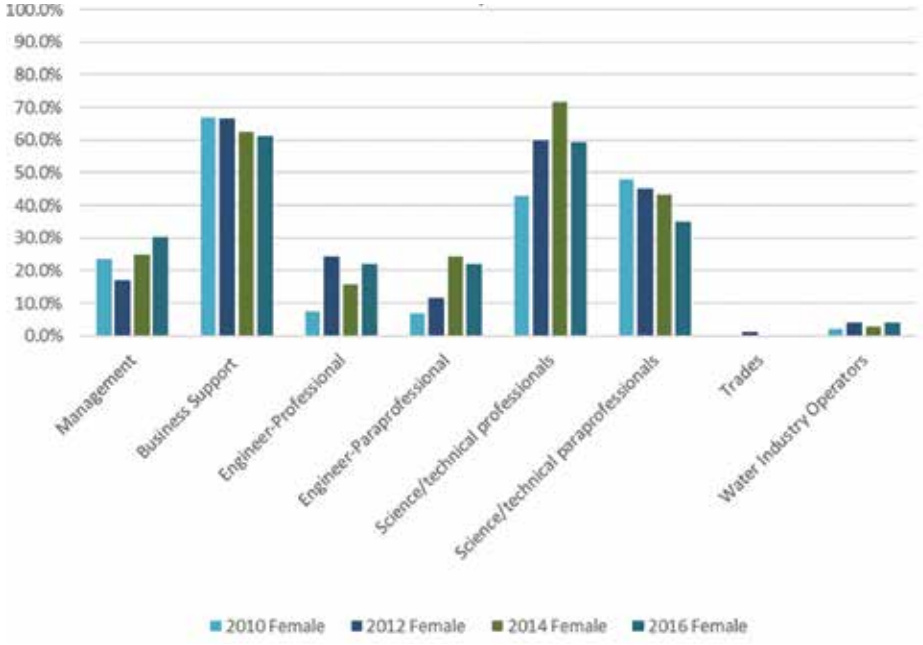

Figure 8a: Number of females in each job family as a % of total– comparison of 2010, 2012, 2014 and 2016 data

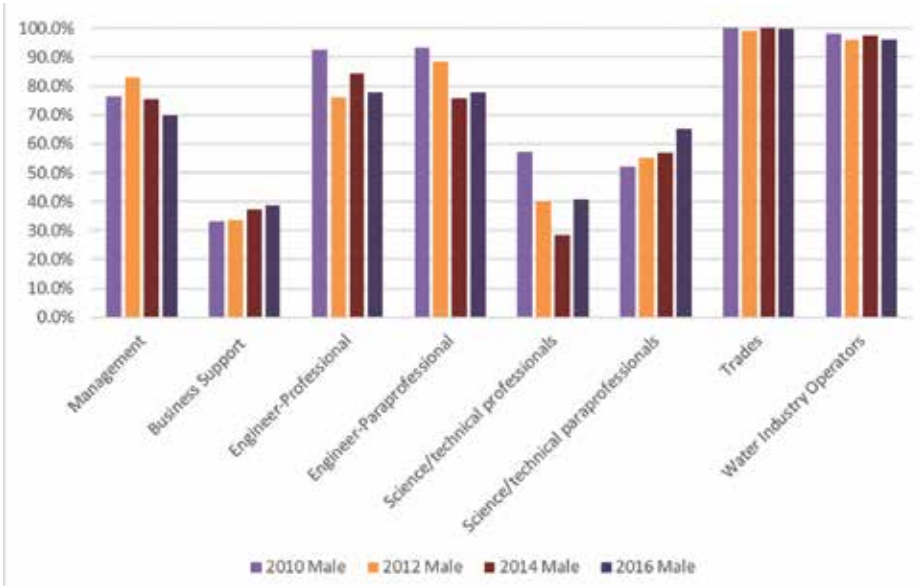

Figure 8b: Number of males in each job family as a % of total – comparison of 2010, 2012, 2014 and 2016 data

The International Water Association (IWA) has identified the need for the water industry, internationally, to address the workforce diversity in the industry. IWA (2016) outlines that a number of studies have shown that gender diversity in leadership results in better performance. IWA states that closing the gender gap in the sector may address several issues such as:

- By tapping into an underutilised employment segment, address challenges in future workforce shortages due to an ageing workforce.
- More accurately represent the demographics of the industry customer base.
- Promote greater creativity and innovation.
- Create industry leadership that can draw upon a wider set of experiences and competencies in order to inform decision-making.

Innovation – Banana Shire Council

Contrasting the overall data indicating that approximately 6.57% of treatment plant operators are female, at Banana Shire Council one third (33.3%) of water and wastewater treatment plant operators are female.

The Council has implemented a number of "organic" recruitment strategies over the years in order to encourage applicants to water industry job roles. This included establishing a number of traineeship and graduate positions. While females were not specifically targeted, they were encouraged to apply, backed up by a positive workplace culture to support females working in a previously male-dominated environment.

3.5 Job Categories and Qualification Levels

Figure 9 compares the highest level of qualification achieved for each of the job categories surveyed. The results in this figure represent a much smaller subset of the total survey responses (n = 941) as not all respondents were able to source qualifications data. The qualification categories were amended slightly for 2016, including separating Certificate III and IV qualifications into distinct categories and adding a category for 'none.' Thus, direct comparison with the data from previous reports is not possible.

As would be expected, the majority of employees in professional roles such as Engineers, Managers and Science/ Technical Professionals hold a Bachelor Degree in 2016. This data is similar to the 2014 and 2012 data. The job role category with the largest number of employees with no formal qualifications was Civil Construction and Maintenance (48.86%). The number of staff with no formal qualifications in the Trades job role category may be attributed to employees on apprenticeships that do not currently hold qualifications but are studying to complete them.

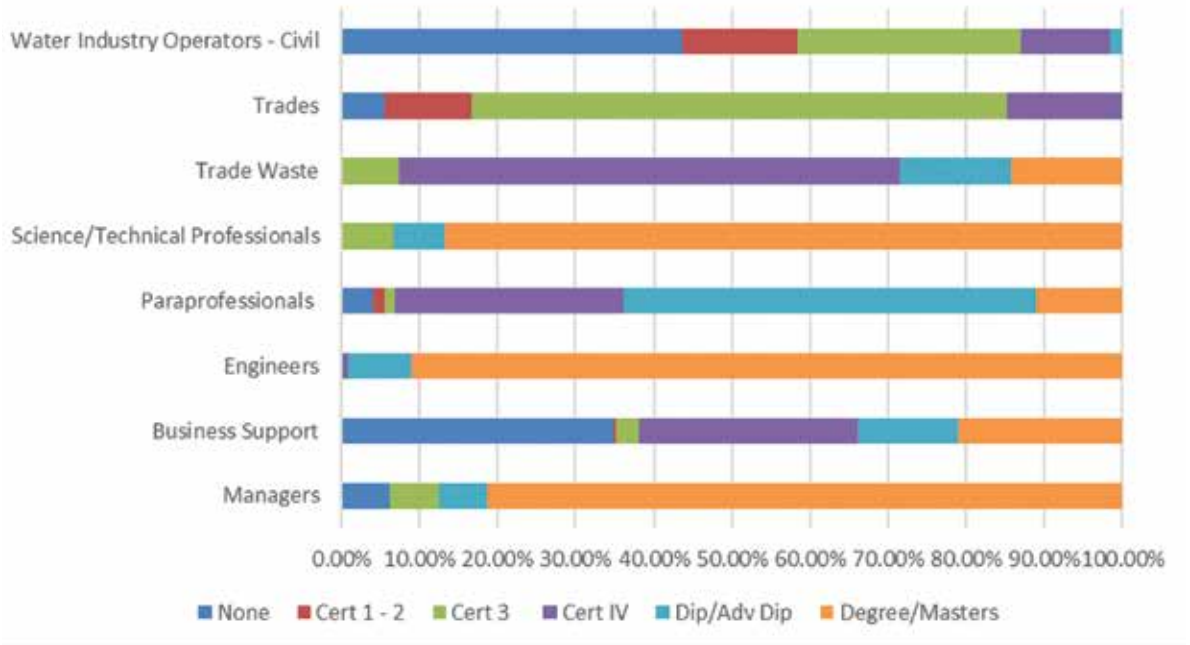

Figure 9: Highest Qualification Achieved by job category 2016

For the 2016 report, separate data was collected for water and wastewater treatment plant operators and supervisors. Respondents were asked to include qualifications held from recent (post 2001) versions of the National Water Training package (NWP) only and include all qualifications attained (i.e. not just highest level qualification). It is important to note that in a number of organisations, operators may have both water and wastewater treatment responsibilities, but this is not a dominant practice for survey respondents.

The results (**Figure 10**) showed that 77.4% of water treatment plant supervisors held a qualification from NWP that was attained post 2001. Similarly, only 26.7% of water treatment plant operators did not hold a recent NWP qualification. The most commonly held qualification for water treatment plant operators was Certificate III in Water Operations (66.4%).

For wastewater treatment plant operators, 26%% did not hold a recent qualification from NWP. The majority (63%) of wastewater treatment plant operators held a Certificate III Water Operations.

The data also showed that 22.6% of water treatment plant supervisors and 46.7% of wastewater treatment plant supervisors held a Diploma qualfiication. This is potentially reflective of the survey respondents who were able to provide qualification data (mainly SEQ based) rather than an overall reflection of the industry.

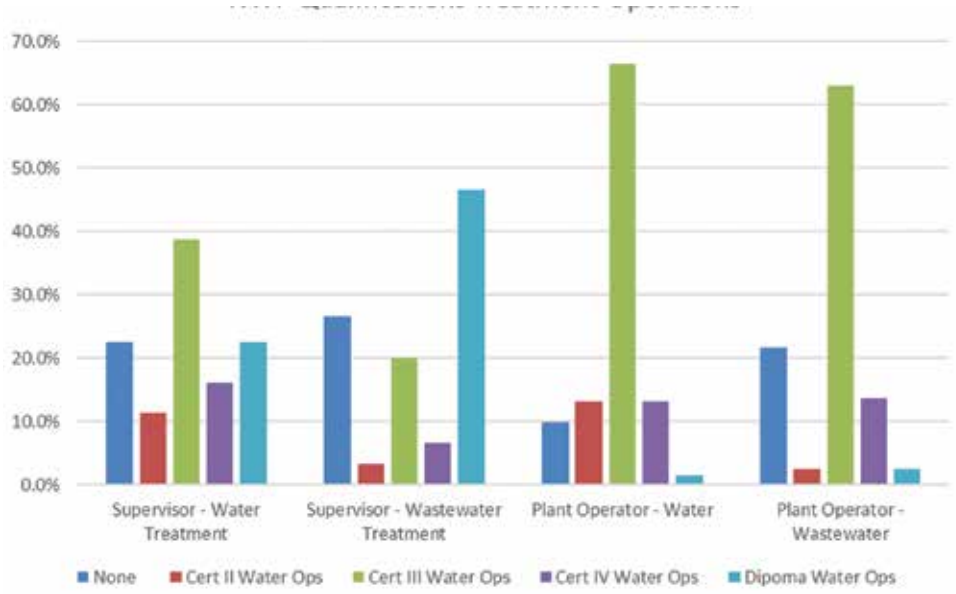

Figure 10: NWP qualifications held by water/wastewater treatment operations employees

These results are in line with previous assumptions on the number of water operators in Queensland with post-2011 NWP qualifications. Assuming that this data could be extrapolated to the wider Queensland industry, approximately 75-90% of water treament plant operators and supervisors hold qualifications that can be assessed against the Certification Framework for Operators of Drinking Water Systems 2016. However, based on the results of pilot activities for Certification, it is anticipated that the majority of operators that hold an existing NWP qualification would still need to complete between three to six additional units of competency (as relevant to the treament processes that they operate) in order to meet the criteria for becoming a Certified Operator. In addition, earlier surveys showed more significant qualification gaps in smaller organisations, which were not able to participate in this study.

3.6 Outsourced roles

In 2016, the data provided on outsourced roles was limited. Data was again requested from private organisations (for operations and maintenance functions, not e.g. design and construction activities) but not available. Of those who responded to the survey with estimates of number of outsourced roles, outsourced roles comprised approximately 12% of the total workforce. Anecdotal evidence suggests that this is a significant underestimation for the sector.

Innovation - Gold Coast Water Training Culture

Gold Coast Water has been an industry leader in supporting training and upskilling for the water industry workforce. It has been a passionate supporter and participant in the Water Industry Worker program (focussed on training for networks/civil operations staff) since the original industry pilot in 2009. Since the pilot, the organisation has seen over 100 enrolments in the qualifications including Certficate II, Certificate III, Certificate IV and Diploma Water Operations. The supervisors have been regular participants in the Water Industry Worker Technical Reference Group and provided input into training package changes as well as promoting the training to the broader industry.

Gold Coast Water has also focussed on ensuring that the wastewater treatment plant operators are suitably trained, with all operators required to attain a Certificate III Water Treatment (Wastewater). It is a participant in the pilot for implementation of the Sewage Treatment Plant Operator Certification Framework in Queensland (the Framework was developed by the Water Skills Partnership in 2015) and aims to have its first four operators Certified by mid 2016.

Trends – Outsourcing in the water industry

In 2011, the Productivity Commission stated that outsourcing was used extensively in the water industry and concluded that the majority of industry employment was in the private sector (p.41). This assumption is almost certainly based on practices in metro areas of other jurisdictions, with utilities in Queensland currently the dominant employers (subject to observations above indicating a gradual increase in outsourcing). The Commission's assertion that most organisations outsource capital works is supported.

The Commission provided a summary of the percentage of operating expenditure outsourced by the large NSW, WA, SA and Victorian entities between 2009 and 2010. The figures ranged from 30% of expenditure outsourced to 73% (Productivity Commission, 2011, p.114). Considering that this data is now over five years old, it is reasonable to expect that these percentages have increased.

4. Conclusions and Key Recommendations

The fourth iteration of this Snapshot has highlighted a number of potential trends in the industry such as changing job roles, an aging employee profile and continuing male-dominated roles such as trades and operations. The report has also suggested an increasing outsourcing trend (a change to the way necessary skills are accessed) and detailed difficulties in capturing data to support these assertions.

The report demonstrates the need for the industry to look at workforce trends and proactive options to ensure that current and future workforce challenges are addressed. In particular, there is a need to focus on ensuring that entry level recruitment options are supported to enable younger workers to enter the workforce and also to promote the uptake of mentoring opportunities to ensure that skills and knowledge can be passed down from experienced workers.

The industry may also benefit from focussing on attraction and retention of female workers, particularly in the male dominated job roles. There are already emerging industry models for recruitment and retention of female workers and these industry experiences will continue to be shared to inform others.

The need to investigate the impact of outsourcing is becoming more pressing. This includes investigating options for ensuring that internal staff are equipped with the skills and knowledge required to effectively manage contractors.

There are a number of current and future planned projects both nationally and in Queensland through the Water Skills Partnership that are attempting to address some of these issues.

The ***qldwater*** Technical Reference Group and Water Skills Partnership Industry Leaders Group members are currently considering options for improving data collection and analysis to enhance future reports. It is anticipated that a revised format will be presented for future reports, with potential to add more detailed confidential comparative data for the benefit of respondents.

qldwater's ongoing roles with the national Water Industry Skills Taskforce are aimed at ensuring that all work undertaken complements and enhances other industry workforce studies.

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Appendix A. Queensland Water Skills Partnership Subscribers 2016/17

- Balonne Shire Council
- Banana Shire Council
- Barcoo Shire Council
- Blackall Tambo Regional Council
- Boulia Shire Council
- Bundaberg Regional Council
- Burdekin Shire Council
- Carpentaria Shire Council
- Cassowary Coast Regional Council
- Central Highlands Regional Council
- Charters Towers Regional Council
- City of Gold Coast
- Diamantina Regional Council
- Douglas Shire Council
- Etheridge Shire Council
- Gladstone Area Water Board
- Gladstone Regional Council
- Goondiwindi Regional Council
- Gympie Regional Council
- Hinchinbrook Regional Council
- Logan City Council
- Longreach Regional Council
- Mackay Regional Council
- Maranoa Regional Council
- Mareeba Shire Council
- McKinlay Shire Council
- Mount Isa City Council
- North Burnett Regional Council
- Paroo Shire Council
- Queensland Urban Utilities
- Redlands City Council
- Richmond Regional Council
- Rockhampton Regional Council
- Seqwater
- South Burnett Regional Council
- Southern Downs Regional Council
- Sunwater
- Tablelands Regional Council
- Toowoomba Regional Council
- Townsville City Council
- Unitywater
- Wujul Wujul Aboriginal Shire Council

Special thanks to each of the organisations who contributed data to this study.

About *qldwater*

The Queensland Water Directorate (***qldwater***) is the central advisory and advocacy body within Queensland's urban water industry and represents members from Local Government and other water service providers across Queensland.

The Directorate actively promotes collaboration and development across the industry. One major area of focus for ***qldwater*** has been to help identify and understand as well as guide the development of industry-wide strategies to aid the industry's significant skill development, attraction and retention challenges across the state.

qldwater will continue to work with industry to further develop its workforce and improve and retain valuable skills unique to the industry. Further information about this and other programs is available at www.qldwater.com.au.

43-49 Sandgate Road
Albion, QLD, 4010

PO Box 2100
Fortitude Valley, BC, 4006

phone: 07 3632 6853

fax: 07 3632 6899

email: enquiry@qldwater.com.au

www.qldwater.com.au