



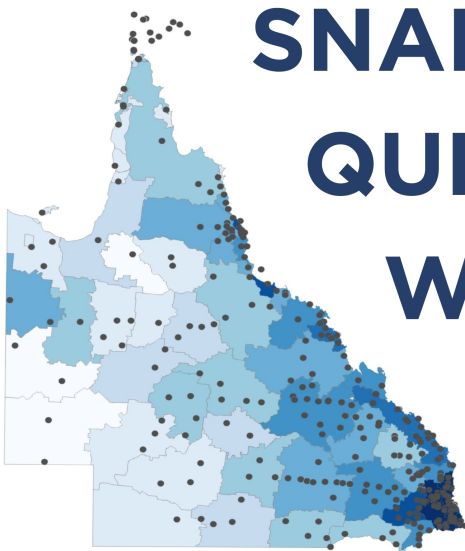
waterskills
PARTNERSHIP



The Queensland Water Directorate 2022 Urban Water Industry Workforce Composition Snapshot Report

Tracking trends in workforce, skills and training issues for the Queensland Urban Water Industry

SNAPSHOT OF THE QUEENSLAND URBAN WATER INDUSTRY 2022



Providing essential Water and Sewage services to 5,378,300 Queenslanders

waterskills
PARTNERSHIP

INDUSTRY

75

**WATER SERVICE
PROVIDERS***

370

**WATER SUPPLY
SCHEMES**

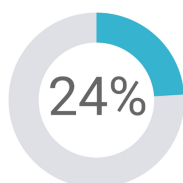
265

**SEWERAGE
SCHEMES**



**DIRECTLY
EMPLOYS**

6711

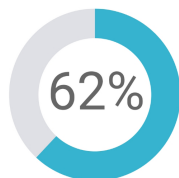


**BUSINESS SUPPORT
LARGEST OCCUPATION**

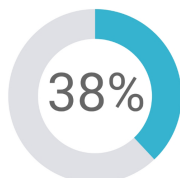
*75 Suppliers supporting drinking water, sewerage and recycled water services for Queensland communities, 180 total registered suppliers.

DEMOGRAPHICS

MALE



FEMALE



2%

**<21 YEARS
OF AGE**

28%

**41-50 YEARS
OF AGE**

9%

**>60 YEARS
OF AGE**



THANK YOU to all **qldwater** Skills Partnership members who completed the workforce survey. Other data used in the development of these images includes Statewide Water Information Management System (SWIM) (**qldwater**, 2022).

VACANCIES (2022 33 RESPONDENTS)

OF 3,706
EMPLOYEES THERE ARE

267
VACANCIES

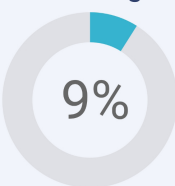
HIGHEST VACANCY

15%
WATER PLANT OPERATOR

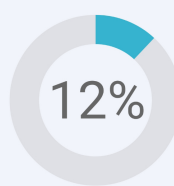


4/9 WATER PLANT OPERATOR ROLES
HAVE BEEN VACANT FOR **13+** MONTHS

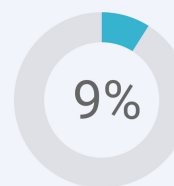
Survey respondents had:



WASTEWATER
PLANT OPERATOR
SHORTAGES



ENGINEER
PROFESSIONAL
SHORTAGES

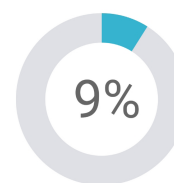


TRADE WASTE
OFFICER
SHORTAGES

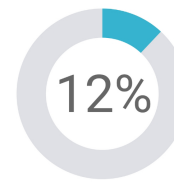
QUALIFICATIONS - OPERATORS & SUPERVISORS



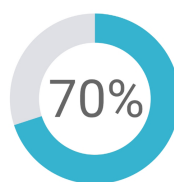
OUT OF 546
OPERATORS & SUPERVISORS:



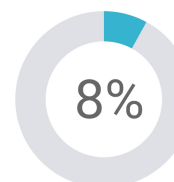
NO QUALIFICATIONS



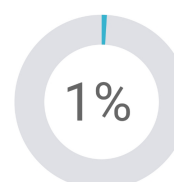
CERT II



CERT III



CERT IV



DIPLOMA

ISSUES



NO PUBLIC
TRAINING PROVIDER



ONLY 2 RTOS ACCESSING
SUBSIDISED TRAINING



INFLEXIBLE TRAINING
SUBSIDIES



NO WATER INDUSTRY SPECIFIC
AWARD STRUCTURE



INCREASED DEMAND & COMPETITION
FROM OTHER SECTORS



ESSENTIAL SERVICES - ESSENTIALLY INVISIBLE



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The Queensland Water Directorate (**qldwater**) is a business unit of the Institute of Public Works Engineering Australasia Queensland & Northern Territory (IPWEA-QNT)



QUEENSLAND NORTHERN TERRITORY
IPWEA
INSTITUTE OF PUBLIC WORKS
ENGINEERING AUSTRALASIA

This document can be referenced as the 'Queensland Urban Water Industry Workforce Snapshot Report 2022'

1. Overview & Summary

1.1 Snapshot Report Background

Since 2010, the Queensland Water Directorate (**qldwater**) has produced biennial Workforce Composition Snapshot Reports to track trends in skills and training, using data gathered from a representative sample of Queensland urban water service providers and a range of other sources.

The 2022 Snapshot Report is the seventh iteration of the Queensland Urban Water Industry Workforce Composition Snapshot Report. While responding organisations have differed for each reporting period and there may be variability in some results, the sample has consistently maintained a good cross-section of responding utilities of different sizes and geographic variation.

There are currently no 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, this work provides important information to support broad industry workforce planning and investment in workforce development.

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

Data gathered for this report was collated in late 2022, with the report drafted and issued in 2023, which marks **qldwater**'s 20th anniversary.

1.2 The Queensland Water Skills Partnership

The Queensland Water Directorate, or **qldwater**, is a business unit of the Institute of Public Works Engineering Australasia Queensland & Northern Territory (IPWEA-QNT) and is the central advisory and advocacy body within Queensland's urban water industry. Members include the majority of councils, other local and some state government-owned water and sewerage service providers, and affiliates.

qldwater facilitates the Queensland Water Skills Partnership, the only industry-led skills program for the Queensland water industry, and a national leader in strategic water skills development and advocacy. The members of the Partnership range from small local Councils to very large Council-owned distribution/retail entities and state-owned bulk entities and there are currently 51 subscribers with broad representation from across the State. Members for the 2022-23 financial year are detailed at the back of this publication.

The Partnership performs a number of functions 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.

qldwater would like to acknowledge and thank the Chairs of the Water Skills Partnership for their support during the period covered by this report:

Previous Chair Angela Robinson, Seqwater

Current Chair Amber Robinson, Central Highlands Regional Council

Senior representatives from water and sewerage service providers from across the State set the strategic direction for the Water Skills Partnership.

1.3 2020-2023 Key Water Skills Partnership Projects

- Ongoing role as an Industry Skills Advisor for the Department of Youth Justice, Employment, Small Business and Training (DYJESBT)
- Annual Queensland Water Industry Skills Forum held in June with more than 70 industry stakeholders involved in discussions on key skilling and training issues
- Continuation of the Fundamentals Webinars series to build an online resource library of common water and wastewater treatment and network operations and maintenance tasks
- Development of additional micro credential courses with funding support applied for from DYJESBT in the latest 2023 Micro Credentialing funding round.
- Migration of relevant online learning resources to a new Moodle Workplace platform, offering improved functionality and user experience whilst providing continued support for online offerings from both the NSW Water Directorate and SA Water as partners
- Launch of the new Green Card – an environmental policy and legislation focused online training resource, standing alongside the already highly successful Aqua Cards and Brown Cards
- Support for collaborative training arrangements in a number of regions
- Expansion of the award-winning Queensland Water Regional Alliance Program (QWRAP) with secured permanent annual funding of \$2M through the support of the Department of Regional Development, Manufacturing and Water (DRDMW)
- Expansion of the Water Industry Worker Program to also offer support in the Operator and developing Leadership spheres as well as continuation of coordination in the Network training field
- Development of a Careers in Water web portal including qualification requirements and career pathways, capturing the experiences of recent trainees through recorded interviews
- Development of the Water Skills Toolbox - a one stop shop for members to access materials and resources all things Water and Skills Training related
- Increased 50% subsidy uplift secured for both Certificate IV and Diploma Higher Level Skills training from DYJESBT through advocacy
- Representation on the Water Engagement Forum, which included a workshop on developing a new water strategy for Queensland, identifying risk in the urban water sector – one component of which is workforce capacity, skills and training.
- Representation on the new Cross Agency Government Working Group
- Ongoing partnerships with key agencies and organisations, such as the Water Industry Operators Association of Australia, Australian Water Association, Water Services Association of Australia, NSW Water Directorate and other state associations
- Consultation with Federal and State Governments to progress key reforms to improve the VET system, the quality of VET training, improved access to training (particularly for rural and remote geographies), and the role of industry engagement.

More information about Water Skills Partnership initiatives is available at: https://qldwater.com.au/water_skills_partnership

1.4 Report Methodology

Data gathered for this report used a slightly modified version of previous Snapshot Report data templates. The mainstay of the document was unchanged, but additional questions were added to better understand vacancy rates and use of contract or labour hire.

The template was distributed via Excel format to Water Skills Partners to collect information on job roles, number of employees, age, gender and qualifications held.

For this report, the additional questions included:

- Number of vacancies for each position?
- Length of time that a vacancy has been open?
- How many roles are filled by labour hire/contractual arrangements or alternative resourcing arrangements?

The 2022 Water Industry Snapshot Report survey saw the largest level of responses ever received. A total of 33 responses were received from water services providers, and whilst there have been some changes to the participating organisations for each report, the sample for 2022 is more representative of the diversity of the industry in relation to organisation sizes and locations, given that increased level of response.

The responses received represented 3442 employees, which is 58% of the total Queensland water industry workforce (Statewide Water Information Management System, 2022).

The following organisations provided survey submissions :

- Balonne Shire Council
- Banana Shire Council
- Barcoo Shire Council
- Boulia Shire Council
- Bulloo Shire Council
- Bundaberg Regional Council
- Burdekin Shire Council
- Cairns Regional Council
- Cassowary Coast Regional Council
- Central Highlands Regional Council
- Charters Towers Regional Council
- City of Gold Coast
- Cook Shire Council
- Croydon Shire Council
- Diamantina Shire Council
- Douglas Shire Council
- Etheridge Shire Council
- Goondiwindi Regional Council
- Gympie Regional Council
- Hinchinbrook Shire Council
- Isaac Regional Council
- Mackay Regional Council
- Mareeba Shire Council
- North Burnett Regional Council
- Palm Island Aboriginal Shire Council
- Redlands City Council
- Richmond Shire Council
- Seqwater
- Southern Downs Regional Council
- Townsville City Council
- Unitywater
- Western Downs Regional Council
- Whitsunday Regional Council

qldwater would like to acknowledge and thank the respondents for their submissions which have served to make production of this report possible.

Whilst there are potential inconsistencies in data reporting due to differences in participating organisations and some classification issues, the data does indicate changes to workforce composition.

Noting that data for Urban Utilities was modelled in 2020 and is referred to throughout the report.

Two case studies have been created from subsets of previous respondents allowing comparison with consistent responders from previous surveys to draw out trends amongst those groups and to understand if those trends mirror or are different to overall response trends.

These case studies are new to the reporting methodology in the 2022 edition of the Composition Report.

Case Study A - represents those 11 entities that responded to both the 2020 and 2022 surveys, to see what changes have taken place in that time for those organisations across the reporting periods.

Case Study B - represents those 6 entities that have responded to every survey request since **qldwater** started this work - survey data from reports since 2016 to date has been analysed for this group.



2. Size and Scope of the Qld Water Industry

2.1 Queensland Urban Water Industry Employers

As of November 2022, there were 75 publicly owned water service providers, excluding private providers, directly providing water and sewerage services to Queensland's communities.

- 66 are local councils outside of South-East Queensland (SEQ), 15 of these are Aboriginal councils and two are Torres Straight Island councils.
- The water distribution/sewage collection and retail services for another eight SEQ local government areas are managed by two statutory authorities, owned by the relevant councils.
- The remaining three SEQ councils are directly responsible for water 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 contract out certain activities using various forms of procurement, with other organisations needing to contract in resources to meet operational requirements.

The workforce typically comprises water operators (civil, treatment and dams with some irrigation), engineers, trades, trade waste, science/technical professions, management and business support functions.

The 2022 data displays the water sector's complex challenges including ageing workforce, attraction and retention of staff, competition from other industries (particularly resource industries) and general skills and labour shortages. It is highly dispersed and very diverse with different key drivers in each region. More than 50% of Queensland's ~370 water supply schemes service communities of fewer than 500 people (Statewide Water Information Management System, 2022).

In many parts of Queensland there continues to be a growing shortage of qualified water and wastewater treatment plant operators with the issue more pronounced in regional areas. Increasingly even larger utilities are being affected by shortages.

Trends towards increasing technology, community expectations, outsourcing contracts and legislative reform emphasise the need to address both workforce and training and professional development challenges. Operators of permitted urban water facilities need to be competent (and adequately supported) to run their site successfully, and in a manner that protects the environment and human health.

2.3 Total Size of the Queensland Urban Water Industry

As of November 2022, a total of 6,711 people were directly employed in the Queensland Urban Water Industry which is comparable with 6,686 people recorded in 2020 (Statewide Water Information Management System, 2022).

Table 1 summarises the number of employees that represent the Queensland Water Industry.

The employee numbers for local council service providers in Table 1 are those reported via the 'employees' indicator' QG1.20, through the Statewide Water Information Management system (SWIM). (Queensland Water Directorate, 2022)

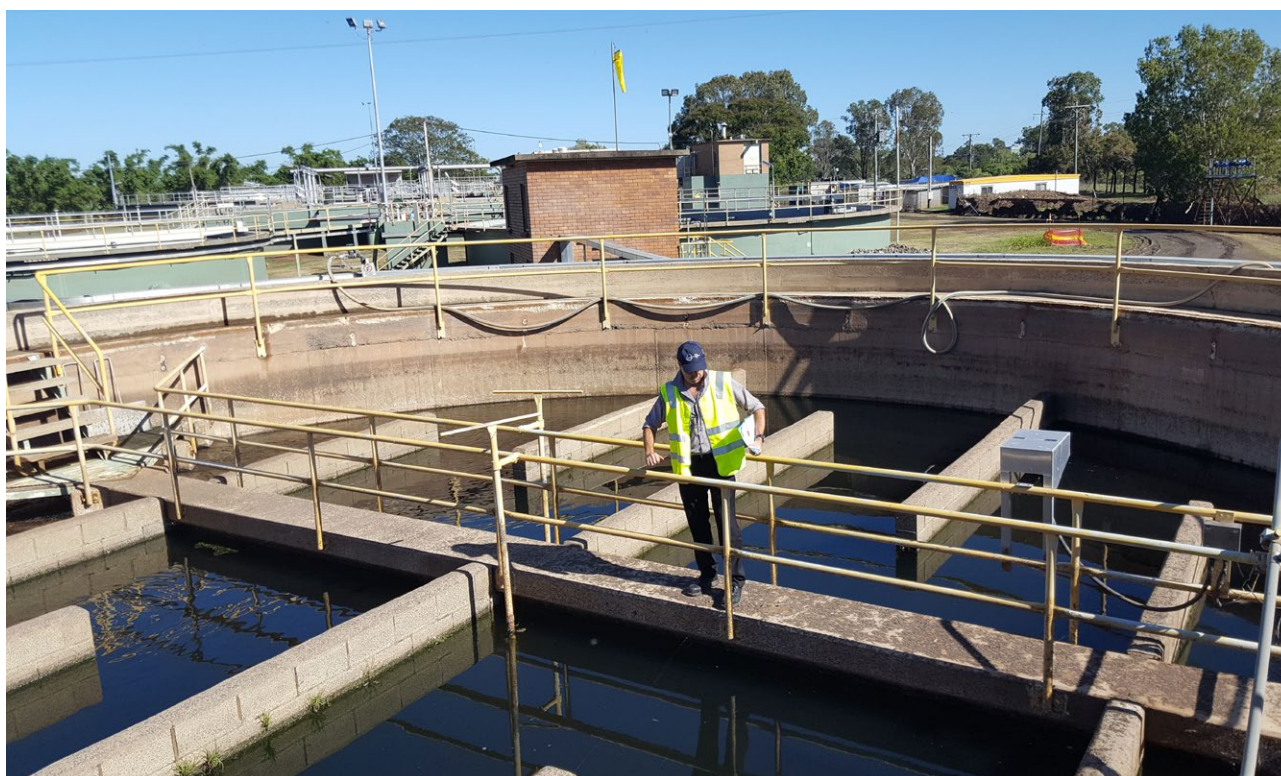
Employee numbers for bulk water and state-owned water boards have been obtained from published 2022 annual reports for each entity (Mount Isa Water Board, Gladstone Area Water Board, Seqwater and Sunwater).

The number of employees working in private organisations has been estimated based on what is understood about current outsourcing arrangements and previous data collected.

Table 1: Number of employees working in the Queensland Urban Water Industry

Organisation	Size of the Workforce
Total SEQ local government-owned employers (includes 3 council service providers, Queensland Urban Utilities, Unitywater)	2,562 employees
Local Government service providers outside SEQ	2,462 employees
Bulk water providers	1,376 employees
Private and other organisations	200* employees
Gladstone and Mt Isa state-owned water boards	111 employees
TOTAL	6,711

*This estimate includes contract operations employees only, not capital project employees or consultants.



2.4 Queensland Water and Sewerage Schemes

Figure 2 shows property connections by local government area in Queensland as well as the water supply scheme locations. This demonstrates the significant diversity in density of Queensland communities and large geographic separation which contribute to the challenge of providing services. As a result, financial sustainability is an issue for many service providers, as is sourcing skills staff and delivering face to face training for technical and operations roles.

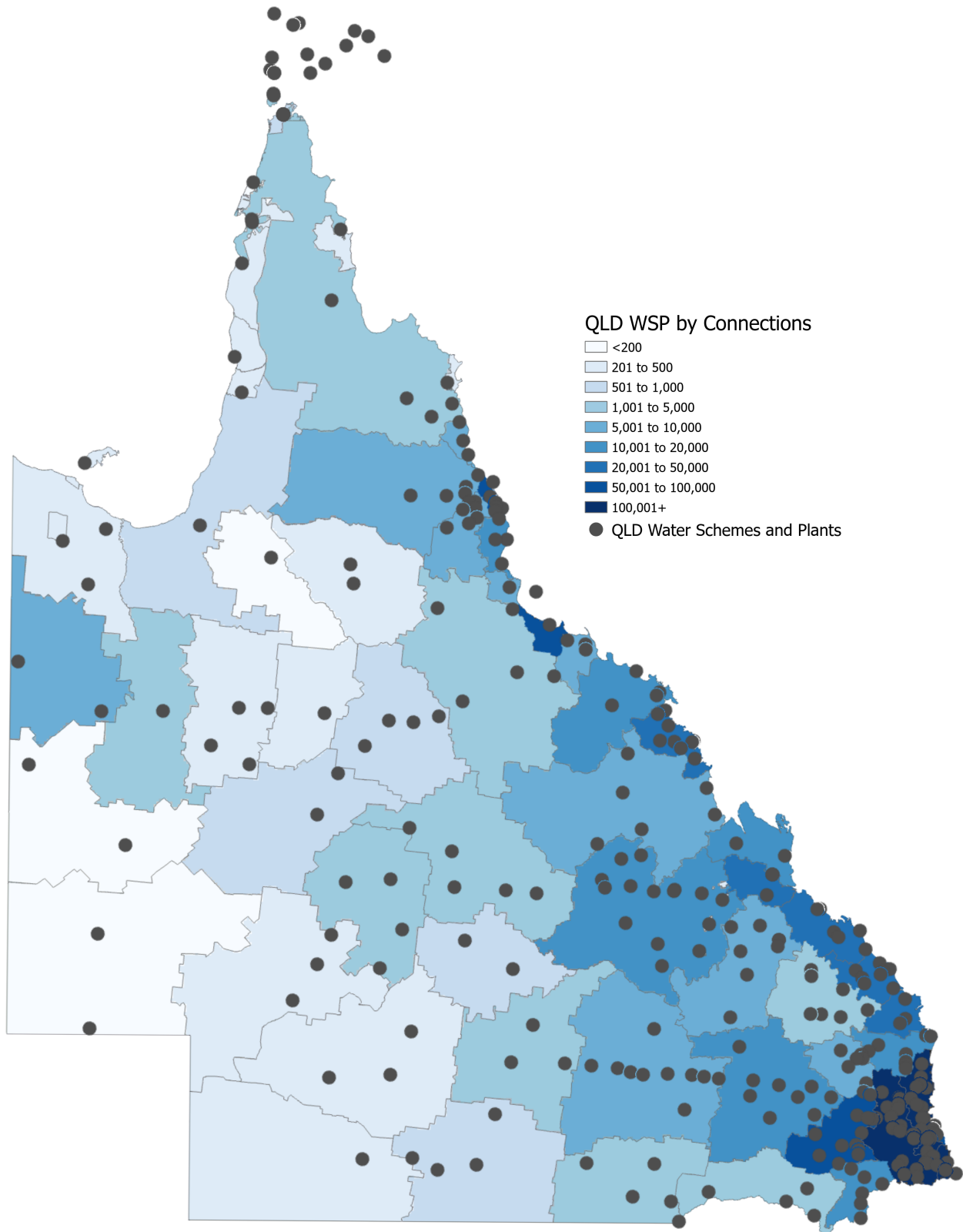


Figure 2: Queensland Potable Water Schemes and Property Connections by Local Government Area

3. Workforce Statistics & Trends

3.1 Job Family Categories and Trends

Figure 3 represents the proportion of the total water industry workforce employed within each 'Job Family' in 2022. For 2022, Business Support (which includes all support functions such as finance, human resources, communications and IT professionals) was once again the largest job role category at 24%. Its place as the largest category has been consistent across reporting periods previously, but the percentage for this reporting period is significantly different from those identified in other surveys (2016 at 29%, 2018 at 35% and in 2020 at 34%).

Larger and extra-large respondents may have significant business support allowances compared to smaller sized entities which have limited business support resources, or no dedicated support functions at all. Whilst the picture may be broadly unchanged for those smaller entities therefore, latest responses show a decline in this job family predominantly within those large and extra-large respondents. This job family category also includes an estimate of full-time equivalent staff for local government providers that access these services through departments within a larger council structure.

The next largest combined Job Family category, at 36%, are the Water Operations roles which encompasses Water Operations – Civil (18%), Water Operations – Treatment Plant Operators (16%) and Water Operations – Dam (2%). Compared to the 2020 report, 2022 survey data shows a 9% increase for this combined Job Family category. There are no other notable changes from the 2020 to 2022 reporting periods.

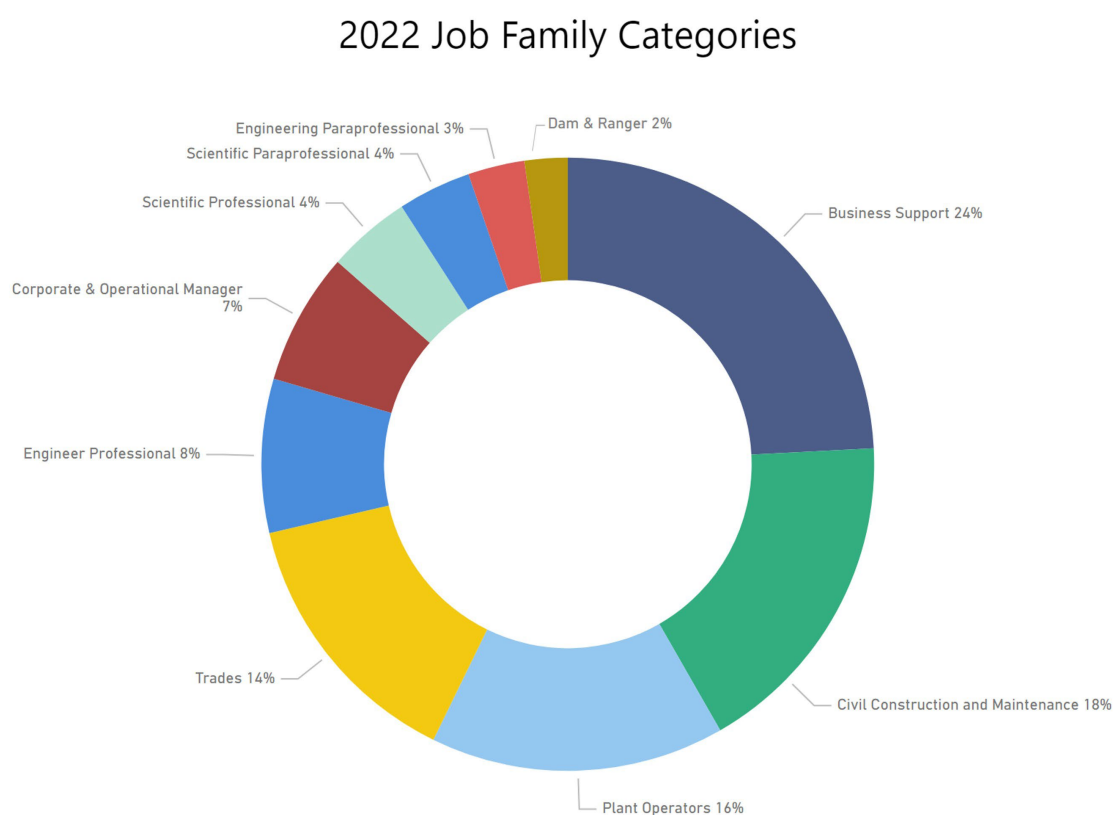


Figure 3: Job Family Categories 2022

Figure 4 provides an analysis of the proportion of employees within each Job Family Category across the past four reporting periods 2016, 2018, 2020 and 2022 respectively.

There appears to have been an adjustment in business support roles, after a sharp rise in 2018, reported previously as relating to significant recruitment in temporary roles for large scale IT and other projects in some larger responding organisations (*qldwater*, 2018).

Whilst the correction in the workforce subsequently may reflect adjustment after those projects were completed, nevertheless it is clear the trend continues downward.

From a high of 37% in that initial 2018 period, business support roles reduced to 34% reported by respondents in 2020, now falling to the 24% reported in 2022.

Notably also, a significant decrease in Engineering Paraprofessional job roles with a reported 7% occupancy in 2020 compared to now only 3% in 2022. This downward trend is reflective of wider trends and scarcity in this category.

The upward trend continues from 2018, through 2020 and to 2022 for Plant Operators (9% to 16% across the reporting periods), Civil Construction and Maintenance (recovering from 12% to 18% 2020 to 2022) and strong growth in Trades (7% to 14%) for those job roles. Further analysis of the reasons behind these changes is outside the scope of this report.

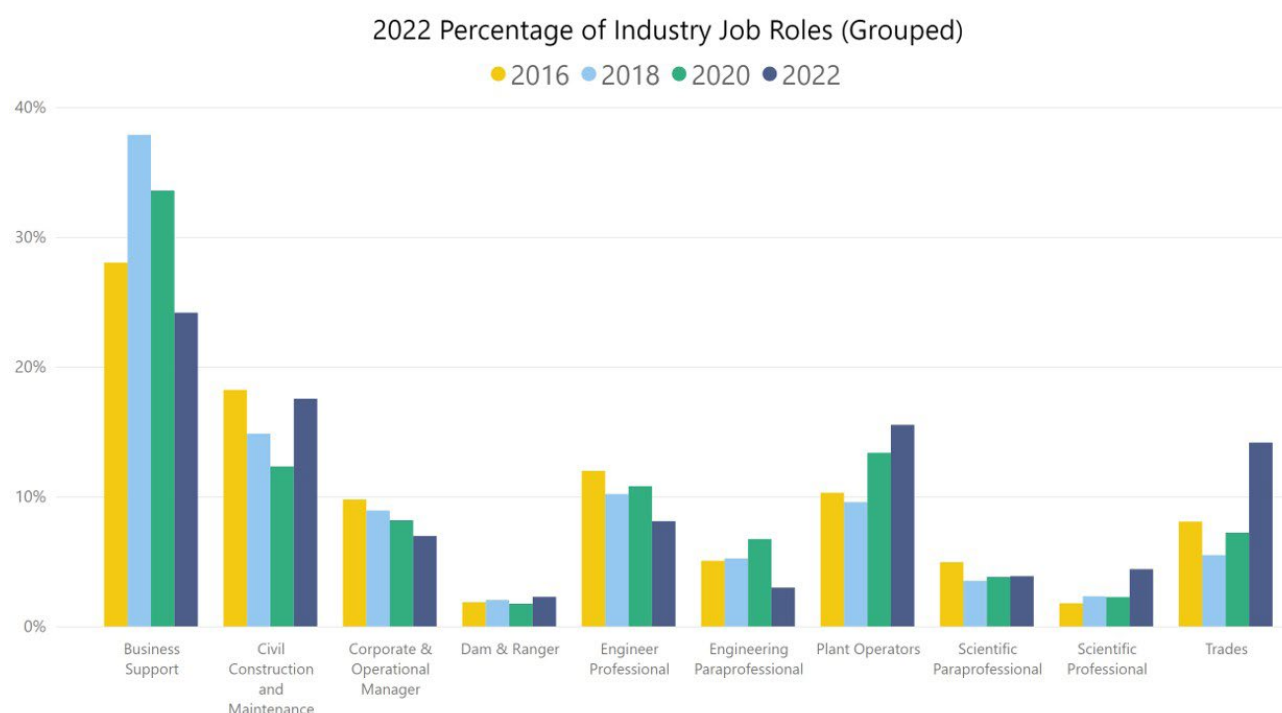


Figure 4: Job Family Category Trends 2016 - 2022

3.2 Age Profile

Figure 5 outlines the age profiles across seven Snapshot Reports from 2010 to 2022. The majority of the workforce is within the 31 – 60 age groups. This has been a consistent trend since reporting began in 2010. There is an upward trend for >20, and 21 - 30 age groups compared to 2018, increasing in 2020 and increasing again in 2022.

In previous reports, when respondents were presented with follow-up questions specifically related to age profiles, the following points were noted:

- Attempts to offer more traineeships and early career opportunities appear to have increased.
- These are often hindered by the inability of many organisations to offer permanent roles on completion of those traineeships. In a recent **qldwater** survey of water service providers, 100% of respondents indicated they were unable to guarantee permanent roles on completion of traineeships, unless a vacancy happens to exist at that time within their FTE count – or the limit applied by many employers on total number of staff.
- Irrespective, many reported low success rates in retention of school leavers, and better results when targeting hiring towards young people with some workforce experience. It was reported these cohorts were more likely to be attracted to positive aspects of working in the water sector, including challenging job roles with chance to learn and trouble-shoot, as well as a sense of performing an essential community service.
- Some organisations actively sought to recruit employees with existing trade qualifications, whether that trade was directly relevant to a water operations role or not.

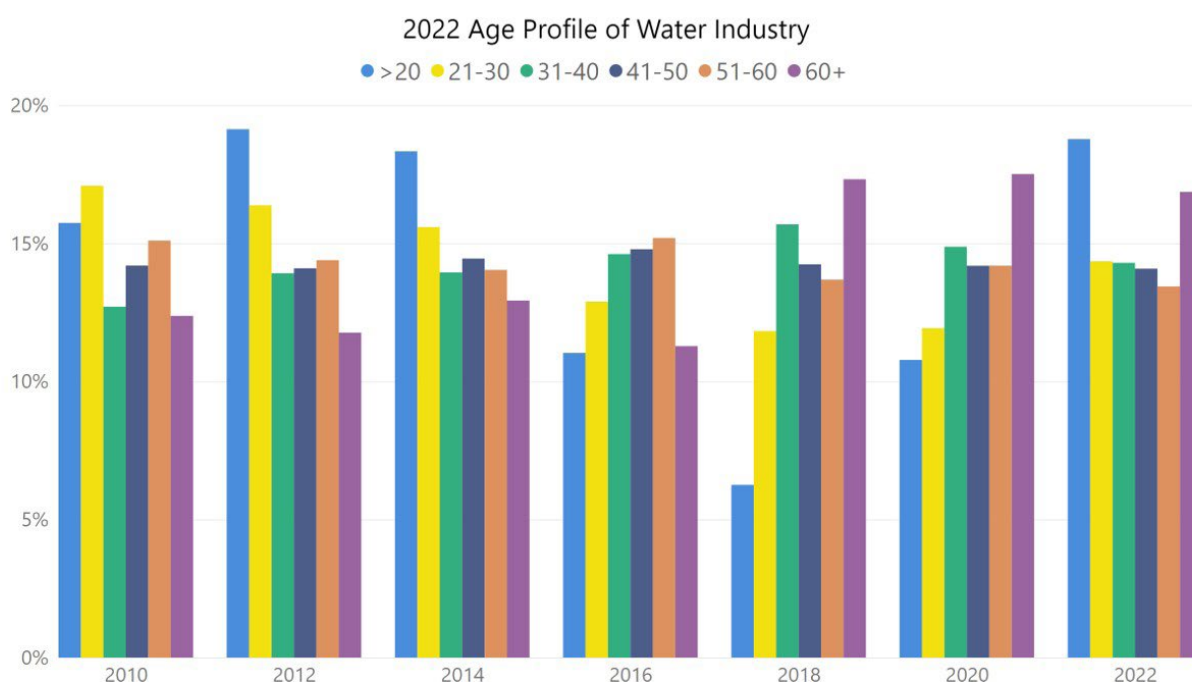


Figure 5: Age profile of Queensland Water Industry - comparison of 2010, 2012, 2014, 2016, 2018, 2020 and 2022 Snapshot Reports

3.3 Age Profile and Job Role Category

Figure 6 displays the age profile for each job role category in order to identify and highlight roles where an ageing demographic may pose a workforce risk.

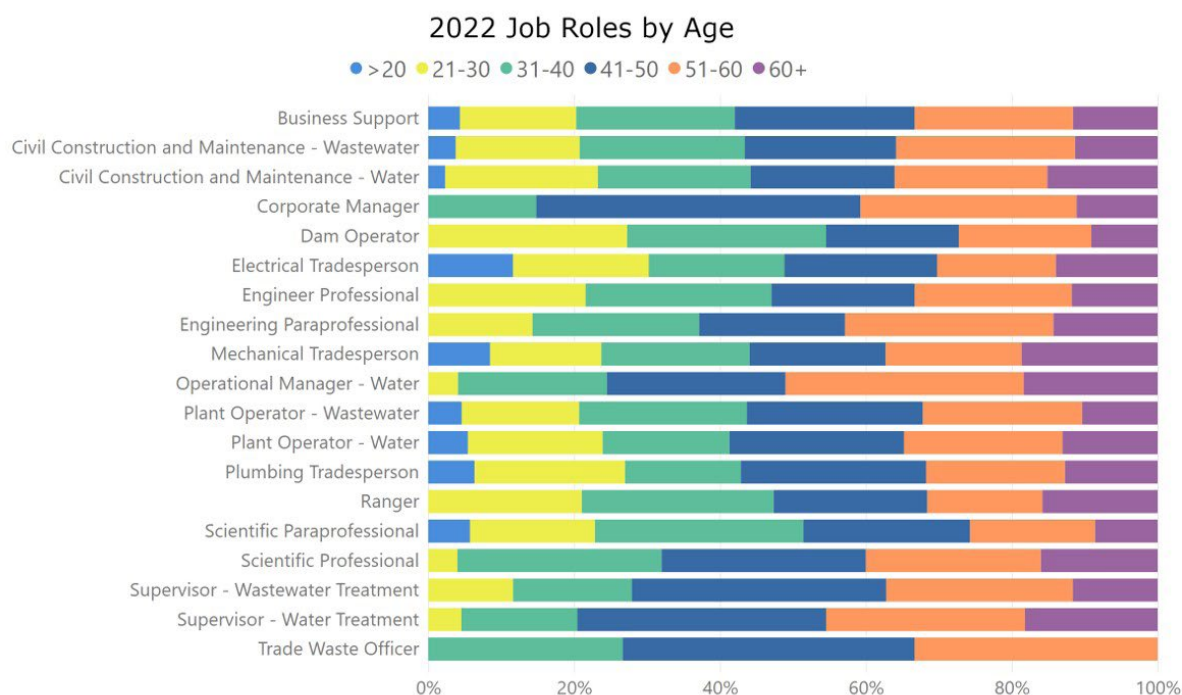


Figure 6: Age Profile by Job Role Category

Some job roles have seen little change in their age profile make up since the previous report.

Business Support, Civil Construction & Maintenance (both Water and Wastewater), Operational Manager Water, Plant Operator Water, Plumbing Tradesperson and Scientific Professional roles all remain largely unchanged in their age profile make up since 2020.

- Business Support continues to have the majority of roles taken by the 31–50-year age ranges (61%)
- Civil Construction continues to have relatively low participation at either end of the age ranges, mainly centered on age profiles between 31 and 60 years
- Corporate Managers are still mainly in the 41–50-year profile, with almost half the workforce responses in this age range (47%)
- There has been a 10% decrease in Corporate Manager role participants in the 51-60 age profile from 2020 to 2022
- Significant changes have taken place across the Dam Operator profile in the 2022 responses. Previously some 34% of this role was occupied by the 21-40 age profiles; in 2022 this has risen to 63%
- This looks to have taken place at the expense of older Dam Operators with 51-60+ cohorts reduced from 44% in 2020 to only 18% in 2022
- Both Electrical and Mechanical Trades have shown sharp rises in the youngest cohort age groups between 2020 to 2022 (4% to 11% and 2% to 8% respectively)
- Mechanical Trades showed a sharp decline from 34% to 22% in the 51-60 cohort from 2020 to 2022

- Plant Operator profile remains largely the same in Water and Wastewater, with the exception of the oldest bracket (60+) for Wastewater Operators, halving from 12% in 2020 to just 6% in 2022
- Rangers continue to reduce in age, with a 19% increase in the 3 youngest age profile brackets between 2020 and 2022, with a corresponding reduction in the 41-60 cohorts of 20%
- The majority of Scientific Paraprofessionals are also getting younger with 57% of roles in the 21-40 age fields (up from 41% in 2020)
- This has occurred predominantly at the expense of the 51–60-year-olds who have seen a reduction from 20% to just 9% between 2020 and 2022
- Supervisory roles – in Water Treatment has seen 21–30-year-old Supervisors increase from just 3% in 2020, to 9% in 2022, whilst there has been a downshift in 60+ Supervisors in the same period from 20% to only 7% in this report
- Trade Waste Officers have seen a 24% growth in the 21-40 age ranges, where there were previously no respondents in these roles in 2020
- This has been matched by a 25% growth in 60+ aged respondents in 2022 where, once again in 2020, there were no roles satisfied by this age profile



3.4 Gender Profile

Figure 7 shows the proportion of male and female employees in the workforce, how it is changing over time and how it relates to gender balance for all industries across the State using ABS data.

For this report, Queensland data was gathered from the Australian Bureau of Statistics to compare water industry gender balance to all industries, reflected as a trend line on the graph.

While the water industry remains male-dominated, the gap between male and female employee percentages is closing, reflecting the recognition of gender equality, and the work undertaken by organisations to make the in the industry more inclusive.

The percentage of female employees across the State has increased by 8% from 2020 to 2022, the most substantial increase since Snapshot reports began.

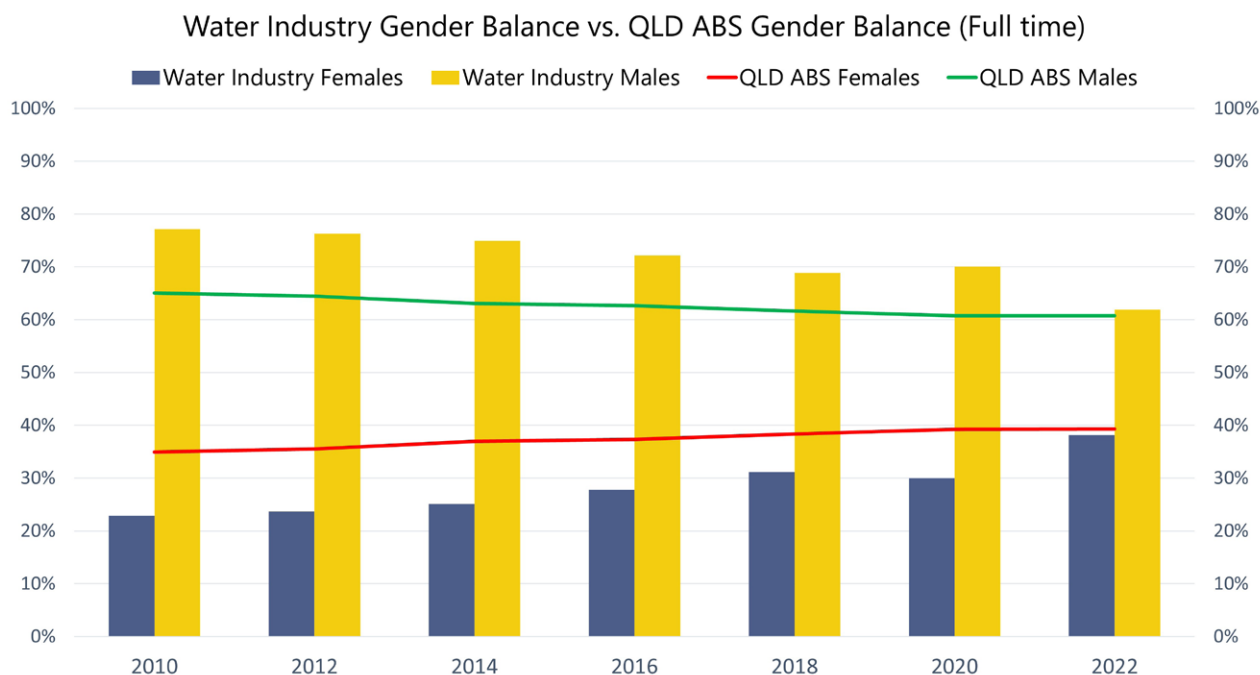


Figure 7: Comparison of 2010, 2012, 2014, 2016, 2018 and 2020 gender data

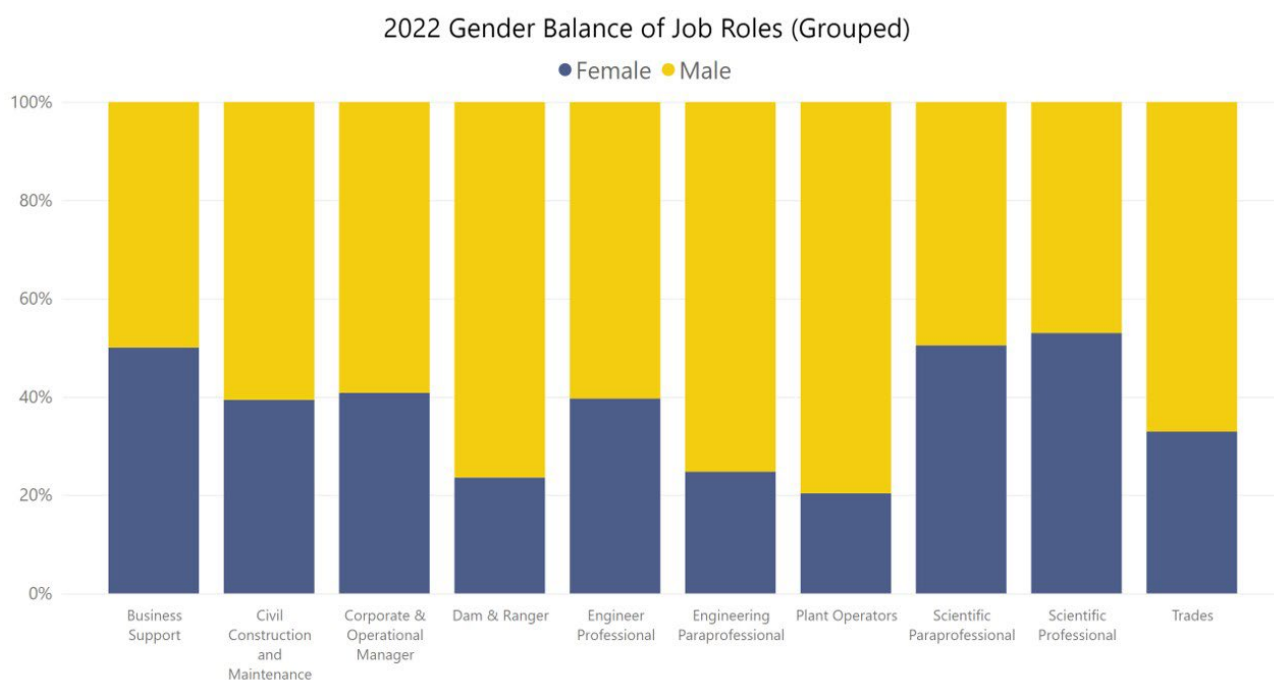


Figure 8: 2022 Number of males and females in each job family as a % of total

There have been some marked changes across gender balances when viewed through the lens of job roles between the 2020 and 2022 reports. The changes are most notable in these roles:

- Business Support - male uplift of 8%
- Civil Construction & Maintenance - female uplift of 37%
- Dam & Ranger - female uplift of 18%
- Trades - female uplift of 32%
- Engineer Professional - female uplift of 18%
- Plant Operators - female uplift of 13%

All job roles across the industry saw an increase in female participation with the exception of Business Support – the only role to show increased male participation between the two reporting periods.

In line with current community expectations, the next report in 2024 will include the collection of broader diversity metrics including, but not limited to, those who identify as non-binary in gender statistics, where that information is collected by employers.



3.5 Job Categories and Qualification Levels

Qualifications data across all job roles has been historically difficult to obtain so this report has focused on the qualifications for key industry job roles. Figure 9 shows all National Water Training Package (NWP) qualifications held by Water and Wastewater Treatment Plant Operators and Supervisors.

The NWP includes four qualifications made up of 169 units of competency:

- Certificate II in Water Industry Operations
- Certificate III in Water Industry Operations
- Certificate IV in Water Industry Operations
- Diploma of Water Industry Operations

The sector understands that the existing NWP Units of Competency, Skills Sets and Qualifications need review. This will enable the VET System to better recognise or encapsulate new or other forms of learning such as micro credentials, recognition of prior learning and on the job experience.

With those elements accounted for, it is anticipated this will better reflect the skills that an individual possesses and what level of qualification or competency should be assigned accordingly.

This should also recognise the skills and training that the industry deems to be the most appropriate for the workforce of the future.

With the newly established Jobs and Skills Councils (JSCs) coming into being in 2023, the former Industry Reference Committees have been replaced. The remit of training package development will sit within those newly created JSCs, as will oversight of RTO delivery.

qldwater will seek membership on the appropriate committee within the relevant JSC when the organisational structure is formulated. There is a significant impact from the delays in this process with uncertainty prevalent across both industry and State Government. The extent of VET reform is also unclear at this time and the frameworks and mechanisms that support VET delivery at both State and Federal levels may also be subject to change. It is ambiguous at this moment as to how those functions will integrate and interact.

The Certificate III in Water Industry Operations is the most widely used qualification in the training package and becoming the most widely held qualification for water/wastewater treatment operators operating conventional treatment systems.

In 2022, 83% of Wastewater Treatment Plant Operators and 65% of Water Treatment Plant Operators, (from organisations that responded to the survey), hold a Certificate III in Water Industry Operations.

The levels of this qualification held by Operators increased from 65% for Wastewater Treatment Plant Operators and 59% for Water Treatment Plant Operators respectively, in the 2020 survey responses.

Both the Certificate II and III qualifications currently receive Priority One funding from the Department of Youth Justice Employment, Small Business and Training (DYJESBT) under the User Choice and Certificate 3 Guarantee programs.

Certificate IV and Diploma level qualifications also receive subsidy support from DYJESBT under the Higher-Level Skills (HLS) funding program. Training in the 10 skill sets from the NWP are also supported by HLS subsidies.

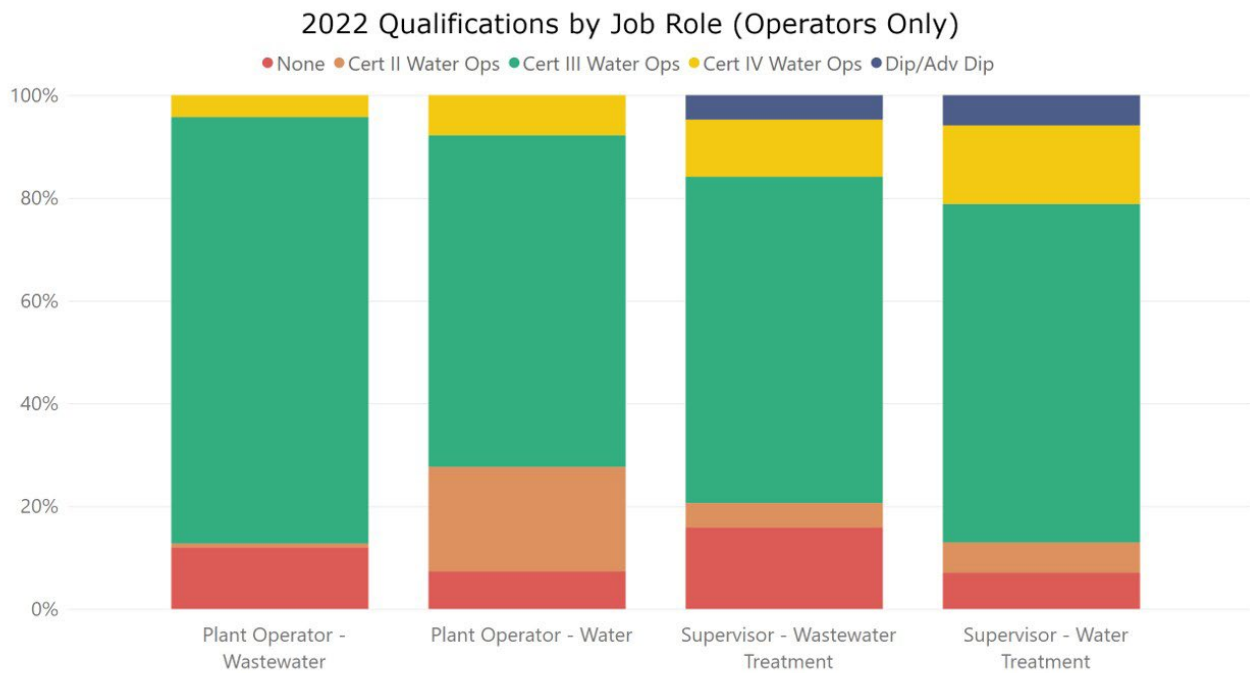


Figure 9: NWP qualifications held by water/wastewater treatment operations employees (for responding organisations)

Qualifications by job role data show interesting changes taking place across the workforce respondents between the 2020 and 2022 surveys. It reflects the increasing “newness” (lack of knowledge and/or experience) of the industry that members speak to in their engagement and interactions with **qldwater**.

This newness is reflected in the growing numbers without qualifications at both Operator and Supervisor levels.

Without Qualifications:

All roles, except for “Plant Operator - Water”, have seen increases in the percentage of staff with no qualifications at all between 2020 and 2022:

- Plant Operator – Wastewater increased from 4% to 12%
- Plant Operator – Water 7% with no qualifications
- Supervisor – Wastewater Treatment increased from 5% to 16%
- Supervisor – Water Treatment increased from 0% to 7%

Whilst this may in part be attributable to a much larger response level in the 2022 survey, it identifies gaps in training across the workforce and may reflect the high vacancy rates. With no enforced standard for water industry workers, there is no requirement for staff to hold formal qualifications, allowing this status to prevail.

It may also suggest that wider use of Recognition of Prior Learning (RPL) could better evidence skill sets individuals may possess as a result of career progression, development and practical experience.

Certificate II:

There have been reductions across all positions in the percentages holding Certificate II qualification, apart from “Supervisor – Wastewater Treatment”, which showed a 5% increase from 2020 to 2022.

It seems likely that individuals possessing Certificate II qualifications in this capacity have obtained certification on route to progression into supervisory roles as careers have developed.

(See also Cert IV and Diploma section for further commentary).

The reductions across all other roles reflect the broad consensus that Certificate II, for numerous reasons, is not the qualification most utilised by industry at this moment in time.

Challenges around capacity building, access to training subsidies, RTO access and availability, unit of competency content and the length of time taken to obtain qualifications, have all been cited as reasons behind the shift away from Certificate II training.

Anecdotally some water providers still feel that Certificate II could still be a better pathway for new industry entrants, rather than a direct jump to Certificate III; a decision sometimes driven by resourcing constraints, rather than entirely by learner outcomes.

Certificate III:

There is also demonstrable representation of industry's alignment and coalescing around the Certificate III qualification, with all roles showing uplift in percentages where this Certification is held:

- Plant Operator – Wastewater increased from 65% to 83%
- Plant Operator – Water increased from 59% to 65%
- Supervisor – Wastewater Treatment increased from 49% to 63%
- Supervisor – Water Treatment increased from 53% to 66%

Plant Operators (Water and Wastewater), both show reductions in Certificate II qualifications and uplifts in Certificate III, which continues to become the qualification of choice for these roles for most of the industry. This has come to be seen by industry as the qualification that encapsulates within it most of the skills that Operators need.

Issues around access to subsidised training and RTO availability, as well as an organisation's ability and capacity to release staff for training, have all been cited in engagements by members as also part of the reason for the move toward Certificate III.

With limited access to subsidy and difficulty in engaging RTOs for delivery, Certificate III represents "best value" given these constraints.

A combination of market conditions and qualification content continues to see the growth of Certificate III in Water Industry Operations, being held across the workforce.

Certificate IV and Diploma:

In looking back at the "Supervisor – Wastewater Treatment" role it is also noteworthy that this job role has seen the most substantial decrease in Diploma qualifications held, from 39% in 2020 to just 5% in 2022.

Respondents holding this qualification have substantially reduced in the reporting periods, perhaps indicating occupational detachment of these individuals from the sector.

Current vacancy data shows whilst there are now only a small number of vacancies reported from respondents, the durations of vacancies are lengthy, showing the role is stubbornly difficult to fill once vacated.

Whilst there are existing subsidies that apply to the Certificate IV and Diploma, Water Skills Partners have expressed a need for these to be increased to provide higher subsidies to support providers challenged by tight training budgets to upskill operators into supervisory roles.

qldwater has recently (2023) been successful in securing a 50% uplift in levels of subsidy from DYJESBT across both Certificate IV and Diploma level qualifications.

The support of DYJESBT in raising the subsidy levels reflects the needs of industry and will be well received by organisations with requirements for training in these qualifications.

Training Context:

TAFE Queensland's complete withdrawal from delivery of training in the NWP in 2022 has only served to exacerbate issues around access to subsidised training for the industry. Given the challenges of the thin market, the somewhat unpredictable nature of demand for training, development and retention of trainers and the costs associated with updating course materials, TAFE Queensland took the view that delivery of the NWP was no longer viable for them as an organisation.

A recent report on the Queensland education sector by the Queensland Audit Office (2023) raises concerns over the financial sustainability of TAFE Queensland, finding that this remains at risk. It would appear that the public provision of NWP training in the State is no longer recoverable in its previous form.

As a result, subsidised training in the State is now only delivered by two private RTO organisations, only one of which is based in Queensland. Most water service providers rely on subsidies to be able to afford staff training at all levels.

There are some challenges in the mechanisms around training subsidies in Queensland, as well as the ways in which those mechanisms are now being applied. Mechanisms were designed with the intention of training being delivered, sign off from RTO and employer (recognising learning appropriately adopted by the student), enabling subsidy for training to be drawn down and passed to the RTO after provision of that documentation to DYJESBT.

This led to a position where RTOs were carrying costs associated with training delivery for a long period of time before any payments may be forthcoming, a position unsustainable for the training organisation.

Recipients of training have more recently been asked to pay for training in advance, with subsidy "refunded" once sign off has been completed. Councils asked to pay in full for training triggers different procurement processes (usually because of the amounts involved), further delaying training.

Some members who would normally rely on subsidy for training, unable to either get subsidised RTOs to respond to requests for training quotes and/or unable to receive training in a timely manner, have stepped outside of the subsidised training model altogether. They have had to use fee for service training to get staff trained in a timely, fit for purpose fashion to meet their needs.

The same factors causing pressure on recipients of training, also present challenges for RTOs in ensuring they too have appropriately qualified trainers to meet industry demand. The limited availability of RTOs and trainers is a growing problem for the industry and has been developing for some time.

The challenges of the thin market combined with the tyranny of distance and the constraints of the Local Government frameworks (which nearly all water providers in the State operate within), combine to mean training is both difficult and costly to access for all concerned, whether as a provider or recipient of that training.

The practical nature of the qualifications has traditionally driven a preference for face-to-face training delivery; however, the remote nature of many service providers means there are limited opportunities to access face to face training or it is prohibitively expensive, often with additional travel and accommodation charges and additional administrative overheads applied.

qldwater, through the Queensland Water Regional Alliance Program (QWRAP) helps facilitate training cohorts of operators from a range of councils within a region and this has been successful on a number of occasions in reducing training costs.

In addition, COVID-19 created an opportunity for the industry to engage in virtual skilling and training methods and there have been ongoing efforts by training providers to improve the quality of online training resources and engagement tools. There is a need to continue this innovative method of training and develop further innovations which allow more flexible delivery of training wherever possible.

These efforts and initiatives by organisations such as **qldwater** to provide alternative delivery methods for training and upskilling has allowed for greater engagement from staff in remote and regional councils and continues to encourage innovation.

3.6 Labour Hire, Vacancy Rates and their duration

For the first time in the 2022 survey, **qldwater** attempted to quantify the amount of Labour Hire used to ‘back fill’ positions, the number of vacancies across the workforce, as well as the duration (length to fill) of those vacancies.

Respondents took the opportunity to not only complete the task, but to also quantify the durations of vacancies; in some cases, these were more than 3-years in duration.

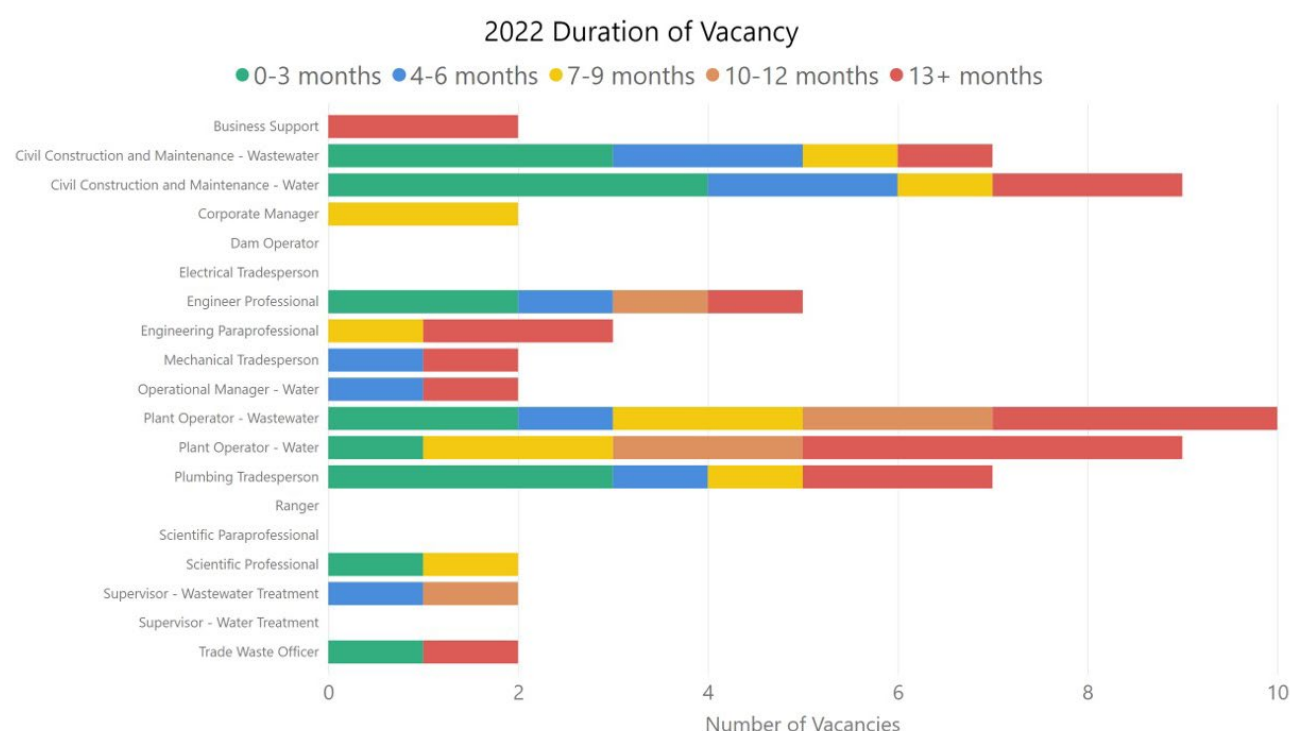


Figure 10: 2022 Duration of Vacancy

* Please note, where no vacancies are shown, this is where respondents failed to specify the duration of a vacancy. There are no roles in the industry without vacancies, which is confirmed by figure 11.

The table shows both the number of vacancies and the duration of those vacancies. As an example, Plant Operator Wastewater shows ten (10) vacancies:

- 2 vacancies for a duration of 3 months or less
- 1 for between 4 and 6 months in duration
- 2 of between 7 and 9 months in duration
- 2 of between 10 and 12 months in duration
- 3 of 13 months + in duration

The data demonstrates that some degree of vacancy exists in all roles of the industry across the respondent base (33 respondents).

The data also reflects that the most significant vacancy rates exist in Plant Operators (both Water and Wastewater) – again reflective of engagement results with Water Skills Partnership members and the anecdotal feedback obtained during the most recent **qldwater** Water Connections Tour in May 2023.



Figure 11: 2022 Directly Employed, Labour/Contract Hire and Vacancy Rates by Job Roles

Vacancy rates in the Operator realms have been communicated as being as high as 40%-45% within individual organisations, with very lengthy vacancy durations. This is placing extreme stress on existing teams with increased levels of fatigue and burnout being mentioned in engagement pieces.

Supervisors and more senior team members are also having to cover operational roles and as an example often having to go on call to ensure adequate coverage. During the Water Connections Tour, Government stakeholders heard accounts of staff members being unable to take leave and sometimes having to work for continuous periods without the ability to have days off.

New legislation enacted in April 2023 (*Work Health and Safety (Psychosocial Risks) Amendment Regulation 2022*), now places a duty on organisations to manage psychosocial risks, which include high job demands, fatigue and excessive work hours.

The Code of Practice: Managing the Risks of Psychosocial Hazards in the Workplace 2022 (Qld) outlines proactive opportunities for prevention of psychological injury. (The Code is a preventative measure, while other WHS legislation comes into effect after injury has occurred). Workplaces have an obligation to take all reasonable steps to manage, mitigate and eliminate the risk of psychosocial harm.

This changes the dynamic and ensures that previous ways of working will need to be revisited and adjusted accordingly to demonstrate active risk management and compliance with the Code.

Vacancy rates in the Electrical and Mechanical Trade roles demonstrate the inability of Local Government entities to successfully recruit and retain these functions within the water departments/functions.

Competition for these trades is exacerbated by both the awards structures and the number of FTE roles available within the Council operational structures.

Many of these issues are also being felt in the larger utilities and bulk water providers in SEQ, who are not subject to those same constraints. This is likely to become more prevalent given the demands for trades as projects ramp up for the Olympic Games in 2032. There are also likely to be significant impacts across all engineering roles from these increased demands.

4. Case Study A: Respondents (11) Workforce Statistics & Trends

Case Study A represents 11 entities that responded to both the 2020 and 2022 surveys. These respondents are from a range of Medium, Large and Extra-Large sized Water Service Providers.

Comparing the same respondents between 2020 and 2022 provides additional support to trends observed contained earlier in this report. Case Study A (see Figures 12 and 13) provides insight to job family categories, age profile and qualification trends for 2020 and 2022. In some instances, Case Study A respondents are further explored by entity size (Table 2).

Table 2: Entity Size and Number of Connections

Entity Size	Number of Connections
Medium	1,000 and 9,999 connections
Large	10,000 and 50,000 connections
Extra-Large	more than 50,000 connections

4.1 Total Employees

Figure 12 represents total employees for Case Study A respondents. Medium sized entities display a reduction of employees in 2022 by 18 personnel compared to 2020. Large sized entities have remained consistent in their total employee numbers across both survey periods.

Extra-large sized entities have slightly increased total employees in 2022 by 66 new employees compared to 2020. The Extra-large sized entities are four-times the size of Large sized entities - this is often driven by the number of connections.

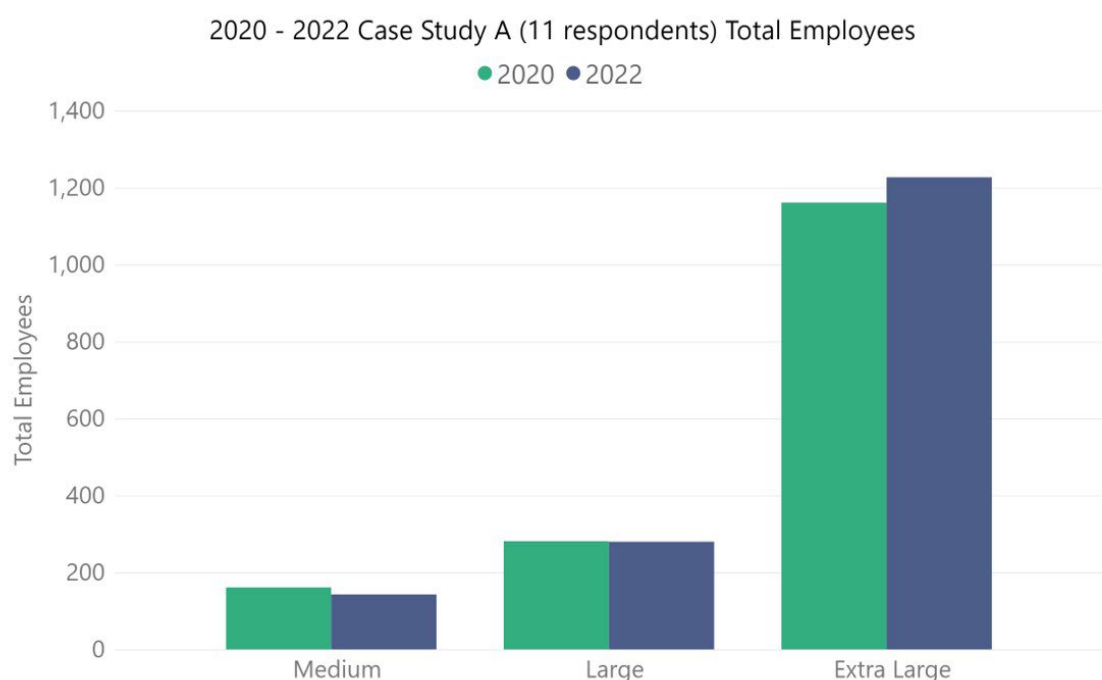


Figure 12: Case Study A Total Employees

4.2 Job Family Categories and Trends

Figure 13 provides an analysis of the proportion of employees within each Job Family Category across the past two reporting periods for the same 11 respondents in 2020 and 2022 respectively.

Business Support roles for Case Study A participants have remained fairly consistent (~24% occupancy) for 2020 and 2022.

Similarly with Trade roles at ~11% for the past two reports.

Notably, a 7% significant decrease is observed for Plant Operators. Further decreases are observed for Engineering Paraprofessional (4% decrease) and Scientific Professional (2% decrease) compared to 2020 occupancy rates.

A significant upward trend is observed for Civil Construction and Maintenance roles with a 9% increase for Case Study A participants in 2022. Slight upward trends are also displayed for Corporate and Operational Manager (2% increase) and Scientific Paraprofessional (1% increase).

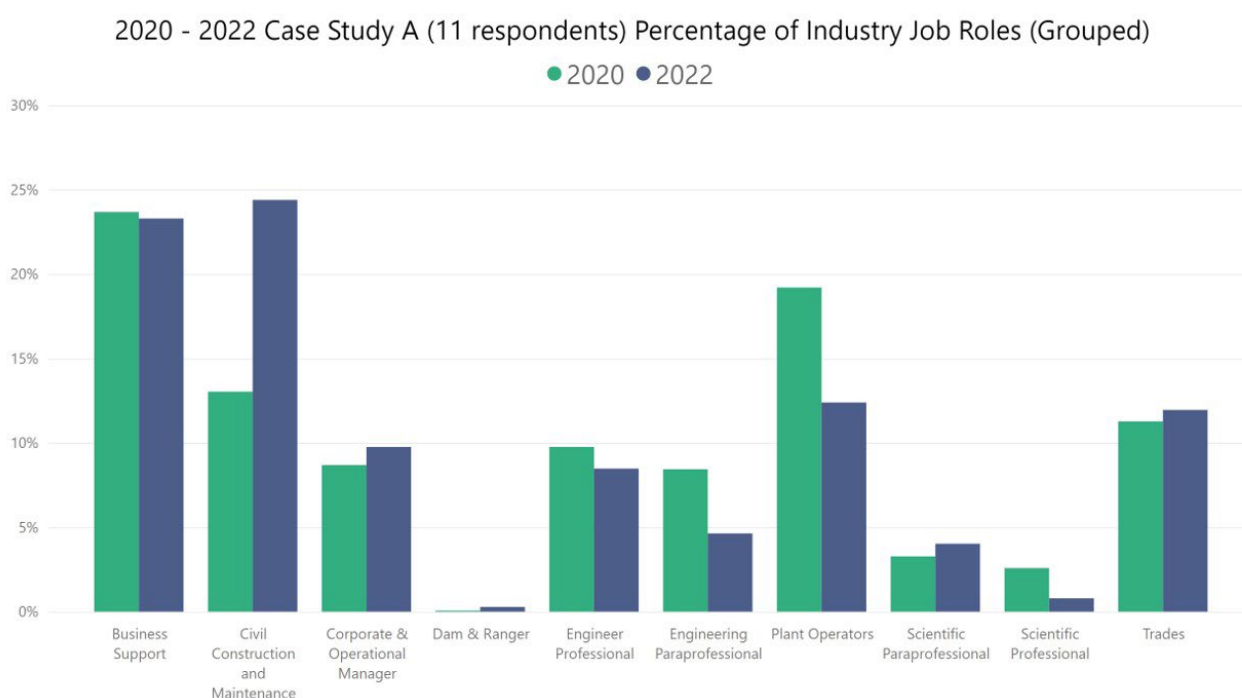


Figure 13: 2020-2022 Case Study A Percentage of Industry Job Roles (Grouped)

Figure 14 separates Case Study A participants into their respective entity size categories to ascertain how job role rates vary between the different sized entities during 2020 and 2022.

During 2022, medium sized entities lacked Rangers, Scientific Professionals and Trade Waste Officers unlike larger sized entities in 2020 and 2022. Medium sized entities contain the highest amount of positions for Civil Construction and Maintenance – Wastewater, Dam Operator, Engineer Professional and Paraprofessional, Scientific Paraprofessional, Supervisor Wastewater and Water Treatment roles compared to larger sized entities in 2022.

Large sized entities have all Water Industry roles occupied in 2022 except for Dam Operator. The largest employed position for Large sized entities is Engineering Paraprofessional role. Comparing 2020 and 2022 job roles within the Large sized entity category, there is a clear trend of decreased uptake of majority of positions in 2022.

Civil Construction and Maintenance – Water is the largest occupied role for Extra-Large entities during 2022. Extra-Large sized entities contain the highest amount of Plant Operator – Water positions filled compared to smaller sized entities. There are no employees in the positions of; Dam Operator, Plumbing Tradesperson and Supervisor – Water Treatment for Extra-Large sized entities in 2022.

It is important to note that some roles are not required for certain organisations, particularly those who may only provide bulk water supply or only provide wastewater services resulting in gaps observed in Figure 14.

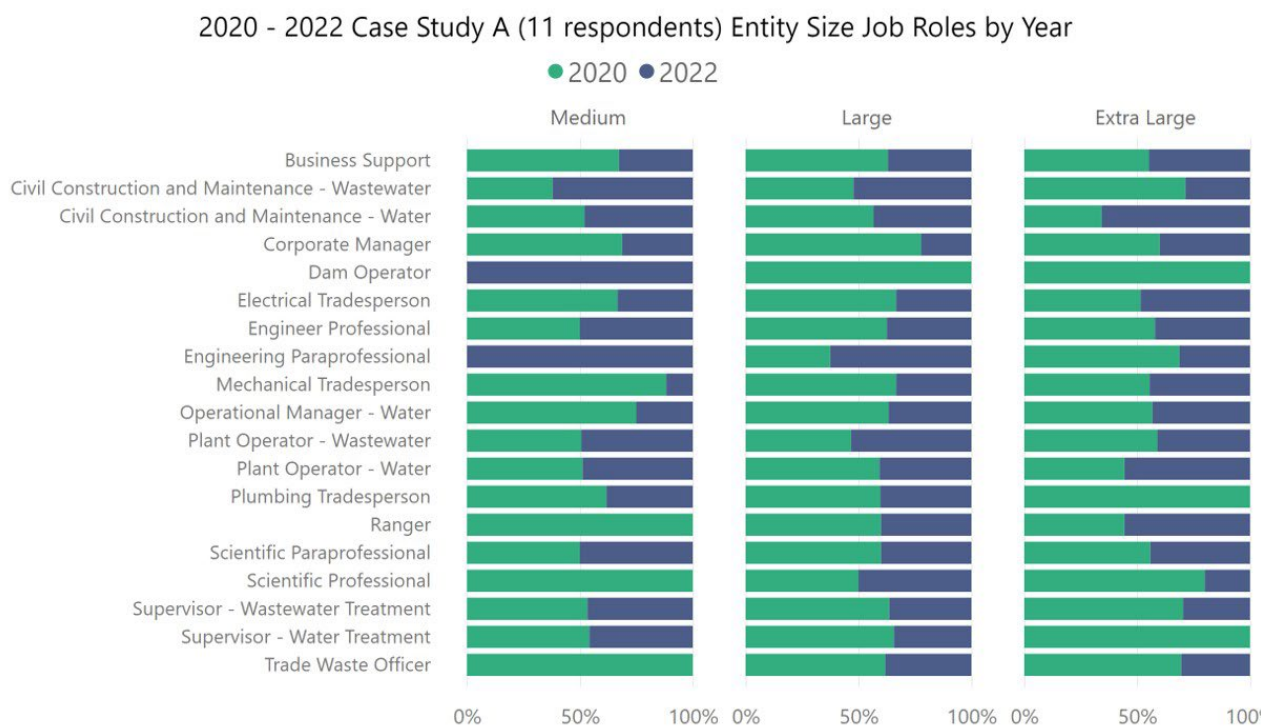


Figure 14: 2020-2022 Case Study A Entity Size Job Roles by Year

4.3 Age Profile

Figures 15 and 16 outline the age profiles for each job role category for all Case Study A respondents during 2020 and 2022.

The youngest demographic (people aged below 21) contains the smallest percentage of all workforce positions for both years. In 2022, the youngest demographic displays a slight increase of uptake for Plant Operator – Wastewater and Water positions. Overall, for Plant Operator Wastewater and Water roles, across both years, there is a reasonable spread of demographics containing the 21-60+ age groups. However, despite 5% uptake of Plumbing Tradesperson position in 2020 there is no uptake in 2022 for the youngest demographic.

During 2022 there are no 21–30-year-olds in Scientific Professional, Supervisor Wastewater and Water Treatment, Trade Waste Officer positions, unlike 2020. This shows a shift of this age demographic, who are potentially staying within the Water Industry as there is a higher percentage of 31–40-year-olds within the aforementioned positions during 2022.

There is a significant decline in 21–30-year-olds for the Electrical Tradesperson position in 2022 compared to 2020. Furthermore, Electrical Tradesperson positions during 2022 contain one of the higher percentages of 60+ demographics indicating the ageing workforce of this role. The differential between public and private sector wages is a significant factor for trades in general, in particular for Electrical Trades.

The Corporate Manager position predominantly contains 41-50 age demographic during both years. The 41-50 age demographic was the only demographic to fill the Ranger role in 2020, in 2022 this position is now covered by 21 – 60+ displaying an increasing age diversity for this position.

51–60-year-olds are working in all Water Industry positions in 2022, with the highest occupancy rates in the Engineering Paraprofessional and Trade Waste Officer roles (both 33% occupancy).

The 60+ age category is slim across the board, whilst still prevalent in most roles, except for the Trade Waste Officer position.

It is important to capture this data to support succession planning for each Water Service Provider.

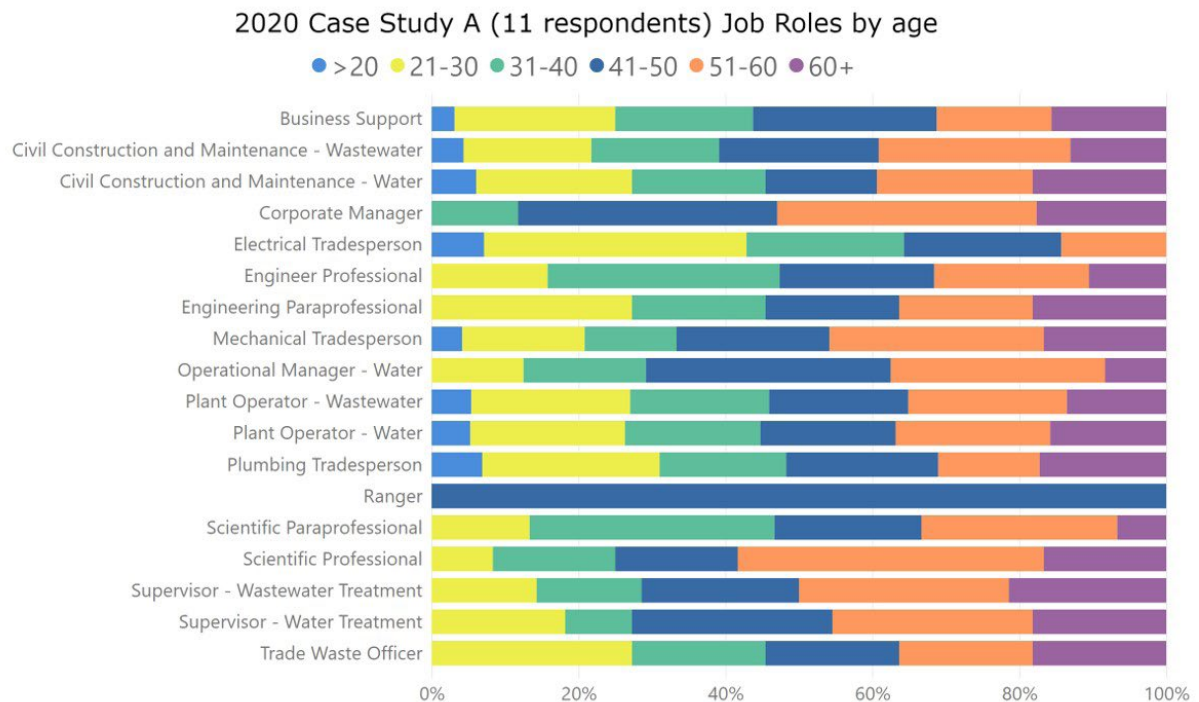


Figure 15: 2020 Case Study A Job Roles by age

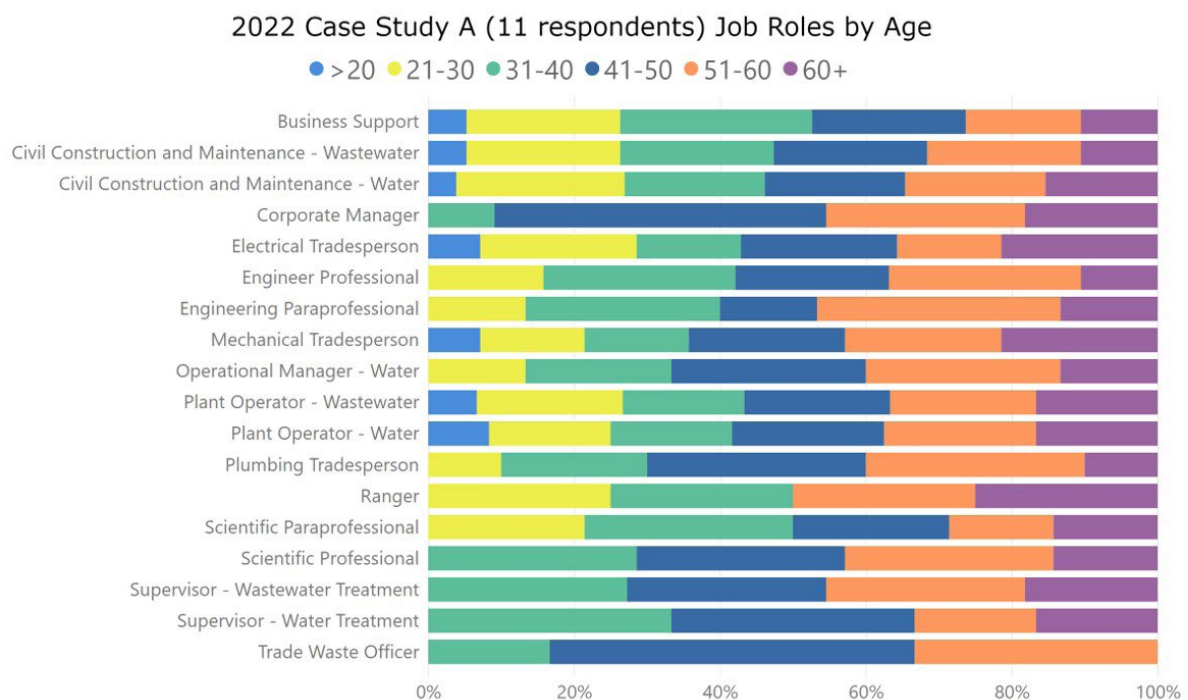


Figure 16: 2022 Case Study A Job Roles by age

4.4 Job Categories and Qualification Levels

Figure 17 displays certification levels for Operator positions including Plant Operator Wastewater and Water and Supervisor Wastewater and Water Treatment. Figures 18 and 19 contain further analysis of entity size specific details regarding qualifications for Operator positions.

No Qualifications:

All Plant Operator Wastewater and Water roles have a percentage of staff without qualifications across 2020 and 2022. A slight increase of Plant Operator – Wastewater and Water without qualifications in 2022 is noted:

- Plant Operator – Wastewater increased from 5% to 9%
- Plant Operator – Water increased from 7% to 9%

Figures 18 and 19 provide further information that the majority of unaccredited Plant Operators Wastewater and Water are within the Medium sized entities for 2020 and 2022 respectively. This identifies training gaps for the Medium sized entities and almost certainly speaks to their more remote geographic locations and associated challenges in access to training as a result.

Certificate II:

Whilst there is a decrease in the number of Certificate IIs held for Supervisor Water Treatment in 2022 (9% decrease compared to 2020) there is a notable rise in Supervisor Wastewater Treatment (7% increase) during 2022 (Figure 17). Significant decreases for Plant Operator Wastewater and Water Certificate IIs are also observed in 2022. Figures 18 and 19 display Medium entities in 2022 had the highest percentage of Certificate II (both 8%) trained personnel in the Supervisor Wastewater and Water Treatment positions.

Certificate III:

Notably, the largest uptake on any qualification is Certificate III across all Operator roles, years and sizes. Industry continues to coalesce toward this qualification as “best value” for Operator training.

Certificate IV:

A higher completion rate of Certificate IV in 2022 is observed in Figure 17 for both Supervisor roles compared to 2020 data. Figures 18 and 19 display that this qualification in the Supervisor roles sits within the Medium and Large entities in 2022 and has increased compared to 2020.

The trends are observed between 2020 and 2022:

- Plant Operator – Wastewater decreased from 16% to 1%
- Plant Operator – Water increased from 0% to 4%
- Supervisor Wastewater increased from 3% to 21%
- Supervisor Water increased from 3% to 19%

Diploma/Advanced Diploma:

A significant decrease in Diploma qualifications is observed in 2022 (Figure 17). In 2020, Supervisor Wastewater Treatment positions held the only and highest completion rate of 40% for Diploma level qualification.

Across all years this level of qualification sits within the Extra-large sized entity and within the Supervisor level position.

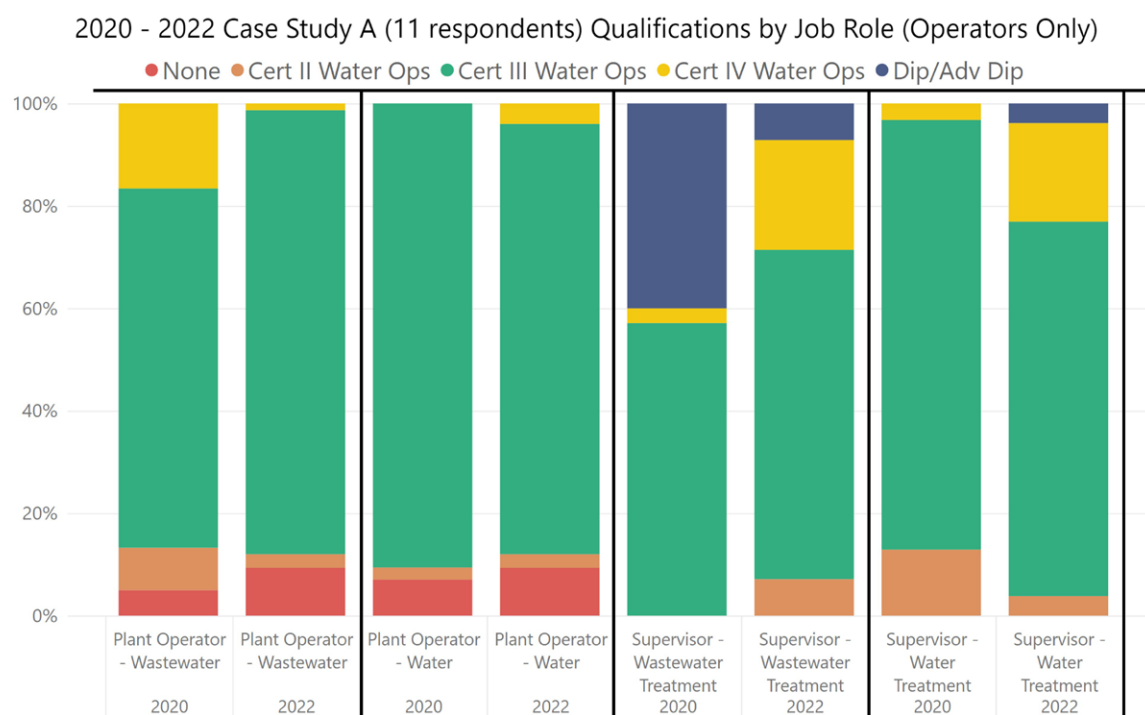


Figure 17: 2020-2022 Case Study A Qualifications by Job Role (Operators Only)

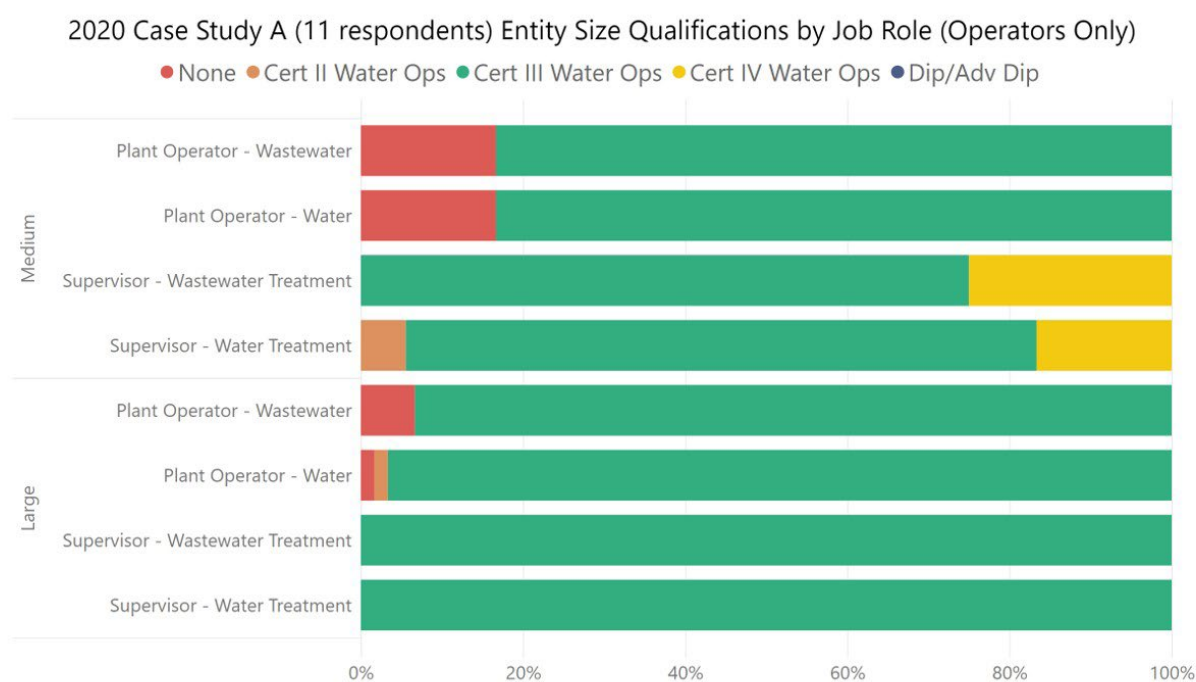


Figure 18: 2020 Case Study A Qualifications by Job Role (Operators Only)

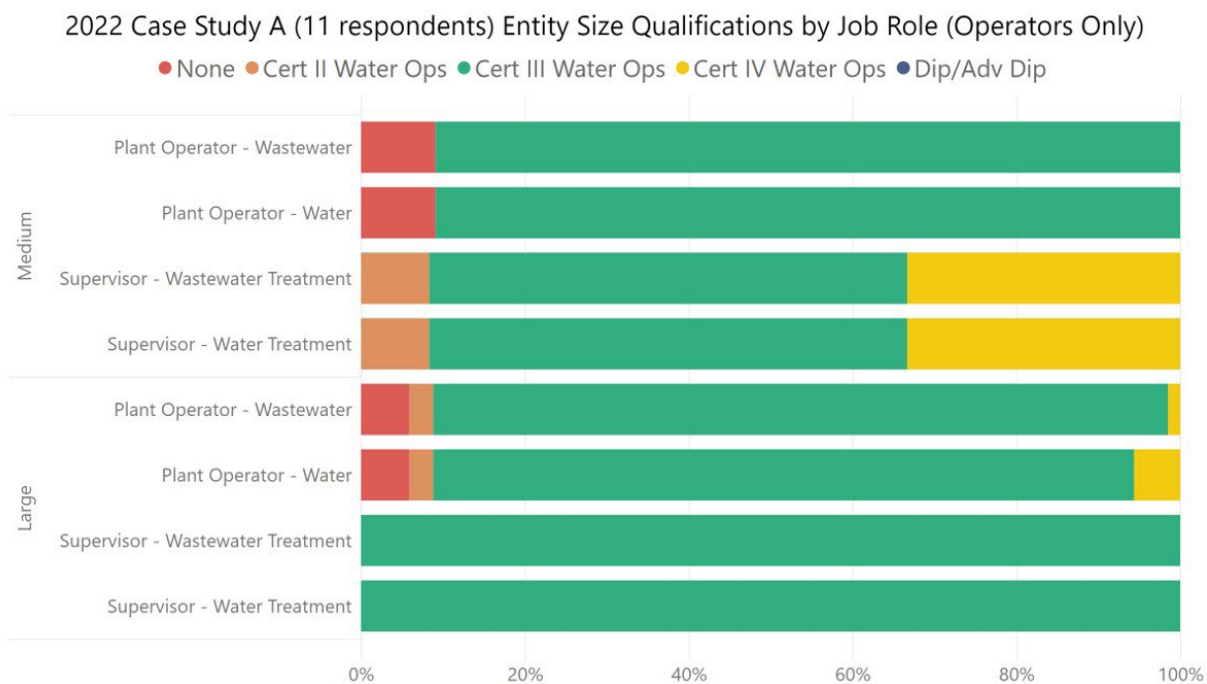


Figure 19: 2022 Case Study A Qualifications by Job Role (Operators Only)



5. Case Study B: Respondents

(6) Workforce Statistics & Trends

Case Study B represents six entities that responded to all surveys since 2016. These respondents are from a range of Medium, Large and Extra-Large sized Water Service Providers. Comparing the same respondents between 2016, 2018, 2020 and 2022 will provide additional support to trends observed earlier in this report. Case Study B graphs will provide insight into job family categories, age profile and qualification trends. In some instances, Case Study B respondents are further explored by their relevant entity size (Table 2).

5.1 Total Employees

Figure 20 represents total employees for Case Study B respondents. Medium sized entities are fairly consistent throughout 2016 – 2022 with a maximum number of 66 employees in 2018. Large sized entities display the peak of total employees in 2016 with 213 employees and has remained consistent with 183 employees in 2020 and 178 in 2022.

Extra-large sized entities have slightly increased total employees in 2022 by 71 new employees compared to 2020. The Extra-Larged sized entities are seven times the size of Large sized entities, this is often driven by the number of connections.



Figure 20: 2016 – 2022 Case Study B Total Employees

5.2 Job Family Categories and Trends

Figure 21 displays the proportion of employees within each Job Family Category across the past four reports (2016 to 2022) for the same six respondents across all years.

Business Support roles in 2018 were just over 30% filled, a 5% decrease was observed in 2020 and continued a slight downward trend in 2022.

A significant increase of Civil Construction and Maintenance positions in 2022 with a 12% increase compared to 2020. 2020 recorded the lowest amount (12%) occupancy for Civil Construction and Maintenance positions across 2016 to 2022.

In 2022, Corporate and Operational Manager positions contained the highest percentage at 10% occupancy compared to previous years.

Dam and Ranger positions are only a small percentage (0.25%) of the Water Industry Workforce as not all respondents have a requirement for these positions, not having the assets requiring those roles.

Engineer Professional roles have remained consistent with occupancy rates ranging from 8% - 11%, unlike the Engineer Paraprofessional role which is usually low ~5% across all years except for a spike of 10% in 2020.

Notably, in 2020 Plant Operator positions reached 17% for Case Study B respondents however, 2016, 2018 and 2022 are consistently lower at ~9% occupancy.

Scientific Paraprofessional recorded the highest level of 4.5% occupancy since 2016, unlike Scientific Professional recording the lowest level of occupancy at only 0.80%.

Trades positions are on an upward trajectory since 2018 however, 2016 continues to hold the highest amount of 12.5% occupancy.

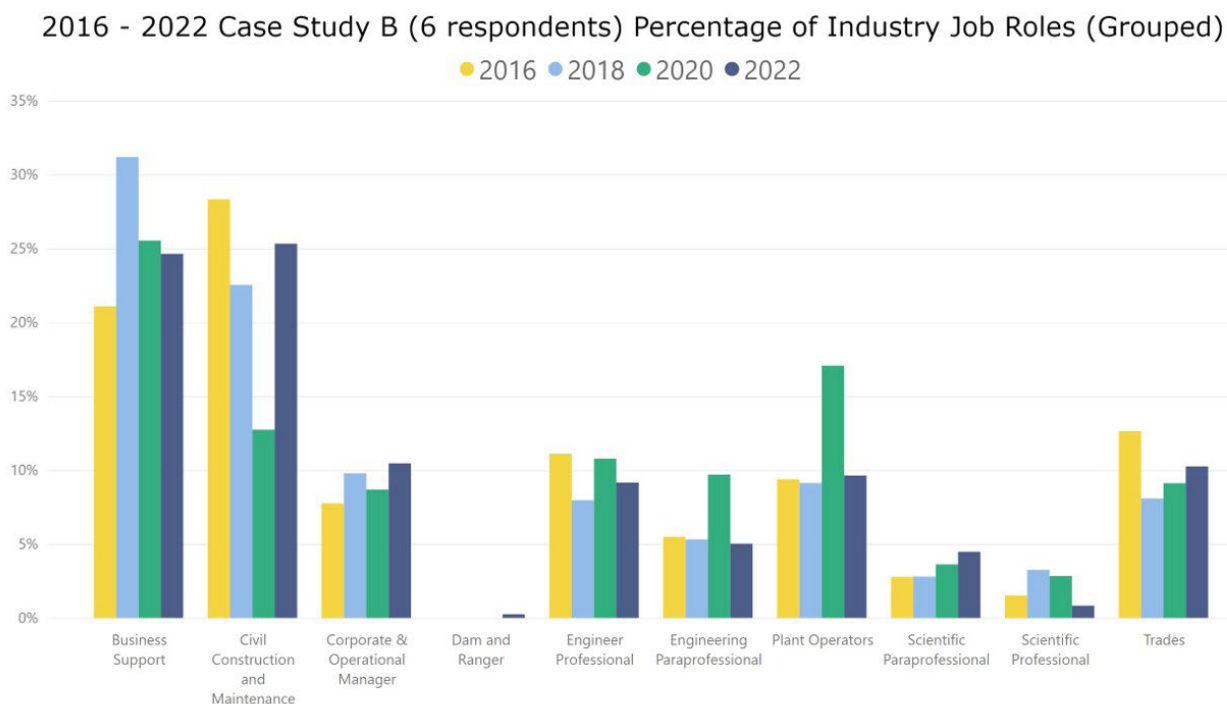


Figure 21: 2016 – 2022 Case Study B Percentage of Industry Job Roles (Grouped)

Figure 22 separates Case Study B participants into their respective entity size categories (Table 2) to ascertain how job role rates vary between the different sized entities during 2016, 2018, 2020 and 2022.

Medium sized entities lack Dam Operators, Electrical Tradesperson, Mechanical Tradesperson, Ranger and Scientific Professionals across all years. As already noted some of these roles may not necessarily be a requirement for Medium sized entities, particularly Dam Operator or Ranger.

However, it would be anticipated to see some occupancy rates for Electrical and Mechanical Tradesperson positions as these are preferred to be employed and not necessarily outsourced via contractual arrangements. There are occupancy percentages for all other roles across all years, except for no Scientific Paraprofessional roles in 2016 and Trade Waste Officer with positions only occurring during 2020.

Large sized entities have majority of roles filled across all years with the exception of Dam Operator (2016 and 2020), Ranger (2020 and 2022) and Trade Waste Officer (2016, 2020 and 2022). Plant Operator – Wastewater displays the highest occupancy rate in 2022 compared with previous years for the same role.

Dam Operator position is only filled during 2020, likewise for Supervisor – Water Treatment for Extra-Large entities, otherwise majority of roles are occupied from 2016 – 2022. Plant Operator – Water in 2022 has the highest percentage of occupancy compared to previous years for Extra-Large entities.



Figure 22: 2016 – 2022 Case Study B Entity Size Job Roles by Year

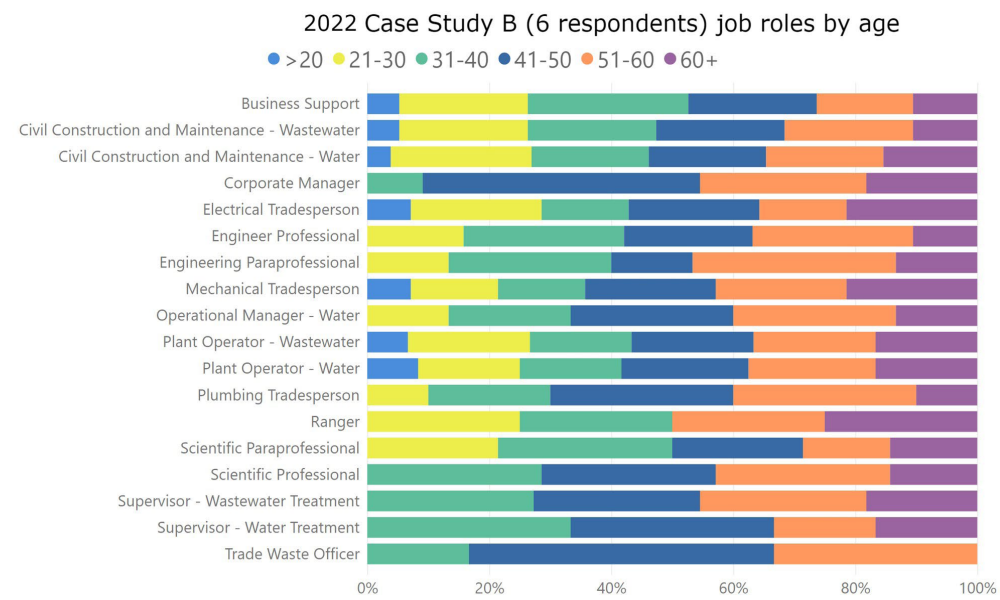
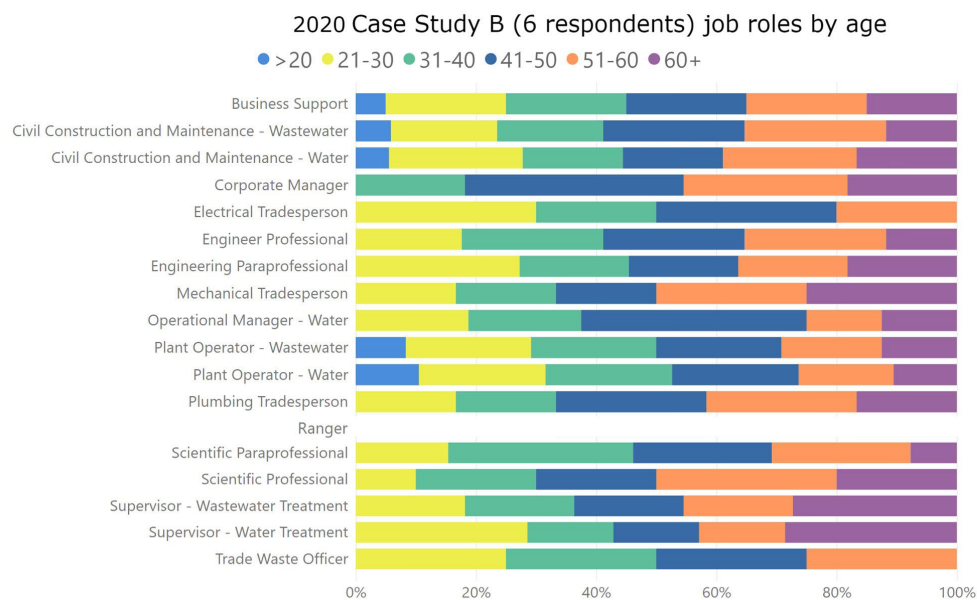
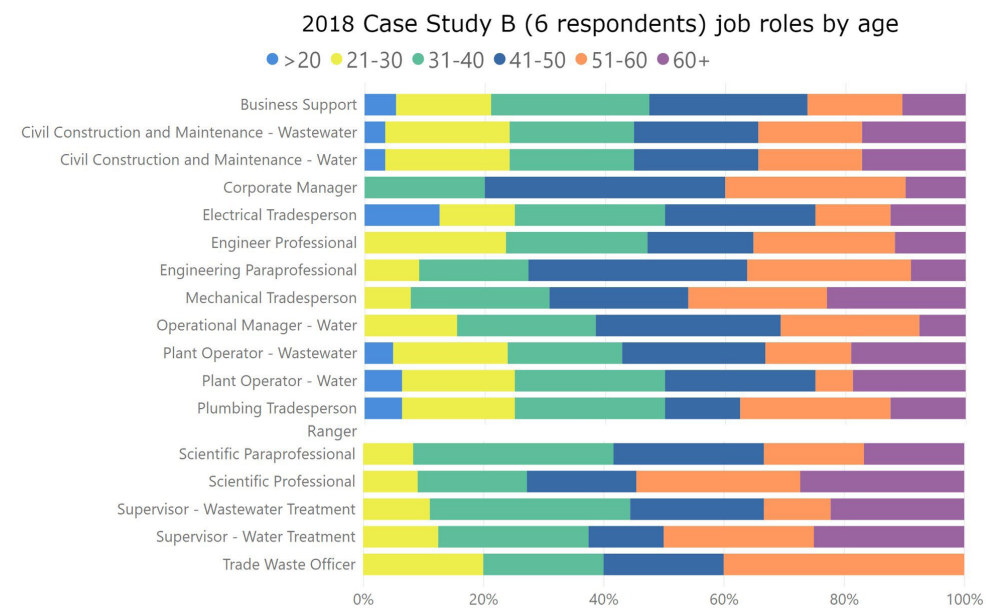
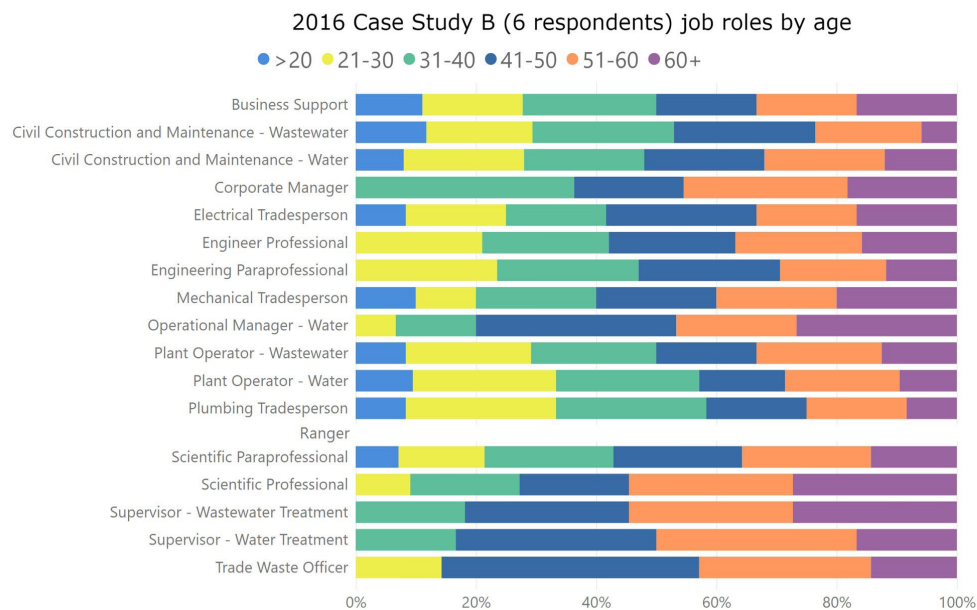


Figure 23: Case Study B Job Roles by Age

5.3 Age Profile

Figure 23 displays the age profiles for each job role for all Case Study B respondents for 2016, 2018, 2020 and 2022.

The youngest demographic (people aged below 21) represents the smallest percentage of all workforce positions for all years. Notably, during 2020 there was a particular shortage of this demographic despite containing the highest percentages for Plant Operator Wastewater and Water positions during 2020. 2016 contains the highest spread of the youngest demographic filling 9 positions out of 18.

The 21–30-year-old demographic has the highest percentage of occupancy during 2020 compared to all other years. There is a shift of this age group leading into 2022 with a reduction of positions filled by this demographic. The 31–40-year-olds hold the majority of positions since 2016, except for Ranger positions, which they remain absent from until 2022.

Corporate Manager positions are predominately filled by 41–50-year-olds since and this has remained unchanged since 2018.

5.4 Job Categories and Qualification Levels

Figure 24 displays certification levels for Operator positions including Plant Operator Wastewater and Water and Supervisor Wastewater and Water Treatment. Figure 25 contains further analysis of entity size specific details regarding qualifications for Operator positions.

No Qualifications:

The percentage of Plant Operator Wastewater staff without formal qualifications is under 20% across all years, with the highest figure of 19% in 2016.

Despite gradually declining during 2018 and 2020, there is a sharp rise in 2022 to 15.5% of Plant Operator Wastewater staff without qualifications. Plant Operator Water staff had 35% without qualifications during 2016, declining to 25% in 2018, 0% in 2020 and rising to 15% in 2022. Supervisor Water Treatment contains the highest percentage of staff receiving no formal qualifications in 2016 at 55%, this has not reoccurred since. Figure 24 further expands on these trends to show that Medium and Large entities hold the highest percentage of no formal qualifications for Plant Operator Wastewater and Water positions.

Certificate II:

Within figure 24, the highest percentage of Certificate II completion is recorded for Supervisor Water Treatment in 2016 at 10%. There are no Certificate II qualifications held for Supervisor Wastewater and Water Treatment since 2018. Only a small percentage (4% - 9%) of Plant Operator Wastewater and Water recorded completing Certificate II. Figure 25 displays that the small percentage of completed Certificate II lays within the Large sized entities.

Certificate III:

Notably, in Figure 24 the largest uptake on any qualification is Certificate III across all Operator roles, for all survey years.

Certificate IV:

The highest percentage (28%) of Certificate IV in 2018 is observed in Figure 24 for Supervisor Wastewater Treatment role compared to other years. This certification has increased in 2022 for both Supervisor positions. Figure 25 displays that this qualification in the Supervisor roles sits within the Medium entities only.

Diploma/Advanced Diploma:

Supervisor Wastewater Treatment is the only position to hold Diploma qualifications as displayed in Figure 24. Figure 25 shows that this is only held within Extra-Large sized entities.

2016 - 2022 Case Study B (6 respondents) Qualifications by Job Role (Operators Only)

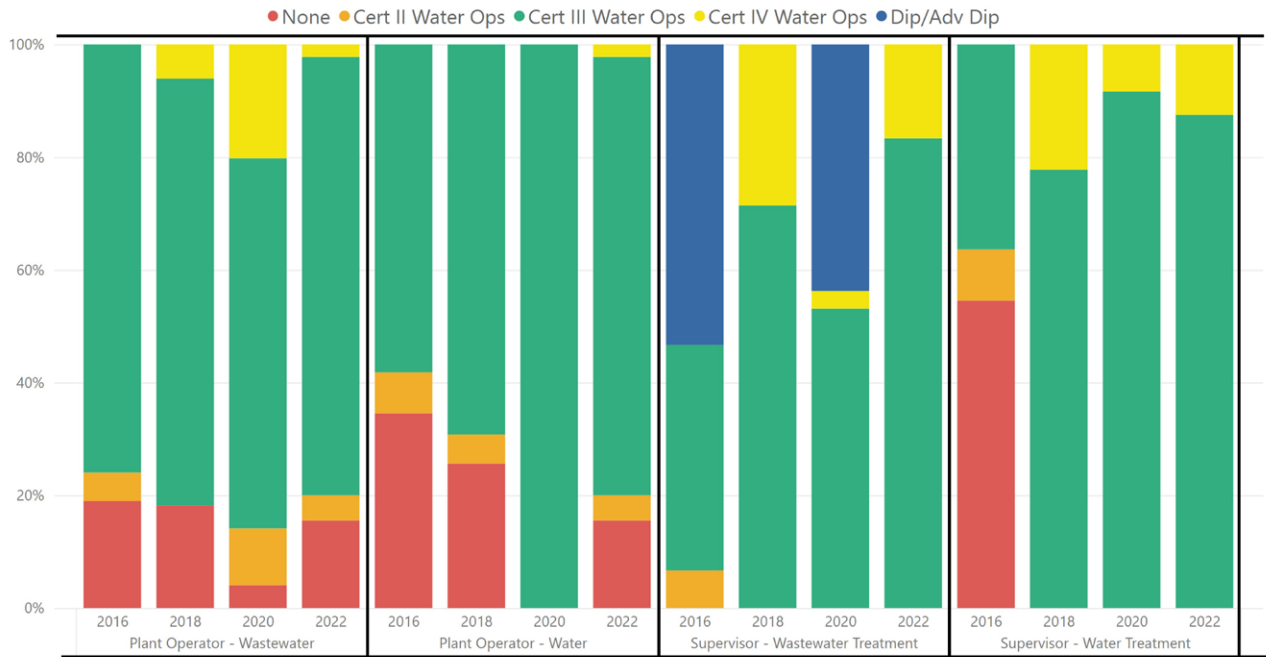


Figure 24 Case Study B Qualifications by Job Role (Operators Only)



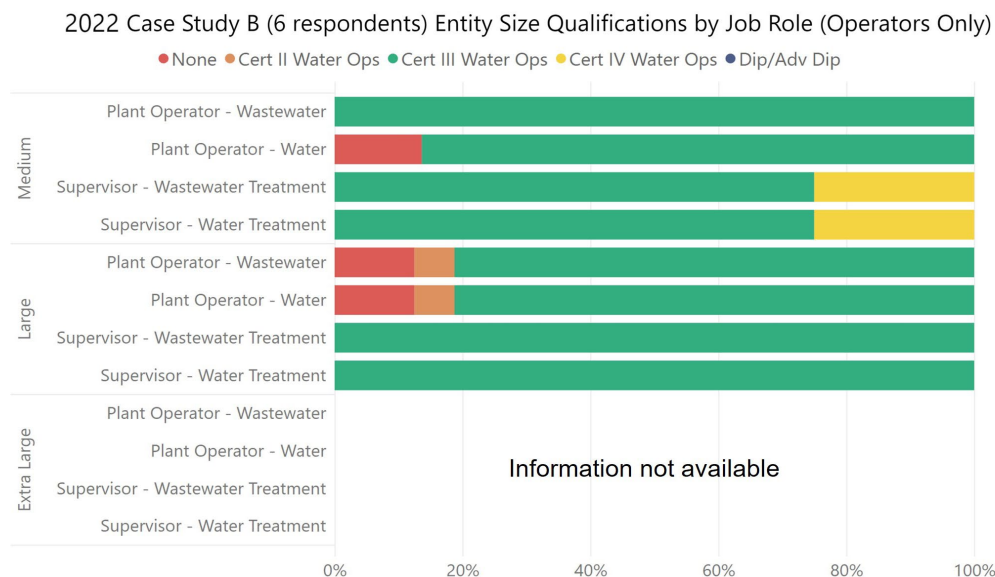
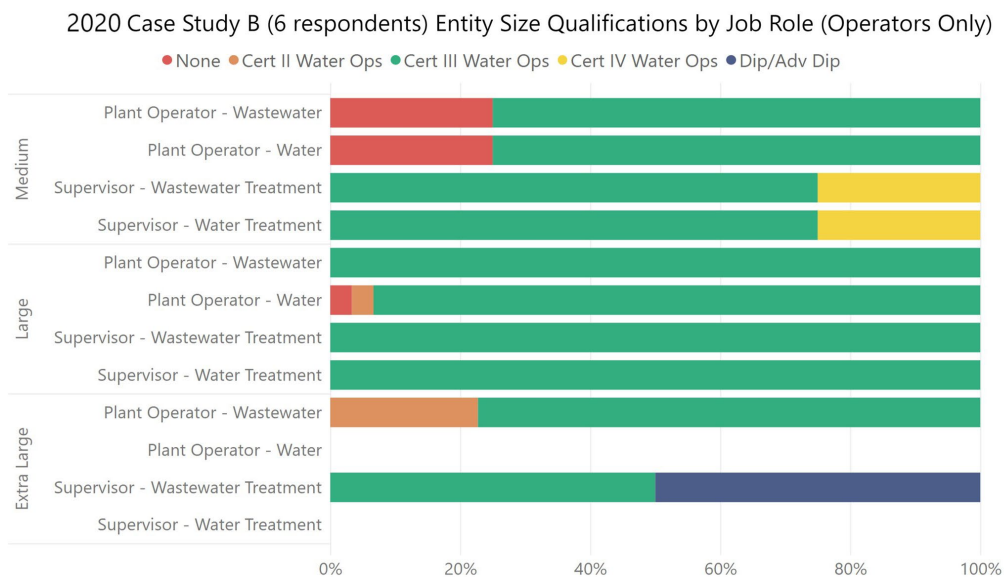
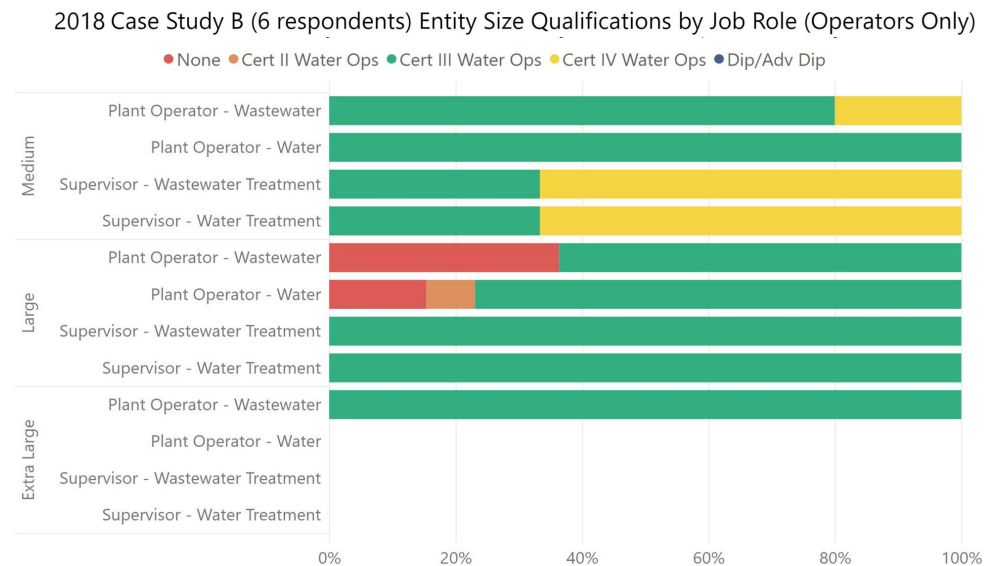
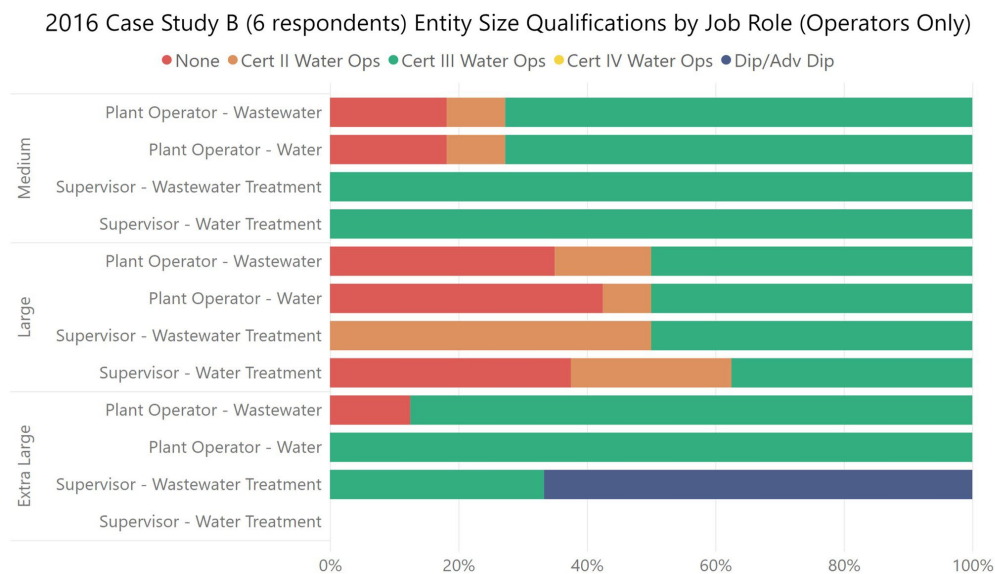


Figure 25: 2016 – 2022 Case Study B Entity Size Qualifications by Job Role (Operators Only)

6. Conclusion

The report reflects what **qldwater** has gleaned and communicated for more than a decade in engagement piece feedback from members and in more recent work as Industry Skills Advisor to the Department of (now) Youth Justice, Employment, Small Business and Training.

There are three core themes which need to be highlighted in concluding the work completed on the Snapshot data.

6.1 Vacancy Rates and Durations:

- Attraction and Retention is a growing issue, reaching critical levels
- Impact of change and churn within Local Government is significant
- In particular, lack of visibility of careers in the sector with school leavers
- Numbers of direct employees remains broadly similar from 6,686 in 2020 to 6,711 in 2022
- Increasing vacancy across operational roles - (15% Water Operator and 9% Wastewater Operator vacancies)
- Vacancies now exist across all roles, significant in percentage (12% Engineer Professionals, 9% Trade Waste Officers and 8% Plumbing Tradesperson vacancies)
- For first time data captured on vacancy duration, ranging from 3 to 13+ months
- Impact of vacancy and resource scarcity being felt with fatigue impacts

New psychosocial legislation effected April 2023 places onus on employers to manage and eliminate, wherever possible, risk for the workforce from psychosocial harm. Requirements to act are now crystallised as never before; business as usual in this area is no longer an option for water service providers.

6.2 Qualifications and Training:

- Significant increases in operational roles where no qualifications are held by incumbent (e.g. Plant Operator – Wastewater increased from 4% in 2020 to 12% in 2022)
- Highlights the 'greenness' in the operational space especially regionally and remote
- Reduction in the take-up of higher-level qualifications
- Lack of career pathways with the industry
- Increased competition from other sectors across higher qualified employees like engineers
- Access to RTOs with subsidised training continues to place constraints access to cost effective and timely training
- Award structures within local government WSPs are not competitive

Ongoing attraction and retention issues are amplified within this report by the overarching 15% Plant Operator vacancy rate and duration, as well as the rise in those without qualifications in these roles. This evidences one of the most significant pressure points for attraction, retention and training currently felt by industry.

There seems little doubt that the National VET reform, specifically on NWP, should seek to explore ways to better recognise skills sets, experience and competencies that individuals possess. This in part will better inform what skills gaps exist in all areas of the workforce.

Also, as methods of learning adapt and change industry and trainers must seek to facilitate the development of staff, ideally on a continual basis. Pathways and learning developments which can better capture and evidence Continuous Professional Development, Recognition of Prior Learning, Micro Credential type learning and so on, will be more reflective of the individual, than just purely traditional Certifications or competency units alone can convey.

Competition for higher level, formally qualified staff from other sectors could also be at play here in the data returned and the reduction in qualifications held. Notably from sectors operating outside the constraints of bargaining agreements which restrict remuneration levels in Local Government spheres. The resources sector has long been known as a drain of talent from the water sector.

In times of rising living costs, increased remuneration becomes a more compelling argument for movements in the workforce.

Data also evidences, at least in part, the issues that exist around access to training, with limited private RTO provision able to access subsidies throughout the State, exacerbated by the complete withdrawal of a public provider in TAFE Queensland from the National Water Package (NWP) training.

The challenges of the thin market combined with the tyranny of distance and the constraints of the Local Government frameworks (which nearly all water providers in the State operate within), combine to mean training is both difficult and costly to access for all concerned, whether as a provider or recipient of that training.

Provision of subsidy is critical, flexibility of subsidy needed and mechanisms that govern subsidy must be appropriately applied to ensure that both trainers and recipients of training can participate effectively.

6.3 Essential Services – Essentially Invisible:

The role that the water industry plays cannot be denied; services essential for maintaining public health, as well as protecting the environment. Despite this essential role, the water industry does not enjoy a footing which speaks to that work with the gravity, recognition, and support commensurate with the importance of the work delivered to the wider community.

Discussions around The Olympics, Hydrogen development or just continued development across the State, rarely mention water beyond an infrastructure perspective. There is often a perception that water – more importantly the people in water - will somehow just “be available” for these developments to continue. This is without added pressure brought to bear by climate change.

This picture is nothing new. There has been a trajectory that has taken place over the last decade or more which sees the industry where it finds itself today. Many of the issues being faced now, evidenced in the data of this report, have been spoken of and gone unsolved across that period. Innovation and flexibility will be required across all elements of this complex puzzle to find solutions that ensure we are not asking similar questions in another 5 or 10-years’ time.

The issues are complex, numerous and often interconnected. Some can be solved by industry itself, others by Government, many however will require true collaboration between industry, Government and Unions to resolve, with no one entity able to offer solutions alone.

Looking forward for *qldwater*

qldwater through the Water Skills Partnership will continue to work with water service providers to better understand the potential risks and impacts of their skilling and workforce challenges and work collaboratively to address them.

qldwater's ongoing roles within the newly forming Jobs and Skills Councils and continued role as Industry Skills Advisor to DYJESBT, will ensure the Directorate continues to provide a voice for the urban water industry across the State and more widely across Australia.

qldwater will continue to monitor and advocate on issues that become prevalent, guided by Skills Partnership Group and the Strategic Priorities Group in confirming and reaffirming members' needs.



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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.



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Level 1, 6 Eagleview Place
Eagle Farm QLD 4009
Australia

phone: 07 3632 6853
email: enquiry@qldwater.com.au
www.qldwater.com.au