Department of Climate Change, Energy, the Environment and Water



## NSW Local Water Utility Workforce Composition Report

Understanding the workforce needs of local water utilities in NSW



# Acknowledgement of Country



Department of Climate Change, Energy, the Environment and Water acknowledges the traditional custodians of the land and pays respect to Elders past, present and future.

We recognise Australian Aboriginal and Torres Strait Islander peoples' unique cultural and spiritual relationships to place and their rich contribution to society.

Artist and designer Nikita Ridgeway from Aboriginal design agency – Boss Lady Creative Designs, created the People and Community symbol.

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## Snapshot of the local water utility sector in NSW

Data in this snapshot is representative of the 59% of local water utilities that responded to the survey in 2024.

Survey region and size

### Where are we now? Our workforce in 2024





#### Challenges

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- High number and long duration of vacancies
- Knowledge transfer and succession planning
- Inflexible training subsidies







# Executive summary



## 1 Executive summary

Local water utilities (LWUs) in NSW often report difficulty attracting and retaining the skilled staff they need to provide essential water and wastewater services to their communities. There is little published information quantifying this challenge or investigating the underlying causes.

The NSW Department of Climate Change, Energy, the Environment and Water (the department) conducted a Workforce Composition Survey in 2024 to collect information from LWUs on workforce demographics, pay and conditions, and training. The survey was focused on operational roles responsible for service delivery within LWUs, not the broader support roles. This report presents the findings of the survey, combined with data from other sources, to inform a sectorwide response to the challenges facing LWUs.

55 of the 93 LWUs in NSW completed the Workforce Composition Survey – a 59% participation rate.

## 1.1 Key findings of the survey

#### 1.1.1 Job roles

The roles with the highest number of full-time equivalents (FTEs) across the responding LWUs were water networks operator, wastewater treatment plant operator, and civil construction and maintenance – water. Half of all job roles reported were frontline operational roles.

Small LWUs reported a higher proportion of trainee water treatment plant operators and water networks operators. Western region LWUs had a higher proportion of water treatment plant operator trainees than coastal region LWUs.

#### 1.1.2 Workforce age profile

**58%** of the LWU workforce is aged over 41 years. The most common roles for older employees are supervisors and plumbing trades. Younger employees aged 40 and under are more highly represented among scientific, electrical trades, civil construction and maintenance roles. The coastal and western regions were similar in the workforce age profile across most job roles.

The survey data showed a reliance on older, more experienced employees in leadership and supervisory roles. Maintaining a sufficient workforce in these important roles will likely require targeted strategies for workforce planning, knowledge transfer and leadership training.

#### 1.1.3 Gender profile

Survey results show a disproportionate gender distribution across the workforce, with females representing only **8**% of all employees. Females are more prevalent in scientific roles and other operational roles not specified in the survey.

There is a significant underrepresentation of females in the workforce of the responding LWUs. This trend is likely to be consistent across the sector. There is an opportunity to address this disparity by focusing future recruitment efforts on gender diversity and inclusion for females in non-traditional roles in the water industry.

## 1.1.4 Aboriginal and/or Torres Strait Islander participation

The participation rate of Aboriginal and Torres Strait Islander people in LWU employment is **5**%. This is higher than the **3.4**% representation of Aboriginal and Torres Strait Islander people in the general NSW population, but in some parts of NSW may be lower than the local percentage of Aboriginal and Torres Strait Islander people. Aboriginal and Torres Strait Islander employees were primarily recorded in other operational roles and civil construction roles.

There is opportunity to increase Aboriginal and Torres Strait Islander participation across a broader range of roles, particularly leadership and technical positions. Fostering inclusive recruitment, career development pathways and partnering with Indigenous organisations to ensure cultural capability and promote employment opportunities in the water industry could help achieve this.

#### 1.1.5 Vacancy rates

Survey responses on role vacancies and turnover indicated a high proportion of vacancies in frontline operational roles. Vacancies across regions differ. Coastal region LWUs experience larger shortages in engineering roles and western region LWUs experience larger shortages in operational leadership roles. Staff turnover in the previous 12 months was between **9%** for major LWUs and **23%** for small LWUs. Turnover for frontline operational roles in coastal and western regions was similar at **13%**. LWUs anticipated almost a quarter of the current workforce to leave or retire in the next 10 years. More frontline workers are expected to leave the workforce than other operational roles.

#### 1.1.6 Pay and incentives

The survey asked remuneration questions relating to frontline operational roles. The majority of operators are paid equivalent to Bands 1 and 2 of the Local Government (state) Award 2023. The majority of supervisor/team leaders are paid equivalent to Bands 2 and 3. Supervisor/team leader roles are more highly paid in coastal region LWUs compared to the western region. Major LWUs were the only LWUs to pay any employees above the equivalent of Band 3 Level 4.

Survey results suggest frontline operational roles receive **12%** to **17%** of their gross annual income from overtime, on-call, or penalty rates. Operators may rely on this income to support cost of living. These employees may be spending many additional hours at work to cover operational tasks or support their families, at the cost of wellbeing. This may also indicate a general lack of preventive asset management and inadequate resourcing.

#### 1.1.7 Qualifications and training

Uptake of Certificate II in Water Industry Operations is significantly lower than Certificate III. The proportion of enrolments in Certificate III in Water Industry Operations is marginally higher in the western region than in the coastal region.

The completion rate of Certificate III is generally less than half the original enrolments. Data shows the western region has a higher enrolment and completion across most years.

Demand remains strong for water and wastewater treatment training run by the department. Western region LWUs are more likely to participate in department training than the coastal region. This may indicate a lack of access to accredited training in these areas.

## 1.2 Spotlight statistics

#### 1.2.1 Spotlight on small LWUs

Small LWUs are those with less than 1500 connected properties. These represent the areas of NSW with the least dense populations, fewest number of ratepayers, and smallest urban centres. All small LWUs are in the western region.

<b>₩</b>	Diversity of job roles	Small LWUs had the smallest range of roles across those reported in the survey. Small LWUs reported no roles in civil construction and maintenance – water or wastewater, scientific professional, or scientific paraprofessional roles. This suggests that these roles, when needed, are provided by external service providers. Operational staff within small LWUs are more likely to undertake a broad range of tasks, often across both water and wastewater roles, rather than specialise in one area, as staff in larger LWUs may do.
	Separation and turnover	Small LWUs had the highest rate of employee turnover at <b>26</b> %. However, this was largely influenced by a very high turnover in other operational roles of <b>83</b> %. Small LWUs had the lowest turnover of frontline operators ( <b>9</b> %) compared with all other LWU sizes ( <b>14</b> % – <b>17</b> %).
ES	Pay	Small LWUs did not pay any operators above the equivalent of Band 2. Water supervisor/ team leaders in small LWUs were much less likely to be paid equivalent to Band 3 or above (16%) than larger LWUs. By comparison, 64% of water supervisor/team leaders in the coastal region were paid equivalent to Band 3 or higher.

The high turnover of non-frontline roles, and the lack of in-house technical and scientific support roles, suggests that small LWUs may face challenges maintaining corporate knowledge and managing strategic risks. The lack of higher paying roles for operators and supervisors may result in the most talented staff in small LWUs moving to other larger LWUs for greater opportunities.



#### 1.2.2 Spotlight on supervisors

The role of operator supervisors or team leaders is critical to effective functioning of any operational team. Supervisors are usually skilled operators with advanced problem-solving abilities, combined with leadership and management skills. They are a key driver of team culture, communication between frontline roles and management, and mentors and role models for new operators in training.

Age	The survey identified supervisor/team leader roles as the oldest age profile across all roles. <b>48</b> % of water supervisor/team leaders and <b>54</b> % of wastewater supervisor/team leaders are over the age of 50.
জিলি উদ্ধিজি উদ্ধি উদ্ধিজি উদ্ধি উদ্ধিজি উদ্ধি উদ্ধিজি উদ্ধি উদ্ধিজি উদ্ধ উদ্ধি উদ্ধি উদ্ধি উদ্ধি উদ্ধি উদ্ধি উদ্ধি উদ্ধি উদ্ধি উদ্ধি উদ্ধি উদ্ধি উদ্ধি উদ্ধি উদ্ধ উদ্ধ উদ্ধি উদ্ধ উদ্ধ উদ্ধ উদ্ধ উদ্ধ উদ্ধ উদ্ধ উদ্ধ	Supervisor/team leader roles had one of the lowest percentages of female employees, with only 2 out of 184 total roles held by females.
Role vacancies	Vacancies in supervisor/team leader roles differed significantly between the coastal and western regions. In the coastal region, vacancy rates were low ( <b>3</b> % for water, <b>6</b> % for wastewater). However, in the western region, nearly one in 5 roles were vacant ( <b>19</b> % for water, <b>18</b> % for wastewater). These were also two of the longest periods of vacancies, with around two- thirds of the roles ( <b>67</b> % for water, <b>64</b> % for wastewater) vacant for longer than 6 months.
Pay	Supervisor/team leader roles were the highest paid of all frontline operational roles. Some roles in major sized LWUs attracted pay at rates above the equivalent of Band 3 Level 4, with 15% of water and 8% of wastewater supervisors paid at this higher rate. No supervisor/team leaders in big, medium or small LWUs were paid at this higher rate.

The survey suggests a significant need for new supervisors/team leaders over the coming years, particularly in the western region. Training and support are required to transition operators into these leadership roles. There is an opportunity for increased gender diversity and participation of Aboriginal people within the critical roles of supervisors, which could provide benefits to LWUs by promoting inclusion, innovation and a wider range of role models for new starters.

#### 1.2.3 Spotlight on engineers

Engineering professionals provide vital technical support, strategic risk management and project delivery in LWUs. Engineer roles are a common pathway to LWU manager roles. LWU engineers typically learn through on-the-job experience, as there is little LWU contextualised training available to engineers, either as part of undergraduate studies or as professional development.

	Number of roles	Engineering professional roles were the second most common non-frontline role for all LWUs, and the most common in the western region.
	Age	Engineering roles had one of the younger age profiles, especially in the western region where <b>58</b> % of engineers were aged 40 or younger.
S/S/S	Gender profile	Engineers had the highest number of roles held by females, and one of the highest percentages ( <b>23</b> %).
	Role vacancies	Engineering roles reported the highest vacancy rate of all roles. Vacancy rates were higher in the coastal region (22%) than in the western region (12%).

The survey shows that the profile of engineers in LWUs is significantly different to frontline operational roles. A specific focus on attraction and retention for engineering roles is likely needed. The young age profile, combined with high rates of employee turnover in the western region, suggests a need for rapid professional development of engineers as they transition into LWU roles.



## Survey overview

NSW Local Water Utility Workforce Composition Report

## 2 Survey overview

NSW local water utilities (LWUs) face significant staff shortages and challenges accessing appropriate competency-based training. The 93 LWUs in NSW vary widely in size, workforce need, and risk profile. This makes it difficult to describe the challenges of the LWU sector as a whole.

To support a response to these challenges, the NSW Department of Climate Change, Energy, the Environment and Water (the department) has conducted the first NSW LWU Workforce Composition Survey. This survey aims to better quantify the LWU sector workforce, with a specific focus on operational roles, identify workforce gaps and training needs, and better understand the LWU sector. This survey is a key objective of the department's Town Water Risk Reduction Program. The department plans to conduct the survey every two years to monitor trends in workforce and training.

Analysis of the data collected through this survey provides a clearer understanding of the range of workforce and training needs, allowing more accurate identification of challenges, and provides the basis for more effective long-term workforce planning.

### 2.1 Research methodology

## 2.1.1 Workforce Composition Survey development

The department developed the survey with guidance from water industry colleagues in Queensland and Victoria, Local Government NSW, the NSW Water Directorate, NSW Public Sector Industry Training Advisory Body (ITAB), union representatives, and departmental staff.

The department chose survey questions across a range of categories covering workforce demographics, pay and conditions, and training. Where possible, questions aligned with those in the <u>Queensland Water Directorate</u> <u>Urban Water Industry Workforce Composition</u> surveys. This allows comparison between NSW and Queensland datasets.

We designed the survey to avoid asking LWUs for information that duplicated existing reporting requirements.



#### 2.1.2 Conducting the survey

The department conducted the survey between 30 May and 9 August 2024. We sent LWUs a spreadsheet with survey questions. The department promoted the survey through broad industry communications, and personal emails to LWU managers.

We offered a range of tailored support options to assist LWUs to complete the survey including one-onone phone calls and Teams meetings, online drop-in sessions, and a webinar.

The department provided LWUs with a direct contact offering personalised and ongoing support throughout the survey process. We granted some LWUs extensions to allow additional time to complete the survey, with a view to establishing a robust survey sample.

#### 2.1.3 Survey data analysis

We collated and cleaned completed surveys from individual LWUs to prepare for analysis. This report presents quantitative survey results using graphs and tables. Qualitative analysis used free text and written responses to identify key themes. For simplicity, percentages have been rounded in some cases.

#### 2.1.4 Other data sources

This report presents data from a range of other sources in addition to the Workforce Composition Survey. These data sources include:

- National Centre for Vocational Education Research (NCVER) data from 2018 to 2023
- department training participation data from 2019 to August 2024
- information from the department's NSW Performance Monitoring data analysis.

The department de-identified all data to ensure LWUs or individuals remain anonymous.

#### 2.1.5 Analysis of data by LWU region

LWUs can face different challenges depending on their climate and remoteness. For this survey, we grouped LWUs into one of two survey regions, coastal and western, allowing a deeper dive into the similarities and differences.

#### **Coastal region**

LWUs grouped into the coastal region were those that border the coast of NSW or are otherwise geographically and culturally connected to these coastal communities. Coastal region LWUs vary in size but are typically larger, with 13 of the 18 coastal region LWUs categorised as 'major' in size. The coastal region is typically a desirable place to live and work and has a growing population.

#### Western region

LWUs grouped into the western region are those with no clear geographical or cultural connection to the coast. Western region LWUs vary widely in size, but tend towards being smaller, with 46 of the smallest 50 LWUs in the western region. Many western region LWUs face difficulty attracting and retaining staff. Major regional centres are experiencing strong population growth but many of the smaller LWUs in the western region face declining populations.

#### 2.1.6 Analysis of data by LWU size

LWUs can also face varying challenges depending on their size. This refers to the number of connected properties the LWU supplies. Utility size impacts revenue and workforce.

We grouped LWUs responding to the survey into four category sizes.

- Small: less than 1500 connected properties
- Medium: 1501-4000 connected properties
- Big: 4001-10,000 connected properties
- Major: more than 10,000 connected properties.

We provide detailed information on LWU size in the department's website – <u>Local water utility performance |</u> <u>NSW Government Water.</u>

### 2.2 Workforce Composition Survey responses

Fifty-five of the 93 LWUs in NSW responded to the survey, a 59% response rate. All questions were voluntary and not all LWUs answered every question. Analysis of survey results in <u>Section 3</u> shows the number of LWUs that responded to each question.

The department recognises the detailed nature of the survey and greatly appreciates the time and resources LWUs invested to complete the survey.

Figure 1 below shows the utilities that responded to the survey.

Figure 1—NSW local water utilities by survey region and highlighting participating utilities



#### 55 LWUs that participated in the Workforce Composition Survey

1	Armidale Regional Council	29	Lachlan Shire Council
2	Ballina Shire Council	30	Leeton Shire Council
3	Balranald Shire Council	31	Lithgow City Council
4	Bega Valley Shire Council	32	Liverpool Plains Shire Council
5	Berrigan Shire Council	33	Lockhart Shire Council
6	Bogan Shire Council	34	MidCoast Council
7	Byron Shire Council	35	Nambucca Valley Council
8	Cabonne Council	36	Narromine Shire Council
9	Carrathool Shire Council	37	Oberon Council
10	Central Coast Council	38	Port Macquarie Hastings Council
11	City of Coffs Harbour	39	Queanbeyan-Palerang Regional Council
12	Coonamble Shire Council	40	Richmond Valley Council
13	Cowra Council	41	Rous County Council
14	Dubbo Regional Council	42	Shoalhaven City Council
15	Forbes Shire Council	43	Singleton Council
16	Gilgandra Shire Council	44	Snowy Valleys Council
17	Glenn Innes-Severn Council	45	Tamworth Regional Council
18	Goldenfields Water	46	Tenterfield Shire Council
19	Goulburn Mulwaree Council	47	Tweed Shire Council
20	Greater Hume Council	48	Upper Lachlan Shire Council
21	Gunnedah Shire Council	49	Uralla Shire Council
22	Gwydir Shire Council	50	Wagga Wagga City Council
23	Hawkesbury City Council	51	Walcha Council
24	Hay Shire Council	52	Warren Shire Council
25	Inverell Shire Council	53	Warrumbungle Shire Council
26	Junee Shire Council	54	Wingecarribee Shire Council
27	Kempsey Shire Council	55	Yass Valley Council
28	Kyogle Council		



## LWU workforce statistics and trends



## 3 LWU workforce statistics and trends

## 3.1 LWU job roles and numbers of FTE positions

#### 3.1.1 Job role categories

The survey asked respondents to identify the number of full-time equivalent (FTE) job roles from a specified set. We divided roles into two categories: frontline operational roles and other operational roles.

#### Frontline operational roles

We identified six job roles as 'frontline', covering positions that operate and supervise water and wastewater infrastructure operations. Almost all LWUs employ staff in these positions:

- water treatment plant operator
- wastewater treatment plant operator
- water networks operator
- wastewater networks operator
- supervisor/team leader water operator
- supervisor/team leader wastewater operator.

#### Other operational roles

We identified 12 job roles as "other operational". This set of roles includes support and managerial roles common to almost all LWUs, and other less common roles:

- trade waste officer
- electrical tradesperson
- mechanical tradesperson
- plumbing tradesperson
- civil construction and maintenance water
- civil construction and maintenance wastewater
- dam operator
- operational manager water.

- engineer professional
- engineering paraprofessional
- scientific professional
- scientific paraprofessional.

#### Other non-specified roles

The survey was not able to identify every job role for every LWU. If LWUs employed staff in a role that didn't match the roles specified in the survey, respondents could choose "Other operational roles not identified" and give more details. Other roles respondents identified included:

- technical officer water and wastewater
- water or wastewater attendant (operator support role with informal training)
- administration staff
- wastewater manager
- business support, finance, and facilitation officers
- sewer pump station teams
- mechanical/electrical apprentice
- service provider external to operations
- security and IT roles.

#### 3.1.2 Number of positions in job roles

?

Question: Number of Full-time Equivalent positions for each role in your organisation, based on primary role? Do not include trainees or apprentices.

Response: 55 LWUs.

The survey asked respondents to identify the number of FTE job roles in the specified categories. This included vacant roles and did not include trainees or apprentices.

The survey reported 2131 total positions. 1297 or **61%** of these positions were in the coastal region and 834 or **39%** in the western region.

The six most common roles respondents identified were:

- water networks operator (215 FTE)
- wastewater treatment plant operator (202 FTE)
- civil construction and maintenance water (187 FTE)
- water treatment plant operator (176 FTE)
- wastewater networks operator (173 FTE)
- engineer professional (172 FTE).

Four of the six most common roles are frontline operational roles. Frontline operational roles represented **49%** of all the roles respondents identified.

#### Difference in positions and job roles by LWU size

Major and big LWUs generally had more FTEs, and a wider range of roles compared to medium and small LWUs. We expected this due to the larger scale of operations.

Small LWUs reported no roles in civil construction and maintenance – water or wastewater, scientific professional, or scientific paraprofessional roles.

#### Difference in positions and job roles by region

The roles with the highest number of employees were similar across coastal and western region LWUs. The coastal region also recorded mechanical or electrical tradesperson among the most common roles.

Figure 2 shows the full breakdown of roles reported in the survey.

Figure 2 — Number of full-time equivalent positions for each role and current number of trainees or apprentices in these roles, Workforce Composition Survey 2024



#### 3.1.3 Traineeship and apprenticeship roles



Question: Current number of trainees or apprentices in these roles (part of formal traineeship or apprenticeship program)?

Response: 54 LWUs.

The survey asked respondents to identify the number of formal trainee and apprentice job roles in the specified categories. This did not include permanent staff completing on-the-job training. Figure 2 shows the full breakdown of apprentice and trainee roles the survey reported.

The five most common roles for trainees and apprentices were:

- water treatment plant operator (28 FTE)
- electrical tradesperson (24 FTE)
- mechanical tradesperson (21 FTE)
- wastewater treatment plant operator (18 FTE)
- water networks operator (18 FTE).

The three most common trainee roles are frontline operational roles. Electrical and mechanical tradesperson are the most common apprenticeship roles. Wastewater networks operator had significantly fewer trainees (six) compared with other frontline nonleadership roles.

## Difference in trainee profile between LWUs of different sizes

Small LWUs had a significantly higher proportion of trainee operators in water treatment (27%) and water networks (17%) than all other size categories.

#### Difference in trainee profile between regions

Western region LWUs had a significantly higher proportion of trainee water treatment plant operators (17%) compared with the coastal region (8%). This is likely linked to the majority of small LWUs being in the western region. However, the proportion of trainee wastewater treatment, water network, and wastewater network operators was similar across both regions.

#### 3.1.4 Staff performing multiple functions across different roles

?	Question:	Do your staff perform multiple functions across different roles? Please explain in comments, for example, operate water and wastewater treatment plants.
	Response:	55 LWUs.

Fifty out of 55 LWUs responding to this question noted that some staff performed multiple functions across more than one job role. Responses suggested that staff who performed multiple functions across different roles mostly worked in treatment plants, pumping stations, and reticulation networks in addition to their main role.

#### 3.1.5 Jobs requiring additional roles



Do you need more staff/ roles to cover the work, not counting the roles you are trying to fill now?

Response: 54 LWUs.

The survey asked respondents to indicate where they needed additional job roles to meet workload requirements. This referred to roles that had not been established and did not include vacancies in established roles. See further information on vacant roles in section 3.5.

The four most common roles requiring additional staff were:

- water treatment plant operator (17 LWUs)
- wastewater treatment plant operator (15 LWUs)
- water networks operator (13 LWUs)
- wastewater networks operator (13 LWUs).

### 3.2 Workforce age profile



The survey asked respondents to identify the number of employees in specified age brackets. Figure 3 shows the proportion of age groups the survey reported.





The department previously conducted workforce and training research in 2022 (*NSW water operations workforce and training analysis*). This research found:

- 57% of the workforce was aged 45 years and over
- 30% was aged between 45 and 55 years
- **27**% was aged 55 years and over.

The age ranges used for the 2022 research did not directly align with those used in the Workforce Composition Survey. However, the findings were reasonably consistent. The proportion of the LWU workforce aged over 41 years from the Workforce Composition Survey (58%) matches the reported workforce aged over 45 years in the 2022 research (57%).

#### 3.2.1 Age profile by role

Figure 4 shows the full breakdown of roles by age reported in the survey.

#### Figure 4 – Percentage of employees in age ranges by job role, Workforce Composition Survey 2024





#### Most common job roles by age group

The most common roles reported for people **aged over 60** were:

- trade waste officer (22%)
- plumbing tradesperson (21%).

For roles in the **age group 51-60** the most common were:

- supervisor/team leader wastewater operator (54%)
- plumbing tradesperson (49%)
- supervisor/team leader water operator (48%).

The most common roles recorded for people **aged 41-50** were:

- operational manager water (41%)
- engineering professional (33%)
- dam operator (33%).

The most common roles for people aged 31-40 were:

- scientific paraprofessional (39%)
- dam operator (33%)
- civil construction and maintenance – wastewater (29%).

The most common roles for the **21–30-year-old** age group were:

- scientific paraprofessional (29%)
- scientific professional (26%).

The **under-20** age group has very few people in most roles. The most common roles were:

- mechanical tradesperson (8%)
- water treatment plant operator (7%)
- electrical tradesperson (7%).

Survey responses showed that roles requiring experience in operations and supervisory skills are more common in older age groups, while younger workers tend to be in technical and entry-level positions requiring formal training.

#### Differences in age profile between regions

The age profile across most job roles was similar between the western and coastal regions.

In the **western region**, dam operators, supervisors/ team leaders wastewater, and supervisors/team leaders water operations were likely to be older than those in the coastal region.

**Coastal region** 

In the **coastal region**, plumbers and engineering professionals were likely to be older than those in the western region.

Figure 5 shows the full breakdown of role by age in the coastal region and western region.

#### Figure 5 – Percentage of employees in age ranges by survey region and job role, Workforce Composition Survey 2024

Water treatment plant operator Wastewater treatment plant operator Water networks operator Wastewater networks operator Supervisor/team leader water operator Supervisor/team leader wastewater operator Trade waste officer Electrical tradesperson Mechanical tradesperson Plumbing tradesperson Civil Construction and Maintenance - Water Civil Construction and Maintenance - Wastewater Dam operator Operational manager - Water Engineer professional Engineering paraprofessional Scientific professional Scientific paraprofessional Other operational roles not listed 0%







Water treatment plant operator Wastewater treatment plant operator Water networks operator Wastewater networks operator Supervisor/team leader water operator Supervisor/team leader wastewater operator Trade waste officer Electrical tradesperson Mechanical tradesperson Plumbing tradesperson Civil Construction and Maintenance - Water Civil Construction and Maintenance - Wastewater Dam operator Operational manager - Water Engineer professional Engineering paraprofessional Scientific professional Scientific paraprofessional Other operational roles not listed

## 3.3 Gender profile

Question: Number of employees in each gender category?

Response: 55 LWUs.

Survey respondents reported the workforce is 8% female and 92% male. There were no employees who identified as "other" or chose not to specify their gender. The total recorded number of employees across all the responding LWUs was 1898–152 females and 1746 males.

Figure 6 shows the gender profile reported in the survey.

Data LWUs reported to the department for annual performance shows a gender breakdown of **13%** female and **87%** male. This suggests the LWUs that responded to the survey have a lower proportion of female employees compared to all LWUs.





Figure 6 — Gender profile of survey respondents, Workforce Composition Survey 2024

92% Male

#### 3.3.1 Female representation by job role

Figure 7 shows the number of employees recorded by role for each gender.





The survey identified that females are underrepresented in many roles. From the responding LWUs, there were no females in positions of:

- supervisor/team leader wastewater operations
- plumbing tradesperson
- civil construction and maintenance wastewater
- dam operator.

Roles in which **women represent less than 5%** of the workforce were:

- water treatment plant operator (4%)
- wastewater treatment plant operator (5%)
- water networks operator (3%)
- wastewater networks operator (3%)
- supervisor/team leader water operator (2%)
- electrical tradesperson (3%)
- mechanical tradesperson (2%)
- civil construction and maintenance water (2%).

Female representation was highest in the roles of:

- scientific professional (57%)
- scientific paraprofessional (43%)
- other operational roles not listed (31%).

#### Difference in gender profile between regions

Gender profile was similar across the western and coastal regions for most job roles. Key differences included:

- the coastal region had 24% female representation for engineering paraprofessional roles, compared with 0% in the western region
- the coastal region had 60% female representation in scientific professional roles, compared with 33% in the western region.

### 3.4 Aboriginal and Torres Strait Islander participation



Question: How many of your staff identify as Aboriginal and/or Torres Strait Islander?

Response: 50 LWUs.

The survey respondents reported that 5% of their employees identify as Aboriginal and/or Torres Strait Islander, with a further 13% reporting as unsure or prefer not to say.

The 2021 Australian Census reports that 3.4% of the NSW population identifies as Aboriginal or Torres Strait Islander. However, many local governments areas in regional NSW have a significantly higher proportion of Aboriginal and/or Torres Strait Islander people than the NSW average.

Figure 8 shows Aboriginal and Torres Strait Islander participation in the LWU sector.

Figure 8 – Percentage of workforce identifying as Aboriginal and/or Torres Strait Islander, Workforce Composition Survey 2024





#### 3.4.1 Aboriginal and/or Torres Strait Islander participation by role



Question: How many of your staff identify as Aboriginal and/or Torres Strait Islander and number of full-time equivalent positions for each role in your organisation, based on primary role?

Response: 50 LWUs.

The roles identified with the highest Aboriginal and/or Torres Strait Islander participation were:

- other operational roles not listed (17%)
- civil construction and maintenance wastewater (11.4%)
- civil construction and maintenance water (8.2%).

Aboriginal and/or Torres Strait Islander employment in frontline operational roles reported in the survey:

- water networks operator (7.4%)
- wastewater networks operator (6.5%)
- wastewater treatment plant operator (5.6%)
- supervisor/team leader water operator (4.7%)
- supervisor/team leader wastewater operator (3.8%)
- water treatment plant operator (2.1%).

There are no Aboriginal or Torres Strait Islander staff recorded in the roles of scientific paraprofessional, scientific professional, dam operator, and plumbing tradesperson.

Figure 9 shows the full breakdown of Aboriginal or Torres Strait Islander participation by role.

## Figure 9 – Percentage of employees identifying as Aboriginal and/or Torres Strait Islander by role, Workforce Composition Survey 2024.

Other operational roles not listed Civil Construction and Maintenance - Wastewater Civil Construction and Maintenance - Water Water networks operator Wastewater networks operator Wastewater treatment plant operator Mechanical tradesperson Supervisor/team leader water operator Supervisor/team leader wastewater operator Engineering paraprofessional Trade waste officer Electrical tradesperson Water treatment plant operator Operational manager - Water Engineer professional Scientific paraprofessional Scientific professional Dam operator Plumbing tradesperson



### 3.5 Role vacancies and turnover

#### 3.5.1 Vacancies by role

?

Question: Number of vacant roles?

Response: 45 LWUs.

The survey asked respondents to identify vacant roles. This refers to established positions with no person in the role and does not include where additional job roles were needed to meet workload requirements.

Survey respondents reported 281 vacant roles. This represents 13% of the 2131 roles reported in the survey.

Figure 10 shows the vacancies by role.



#### Figure 10 – Percentage of vacancies by role, Workforce Composition Survey 2024

The highest proportion of vacancies were in the following roles:

- engineer professional (19%)
- plumbing tradesperson (18%)
- trade waste officer (17%).

The reported proportion of vacancies for frontline operational roles was:

- water networks operator (14%)
- wastewater networks operator (14%)
- supervisor/team leader water operator (12%)
- supervisor/team leader wastewater operator (11%)
- water treatment plant operator (9%)
- wastewater treatment plant operator (8%).

#### Difference in vacancies by region

The proportion of vacancies in some roles differed significantly between the western and coastal regions. Key differences included:

- vacancies in the western region for supervisor/team leader water (19%) and wastewater (18%) were significantly higher than in the coastal region (3% and 6% respectively)
- water treatment plant operator vacancies were more than double in the western region (11%) compared with the coastal region (5%)
- wastewater treatment plant operator vacancies were higher in the coastal region (10%) than in the western region (6%)
- engineering professional role vacancies were higher in the coastal region (22%) than in the western region (12%).
- trade waste officers in the western region had the highest percentage of vacancies of all roles (27%).

#### Figure 11 - Percentage of vacancies per role by survey by region, Workforce Composition Survey 2024





#### Fill rates and occupation shortages across sectors

The Australian Government's Occupation Shortage report provides information on jobs that may be in shortage or are experiencing shortage pressures. It bases this information on the percentage of advertised vacancies filled by occupation (the fill rate), as identified through the Jobs and Skills Australia Survey of Employers who have Recently Advertised (SERA).

An occupation is in shortage when employers are unable to fill or have considerable difficulty filling vacancies or cannot meet significant specialised skill needs within that occupation – at current levels of remuneration and conditions of employment, and in reasonably accessible locations. The fill rate is the key proxy measure of shortages. If the fill rate is high, the likelihood of an occupation being in shortage or having shortage pressures is low. Whereas if the fill rate is low, the probability of shortage is higher.

The national regional fill rate was **61.3%** in June 2024. This compares to a national metropolitan fill rate of **68%**. The lower fill rate in regional Australia demonstrates the greater shortage pressures in regional

areas. In addition, the much higher number of total applicants, qualified applicants and suitable applicants in metropolitan areas is a product of larger pools of workers in those areas compared to regional areas.

In metropolitan and regional areas, "lacking work experience" and "lacking relevant qualifications" were the two most common reasons applicants were deemed unsuitable for vacancies. In regional areas, "lacking working rights" was the third-most common reason.

Fill rates for "technicians and trades workers" was **51.9%**, compared with a fill rate of **66.2%** across all occupations. Technicians and trades workers had the lowest fill rate / most likely shortages of all major groups. This indicates acute shortage pressures for occupations among technicians and trades – which is likely to impact technicians and trades within the LWU sector.

Source: <u>Australian Government, Jobs and Skills</u> <u>Australia (August 2024). Occupation Shortage Report:</u> <u>June quarter 2024</u>.

#### 3.5.2 Duration of vacancies

Question: Number and duration of vacant roles?

Response: 45 LWUs.

The survey asked respondents to identify the duration of vacancies reported. About half the vacant roles (48%) had been vacant for more than six months. Figure 12 shows the duration of vacancies.

## Figure 12 – Percentage duration of role vacancies, Workforce Composition Survey 2024



The roles with the shortest period of vacancy were:

- scientific paraprofessional
- scientific professional
- dam operator.

Most frontline roles had longer periods of vacancy than other roles.

The three key leadership roles of supervisor/team leader water, supervisor/team leader wastewater, and operational manager water had some of the longest periods of vacancy. In these roles, about two-thirds of the vacant positions were empty for more than six months.

Figure 13 shows the full breakdown of vacancies by role and duration.

#### Figure 13 - Percentage duration of role vacancies by role, Workforce Composition Survey 2024



#### Differences in vacancy duration by region

The survey identified that in general, roles were vacant for longer in the western region. The percentage of roles vacant for less than six months in the coastal region was 62%, compared with 38% in the western region. For roles vacant for 6-12 months, the western region was 30%, compared with 13% in the coastal region.

Figure 14 shows the duration of vacancies in the western region. Figure 15 shows the duration of vacancies in the coastal region.



#### 3.5.3 Labour hire, contract workers, and alternative resourcing



Question: How many of these roles are filled by labour hire/contractual arrangements or alternative resourcing arrangements?

Response: 48 LWUs.

Survey respondents reported that labour hire/contractual arrangements or alternative resourcing arrangements filled **12%** of vacant positions.

#### 3.5.4 Employee separation and turnover



The survey asked respondents to identify how many employees had left the organisation in the previous 12 months. Survey responses identified 219 employee departures in the previous 12 months. This represents a mean turnover of 11% of the 2131 roles identified.

#### Differences in separation and turnover by LWU size

Figure 16 shows the turnover rate across each size LWU.

#### Figure 16 – Percentage of role turnover in 12 months by role category and LWU size, Workforce Composition Survey 2024



Small LWUs had the highest rate of turnover at **26**%. This was largely influenced by a very high turnover in other operational roles of **83**%. Small LWUs had the lowest turnover of frontline operators **(9%)** compared with all other sizes **(14**% – **17%)**.

#### Differences in separation and turnover by region

Figure 17 shows the turnover rate by region.

#### Figure 17 – Percentage of role turnover in 12 months by role category and survey region, Workforce Composition Survey 2024



Turnover rates for frontline operational roles were similar in the coastal region (14%) and the western region (15%). Western region LWUs had a higher rate of other operational staff turnover (11%) than coastal region LWUs (7%).

#### 3.5.5 Anticipated employee departures



The survey asked respondents to predict how many employees will leave the organisation in future years. This question focused on employees retiring from work or leaving the water sector, rather than transferring to other roles in the water sector.

Results anticipate 488 employees will leave or retire from LWUs in the next 10 years. This represents **23**% of current employees. Expected departures of frontline operators over 10 years **(33%)** are much higher than for other operational roles **(13%)**.

#### Differences in anticipated employee departures by LWU size

Figure 18 shows a full breakdown of the anticipated employee departures by LWU size.

#### Figure 18 - Number of anticipated employee departures by utility size, Workforce Composition Survey 2024



The proportion of anticipated frontline operational role departures is more than double the rate for other operational roles for all LWU sizes.

#### Anticipated employee departure by region

Figure 19 shows anticipated employee departures by region.



#### Figure 19 – Number of anticipated employee departures by survey region, Workforce Composition Survey 2024

## Percentage of expected departures over 10 years in the western region (28%) is higher than in the coastal region (21%).



### 3.6 Pay, conditions, and incentives for frontline roles

The survey asked questions about employee pay, conditions, and incentives. We only asked these questions for roles identified as frontline operational roles.

Fifty-one LWUs responded to this section. Some LWUs only responded to some of the questions in this section.

#### 3.6.1 Remuneration for frontline roles



Response: Between 47 and 50 LWUs.

The survey asked respondents to identify the band of remuneration for frontline operational roles. Bands in the survey were chosen to reflect the Local Government (State) Award 2023 rates of pay for the 2023/24 financial year. Table 1 shows the pay rates given in the survey.

#### Table 1 – Monetary rates, adapted from Local Government (State) award 2023 Vol.394

Band	Level	Rate per week \$ (FY23/24)	Rate per year \$ (FY23/24)
Band 1	Level 1	\$452.20-\$1,154.20	\$23,514-\$60,018
Operational	Level 2	\$947.10-\$1008.70	\$49,249-\$52,452
	Level 3	\$1008.70-\$1116.30	\$52,452-\$58,047
	Level 4	\$1116.30	\$58,047
Band 2	Level 1	\$1103.90-\$1266.00	\$57,403-\$65,832
Administrative/technical/trades	Level 2	\$1266.00-\$1515.10	\$65,832-\$78,785
	Level 3	\$1515.10	\$78,785
Band 3	Level 1	\$1266.00-\$1515.10	\$65,832-\$78,785
Professional/specialist	Level 2	\$1515.10-\$1764.30	\$78,785-\$91,744
	Level 3	\$1764.30-\$ 2138.90	\$91,744 - \$111,223
	Level 4	\$2138.90	\$111,223

Figure 20 shows the breakdown of remuneration across frontline operational roles.



## Figure 20 – Percentage of frontline roles remunerated equivalent to Local Government (State) Award 2023 bands, Workforce Composition Survey 2024

The most common salary bands for each frontline operational role were:

- wastewater networks operator Band 1 (64%)
- water networks operator Band 1 (62%)
- wastewater treatment plant operator Band 1 (57%)
- water treatment plant operator Band 1 (48%)
- supervisor/team leader wastewater operator – Band 2 (51%)
- supervisor/team leader water operator
  Band 2 (45%)

#### Differences in pay by region

Figure 21 and Figure 22 show the breakdown of remuneration across frontline operational roles in the coastal and western regions.

## Figure 21 – Percentage of frontline roles remunerated equivalent to Local Government (State) Award 2023 bands in the coastal region, Workforce Composition Survey 2024



## Figure 22 — Percentage of frontline roles remunerated equivalent to Local Government (State) Award 2023 bands in the western region, Workforce Composition Survey 2024



Supervisor/team leader water roles in the coastal region had significantly higher percentage of roles paid equivalent to Band 3 and above (64%) compared to the western region (29%). This is the same for water treatment plant operators, who are more likely to be paid equivalent to Band 2 or higher in the coastal region (62%) than in the western region (46%).

Water and wastewater networks operators are more likely to be paid at Band 2 and higher in the western region (48% and 43%) compared to the coastal region (31% and 33%).



#### Differences in pay in small LWUs

## Figure 23 — Percentage of frontline roles remunerated equivalent to Local Government (State) Award 2023 bands in small sized LWUs, Workforce Composition Survey 2024

Small LWUs are more likely to pay supervisor/team leader wastewater roles equivalent to Band 3 or higher (50%) compared to all western region LWUs (37%). However, they are less likely to pay supervisor/team leader water roles above the equivalent of Band 3 (17%) compared to all western region LWUs (29%).

Small LWUs reported that no operators were reported as paid equivalent to band 3 or higher.

No supervisor/team leaders at small LWUs were paid equivalent to Band 1, compared to all other western region LWUs, where **13**% of water supervisor/team leaders and **15**% of wastewater supervisor/team leaders were paid equivalent to Band 1.

#### 3.6.2 Roles with highest remuneration

Question: How many staff are remunerated at higher award rates? That is, above Band 3, Level 4? Response: 47 LWUs.

We asked LWUs if they paid any frontline operational staff at rates above the equivalent of, Band 3, Level 4.

Survey responses identified that 5% of employees are paid at rates above the equivalent of Band 3, Level 4. Major LWUs were the only ones to pay their employees above this rate. No employees of big, medium, or small LWUs were paid at this higher rate. Supervisor/team leader water operator positions were about twice as likely to be paid above the equivalent of Band 3 (15%) than supervisor/team leader wastewater operator positions (8%).

#### Difference in roles with highest remuneration by region

Figure 24 shows the percentage of staff in coastal LWUs remunerated higher than the equivalent of Band 3.

## Figure 24 – Percentage of frontline employees remunerated above the equivalent of Local Government (State) Award 2023 Band 3 in the coastal region, Workforce Composition Survey 2024



Figure 25 shows the percentage of staff in western LWUs remunerated higher than the equivalent of Band 3.

## Figure 25 — Percentage of frontline employees remunerated above the equivalent of Local Government (State) Award 2023 Band 3 in the western region, Workforce Composition Survey 2024



Only the supervisor/team leader water operator or wastewater operator roles are paid above the equivalent of Band 3, Level 4 in the western region. No other operational roles were paid at this higher rate. The percentage of water and wastewater supervisors in the western region paid at this higher rate (10% and 3%) is significantly lower than in the coastal region (19% and 12%).

#### 3.6.3 Overtime, on-call, and penalty rates

Question: Estimated % of gross annual pay from overtime, on-call, or penalty rates? Response: 38 LWUs.

The survey asked respondents to estimate the percentage of frontline operational staff's take-home pay provided from overtime, on-call, or penalty rates. In most cases this would be additional to base rates of pay described in section <u>3.6.1</u>.

The average percentage of pay ranged from 12% – 17% across frontline roles. Figure 26 shows the breakdown.

## Figure 26 — Mean estimated percentage of annual pay received from overtime, on call or penalty rates for frontline roles, Workforce Composition Survey 2024



Supervisor/team leader water operations had the lowest percentage of pay from overtime, on-call, or penalty rates. However, this role receives the highest overall base salary of all operational roles.

#### 3.6.4 Allowances and other incentives

Question: Does your organisation offer over-award payments/incentives for these roles? For example, higher superannuation, higher pay rates, or standard on-going allowance for adverse working conditions?

Response: 42 LWUs.

The survey asked respondents if they provide allowances or incentives to employees in addition to their award rates of pay.

All LWUs responding to this question reported they do offer incentives of some sort.

LWUs generally provided over-award payments and incentives in recognition of market conditions or adverse working conditions. Several LWUs highlighted their enterprise agreements that provided the above-award remuneration. Some LWUs also offered incentives such as a 35 hour working week, nine day fortnight and/or an additional week of annual leave per year over award.

About one-quarter of respondents to this question (11 LWUs) highlighted allowances for adverse working conditions, with many specifically identifying first aid and sewer choke allowances. Other allowances and incentives discussed in responses included meal allowances and vehicle leaseback arrangements.

## 3.7 Addressing future skills needs

The survey asked questions about LWUs' understanding of the changes to their existing skills needs, and how they plan to address these into the future.

#### 3.7.1 Identifying future skills needs



We asked LWUs to respond and comment on any action taken to identify changes to the roles and skills required by their workforce into the future. We grouped survey comments into common themes.

Many respondents reported they do undertake analysis or forecasting on an ongoing basis and some respondents indicated a lack of capability or capacity to complete future planning.



LWUs were asked to select from a set of internal or external factors they expect will impact future skills needs.

Figure 27 shows the breakdown of responses.

## Figure 27 — Percentage agreement with internal and external factors impacting future skilling needs, Workforce Composition Survey 2024



The factors expected to have the biggest impact are increasing levels of government compliance (95%), an ageing workforce (93%), and technological change (93%). Climate change (51%) and growth in local government areas (66%) were not generally seen as affecting future skilling needs as much as other factors.

#### 3.7.2 Emerging roles to respond to future skills needs

Question: What new roles do you see emerging over the next 3 years as a result of changes in service delivery, technological advancements, or other changes in your organisation?

Response: 31 LWUs.

We asked LWUs to comment on new roles they expect to see in the future.

Respondents generally identified the importance of higher skilled roles and roles with a technology focus. There was also a desire for more traineeships.

Emerging roles respondents identified were:

#### **Management roles**

- project managers and contract managers
- change management and wellbeing roles
- team leaders
- roles focusing on infrastructure delivery, defect management, and data asset management.

#### **Operator roles**

- operator maintainers
- roles that combine multiple functions, such as water and wastewater operator functions, or manual handling, mechanical, electric and scientific functions
- membrane plant operators

- electrical, control systems and Supervisory Control and Data Acquisition (SCADA) maintenance
- smart meter installers.

#### **Technical roles**

- liquid trade waste officer role
- technical officers
- data-focused roles, such as those with expertise in artificial intelligence (AI), tech innovation, data analytics, and cybersecurity
- compliance and regulatory roles such as compliance reporting officers, chemists, or scientists
- water and/or wastewater quality specialists
- instrumentation technicians/engineers
- industrial electrical roles, treatment specialities, and telemetry specialities.

#### **Trades roles**

• plumbers, for example.

#### Administrative roles

• staff supporting smart meter rollout.



#### 3.7.3 Actions to address current and future skills needs

Question: What is your organisation doing to meet current and future skills needs?

Response: 41 LWUs.

We asked LWUs to select from a set of actions that could help address current and future skills needs. Figure 28 shows the breakdown of responses.

#### Figure 28 — Percentage agreement with actions to address current and future skill needs, Workforce Composition Survey 2024



Most LWUs identified training and education as a response to current and future skilling needs. Targeted training and development programs (95%) were the most common response.

#### Question: What would help your organisation meet future skill needs?

We asked LWUs to comment on actions and changes that would best help support them meet future skills needs. We grouped survey comments into common themes. Figure 29 shows responses grouped by themes.





The most common responses were for better, more, and shorter training courses (31%) and funding support for training courses (28%).

## 3.8 LWU expectations and feedback on training

This section asked LWUs to give information on their experience with past training delivery, their expectations of future training enrolments, preferences for training delivery, and potential for incentives for staff to become trainers.

#### 3.8.1 Future expected Vocational Education and Training (VET) enrolments



We asked LWUs to select which VET courses they expect to enrol staff in over the coming 5 years. Figure 30 shows the breakdown of results.



#### Figure 30 - Number of expected enrolments in VET training over next 5 years, Workforce Composition Survey 2024

Certificate III in Water Industry Operations is expected to attract the highest number of enrolments (213) over the next five years.

The low number of estimated enrolments in Certificate II Water Industry Operations (29) likely reflects LWUs' lack of uptake of school-based traineeship programs.

#### 3.8.2 Future expected department training enrolments



Question: How many staff do you expect to enrol in department-provided technical courses in the next 5 years?

Response: 42 LWUs.

We asked LWUs to select which department training courses they expect to enrol staff in over the coming 5 years. Figure 31 shows the breakdown of responses.



Figure 31 – Number of expected enrolments in department training over next 5 years, Workforce Composition Survey 2024

We expect participation in department training courses to continue to be popular, particularly in the western region.

#### 3.8.3 Future enrolments in VET and department training courses by region

Figure 32 shows the breakdown of expected training enrolments for VET and department training courses by region.

## Figure 32 — Number of expected enrolments in VET and department training over next 5 years by survey region, Workforce Composition Survey 2024



LWUs in the western region anticipate more enrolments in training than those in the coastal region, across both accredited VET and department training. We expect the Certificate III Water Industry Operations training to be popular in the next five years in **coastal (123)** and **western (125)** regions.

#### 3.8.4 Feedback on training undertaken

Question: Did your most recent water training delivery meet your expectations?

Response: 38 LWUs.

We asked LWUs to comment on their experiences with recent training delivery. We grouped responses into themes.

Key themes from responses include:

- poor quality of some training programs offered by registered training organisations
- better quality training offered by the department
- importance of online and face-to-face training
- travel distance to training locations
- importance of offering refresher courses to build on previous learning.

#### 3.8.5 Preferences for future training delivery

Question:What are the preferred methods of training delivery for your staff? For example,<br/>face-to-face, virtual delivery, self-paced, blended (combination of each).Response:47 LWUs.

We asked LWUs to comment on preferred methods of training delivery. We grouped responses into key themes.

Many respondents highlighted the importance of face-to-face training for field staff as well as mixed-delivery options. Only one respondent out of 47 nominated online training as their preference for training delivery.

Question: Are there specific topics of education from which your staff or councillors would benefit? For example, emergency and incident management, or climate change considerations.

Response: 28 LWUs.

We asked LWUs to comment on areas of interest for training. We grouped responses into key themes.

Respondents reported that the current councillor water industry induction package was working well. There were requests for further information about:

- the <u>NSW Regulatory and Assurance Framework for</u> <u>Local Water Utilities</u>,
- Public Health Act 2010
- emergency and incident management
- water quality awareness

- climate change considerations and resilience
- working in confined spaces
- refresher training modules in water and wastewater treatment.

#### 3.8.6 Incentives to increase numbers of trainers and assessors



Question: Are there any incentives the NSW Government could offer to increase the number of trainer/assessors in your organisation?

Response: 39 LWUs.

We asked LWUs to comment on whether NSW Government incentives would help increase numbers of trainers and assessors.

Respondents indicated that incentives would be helpful to increase the number of trainer/assessors in their organisations. The incentives suggested included:

- subsidised or fee-free training
- funding for training courses, such as Training and Education Package 2022 (TAE22)
- providing additional resources should the training mean a staff member needs to leave/reduce their commitments under their current role
- holding courses in regional locations, not only online, and in better facilities in strategic locations
- developing a skills/accreditation process for senior operators
- developing a recognition and accreditation process for continuous professional development
- more local providers and more classes on offer.



### 3.9 Training enrolments and completions in LWU sector

The department collated data from existing data sets on VET training and department training courses. We did not collect this data through the survey. It covers all water utilities in NSW, including major utilities in metropolitan areas. We categorise these major utilities in this section as "metropolitan" to separate them from LWUs in the coastal and western regions.

#### 3.9.1 VET training – Certificate II and Certificate III qualifications

Certificate II and Certificate III in Water Industry Operations are nationally recognised qualifications designed to equip participants with skills and knowledge for various roles. These certificates cover essential aspects of water operations, including water treatment, distribution, and maintenance. Certificate III is the typical qualification for operational roles, while Certificate II targets school students and entry-level positions.

Popularity and uptake of these qualifications over time is difficult to determine. Water operations training was offered fee-free for students in NSW for a period between 2018 and 2022, which likely affected participation. The Covid-19 pandemic lockdowns occurred during 2020 and 2021 and impacted the delivery of training, and likely also influenced participation levels.

## 3.9.2 Certificate II and Certificate III enrolments

There were more enrolments across western and coastal regions in the Certificate III course than Certificate II. Enrolments in the Certificate III course were similar in the coastal and western regions. The greatest difference in enrolments between the two regions was in 2020 where the western region had significantly higher enrolments.

School-based traineeships in water operations are delivered as Certificate II training. There is low uptake of these in the LWU sector.

Figure 33 shows Certificate II enrolments by region. Figure 34 shows Certificate III enrolments by region.



#### Figure 33 - Number of water industry Certificate II enrolments by region, NCVER 2024





#### 3.9.3 Certificate II and Certificate III completions

Data shows that over a six-year period, Certificate II completions are less than half the enrolment numbers. Covid-19 impacted this time period, which may have delayed some completions.

Figure 35 shows the breakdown of Certificate II completions by region.

#### Figure 35 – Number of water industry Certificate II completions by region, NCVER 2024



Figure 36 shows the breakdown of Certificate III completions by region.



#### Figure 36 - Number of water industry Certificate III completions by region, NCVER 2024

Data shows that over a six-year period, fewer than half the students are completing their training. Covid-19 highly impacted this time period, which may have delayed some completions.

#### 3.9.4 Department training course participation

The department offers training courses in water industry operations. Training is similar to Certificate III training and primarily focuses on drinking water treatment and wastewater treatment. We deliver training across two courses for each topic, known as Part 1 (basic training) and Part 2 (advanced training).

Department training attracts similar numbers of students to Certificate III completions. Participation data shows most students attending department training come from the western region. Enrolment in Part 1 courses is higher than Part 2.

Figure 37 and Figure 38 show the breakdown of participation in department training courses over the past six years.









This data shows strong demand for part 1 training, particularly in the western region. Wastewater training participation is higher than water training.

### 3.10 Looking ahead

LWU operational staff are critical to the delivery of essential services of water and wastewater to communities. They are responsible for safeguarding public health, protecting the environment, and managing work health and safety risks, with consequences ranging from minor to fatal. Investment in the operational workforce of LWUs is an investment in the sustainable future of the industry.

Developing and maintaining an effective workforce is a common challenge across the LWU sector. This is highlighted in the results of the survey. Skills and training gaps cannot be addressed without also investing in workforce development.

The importance of succession planning and knowledge transfer within operational roles is highlighted in this report. Diverse role models and effective mentors play a critical role in the culture of an organisation. There is an opportunity to increase workforce participation of females, Aboriginal and Torres Strait Islander people and other underrepresented groups.

LWUs cannot expect to attract and retain staff purely through higher pay and must consider the whole workplace culture. Employees should feel valued, that the work they do has purpose and meaning, as well as being appropriately remunerated. Incentives to ensure employees feel supported may include options for flexible working or opportunities for vehicle leaseback arrangements. Providing access to appropriate training and learning and development opportunities, including clear pathways for career progression, will help build resilience for individual employees, teams and the entire LWU sector.

LWUs have clearly stated a desire for quality training, covering a broad range of industry topics, and delivered in a way that meets their needs. Training delivery will need to change to support LWUs to develop and maintain a capable workforce into the future.

These challenges are complex and require a sectorwide response. The department is partnering with the sector to lead this response, including using this data to identify key areas for improvement, adequate resourcing and inform a workforce development strategy for the LWU sector. This will require local, regional and statewide collaboration.

LWUs can use the Workforce Composition Survey report to see how their organisation compares to others in NSW in areas like staffing, training, and pay. It can also be used to support conversations on workforce planning.

The survey will be repeated in 2026 to update the data and monitor trends in LWUs. These trends will help the department and LWUs set priorities for workforce development and decision-making. Future surveys will take place every two years.





## References



## 4 References

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- NSW Department of Climate Change, Energy, the Environment and Water (January 2025). <u>Performance</u> <u>Monitoring Database</u>.
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- NSW Department of Climate Change, Energy, the Environment and Water. (2019-August 2024). NWP30315 Certificate III in Water Industry Treatment – Wastewater and NWP30315 Certificate III in Water Industry Treatment – Drinking Water data
- NSW Department of Planning and Environment. (September 2022). NSW water operations workforce and training analysis. <u>NSW water operations workforce and training analysis.</u>



## Appendix



## 5 Appendix

## 5.1 Workforce Composition Survey tool

For a detailed view of the survey questions, please visit our website <u>Skills, training and workforce development</u> <u>NSW Government Water</u> to see the survey spreadhseet that includes:

- Instructions
- Workplace demographics
- Vacancies and labour hire
- Remuneration and conditions
- Workplace development.

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