

CERTIFICATION OF POTABLE WATER OPERATORS – THE WIOA SCHEME



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BACKGROUND

For many years, water has been at the forefront of public and media attention, mostly as a result of prolonged drought. The topics most often discussed relate to reservoir levels, restrictions and management of our rivers. Little attention is given to the operational side of the industry and the challenges that need to be met on a daily basis.

Issues such as variable and often poor quality source water, under-designed or over extended water treatment plants, algal blooms, and in more recent times flooded water and wastewater treatment plants, damaged infrastructure and a host of other issues all impact on our ability to supply safe, palatable drinking water every single time the consumer turns on their tap.

Clearly, to be able to perform at the required level under ALL circumstances, operational staff need sound training and extensive knowledge, coupled with well developed practical skills and experience. They also need a well maintained and fully functional water treatment plant, appropriate for the source water being treated.

The question can be posed: “How much training and experience is appropriate to equip operators with the necessary skills to allow them to meet their responsibilities?” There is no Australia wide definition or standard. In addition, the quality of training courses varies widely in their content and suitability to underpin the necessary knowledge.

Errors at treatment plants or within water distribution systems can place thousands of people at risk as has been amply demonstrated in Walkerton (Canada) and Milwaukee and Gideon (USA). These incidents directly contributed to widespread illness and a number of deaths in their communities. Countries such as the USA, Canada and to a lesser extent New Zealand now have formally regulated systems in place in response to these types of events. These regulations ensure the pathogen contamination risk of the source water is matched to a treatment plant able to manage the risk posed by the source water. Additionally, the operator skills set required must then meet the complexity and sophistication of the plant itself. Sadly, Australia has not kept up with overseas best practice.

The Water Industry Operators Association of Australia (WIOA), has worked tirelessly to establish and promote minimum standards of training, skill and experience for operators and to inform the entire industry about best practice systems. Through the publication of a series of “Practical Guide” books and our technical Journal “*WaterWorks*”, WIOA has alerted the industry to, and suggested means to rectify, many examples of substandard operational systems or practices.

1.0 VICTORIAN BEST PRACTICE GUIDELINES

WIOA recognised quite some time ago the need to implement better systems and has been proactively working with the Victorian Department of Health (DH) and VicWater in the development of the “*Victorian Framework for Water Treatment Operator Competencies - Best Practice Guidelines*”.

After making the first approach to DH in 2007, there was a great deal of satisfaction and excitement within WIOA circles when the new Guidelines came into effect from 31 March 2011. For the first time in Australia we now have specified minimum training, competency and experience requirements in place, as well as a requirement to undertake refresher training to keep skills updated. Further, operators will be “Certified” under a new scheme offered by WIOA, as having the appropriate training and experience to match the types of systems they are operating. WIOA is the only organisation “endorsed” by DH to act as a Certifying body.

The certification of potable water operators has now also gained national importance with the announcement of a project to develop a National Certification Framework for Potable Water Treatment Operators under the direction of COAG (Councils of Australian Government) and funded by the National Water Commission (NWC). This project requires the development of a National Framework by the end of 2011 with implementation to follow in the future.

2.0 THE WIOA CERTIFICATION SCHEME

The WIOA scheme is a voluntary, national program of industry recognition covering a number of key water industry operational occupations including:

- urban potable water treatment system operators
- urban potable water reticulation system operators
- urban wastewater operators, and
- urban Class A recycled water system operators

and potentially in the future to include:

- bulk water or irrigation water distribution operators
- catchment management and/or reservoir operators.

Becoming a certified operations practitioner in any of the above occupations will help to raise the skills, knowledge and standards of the whole industry – which in turn will help the water industry control its own future, guarantee quality at all times and become more sustainable. There are personal benefits too – Certified operations practitioners will gain an industry based recognition for their skills which is transportable throughout their future career.

Certification is a designation earned by an individual to verify that he/she is qualified to perform a particular job. Certification indicates that the individual has a specific set of knowledge, skills, experience or abilities in the view of WIOA as the certifying body.

The WIOA potable water scheme has two distinct components:

- the initial Certification process; and
- the re-certification process.

2.1 The Initial Certification Process

In accordance with the Victorian Best Practice Guidelines, each separate water supply system must undertake a public health (microbial) risk classification. A simple point scoring system is used to determine the level of risk for each system from Level 2, 3 or 4 with 4 the highest risk. In general, the greater the microbial risk, the more technologically complex the water treatment facility needs to be to manage the risk and therefore, the

greater the skill set that the operator needs to adequately operate the facility.

Once the level of microbial risk is determined and attributed to the system, the minimum levels of competence that are required for water treatment operators for that system can be assigned. There are specified minimum qualifications for each risk level based on the water industry's National Water training Package (NWP 07). There are also minimum levels of experience required at each level.

It is at this point that WIOA enters the system. It is a requirement of the Victorian Guidelines that at each level, as part of completing the appropriate NWP 07 qualification, operators must have undertaken training in each of the Unit Processes that make up the treatment plant/s being operated. When an operator applies for Certified status, WIOA will verify the "statements of attainment" making up the NWP qualification against the treatment plant/s being operated. In addition, WIOA will seek endorsement from the employer of the level of experience of the applicant. Once these two processes are completed and the applicant commits to following a "code of conduct", certified status will be awarded for an initial three year period.

2.2 The Re-Certification Process

To ensure that Certified operations practitioners keep their skills up-to-date there is a process requiring certification to be renewed every three years. Certified Operational practitioners will need to participate in WIOA's Professional Development scheme in order to show that they have remained active in the industry and that they have taken steps to keep up-to-date with new technology, information and industry and best practice developments. They do this by meeting the prescribed number of 15 certification points in each three year period and by confirming that have remained active in the industry in the area related to their current certification.

There are a wide range of activities which are eligible for certification points, some of which include:

- undertaking additional accredited training
- undertaking vocationally relevant refresher training
- participating in a Vic Dept Health "water industry issues" refresher course
- attendance at vocationally relevant seminars, conferences or workshops
- attending non-accredited in-house training courses
- participating in industry development awards and initiatives
- completion of a significant workplace process, or
- undertaking exceptional activities such as training or mentoring new/young operators.

2.3 Other Occupational Categories

It is true that this paper and the initial WIOA Certification Scheme concentrates predominantly on potable water treatment operators but there is a good reason for this. With our limited resources, we have concentrated our initial efforts in this area and we have successfully convinced regulators of the importance of a system such as this on public health grounds. They have responded appropriately. We are now taking the discussion to regulators for the environment and the other sectors of the water industry to ensure that similar systems can be implemented across the board.

In closing I want to leave you an important message – ***“To date there has not been a major water quality incident in Australia – we want to help keep it that way”***.