The Queensland Urban Water Industry

Workforce Composition Snapshot

Contents

qldwater

is a business unit of the Institute of Public Works Engineers Association Queensland (IPWEAQ) and an initiative of Institute of Public Works Engineering Australia QLD Division Inc

Local Government Association of QLD

Local Government Managers Australia

Australian Water Association

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1 Introduction

Queensland is mobilising its water industry to respond to significant skills challenges including an ageing workforce and competition from other sectors.

1.1 Queensland Water Industry

In Queensland, there are 77 standard registered water service providers, excluding smaller boards and private schemes. Of these, 66 are owned by local government, 15 utilities are indigenous councils including 2 Torres Strait Island councils and 13 Aboriginal councils. There is also a single council-owned corporation for the Fraser Coast Region (Wide Bay Water Corporation). The distribution/sewage collection and retail services of the ten South East Queensland (SEQ) councils are managed by three statutory authorities, owned by the councils. The remaining registered providers include privately owned industrial services along with large, state-owned entities responsible for bulk water supply, and transport. Some of these organisations outsource part of their operations to private companies.

The Queensland water industry's workforce is facing complex challenges including an ageing workforce, attraction and retention of staff, falling workforce participation rates, competition from other industries (including mining) and skill and labour shortages.

Nationally, trends towards increasing technology, community expectations, outsourcing contracts with specified requirements for operators, legislative reform and the career needs of water workers have brought the need for industry skills development to the fore.

Due to the increasing demands being placed on the water industry it is crucial to properly address workforce development challenges to ensure the water industry has the capacity to support safe, secure and efficient water services across the state. To achieve this, the industry must adopt a collaborative approach to develop, short, medium and long term plans to attract, develop, train, and retain a skilled water workforce.

This information within this report consolidates data from a variety of published sources to provide a snapshot of the industry. The report is the first of a series of products to be developed as part of the Workforce Capability Theme for the Water Skills Formation Strategy.

1.2 What is a Skills Formation Strategy

The skills formation strategies are an initiative of the Department of Education and Training and have been implemented through the Queensland Skills Plan 2008. There are 47 skills formation strategies, where 40 have already transitioned to industry.

The skills formation strategy works using a stakeholder cluster approach to:

- Provide local solutions to workforce issues
- Identify shared goals
- Strengthen capacity through shared resources
- Increase industry community influence on future planning

Currently the Water Skills Formation Strategy focuses on the needs of those organisations (publicly owned) which provide water and wastewater services to Queensland communities.

The Skills Formation Strategy is governed by an Industry Leaders' Group with largely CEO-level representation, currently from:

- Unitywater, Allconnex Water, Queensland Urban Utilities, Cairns Water, Murweh Shire and Wide Bay Water Corporation representing local government-owned utilities
- Seqwater, SunWater and the SEQ Water Grid Manager representing state government-owned utilities
- The Department of Environment and Resource Management, Department of Education and Training, Local Government Association of Queensland and Australian Workers' Union.

The Industry Leaders' Group sets the strategic direction for the strategy and the four working groups; Branding, Training and Education, Workforce Capability and Policy and Partnerships work to develop solutions around key issues and challenges.

2 Size of the Queensland Water Industry

Around 6,000 employees deliver the state's crucial water and wastewater services.

2.1 Section Summary

This section summarises available information on the size of the Local Government water industry in comparison with data on the broader water industry. ***qldwater*** has conservatively estimated the total size of the industry to be 5500 employees excluding an average vacancy rate of up to 10% and further excluding contractors. These figures are consistent with estimates for the national water industry (WSAA 2008).

2.2 Background

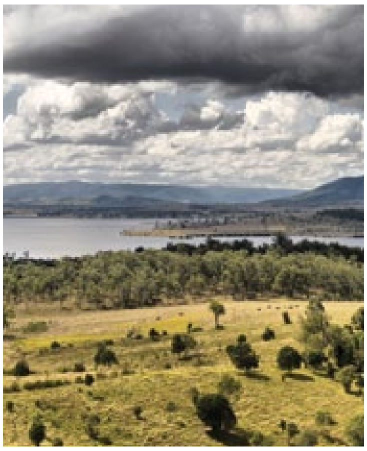
There is little quantitative data on the size of the Queensland water industry because the majority of the sector has traditionally been managed by local governments where water and wastewater roles can be shared across various council functions. The exceptions are organisations with discrete water functions including bulk providers, SEQ distribution/retail entities and some larger council service providers.

With recent changes to institutional arrangements in SEQ in 2010 to rationalise the number of providers and the increasing focus on workforce planning, many larger water service providers are compiling more accurate figures on staff numbers and future requirements.

In 2009, ***qldwater*** surveyed 73 local government water service providers to try and ascertain the size of the Queensland water industry. Responses were received from 36 councils or 48 percent of the industry. These 36 councils represent around 80 percent of all connected properties across the state.

The data collected generally referred to technical staff and those involved in direct line management and administration.

The responses (collected prior to the SEQ reform) showed that 69 percent of council businesses employ fewer than 50 staff, 13 percent employ between 50 and 199 staff and about 12 per cent employ more than 200 staff.



2.3 Total Size of the Local Government Water Industry

To establish the total size of the local government water industry, an estimation model was used to determine appropriate employee levels for councils that did not respond to the survey or in cases where insufficient data was provided.

There is a strong relationship between size of the workforce and the number of connections across the local government-owned utilities (Figure 1). Further anecdotal evidence suggests that the relationship between these two factors are similar for councils where limited data has been collected.

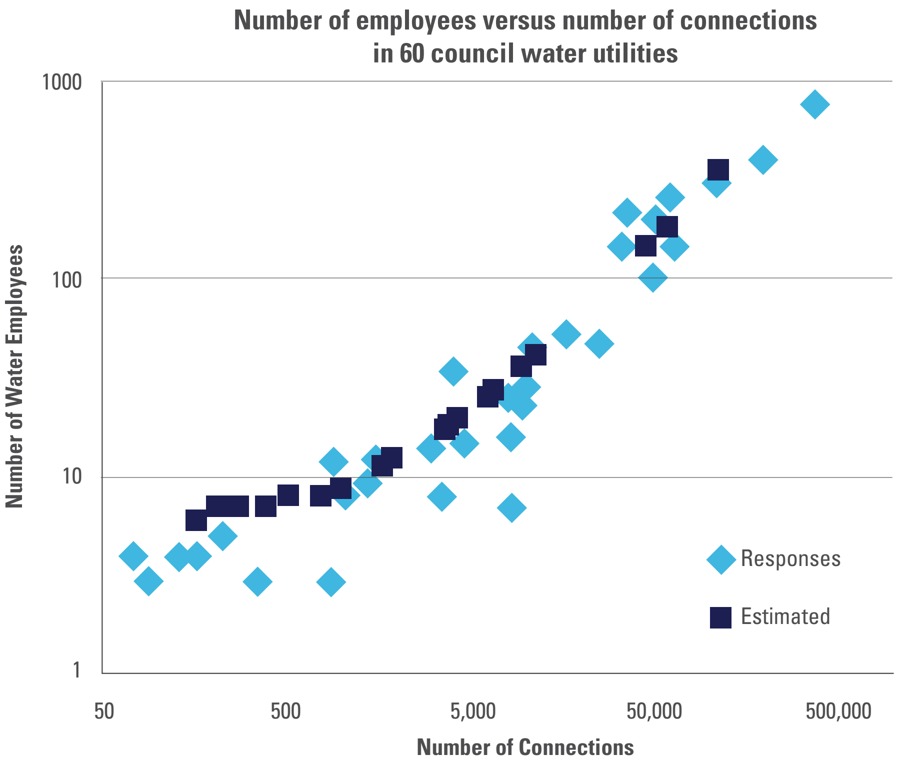


Figure 1: *Number of water employees in 60 local government water service providers including survey respondents and estimates based on the relationship between staff numbers and number of connections (note log scale on both axes).*

The data included in Figure 1 does not adequately represent the 13 Aboriginal councils because only one (Yarrabah) responded to the survey. Given that Yarrabah is one of the larger aboriginal councils (in terms of population) and reported a water workforce of five, it is likely that the remaining 12 Aboriginal councils each have fewer than 10 water employees and likely between one and five employees.

A summary of the size of the workforce is provided in Figure 2, which includes estimated staff numbers for the councils that did not respond to the survey. It also shows the data for the SEQ councils aggregated to represent the workforce of the three distribution and retail entities that commenced operations in July 2010. This data highlights the fact that 76.6% of Queensland council water service providers employ fewer than 50 staff.

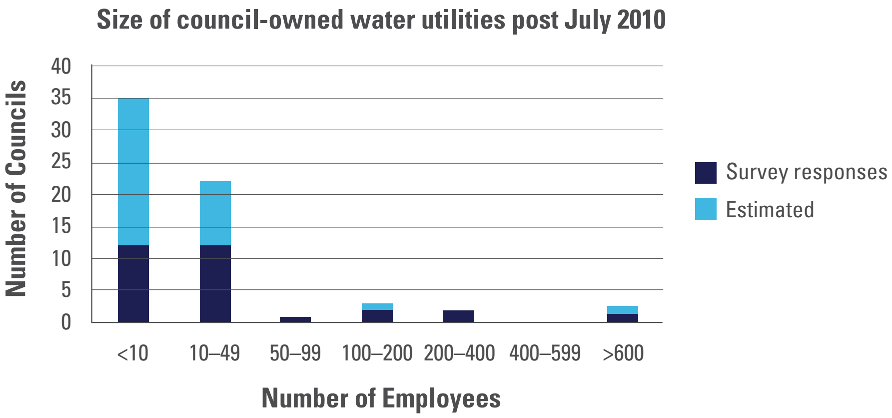


Figure 2: *Number of water employees in each of the 66 local government water service providers including survey data and estimated numbers. Note that 10 councils in South East Queensland are represented by three new distribution and retail entities each with →600 water staff.*

Based on the survey total of 3178 current water employees and estimated figures, there are a total of 4217 water employees in the local government water sector outside of Aboriginal councils.

Anecdotal evidence suggests that over 50 water staff currently work in Aboriginal councils making the total number of current workers at 4270 employees.

This figure is likely to be an underestimate of the number of employees directly and indirectly associated with the industry because the survey responses included only technical, managerial and administrative staff directly involved in water services. Other ancillary and support functions provided by the general staff of the local governments were not included in most responses. The data also underestimates personnel engaged through contracts or through outsourcing or alliance models.

2.4 Size of the Broader Queensland Water Industry

Estimates of numbers of staff in the State-owned statutory water authorities and private companies are likely to be more accurate and comprehensive than those obtained from local governments. The following table summarises the number of employees working in each of the larger organisations making up the broader Queensland Water Industry. Assuming the most conservative figure, the total number of staff in the listed organisations totals 1210. Combined with the data on the Local Government Water Industry this brings the Queensland workforce to a total of around 5500 employees. This is a conservative estimate and does not include current vacancies in the Industry.

Business	Size of the Workforce
SunWater	Between 650 – 675 employees
Seqwater, WaterSecure, SEQ Water	435 employees
Grid Manager	
LinkWater	55 employees
Veolia	70 employees

Table 1: *Size of other major employees in the broader Qld Water Industry*
Sources: SunWater 2009, 4; SEQ Water Grid 2009, 1; Veolia website.

3 Internal Analysis: Workforce Statistics

Water utilities have a male-dominated workforce with a high average age. Water operators, trades and construction and maintenance staff make up the majority of staff in the industry.

3.1 Section Summary

This section sets out the current workforce of participating water utilities in terms of: job family, age and job roles. Not all of the participating water utilities provided full details on all of these employment dimensions, therefore the figures in this section may have slightly different total staff numbers.

3.2 Background

The approach applied to the data gathering stage was evidence-based, building on the experience gained in a 2009 study of the new SEQ bulk water authorities, and national surveys by WSAA and COAG.

To validate initial data and anecdotal evidence collected from across the Queensland industry, a representative sample of non-indigenous service providers were asked to provide further data on workforce demographics. A survey was completed by the nine service providers in May 2010 to collect information on job roles, number of employees, age, gender, turn-over rates and qualification held by staff. The sample included four small (<1,000 connections), four medium (1,000 to 25,000 connections) and one large (more than 25,000 connections) utility. Their workforces ranged in size from 15 to 769 employees and their were utilities based in all regions except the far-north and north-west regions of the state.

3.3 Job Family/Role

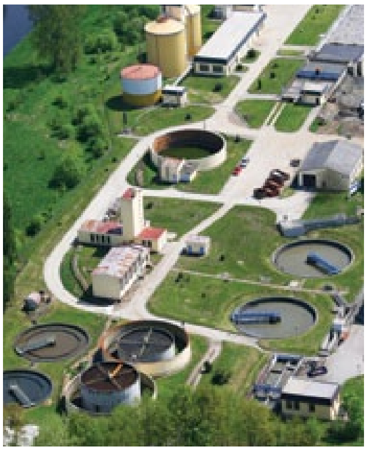


Figure 3 represents the proportion of the workforce employed within each Job Family (using the WSAA Job Role Framework classification). The job family 'Water Industry Operators' which comprises construction and maintenance and plant operators for water and wastewater represents the largest job family with 36% of the workforce being employed in this area. This is closely followed by 'white collar' roles (Management and Business Support) which make up 32% of the total workforce. Science/Technical Professionals (Environmental, Microbiology, and Chemist) represent the smallest proportion of the workforce with only 1% employed in this area.

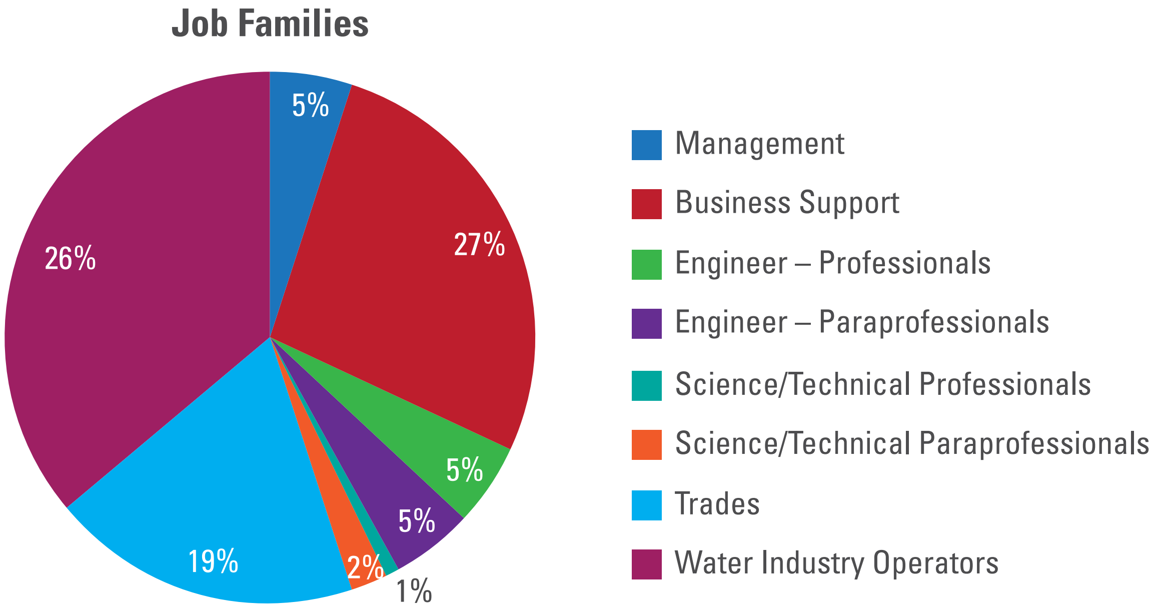


Figure 3: *Proportion of the workforce employed in each Job Family n = 1463*

3.4 Age

There were 60.6% of employees reported in the survey as 41 years or older, with over half of those (32.47%) older than over 51 (Figure 4). This is consistent with WSAA's findings, where almost half (49.2%) of the water utilities workforce is 45 years or older (WSAA 2008, 17). Figure 2 provides a comparison between the Water Service Providers and a 2009 study of the entities comprising the SEQ Water Grid. While the age profiles are similar, the "ageing workforce" dilemma is even more clearly illustrated for the local government-owned WSPs.

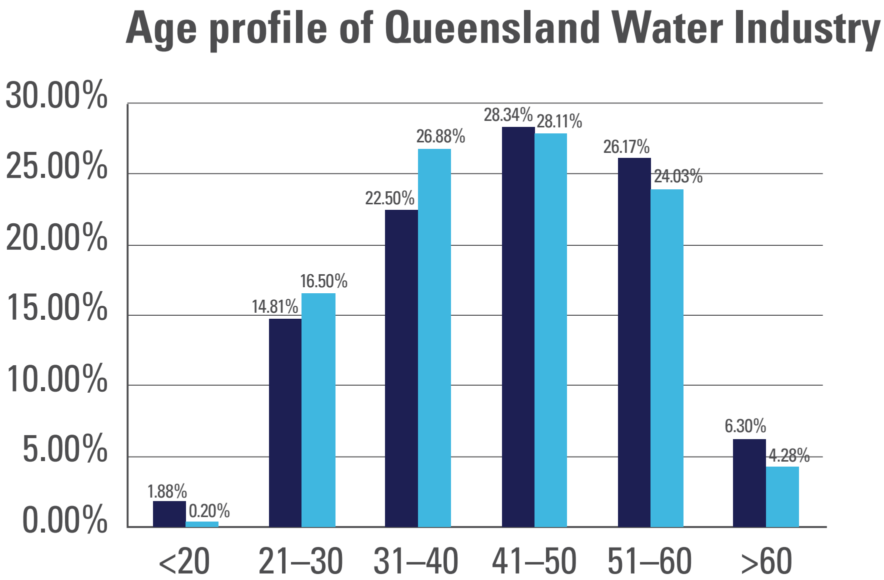


Figure 4: *Age profile of the Queensland Water Industry sampled (dark blue) in comparison to the SEQ Water Grid 2008.*

3.5 Age Profile and Job Role

Figure 5 represents the different job roles in the water industry and the number of employees that work in each role broken down into age categories. The largest job role is Construction and Maintenance, with 28.5% of all employees. Notably, 37% of employees in this role are over the age of 51. The second largest job role is 'Mechanical Tradesperson' with 15% of employees. The Mechanical Tradesperson role has an evenly distributed age profile with 43% of employees under the age of 41 and 56% over the age of 41. Out of the sample, no employees were found to work in Environmental engineering as a professional and only two employees worked in Environmental Engineering as a paraprofessional.

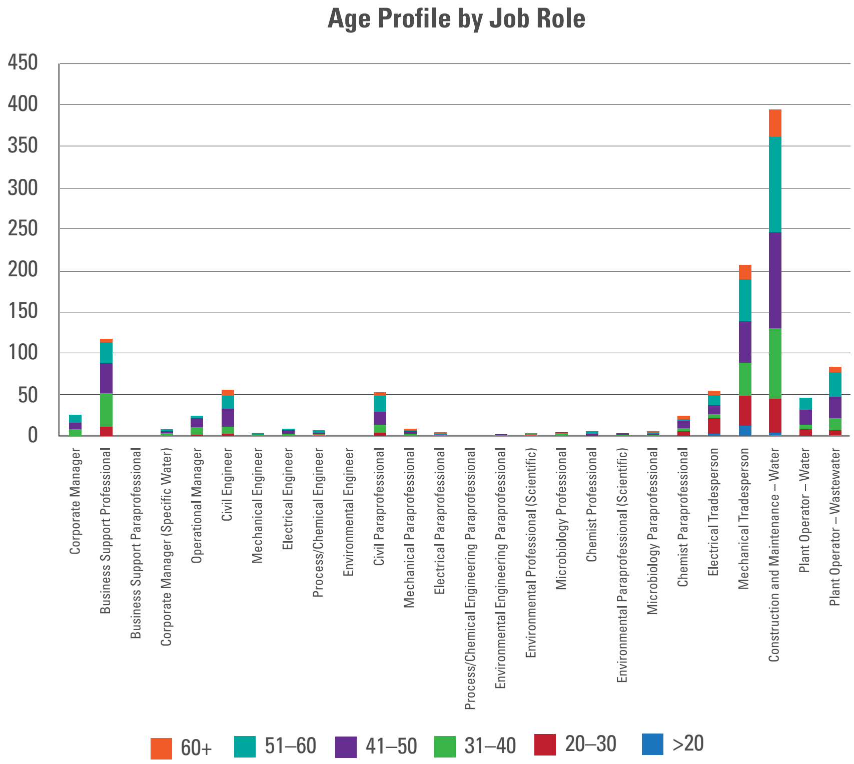


Figure 5: *Age Profile by Job Role*

The SEQ Water Grid Report showed Water Plant Operator was the largest job role, with 21% of staff employed in this area. Construction and Maintenance was one of the smaller job roles with only 0.60% of staff in this area (SEQ Water Grid 2009, 25). This reflects the predominance of bulk water treatment in the data analysed for the SEQ region.

3.6 Comparison of Queensland Local Government owned Water Service Providers, SEQ Water Grid and WSAA study workforce statistics

Figure 6 compares the statistics of the four state-owned water entities in the SEQ Water Grid, 18 water utilities surveyed in a WSAA (2008) sponsored study and nine representative Queensland local government water services providers.

In the WSAA study the total headcount of these water utilities was 56% of the total WSAA workforce. For the SEQ Water Grid, 490 employees were captured and for the Queensland local government owned water service providers, information about 1463 employees were captured.

The results from the Queensland local government water service providers survey support the anecdotal evidence that the water industry is male dominated with males representing 78% of its workforce. These results also support the WSAA and SEQ Water Grid findings for the urban water industry with 73% of employees being male (WSAA 2008, 18).

In the WSAA, SEQ Water Grid and the Queensland local government water service providers survey there were no women reported to be working in the job family 'trades' and only a very small proportion of women (1.21%) to be working in the job family 'water industry operators'. The majority of female employees (57%) were reported to work in business support.

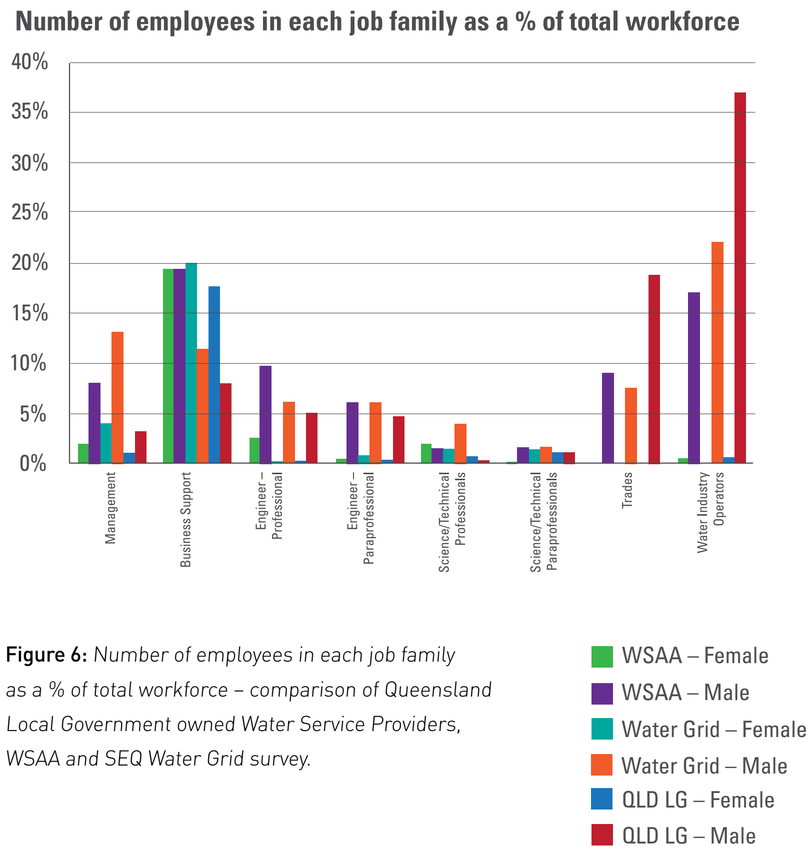


Figure 6: *Number of employees in each job family as a % of total workforce – comparison of Queensland Local Government owned Water Service Providers, WSAA and SEQ Water Grid survey.*

4 Discussion and Conclusion

The water industry delivers a crucial service to Queensland communities; however it does so with a relatively small, and diverse workforce. Gaining community or political interest in dealing with workforce issues faced by the sector can be difficult as the service is taken for granted in many areas. Significant industry reform in recent years, and increasing emphasis on quality and security of supply in the face of increasing technology and climate change are likely to increase the profile of the sector in coming years.

While South-East Queensland continues to grow at a rapid rate and the water industry responds to support this growth, regional Queensland has diverse pressures with significant industrial growth from resource-based projects, population expansion but also population decrease in different areas.

The projected staffing needs for Resource-sector projects dwarf the water industry and competitive pressures for skilled staff are already being felt. Regulatory pressures also continue to grow, with an increased focus on water quality; both in terms of public and environmental health.

This snapshot is the first step towards a significant effort aimed at rallying the industry to develop innovative strategies to attract and retain the right skills to deal with these demands.

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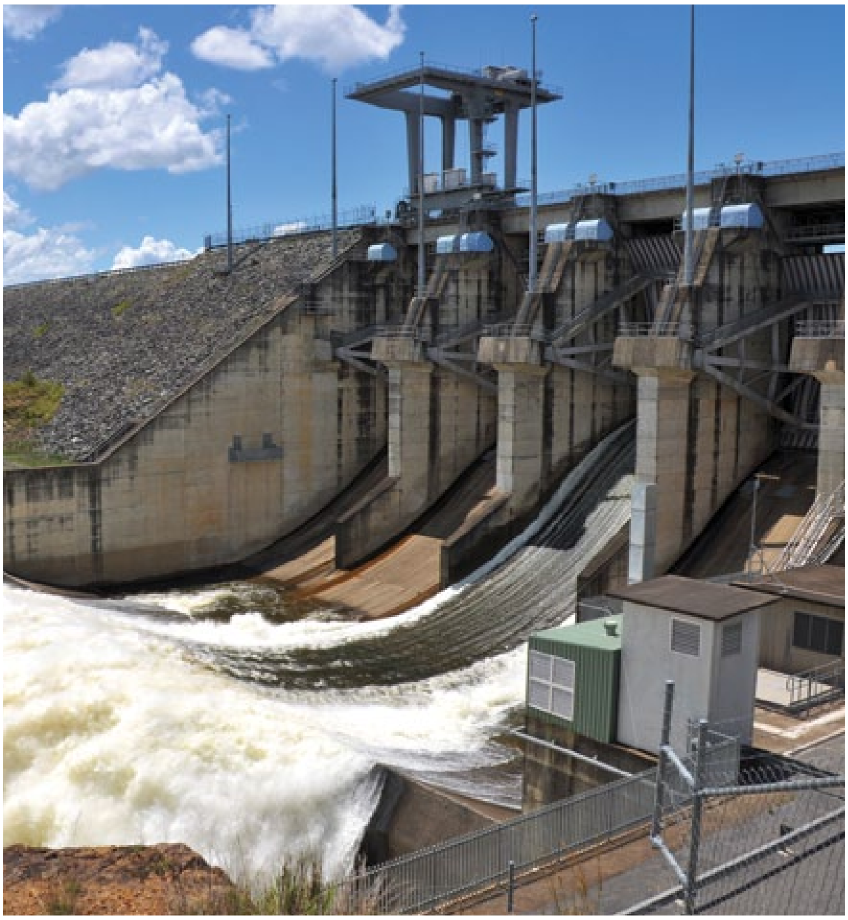
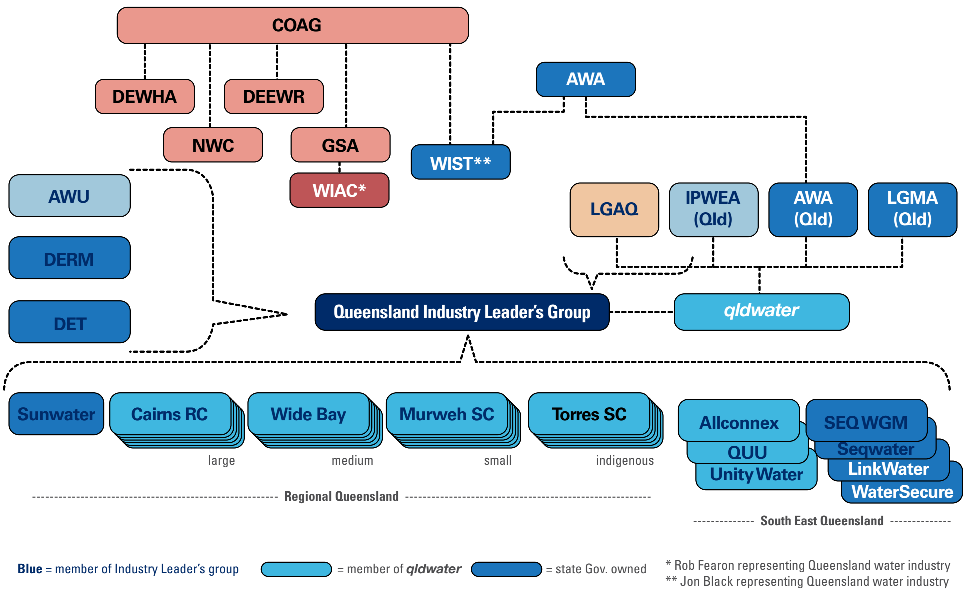


Appendix 1 – Summary of water reform since 2005

- Local government reform process completed in 2008. Amalgamation affected the majority of councils with up to 8 previous local government areas combining to form one. The total number of registered water service providers reduced to 84 (73 local government).
- Water reform in South-East Queensland commenced in 2008
  - Water retail and wastewater services transferred to council control with former council bulk water functions moved to the state under the control of Seqwater
  - Establishment of the water grid including the Water Grid Manager, Linkwater, Watersecure and (the expanded) Seqwater
  - Establishment (briefly) of a distribution/ retail entity to take control of water retail and wastewater services from the 10 SEQ councils
  - May–July 2010 Removal of that entity, establishment instead of:
    - Unitywater (servicing Sunshine Coast and Moreton local government areas)
    - Queensland Urban Utilities (servicing Brisbane, Ipswich, Somerset, Lockyer Valley, Scenic Rim local government areas)
    - Allconnex Water (servicing Gold Coast, Redlands, Logan local government areas)
  - Dec 2010 proposed merger of Watersecure and Seqwater by July 2011.

Appendix 2

Primary State/National Water Skills Linkages



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.