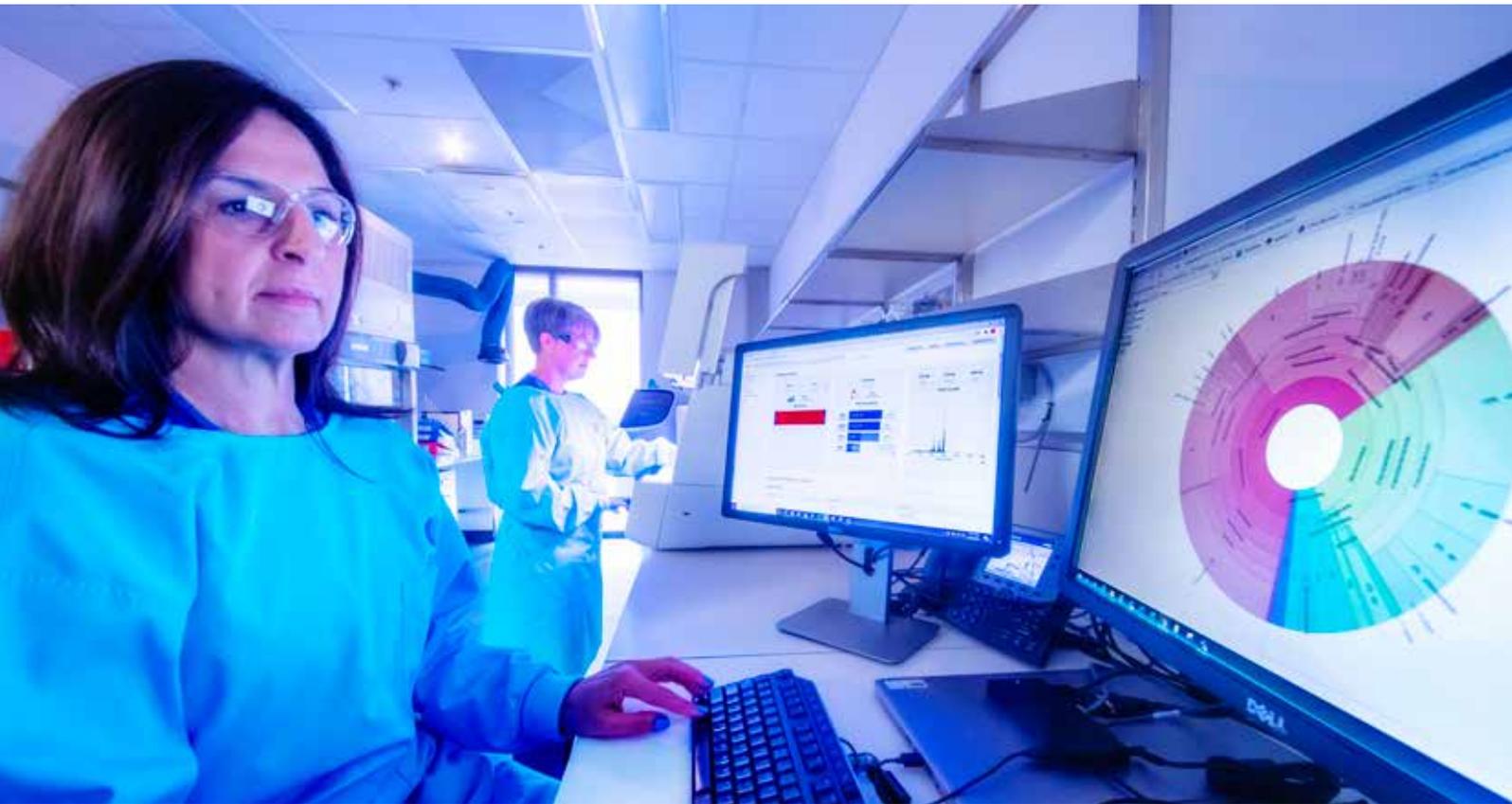




# AWQC CAPABILITIES OVERVIEW



- High quality analytical services
- Leading edge research
- Solving water quality issues

[awqc.com.au](http://awqc.com.au)





## **Passionate about water quality**

The Australian Water Quality Centre (AWQC) plays a critical role in the supply of safe, reliable water and wastewater services to the people and communities who rely on them.

Established nearly 90 years ago by SA Water, we are dedicated to safeguarding public health and the environment by helping water utilities and manufacturers prevent the entry and transmission of contaminants into drinking water systems or their discharge into the environment in wastewater.

Our specific water industry focus drives our comprehensive range of services which are tailored to all aspects of the water cycle from catchment to tap, to wastewater, reuse and alternative sources.

Today, we provide our customers with world-class sampling, testing and analysis, and research and consultative services associated with the chemistry, microbiology, biology and ecology of waters, wastewater, sediment and sludge.

Offering so much more than testing services, we help our customers to solve water quality issues and rapidly respond to major water quality incidents. We also provide expert advice on disinfection and water treatment systems and water treatment plant design and process optimisation.

## **Quality assured services**

At AWQC quality is our focus. We operate with a continuous improvement mindset and principles of excellence in safety, service, technology and sustainability in all that we do.

Our Business Quality Management System is certified to ISO9001:2008. Our laboratories are NATA accredited for chemical and biological testing. Our testing and instrument calibration services are certified to ISO/IEC 17025:2005.

## Analytical services

Our customers can access a great range NATA-accredited field sampling and water quality tests associated with the chemistry, microbiology, biology and ecology for a range of matrices including water, wastewater, sediment and sludge.

Serving a large base of customers both nationally and internationally, our analytical services are comprehensive and backed by world-leading expertise to help our clients monitor and solve challenging water quality issues.

Our testing services have:

- high sensitivity with lower limits of detection
- fast turnaround times
- rapid response services for health-related incidents

Routine and emergency laboratory testing and analysis services are delivered by our two state-of-the-art laboratories in Melbourne and Adelaide.

### Microbiology

As leaders in the field of microbiological testing and analysis, we have an unrivalled track record of developing and validating more effective testing methods for the detection of waterborne pathogens in the interests of protecting public health.

With more than 30 years' experience in bacteriology and protozoology, we are also the Australian reference laboratory for the identification of *Amoebae*.

We provide a comprehensive range of NATA accredited microbiological testing services for the analysis of bacteriological quality of water, wastewater and soils. These include testing water and wastewater for bacteria, such as the index pathogen *Escherichia coli* (*E. coli*), and pathogenic protozoa, including *Cryptosporidium*, *Giardia* and *Amoebae*.

In addition to advanced microscopy and culture-based testing methods, we offer a full suite of DNA analyses for monitoring the microbiological quality of water. These include the use of advanced next generation sequencing (NGS) testing methods combined with the most extensive DNA database of waterborne pathogens in Australia. Our molecular testing methods provide Australian drinking water suppliers with unrivalled pathogen testing results for a broad range of applications.

### Inorganic chemistry

Our inorganic chemistry analytical services include tests for cations, anions, nutrients, heavy metals, radioactivity and a range of wastewater related tests.

### Organic chemistry

We test for wide range of organic constituents that include algal toxins, disinfection by-products, faecal sterols, general and volatile organic compounds, pesticides, and petroleum hydrocarbons. A range of specialised mass spectral analyses are available for the identification and quantification of organic compounds in water.

### Biological services

We provide a comprehensive range of services in aquatic biology that are based principally upon the accurate identification of aquatic biota to a defined taxonomic level and the accurate and precise estimates of their diversity and abundance from representative samples.

### Field sampling services

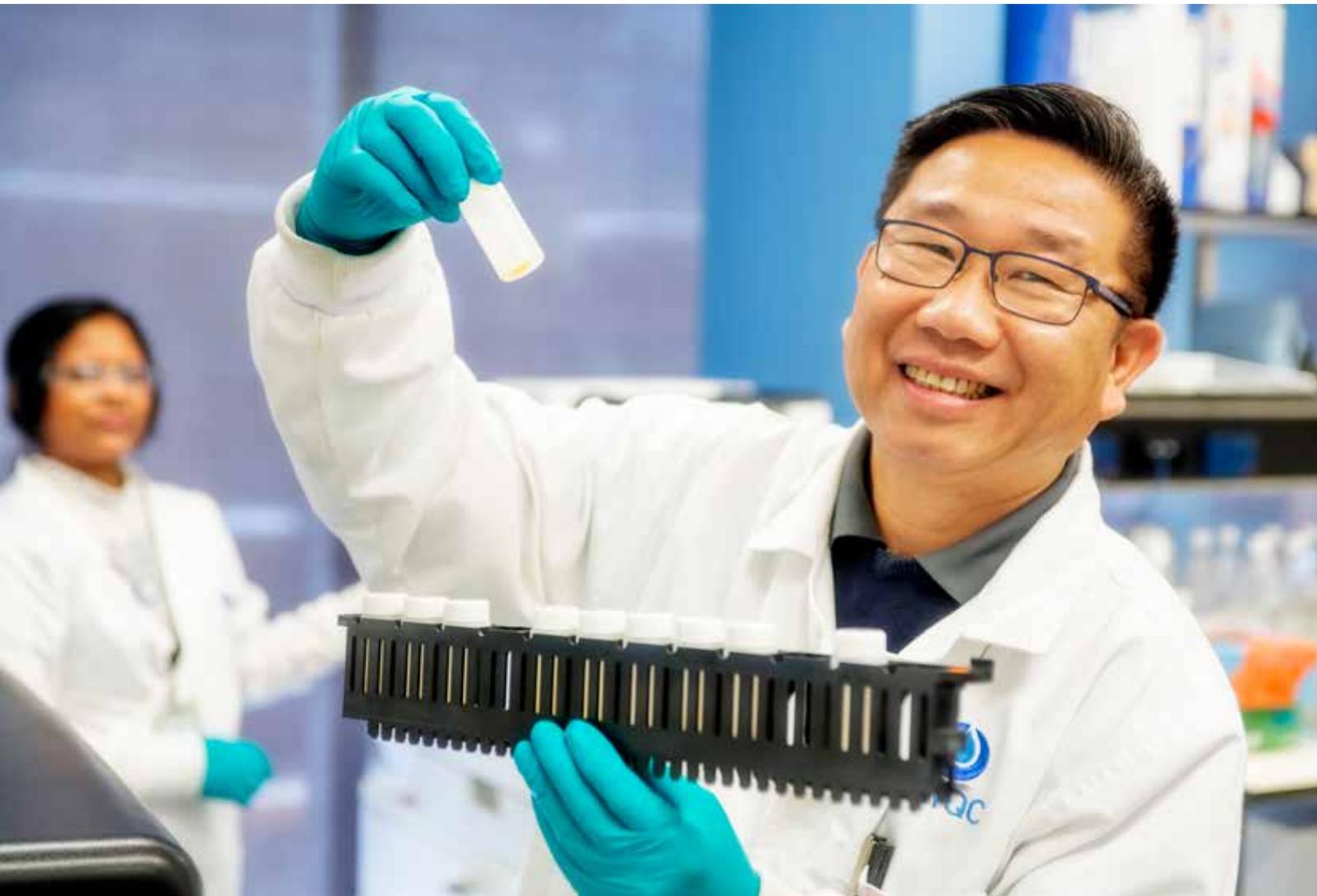
Our NATA-accredited field sampling services include the provision of experienced staff with fully equipped vehicles, specialist sampling teams for specific surveys and a comprehensive courier system including links with courier providers and sampling personnel in remote locations.

### **AS/NZS 4020 product testing**

**Ensuring products are safe for contact with drinking water.**

We play a key role in protecting public health by providing leading manufacturers in Australia and around the world with NATA-accredited laboratory testing services to AS/NZS 4020:2018 standard.

Certificates of testing issued by the laboratory are recognised by Standards Australia and major water authorities. NATA accreditation has been obtained for all the tests described in the standard.



## Research and consultancy services

Offering so much more than testing services, we help our customers solve water quality issues and rapidly respond to major water quality incidents and challenges.

Our world-renowned water and wastewater research and consultancy teams have strong track record of helping our customers prevent waterborne disease outbreaks and solve water quality issues in areas including algal management, microbiological contamination, environmental impact assessment, source water quality management, disinfection and water treatment systems, and water treatment plant process optimisation.

### Algal management

We are well-placed to provide our customers with expert interpretation of algal analytical results, advice on a broad range of algal issues, and help resolving incidents involving noxious blooms of cyanobacteria in both potable and recreational waters.

Our services include:

- the assessment of algae population growth dynamics and bloom potential from chemical and physical datasets
- hydrodynamic modelling of water movement and water quality
- evaluation of growth control strategies in source water
- the effectiveness of cell, toxin and metabolite removal by water filtration processes.

### Water treatment

We provide a great range of water treatment plant investigatory and advisory services associated with water treatment processes to improve drinking water quality. Our team of experts are available for both onsite efficiency evaluations of existing treatment processes as well as desktop studies of proposed plants.

Our services include:

- determining coagulant and coagulant aids required for effective treatment
- characterisation of water quality to assess impact on treatment
- optimisation of treatment processes for pathogen control, particularly *Cryptosporidium*
- evaluation of treatment options such as oxidation and activated carbon for removal of soluble micro pollutants
- determining disinfectant demand for a range of disinfectants, including chlorine, chloramine, chlorine dioxide, ozone and ultraviolet irradiation
- evaluation of the potential for bacterial regrowth in a distribution system by measuring biodegradable organic carbon
- evaluation of water treatment processes using bench scale or pilot plant facilities.

## Drinking Water Quality Management Plan audits

Get a fresh perspective on your Drinking Water Quality Management Plan. Engage an experienced auditor with specialist expertise and an intimate understanding of the workings of water utilities to verify your compliance with the requirements of your DWQMP.

Our Exemplar Global Qualified Drinking Water Quality Management System Level 1 Auditor will:

- verify accuracy of monitoring and performance data given to the regulator under the plan
- verify that your compliance with the requirements of your DWQMP during the audit or inspection period
- assess the relevance of the DWQMP to the drinking water service
- carry out any follow-up audits or inspections, if necessary, to check to see if action has been taken to remedy any identified deficiencies of the risk management plan
- undertake any other functions prescribed by the regulations.

Benefits of undertaking an audit through the AWQC include:

- identification of key improvements and gaps
- provision of independent expert insight and advice from an auditor with extensive water utility experience
- strengthening of your internal practices and quality control measures
- provide evidence to varied stakeholders, including customers and the regulator, compliance with regulatory requirements
- assures stakeholders on the quality of water supplied to consumers through appropriate management of risks
- demonstrates a culture of continuous improvement.



## Locations

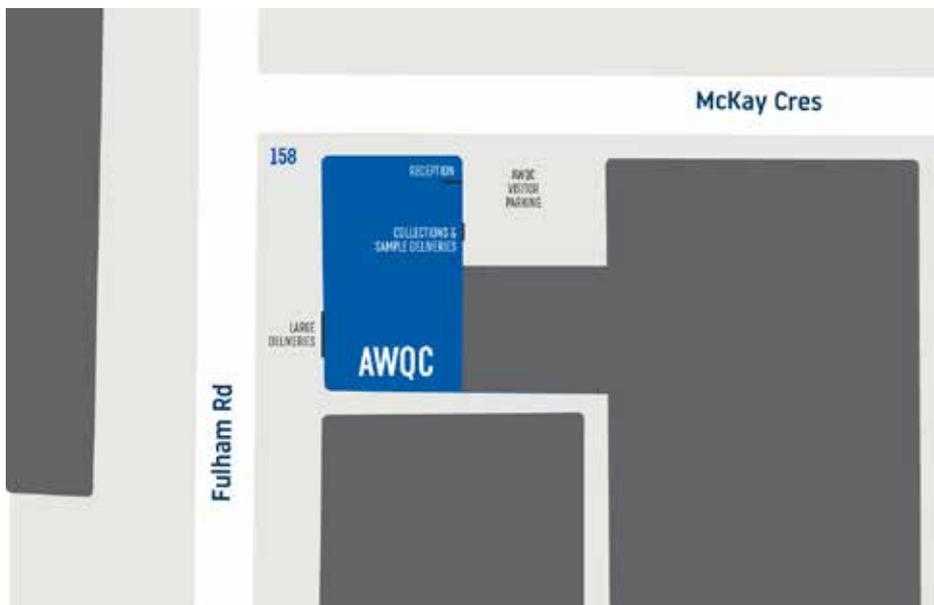
### Adelaide, SA



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ADELAIDE SA 5000

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### Melbourne, VIC



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