IPART Independent Pricing and Regulatory Tribunal | NSW

Water Industry Competition Act 2006

Audit Guidelines – Application Audits

July 2025

Water »

Acknowledgment of Country

IPART acknowledges the Traditional Custodians of the lands where we work and live. We pay respect to Elders both past and present.

We recognise the unique cultural and spiritual relationship and celebrate the contributions of First Nations peoples.

Tribunal Members

The Tribunal members for this review are:

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The Independent Pricing and Regulatory Tribunal

IPART's independence is underpinned by an Act of Parliament. Further information on IPART can be obtained from IPART's website.

Amendment record

Revision	Date issued	Summary of amendments made
Draft	April 2025	Draft released for consultation
Revision 1	July 2025	Final approved for publication

Contents

1 Introduction

This application audit guideline (Guideline) is applicable to those applying for an approval or a variation to an approval under the *Water Industry Competition Act 2006* (WIC Act), where IPART has required an application audit.[1] Granting of a licence is conditional on the application audit being successfully completed. IPART normally requires the following types of application audits to be submitted with applications for operational approvals:

- Pre-operation audit.
- New infrastructure audit.[2]

Unless the variation is minor, these audits will normally also need to be submitted with applications to vary an operational approval.[3]

This Guideline does not apply to one-off or specific application audits unless IPART expressly states otherwise. If a particular type of application audit becomes a routine requirement over time, IPART will update this Guideline to include it.

1.1 IPART publishes Audit Guidelines

In addition to this Guideline, IPART has published the following audit guidelines:

- *Audit Guidelines - Fundamentals, process and findings*
- *Audit Guidelines - Compliance audits*
- *Audit Guidelines - Contingency plan audits*

These guidelines are available for download from www.ipart.nsw.gov.au.

Application audits should be carried out in accordance with this Guideline and the *Audit Guidelines – Fundamentals, process and findings*.

[1] The WIC Act enables IPART to require an application audit to be undertaken in relation to an application to grant or vary an approval or licence, or to impose, vary or revoke conditions of an approval or licence – see sections 7E, 7G, 7K, 8B, 8G and 8M.

[2] See question 10 of IPART's WIC Act Operational Approval Application Form and WIC Act Operational Approval Application Guide for details – available from IPART's website here.

[3] Contact the R&C Water team if you believe the variation is in relation to a minor change that does not require application audits to demonstrate the requirements in section 7D(1)(a) to (d) have been met.

1.2 Purpose of this document

The objective of this document is to provide licensees and auditors information on the application audits required to accompany licence or approval applications, including:

- what is an application audit
- when to undertake an application audit
- how to select an auditor
- the scope of the audit
- the audit criteria
- how to report audit findings.

2 Types of Application audits

Currently, the only types of application audits routinely required by IPART are pre-operation audits and new infrastructure audits.

2.1 Pre-operation audits

When seeking an operational approval or a variation to an operational approval, the applicant is generally required to provide a pre-operation audit report of the adequacy of the water quality management system, sewage management plan or system, or asset management plan or system, as relevant.[4] [5]

The purpose of this audit is to satisfy the criteria under section 7D(1)(c) of the WIC Act that there are adequate plans and systems in place to ensure the infrastructure is fit for purpose and operated:

- safely and reliably, and
- in a way consistent with the national safety guidelines for the control of public health risks, and
- in a way that does not present a significant risk of harm to the environment.[6]

The 'national safety guidelines' refer to the *Australian Drinking Water Guidelines* (**ADWG**) or the *Australian Guidelines for Water Recycling* (**AGWR**), as applicable to the infrastructure.

The above criterion must be satisfied before IPART can grant an operational approval or a variation to an approval.[7]

Pre-operation audits fall under the following categories:

- Water quality management systems (drinking water and/or recycled water)
- Sewage management plans or systems
- Asset management plans or systems.

[4] See our WIC Act Operational Approval Application Form and WIC Act Operational Approval Application Form Guide for more details – available on our website here.

[5] Contact IPART if you believe that your application does not require application audits to demonstrate the requirements in section 7D(1)(a) to (d) of the WIC Act have been met.

[6] This is an "application audit" required for the purposes of section 7E(2) of the WIC Act.

[7] WIC Act, section 7D.

2.2 New Infrastructure audit

When seeking an operational approval for the first time or a variation to an operational approval to commence operating new infrastructure, the applicant is generally required to submit a new infrastructure audit report on the adequacy of the infrastructure.

The purpose of this audit is to satisfy the criteria under sections 7D(1)(a), (b) and (d) of the WIC Act that the infrastructure:

- has been substantially constructed as authorised by the scheme approval for the infrastructure
- is fit for purpose
- is capable of operating:
  - safely and reliably, and
  - in a way consistent with the national safety guidelines for the control of public health risks, and
  - in a way that does not present a significant risk of harm to the environment, and
- is capable of operating in compliance with the WIC Act and regulations, the plans and systems developed to operate the infrastructure and the conditions of the licensee's operator licence.[8]

This criterion must be satisfied before IPART can grant or vary an operational approval.[9]

The auditor needs to seek input from the licensee to determine the extent of the new infrastructure to be audited. New infrastructure does not include the reticulation network pipelines or infrastructure that extends or expands existing infrastructure, unless it:

- involves different technology to that used in the existing infrastructure, or
- is inconsistent with the asset management plan or system, water quality management system and/or sewage management plan or system (as is relevant) for the existing infrastructure, or
- is outside the existing area of operations or location of infrastructure, as specified in the scheme approval for the relevant scheme.

A field verification site visit is required as the auditor needs to verify the criterion is met, in particular:

- that the infrastructure has been substantially constructed as authorised by the scheme approval
- how effectively the licensee is implementing the requirements of the WIC Act, *Water Industry Competition (General) Regulation 2024* (WIC Regulation) and licence in practice.

8 This is an "application audit" required for the purposes of section 7E(2) of the WIC Act.

9 WIC Act, section 7D.

3 Audit timing, scope and auditor selection

3.1 Audit timing

The timing of application audits is generally determined by the licensee as they are in the best position to understand the maturity and readiness of the relevant systems and plans and/or when the construction of the new infrastructure will be completed.

New infrastructure audits can only be conducted after the licensee has completed construction and commissioning of the water industry infrastructure specified in the scheme approval. For schemes with staged development plans, IPART will provide specific guidance to licensees.

Licensees should inform IPART of the audit timing in the audit proposal, to allow an IPART representative to participate in the audit.

There should be no more than 10 weeks between the audit interview and the day the auditor issues the final audit report to IPART. The licensee and the auditor should agree on key milestone dates to achieve this.

Completing an application audit will trigger the 'stop the clock' provisions that apply to the determination of an operational approval. These provisions pause the assessment timeframe while the audit is underway. The full process and applicable timeframes for determining an approval application are outlined in our WIC Act *Operational Approval Application Guide*.

3.2 Auditor selection

Refer to section 2 of our *Audit Guidelines – Fundamentals, process and findings* for details on how to select an auditor.[10]

To undertake a pre-operation audit, the licensee should select an auditor from the relevant specialist category from our *Audit Services and Technical Experts Panel*. The audit can be undertaken by a single auditor or a team of auditors that have been approved in all required categories. See Table 1 in our *Audit Guidelines – Fundamentals, process and findings* for the auditor requirements.

3.3 Audit scope

The auditor, with input from the licensee, should determine the audit scope[11]. The auditor should ensure that the audit is comprehensive and assesses all the elements of the applicable audit criteria set out in section 3.4 below.

[10] Our current list of approved auditors and technical experts is on our website.

[11] The extent and boundaries of an audit.

The scope of the audit will form part of the Audit Proposal, which must be submitted to and approved by IPART before the audit can commence. See Section 3.2 of the *Audit Guidelines – Fundamentals, process and findings* for more information about Audit Proposals.

3.4 Audit Criteria

The audit criteria for the different types of application audits are detailed below. When preparing the audit scope, the auditor should ensure that the audit scope satisfies the audit criteria listed in this Guideline.

3.4.1 Audit criteria - New infrastructure audits

We use new infrastructure audits to assess whether the infrastructure:

- has been substantially constructed as authorised by a scheme approval for the infrastructure
- is fit for purpose and is capable of operating:
  - safely and reliably, and
  - in a way consistent with the national safety guidelines for the control of public health risks, and
  - in a way that does not present a significant risk of harm to the environment, and
- is capable of operating in compliance with the WIC Act and regulation, the plans and systems referred to in the relevant pre-operation audit, and the conditions of the licensee's operator licence.[12]

3.4.2 Audit criteria – Pre-operation audits

Water quality management systems

A water quality management system must be consistent with the applicable national safety guidelines. For drinking water infrastructure, it must be consistent with the ADWG, and for recycled water infrastructure, it must be consistent with the AGWR.[13]

To assess the adequacy of the water quality management system, the audit must clearly demonstrate how the relevant national guideline has been addressed in full, with specific focus on the 12 elements of the applicable management framework:

- **Drinking water supply** – For water supplied as drinking water, the audit must show how the applicant has addressed and will implement the ADWG generally, with specific focus on the 12 elements of the framework for managing drinking water quality.

[12] WIC Act, sections 7D(1)(a), (b) and (d).

[13] WIC Regulation, section 5.

- **Recycled water supply** - For water supplied as recycled water, the audit must demonstrate how the applicant has addressed and will implement the *Australian Guidelines for Water Recycling* (**AGWR**). This includes a detailed explanation of how the 12 elements of the recycled water quality management framework are applied, how the system accounts for the intended uses of the water, and any restrictions on unsuitable uses, in accordance with AGWR guidance. If directed by the Minister or IPART, the audit must also detail how the licensee's water quality management system has been amended to comply with such directions.[14]

The water quality management plan and system must ensure the infrastructure continues to be fit for purpose and can be operated safely and reliably, in a way consistent with the national safety guidelines and that does not present a significant risk of harm to the environment.[15]

The auditor should follow the instructions provided in Appendix C and/or Appendix D to test compliance with relevant national safety guidelines.

Input from NSW Health

We may seek comments from NSW Health throughout the audit process. We may specify additional requirements from NSW Health in the audit scope prior to the commencement of the audit. We may also seek NSW Health's comments on the audit findings prior to finalisation of the audit report.

If the auditor wishes to clarify NSW Health's expectations for a component of the audit, the auditor must contact us, and we will liaise with NSW Health. The auditor should not place unreasonable timeframes on us, or NSW Health. While NSW Health has agreed to provide feedback to IPART within 2 weeks of receiving the request, actual response times may vary. Therefore, auditors should discuss timeframes with IPART in advance.

Audit Criteria – Sewage management plans or systems

The audit should assess whether the licensee's sewage management plan or system is adequate, in relation to the conveyance, treatment and disposal of sewage by means of the infrastructure. The sewage management plan or system should describe:

- how health and ecological assessments will be undertaken
- how a concern arising from an assessment will be addressed
- the arrangements for the disposal of waste from the infrastructure
- if the Minister or IPART directs, how the licensee's sewage management plan or system has been amended in accordance with the direction.[16]

The general principles of undertaking a health and ecological assessment as adapted from the AGWR, apply to sewage management plans and systems.

[14] WIC Regulation, Schedule 2 section 8.
[15] Section 7D(1)(c) of the WIC Act.
[16] WIC Regulation, Schedule 2 section 9(3)(c).

The sewage management plan or system must also ensure the infrastructure continues to be fit for purpose and can be operated safely and reliably, in a way consistent with the national safety guidelines and that does not present a significant risk of harm to the environment.[17]

Audit criteria - Asset management plans and systems

To assess the adequacy of an asset management **plan**, the audit should address whether the licensee's asset management plan includes policies and procedures relating to the construction and operation of the infrastructure, including in relation to:

- the safe and reliable construction, operation and maintenance of the infrastructure,
- the redundancy built into the infrastructure and the arrangements for the renewal of the infrastructure,
- the continuity of water supply or sewerage services and alternative water supply or sewerage service arrangements,
- the maintenance, monitoring and reporting of standards of service,[18] and
- if the Minister or IPART directs, how the licensee's asset management plan or system has been amended in accordance with the direction.[19]

To assess the adequacy of an asset management **system**, the audit should assess whether the system is consistent with *AS ISO 55001:2014, Asset management—Management systems—Requirements*.[20]

The asset management plan or system must ensure the infrastructure is fit for purpose and can be operated safely and reliably, in a way consistent with the national safety guidelines and that does not present a significant risk of harm to the environment.[21]

17 Section 7D(1)(c) of the WIC Act.
18 WIC Regulation, Schedule 2 section 7(2).
19 WIC Regulation, Schedule 2 section 7.
20 WIC Regulation, Schedule 2 section 7(3).
21 Section 7D(1)(c) of the WIC Act.

4 Reporting and Findings

Auditors must report audit findings in accordance with section 5 of our *Audit Guidelines – Fundamentals, process and findings* and using the guides provided in **Appendices A and B**.

4.1 New infrastructure audits

Auditors should assess the adequacy of the new infrastructure based on the evidence provided and assign an appropriate compliance grade in accordance with **Table 1** below.

Guidance for reporting new infrastructure audit findings is provided in Appendix A. Auditors are not required to provide reports in a set style or structure, as long as the elements in Appendix A are met.

We will include the findings from the new infrastructure audit in our annual compliance report to the Minister.

4.2 Pre-operation audits

The Auditor should assess the adequacy of the plans or systems based on the evidence provided for the audit and assign a compliance grade in accordance with Table 1 below.

Guidance for reporting compliance audit findings is provided in Appendix B. Auditors are not required to provide reports in a set style or structure, as long as the elements in Appendix B are met.

We will include the findings from the pre-operation audit in our annual compliance report to the Minister.

4.3 Audit grades

Application audits focus on the adequacy of infrastructure, plans or systems. The audit grades shown in **Table 1** must be used for these types of audits.

Table 1 Audit grades for pre-operation audits or new infrastructure audits

Audit grade		Description
	Adequate	Sufficient evidence is available to confirm that the requirements have been met. Minor shortcomings that do not affect adequacy may need to be monitored in future audits. These shortcomings should be noted in any audit report.
	Inadequate	Sufficient evidence is not available to confirm the requirements have been met.

Appendices

A New infrastructure audit report requirements

The auditor must apply the following elements to present the audit findings on each audit criterion.

Element	Requirements
Statement	Provide a statement as to whether the new infrastructure is adequate or inadequate based on the audit grades in Section 4.3, Table 1. **If the infrastructure is adequate, the statement should also indicate that the new infrastructure:** • has been substantially constructed as authorised by a scheme approval for the infrastructure • is fit for purpose • is capable of operating: – in compliance with the requirements of the WIC Act, WIC Regulation and any licence conditions of the registered operator's licence – safely and reliably – in a way consistent with the national safety guidelines – in a way that does not present a significant risk of harm to the environment – in compliance with its asset management plan or system, water quality management system and/or sewage management plan or system.
Description of the infrastructure audited	Provide a clear description of the infrastructure that is the subject of the new infrastructure audit.
Audit grade	Auditors must assign an audit grade that reflects the evidence showing whether the requirements have or have not been met at the time of drafting the report.
Reason for the audit grade	A few sentences to explain why the infrastructure was assigned the particular audit grade. This must be clearly linked to the audit criterion being audited.
Auditor comments and justification	How did the auditor reach their finding? • **Basis for the finding** – Clearly describe the evidence or facts that informed the auditor's finding. – Explain how the evidence or facts support the auditor's finding, showing the link between what was observed and the conclusion reached. – Include an analysis of the gap between what was observed and what is required by the obligation. Where relevant, also explain the causes of the gap and its potential or actual impacts. • **Infrastructure deficiencies** – Identify any deficiencies in the infrastructure, and explain why the deficiency is non-material or material. Non-material deficiencies are to be identified as minor shortcomings that do not affect adequacy. Material deficiencies will affect adequacy. • **Minor Shortcomings** – Identify any minor shortcomings that do not affect safety and reliability of the infrastructure but may need to be monitored in future audits. • **Recommendations for Inadequate infrastructure** – If the infrastructure is found to be inadequate, provide clear recommendations of actions that the licensee should take to address the material deficiencies. – Where applicable, reference to the relevant recommendation numbers that support the findings and justification.
Evidence cited	List the evidence cited or alternatively, provide a link/reference to a separate list in another section of the report.
Recommendation(s)	Only to be provided where the audit grade is inadequate. Recommendations must be numbered or labelled logically for reference.
Opportunities for improvement	Can be provided for all audit grades. Opportunities for improvement must be numbered or labelled logically for reference.

B Pre-operation audit report requirements

The auditor must apply the following elements to present the audit findings on each audit criterion.

Element	Requirements
Statement	Provide a statement as to whether the plan or system is adequate or inadequate based on the audit grades in Section 4.3, Table 1.
Audit grade	Auditors must assign an audit grade that reflects the evidence that the requirements have or have not been met at the time of drafting the report.
Reason for the audit grade	A few sentences to explain why the plan or system was assigned the particular audit grade. This must be clearly linked to the audit criterion being audited.
Auditor comments and justification	How did the auditor reach their finding? • **Basis for the finding** – Clearly describe the evidence or facts that informed the auditor's finding. – Explain how the evidence or facts supports the auditor's finding, showing the link between what was observed and the conclusion reached. – Include an analysis of the gap between what was observed and what is required by the obligation. Where relevant, also explain the causes of the gap and its potential or actual impacts. • **Systems or plan deficiencies** – Identify any deficiencies in the plan or system, and explain why the deficiency is non-material or material. Non-material deficiencies are to be identified as minor shortcomings that do not affect adequacy. Material deficiencies will affect adequacy. • **Minor Shortcomings** – Identify any minor shortcomings of the plan or system that do not affect adequacy but may need to be monitored in future audits. • **Recommendations for Inadequate infrastructure** – If the system or plans or components of the system or plans are found to be inadequate, provide clear recommendations of actions that the licensee should take to address the material deficiencies. – Where applicable, reference to the relevant recommendation numbers that align with the findings and justification.
Evidence cited	List the evidence cited or alternatively, provide a link/reference to a separate list in another section of the report.
Recommendation(s)	Only to be provided where the audit grade is inadequate. Recommendations must be numbered or labelled logically for reference.
Opportunities for improvement	Can be provided for all audit grades. Opportunities for improvement must be numbered or labelled logically for reference.

C Instruction to auditor for the adequacy and implementation of drinking water quality management system or plan

The following tables list the elements 1-12 of the *Australian Drinking Water Guidelines* (**ADWG**) framework.

Column 1 – lists the components of each element of the ADWG framework.

Column 2 – summarises actions for each component of the ADWG framework.

Column 3 – the licensee achieves adequacy if a plan substantially meets these outcomes.

Column 4 – the licensee has implemented its plan if it substantially meets these items.

ADWG Element 1 – Commitment to drinking water quality management

Component	Summary of actions from the ADWG	Evidence of adequacy
Drinking water policy	Formulate a drinking water quality policy, endorsed by senior executive, to be implemented throughout the organisation.	A drinking water policy has been endorsed by senior managers.
	Ensure that the policy is visible and is communicated, understood and implemented by employees.	A process for communicating the policy has been identified and the drinking water policy is available to employees.
Regulatory and formal requirements	Identify and document all relevant regulatory and formal requirements.	Identify and document regulatory and formal obligations, and agencies responsible for the obligations that apply to the scheme. Document what the scope of the licence authorises.
	Ensure that responsibilities are understood and communicated to employees.	Allocates responsibilities for managing regulatory obligations to the appropriate employees.
	Review requirements periodically to reflect any changes.	Document process for reviewing and updating the regulatory and formal obligations.
Engaging stakeholders	Identify all stakeholders who could affect, or be affected by, decisions or activities of the drinking water supplier.	List all stakeholders who could affect, or be affected by, decisions or activities of the drinking water supplier. List the stakeholders where catchments and source waters are beyond the drinking water supplier's area of operation and their input is necessary for the development of the water quality management system (drinking water) consistent with the ADWG.
	Develop appropriate mechanisms and documentation for stakeholder commitment and involvement.	Identifies the mechanisms that will be employed to involve stakeholders and gain their commitment.
	Regularly update the list of relevant agencies.	A process for reviewing and updating the list of relevant agencies has been documented.

ADWG Element 2 – Assessment of the drinking water supply system

Component	Summary of actions from the ADWG	Evidence of adequacy
Water supply system analysis	Assemble a team with appropriate knowledge and expertise.	Identifies the appropriate experts (or knowledge and expertise) that assess the drinking water supply system.
	Construct a flow diagram of the water supply system from catchment to consumer.	Summarises the results of the drinking water system analysis that has been undertaken by the appropriate team. Includes a comprehensive flow diagram of the water supply system consistent with section 3.2.1 of the ADWG. The diagram outlines all steps and processes, if they are under control of the drinking water supplier, verified by field verification site visits and checked by those with specific knowledge of the system.
	Assemble pertinent information and document key characteristics of the water supply system to be considered.	Each part of the water supply system from catchment to consumer is characterised with respect to water quality, the factors affecting it, and the integrity of the water supply system.
	Periodically review the water supply system analysis.	Document a process to periodically review the water supply system analysis, including flow diagram. Analysis remains relevant. Flow diagrams reflect what is currently in operation from catchment to consumer.
Assessment of water quality data	Assemble historical data from source waters, treatment plants and finished water supplied to consumers (over time and following specific events).	Assembles historical data regarding source water quality, as well as data from treatment plants and/or finished water supplied to consumers, identifying gaps and assessing reliability of the data (including exceedance data). Water quality data is periodically updated.
	List and examine exceedances.	See above.
	Assess data using tools such as control charts and trends analysis to identify trends and potential problems.	Identifies a process for assessing data to identify trends and potential problems in the water supply system, including any exceedance data. Trends and potential problems resulting from data analysis are identified.

Component	Summary of actions from the ADWG	Evidence of adequacy
Hazard identification and risk assessment[22]	Define the approach and methodology to be used for hazard identification and risk assessment.	Documents the approach and methodology to be used for hazard identification and risk assessment.
	Identify and document hazards, sources and hazardous events for each component of the water supply system.	Identifies and documents hazards, sources and hazardous events for each component of the water supply system.
	Estimate the level of risk for each identified hazard or hazardous event.	Identifies the estimated level of risk for each identified hazard or hazardous event.
	Evaluate the major sources of uncertainty associated with each hazard and hazardous event and consider actions to reduce uncertainty.	Identifies the actions necessary to reduce uncertainty associated with each hazard and hazardous event.
	Determine significant risks and document priorities for risk management.	Identifies significant risks and documents priorities for risk management.
	Periodically review and update the hazard identification and risk assessment to incorporate any changes.	Documents a process to periodically review and update the hazard identification and risk assessment to incorporate any changes. The process should also identify triggers for review of hazard identification and risk assessment. Hazard identification and risk assessment have been reviewed and are current.

[22] The assessment should be consistent with the principles of Hazard analysis critical control point (HACCP). The HACCP risk management framework was adopted for the ADWG (See section 2.1).

ADWG Element 3 – Preventive measures for drinking water quality management

Component	Summary of actions from the ADWG	Evidence of adequacy
Preventive measures and multiple barriers	Identify existing preventive measures from catchment to consumer for each significant hazard or hazardous event and estimate the residual risk.	Identifies preventive measures from catchment to consumer for each significant hazard or hazardous event and estimates the residual risk.
	Evaluate alternative or additional preventive measures where improvement is required.	Defines acceptable risk level and evaluates alternative or additional preventive measures where improvement is required.
	Document the preventive measures and strategies into a plan addressing each significant risk.	Documents the preventive measures and strategies addressing each significant risk in the scheme water quality management system (drinking water) risk register.
Critical control points	Assess preventive measures throughout the drinking water system to identify critical control points.	Identifies the critical control points. Selection of critical control points, mechanisms for control, critical limits and target criteria are supported by verifiable evidence.
	Establish mechanisms for operational control.	Identifies the mechanisms for operational control at critical control points.
	Document the critical control points, critical limits and target criteria.	Documents the critical control points, critical limits and target criteria. Changes to critical control points, critical limits and target criteria are documented and justified.

ADWG Element 4 – Operational procedures and process control

Component	Summary of actions from the ADWG	Evidence of adequacy
Operational procedures	Identify procedures required for processes and activities from catchment to consumer.	Clearly identifies all the operational procedures that are required to ensure processes and activities, including preventative measures identified in the risk register are formalised and actioned.
	Document all procedures and compile into an operations manual.	Documents identified operations procedures which form part of the water quality management system (drinking water) or asset management plan.
Operational monitoring	Develop monitoring protocols for operational performance of the water supply system, including the selection of operational parameters and criteria, and the routine analysis of results.	Documents an operational monitoring protocol which specifies monitoring protocols for operational performance of the system, including the selection of operational parameters and criteria, and the routine analysis of results.
	Document monitoring protocols into an operational monitoring plan.	See above.
Corrective action	Establish and document procedures for corrective action to control excursions in operational parameters.	Establish procedures for corrective action where operational parameters are not met. There are documented processes in place to ensure that equipment performs adequately and provides sufficient flexibility and process control.
	Establish rapid communication systems to deal with unexpected events.	Documents rapid communication systems to deal with unexpected events, including incident notifications in accordance with the IPART WICA Reporting Manual.
Equipment capability and maintenance	Ensure that equipment performs adequately and provides sufficient flexibility and process control.	Equipment and infrastructure in a water supply system needs to be adequately designed and of sufficient capacity (in terms of size, volume and detention times) to handle all flow rates (peak and otherwise), without limiting performance.
	Establish a program for regular inspection and maintenance of all equipment, including monitoring equipment.	Documents an asset management and maintenance program that specifies inspection and maintenance requirements for all equipment, including monitoring equipment. The program should detail schedules and timelines, responsibilities, and resource requirements. Identify where the program is a part of operations and maintenance manual or asset management plan.
Materials and chemicals	Ensure that only approved materials and chemicals are used.	Documents specifications of approved materials and chemicals. In addition, documents specifications and procedures for evaluating chemicals, materials and suppliers to ensure only approved materials and chemicals are used.

Component	Summary of actions from the ADWG	Evidence of adequacy
	Establish documented procedures for evaluating chemicals, materials and suppliers.	See above.

ADWG Element 5 – Verification of drinking water quality and environmental performance

Component	Summary of actions from the ADWG	Evidence of adequacy
Drinking water quality monitoring	Determine the characteristics to be monitored in the distribution system and in water as supplied to the consumer.	Identifies the characteristics to be monitored in the distribution system and in water as supplied to the consumer.
	Establish and document a sampling plan for each characteristic, including the location and frequency of sampling.	Identifies the points at which monitoring will be undertaken. Identifies the agreed levels of service with the registered retailer.
	Ensure monitoring data are representative and reliable.	Identifies the frequency of monitoring in order to obtain meaningful information and statistical validity.
Consumer satisfaction	Establish a consumer complaint and response program, including appropriate training of employees.	Documents program, or arrangements for ensuring that the scheme retail supplier has a program, to monitor satisfaction of consumers and train the people responsible for the program.
Short-term evaluation of results	Establish procedures for the daily review of drinking water quality monitoring data and consumer satisfaction.	Documents procedures for the short-term review of monitoring data. Procedures include rapid notification process for the contracted laboratory for out of specification results. Procedures include a notification process for the retail supplier to report issues/complaints regarding water quality from end users.
	Develop reporting mechanisms internally and externally, where required.	Documents reporting mechanism for the short-term evaluation of results internally and externally, as appropriate.
Corrective action	Establish and document procedures for corrective action in response to non-conformance or consumer feedback.	Documents procedures for corrective action in response to non-conformances or feedback from users via the registered retailer.
	Establish rapid communication systems to deal with unexpected events.	Documents rapid communication systems to deal with unexpected events, including incident notification in accordance with the IPART Reporting Manual.

ADWG Element 6 – Management of incidents and emergencies

Component	Summary of actions from the ADWG	Evidence of adequacy
Communication	Define communication protocols with the involvement of relevant agencies and prepare a contact list of key people, agencies and businesses.	Document protocols for internal and external communications with involvement from relevant stakeholders. The contents of the protocol should be consistent with Element 6 of the ADWG. Contact lists of key stakeholders should be updated regularly for accuracy.
	Develop a public and media communications strategy.	A public and media communications strategy is prepared in advance. Specific staff are trained appropriately to handle communications. Employees are kept informed during any incident, and consumers are informed when the incident has ended as well as the cause and any actions taken to prevent future occurrences.
Incident and emergency response protocols	Define potential incidents and emergencies and document procedures and response plans with the involvement of relevant agencies.	Incident and emergency communications protocols are implemented as described in the water quality management system (drinking water), and follow the requirements of IPART's Network Operator's Reporting Manual and notification requirements as set out in the WIC Regulation sch 2, cl.3(1).
	Train employees and regularly test emergency response plans.	Employees are trained in incident and emergency response protocols and the plans are tested as appropriate.
	Investigate any incidents or emergencies and revise protocols as necessary.	Following any incident and emergency situation, an investigation is undertaken, and all appropriate staff debriefed. Protocols have been revised as necessary.

ADWG Element 7 – Operator, contractor and end-user awareness and training

Component	Summary of actions from the ADWG	Evidence of adequacy
Employee awareness and involvement	Develop mechanisms and communication procedures to increase employees' awareness of and participation in drinking water quality management.	Identifies mechanisms and communication procedures to increase employee awareness of, and participation in managing drinking water quality.
Employee training	Ensure that employees, including contractors, maintain the appropriate experience and qualifications.	Ensure employees, including contractors, are suitably competent and adequately trained to carry out their duties.
	Identify training needs and ensure resources are available to support training programs.	Identify any gaps in experience and training of operators and key contractors and identify ongoing training needs. Includes a schedule of training with timeframes and resources identified.
	Document training and maintain records of all training sessions.	Document processes and procedures for employee training and maintaining records of all employees training.

ADWG Element 8 – Community involvement and awareness

Component	Summary of actions from the ADWG	Evidence of adequacy
Community consultation	Assess requirements for effective community involvement.	Identifies requirements for consultation and communication with the community. This requirement may be satisfied through appropriate arrangements with the scheme retail supplier.
	Develop a comprehensive strategy for community consultation	Documents a consultation strategy, or makes arrangements for the registered retailer to develop a consultation strategy consistent with requirements.
Communication	Develop an active two-way communication program to inform consumers and promote awareness of drinking water quality issues.	Documents communication arrangements with consumers. This may occur through the registered retailer.

ADWG Element 9 – Validation, research and development

Component	Summary of actions from the ADWG	Evidence of adequacy
Investigative studies and research monitoring	Establish programs to increase understanding of the water supply system.	Documents a program to increase understanding of the drinking water supply system and to improve management of the system.
	Use information to improve management of the water supply system.	See above.
Validation of processes	Validate processes and procedures to ensure that they are effective in controlling hazards.	Documents validation processes and procedures that ensure effective control of hazards. The processes and procedures should include evaluation of scientific and technical information to demonstrate, as a minimum, that the log removal value claimed for each process and critical control point is valid. Where scheme validation relies on the WaterVal validation of treatment technologies framework (complements the objectives of the ADWG), the specific section needs to be identified.[23]
	Revalidate processes periodically or when variations in conditions occur.	Identifies variations that may affect performance of processes and would trigger revalidation. Documents processes for revalidation.
Design of equipment	Validate the selection and design of new equipment and infrastructure to ensure continuing reliability.	Documents validation processes and procedures that apply to the design of new equipment and infrastructure to ensure reliability.

Note: Chapter 9.8 of the ADWG has additional guidance on validation of barrier performance.

[23] See: https://www.waterra.com.au/research/waterval/

ADWG Element 10 – Documentation and reporting

Component	Summary of actions from the ADWG	Evidence of adequacy
Management of documentation and records	Document information pertinent to all aspects of drinking water quality management.	Identifies information that is pertinent to aspects of drinking water quality management.
	Develop a document control system to ensure current versions are in use.	Documents a document control system to ensure current versions of key documents are in use.
	Establish a records management system and ensure that employees are trained to fill out records.	Documents a records management system, and a process to ensure that employees are trained to complete records.
	Periodically review documentation and revise as necessary.	Documents review timeframes.
Reporting	Establish procedures for effective internal and external reporting.	Documents procedures for effective internal and external reporting.
	Produce an annual report to be made available to consumers, regulatory authorities and stakeholders.	Identifies requirements for the production of an annual report that contains sufficient information to enable consumers, regulatory authorities and stakeholders to make informed judgements about water quality, and to canvas feedback.

ADWG Element 11 – Evaluation and audit

Component	Summary of actions from the ADWG	Evidence of adequacy
Long-term evaluation of results	Collect and evaluate long-term data to assess performance and identify problems.	Documents processes and practices for the collection and evaluation of long-term data to assess performance and identify problems.
	Document and report results.	Documents processes and practices for documenting and reporting results.
Audit of drinking water quality management	Establish processes for internal and external audits.	Documents process for effective implementation and maintenance of drinking water quality management internal and external audits. The frequency and schedule of audits, as well as the responsibilities, requirements, procedures and reporting mechanisms, should be defined.
	Document and communicate audit results.	Identify that audit results are to be communicated to relevant stakeholders. Audit results should be considered as a part of Element 12 review and continuous improvement.

ADWG Element 12 – Review and continuous improvement

Component	Summary of actions from the ADWG	Evidence of adequacy
Review by senior executive	Senior executive reviews the effectiveness of the management system.	Identify the process for senior executives to review the effectiveness of the management system and evaluation of the need for change, including approving and monitoring implementation of audit programs and review of audit outcomes.
	Evaluate the need for change.	Processes and practices for periodic review of the water quality management system (drinking water) have been established and triggers of significant change that require it to be re-audited are determined.
Drinking water quality management improvement plan	Develop a drinking water quality management improvement plan.	A drinking water quality management improvement plan has been developed to address identified needs. Results of analysis and evaluation, and output from the management review is considered to determine need for inclusion in improvement plan. The improvement plan is endorsed by senior executive and the water quality management system (drinking water) commits to implementing the plan. The improvement plan includes objectives, actions to be taken, accountability, timelines and reporting.
	Ensure that the plan is communicated and implemented, and that improvements are monitored for effectiveness.	A process for communicating, implementing and monitoring effectiveness of continual improvement actions has been established.

D Instruction to auditor for the adequacy and implementation of recycled water quality management system or plan

The following tables list the elements 1-12 of the Australian Guidelines for Water Recycling (**AGWR**) framework.

Column 1 – lists the components of each element of the AGWR framework.

Column 2 – summarises actions for each component of the AGWR framework.

Column 3 – the licensee achieves adequacy if a plan substantially meets these outcomes.

Column 4 – the licensee has implemented its plan if it substantially meets these items.

AGWR Element 1 – Commitment to responsible use and management of recycled water quality

Component	Summary of actions from the AGWR	Evidence of adequacy
Responsible use of recycled water	Involve agencies (i.e. stakeholders) with responsibilities and expertise in protection of public and environmental health.	Identifies governmental agencies with responsibilities and expertise in protection of public health and the environment relevant to the scheme and specify their involvement in the development of relevant aspects of the water quality management system (recycled water).
	Ensure that design, management and regulation of recycled water schemes is undertaken by agencies and operators with sufficient expertise.	Identifies the expertise required for the design, management and regulation of the recycled water system.
Regulatory and formal requirements	Identify and document all relevant regulatory and formal requirements.	Identifies and documents the regulatory and formal obligations that apply to the scheme. Document what the scope of the licence authorises.
	Identify governance of recycled water schemes for individual agencies, designers, installers, operators, maintainers, owners and users of recycled water.	Identifies the agencies responsibilities for the regulatory obligations that apply to the scheme.
	Ensure that responsibilities are understood and communicated to designers, installers, maintainers, operations employees, contractors and end users.	Allocates responsibilities for managing regulatory obligations to the appropriate employees.
	Review requirements periodically, to reflect any changes.	Documents process for reviewing and updating the regulatory and formal obligations.
Partnerships and engagement of stakeholders (including the public)	Identify all agencies with responsibilities for water resources and use of recycled water; regularly update the list of relevant agencies.	Lists all agencies with responsibilities for water resources and recycled water, and process for updating list.
	Establish partnerships with agencies or organisations as necessary or where this will support the effective management of recycled water schemes.	Identifies partnerships that are necessary to ensure effective management of recycled water.
	Identify all stakeholders (including the public) affecting, or affected by, decisions or activities related to the use of recycled water.	Lists stakeholders and the decisions or activities that they affect or will be affected by.
	Engage users of recycled water; ensure responsibilities are identified and understood.	Identifies the responsibilities of users and processes employed to ensure they understand their responsibilities. This may include identifying the roles and responsibilities of the scheme retailer in ensuring all requirements of the AGWR are articulated.
	Develop appropriate mechanisms and documentation for stakeholder commitment and involvement.	Identifies the mechanisms that will be employed to involve stakeholders and gain their commitment.

Component	Summary of actions from the AGWR	Evidence of adequacy
Recycled water policy	Develop a recycled water policy, endorsed by senior managers, to be implemented within an organisation or by participating agencies.	A recycled water policy has been endorsed by senior managers.
	Ensure that the policy is visible and is communicated, understood and implemented by employees and contractors.	A process for communicating the policy has been identified and the recycled water policy is available to employees and contractors.

AGWR Element 2 – Assessment of the recycled water system[24]

Component	Summary of actions from the AGWR	Evidence of adequacy
Intended uses and source of recycled water	Identify source of water.	Identifies the intended sources.
	Identify intended uses, routes of exposure, receiving environments, endpoints and effects.	Identifies the intended end uses (as authorised by licence), routes of exposure, receiving environments, endpoints and environmental effects.
	Consider inadvertent or unauthorised uses.	Identifies possible unintended and unauthorised end uses. If there is a staged approach, the water quality management system (recycled water) identifies current/existing and planned sources of recycled water and an indicative timeframe or milestones as appropriate.
Recycled water system analysis	Assemble pertinent information and document key characteristics of the recycled water system to be considered.	Each part of the recycled water system from source to end use is characterised with respect to water quality, the factors affecting water quality, and the likely variability.
	Assemble a team with appropriate knowledge and expertise.	Identifies the appropriate experts (or knowledge and expertise) that assessed the recycled water system.
	Construct a flow diagram of the recycled water system from the source to the application or receiving environments.	Summarises the results of the recycled water system analysis that has been undertaken by the appropriate team. Includes a comprehensive flow diagram of the recycled water system consistent with section 2.2.2 of the AGWR. The diagram outlines all steps and processes from source to end use, including out of specification recycled water and where the scheme has been constructed, the flow diagram has been verified by those with specific knowledge of the system.
	Periodically review the recycled water system analysis.	Documents a process to periodically review the recycled water system analysis, including flow diagram. Flow diagrams reflect what is currently in operation from source to end use.

[24] The assessment should be consistent with the principles of HACCP. The HACCP risk management framework was adopted for both the ADWG and AGWR, see section 1.2.2 and chapter 5 of the AGWR.

Component	Summary of actions from the AGWR	Evidence of adequacy
Assessment of water quality data	Assemble historical data about sewage, greywater or stormwater quality, as well as data from treatment plants and of recycled water supplied to users; identify gaps and assess reliability of data.	Assembles historical data regarding source water quality, as well as data from treatment plants and/or recycled water supplied to users, identifying gaps and assessing reliability of the data (including exceedance data). Water quality data is periodically updated.
	Assess data (using tools such as control charts and trends analysis), to identify trends and potential problems.	Identifies a process for assessing data to identify trends and potential problems in the recycled water system, including any exceedance data. Trends and potential problems resulting from data analysis are identified.
Hazard identification and risk assessment	Define the approach to hazard identification and risk assessment, considering both public and ecological health.	Documents the approach and methodology to be used for hazard identification and risk assessment, considering both public and ecological health.
	Periodically review and update the hazard identification and risk assessment to incorporate any changes.	Documents a process to periodically review and update the hazard identification and risk assessment to incorporate any changes. The process should also identify triggers for review of hazard identification and risk assessment. Hazard identification and risk assessment have been reviewed and are current.
	Identify and document hazards and hazardous events for each component of the recycled water system.	Identifies and documents hazards, sources and hazardous events for each component of the recycled water system.
	Estimate the level of risk for each identified hazard or hazardous event.	Identifies the estimated level of risk for each identified hazard or hazardous event.
	Consider inadvertent and unauthorised use or discharge.	Includes inadvertent and unauthorised use and discharge in risk assessment.
	Determine significant risks and document priorities for risk management.	Identifies significant risks and documents priorities for risk management.
	Evaluate the major sources of uncertainty associated with each hazard and hazardous event and consider actions to reduce uncertainty.	Identifies the actions necessary to reduce uncertainty associated with each hazard and hazardous event.

AGWR Element 3 – Preventive measures for recycled water management

Component	Summary of actions from the AGWR	Evidence of adequacy
Preventive measures and multiple barriers	Identify existing preventive measures system-wide for each significant hazard or hazardous event, and estimate the residual risk.	Identifies preventive measures from source to end use for each significant hazard or hazardous event and estimates the residual risk.
	Identify alternative or additional preventive measures that are required to ensure risks are reduced to acceptable levels.	Defines acceptable risk level and evaluates alternative or additional preventive measures where improvement is required.
	Document the preventive measures and strategies, addressing each significant risk.	Documents the preventive measures and strategies for addressing each significant risk in the scheme water quality management system (recycled water) risk register.
Critical control points	Assess preventive measures throughout the recycled water system to identify critical control points.	Identifies the critical control points. Selection of critical control points, mechanisms for control, critical limits and target criteria are supported by verifiable evidence.
	Establish mechanisms for operational control.	Identifies the mechanisms for operational control at critical control points.
	Document the critical control points, critical limits and target criteria.	Documents the critical control points, critical limits and target criteria. Changes to critical control points, critical limits and target criteria are documented and justified.

AGWR Element 4 – Operational procedures and process control

Component	Summary of actions from the AGWR	Evidence of adequacy
Operational procedures	Identify procedures required for all processes and activities applied within the whole recycled water system (source to use).	Clearly identifies all the operational procedures that are required to ensure processes and activities, including preventative measures identified in the risk register are formalised and actioned.
	Document all procedures and compile into an operations manual.	Documents identified operations procedures which form part of the Water quality plan – recycled water (WQP-RW) or Infrastructure Operating Plan and Operations and Maintenance (IOP O&M) manual.
Operational monitoring	Develop monitoring protocols for operational performance of the recycled water supply system, including the selection of operational parameters and criteria, and the routine analysis of results.	Documents an operational monitoring protocol which specifies monitoring protocols for operational performance of the system, including the selection of operational parameters and criteria, and the routine analysis of results.
	Document monitoring protocols into an operational monitoring plan.	See above.
Operational corrections	Establish and document procedures for corrective action where operational parameters are not met.	Determine operational parameters (criteria) for fit-for-purpose recycled water for the end uses authorised by the licence. Establish procedures for corrective action where operational parameters are not met. There are documented processes in place to ensure that equipment performs adequately and provides sufficient flexibility and process control.
	Establish rapid communication systems to deal with unexpected events.	Documents a rapid communication systems to deal with unexpected events, including incident notifications in accordance with the IPART Network Operator's Reporting Manual.
Equipment capability and maintenance	Ensure that equipment performs adequately and provides sufficient flexibility and process control.	Establish and document arrangements for preventing out-of-specification water being supplied to end use. Equipment and infrastructure in the recycled water supply system need to be adequately designed and of sufficient capacity (in terms of size, volume and detention times) to handle all flow rates (peak and otherwise), without limiting performance.
	Establish a program for regular inspection and maintenance of all equipment, including monitoring equipment.	Documents an asset management and maintenance program that specifies inspection and maintenance requirements for all equipment, including monitoring equipment. The program should detail schedules and timelines, responsibilities, and resource requirements.

Component	Summary of actions from the AGWR	Evidence of adequacy
		Identify where the program is a part of operations and maintenance manual or asset management plan.
Materials and chemicals	Ensure that only approved materials and chemicals are used.	Documents specifications for approved materials and chemicals and procedures for evaluating chemicals, materials and suppliers and ensuring only approved materials and chemicals are used.
	Establish documented procedures for evaluating chemicals, materials and suppliers.	See above.

AGWR Element 5 – Verification of recycled water quality and environmental performance

Component	Summary of actions from the AGWR	Evidence of adequacy
Recycled water quality monitoring	Determine the characteristics to be monitored.	Identifies the characteristics to be monitored in the recycled water system.
	Determine the points at which monitoring will be undertaken.	Identifies the points at which monitoring will be undertaken. Identifies the agreed levels of service with the registered retailers.
	Determine the frequency of monitoring.	Identifies the frequency of monitoring in order to obtain meaningful information and statistical validity.
Application site and receiving environment monitoring	Determine the characteristics to be monitored and the points at which monitoring will be undertaken.	Identifies the characteristics to be monitored at application sites and receiving environment, including the location and frequency of sampling.
Documentation and reliability	Establish and document a sampling plan for each characteristic, including the location and frequency of sampling, ensuring that monitoring data is representative and reliable.	Documents a consolidated sampling plan, including procedures for sampling and testing that are suitable for verification of whether the scheme is performing as intended.
Satisfaction of users of recycled water	Establish an inquiry and response program for users of recycled water, including appropriate training of people responsible for the program.	Documents a program, or arrangements for ensuring that the registered retailer has a program, to monitor satisfaction of users and train the people responsible for the program.
Short-term evaluation of results	Establish procedures for the short-term review of monitoring data and satisfaction of users of recycled water.	Documents procedures for the short-term review of monitoring data. Procedures include rapid notification process for the contracted laboratory for out of specification results. Procedures include a notification process for the registered retailer to report issues/complaints regarding water quality from end users.
	Develop reporting mechanisms internally and externally, where required.	Documents reporting mechanism for the short-term evaluation of results internally and externally, as appropriate.
Corrective responses	Establish and document procedures for corrective responses to non-conformance or feedback from users of recycled water.	Documents procedures for corrective action in response to non-conformances or feedback from users via the registered retailer.
	Establish rapid communication systems to deal with unexpected events.	Documents rapid communication systems to deal with unexpected events, including incident notification in accordance with the IPART WICA Reporting Manual.

AGWR Element 6 – Management of incidents and emergencies

Component	Summary of actions from the AGWR	Evidence of adequacy
Communication	Define communication protocols with the involvement of relevant agencies and prepare a contact list of key people, agencies and stakeholders.	Identifies communications protocols. Includes an up-to-date contact list of key people, appropriate agencies and stakeholders relevant to management of incidents and emergencies.
	Develop a public and media communications strategy.	Documents the public and media communications strategy developed in consultation with the registered retailer.
Incident and emergency response protocols	Define potential incidents and emergencies and document procedures and response plans with the involvement of relevant agencies.	Define declared and notifiable incidents and emergencies. Document procedures and response plans, including rapid communications for incident notification, which reflect events identified in the risk register and notification requirements set out in IPART's WICA Reporting Manual and Incident Notification Forms A and B.
	Train employees and regularly test emergency response plans.	Identifies training and testing plan.
	Investigate any incidents or emergencies and revise protocols as necessary.	Identifies the process for reviewing incidents or emergencies and identifying new risks, or new or improved preventative measures and making any necessary amendments to operational procedures or protocols.

AGWR Element 7 – Operator, contractor and end user awareness and training

Component	Summary of actions from the AGWR	Evidence of adequacy
Operator, contractor and end user awareness and involvement	Develop mechanisms and communication procedures to increase operator, contractor and end-user awareness of, and participation in, recycled water quality management and environmental protection.	Identifies mechanisms and communication procedures to increase operator and contractor awareness of, and participation in managing recycled water quality and environmental protection. Documents process (arrangements) for ensuring that the registered retailer fulfils the requirement to ensure end-user awareness.
Operator, contractor and end user training	Ensure that operators, contractors and end users maintain the appropriate experience and qualifications.	Ensure employees, including contractors, are suitably competent and adequately trained to carry out their duties. Document process (arrangements) for ensuring that the registered retailer fulfils the requirement to ensure end users maintain appropriate experience and qualifications as appropriate.
	Identify training needs and ensure resources are available to support training programs.	Identify a process for identifying any gaps in experience and training of operators and key contractors and identify ongoing training needs. Includes a schedule of training with timeframes and resources identified.
	Document training and maintain records of all training sessions.	Document processes and procedures for employee training and maintaining records of all employees training.

AGWR Element 8 – Community involvement and awareness

Component	Summary of actions from the AGWR	Evidence of adequacy
Consultation with users of recycled water and the community	Assess requirements for effective involvement of users of recycled water and the community.	Identifies requirements for consultation, communication and education with users of recycled water and the community. This requirement may be satisfied through appropriate arrangements with the registered retailer.
	Develop a comprehensive strategy for consultation.	Documents a consultation strategy or makes arrangements for the registered retailer to develop a consultation strategy consistent with requirements.
Communication and education	Develop an active two-way communication program to inform users of recycled water and promote awareness of recycled water quality issues.	Documents communication and education arrangements with users of recycled water. This may occur through the registered retailer of the scheme.
	Provide information on the impacts of unauthorised use.	Identifies the impact of unauthorised use to be communicated and process to be followed to communicate the information.
	Provide information on the benefits of recycled water use.	Identifies the benefits of recycled water use to be communicated and process to be followed to communicate the information.

AGWR Element 9 – Validation, research and development

Component	Summary of actions from the AGWR	Evidence of adequacy
Validation of processes	Validate processes and procedures to ensure they control hazards effectively.	Documents validation processes and procedures that ensure effective control of hazards. *The processes and procedures should include evaluation of scientific and technical information to demonstrate, as a minimum, that the log removal value claimed for each process and critical control point is valid.* *Where scheme validation relies on the WaterVal validation of treatment technologies framework (complements the objectives of the AGWR), the specific section needs to be identified.*[25]
	Revalidate processes when variations in conditions occur.	Identifies variations that may affect performance of processes and would trigger revalidation and documents processes for revalidation.
Design of equipment	Validate the design of new equipment and infrastructure to ensure continuing reliability.	Documents validation processes and procedures that apply to the design of new equipment and infrastructure to ensure continuing reliability.
Investigation studies and research monitoring	Establish programs to increase understanding of the recycled water supply system, and use this information to improve management of the recycled water supply system.	Documents a program to increase understanding of the recycled water supply system and to improve management of the system.

Note: Chapter 5 of the AGWR has additional guidance on validation monitoring.

[25] See: https://www.waterra.com.au/research/waterval/

AGWR Element 10 – Documentation and reporting

Component	Summary of actions from the AGWR	Evidence of adequacy
Management of documentation and records	Document information pertinent to all aspects of recycled water quality management, and develop a document-control system to ensure current versions are in use.	Identifies information that is pertinent and uses a document control system to ensure current versions of key documents are in use.
	Establish a records-management system and ensure that employees are trained to complete records.	Documents a records-management system, and a process to ensure that employees are trained to complete records.
	Periodically review documentation and revise as necessary.	Documents review timeframes.
Reporting	Establish procedures for effective internal and external reporting.	Documents procedures for effective internal and external reporting.
	Produce an annual report aimed at users of recycled water, regulatory authorities and stakeholders.	Identifies requirements for the production of an annual report that contains sufficient information to enable consumers, regulatory authorities and stakeholders to make informed judgements about recycled water quality, and to canvas feedback.

AGWR Element 11 – Evaluation and audit

Component	Summary of actions from the AGWR	Evidence of adequacy
Long-term evaluation of results	Collect and evaluate long-term data to assess performance and identify problems.	Documents processes and practices for the collection and evaluation of long-term data to assess performance and identifying problems.
	Document and report results.	Documents processes and practices for documenting and reporting results.
Audit of recycled water quality management	Establish processes for internal and external audits.	Documents processes for internal and external audits of recycled water quality management systems and their implementation. The frequency and schedule of audits, as well as the responsibilities, requirements, procedures and reporting mechanisms, should be defined. Internal audits should also assess effectiveness of end-user controls.
	Document and communicate audit results.	Identify that audit results are to be communicated to relevant stakeholders. *Audit results should be considered as a part of Element 12 implementation.*

AGWR Element 12 – Review and continuous improvement

Component	Summary of actions from the AGWR	Evidence of adequacy
Review by senior managers	Senior managers review the effectiveness of the management system and evaluate the need for change.	Identify the process for senior managers to review the effectiveness of the management system and evaluation of the need for change, including approving and monitoring implementation of audit programs and review of audit outcomes. Processes and practices for periodic review of the water quality management system (recycled water) have been established and triggers of significant change that require it to be re-audited are determined.
Recycled water quality management improvement plan	Develop a recycled water quality management improvement plan.	A recycled water quality management improvement plan has been developed to address identified needs. Results of analysis and evaluation, and output from the management review is considered to determine need for inclusion in improvement plan. The improvement plan is endorsed by senior executive and the water quality management system (recycled water) commits to implementing the plan. The improvement plan includes objectives, actions to be taken, accountability, timelines and reporting.
	Ensure that the plan is communicated and implemented, and that improvements are monitored for effectiveness.	A process for communicating, implementing and monitoring effectiveness of continual improvement actions has been established.

ISBN 978-1-76049-833-7