



WHY INDUSTRY STANDARDS MATTER

A paper for the Australian Aquatic Industry
to encourage the use of international standards
to raise public pool water quality to acceptable levels

Background

JH Cockerell, is Australia's leading specialist aquatic engineering firm. Established in 1979, we are the only firm to guarantee a commitment to quality by using the proven international design standard for public pool water treatment (DIN 19643).



- Australian owned
- 2nd gen family business
- 45 years experience
- Trusted aquatic auditor
- International conference speaker & panellist.

Why standards matter

Solutions to high risk problems require a degree of regulatory oversight in many areas, e.g. when you board an airplane, you expect that it is properly designed and certified to internationally accepted standards.

Despite the complexities and risks involved in the water treatment plants of large public pools, it beggars belief why Australia, without a standard, does not insist on the application of an available and widely acknowledged and used overseas standard.

Use of the German Standard DIN 19643 for water treatment in public aquatic facilities, is unique in ensuring:

- (i) that with a probability bordering on certainty, the health of swimmers will not be compromised by public pool water;
- (ii) a reduced use of hazardous and expensive pool chemicals;
- (iii) reduced maintenance costs and associated pool closures;
- (iv) avoids the need for secondary pool water treatment equipment.

Regulatory requirements

The Queensland Public Health Act 2005 requires “a public aquatic facility must not pose a public health risk”. Every public pool owner acknowledges their duty of care for the health and safety of bathers. This duty is clearly demonstrated with every effort being made to prevent drownings.

However, when it comes to protecting bathers from pool water health risks, Australia’s aquatic landscape is some 30 years behind European class leaders who use the German Standard DIN19643 for the design of pool water treatment plants.

In 2019, Queensland and Victoria State Health Departments published new, improved operator guidelines for public pool water quality. The most significant improvement was the recommended use of DIN19643. Other important improvements included recommended use of a turbidity meter, to confirm efficient operation of pool water filters and the use of a pool dye test to confirm all pool water regularly passes through the pool water treatment plant.

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Water quality

- Drinking water
- Pools, spas and other recreational water bodies**
- Water contaminants and public health risks
- Water testing
- Recycled water

Pools, spas and other recreational water bodies

Managing the quality of 'recreational' water bodies falls into two areas:

- Public aquatic facilities e.g. swimming pools and spas
- Waterways and beaches

Public aquatic facilities

Guidelines

There are no Queensland Government laws for water quality at public aquatic facilities (pools, spas, water parks etc) although, under the *Public Health Act 2005*, a public aquatic facility must not pose a public health risk. Under the *Public Health Act 2005*, your local council is responsible for the regulation of public aquatic facilities and so some councils have applied local laws to public aquatic facilities within their council area.

To help operators of public aquatic facilities, Queensland Health has published [Water Quality Guidelines for Public Aquatic Facilities \(PDF 2363 kB\)](#). These guidelines provide water quality criteria for public aquatic facilities and practical operational advice for facility operators. They also contain recommended response procedures for dealing with incidents such as faecal releases into a pool or remediating water that has been contaminated with *Cryptosporidium*. To assist operators and managers of public aquatic facilities who need to develop a site-specific risk management plan, Queensland Health has also developed a [Site-Specific Risk Management Plan template \(DOCX 4658 kB\)](#).

While these guidelines were written for public aquatic facilities, many of the ideas within the guidelines can be applied to most types of pools, other than 'natural' or 'chemical-free' pools. As germs can contaminate any kind of pool, whether public or privately-operated, good hygiene and proactive pool management should be used for all pools.

Queensland Health

Water quality guidelines for public aquatic facilities

December 2019

Queensland Government

Scan of the aquatic environment

Australians love their swimming! As a nation we have more pools per capita, than any other country in the world. At international competitive swimming events, we consistently punch above our weight against nations with much larger populations.

Our billion dollar public aquatic industry employs some 67,000 workers and is the key to keeping the community active and healthy.

Given all the good news in the industry, Australia must now address the quality of public pool water, to avoid falling even further behind.

- In excess of a hundred audits confirm public pool water poses unacceptable health risks to bathers, especially to infants and pre-schoolers.
- JH Cockerell is not yet aware of a public pool in Queensland or Victoria that regularly undertakes pool dye tests and uses a turbidity meter weekly to confirm adequate filter performance, as recommended by the new 2019 State Health Department Guidelines
- Without the use of a design standard for public pool water treatment plants, there is ongoing waste of public funds.
- There are currently over \$500M of aquatic facilities being designed and constructed, without these important standards.



The solutions are simple

When a public pool water treatment plant is designed to an available standard (DIN 19643), the pool owner benefits from guaranteed outcomes in pool water quality, along with lower operating and maintenance costs, while also extending its economic life. Obvious solutions include the following:

- Circulation - Designing pool water circulation to DIN requirements ensures that all the water from the pool frequently passes through the water treatment plant.
- Filtration - Using DIN certified filters ensures consistent and efficient filtration which is essential for effective disinfection.
- Disinfection - Effective filtration allows operators to reduce chlorine use. In combination, they are now recognised as best practise for minimising combined chlorine levels.

Public pool owners who ignore quality standards and award tenders based on design and construction costs alone, are left with unsatisfactory outcomes, non-compliant pools and much greater costs of ownership over the lifetime of the pool.

With JH Cockerell, you benefit from our vast experience and uncompromising commitment to quality. Working with us protects your aquatic investment long term and gives you confidence you are meeting your duty of care.

Get in touch with us to learn more about how we can assist you?



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