

# PROCEDURE

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## RECYCLED WATER CONNECTION

### APPROVALS

<b>PROCEDURE NUMBER</b>	WW-PRO-083	<b>DOC. ID</b>	4567829
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<b>APPROVED BY THE DIRECTOR</b>	Water & Waste		
<b>ENDORSED BY</b>	Executive Leadership Team – 5.4		
<b>POLICY REFERENCE NUMBER</b>	WWW-POL-012		

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## AIM

This procedure aligns with Councils Recycled Water Policy WWV-POL-012 and defines the process Council will follow when providing minimum mandatory requirements and guidance for connecting to Isaac Regional Council's recycled water network. It identifies key requirements and responsible parties, provides planning guidelines and sets forth procedures that must be followed in order to connect to a recycled water supply.

Point of note - is that all recycled water applications will be individually assessed based on current supply/demand. If towns recycled water supplies are fully allocated, then access can only be obtained during higher than normal Effluent Storage Dam (ESD) levels or in agreeance with existing End Users.

- Adherence to this procedure will:
- Promote consistent project management and implementation;
- Ensure compliance with statutory requirements;
- Support effective risk management;
- Protect the health and safety of all persons in contact with recycled water.

## SCOPE

Recycled water is water generated from sewage, greywater, stormwater, rainwater, industrial or animal processes and treated to a standard that is appropriate for its intended use which must meet recycled water guidelines and health regulations. Recycled water can be supplied by either centralised schemes administered by State or Local Government, or by on-site privately managed systems. This procedure applies to all IRC employees (permanent, temporary and casual), End Users, contractors and subcontractors responsible for the connection and management of recycled water supplies to all End Users throughout the Isaac Region. It sets forth the process to develop a scope of works to connect an End User to recycled water.

## ROLES AND RESPONSIBILITIES

### Chief Executive Officer and Executive Leadership Team

To enable effective implementation of this procedure, the CEO and ELT shall:

- Ensure adequate resources are applied to work related to this procedure;
- Actively support the implementation of this procedure;
- Through the chain of command, hold people accountable for compliance with this procedure;
- Ensure the development of documentation complies with the requirements of this procedure.

### Managers shall:

- Ensure understanding of this procedure and support its implementation.

## All Employees and Contractors shall:

- Ensure understanding of and compliance with this procedure.

## Manager Operations and Maintenance Water and Wastewater shall:

- Be responsible for implementation of this procedure for all recycled water collections and to notify recycled water users if non-compliance is identified;

## Water and Wastewater Assets and Compliance Officer

- Occupy a position uniquely suited to coordinate on-site resources and liaise with Water and Wastewater Department administrators, recycled water users and other government agencies.
- Ultimately responsible for final approval of connection

## Water and Wastewater Asset Policy Environmental Resources

- Water and Wastewater (W&WW) Team is responsible for monitoring existing recycled water collections, providing oversight for recycled water collections at recycled water sites and ensuring Water & Waste Directorate procedures are complied with.

## Business Services Manager Water and Wastewater shall:

- Be responsible for the management and implementation of Water Supply Agreements for recycled water connections.

## Department of Housing and Public Works

- Regulates plumbing, including cross-connection audits, backflow prevention device inspections and Certificates of Compliance.

## Department of Environment and Science

- Responsible for regulation of recycled water to prevent environmental harm. They also licence local governments to treat various types of waters and provide Environmental Licences to be complied with.

## Department of Natural Resources, Mines and Energy

- Provide the Recycled Water Guidelines and are responsible for regulation of recycled water as per the Water Safety and Reliability Act 2008.

## DEFINITIONS

Definitions of terms used in the document and explanations of any abbreviations e.g. Aus (Australia) or acronyms e.g. LG (Local Government).

TERM	MEANING
AGWR	Australian Guidelines for Water Recycling
DES	Department of Environment and Science

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DHPW	Department of Housing and Public Works
DNRME	Department of Natural Resources, Mines and Energy
DPH	Department of Public Health
ESD	Effluent Storage Dam
HARVESTED STORMWATER	Refers to schemes which collect stormwater for storage and reuse from an external water supplier, including ASR, MAR, stormwater collection dams and storage tanks
IRC	Isaac Regional Council
QBCC	Queensland Building Construction Commission
RECYCLED WASTEWATER	Wastewater that has been treated to remove solids and other contaminants, and disinfected to meet at least minimum standards for use as per the SDS in irrigation and toilets
RMP	Risk Management Plan
RWCP	Recycled Water Collection Points such as truck fill points used to larger quantities of recycled water
SDS	Safety Data Sheet
STAKEHOLDER	Individual or organisation involved in recycled water supply and management at Isaac Regional Council sites
SWIM	State-wide Water Information Management
WASTEWATER	Sewage or effluent
WATER SUPPLIER	Organisation providing recycled water to the user/collector
WILL OR MUST	Use of these words indicates that the process or statement is a Legislative, Australian Standard or mandatory requirement
W&WW TEAM	Water and Wastewater Team

## PROCEDURE

### PROCEDURE PHASES

This procedure is set out in four phases to ensure recycled water connections are effectively implemented and maintained. These phases are:

1. Phase 1: Site Feasibility Assessment:
  - Purpose: Assess viability of potential recycled water connections.
2. Phase 2: Project Development:
  - Purpose: Identify project goals, risks and strategies; obtain necessary approvals.
3. Phase 3: Project Implementation and Acquittal:
  - Purpose: Complete installation, handoff End User Agreements and activation.
4. Phase 4: Operating Recycled Water Connections:
  - Purpose: Requirements for ongoing system operation.

In addition to the four phases, there are Mandatory Requirements which establish the standard expectations for implementation of recycled water connections.

### MANDATORY REQUIREMENTS

This procedure for implementing and managing recycled water connections is based on the Australian Guidelines for Water Recycling (AGWR) and the Department of Natural Resources, Mines and Energy (DNRME) *Water Supply (Safety and Reliability) Act 2008*.

The following mandatory requirements apply to all recycled water connections:

#### MINIMUM MANDATORY REQUIREMENTS

The Water and Wastewater Operations Team is responsible for managing and monitoring recycled water connections and must be notified of all recycled water connections.

All connections must comply with the Australian Guidelines for Water Recycling and Department of Natural Resources, Mines and Energy where applicable.

Recycled water connections must be undertaken through End Users, e.g. Greens Keeper, Grounds person or contractors.

Recycled water will only be used for irrigation purposes with approval from relevant regulatory authorities.

Recycled water will not be supplied to any End User site unless a valid and signed End User Agreement exists between the water supplier and the End User.

A recycled water connection will not be activated at an End User site until project handover has been completed.

Recycled water will not be supplied to End Users when ESD levels are at low levels

## PHASE 1 SITE FEASIBILITY ASSESSMENT

Phase 1 assesses the viability of potential recycled water connections.

**Note:** *The table provided assists with information on feasibility to ensure supply to the End Users is sustainable and achievable.*

### Phase 1 Site Feasibility Assessment

DETAILS			
W&WW TEAM	END USER		
		<b>5.3.1 Identification of Recycled Water Connection</b>	Water suppliers and End Users interested in a recycled water connection at an IRC site must contact the W&WW Team to initiate a feasibility assessment in writing.
		<b>5.3.2 Feasibility Assessment</b>	W&WW Team will conduct feasibility assessments of all proposed recycled water connections in collaboration with the End Users.
		<b>5.3.3 Irrigation Assessment</b>	An assessment of the irrigation system and irrigation requirements must be undertaken so that the recycled water connection will be designed to meet the End User's needs and meets Queensland Plumbing and Wastewater Code 2019.
		<b>5.3.4 Water Supply Investigation</b>	Recycled water supply volumes applied for must be made clear to discuss impacts of the new supply with existing stakeholders. If agreement can be reached to supply the applicant, then allocations can be adjusted. If not recycled water can only be supplied when Dam levels are at high levels. All other irrigation systems on site also need to be reviewed.



		<b>5.3.5 Proposed Recycled Water Connection Point</b>	<p>The connection point analysis will identify:</p> <ul style="list-style-type: none"> <li>Current location of the recycled water distribution network.</li> <li>Closest and nearest serviceable point to the recycled water main.</li> <li>The water quality of the recycled water in the distribution system at the distribution point.</li> </ul>
		<b>5.3.6 Payback Analysis</b>	<p>W&amp;WW Team will model an estimated payback period for implementing the recycled water connection if required.</p>
		<b>5.3.7 W&amp;WW Team Approval</b>	<p>W&amp;WW Team (Assets and Compliance Officer) must provide written approval confirming a favourable feasibility assessment and authorising the project to proceed to Phase 2.</p>

## PHASE 2 PROJECT DEVELOPMENT

Phase 2 identifies project goals, risks and strategies and includes obtaining necessary approvals.

### Phase 2 Project Development

DETAILS			
W&WW TEAM	END USER		
		<b>5.4.1 Stakeholder Notification</b>	<p>W&amp;WW Team will liaise with all relevant stakeholders following the feasibility assessment and approval.</p>
		<b>5.4.2 Regulatory Consultation and Compliance</b>	<p>W&amp;WW Team and IRC Building Services Team will verify they are water suppliers and hold all regulatory agency approvals and licences required to supply recycled water prior to implementation of the recycled water connection.</p> <p>The End User will consult with appropriate regulatory agencies to identify and obtain any approvals, permits or licences required to connect to recycled water.</p>
		<b>5.4.3 Risk Management and DPH Approval</b>	<p>W&amp;WW Team will provide support to the End Users to undertake risk assessments for the use of recycled water.</p>

		<p><b>5.4.4 Risk Assessment and Risk Management Plan</b></p>	<p>The End Users will undertake a risk assessment and develop a Risk Management Plan to ensure site specific conditions are captured:</p> <p>The risk assessment must cover operations and maintenance activities associated with the recycled water connection and be performed using the IRC Risk Assessment Matrix.</p> <p>The Risk Management Plan must be provided with the End User Agreement.</p>
		<p><b>5.4.5 DPH Approval / Support</b></p>	<p>The End Users must obtain a Department of Public Health Letter of Approval if the site will be supplied with recycled water.</p> <p>The water supplier must obtain Department of Environment and Science approval and or a Letter of Support if the site will be supplied with harvested stormwater. The letter must include:</p> <p>An assessment of risks and risk levels associated with the harvested stormwater supply.</p> <p>Control measures to mitigate identified risks.</p> <p>An evaluation of compliance of the harvested stormwater supply with the current Environment Authority guidelines.</p>
		<p><b>5.4.6 Water Supply Agreement</b></p>	<p>W&amp;WW Team and End Users will negotiate a site-specific End User Agreement and water allocation with other stakeholders for all recycled water connections.</p> <p>All End User Agreements must refer to the Environment Authority and the Recycled Water Policy. For more information, contact the W&amp;WW Team.</p> <p>The W&amp;WW Team must conduct regular water quality testing with samples taken from the distribution line supplying recycled water to all users.</p> <p>The W&amp;WW Team must test for all parameters set out in the Environment Authority</p> <p>The W&amp;WW Team must provide annual water quality testing results to State Wide Water Information Management (SWIM).</p> <p>The W&amp;WW Team must adhere to any conditions attached to regulatory agency approvals or licences throughout the term of the End User Agreement.</p>

## PHASE 3 PROJECT IMPLEMENTATION AND ACQUITTAL

Phase 3 is complete installation and handoff End User Agreements and activation.

### Phase 3 Project Implementation and Acquittal

DETAILS		
W&WW TEAM	END USER	
		<p><b>5.5.1 Engage Contractors</b></p> <p>The End User will seek and engage contractors to complete project works, ensuring that all plumbing controls are installed by a qualified plumber as required under the Plumbing and Drainage Act 2019.</p> <p>The End User must provide a copy of this procedure to the contractors with the Scope of Works.</p>
		<p><b>5.5.2 Project Signoff</b></p> <p>The End User must sign off on completion of the system and provide relevant documentation to IRC Building Services Team and W&amp;WW Team, including:</p> <p>Final Plumbing Certificate of Compliance.</p> <p>Backflow Prevention Device Inspection Certificate of Compliance and registration.</p> <p>Any necessary approvals, licences or permits from relevant regulatory agencies.</p> <p>As constructed drawings and details of the project.</p>
		<p><b>5.5.3 Preventative Maintenance</b></p> <p>The End User must update the irrigation site's preventative maintenance schedule to include cross-connection audits and backflow prevention inspections in compliance with the Plumbing and Drainage Act</p>
		<p><b>5.5.4 Final Water Supply Agreement</b></p> <p>W&amp;WW Team must ensure that a valid and signed End User Agreement is obtained prior to recycled water system handover and the supply of recycled water.</p>
		<p><b>5.5.5 W&amp;WW Team</b></p> <p>W&amp;WW Team will not authorise activation of the recycled water connection until:</p>

		<b>Final Approval</b>	<p>All requirements of the Recycled Water Procedure have been met.</p> <p>A valid and signed End User Agreement is in place.</p> <p>Recycled water system maintenance is included in the irrigation site's preventative maintenance schedule.</p> <p>Users of the recycled water have been effectively trained in the use and management of recycled water.</p>
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## PHASE 4 OPERATING RECYCLED WATER CONNECTIONS

Phase 4 sets out the requirements for ongoing system operation.

### Phase 4 Operating Recycled Water Connections

PHASE 4: SUMMARY TABLE	
KEY EVENT	DETAILS / RESPONSIBILITY
<p><b>5.6.1 Breakdown Maintenance</b></p>	<p>The End Users will be responsible for all breakdown maintenance associated with irrigation owned recycled water infrastructure installed on irrigated property (refer to Diagram 1) including:</p> <ul style="list-style-type: none"> <li>• Regular maintenance of the irrigation system to ensure there are no leaks</li> <li>• Verification that signage is not damaged or vandalised. Replacement of signs will be an End Users responsibility unless stipulated otherwise in the End User Agreement.</li> </ul> <p>The End Users will raise breakdown maintenance as per standard operating procedures.</p> <p>The End Users must notify the W&amp;WW Team in the event of a major breakdown, fault or failure at the recycled water network, such as a major leak, burst pipe or loss of supply so that an appropriate response can be coordinated between stakeholders.</p> <p>The End Users will not interfere with the main irrigation connection cabinet (installed between the boundary and the End Users irrigation system) other than to identify where a breakdown has occurred and to shut off supply.</p> <p>The W&amp;WW Team will be responsible for monitoring and maintaining water supplier owned infrastructure located on irrigated property as identified in the End User Agreement.</p>

<p><b>5.6.2 Upgrades and Extensions</b></p>	<p>The End Users will consult with the W&amp;WW Team prior to altering or expanding the irrigation system or recycled water infrastructure.</p> <p>The End Users will provide written notification to W&amp;WW Team prior to altering or expanding the irrigation system or recycled water infrastructure.</p> <p>W&amp;WW Team will review and ensure that proposals to alter or expand irrigation systems or infrastructure supplied by recycled water meet the requirements of the Australian Guidelines for Water Recycling, Department of Natural Resources, Mines and Energy and the Plumbing and Drainage Act.</p>
<p><b>5.6.3 Irrigation Management</b></p>	<p>The End Users will only irrigate with recycled water in areas where “restricted access” is required as a treatment or control for recycled water as defined in the Environmental Authority.</p> <p>The End Users will not operate spray irrigation systems when high winds have been forecast and as per the Environmental Authority.</p> <p>All components such as sprinkler heads will be replaced with lilac colours as part of ongoing maintenance so that the use of recycled water for irrigation is highlighted.</p> <p>The End Users will monitor irrigation system performance and implement water efficient irrigation schedules to avoid over-irrigation, including reduction of surface runoff and water pooling on the soil surface.</p>
<p><b>5.6.4 Disconnection of Services</b></p>	<p>Disconnection of services will be carried out upon the following:</p> <ul style="list-style-type: none"> <li>• Should End Users fail to comply with regulatory Guidelines on numerous occasions and endanger the public or other customers.</li> <li>• Should End Users no longer use or wish to use the recycled water. Connections will be blanked off and the connection system removed for use at another location.</li> <li>• Facilities using the recycled water are no longer viable/redundant and there has been no use.</li> </ul> <p>Please note time frames considered as no longer requiring water will be 24 months with notifications sent to the end user notifying of disconnection. Correspondence shall be made after this time frame notifying the End User to respond within 30 days or the disconnection will proceed.</p>

## IMPORTANT CONTACTS

ORGANISATION	ADDRESS	PHONE
<b>ASSET &amp; COMPLIANCE OFFICE WATER &amp; WASTE</b>	Batchelor Parade, PO Box 97, Moranbah, QLD 4744	1300 ISAACS (1300 472 227)
<b>MANAGER OPERATIONS &amp; MAINTENANCE WATER &amp; WASTEWATER</b>	Batchelor Parade, PO Box 97, Moranbah, QLD 4744	1300 ISAACS (1300 472 227)
<b>MANAGER BUSINESS SERVICES WATER &amp; WASTE</b>	Batchelor Parade, PO Box 97, Moranbah, QLD 4744	1300 ISAACS (1300 472 227)
<b>MANAGER PLANNING &amp; PROJECTS WATER &amp; WASTE</b>	Batchelor Parade, PO Box 97, Moranbah, QLD 4744	1300 ISAACS (1300 472 227)
<b>IRC BUILDINGS AND SERVICES DEPARTMENT</b>	Batchelor Parade, PO Box 97, Moranbah, QLD 4744	1300 ISAACS (1300 472 227)
<b>QUEENSLAND HEALTH MACKAY BASE HOSPITAL</b>	474 Bridge Road, PO Box 5580 Mackay MC, QLD 4741	(07) 4885 6000
<b>DEPARTMENT OF HOUSING AND PUBLIC WORKS</b>	GPO Box 2457, Brisbane, QLD 4001	139 333
<b>DEPARTMENT OF NATURAL RESOURCES, MINES AND ENERGY</b>	22-30 Wood Street PO Box 63 Mackay, QLD 4740	13QGOV (13 74 68)

This procedure will be reviewed at least every five (5) years by the W&WW Team in consultation with Department of Environment and Science, Department of Natural Resources, Mines and Energy, Department of Public Health, IRC Building Services Team and all irrigation End Users. Reviews may also be undertaken at other times if there has been a change in legislation, Australian Standards or W&WW specifications.

All irrigated sites with recycled water connections will be periodically audited by the IRC Building Services Team for any problems related to the connection. Problems with recycled water connections identified through audits will be assessed based on how the problem was discovered, how it was mitigated, and effectiveness of mitigation and whether this procedure provided sufficient guidance to address the problem. Information obtained through recycled water connection audits will be used to guide periodic review of this procedure.

## AUDITS

IRC Building Services Team will audit End Users with recycled water connections on an annual basis in accordance with an audit schedule. Water and Waste will provide budget for these audits to confirm compliance with the recycled water procedure and identify opportunities for improvement. The number of irrigated sites audited, and the audit frequency may be varied based on audit outcomes. End Users will be given a minimum of (5) five working days' notice prior to an audit being conducted. Audits may include, but not be limited to a review of:

<b>End User Agreement</b>	Site staff demonstrated knowledge of End Users responsibilities under the End User Agreement and recycled water procedure.
<b>Risk Mitigation</b>	Measures as defined in the Risk Management Plan are in place.
<b>Relevant Staff</b>	Demonstrate knowledge of work health and safety requirements.
<b>Water Consumption Analysis</b>	Actual Consumption vs Expected Consumption based on IPOS practices.
<b>Cross-connection Audits and Backflow Prevention Device Inspections</b>	Records of Certificates of Compliance are available and RPZ's are testable devices are tested and compliant
<b>Signage</b>	Appropriate signs are posted, visible and secure.
<b>Ongoing Maintenance</b>	Sprinklers and other hardware are being replaced with lilac coloured replacement parts.

## TRAINING

Council employees, contractors and others will be trained in accordance with Council's Learning and Development Procedure.

## RECORDS

All records are to be kept in a safe and secure location and in accordance with Council's records management process.

## INCIDENTS

Council supports the reporting and investigating of all incidents. All incidents will be reported and handled in accordance with Council's Incident Management Procedure.

## RISK MANAGEMENT

To support the identification, assessment, control and review of risk, Council utilises the Think ISAAC concept. All risks will also be processed in accordance with Council's WHS Hazard and Risk Management Procedure and the Enterprise Risk Management Framework.

## REFERENCES AND RELATED DOCUMENTS

- *Environmental Protection Act 1994*
- *Water Supply (Safety and Reliability) Act 2008*
- Australian Guidelines for Water Recycling
- The National Construction Code Volume 3: Plumbing Code of Australia

## DOCUMENT ID/NAME

ID	NAME
ADM-POL-002	Environmental Policy
WWW-POL-012	Recycled Water Policy
ADM-POL-001	Workplace Health and Safety Policy
STAT-POL-045	Enterprise Risk Management Policy
CGFS-095	Record Keeping Policy
V1-PRO-58	Learning and Development Procedure
WWW-PLN-001	Recycled Water Management Plan