

# NATIONAL CERTIFICATION FRAMEWORK 2012

## Final Report



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## Abbreviations and acronyms

ADWG	Australian Drinking Water Guidelines
AQF	Australian Qualifications Framework
AQTF	Australian Quality Training Framework
AWA	Australian Water Association
GSA	Government Skills Australia
ITAB	Industry Training Advisory Body
NWC	National Water Commission
WIOA	Water Industry Operators Association
WSAA	Water Services Association Australia

### States and Territories:

ACT	Australian Capital Territory
NSW	New South Wales
NT	Northern Territory
QLD	Queensland
SA	South Australia
TAS	Tasmania
VIC	Victoria
WA	Western Australia

## Executive summary

In June 2011, the National Water Commission awarded a project to Government Skills Australia (GSA) to create a 'framework for the certification of operators in potable water treatment facilities'. The project was conducted within the tight timeframe of nine months, between July 2011 and March 2012.

GSA is proud to have completed the project on budget and on time. Within this tight timeframe wide consultation was undertaken and the proposed framework was accepted as a model that meets the needs of all stakeholders.

## Strategy

The project was structured in five distinct stages. The table below outlines the stages and key actions conducted in each stage:

Stage	Action
<b>1. Desktop Research</b>	<ul style="list-style-type: none"><li>• Contractor engaged</li><li>• Report provided and submitted to NWC</li><li>• Completed 31 August 2011</li></ul>
<b>2. Phase 1 Consultation</b>	<ul style="list-style-type: none"><li>• Contractor engaged (Project Manager)</li><li>• Steering committee meeting held</li><li>• Workshop reports produced</li><li>• Phase 1 interim report produced</li><li>• Completed November 2011</li></ul>
<b>3. Production of Draft Certification Framework and report</b>	<ul style="list-style-type: none"><li>• Discussion Draft Frameworks produced</li><li>• Meetings of steering committee held</li><li>• Draft Framework for Round Two consultations produced</li><li>• Completed January 2012</li></ul>
<b>4. Phase 2 Consultation</b>	<ul style="list-style-type: none"><li>• Workshop reports produced</li><li>• Phase Two interim report produced and submitted to NWC</li><li>• Completed 17 February 2012</li></ul>
<b>5. Production of Final Certification Framework and this report</b>	<ul style="list-style-type: none"><li>• Completed 31 March 2012</li></ul>

Table 1 - Stages of the Project

In August 2011 the contracted project consultant provided the newly established steering committee with a research report. The research report informed the discussion paper.

Stages Two to Five comprised of national industry consultation workshops and the provision of draft and proposed frameworks/reports.

The consultation phases were managed to gain maximum benefit despite the short timeframe. Industry stakeholders were generally thankful for the personal contact they received through the consultation workshops and felt positive about their ability to have input to the framework on two occasions. All viewpoints, concerns and ideas raised from representatives of all seventy eight organisations across fourteen locations were considered by the steering committee. The result is a framework that is flexible, practical, cost-sensitive and valuable.

## Framework

Consultation with industry was founded upon the research undertaken during Stage 1 of the project. For this reason, workshop participants were presented with the Victorian Framework for Operator Competencies - Best Practice Guidelines. Discussions were generated by analysing the application of that framework in local workplaces and considering any additions or shortfalls that might benefit a national certification framework. It became clear during Round One workshops that the Victorian model would require modification to provide equity to all drinking water suppliers and operators. Throughout Round Two workshops, further refinement and reinforcement of previously stated opinions led to the development of a framework that comprises eight parts and is supported by two appendices:

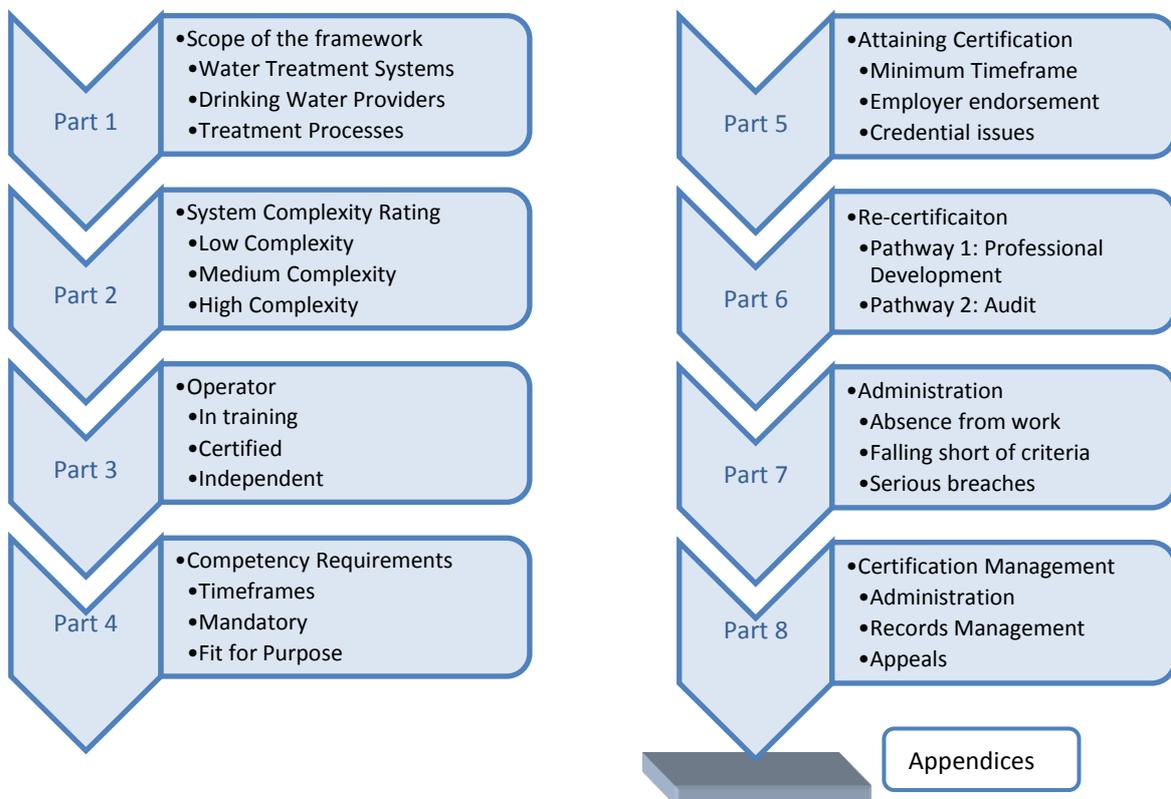
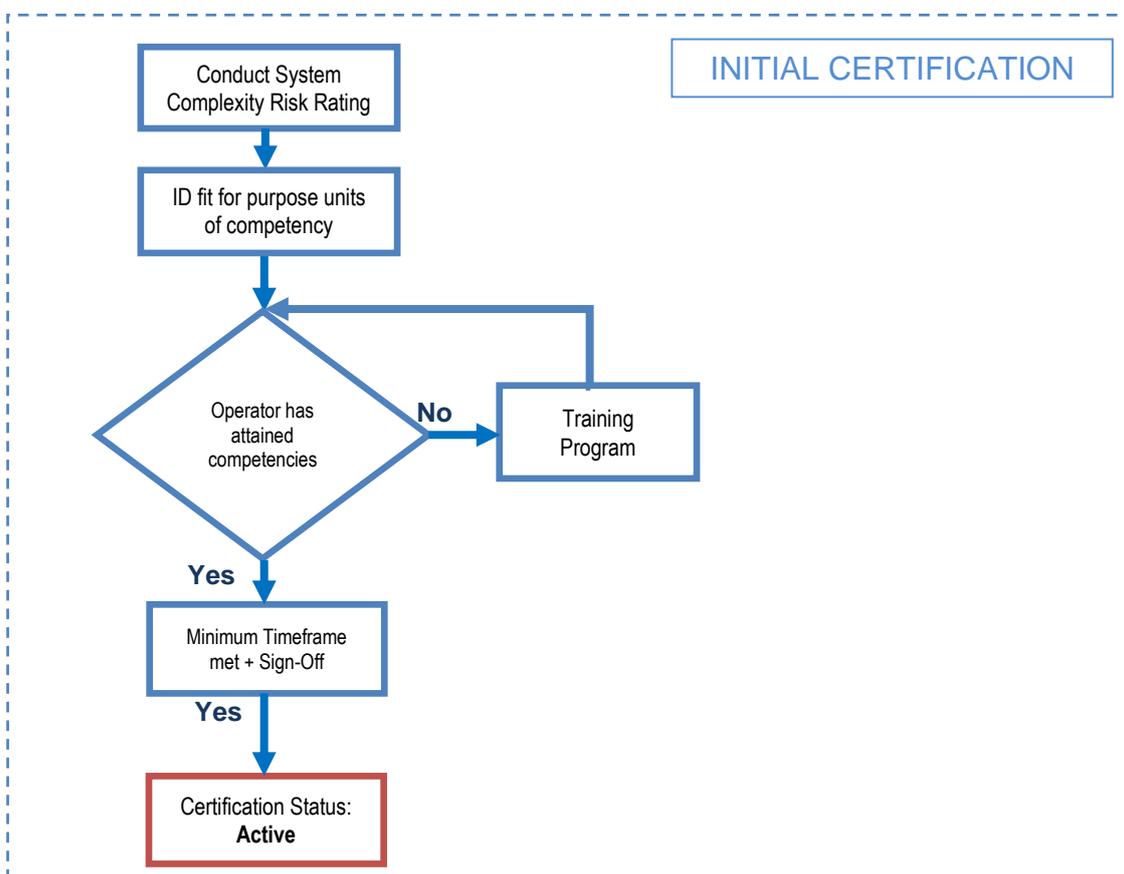


Figure 1 - Structure of the Certification Framework

Fundamentally, the framework is underpinned by a need to ensure that public health is assured. With this in mind, activities and structures have been designed to:

- Apply the framework to a 'drinking water treatment system' as a subset of the 'drinking water supply system' which is defined in the Australian Drinking Water Guidelines (ADWG); this broadened the original scope of the project.
- Rate the complexity of a facility using processes and tools which are determined by the relevant state/territory water quality/health regulator.
- Designing complexity ratings that indicate the type of system and the resultant competency requirements of operators to monitor, sample and report water quality issues, as well as operate, control and optimize treatment processes.
- Capture other water quality treatment processes that are not directly considered to be 'risks' to public health. For example, the addition of fluoride to drinking water requires competent operators.

The framework provides a pathway to initial and continued certification and is represented below:



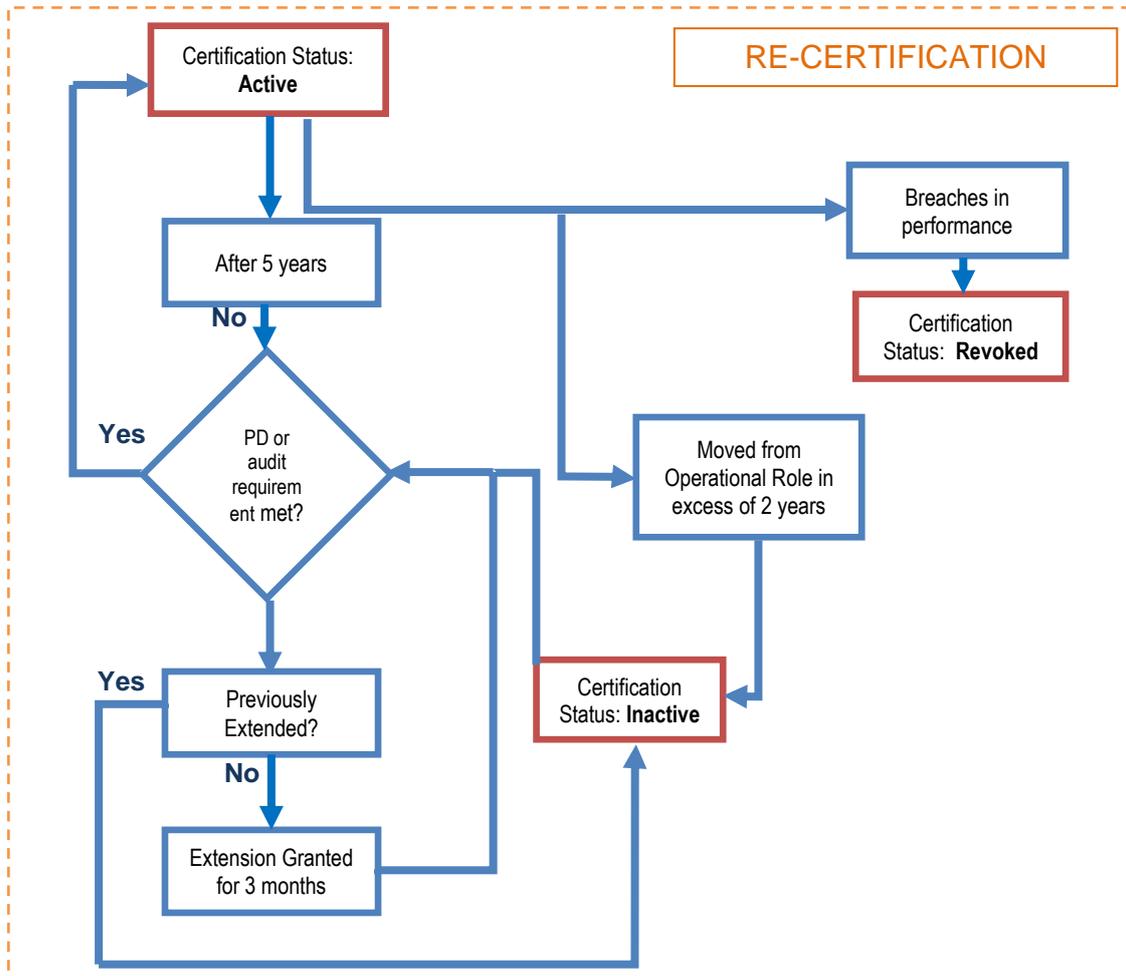
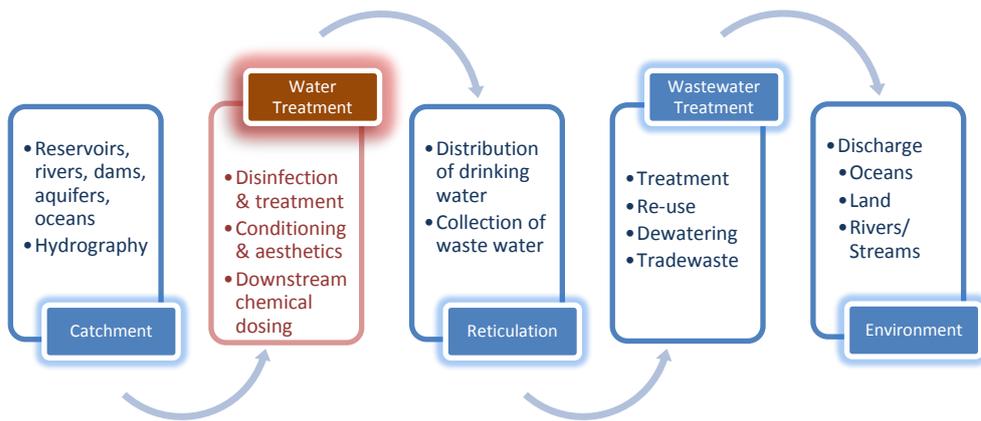


Figure 3 - Process for Certification and Re-Certification

As indicated previously, the scope of this framework was slightly expanded outside of the original brief; this was necessary for two reasons:

- To ensure that secondary disinfection treatment was performed by equally competent and capable operators.
- To ensure that, where drinking water is provided from a source requiring no treatment, that the operators are competent to perform sampling, monitoring and reporting functions in accordance with local regulatory conditions.

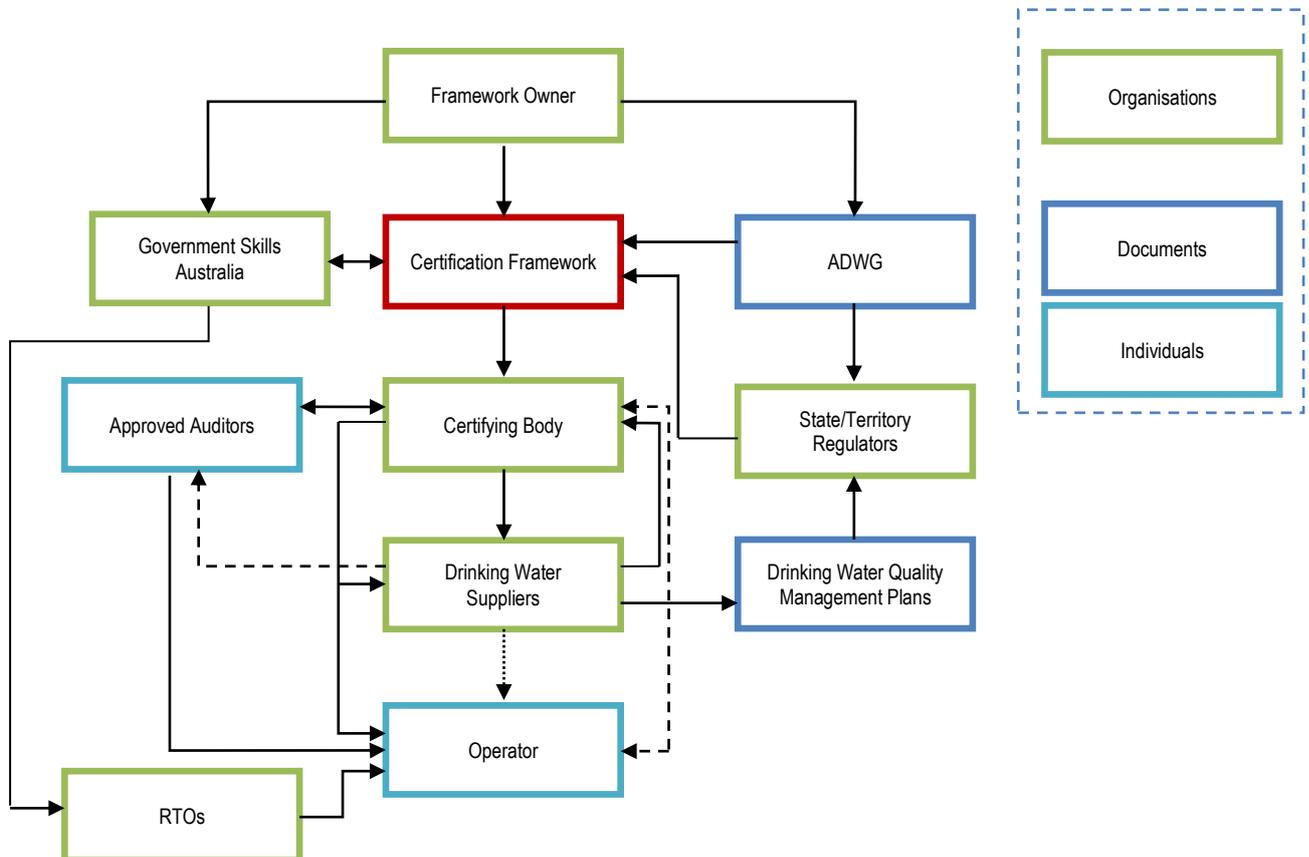
The scope of this framework is therefore depicted below, noting that upon successful implementation of this certification framework, industry representatives have largely been in support of increasing its scope in the future.



## Governance

The stakeholders responsible for the certification scheme and their proposed interactions have been depicted below in a flowchart. Of highest importance, the project steering committee was unanimous in their agreement that:

- Ownership of the certification framework is best placed with an independent body - most notably with the National Health and Medical Research Council.
- The certifying body must be a national, credible organisation that does not place itself in a position that risks real or a perceived conflict of interest. Of highest relevance, the certifying body must not be operating as, or affiliated with a Registered Training Organisation (RTO), a state or territory regulatory body or a drinking water supplier.



## Implementation

This report notes the requirement for a separately funded project that builds upon the implementation suggestions made in this report. A 'Phase Two' project would seek to develop a detailed implementation plan and should include:

- Legal advice on all aspects of the framework and its governance
- A cost benefit analysis (including a Regulatory Impact Statement)
- Identification of the requirements that state and territory water quality/public health regulators in the development of 'system complexity' criteria and
- Finalisation of the stakeholders involved in the certification framework and their interaction as recommended in this report.

This report suggests an implementation plan that involves:

- Tendering for a national certifying body
- Establishment of the certifying body
- Rollout of the framework in three phases:
  - Large metropolitan and major regional utilities, including contracted organisations
  - Local government bodies in smaller regional and remote areas of Australia
  - Allied/peripheral industries such as the mining and hospitality sectors.

There are many implementation issues that have been identified and need resourcing to be addressed - whether through an individual effort by one or more organisations or through a collaborative effort that is managed or facilitated on behalf of the industry.

Issues broadly fall into the following categories:

- Capacity of RTOs - noting the constraints caused by a need to obtain optimal class sizes, restrictions in the ability to engage with regional and remote drinking water suppliers, scheduling pressures and the ability to attract and retain trainers and assessors (sometimes known as lecturers).
- Moving toward (and resistance against) alternative delivery models such as e-learning, project based learning and case-managed workplace learning.
- Perceptions and realities regarding the quality of delivery and assessment by some Registered Training Organisations.
- Poor experiences in the past with Recognition of Prior Learning (RPL) and the need to overcome resistance to this important assessment pathway.
- Low levels of Language Literacy and Numeracy (LLN) are present in many workplaces and the need for Registered Training Organisations to work collaboratively with industry to adjust delivery and assessment and/or support these learners to achieve competency.
- The cost of training can be high, particularly for regional and remote drinking water suppliers
- Backfilling by drinking water suppliers needs to occur to allow operators to attend off-the-job training for initial and, where relevant, professional development activities.

- Drinking water suppliers will be required to ensure that internal processes capture and measure the current competency of their operators to ensure continued certification. This will likely incur an upfront cost as human resources will need to create solutions which may involve redesigning IT systems or part thereof.

While the tasks required for implementation may seem large, the water, local government and vocational education and training industries are well supported and have a wealth of options available to them including:

- Bodies that allow collaboration in local government, including Regional Organisations of Councils, the NSW Office of Water and Water Directorate and QLD Water.
- Bodies that are available across the water sector including Government Skills Australia, VIC Water, State and Territory Industry Training Advisory Bodies, the Australian Water Association, The Water Industry Operators Association of Australia and The Water Services Association of Australia.
- The certifying body itself shall be a central pillar of support during and post implementation
- The availability of numerous funding arrangements, that whilst continually changing, include The National Workforce Development Fund, Workplace English Language and Literacy Funding, Australian Apprenticeship Mentoring Funding, Experience+ and Experience+ More funding.
- Further incentives are available through the Australian Government for employers who choose to offer full traineeships to their operators; this includes commencement and completion payments as well as programs to support workers through Centrelink and a number specific to the indigenous workforce.

## Recommendations

### RECOMMENDATION 1:

Certification is accepted as the preferred model to implement nationally consistent minimum competency and capability criteria to apply to operators who perform water quality tasks within drinking water treatment systems.

### RECOMMENDATION 2:

The certification framework is implemented using a mandatory approach through an amendment of regulatory arrangements in each state and territory.

### RECOMMENDATION 3:

The certification framework applies to:

- Drinking water treatment facilities
- Downstream from the treatment facility e.g. secondary disinfection treatment
- Where no drinking water treatment facility exists, operators who monitor, sample and report drinking water quality are within scope.

**RECOMMENDATION 4:**

Certification must recognise the competency and capability of operators within the scope of the framework. It must not attempt to impact upon the operational processes and practices of the drinking water supplier.

**RECOMMENDATION 5:**

An independent certification body is adopted over a self-certification model to ensure integrity, consistency and national portability.

**RECOMMENDATION 6:**

The certification framework owner is clearly assigned and independent of the certifying body.

**RECOMMENDATION 7:**

State and territory regulators shall determine the method for categorizing the complexity of a Drinking Water Treatment System in accordance with Part 2 of the proposed framework.

**RECOMMENDATION 8:**

The certifying body is appointed by the owner through a tender process that will establish the credibility and suitability of the applicant to:

- Remain impartial and ensure that conflicts of interest are avoided
- Operate at a national level.

**RECOMMENDATION 9:**

At time of implementation, the existing workforce will be required to comply with the requirements of this framework. A grandfather clause is not appropriate.

**RECOMMENDATION 10:**

Seed funding is assigned to the proposed framework to allow a certifying body to establish human and business resources while membership of certified operators is growing.

**RECOMMENDATION 11:**

Phase 2 of the project is scoped and funded to develop a detailed implementation plan.

**RECOMMENDATION 12:**

This report is accepted by the National Water Commission.

# 1. Overview of the Project

## Purpose of Certification

This project commenced with the intent to recommend a national certification framework for the operators of drinking water treatment facilities to the National Water Commission (NWC). The framework is:

- applicable to all facilities regardless of size
- able to be implemented in all states and territories
- founded on consultation with industry stakeholders
- endorsed by the steering committee.

Following initial consultation, the scope of the project was expanded to include drinking water treatment activities that do not occur inside the treatment facility. In this respect, the scope has been developed to adopt the term ‘drinking water treatment system’. For the purposes of this overview, a drinking water treatment system includes secondary/booster disinfection and chemical dosing that occurs downstream of a facility; or where no facility exists, the activities to sample and report drinking water quality are included.

The proposed framework’s stated purpose is to provide:

“a set of nationally consistent criteria that defines and recognises the minimum level of competency and capability required of operators who treat and/or sample drinking water for human consumption to ensure that it is safe”.

## Benefits

‘Certification’ is a positive approach to defining nationally consistent minimum standards for operators to ensure initial and ongoing competency. The proposed certification framework is designed to provide the following benefits:

- Increase the profile of workers and the water industry by ensuring operators who perform drinking water treatment processes are trained to perform the tasks required.
- Improve consistency of training for operators who control or optimise drinking water treatment processes and sample/report drinking water across Australia.
- Reduce the risk of events that may affect the quality and/or safety of drinking water to the Australian community in support of the Australian Drinking Water Guidelines (ADWG).
- Provide greater assurance to water regulators in each state and territory regarding the competency of workers involved in the treatment of drinking water.

The framework achieves this through the engagement of an independent certifying body to administer a nationally consistent set of criteria. In particular, the independence of the organisation and its reputation within the water industry must ensure that the certified status is valued by operators and provides for a level of accountability for individual drinking water suppliers.

Whilst maintaining independence, it has also been important to consider the costs of certification to industry and for this reason every effort has been made to make use of existing systems, processes and stakeholders.

## Project Commencement

The project was awarded to Government Skills Australia (GSA) in June 2011 by the NWC. There was a delay in awarding the contract which created constraints and challenges for the project:

- The project scope - the initial proposal included implementation of the framework within the scope of this project, however the short timeframe necessitated the removal of this aspect. This project now includes recommendations and considerations for implementation only.
- The engagement strategy - the project needed to be completed within a nine month timeframe; this included all preparatory and establishment activities by GSA, conducting the research and national consultation as well as the production of the final framework and this report.

The engagement with industry has been managed to ensure maximum consultation was achieved within a short timeframe. It was difficult to manage as it included the period over the Christmas and New year.

## Steering Committee Establishment

The steering committee for this project was established in August 2011 and comprised the following:

• Paul Smith	National Water Commission
• Ryan Gormly	National Water Commission
• Wayne Morling	Government Skills Australia (GSA)
• Susan Peisley	Government Skills Australia
• Petra Kelly	Australian Water Association (AWA)
• George Wall	Water Industry Operators Association (WIOA)
• Grant Leslie (WSAA)	Water Services Association of Australian
• John Harris	Wannon Water / Employee Association /
• Peter Bernich	SA Water
• David Sheehan	Department of Health Victoria
• Pradeep Kumar	New South Wales Office of Water
• David Cameron	Queensland Water Directorate
• Kathy Northcott	Veolia Water
• Kevin Peachey	Contracted Project Manager

## Staging of the project

GSA is pleased to have been awarded the contract to design the national certification framework. The project was designed to progress through five stages that took place over a 9 month period, commencing in July 2011:

Stage	Action
1. Desktop Research	<ul style="list-style-type: none"><li>• Contractor engaged</li><li>• Report provided and submitted to NWC</li><li>• Completed 31 August 2011</li></ul>
2. Phase One Consultation	<ul style="list-style-type: none"><li>• Contractor engaged</li><li>• Steering committee meeting held</li><li>• Workshop Reports produced</li><li>• Phase 1 Interim Report produced</li><li>• Completed November 2011</li></ul>
3. Production of Draft Certification Framework and report	<ul style="list-style-type: none"><li>• Discussion Draft Frameworks produced</li><li>• Meetings of steering committee held</li><li>• Draft Framework for Round 2 produced</li><li>• Completed January 2012</li></ul>
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5. Production of Final Certification Framework and this report	<ul style="list-style-type: none"><li>• Completed 31 March 2012</li></ul>

## 2 Research

### Approach

The following process was used to undertake the desktop analysis:

- Internet research based upon key word search criteria such as - ‘competency; potable; water; treatment; operators’;
- Review of the National Water Commission ‘Review of Urban Water Quality Regulation in Australia’, Waterlines Report Series No. 47, May 2011;
- Review of speaker’s notes delivered at Australian Water Association, Ozwater’11, May 2011, ‘Training and Skills Development of Operations Staff - What Works, What Doesn’t’;
- Review of joint initiative of Victorian Department of Health and Victorian Water Industry Association’s ‘Victorian Framework for Water Treatment Operator Competencies, Best Practice Guidelines’ (referred to as the Victorian Best Practice Guidelines) including an associated Framework identified within the Guidelines as an approved Certification Framework - the Water Industry Operators Association (WIOA) “Water Industry Operator Certification Scheme”.

Using the Victorian Best Practice Guidelines as a basis, each of the prescribed guidelines, requirements and principles were extracted and tabulated, and subsequently used to analyse and evaluate all of the exhibits found from the internet-based search. A comparison was undertaken of each exhibitor’s documents with the Victorian Framework; this resulted in a current positional view, research gaps and items for consideration in relation to the National Water Commission’s project to develop a national certification framework for operators of potable water facilities (within each State / Territory of Australia irrespective of the facilities size, ownership or amount).

## Systems Studied

- Victorian Water Industry Association Inc, August 2010, Victorian Framework For Water Treatment Operator and Competencies Best Practice Guidelines, Department of Health, VIC, Australia.
- Water Industry Operators Association of Australia (WIOA), Water Industry Operator Certification Scheme.
- Water Industry Operations Group New Zealand Incorporated, Water Industry Registration of Competency.
- Association of Boards of Certification (ABC) - Operator Certification Program 2007 Standards - IOWA, USA.
- Water Industry Operators Association of Australia, <http://www.wioa.org.au>.
- California Department of Health Services - California Operator Certification Program - Drinking Water Program, Certification Unit Annual Report (June 30, 2004 - June 30, 2005) [www.dhs.ca.gov/ps/ddwem/technical/certification/opcert.html](http://www.dhs.ca.gov/ps/ddwem/technical/certification/opcert.html).
- California Department of Public Health (CDPH) Programs - Division of Drinking Water & Environmental Management - Drinking Water Program, <http://www.cdph.ca.gov/programs/Pages/default.aspx>.
- Illinois Environmental Protection Agency, Drinking Water Operator Certification <http://www.epa.state.il.us/water/operator-cert/drinking-water/index.html>.
- Scottish Water and Energy & Utility Skills Council, Scottish Water First Under New Framework, <http://www.euskills.co.uk>.
- Washington Environmental Training Center - Drinking Water and Wastewater Operator Certificate Programs in Conjunction with Green River Community College.
- Commonwealth of Massachusetts, Consumer Affairs and Business Regulation, Board of Registration of Operators of Drinking Water Supply Facilities Operators Consumer Fact Sheet, <http://www.mass.gov>.
- Ontario Canada, Certification of Drinking-Water Operators and Water Quality Analysts O. Reg. 128/04, Safe Drinking Water Act (SDWA), Ontario Water Wastewater Certification Office (OWWCO), Minister for Environment, Director, Drinking Water Programs Branch, Drinking Water Management Division, <http://www.ontario.ca/ONT/porta161/drinkingwater/Combo?docId=STEL01>.
- US Environmental Protection Agency, State Of Florida, Department of Environmental Protection, Operator Certification Program, Operator Certification Program Handbook - Tallahassee Florida USA.
- South African Qualifications Authority (SAQA), Energy and Water Sector Education and Training Authority (EWSETA), National Certificate: Water and Wastewater Treatment and Process Operations.
- USA California, Sacramento State, Office of Water Programs, Water Treatment Plant Operations Specialist Certificate Program, California State University, Sacramento <http://www.owp.csus.edu/>.

## Outcomes

The research provided a list of considerations that were used to develop the Round One Discussion Paper. This paper was provided to all workshop attendees and made available on the GSA website which, alongside the Victorian Best Practice Guidelines, was used as a basis for discussion. Items for consideration were broadly grouped into the following categories:

- **Administration and Governance**  
Addressing structure of the certifying body (including boards of management), fees and credentials
- **Foundation Strategies and Principles**  
Focusing on identifying and addressing language, literacy and numeracy issues, upfront assessments, inhouse training, recognition of prior learning and award/rotation schemes to support the framework.
- **Assistance Mechanisms**  
Highlighting the identification of very small providers, availability of government grants and mobility of training.

The author of the research report concluded that the *Victorian Framework for Water Treatment Operator Competencies - Best Practice Guidelines* should form the basis for establishing the remaining criteria of the Australian national certification framework.

## 3. Consultation

### Communications/Engagement Strategy

The communications strategy sought to engage with stakeholders within existing networks maintained by GSA, as well as drawing on the resources of peak national and state industry peak bodies. Significant effort was made to communicate the project to key stakeholders in readiness for Round One and Two workshops and included the following strategies:

- The advice of steering committee members was sought regarding the number of consultation workshops needed and the best locations across Australia for maximum attendance.
- Letters jointly signed by the NWC and GSA were addressed to the Chief Executive Officers (CEOs) of organisations. These letters were disseminated through peak water industry associations and stakeholders including AWA, WSAA, WIOA, GSA and state Industry Training Advisory Body (ITAB) networks.
- A discussion paper was produced and disseminated to those that registered for Round One workshops.
- Invitations were sent directly to all Round One participants.
- Direct phone contact occurred between the project manager and the following:
  - Public Health (Water) Regulators in all states and territories, with specific effort in the ACT (state and commonwealth government agencies) and Tasmania.
  - Engagement with other government agencies including the Queensland Department of Local Government and Planning.
  - Engagement with ITABs where appropriate - including the NSW ITAB, Queensland Mining Skills, Queensland Energy Skills, Queensland Resources Council and WA Resources Training Council.
  - Direct engagement with Rio Tinto, Fortescue Metals Group, BHP Biliton and GE Australia.
  - Engagement with the Chamber of Minerals and Energy in Western Australia. The Chamber forwarded advice to its members resulting in WA being the only meeting where resource sector stakeholders were present.
  - Considerable effort to attract regional drinking water providers in the Northern Territory.
- A group was formed through the LinkedIn network and messages were sent by the project manager.
- The Sydney and Dubbo workshops during Round One consultations were scheduled to coincide with the NSW ITAB 'Water Trainers and Assessors Network' Meetings to provide opportunities for greater attendance.
- The project was included on the agenda for the Queensland and NSW Water Directorate meetings allowing successful consultation to occur with a large number of regional water providers.

It is of no doubt that the short timeframes have limited the participation of stakeholders and customers in providing feedback. Generally, attendance at the consultation workshops during Round Two was better, with higher numbers and/or better representation of relevant industry stakeholders.

## Workshop Strategy

Workshops were structured in two phases:

**Phase One:** Identify and discuss the principles and foundations for certification, using the Victorian Guidelines for Operator Competencies - Best Practice Guidelines and the desktop research as a basis for discussion.

The agenda for Round One was designed to take stakeholders through the process of gaining, retaining and exiting certification. Additionally, stakeholders considered the governance of a framework and associated implementation issues.

Scope	<ul style="list-style-type: none"> <li>• What is a facility?</li> <li>• Should facilities be classified?</li> <li>• What is the best method for classification?</li> <li>• Who are Water Treatment Operators?</li> </ul>
Skilling/Knowledge Requirements	<ul style="list-style-type: none"> <li>• Are qualifications or skill sets appropriate for entry into certification?</li> <li>• Should there be time-based experience requirements?</li> </ul>
Re-certification	<ul style="list-style-type: none"> <li>• What expectations are placed upon an operator to be re-certified?</li> <li>• Should this include professional development requirements?</li> </ul>
Exit and Re-entry	<ul style="list-style-type: none"> <li>• What expectations are placed upon an operator to re-enter after a period of absence?</li> </ul>
Governance	<ul style="list-style-type: none"> <li>• Is third-party or self-certification appropriate?</li> <li>• How should certification be managed?</li> </ul>
Implementation	<ul style="list-style-type: none"> <li>• What expectations should be placed upon existing workers?</li> <li>• Consider roll-out issues for Round 2 consultations.</li> </ul>

Table 2 - Agenda for Round One Workshop

**Phase Two:** Round 2 workshops utilised the draft framework that was developed as a result of feedback from participants of the round one workshops and the Steering Committee. Attendees were presented with the draft document and offered an opportunity to discuss the suitability and appropriateness of decisions made and the contents of the draft framework.

## Locations

Consultation Workshops were held in the following locations:

Northern Territory	Darwin
Queensland*#	Brisbane Townsville
New South Wales#	Sydney Coffs Harbour Dubbo Port Macquarie Wagga Wagga
Australian Capital Territory	Canberra
Victoria	Melbourne
Tasmania*	Hobart
South Australia	Adelaide
Western Australia^	Perth Bunbury

Table 3 - Location of Consultation Workshops

\* Workshops were also scheduled for Rockhampton Queensland (Round One and Two) and Launceston Tasmania (Round One only). These workshops were unfortunately cancelled as there was no take-up.

# The Qld and NSW Water Directorates included the certification project for discussion as an agenda item.

^ The Water Corporation hosted a video conference with regional staff across Western Australia.

## Organisations Consulted

- ACTEW AGL
- Albury City Council
- Albury City Council
- Allwater
- ALS Water Resources Group
- Aqwest
- Atom Consulting
- Australian Government Department of Sustainability, Environment, Water, Population and Communities
- Australian Water Association (AWA)
- Banana Shire Council
- Barwon Water
- Bathurst Regional Council
- Ben Lomond Water
- Bundaberg Regional Council
- Busselton Water
- Cairns Regional Council
- Cassowary Coast
- Central Regional Councils (CENTROC)
- Challenger Institute of Technology
- Charters Towers Regional Council
- Coffs Harbour Shire Council
- Corowa Shire
- Degremont
- Desalination Discovery Centre (National Centre of Excellence for Desalination)
- Dubbo Regional Council
- East Gippsland Water
- NSW State Training Authority
- NT Department of Local Government
- NT Power and Water
- Orange Regional Council
- Port Macquarie/Hastings Council
- QLD Department of Environment and Resource Management (DERM)
- QLD Department of Health
- QLD Department of Local Government and Planning
- QLD Water
- Rio Tinto
- Risk Edge
- Riverena Water
- SA Department of Health
- SA Water
- SEQ Water
- Shoalhaven City Council
- Simmons and Bristow
- Skillset
- SkillsTech QLD
- Smart Water Research Centre (Griffith University)
- South Gippsland Water
- South Western Sydney TAFE
- Southern Seawater Alliance
- Southern Water
- Sydney Water
- Education QLD
- Fitzroy River Water
- Fortescue Metals Group
- GE Australia
- Gippsland Water
- Gladstone Water
- Goulbourn Valley Water
- Griffith City Council
- Hunter Water
- Hydramet
- Kempsey Shire Council
- Lachlan Shire
- Longreach Regional Council
- Mackay Water
- Master Plumbers Association WA
- MidCoast Water
- Monadelphus
- Mornington Regional Council
- North Burnett Regional Council - Mundubbera
- NSW Department of Education and Communities
- NSW Department of Health
- NSW Office of Water
- NSW Public Sector ITAB
- TAFE Illawarra
- TAFE QLD
- Toowoomba Regional Council
- Torres Strait Islands Regional Council
- Townsville Regional Council
- Trility
- Tweed Shire Council
- UGL Limited
- University of QLD
- Veolia Water
- VIC Department of Health
- WA Department of Health
- WA Water Corporation
- Walcha Shire Council
- Wannon Water
- Water Industry Operators Association (WIOA)
- Water Quality Research Australia
- Water Services Association of Australia
- Western NSW TAFE
- Westernport Water
- Widebay Water Corporation
- Unitywater North
- Unitywater South

## 4 The Certification Framework

### The Case for Certification

Certification is implemented in many occupations and professions to stipulate minimum conditions of education and/or training. These conditions are applied at entry as well as at set intervals, to provide assurance that those who are certified have met industry defined standards. This differs to other forms of recognition as highlighted in Table Three below:

Type	Recipient	Responsible Body	Required/Voluntary	Example	Lifespan	Consumer Protection
Licence	Individual	Statutory Authority	Required	Driver's Licence, Plumber	Periodic renewal	Can be withdrawn
Accreditation	Program / Org	Association / Agency	Voluntary	ISO	Periodic Renewal	Regular audits Can be withdrawn
Qualification	Individual	Training Provider (RTO)	Voluntary	Cert III / Diploma / Degree	No renewal	None post judgement of competency
Certification	Individual	Association/ Agency	Voluntary	CPA / Nurse	Periodic renewal	Usually involve skill updates Can be withdrawn

Table 4 - Types of recognition

Some stakeholders questioned the value of a certification framework; their concerns focused on the benefit of a certification framework where training was already embedded into an organisation. For these stakeholders, certification was viewed as potentially costly red tape.

It was found that drinking water suppliers may have already implemented business practices that involve:

- accreditation of facilities (e.g. quality assurance standards such as ISO or HACCP) and qualification
- qualification of operators (e.g. the Certificate II or III in Water Operations).
- Specific processes to meet conditions imposed by the relevant state and/or territory water quality or health regulator.

The case for certification is premised on the fact that *there is currently no consistent or mandatory application of competency requirements for operators*. Without a driving force, drinking water suppliers are currently able to choose whether or not to train their operators, to what standard and - unless there is an Australian Standard or other regulatory condition - how often they are trained. This has led to a variation in standards and practices across Australia that may have a direct impact upon public health outcomes.

Many stakeholders highlighted that they held a Certificate III in Water Operations; this qualification has been accepted by many as a baseline for work in the industry. However, many stakeholders also recognised that the Certificate III held by themselves and many other operators, comprised of units of competency that held little or no relevancy to the treatment processes for which they were responsible.

## Options to increase Consistency

As discussed throughout this document, the proposed certification framework applies to the operator performing drinking water quality tasks only. If the industry is to implement any framework, this leaves the following options:

- **Licensing:** In much the same way as electricians or plumbers, licensing could force all operators to engage in initial training. However, this approach is a government driven approach - *imposed on industry rather than adopted by industry*. Of course, without a national regulator, implementation would be required at state and territory level. It typically involves the regular payment of fees to continue under the licensing arrangements.

Licensed occupations are well known to most people inside and outside the water industry. It was suggested by some that the drinking water operator would be subject to more stringent and onerous conditions if certification (requiring professional development) was implemented; the benefit of this imbalance was questioned.

The argument for continued professional development was founded on the need to ensure operators remain competent and capable - keeping pace with change to the workplace, systems, technological, environmental and regulatory conditions. Cynically, some stakeholders suggested that competency is deemed to be current as long as there are no major incidents. This approach is obviously not aligned to the heavily risk-based models applied to the management of other aspects of the drinking water supply system - captured in the Australian Drinking Water Guidelines (ADWG) - and is not justifiable.

- **Qualification:** For operators in the water industry, this credential is issued by an RTO for completion of qualifications as stipulated in the National Water Industry Training Package (NWP07). It ensures that training and assessment is designed to meet robust nationally consistent standards of workplace performance. Discussions during workshops highlighted the inconsistent approach to implementing qualifications within the drinking water treatment system. Most notably, the fact that an operator held a qualification did not necessarily confirm that the operator was competent to control the treatment processes used within their specific workplace.

It is also important to recognise that once a qualification is issued, it is valid for life and is not retractable. Again, there is a risk of relying upon a qualification (possibly gained many years ago) further highlighting the need for certification.

- **Certification:** Combines the values inherent to qualifications and licensing arrangements in a positive 'industry driven' approach. Most importantly, certification typically requires that the person undertakes activities such as professional development, as a condition of continuation in the scheme. This provides assurance that the initial judgements of competency remain current for the duration of the operator's career.

Certification is a positive approach to defining nationally consistent minimum standards to ensure the competency and capability of operators remains current.

- **Marketing by GSA:** Finally, it is recognised that GSA, the custodian of the National Water Training Package, could provide more guidance and advice to industry about using and packaging water industry qualifications. GSA is currently active in this space and offers a variety of tools and human resources to grow delivery against the NWP07. This method of course does not provide any incentive for drinking water suppliers to change, particularly where extra investment is required in skilling of their workforce.

#### RECOMMENDATION 1:

Certification is accepted as the preferred model to implement nationally consistent minimum competency and capability criteria to apply to operators who perform water quality tasks within drinking water treatment systems.

## Mandatory Compliance or Adoption

Industry stakeholders were requested to consider whether the proposed certification framework should be mandatory or adopted by industry as a voluntary scheme. Feedback was largely in favour of a mandatory approach to implementing this framework, however, it should be noted that there was some support for a voluntary approach during Round One consultations.

For those that supported a voluntary framework, their case was underpinned by a desire to ensure that certification is a positive experience. In other words, certified status is to be valued, and demonstrates and recognises the commitment and expertise of the finest operators in the industry.

It was suggested that the certification framework would gain its own momentum using this approach. Drinking water suppliers and operators would voluntarily adopt the framework in an effort to demonstrate to regulators and communities that their workforce is appropriately skilled and/or to position themselves above other ‘uncertified’ workers. In short, mandating the framework was considered less ‘friendly’ and would ultimately be viewed as a ‘big stick’ approach.

The risk to this approach would be that the framework never gains enough momentum to establish its value to industry. There were also concerns that certification would take some time to be established across the various sectors of the water industry and that certification may never actually cover the entire workforce; it would simply recognise those that are the most committed to their work.

In summary, the case for mandating the framework is founded largely on the need to implement certification in the following manner:

- consistently across the nation
- to apply to all operators who perform drinking water quality tasks
- in a reasonable timeframe.

For stakeholders who were in favour of this approach, mandatory application of the framework through a regulatory approach was considered an absolute necessity. Without it, the drinking water suppliers that really need to improve their efforts with regard to skilling their workforce, may ignore certification for as long as possible. This may be a particular

risk where the provision of drinking water is not the only (or core) business of the organisation. Cost and service delivery pressures may continue to direct funds away from the business of supplying drinking water. Of those currently not regulated, the local governments and regional/remote drinking water suppliers are of the highest risk.

Of course, mandatory application will offer much tighter control over implementation and undoubtedly it will ensure total coverage in a far shorter period of time. The steering committee members also support a mandatory implementation approach. Mandatory implementation of the framework would be best achieved through agreement by the Council of Australian Governments (COAG) to support the alignment of this framework with public health/water quality regulation. In particular, the proposed framework's foundation on 'public health risk' is strengthened through a clear connection and alignment of the "System Complexity Rating" with the reporting requirements of each state and territory public health/water quality regulator.

#### RECOMMENDATION 2:

The certification framework is implemented through a mandatory approach with an amendment of regulatory arrangements in each state and territory.

## Scope

The framework was originally scoped to focus only on operators who work within drinking water treatment facilities. Throughout consultation consistent feedback was provided requesting the inclusion of drinking water treatment processes outside of the treatment facility. This was founded upon the following reasons:

- The ADWG provides a strategy *from catchment to tap*. Some stakeholders expressed a feeling that it was a backward step to limit certification to just one component of the entire drinking water cycle where other activities/systems directly affect drinking water quality.
- Secondary/booster disinfection contributes highly to the safety of drinking water - particularly where reticulation networks are large.
- Operators outside of the treatment facility may have a role in chemical dosing - both pre and post treatment - or sampling and monitoring tasks where no treatment facility exists.
- The inclusion of these operators was not considered to increase the level of complexity of the certification framework.

There is a need to make decisions in relation to the initial scope of implementation. Industry stakeholders have strongly supported further rollout of certification to the other components of the water sector upon successful implementation of this framework. Eventually, certification may apply to any or all of the sectors below:

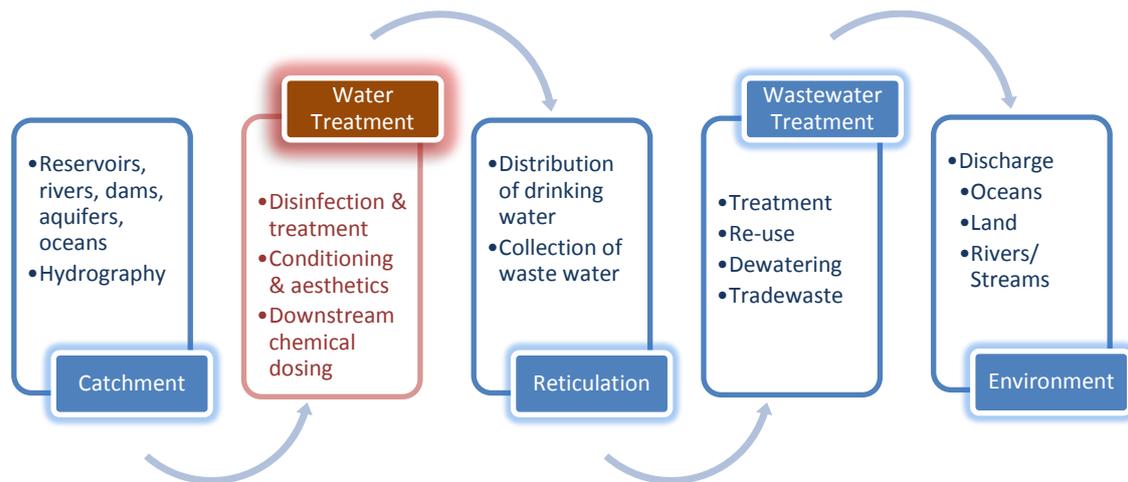


Figure 4 - Scope of the Certification Framework

The steering committee members have agreed that chemical dosing (including secondary disinfection) shall be included within the scope of this project, where it occurs downstream of the treatment facility. Further to this, where the source water is not treated (i.e. does not pass through any treatment barriers) those that perform drinking water quality tests (monitor, sample and record) shall also be included.

As a cautionary note, it can be expected that the framework will be more costly for drinking water suppliers as more operators may now fall within scope. For example, distribution workers might perform a small percentage of a working day performing secondary chemical dosing activities. These workers will now be included within scope of this certification project.

Having said this, the increase in costs is expected only to be applicable to the larger drinking water suppliers. In smaller workplaces, the operator is more likely to perform multiple roles inside and outside a treatment facility anyway. For a major urban utility, the tasks for the operator are more likely to be narrowly focused within the drinking water treatment system.

It may be prudent to develop different cost structures to account for those operators who perform treatment roles as a small component of their daily work.

### RECOMMENDATION 3:

The certification framework applies to:

- drinking water treatment facilities
- downstream from the treatment facility e.g. secondary disinfection treatment

Where no drinking water treatment facility exists, operators who monitor, sample and report on drinking water quality are within the scope of certification.

## Impact on operational practices

Discussions during consultation workshops brought a much larger issue firmly into focus. That is, the impact of the certification framework on the business models used by drinking water providers. More specifically, stakeholders were concerned about the potential

impact on human resource management (such as staff rosters and workforce composition) and operational practices that are subject to other regulatory reporting requirements.

Workshop participants were introduced to the Victorian Best Practice Guidelines at the commencement of Round One during which time it was noted that the guidelines provide all the hallmarks of a certification framework - and a little more. The reference at that stage was mainly targeted at the 'plant capability rating' which measured the suitability of the treatment facility against the microbial risk rating.

However, in discussing the categories and proposed definitions for the workforce it was necessary to revisit the notion that the Victorian Best Practice Guidelines did more than that required of a certification scheme. Specifically:

- The requirement to identify one responsible person in each facility (including the need to account for periods of leave) reportedly creates a workforce structural issue in some environments.
- Defining the requirements of the responsible person - such as the necessity to be onsite weekly - were considered too restrictive to apply across workplaces nationally and did not take into account the growing impact of technology in the workplace.
- Some statements regarding workplace management were seen to be an issue of risk management and likely to already be reported to regulators.

Having re-visited the language of the draft certification framework presented for Round Two consultation, careful attention has been paid to ensure that the certification framework remains true to itself. That is, it should not attempt to be a tool to manage the business practices at enterprise level; the ability for an organisation to manage its own 'water business' is imperative.

The framework must not limit business practices or innovation.

Drinking water providers who are currently regulated must already comply with risk management reporting and other regulatory conditions placed upon them. Consultation with stakeholders confirmed that drinking water quality management plans (risk plans) were the most effective tools to manage these practices and that certification must not attempt to influence these aspects as well.

In summary, the proposed certification framework must not duplicate efforts of regulators to oversee public health.

#### RECOMMENDATION 4:

Certification must recognise the competency and capability of operators within the scope of the framework; it must not attempt to impact upon the operational processes and practices of the drinking water supplier.

*Please note that Section 5 of this report details the justification for each part of the certification framework in detail.*

## Certification Process

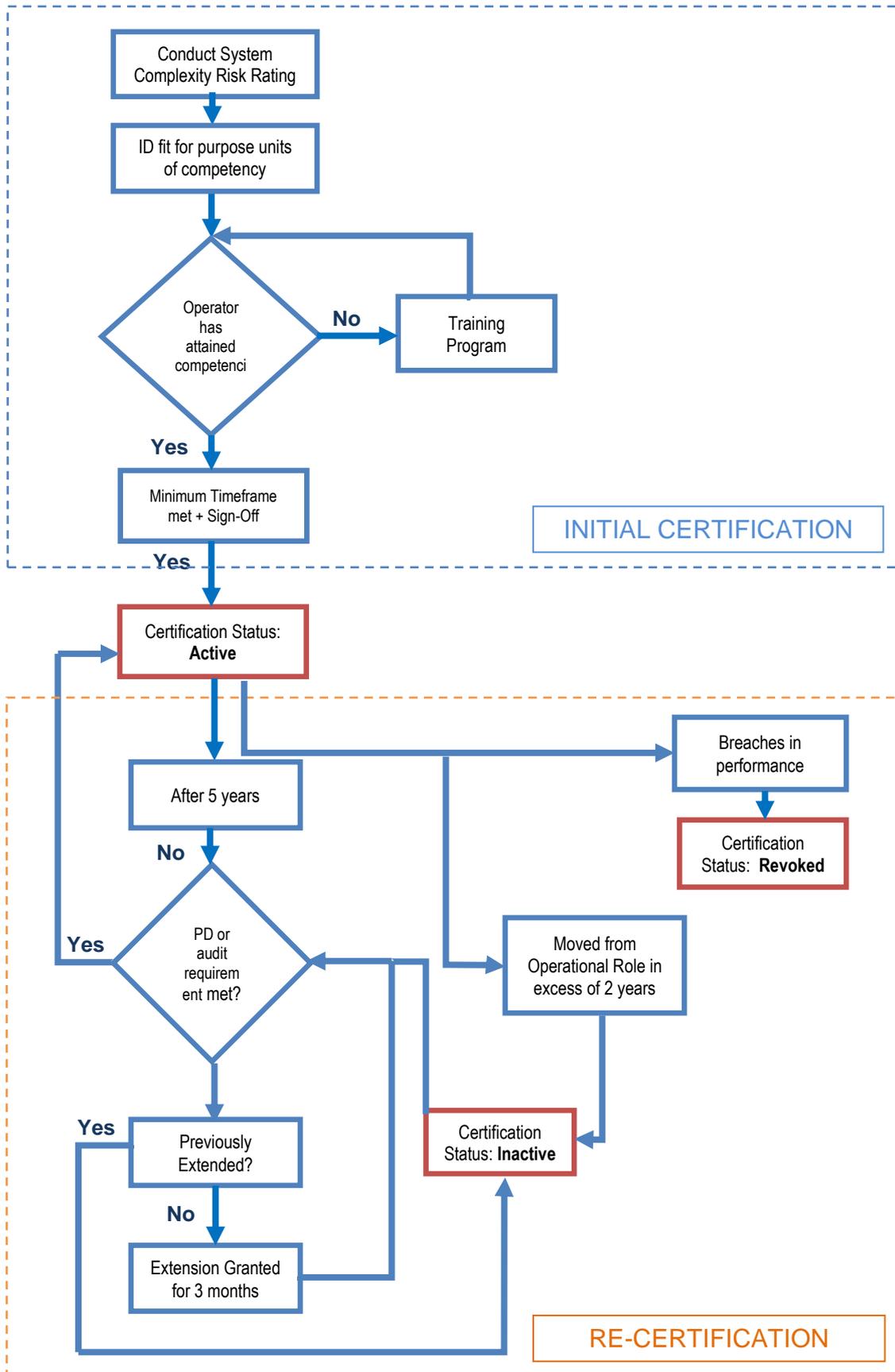


Figure 5 - Process for Certification and Re-Certification

## Structure

The proposed certification framework is structured in 8 parts as follows:

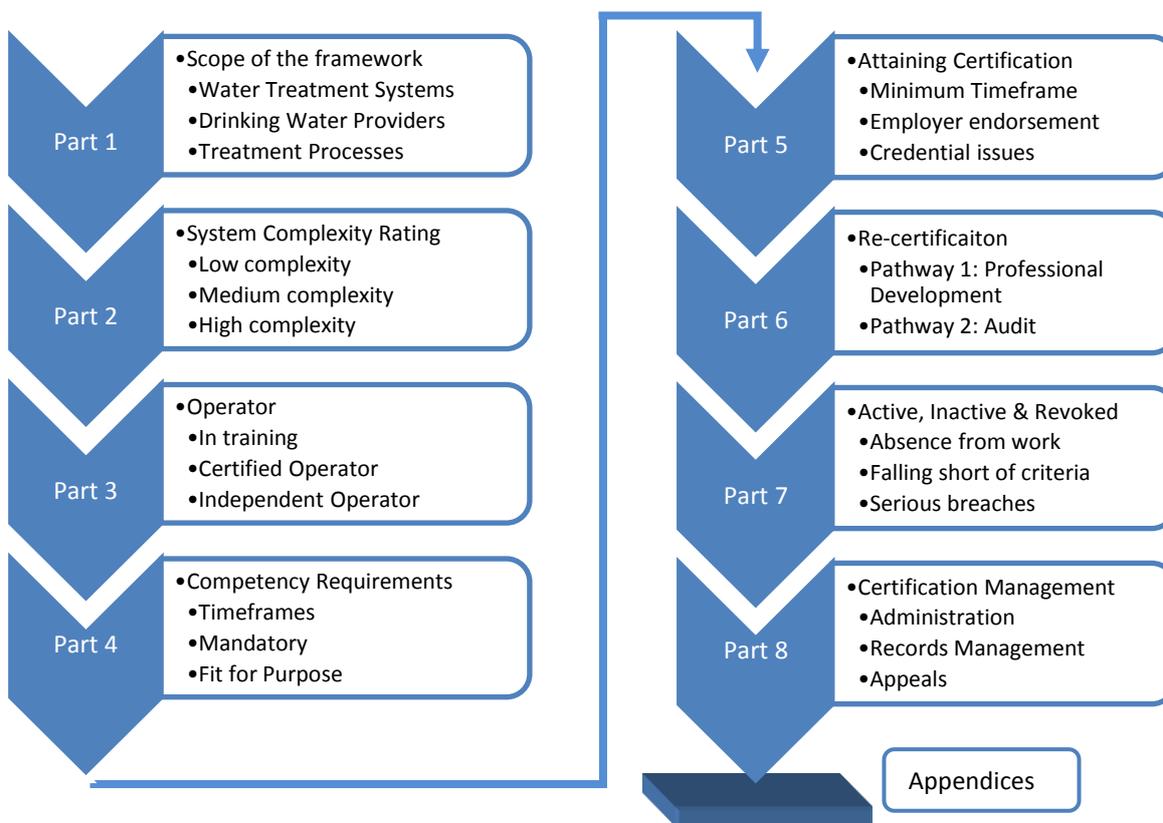


Figure 6 - Structure of the Certification Framework

Appendices have been included to provide additional information to support the eight parts of the framework. These are:

- Appendix A: Approved Professional Development
- Appendix B: Drinking Water Treatment Units of Competency

Further supporting material is expected to be developed if the proposed framework is accepted. Additional materials that would be of benefit include:

- An implementation guide or similar outlining case studies or scenarios that relate to different drinking water suppliers within the water sector.
- A database, preferably online that allows drinking water suppliers to enter information about their rated system (level, treatment processes and tasks). The database would provide advice regarding units of competency. This service could ideally highlight the portion of a qualification completed through the certification requirements, thereby encouraging employers to seek a qualification outcome where ever possible.

## 5 Justification

### The Australian Drinking Water Guidelines

The Australian Drinking Water Guidelines (ADWG) underpins the certification framework. The ADWG is founded on the importance of a multifaceted approach to drinking water quality management, for which the proposed certification framework will become just one component as explained below.

The ADWG defines itself as a set of inter-related standards that provides a preventive risk management approach to drinking water safety. Underpinning the guidelines is an approach described as ‘multiple-barrier’ and expressly states that it is ‘a robust system [that] must include mechanisms or fail-safes to accommodate inevitable human errors without allowing major failures to occur’.

Whilst the ADWG outlines the need for operators to be trained, it has a wide focus on all aspects of water treatment. The proposed certification framework specifically seeks to address the human factor - the operator who monitors, samples, controls and/or optimises the processes to achieve water quality that falls within the stated ADWG parameters. It will ensure that operators are trained and assessed to perform the tasks that they are required to perform.

The ADWG also highlights the inevitable human error that will occur. Many factors will contribute to the likelihood of human error occurring in the treatment of drinking water including attitude, awareness, prior training, fatigue or stress. The proposed certification framework will provide a nationally consistent, flexible set of criteria that assures a minimum level of competency and capability has been attained by all operators who treat drinking water; the framework will ensure that a set of minimum criteria have been reached.

The following table identifies the 12 elements of the ADWG and links to the proposed certification framework subject.

Element	Title	Certification Linkage
1	Commitment to drinking water quality	Parts 2, 4, 5 & 6
2	Assessment of the drinking water supply system	Part 2
3	Preventative measures for drinking water quality management	Parts 4, 5 & 6
4	Operational procedures and process control	Parts 2 & 4
5	Verification of drinking water quality	Part 4
6	Management of Incidents and emergencies	Part 5
7	Employee awareness and training	Parts 4, 5, 6 & 8
8	Community involvement and awareness	
9	Research and development	Part 6
10	Documentation and reporting	Part 8
11	Evaluation and audit	
12	Review and continual improvement	Part 2

Table 5 - Linkage of the Certification Framework to the ADWG

## Part One - Scope of Certification

Part One defines the key components of the drinking water system that are within the scope of the proposed framework.

### Drinking Water Treatment Systems

The Drinking Water Treatment System is a component of the Drinking Water Supply System, defined in the ADWG as:

“Everything from the point of collection of water to the consumer and can include:

- Catchments, including groundwater systems;
- Source waters;
- Storage reservoirs and intakes;
- Treatment systems;
- Service reservoirs and distribution systems;
- Consumers.”

The direct reference to the ADWG definition for a drinking water supply system, demonstrates that the framework is built with industry’s feedback firmly in mind. That is, stakeholder feedback was clear and consistent that the drinking water treatment facility itself should not be singled out for certification as it was seen to promote a message that the other components were not relevant. Drinking water quality was only relevant to the facility. Adoption of ‘treatment systems’ (documented as ‘Drinking Water Treatment System’ in the proposed framework) identifies that it is part of a greater system that determines the quality and safety of drinking water.

Throughout Rounds One and Two, workshop participants stated that as a minimum, secondary and booster disinfection should be included within the framework. Some stakeholders sought to extend this further by requiring all treatment activities that occur between catchment to tap be included within scope of the certification framework.

For this reason, the Steering Committee agreed to include all downstream chemical dosing performed for the purpose of treating drinking water within the scope of the certification framework. It is surprising that upstream chemical dosing was not already considered to be within the scope. This was justified because the public will not drink water upstream of the treatment facility; however there may be issues at implementation in relation to the exclusion of upstream chemical dosing. It is possible that the drinking water supplier will have two operators performing the same duties - one upstream and one downstream from the treatment facility. In this scenario, the operator upstream of a treatment facility will not require certification, despite the fact that the exact task is being completed by an operator downstream, who is required to be certified. Despite some concern from stakeholders about the logic of this decision, management of operators completing certain tasks in the drinking water supply system may well decide that it is best to certify all workers completing the task, irrespective of being up or downstream to a facility.

It is to be noted that the expansion of the certification scope will affect some drinking water suppliers in relation to the number of staff who must be certified, resulting in a cost increase. It is expected that only the larger metropolitan or major regional centres will be affected in this way, as smaller drinking water suppliers tend to utilise staff to perform a wider range of tasks. For example, in the water sector an operator may also perform waste

water, catchment management and/or reticulation network tasks in addition to working within the water treatment facility. For the larger utility, it is more likely that operators perform tasks in discreet parts of the water industry. In particular, the widening of scope to include downstream secondary disinfection will now affect operators who typically perform reticulation network tasks. These operators will require certification.

Where staff numbers allow, it is more likely that operators perform tasks in discreet parts of the drinking water system. In such a case, a broader certification scope may include operators who typically perform reticulation network tasks within the requirements for certification.

## Untreated Supplies

The Queensland Regulator was keen to explore the inclusion of drinking water supplies that supply untreated water within the scope of certification framework. There is concern that public health issues and operator competencies will not be sufficiently recognised if these water sources are not included within the scope. The regulator asserted that where drinking water requires no treatment, operators will still be tasked with sampling drinking water and reporting public health issues in compliance with regulatory requirements.

Whilst this issue was raised by the Queensland regulator, it is a scenario that is evident across Australia. For this reason, the steering committee members agreed to include drinking water systems where no treatment barriers exist, within the scope of the certification framework. This will result in a requirement for those responsible for regulatory monitoring, sampling and reporting, to undertake units of competency directly relevant to their role, in addition to a mandatory unit that introduces the ADWG (for more detail please see the discussion regarding Part Four).

Parts Two and Four of the proposed certification framework describes the rating of the system complexity and the competency requirements.

## Drinking Water Suppliers

The proposed certification framework has adopted the ADWG term for the drinking water supplier. The proposed framework intends that the term captures:

- major urban utilities;
- corporations;
- local government authorities;
- public or private entities;
- small, regional or remote suppliers;
- wholesalers, retailers or contractors.

Any organisation contracted to manage a *Drinking Water Treatment System* (or part thereof) is considered to be a *Drinking Water Supplier*.

The definition is able to be applied across all drinking water supplies - regardless of any regulatory condition placed upon them. In reality, this will mean that any drinking water supplier can voluntarily use the framework. However, those regulated by state and territory water quality and health regulators will be required to use the certification framework.

It should be noted that the proposed certification framework highlights that domestic dwellings, the bottled water industry and other applications (such as in the medical field)

are not included within the certification framework scope. This is consistent with the ADWG.

## Treatment Processes

The term treatment process was adopted to ensure that all treatment activities were included within the scope of the certification framework. Industry feedback clearly highlighted the necessity of including all treatment activities - even those that are not considered to be 'barriers'. In light of this, the proposed framework will include:

Typical Treatment Barriers	Other Treatment Processes
<ul style="list-style-type: none"><li>• Primary and Secondary Disinfection</li><li>• Coagulation and Flocculation</li><li>• Sedimentation and Clarification</li><li>• Dissolved Air Flotation</li><li>• Granular Filtration</li><li>• Membrane Filtration</li></ul>	<ul style="list-style-type: none"><li>• Reverse Osmosis</li><li>• Adsorption</li><li>• Ion Exchange</li><li>• Fluoridation</li><li>• Softening/Hardening</li><li>• Chemical Dosing</li></ul>

Table 6 - Drinking Water Treatment Processes in scope

## Part Two - The System Complexity Rating

This aspect of the certification framework attracted a great deal of feedback from stakeholders and a variety of perspectives during the consultation process. From the outset, it has been the intention of the steering committee to ensure that the framework is underpinned by public health state requirements and the rating of the facility has been considered to be an important distinction.

The adoption of public health requirements as a driver for certification is clearly a positive and understandable approach. It also enabled the development of the proposed framework to utilise the Victorian Best Practice Guidelines as a basis for discussion.

The Victorian Best Practice Guidelines recognises that, *“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 the water treatment operator needs to adequately operate the facility. A serious risk arises where an operator is not fully competent in the operation of the water treatment processes for which they are responsible, particularly in the case where a high level of microbial risk is present.”*

The above generalisation was accepted but subject to the feedback received during consultation; this included:

- The public health risk rating was not seen to be applicable to the operator, but to the facility itself. Many attendees considered that the exercise was particularly relevant at the point where the *facility* is designed (or reviewed).
- The facility rating was not considered to be 100% accurate.
- Indeed, the Victorian Department of Health has provided a snapshot from its last reporting period which uses a ‘plant capability rating’ to check that treatment facilities meet the microbial risk rating. That snapshot showed that of the 18 facilities:
  - 8 scored a plant capability rating that was equal to the microbial risk.
  - 6 scored a plant capability rating that was greater than the microbial risk (indicating the plant is more complex than the microbial risk dictates).
  - 4 scored a plant capability rating that was less than its microbial risk (indicating that the plant is not necessarily complex enough to deal with the microbial risk).

The possibility for inconsistencies were considered by many stakeholders to be issues that would lead to false ‘minimum standards’ through the certification framework. Where facilities did not meet the microbial risk (i.e. the facility is under-engineered) many participants also suggested that the issue related to a plant upgrade; they suggested that it would not effect the certification of a worker measured through the certification framework.

Contrary to this, some stakeholders in Victoria suggest that an operator is required to have higher competencies to work in an under-engineered facility. This is also accepted, as operators in these environments are required to intervene more frequently to monitor, control and optimise processes. It is worthy to note that the competency standards and qualifications contained in the National Water Training Package do not recognise the frequency or intensity of tasks at hand.

- Feedback indicated that an increase in public health risk does not equate to needing a higher level unit of competency or qualification. It is suggested in the Victorian Framework that the more complex the facility, the higher the qualification should be .

The National Water Training Package places units of competency into three categories:

- Disinfection - that exist at AQF Level Two (with the exception of chloramination which is at AQF level 3)
- Treatment Barriers - that exist at AQF Level Three
- Optimisation and/or Management - that exist at AQF Level Four

The above structure does not support a model that increases qualification level dependent upon the public health risk.

During consultation, many other suggestions were made to categorise facilities in order to increase the accuracy of the rating in specific environments. In most discussions, it was agreed that microbial risk was a good place to start, however less error would result if the following were included:

- Number of processes
- Type of processes
- Number of connections
- Volume of flow
- Chemical risks.

The steering committee initially rested on a public health risk rating that was to use microbial and chemical risks to determine a 'public health risk level'. However, the model for determining the rating exercise proved to have some issues during Round Two consultations. In summary, the issues that were clearly difficult to resolve with stakeholders were:

- That state and territory regulators already had reporting processes that could meet local conditions and would likely increase the accuracy, value and efficiency in completing the rating exercise.
- Some regulators felt that the outcome of the proposed rating exercise risked being compromised in an effort to keep it simple.
- Whether seawater desalination plants should be included in the framework; the chemical and/or microbial risk tables did not adequately reflect the complexity of such a facility.

The Regulators Forum held during Round Two of consultation workshops was particularly beneficial. During this workshop, it was suggested that state and territory regulators should retain ownership of the particular criteria to categorise facilities. However, the resultant facility categories would be defined nationally.

Stakeholders from another workshop similarly suggested that the risk process used by Drinking Water Providers to comply with the ADWG should be adopted. All attendees excepting one, at the workshops nationally (which occurred after the Regulator Workshop) accepted the model proposed above as an understandable and positive step. The objection raised by the single participant was based on concerns that states and territories may apply rules that were inconsistent.

The steering committee accepts that state and territory water quality or health regulators should maintain ownership of the rating methodology, which will be used to group systems into nationally consistent categories.

In summary, to facilitate differentiation of the skills required for different water treatment systems, relevant drinking water quality or health, regulators at state and territory level need to work with the water suppliers that they regulate; to categorise treatment facilities into one of three categories: low, medium and high. The regulators will categorise systems based on a framework that suits their particular requirements which may consider:

- Automation and level of intervention
- Technology
- Complexity of individual processes
- Interrelatedness of processes
- Size of the facility
- Number of connections
- Volume of flow
- Timeliness of response requirements
- Raw source water management
- Raw water quality and variability
- Microbial risks
- Chemical risks
- Physical risks
- Radiological risks

### **The Resultant Categories**

A great deal of effort has gone into ensuring the categories that result from the above exercise are of most benefit and do not lead to false or unplanned perceptions.

As discussed, the initial rating exercise resulted in a ‘public health risk category’. This unfortunately led to perceptions amongst stakeholders about treatment systems that could not be addressed by retaining the original approach. One scenario presented by stakeholders was that disinfection-only facilities were perceived to be of low public health risk as they were classified as a ‘level 1’ facility. This is obviously not necessarily true, but served to point the development of a framework back to ‘system complexity’ that is worked out using public health as a criterion, rather than resulting in a public health rating.

The facility rating categories became very difficult to establish as there is an obvious need to ensure that there are different requirements placed upon operators, which are influenced by the complexity rating. To ensure the rating categories are clear, the rating levels are defined in terms of the expected infrastructure at each level and the expected competency requirements of the operator. By adopting this approach, it has been possible to demonstrate that the expectations for operator competency clearly increase for treatment systems of higher complexity rating.

As a result, the final proposed framework returns to a very simple proposal - high, medium and low complexity ratings. The adoption of three levels should also assist the Victorian Department of Health to map its current three-tiered public health rating system across to the national framework.

## Part Three - Operators in Scope

Having defined the physical assets to be included in the scope of this framework (the drinking water treatment system, supplier and treatment process), it is necessary to also identify the human resources required for this framework. Workshop participants were provided with the categories of operators adopted in the Victorian Best Practice Guidelines - Operators and Responsible Persons.

### Responsible Person

The Responsible Person was a contentious issue during both rounds of consultation. Feedback included:

- Most stakeholders were not clear on how to apply the definition presented, but after lengthy discussion most were able to identify a person that would likely fit into this category.
- Having identified the person in the point above, there were issues surrounding the ability of that person (generally in supervisory roles) to be certified under the proposed framework. In many cases, the supervisor did not hold the appropriate technical units of competency.
- The words 'Responsible Person' were confusing as they suggest that an operator is not responsible. Many workshop attendees were adamant that every operator is responsible for the facility and processes. This included the workshops held in Melbourne with Victorian stakeholders strongly supported this view despite their framework including Responsible Person. During another consultation workshop, it was also suggested that the proposed framework might offer the opportunity to change a workplace culture where employees often deflect responsibility to another person.

It is also interesting to note that the Victorian Best Practice Guidelines do not define the term 'operator'. It was found stakeholders were unable to provide guidance when trying to clearly define both an operator and responsible person.

- Alternative titles for a "responsible" role became less clear. Suggestions from stakeholders included 'Operator in Charge' or 'Senior Operator'. However these were not universally accepted. It is noted that these titles may closely align to existing job titles in some settings which further confused the issue.
- The existence of a senior level in the proposed certification framework could lead to a perception that all workplaces should include such an operator. For example, it was considered that the a drinking water supplier may be criticised if a 'responsible person' or similar position was not a component of the workforce structure.

Ultimately, the steering committee considered whether the proposed certification framework was intending to create tiers within the workforce, or whether it should recognise minimum competency requirements for operators of treatment processes. As a result, the steering committee agreed that one level of certification should exist - the 'Certified Operator'.

## Operators

The proposed framework includes two categories of operators within a ‘water treatment system’:

- **Operator in Training:** This category is not required to be certified, but exists to ensure that drinking water suppliers can identify new entrants to the workforce who are working toward their competency requirements.

The framework makes direct statements regarding the maximum timeframe an Operator in Training should take to achieve the required competencies.

- **Certified Operator:** In response to the feedback from consultation workshops, this category has been defined largely by adopting the definition of a ‘responsible person’ from the Victorian Best Practice Guidelines.

It should be noted that this category also includes ‘independent contractors’. It is necessary to name these operators specifically in the framework as this category generally comprises small businesses that may work for multiple drinking water suppliers. It is necessary to ensure that these operators are defined because:

- Drinking water suppliers must ensure that all contractors are certified.
- The independent contractor will not be an employee of a drinking water supplier or business contracted to manage a drinking water system. This effects the ability of independent contractors to apply for and maintain certification.

The existence of independent contractors is considered to be a cohort that may become increasingly important in the future - particularly as the workforce ages and older operators seek employment options that transition to retirement. Please note that it is not intended for these operators to achieve a different certification status.

## Part Four - Competency Requirements

This part of the framework identifies the competencies required and expected timeframes for completion.

### Qualifications -v- Competencies

The most significant discussion raised at the consultation workshops was whether whole qualifications should be required under a certification framework. Consultations proved inconclusive, with stakeholders divided as to the most appropriate outcome.

Ultimately, steering committee members were asked to consider the impact upon every workplace - from the largest to the smallest; from metropolitan to the most remote. The steering committee returned to the original project brief which stated that the framework needs to define a nationally consistent minimum standard for certification including competency requirements.

The steering committee members ultimately recognise the value of qualifications, but have recommended that the minimum standard to be applied nationally should be to require operators to undertake units of competency that are directly relevant to the operator's work and the treatment processes for which they are responsible. The proposed framework has identified these units as 'fit for purpose'.

Further to this, the framework assigns mandatory units of competency that align to the 'System Complexity Rating'. The intention here is to:

- Ensure that all operators complete the unit of competency that introduces the ADWG and risk management;
- Capture units of competency that do not directly relate to specific treatment processes, but are considered mandatory for all operators, such as sampling and reporting.

The above two points specifically support and strengthen the role of the ADWG.

### Traineeships

Drinking water suppliers are 'strongly encouraged' to offer operators an opportunity to complete a full qualification. The decision will ultimately rest with the employer and may well be influenced by the availability of funding or level of investment that can realistically be made in the skilling of the workforce.

Fortunately, all states and territories have funding available to them through the use of Australian Apprenticeships. Under this scheme, Certificates II and III have been classified as traineeships nationally.

QLD Water (the Queensland Water Directorate) has expressed particular concern about the impact of the framework upon negotiated incentives currently available to the industry. It is apparent that the state government contributes to employer incentives over and above that which is provided by the Commonwealth Government through the use of Productivity Places Program (PPP) funding; this is unique to Queensland. QLD Water asserts that employers will be worse off if they choose to enrol operators into a Certificate II or Certificate III pathway, rather than using direct entry at Certificate III level.

Current arrangements should be unaffected by the framework as long as the correct advice is provided to drinking water suppliers. The framework does not support qualifications, so

the packaging of units into skill sets or qualifications is a matter to be handled by each state and territory and each drinking water supplier.

This issue therefore becomes one of 'awareness'. It has already been suggested in this report that supporting resources need to be developed - including an implementation guide that contains case studies. This type of resource could prove valuable however, it is also suggested that individual peak bodies such as QLD Water could provide specific guidance relevant to that state. Guidance should ensure that drinking water suppliers fully utilise the flexibility of the National Water Training Package in an effort to:

- Package electives in a manner that meets the requirement of the framework and reduces any cost burden.
- Utilise 'packaging rules' that allow a number of units from higher or lower AQF levels to be imported into a chosen qualification.

## Part Five - Attaining Certification

The principle behind attaining certification is represented below and is in direct support of Element Seven of the ADWG:



Having defined competency requirements in Part Four of the proposed certification framework, a measure of capability is required.

### Capability and Experience

Workshop attendees did, in many cases, argue for additional criteria over and above the attainment of units of competency to demonstrate certification. This seemed somewhat due to the lack of confidence many water industry stakeholders have in the Vocational Education and Training Sector. Stories of ‘dodgy training’ and ‘tick and flick’ exercises needed to be addressed before they dominated the discussion.

However, even if all the RTO quality issues were to be addressed prior to the implementation of this framework, alternative training and assessment pathways are likely to impact upon the sector. For example, NSW has recently established a school-based traineeship pathway, but in the future, the impact of technology may well make it possible to train in some aspects of water treatment through institutional pathways (learning in an off-the-job environment). The most relevant example at this point in time would be the increased capacity for e-learning through the National Broadband Network (NBN) rollout.

Putting the quality of training aside, the steering committee accepted that additional criteria for certification should be ‘experience in the workplace’. The issue to be addressed in this part of the framework was how best to measure experience.

The draft framework presented to industry stakeholders for consultation made an attempt to recognise experience through the definition of a minimum period of time; this was not well received, with noteworthy points including:

- Serving a period of time within a workplace or industry should not be interpreted as being more experienced with regard to certification. In fact, a model that suggested seniority based on time-served was deemed to be dangerous and completely unacceptable by some.
- Setting a minimum timeframe for certification does not encourage lateral movement from ‘allied industries’ or professions. Examples were provided from WA and the ACT noting that:
  - fitters from process related industries made good candidates for the water industry;
  - engineers who have completed an extended period of study would be required to wait an unnecessary amount of time to be certified (at this stage of consultation, there was still a ‘responsible person’ category).

Despite the issues raised above, stakeholders were keen for a measure of confidence to exist as part of the certification entry requirements and it was suggested that the employer should be able to judge the suitability of the operator for certification. This in part reflects

the criteria stated in the Victorian Best Practice Guidelines which requires a 'suitably qualified person' to judge the suitability of the 'responsible person' for certification.

The steering committee members ultimately decided to involve an operator's employer in this part of the certification process by including a requirement for their endorsement of the operator's suitability. This has been captured as a 'capability' judgment - over and above competency.

It is intended that the certifying body would utilise an approved set of criteria for an employer to endorse. The criteria would seek to ensure that the operator is sufficiently experienced to a standard where they can be expected to perform in changing and challenging conditions.

Further to this, the steering committee advised that a minimum timeframe should still exist. This timeframe needs to be in place to ensure:

- An employer makes an informed decision about the capability of the operator.
- All certified operators will have experience inside the drinking water system. This may have less relevance now, but may well become more relevant in the future if training providers use different delivery modes that do not involve workplace learning (to the extent that currently occurs).
- In the current training environment, a minimum timeframe also provides additional assurance that the decisions regarding competency will be correct decisions and can be supported by a period of workplace performance.

## Part Six - Re-certification

The discussion surrounding Part Six of certification was predominantly focused on the need for 'further effort' on the part of the certified operator to retain certified status. The differences and intentions behind certification were identified early in Round One workshops (please refer to Section 4 of this report - Overview: The case for certification; this section introduced the differences between the commonly misunderstood terms - licensing, accreditation, qualification and certification).

The project tendered by the National Water Commission requires that a certification framework is developed. It is clear that the added assurance of 'periodic renewal' is an intended outcome that will benefit the industry far greater than simply adopting a minimum standard of qualification (which once awarded is valid for life, regardless of circumstance).

For this reason, Part Six has been founded upon the need to determine '*currency*' of competence and capability. This is inherently confrontational - particularly in environments where operators have been left to their own devices for some time. It is imperative that certification is considered to be positive - ideally being seen as a reward for demonstrating competence rather than a challenge to prove one's own worth.

There is a need to carefully introduce this component of the framework to the existing workforce, who may feel that they are being repeatedly *challenged* to demonstrate their suitability to continue working.

In light of this, the steering committee agreed on a model that allows two pathways for re-certification:

- The Professional Development (PD) Pathway
- The Audit Pathway

The pathways were proposed as a result of feedback from industry stakeholders for flexibility and rigour. Of course, the certifying body must also be considered in this equation as they too will seek to ensure that a rigorous process is employed to determine suitability for certification. After all the reputation of the certifying body's brand will also be at stake.

### Professional Development

This pathway has been developed from the current Victorian experience - and in particular, the approved certification scheme owned by the Water Industry Operators Association (WIOA).

Further consideration was given to the work completed by Barwon Water who have recently had a model of professional development approved by the Victorian Department of Health. The model was provided to the project manager and discussed at Round Two workshops. In general the ability to use operational activities to gain points was accepted by stakeholders; however some noted the administrative burden of this approach.

Ultimately, the model seems more appropriate for inclusion within Pathway Number Two of the proposed certification framework.

It is suggested that the total number of points required and the allocation of points to each activity, is closely monitored (or piloted) by the certifying body in the early stages of

implementation to ensure that the requirements provide for rigour without being overly onerous.

## **Audit**

The audit pathway was suggested by stakeholders in recognition that employers may not always be able to meet a professional development requirement. This is particularly the case in regional and remote areas. By including this pathway, the framework is able to be flexibly applied at enterprise level. It will negate:

- Difficulties in backfilling to allow operators to attend training/seminars where workforce numbers are low.
- Low training budgets that do not allow for continued professional development.
- Inability to use some of the approved activities due to the specific nature of the workplace (e.g. mentoring junior staff will not be available where there is just one operator).

Instead, it provides an opportunity to demonstrate continued meaningful engagement in an operational role through an audit process. It is here that the Barwon Water model for certification points may be used to help inform 'auditable activities'.

It should be noted that the proposed framework requires the audit to be undertaken by an independent person approved by the certifying body. This condition should be put in place to ensure:

- That the judgement of the auditor is not compromised (actual or perceived);
- That the audit is of a rigorous nature;
- A reduced cost to industry - allowing operational workers within industry to perform auditing roles rather than requiring experts to be contracted by the certifying body.

The development of a tool to audit the industry is to be developed by the certifying body upon implementation.

## **Current employment condition**

Finally, the requirement for an operator to be currently employed when applying for certification was questioned in some consultation workshops. It was considered that there is value in allowing operators who are not currently in an operational role to maintain their certification status. This was perceived to be an aid in attracting workers back into operational roles and could involve regular communication from the certifying body to maintain their interest in the treatment role. References were made to engineers and nurses who are able to retain certification if professional development requirements are met.

The steering committee was presented with this question, but agreed that certification should be limited to operators who are currently employed. By retaining this condition, the steering committee is of the opinion that the current criteria and categories for certification will allow operators to enter and leave the industry with relative ease. The adoption of 'active' and 'inactive' categories for certification can be interpreted to mean that the operator never loses certification status - they simply become inactive for a period of time.

Communication can still be sent to inactive operators, at which time prompts to keep contact details updated can be made, along with any employment news for the sector.

Ultimately, continued engagement with inactive operators will again come down to the value that is assigned to the certification scheme.

## Part Seven - Certification Status

The adoption of 'active' and 'inactive' status for certified operators would allow the certifying body to manage entry and exit from the framework in a positive manner. Effectively, an operator will never lose certification status but may experience periods of inactivity (unless certification is revoked for serious circumstances).

These classes reflect the often positive reasons why operators would need to move outside of 'active' certification - whether for a period of time or permanently. It is proposed that the use of this terminology will provide a positive approach to dealing with issues such as extended leave, maternity leave, rotations to different disciplines in the water sector or development to higher levels of employment.

Furthermore, records of inactive operators can be maintained which may have a positive effect on future engagement with the water industry including the ability to provide messages about employment or growth within the sector to these operators.

It has also been necessary to include a 'revoked' status for certified operators. This has been included due to stakeholder feedback suggesting this status is needed to inform the certifying body if an operator is dismissed for a serious issue. The steering committee agreed with this notion; there would otherwise be a risk of operators seeking alternative employment with valid certification (either active or inactive) if the 'revoked' status does not exist.

## Part Eight - Certification Management

Part eight provides the final link to the ADWG in relation to the requirement for proper administration and records management - ensuring that adequate records are generated and retained to provide assurance and accountability of the certifying body's practices to the industry.

Importantly this section also requires that the certifying body maintain a distance from other stakeholders in the water industry to ensure that there are no potential conflicts of interest. Therefore, the certifying body is not to be a provider of nationally recognised training (an RTO, in partnership with an RTO or on a board of governance), or a state or territory regulator or drinking water supplier.

Furthermore, it is important to outline the necessity for an appeals process to be documented and available in the event that stakeholders are dissatisfied with the process or outcome of a particular certification application.

## 6 Governance and Administration

Consultation workshop attendees were asked to consider whether certification should be an internal self-certification process or be administered by a third party. Opinions were divided, but could not be separated into categories (e.g. it cannot be said that all large utilities preferred self-certification or all remote providers preferred third party certification).

Arguments for and against third-party certification included:

- Third party certification would provide quality assurance and independence to consumers, industry and regulators.
- A third party would provide value to certification - as long as the organisation was respected within the industry.
- A third party organisation needs to be identified and funded; this may be costly to industry.

Self-certification was considered in the following light:

- Self-certification may be less valued because there is no consistent credibility attached to the framework. Certified Operators would receive a credential issued by their own employer which may provide less cohesion and lack a perception that industry is moving to a new nationally consistent standard in training and professional development.
- Self-certification may be perceived to be less portable as operators would need to re-certify for each facility/drinking water provider.
- Self-certification requires drinking water suppliers to implement sustainable systems to identify, record and manage certification in-house. This could lead to an large amount of individual and repeated effort across Australia.
- There may be particular issues in regional NSW and QLD or in other industries that treat their own water (such as mining and hospitality) where the provision of drinking water is not their sole business. In such cases, it was considered that other business pressures and priorities might gain higher recognition and influence the effectiveness of certification.

Steering committee members agreed with the need for third party governance of the framework to ensure it is a valuable and comprehensive national framework that is removed from enterprise pressures.

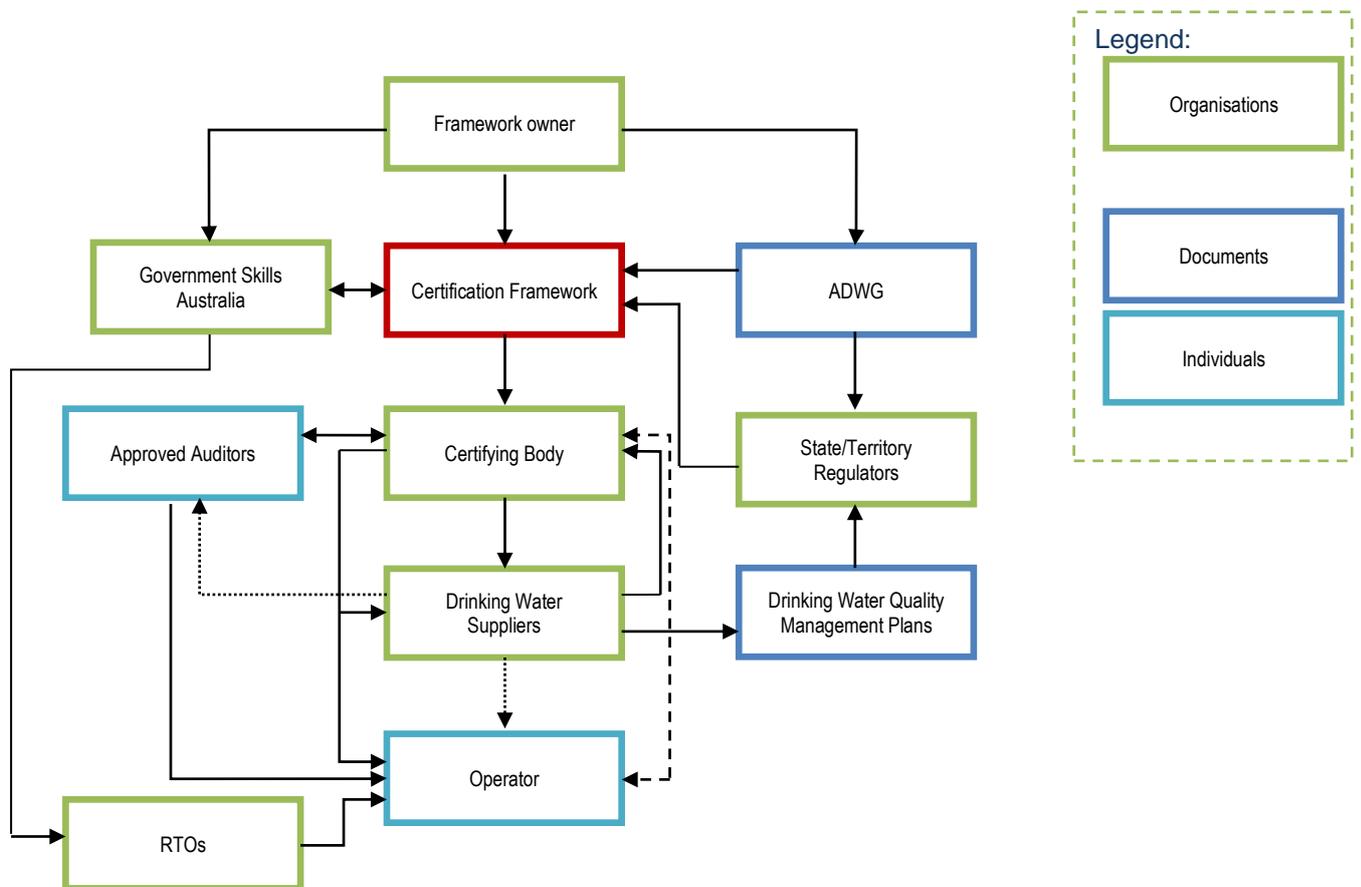
### RECOMMENDATION 6:

An independent certification body is adopted over a self-certification model to ensure integrity, consistency and national portability.

## Ownership and Interaction

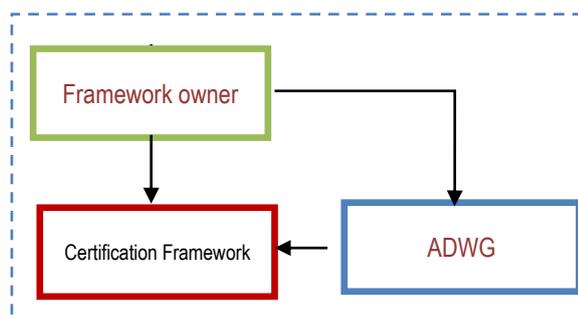
The following chart identifies the key components of the certification framework, including the proposed owner and the interaction that will occur between each component of the framework.

The chart is discussed in more detail below; each component and section of the chart is broken down to fully explain the intention of the project steering committee and the interaction between each component.



## Commonwealth Government

The steering committee suggests that the Commonwealth Government assigns the owner of the certification framework independent of the certifying body. The Commonwealth may consider the following as appropriate owners of the certification framework:



- **The National Health and Medical Research Council (NHMRC):** The NHMRC is the current owner of the ADWG. Given the relationship between the proposed framework and the Guidelines, the NHMRC is an obvious host.
- **The Department of Sustainability, Environment, Water, Population and Communities (SEWPaC):** This Commonwealth department deals with water policy and resources as a component of its wider responsibilities.
- **The National Water Commission:** An entity existing within SEWPaC, the NWC may be well placed to directly oversee ownership of the proposed framework.

It is proposed that the owner of the certification framework will be responsible for:

- Developing a tender for identification of an appropriate certifying body.
- Approving/endorsing the proposed framework and future amendments.
- Approving any tools that complement the framework such as an audit tool.
- Ensuring the framework is subject to regular review.

### RECOMMENDATION 7:

The certification framework owner is clearly assigned and independent of the certifying body.

## The ADWG

The ADWG are an integral resource for the management of drinking water in Australia. The strength of the ADWG continues to grow as more states and territories legislate compliance to these guidelines. The proposed framework draws from the ADWG in relation to:

- Defining the scope of the certification framework; where ever possible, titles and definitions have been sourced directly from the ADWG or align to terminology used within the guidelines.
- Requiring drinking water suppliers to categorise drinking water treatment systems in accordance with state and territory regulatory requirements. As already stated, the ADWG have gained in strength through the inclusion in legislation across Australian jurisdictions.
- Identification and requiring initial and continuing training and development, in direct support of Element Seven of the ADWG.

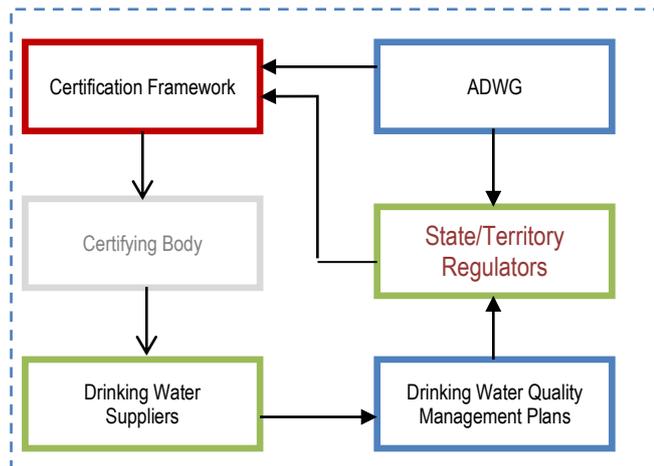
## The Regulators

The certification framework builds upon the existing activities and strengths of the regulatory arrangements in each state and territory.

State and territory regulators engage with drinking water providers to determine drinking water system complexity. The requirements stated within Part Two of the framework require that the methodology

approved by the relevant state or territory public health regulator must be utilised. It is envisaged that the information currently reported to public health regulators through drinking water quality management plans (or similar documents) will be used for the purposes of this framework. This will ensure that conditions and risks to be considered are appropriate to locality.

State and territory regulators will inherently remain an integral part of the administration and review of the certification framework.

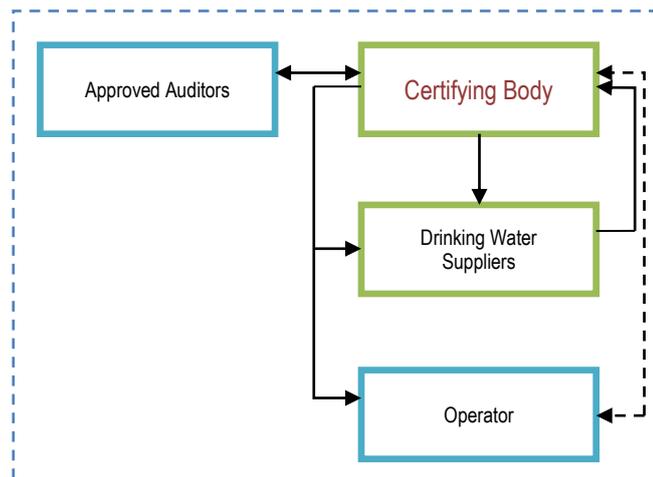


### RECOMMENDATION 8:

State and territory regulators should determine the method for categorising the complexity of a Drinking Water Treatment System in accordance with Part Two of the proposed certification framework.

## The Certifying Body

The certifying body will need to be identified by the owner of the certification framework. There are a number of issues for the framework owner to consider in the appointment of a certifying body. It is proposed that a tender process is instigated with defined criteria to establish the applicant's credibility within the water industry.



It is recommended that the certifying body is formed within an existing or new industry peak body or association. Issues that should be considered in the identification of a certifying body include:

- The proposed framework has been founded on a third-party model, rather than self-certification.
- Can the certifying body be identified at state and territory level or exist at national level. Industry feedback clearly identified that a national certification body is preferred.
- It could be considered a conflict of interest for the certifying body to be involved in the provision of training within the VET sector.

It is proposed that the certifying body will be responsible for the following:

- Accepting advice from (and liaising with) drinking water suppliers in relation to system complexity ratings and treatment processes/tasks applicable to the site.
- Issuing credentials to operators.
- Liaising with Drinking Water Suppliers and operators in relation to process questions and the identification of changes to operator certification status.
- Approving auditors to undertake audits for re-certification of operators.
- Receiving, processing and endorsing the outcomes of audits for re-certification.
- Accepting, managing and resolving appeals from Drinking Water Suppliers and operators

#### RECOMMENDATION 9:

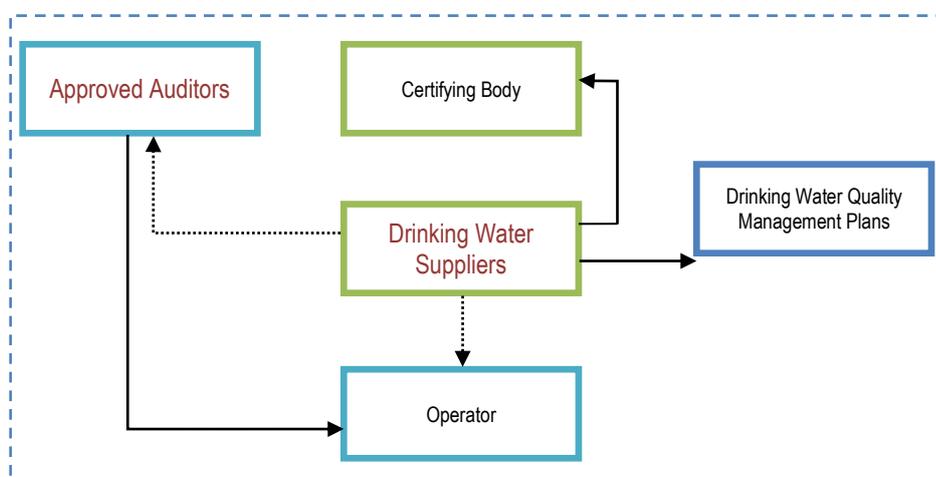
The certifying body is appointed by the framework owner through a tender process that will establish the credibility and suitability of the applicant to:

- Remain impartial and ensure that conflicts of interest are avoided.
- Operate at a national level.

#### Approved Auditors

The certification framework provides two pathways for re-certification. Pathway Number Two involves the conduct of an audit by independently approved auditors.

It is proposed that, in order to keep costs to a minimum, the auditors



are sourced from within drinking water suppliers where ever possible. It should be noted that the proposed framework requires auditors to be independent. In practicality, this may be interpreted by the certifying body to mean:

- The auditor does not work for the same drinking water supplier as the operator that is to be audited.
- The auditor is not at the same facility as the operator to be audited.
- The auditor is not from within the same work-team as the operator to be auditor.

It is clear that the auditor should not be a direct supervisor, however the certifying body may apply a scenario that is best reflected and accepted by the water industry at the time of implementation.

It is proposed that independent auditors shall:

- Perform audits on certified operators using an audit tool approved by the certification framework owner and provided by the certifying body.
- Provide reports to the certifying body identifying true and accurate audit results.

### Drinking Water Suppliers

The drinking water supplier shall:

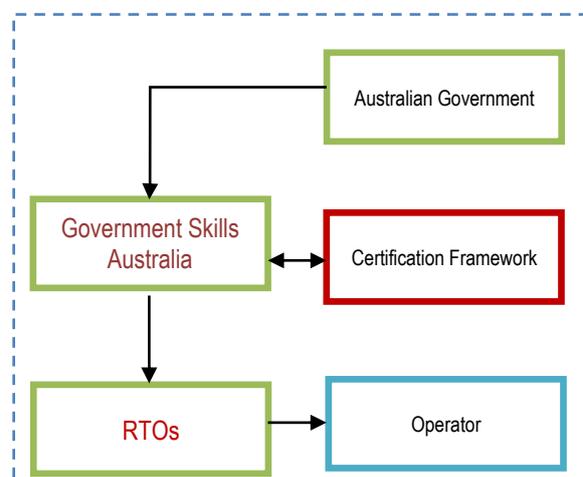
- complete the ‘System Complexity Rating’ endorsed by the state or territory regulator and provide a copy of this to the certifying body for record purposes.
- Ensure that the certifying body is informed of any changes to the treatment processes and tasks required at particular sites.
- Ensure operators are provided with reasonable opportunity to undertake training and/or assessment to attain the relevant units of competency as defined within the proposed framework.
- Provide endorsement of an operator’s capability through the completion of a process to be endorsed by the owner of the certification framework and administered through the certifying body.
- Manage the certified operator to ensure that competencies and capabilities are maintained.
- Inform the certifying body of changes relating to a certified operator’s employment status, including when employment is terminated for a serious technical breach.

### The VET Sector

Finally, it is prudent to highlight the relationship that the water sector has with the Vocational Education and Training Sector.

Government Skills Australia is an Industry Skills Council funded by the Australian Government to represent VET and workforce interests of a number of industries including the water industry.

GSA maintains and develops the National



Water Industry Training Package (currently the NWP07) which contains the qualifications, competency standards and assessment guidelines developed by the water industry.

The competency standards are integral to defining the skills and knowledge requirements of a certified operator; this forms the basis for Part Four and Appendix C of the proposed framework.

The proposed framework will also have a driving effect on the continuous improvement of the National Water Industry Training Package. Already, there have been lengthy discussions regarding the need for units of competency at various AQF levels to recognise skills and knowledge - particularly in relation to risk management and application of the ADWG.

The relationship between the proposed certification framework and the National Water Industry Training Package is a positive step in providing evidence for the continuous improvement of both documents.

Finally, RTOs will also play an integral role in the delivery of units of competency and qualifications to operators in the drinking water treatment system. RTOs are responsible for issuing the qualifications and statements of attainment which will be recognised by the certifying body as evidence of competency.

It should be noted that the chart of stakeholders has been purposely narrowed to only the key organisations directly involved in the process of certification. A large number of other organisations exist that are able to support drinking water suppliers and RTOs; these organisations are identified in the next section.

## 7 Implementation

### Barriers

Throughout the consultation period the following issues were consistently raised by stakeholders and will need to be addressed during the implementation phase.

#### Recognition for the Existing Workforce

Workshop participants were asked to comment on the best strategy to implement a certification framework. The appropriateness of a grandfather clause was raised as a particular concern.

For just a few stakeholders, natural attrition was determined to be an effective ‘transition tool’ that would result in a qualified workforce within a period of years. However, industry largely voiced disapproval of a strategy that includes a grandfather clause which excludes existing workers from having to comply. Such a strategy was considered to leave significant risk and opportunity for criticism to be leveled in the event of a breach in public health. The Walkerton incident is a case that remains fresh in the minds of stakeholders. Marketing a requirement to recognise the existing workforce for their skills would be well supported if a connection is made to the Walkerton incident and other lesser known incidents in Australia.

Steering committee members also agreed that existing workers should be required to comply with the proposed certification framework. This strategy will require careful management and communication to the existing workforce to ensure that experienced operators do not feel devalued or challenged.

#### RECOMMENDATION 10:

At time of implementation, the existing workforce will be required to comply with the requirements of this framework. A grandfather clause is not appropriate.

#### RTO capacity - Access to Training

The water industry accesses the following forms of training for initial skilling of operators:

- Internal Training - where skills are learnt from existing operators and supervisors with varying levels of formality (from informal to induction programs).
- Unaccredited External Training - from external commercial training providers.
- Nationally Recognised Training - delivered either internally through an ‘enterprise RTO’ arrangement or through an external provider (private and publicly funded RTOs).

This proposed framework requires that competencies are recognised through the award of units of competencies from the National Water Industry Training Package.

Currently there are 25 RTOs scoped to deliver the Certificate II, III or IV from the NWP07 (the current National Water Industry Training Package). Despite an apparent high number of RTOs, GSA advises that:

- Some are not active in the water industry and may not have current delivery and assessment materials.
- Delivery of the Certificate IV is very limited, despite 14 that are currently scoped for delivery.
- Seven of the RTOs are NSW based TAFE colleges.

It is also worth noting that some RTOs provide training and delivery services across states and territories. The state of origin has been identified in the table below:

RTO	State of Origin	Qualifications	RTO	State of Origin	Qualifications
Central Institute of Technology / Challenger Institute of Technology	WA	II/III	Skillset	NSW	II/III/IV
South West Institute	WA	II	Illawarra TAFE	NSW	II/III/IV
TAFESA	SA	II/III/IV	North Coast TAFE	NSW	II/III/IV
Chisholm Institute of TAFE	VIC	II/III	OTEN	NSW	III
Goulbourn Murray Rural Water Corporation	VIC	II/III/IV	Riverina Institute	NSW	III/IV
University of Ballarat	VIC	II/III	South Western Sydney Institute	NSW	II/III/IV
Wide Bay TAFE	VIC	II/III/IV	Western Institute	NSW	II/III/IV
Water Industry Training Centre	VIC	II/III/IV	Riverina Community College	NSW	II/III
Water Training Australia	VIC	II/III/IV	Hunter Institute TAFE	NSW	II/III/IV
QLD Urban	QLD	II/III/IV	Tasmanian Skills	TAS	II/III

Utilities			Institute		
Enviro Check Enterprises	QLD	II/III	Australian Employment Services	TAS	II/III
Simmonds and Bristow	QLD	II/III/IV			

Despite what appears to be a reasonable number of RTOs scoped to deliver NWP07 across Australia, stakeholders have consistently stated that there are issues accessing training in a timely manner. Operators in regional and remote areas will likely be most disadvantaged when attempting to access training from NWP07, however all operators may suffer from a lack of training availability as RTOs currently engaged in the industry suffer capacity constraints.

In some states RTOs work directly with the major utility to facilitate the training and assessment process. For instance, in WA both Challenger and Central Institutes of Technology (TAFEs) provided one lecturer each to work directly within the Water Corporation. Accordingly, the capacity for training delivery in Perth appears to be greater than it is in reality.

During the consultation period, stakeholders from RTOs expressed a keen desire to meet industry expectations and requirements. Capacity has also recently increased since the announcement by the AWA of their partnership with Opus to provide delivery for Certificate II, III and IV qualifications.

It should also be noted that the Certificate IV in Water Operations has limited uptake within industry. This has resulted in a limited number of RTOs delivering this qualification at this point in time.

GSA is also embarking on a new project to survey RTOs and industry nationally to gather training and assessment demand/capacity needs.

### **Trainers and Assessors**

Depending on the delivery mode, trainers and assessors may need to be in a position to travel to regional areas on a regular basis and/or be knowledgeable and skilled in the deployment of e-learning strategies.

It must be noted that the VET sector suffers the same barriers to attract and retain quality staff as other industries experience. Training has also been a valid option for those with industry expertise to exit 'frontline' activities. For this reason, the VET workforce is also facing a considerable challenge as lecturers/trainers near retirement age and exit the workforce.

Furthermore, existing RTO staff have experienced an enormous amount of change in recent years. Changes experienced across Australia include:

- Continuous improvement of training packages - including current plans to completely revise the format of training packages.
- Increasing expectations from industry to provide customised training solutions.
- Increasing expectations from students to be recognised for their ability to attain competency in their own time.
- Development and piloting of new models of public funding.
- Increasing pressure on publicly funded RTOs to source more commercial revenue (with an inherent reduction in public funds provided).
- Changes to national and state/territory policies that govern the delivery of Australian Apprenticeships (including Traineeships). Changes to apprenticeship policies often encapsulate all of the above bullet points - requiring employment-based training to transition away from a 'time-served' approach.

## Alternative Delivery Modes

RTOs are continually under pressure to meet individual needs by utilising delivery modes that shift away from normal convention. Most recently, lecturers and trainers have been required to develop into ‘case managers’ - facilitating rather than delivering learning.

Other delivery modes that are being increasingly required include project based learning, workplace training and e-learning. Most importantly, access to a workplace, the existing skills and knowledge of the learner, and the strengths and preferred learning styles of individuals are of highest priority when RTOs determine the most relevant learning strategy.

Examples of alternative delivery:

- E-Learning, project based, self paced, on-the-job
- Portfolios, recordings, photographs

Whilst the move to alternative delivery modes has been raised as a barrier, it is also an obvious solution to address training access issues. The difficulty with this approach is two-fold:

- The effect on RTO staff; mentioned above under ‘Trainers and Assessors’, lecturers are being asked to move to a new method of training delivery that requires a new set of skills. RTO managers are also under pressure to find delivery modes that are not dependent upon optimal class sizes and that generally balance the needs for individuals to pace their own learning with the cost of lecturers’ time.
- Water industry stakeholders (and even lecturers inside of RTOs) often view the development of alternative delivery modes as a reduction in the quality of learning. This is discussed in greater detail below.

## Quality delivery and assessment practices/resources

Training providers currently delivering to the water industry should be sufficiently resourced to continue engagement with the sector providing student numbers remain similar. Of course, there is an expectation that the implementation of this framework will result in an increased demand for training and assessment services within the water industry.

There are numerous examples of training providers and drinking water suppliers working collaboratively to produce high quality strategies for workforce development. However, many stakeholders complained during the consultation sessions that the quality of training and assessment varied considerably with many having had poor RTO experiences.

From an RTO perspective, there has been a discussion that highlights the industry’s pressure for cost-neutral training. In other words, drinking water suppliers wish to keep the cost of delivery down to a level that matches incentives and subsidies provided generally by state and territory governments through traineeship arrangements. It has been argued that this led to RTOs offering a basic product in some circumstances and an unwillingness to invest in raising quality as the additional cost to the RTO would be difficult to pass on to a resistant water sector.

An impression was gained from stakeholders that there was mistrust of RTOs that promoted the speed at which learning could be completed or the use of alternative delivery modes. This is an unfortunate situation suggests RTOs are being encouraged to explore and innovate to find alternative and individual learning strategies. However industry

stakeholders are wary to adopt new methods of training because they only have past experience as a guide for its effectiveness.

Where resources do not exist, the production of materials that are high quality and meet the quality assurance requirements of RTOs is a costly exercise and requires extensive validation with industry to ensure quality and reliability of the learning process.

### **Recognition of Prior Learning (RPL)**

RPL is an 'assessment only' pathway used by RTOs to recognise the existing competencies of an applicant. This pathway is often misunderstood and criticised across many industries. It is also true to say that RTOs have historically struggled with the concept which has led to a great degree of variability in quality and rigor.

The 'tick and flick' exercise has attracted an enormous amount of funding and been the subject of many presentations in VET circles over recent years, predominantly to raise awareness of the RPL process and correct the practices of some RTOs. Funding specifically for RPL appears to have dried up, however the strategy is now embedded as a component of an individual learning plan and can justifiably be included in workforce development strategies which now attract different sources of funding.

The development of quality RPL strategies and tools will be critical to the successful implementation of the framework as this aspect will potentially be the most scrutinised. It will likely be the first assessment event experienced by the water industry and will be undertaken by some of the industries oldest (and hardest to win over) operators.

It is suggested 'RPL' is a phrase that should not be referred to amongst water industry stakeholders (either directly or when making a comparison of these assessment events). In short, it is a brand that has suffered too much to address in a short period of time.

The exercise must be addressed from a positive viewpoint; RPL must not challenge the operator to prove competency but must recognise existing skills and knowledge.

### **Language, Literacy and Numeracy (LLN)**

Stakeholders have raised concerns in addressing LLN deficiencies in some sectors of the workforce. These skills are sometimes referred to as core skills or foundation skills. The issue is applicable across many geographic areas, but is most concentrated in regional and remote areas. There is anecdotal evidence from the consultation workshops that this is either due to general low levels of LLN skills in the community (regional and remote) and/or that applicants are not 'attracted' to the industry because of its profile. In other words, lower skilled people apply for these jobs in regional or remote areas as higher skills people are not generally attracted to work in these areas.

Interestingly, low levels of LLN skills do not appear to impact on performance in the workplace, as supervisors who participated in workshops during Round One and Two keenly highlighted. However, the same supervisors noted that the ability for operators to undertake training and development exercises (particularly if this involves 'classroom' style activities) was seriously affected.

Given that feedback from supervisors identified that operators with LLN deficiencies were more than capable in the workforce, the focus turns to RTOs to be innovative and flexible when designing learning and assessment strategies.

Therefore, the most important aspect to address with RTOs will be to align the level of LLN skills required in the delivery and assessment of training to an equal level expected in the workplace. This principle is expressed in the Australian Quality Training Framework (AQTF), which requires RTOs to develop strategies with 'access and equity', as a condition for compliance. In the VET environment, it is not uncommon to hear RTO staff complain that students do not possess the level of LLN skills required to complete the training - but if it can be demonstrated that the level is inconsistent with that expected in the workplace then the RTO must consider redesigning its learning and assessment activities.

### **Cost of Training and Assessment**

In current economic conditions, many organisations look to cost efficiency measures to increase the profitability or sustainability of a business. This is obviously applicable to the water sector - for both public and private drinking water suppliers. The water sector is also experiencing pressures in relation to the cost of service delivery due to changing climatic conditions, increasing the diversity of water sources, changing expectations from regulators and communities. In some cases, governments are addressing the gap between service cost and fees charged, after many years of leaving public rates static despite heightening costs.

The cost of training issue may be exacerbated in regional areas of Australia where the drinking water supply system (or part thereof) is the responsibility of an entity which performs multiple roles - such as a local government, mining operation or resort. For these entities, there are additional cost pressures that must be managed and prioritised in accordance with all aspects of the business. Workshop participants in some regions expressed difficulty when negotiating training requirements for operators with human resource staff in local governments.

Where cost pressures are evident within an organisation, training budgets are an easy target in an exercise aimed at increasing efficiency. For this reason, investment in training may be narrowed to regulatory and compliance training.

Advice received during consultation confirmed that the cost of training is a highly variable figure and will depend on:

- Geographic location of the drinking water supplier and the RTO.
- Delivery methodology used - e.g. high costs might be involved for a trainer to attend a workplace onsite.
- Numbers of participants - as off-the-job training will be most effective with a critical number of learners. This can range from about 10-15 students and will depend on the competency to be trained and the nominal hours associated with that competency (if publicly funded training).
- Resource costs - this will vary depending on the unit of competency being delivered.
- Packaging - where similar units of competency might be delivered together to provide greater context and efficiencies.

Direct costings are obviously a sensitive issue. Stakeholders provided figures that have been de-identified below (please note that government incentives at state and commonwealth levels have not been considered here):

- A base cost of \$2,500 per qualification at Certificate II or III level, plus all oncosts such as travel and accommodation for lecturers, resources, etc. A realistic figure might start at approximately \$4000 per qualification.
- Between \$6,000-\$8,000 depending upon class sizes and delivery modes.
- Approximately \$6,000 for a Certificate III qualification.
- Approximately \$15,000 for a Certificate III or \$20,000 for a Certificate IV.
- Approximately \$10,000-\$11,000 for regional or remote delivery that includes additional LLN support.
- In Queensland, industry has identified a figure between \$4000 for a Certificate II and \$9,000 for direct entry into a Certificate III. Where an employer chooses to enrol the operator in a pathway that starts at Certificate II and ends with completion of a Certificate III, the cost is significantly higher - being in the range of \$9,000 to \$16,000.

It is noted however, that most drinking water suppliers already provide training and assessment to their operators and the take-up of qualifications (at Certificate II and III) appears to be relatively high. In other words, the competency requirements stated in this framework should not increase costs of *training* for many within the drinking water industry - but should simply ensure training and assessment is directly relevant to the drinking water supply system.

By way of example, discussions with the NSW Public Sector ITAB support the high level of qualification take-up within industry. A representative sample provided by this ITAB reported that a large number of operators had already attained a Certificate III. Of those that remain, most had undertaken training through the New South Wales Office of Water which will lead to the ability to use a strategy that includes a large amount of RPL.

Of course, the cost of training should not be confused with the cost of certification. This is addressed in Section Eight of this report under the heading 'cost structures'.

Finally, it is also prudent to note the changing policy landscape in the VET industry. All states are working well toward a change in the funding of training. This has been strengthened by the announcement on the 19<sup>th</sup> March 2012 by the Prime Minister of the proposal to be put to COAG that will provide subsidised training places for all Australians from post-school to pension age for their first Certificate III and a proposal for interest free loans for VET training at Diploma and Advanced Diploma levels. At the time of implementation for this proposed framework, the industry will need to be informed of the current funding arrangements applicable nationally and at state/territory levels.

### **Backfilling**

The ability for drinking water suppliers to release operators from their duties is also a major issue that needs to be considered. Again, this issue is largely felt in regional and remote areas where the drinking water supply system may be controlled by just one operator.

The inability to backfill water operators restricts the ability for these organisations to offer professional development - particularly if it involves travel to a larger regional centre or metropolitan area for off-the-job delivery.

## Amending and mapping systems

Where drinking water providers are already providing development opportunities to operators (both at initial employment stage and through a professional development program), there will be a need to review their arrangements.

This will obviously incur a cost to the drinking water supplier who may need to:

- Map existing levels of competencies to the requirements of the proposed national certification framework.
- Adjust records and databases to accurately record professional development activities
- Negotiate new arrangements with training providers (including RTOs) where there are differences between current arrangements and those proposed in the certification framework.

Stakeholders in Victoria are presented with a different scenario as VIC Water members have already commenced compliance arrangements with the Victorian Best Practice Guidelines managed by the Department of Health. There will be some obvious anxiety for these stakeholders who may fear conflicting national and state requirements. The main issues to address will be:

- The alignment of existing public health levels (2,3 and 4) to the Low, Medium and High system complexity ratings used in the proposed certification framework. It is anticipated that this should be carried out by the Public Health department and would not be an onerous exercise, particularly as Part 2 of the framework requires state and territory regulators to own and develop the rating exercise.
- The Victorian Best Practice Guidelines only requires 'Responsible Persons' of a Level 3 or 4 facility to be certified. This will necessitate a broadening of existing professional development structures and activities to all operators within the drinking water treatment system.

## Strategies to Overcome Barriers

### Communication and Negotiation

Success of the national certification framework will be contingent upon cultural acceptance in both the water industry and VET sector.

### Discussion with industry

Industry will need to understand the importance of their role in delivering training - particularly with regard to providing connections between RTO's off-the-job learning programs with on-the-job tasks that support learning. Advice and case studies demonstrating this positive approach to up-skilling should be provided to industry as part of a communication strategy. Existing case studies include:

- The clever approach used by Southern Water to access multiple funding sources and negotiate with RTOs in relation to delivery costs. This approach not only funded existing delivery of training but also built a sustainable training commitment that is now funded well into the future.
- QLD Water have negotiated top level state funding through traineeship arrangements which can result in a drinking water provider profiting from developing their staff (assuming direct entry at Certificate III level).

Finally, industry must be better informed about RPL and alternative delivery strategies in order to break down existing resistance to it and the mistrust that is entrenched in the minds of stakeholders.

### **Discussion with RTOs**

RTOs should be encouraged to negotiate training plans as much as possible with their clients. Issues regarding quality, rigor and consistency must be tactfully raised with RTOs to encourage innovation and continuous improvement within the VET sector.

RTOs may also need to have honest discussions with industry regarding the ability of some operators to cope with a learning program - particularly where LLN is an issue. Responsibility for the success of an operator in a training program for certification should rest with all three stakeholders - the learner, the enterprise and the RTO.

### **Collaboration in Local Government**

The local government sector provides some of the greatest challenges (due to the geographic location, diversity and small workforce sizes per council). However, this sector also benefits from very constructive collaborative and support arrangements that must be utilised to ensure the successful implementation of this framework. These arrangements include:

- Regional Organisations of Councils (ROCs)
- The NSW Office of Water
- NSW and QLD Water Directorates.

The existence of these organisations allows greater ability to:

- Collectively negotiate RTO fees through economy of scale.
- Collaboratively apply for specific workforce development or training funding.
- Access networks that can provide relief for operators to enable staff to be released from the workplace for training.
- Provide opportunities for external mentoring, professional development or support arrangements. This may be particularly relevant where a drinking water supplier is unable to employ a certified operator for a period of time. Formal arrangements can be managed and reported to state regulators to demonstrate that the risks to public health are being managed.

### **Support by other Stakeholders**

Peak associations within the water industry may be able to assist with transitioning to the proposed certification framework. These organisations may be able to offer support as indicated above and be better positioned to offer advice and support to assist implementation for both RTOs and drinking water providers. Organisations include:

- Government Skills Australia - the organisation responsible for the Water Training Package and in a strong position to offer guidance to industry in relation to workforce planning and access to national funding made available by the Australian Government. Through close and continued engagement with GSA, the proposed framework will also drive continuous improvement of the Water Training Package.

- VIC Water - the peak water industry association in Victoria that assists the industry to implement government policies. It also operates as the Victorian ITAB and is well positioned to connect RTOs with industry and drive change.
- State and Territory ITABS - The NSW Public Sector ITAB, VIC Water (mentioned above), the Major Industries Training Advisory Council (NT), the Electrical, Utilities and Public Administration Training Council (EUPA, WA) all provide industry training advisory services to the water industry in their respective states and territories. The Tasmanian State Training Authority also provides some functions associated with an ITAB for the water industry in their state. These organisations are well placed to connect and facilitate innovative partnerships between RTOs and industry as they are respected for their knowledge and connections within both the industry and VET sectors.

The NSW Public Sector ITAB warrants a specific mention, having established a state-based Water Trainers and Assessors Network. The network has, amongst other things, provided a valuable increase in the capacity of the water sector to train and assess its own staff in collaboration with RTOs. The network has been recognised by a peak national association who plans to take the network to a national level.

- The Australian Water Association - a national peak water industry association who have recently entered into a partnership arrangement with OPUS to establish an RTO that will expand the capacity of the VET sector in offering water industry qualifications.
- The Water Industry Operators Association - a peak water association that has been an integral part of the establishment of the Victorian Best Practice Guidelines and owns a certification scheme that is approved in that arrangement.
- The Water Services Association of Australia - a peak water industry association that, amongst other projects is currently seeking to take the NSW Water Trainer and Assessors Network further and ensure that occupations are better reflected in the Australian and New Zealand Standards Classification of Occupations (ANZSCO); it is hoped this will raise the profile of the water industry and enable organisations to attract more funding.

## **The Certifying Body**

The certifying body must be resourced to provide significant support to industry throughout implementation of the certification framework, and work to ensure that its value and integrity is maintained. During consultation workshops, the following tasks were suggested as key work for the certifying body:

- The development of tools to assist drinking water suppliers to determine competency requirements. This may take the form of an online tool that allows drinking water suppliers to identify their complexity rating and applicable treatment processes, ensuring that all applicable units of competency are brought to the attention of the decision-maker within the drinking water supplier.
- The development of a brand for the certification framework. The brand must reflect the intent of the framework, which is to provide assurance to the community, regulators and employers, that operators are skilled and capable. It must also raise the profile of the industry to ensure value is attached to certified status. Actions to establish the brand will include effective public relations, delivery of quality products and systems as well as a professional presence through its public shop front (a website at the very least).

The certifying body may also be in a position to offer grants or direct assistance to some sectors of the water industry if funds collected result in a surplus for the organisation.

## Recognising/Approving RTOs

Suggestions have been raised in relation to speeding up the process of raising the quality of training delivery and assessment. Suggestions include:

- Liaising with the national VET regulatory body (and State regulatory bodies in Victoria and Western Australia) to conduct a strategic industry audit of RTOs with NWP07 Water Industry Training Package qualifications/units of competency on scope. Judgements of quality will be measured against the Australian Quality Training Framework.
- Forming a 'Preferred Provider' list; the certifying body may provide a quality assurance role by publishing preferred RTOs. The level of formality will need to be judged, ranging from the ability for industry to share positive experiences about engagement with RTOs (in a forum or similar) through to establishing stringent quality measures that are collected from RTOs. Similar models can be found such as the 'Pink Slip' approach used by EE-Oz Industry Skills Council.

## Funding Assistance

VET funding arrangements are constantly changing. Presently, Australian Government Productivity Places Program (PPP) funding is being phased-out in some states and territories. The fluid nature of funding complicates some of the discussion, however the following are raised:

### Skills Connect

Australian Government assistance is contained within the 'Skills Connect' framework. This is a new service designed to help link eligible Australian enterprises with a range of skills and workforce development programs and funding. Please refer to [www.skills.gov.au/SkillsConnect](http://www.skills.gov.au/SkillsConnect) for full details regarding eligibility. The framework currently includes:

### The Workforce Development Fund

This is a \$558 million commitment by the Australian Government over four years. The fund requires that industry co-contributes to the funded training on a scale that aligns to the size of the workforce. For smaller regional/remote drinking water suppliers, it could be expected that a co-contribution between 25-50% of the total costs would be required.

Under this Fund, enterprises can identify their current and future business and workforce development needs and apply for Government funding to support the training of existing workers and new workers in the area of need. The Fund helps eligible organisations to increase the capacity of the workforce by providing existing workers and new workers with the opportunity to enhance their skill levels through formal training. It also helps increase the supply of labour and skills in sectors and occupations where there is a current or emerging skills need.

It is noted that this funding is available for qualifications or 'training package skill sets'. The proposed certification scheme does not require full qualifications, although this is obviously a choice for the drinking water supplier to make. If the drinking water supplier wishes to offer selected units of competency only, this fund is currently not available. To address eligibility, GSA will need to formulate skill sets within the training package itself so that applications for this fund can be made.

Applications will generally fair better where it can be shown that the industry is suffering as a result of the labour squeeze generated by the resources sector. It is suggested the drinking water industry be promoted as an ‘enabler’ to all other industries including general growth and expansion of communities which will support the wider economy.

Finally, Phase 3 rollout (discussed in the final component of this report) suggests that allied industries are included in the scope of the framework. Phase 3 specifically covers drinking water providers in the mining and hospitality sectors. These industries are a particular focus for the Workforce Development Fund recognising the pressures, growth and structural reform that is being experienced.

### **Workplace English Language and Literacy Program (WELL)**

The Workplace English Language and Literacy (WELL) Program helps an organisation train workers in reading, writing and numeracy skills. It also helps Indigenous Employment Program (IEP) participants who need reading, writing and numeracy training.

WELL funding is an obvious choice to address language, literacy and numeracy skills. It is available for employers, partnering with a training organisation, to provide reading, writing and numeracy training linked to job-related workplace training.

The workplace training undertaken is specifically tailored to the workforce development needs of the employer and the learning needs of the workers. The workplace training is usually made up of several units of competency sourced from a nationally recognised training package.

Funding is available on a competitive grants basis and involves a co-contribution by the industry employer - commencing typically at 25% but may be as much as 50% where WELL training is delivered for a second or third year.

### **Accelerated Australian Apprenticeships Initiative**

This initiative is mentioned as an existing source for funding, however it is understood that it is unlikely that applications would be successful given the current priorities on the delivery of training in traditional trades.

A slightly more positive statement about this fund is that it is unclear as to whether an application for this funding initiative would be successful. The fund seems to be squarely focused on the ‘traditional trades’ which involve apprenticeship delivery. Implementation of ‘Australian Apprenticeships’ is confused because most states and territories split this category into Apprenticeships and Traineeships. Presently, water industry qualifications are available through traineeship arrangements in each state and territory.

The Accelerated Australian Apprenticeships initiative supports Australian Apprentices to progress through their training as they demonstrate the required competencies, rather than on a time served basis, helping business and industry to get the *qualified tradespeople* needed as soon as possible.

Australian Government funding will be in the form of one-off grants to Industry Skills Councils, peak industry bodies or other organisation to lead projects under this initiative, working in partnership with employers, Registered Training Organisations, unions and other stakeholders. Partnerships will be required to co-invest in the project. It is proposed that GSA would be well placed to lead or support a project that would be multi-jurisdictional and sector wide

In 2011/12, approximately \$30 million is available to fund projects under the initiative.

### **Australian Apprenticeship Mentoring Program**

This fund has clear application to the water industry given feedback from stakeholders during consultation. The Australian Apprenticeships Mentoring program is targeted at industries and occupations with current or emerging skills need and Australian Apprentices who may face barriers to participation and may be at risk of withdrawing. It aims to increase the retention rates of Australian Apprentices in order to improve completion rates and support the supply of skilled workers in sectors and occupations where there is a current or emerging skills need.

Funding will support targeted mentoring to help Australian Apprentices successfully progress through their apprenticeships. Mentoring projects may also involve support for employers and supervisors in order to better support Australian Apprentices.

The Mentoring program is targeted at Australian Apprentices:

- in industries or occupations with demonstrated skills need, particularly those employed in small to medium enterprises; and
- who may face additional barriers to participation.

Australian Apprentices who may face additional barriers to participation include one or more of the following priority groups:

- Aboriginal and Torres Strait Islander Australian Apprentices;
- Australian Apprentices from regional and remote areas;
- Australian Apprentices with disability;
- Australian School based Apprentices (i.e. an Australian Apprenticeship which is undertaken part-time while the Australian Apprentice is at school);
- Female and male Australian Apprentices in non-traditional occupations;
- Australian Apprentices who have experienced long term unemployment (e.g. stream 4 under Job Services Australia classification);
- Australian Apprentices who are mature workers (e.g. those aged 45 years and older);
- Australian Apprentices who are considered vulnerable youth (e.g. young people 25 years and under with identified barriers to participation); and
- Australian Apprentices who have been impacted by industry/sector structural change and may need additional support as they undertake their training.

The Mentoring program includes a focus on support for the first year of training when Australian Apprentices are most at risk of withdrawing, however this will depend on the needs of the cohort(s) targeted for support.

Approximately \$15 million is available to fund mentoring projects through Australian Government Skills Connect in 2011-12.

### **Experience+ Training**

Experience+ Training supports employers to enable their mature age workers to pass on their valuable skills and experience to new workers. It helps provide quality training to up-skill mature age workers (aged 50 years or over) so that they can gain the skills needed to

successfully mentor and supervise apprentices or trainees in the workplace. It has direct relevance to the scenario presented in many workplaces across the water industry.

Experience+ Training is available to:

- Employers who employ a mature age worker (50 years or over) for at least 15 hours per week and who employ at least one registered apprentice or trainee who works at the same location/site as the mature age worker; or
- Small business owners who employ registered Australian apprentices and who are themselves mature age workers.

Priority qualifications under the program include the Certificate IV in Training and Assessment (TAE); Certificate IV in Frontline Management and the Certificate III in Occupational, Health and Safety. Other Certificate III to advanced Diploma courses may also be considered.

Experience+ Training grants are paid in two instalments - a startup payment of \$3500 including GST and a completion payment of \$1450 including GST.

### **Experience+ More Help for Mature Age Workers**

Experience+ More Help for Mature Age Workers allows employers to retain valuable skills and experience in the workplace. It provides workers aged 50 years and over who have trade and related relevant skills but no formal qualifications with the opportunity to have their skills assessed and formally recognised, and undertake gap training if required.

It differs from the Experience+ Training initiative above in that it is not focused on mentoring skills. Instead, it is focused on recognizing existing industry skills where no formal qualification has been awarded previously. Again, this has significant application to the water industry and the scenario presented by the introduction of the proposed certification framework.

Experience+ More Help for Mature Age Workers is available to:

- Employers who employ a mature age worker aged 50 years and over and who work in industries where there is a high proportion of trade occupations, which range from technicians, machinery operators, drivers, labourers, kitchen hands, garden and nursery workers.
- Employers from other industries who employ workers with trades and related relevant skills for example:
  - Aged Care - drivers who transport elderly clients
  - Arts - audiovisual technician, jeweller and musical instrument maker
  - Textile and Design - saddler and canvass and leather goods
  - Retail - florist, glass craftsman or interior decorator
  - Childcare - kitchen hands or chefs preparing food for children
- Small business owners in relevant occupations and who are themselves mature age workers.

The Experience+ More Help for Mature Age Workers grants are paid in two installments:

- Reimbursement of \$2200 including GST for costs associated with a Skills Assessment. A Registered Training Organisation must undertake the Skills Assessment which can result in either a statement of attainment or a Certificate III to Advanced Diploma level qualification; or an approved Training Package Skills Set for workers with a Certificate III or above qualification already); and
- Reimbursement of a further \$2200 including GST for additional gap training as identified in the Skills Assessment to deliver the target qualification, if required.

## Australian Apprenticeships

The author of this report now treads very carefully into the realm of employer, apprentice and RTO support for the delivery of Australian Apprenticeships. This area is also constantly moving and advice provided below is predicated on a warning to check the currency of the information at the time of implementation of the proposed certification framework. A valuable source for this information is [www.australianapprenticeships.gov.au](http://www.australianapprenticeships.gov.au) or by contacting an Australian Apprenticeship Centre (AAC).

Please note that the National Skills Needs List (NSNL) exists and is used to determine eligibility for the following initiatives:

- Support for Adult Australian Apprentices payments
- Tools for your Trades payments
- Rural and Regional Skills Shortage incentives.

The list is available from [www.australianapprenticeships.gov.au](http://www.australianapprenticeships.gov.au) and currently does not contain the water industry operator (ANZSCO 712921). Therefore, the above support payments are not available to the water industry operator.

## Commencement incentives

Standard commencement incentives for Australian Apprentices in:

- |  |        |
|--|--------|
| • Certificate II level qualifications (nominated equity groups only) | \$1250 |
| • Certificate III, IV, Diploma or Advanced Diploma qualifications    | \$1500 |

Special commencement incentives for:

- |  |        |
|--|--------|
| • rural and regional employers who commence an Australian Apprentice in a Certificate III or IV qualification leading to an occupation listed on the National Skills Needs List in a non-metropolitan area | \$1000 |
| • employers who commence an eligible Australian Apprentice in a Certificate II or higher level qualification who is a disadvantaged person aged 45 years or more   | \$750  |

Additional commencement incentives for:

- |   |       |
|---|-------|
| • employers who commence an Australian Apprentice in an endorsed Australian School-based Apprenticeship in a Certificate II or higher | \$750 |
|---|-------|

level qualification

- employers of eligible Certificate II level Australian Apprentices who have a current Exceptional Circumstances Drought Area Certificate \$1500

### Recommencement and retention incentives

Standard recommencement incentive for: \$750

- employers who recommence an Australian Apprentice in a Certificate III, IV, Diploma or Advanced Diploma qualification

Retention incentive for: \$750

- an employer who continues to employ a Certificate II or higher level Australian School-based Apprentice after the student has completed secondary school

### Completion incentives

Standard completion incentive for: \$2500

- employers of Australian Apprentices who successfully complete a Certificate III, IV, Diploma or Advanced Diploma qualification

Special completion incentives for:

- employers of eligible Australian Apprentices who successfully complete a Certificate II qualification and who attracted a Declared Drought Area commencement incentive \$1500
- employers of Australian Apprentices who successfully complete Certificate II or higher level qualifications and who attracted a Mature Aged Worker commencement incentive \$750

Special completion incentive for: \$1000

- Group Training Organisations that support Australian Apprentices in a nominated equity group to complete a Certificate II Australian Apprenticeship

### Additional assistance for employers and Australian Apprentices

**Support for Adult Australian Apprentices** - (Currently not available to operators) Australian Government financial support is available for adult workers (aged 25 years or over) to upgrade their skills through an Australian Apprenticeship at the Certificate III or IV level in an occupation listed on the National Skills Needs List. The payment is made to either the employer or the Australian Apprentice depending on the actual wage paid to the Australian Apprentice. Payment rates for full-time Australian Apprentices are as follows:

- \$150 per week (up to a maximum of \$7,800 per annum) for the first 12 months of the Australian Apprenticeship; and
- \$100 per week (up to a maximum of \$5,200 per annum) for the second 12 months of the Australian Apprenticeship.

Payment rates for part-time Australian Apprentices are as follows:

- \$75 per week for the first 24 months of the Australian Apprenticeship; and
- \$50 per week for the second 24 months of the Australian Apprenticeship.

**Tools for Your Trade payment** - (not available to water industry operators currently). The Tools For Your Trade payment initiative is available to eligible Australian Apprentices undertaking a Certificate III or IV Australian Apprenticeship leading to an occupation listed on the National Skills Needs List, a Certificate II, III or IV Australian Apprenticeship in an agricultural occupation, and, if in rural and regional Australia, a horticultural occupation.

This payment consists of five tax exempt cash payments paid over the life of the Australian Apprenticeship. From 1 January 2011, eligible Australian Apprentices who commence or recommence their Australian Apprenticeship on or after 1 January 2009 may be eligible for payments of \$800 at the three month point, \$1000 at the 12 and 24 month points, \$1200 at the 36 month point and \$1500 on successful completion of the Australian Apprenticeship.

Eligible Australian Apprentices who commence or recommence their Australian Apprenticeship on or before 31 December 2008 may be eligible for payments of \$800 at the three, 12 and 24 month points and \$700 at the 36 month point and on successful completion of the Australian Apprenticeship.

**Australian Apprentices with disability** - Disabled Australian Apprentice Wage Support (DAAWS) provides additional assistance to employers who employ an eligible Australian Apprentice with disability in a Certificate II or higher level qualification. DAAWS is also available to an employer whose Australian Apprentice acquires a disability during their Australian Apprenticeship.

DAAWS is paid at a rate of \$104.30 per week for a full-time Australian Apprentice, and on a pro-rata scale according to the hours worked for a part-time Australian Apprentice. Assistance for Tutorial, Mentor and Interpreter Services is available to Registered Training Organisations to support eligible Australian Apprentices with disability who are experiencing difficulty with the off-the-job component of their Australian Apprenticeship because of their disability. Assistance for Tutorial, Mentor and Interpreter Services is paid at a rate of \$38.50 per hour (up to a maximum of \$5,500 per annum).

Employers of Australian Apprentices with disability may also be eligible for assistance through the Employment Assistance Fund which helps people with disability and mental health conditions by providing financial support to purchase a range of work related modifications and services. Employers can access the scheme via JobAccess or through Disability Employment Services or Job Services Australia.

## **Funding for RTOs**

On Friday 19<sup>th</sup> March the Prime Minister released a media statement flagging a change in the way training that is publicly subsidized. In summary, publicly subsidized training will be available to all Australians through a 'National Training Entitlement' to attain a Certificate III qualification - from school leavers through to retirement/pension age. This entitlement relates only to the first Certificate III.

Also, a loan scheme is to be introduced in a similar manner to HECs, allowing up to 60,000 students per year to access publicly subsidized diplomas and advanced diplomas at approved providers through an interest-free loan arrangement.

The announcement highlights the ever-changing conditions that those in the VET sector must accommodate. In Victoria, an entitlement model is already in place with many states and territories following in close pursuit, regardless of the announcement made by the Prime Minister.

For now, it is worth noting that RTOs may be able to offer publicly subsidized training through 'user choice' arrangements (for apprenticeships and traineeships), Productivity Places Program (PPP) funding where the state still has residual funds or through TAFE facilities for institutional delivery.

### **Other Sources of Funding**

There is an enormous amount of funding available through programs administered at state/territory level as well as through the Australian Government. It is impossible given the timeframes associated with this project to list them all. It is also suggested that the list would quickly become outdated and is a task best completed at the time of implementation.

However, the following have been highlighted as national funds that can assist various stakeholders in the water sector (sourced from [www.grantslink.gov.au](http://www.grantslink.gov.au)):

- Austudy provides financial help to those under 25 years and are studying an Australian Apprenticeship full time.
- The Indigenous Employment Program supports training and employment opportunities for Aboriginal and Torres Strait Islander jobseekers through financial assistance directly and to employers to offer accredited and non-accredited training.
- The Local Skills Partnership initiative applies directly to local governments and aims to build the skills and capacity of the workforce.
- Economic Development Program - Community Economic Initiatives Scheme (CEIS) funding is available for Queensland and external territories (Torres Strait Islands) for projects that lead to sustainable industries - including tourism. This funding source is obviously very specific, and may only be relevant during the proposed Phase 3 of the rollout.
- The Indigenous Wage Subsidy is available as an incentive to employers to employ eligible Indigenous Australians.

## **8 Implementation Requirements**

### **Cost Structure including seed funding**

The seed funding required for a certifying body will likely be determined through a tender process. Through this process, the Australian Government can select an organisation that provides best value for money as well as meeting criteria to establish its credibility in the water industry.

It is proposed that the certification body will be required to establish financial management practices that will result in it being self-sustainable. It is proposed that it will be supported through fees collected for certification and re-certification of operators from drinking water suppliers.

GSA has advised that the water industry is comprised of approximately 45,000 workers nationally. Of that, it estimates that approximately 30% are in operational duties. This equates to approximately 13,500 operators. GSA further estimates that approximately 20% of operators work within a drinking water treatment facility, providing a total of 2,700 operators in drinking water treatment facilities. Discussions have also been held with WSAA and other stakeholders suggesting that this figure seems accurate. Generally speaking, these stakeholders have suggested that a figure of 3000 would be a reasonable estimate.

Given these numbers, the steering committee suggests that an annual fee of between \$100 and \$120 per operator should be appropriate. This would provide an income of approximately \$300,000 to \$360,000 for the certifying body to conduct its business. It is suggested that this amount of money will provide for a reliable and self-sustaining framework that is able to offer valuable services to the water sector.

It must also be recognised that seed funding may need to provide financial support to the certifying body over a period of two or three years to allow membership to reach the level identified above. Of course, the start-up costs for a certifying body will be dependent on the existence of human and physical resources that can be accessed. The discussions and estimates provided in relation to cost structures are based on two staff, an office and supporting physical and IT infrastructure.

#### **RECOMMENDATION 11:**

Seed funding is assigned to the proposed framework to allow a certifying body to establish human and business resources while membership of certified operators is growing.

The final process employed by the certifying body will also need to recognise that lateral movement by certified operators across the water industry is likely. The collection of certification fees will need to account for this as there is some concern that drinking water suppliers may pay to certify operators who may quickly move on to another employer. It is suggested that an annual fee is considered rather than a fee that covers the entire period of certification (5 years) to ensure that a drinking water supplier does not foot the cost of certification where the operator has moved employers.

### **Business Plan including Regulatory Impact Statement**

As stipulated in the framework, the certifying body must establish sound administrative practices that will ensure the sustainability and integrity of the organisation. This should be underpinned by the production of a business plan.

Where a decision is reached to mandate the framework through regulatory arrangements, a 'Regulatory Impact Statement' should be completed in accordance with the guidelines produced by the Office of Best Regulatory Practice.

The role of the regulator in the proposed certification framework must also be recognised. That is, state and territory water quality or public health regulators must develop the criteria that will establish the complexity of the drinking water facility. Whilst ownership of this process has been left to individual states and territories, there may be significant

benefit in developing individual models through a collaborative approach. This approach will ensure that regulators are informed and influenced by processes to be used in other states and territories whilst having the autonomy to make their own decisions. The activities of the regulators to design this component of the framework should form part of a separate project as discussed in 'Rollout' below.

## Marketing and Communications

Marketing and public relations will be critical to successful implementation of the framework. It is suggested that marketing activities will include:

- The establishment of an online presence with tools, case studies and guidelines available for drinking water suppliers to access.
- Engagement through all available channels to establish relationships - wherever possible this would occur face to face.

## Rollout

The project completed has delivered on the project specifications as documented by the NWC. The result is the development of a proposed certification framework, barriers to implementation, suggested actions and stakeholders that could address these barriers.

A proposed 'Phase Two' project is required to develop a detailed implementation plan. Phase Two has been conceptually discussed with the NWC and should include:

- Legal advice on all aspects of the framework and its governance
- A cost benefit analysis (including a regulatory impact statement)
- Identification of the requirements that state and territory water quality/public health regulators in the development of 'system complexity' criteria and
- Finalisation of the structures recommended in this report (refer to Section 6 of this report).

### RECOMMENDATION 12:

Phase 2 of the project is scoped and funded to develop a detailed implementation plan.

The Gantt chart presented on the following page has been considered to be reasonable in light of the information presented in this report. Please note that 'Year 1' as identified in the chart commences after the completion of a detailed implementation plan (Phase 2 project).

Action	Year 1	Year 2	Year 3	Year 4	Year 5
Tender process to select certifying body	█	█		█	
Establish certification body business		█	█	█	
Develop recognition tools	█	█		█	
Develop database		█	█	█	
Develop forms and processes (e.g. application, appeals)		█	█	█	
Develop audit pool and tools		█	█	█	
Develop website		█	█	█	
Develop supporting guides	Phase 1	█	Phase 2	Phase 3	█
Phase 1 Roll-Out		Phase 1	█	█	
Phase 2 Roll-Out		█	Phase 2	█	
Phase 3 Roll-Out		█		Phase 3	█
Review		█	Phase 1	█	Phase 2
Period for seed funding (3 yrs)		█	█	█	

## Recommendations

### RECOMMENDATION 1:

Certification is accepted as the preferred model to implement nationally consistent minimum competency and capability criteria to apply to operators who perform water quality tasks within drinking water treatment systems.

### RECOMMENDATION 2:

The certification framework is implemented through a mandatory approach through an amendment of regulatory arrangements in each state and territory.

### RECOMMENDATION 3:

The certification framework applies to:

- Drinking water treatment facilities
- Downstream from the treatment facility e.g. secondary disinfection treatment
- Where no drinking water treatment facility exists, operators who monitor, sample an report drinking water quality are within scope

### RECOMMENDATION 4:

Certification must recognise the competency and capability of operators within scope of the framework. It must not attempt to impact upon the operational processes and practices of the drinking water supplier.

### RECOMMENDATION 5:

An independent certification body is adopted over a self-certification model to ensure integrity, consistency and national portability.

### RECOMMENDATION 6:

The certification framework owner is clearly assigned and independent of the certifying body

**RECOMMENDATION 7:**

State and Territory Regulators shall determine the method for categorizing the complexity of a Drinking Water Treatment System in accordance with Part 2 of the proposed framework.

**RECOMMENDATION 8:**

The Certifying Body is appointed by the framework owner through a tender process that will establish the credibility and suitability of the applicant to:

- Remain impartial and ensure that conflicts of interest are avoided
- Operate at a national level

**RECOMMENDATION 9:**

At time of implementation, the existing workforce will be required to comply with the requirements of this framework. A grandfather clause is not appropriate.

**RECOMMENDATION 10:**

Seed funding is assigned to the proposed framework to allow a certifying body to establish human and business resources while membership of certified operators is growing.

**RECOMMENDATION 11:**

Phase 2 of the project is scoped and funded to develop a detailed implementation plan.

**RECOMMENDATION 12:**

This report is accepted by the National Water Commission



Government Skills Australia  
PO Box 347  
Rundle Mall  
South Australia, 5000  
**T:** +61 8 8100 7400  
**F:** +61 8 8232 7444  
**E:** [info@governmentskills.com.au](mailto:info@governmentskills.com.au)

[www.governmentskills.com.au](http://www.governmentskills.com.au)