

Aquacell Pty Ltd

Retail Supply Management Plan

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Retail Supply Management Plan

1. INTRODUCTION

This Retail Supply Management Plan relates to Aquacell's intention, conduct and practices when supplying water under its Retail Supplier's Licence Number 09_004R under the Water Industry Competition (WIC) Act (2006).

It should be noted that the Retail Supply Licence 09_004R includes single customer schemes for which Aquacell holds the corresponding Network Operators License under the WIC Act. Whilst the customer, site, scheme and infrastructure may vary, the intent to supply fit for purpose water, identify and control risks, and the provision of alternate supplies has common elements across all schemes. This Retail Supply Management Plan will consider the elements common to all schemes.

As a consequence of Aquacell holding a corresponding Network Operator's License for each customer, Aquacell maintains a set of management plans that describe the processes and procedures for that scheme. This includes detailed risk assessments, actions to be taken in case of incident and emergency, and alternate supplies in case of service interruption. Typical documents for each scheme describe actions to be taken during normal operations or incident conditions. Examples of these documents include:

- Recycled Water Quality Management Plan
- Sewage Management Plan
- Environmental Management Plan
- Operations and Maintenance Manuals
- Monitoring
- Communication
- Training Documents

As Aquacell is responsible for maintaining these documents on each site, the information contained in this Retail Supply Management Plan gives high level detail and general control measures common across all retail customers. Where actions, risk assessments or other information is site specific, it will be documented in the sites Infrastructure Operating Plan and supporting documentation.

In addition to considering continuity of supply, this document provides information and references in relation to customer complaints, missed payment, debt recovery and marketing and transfer.

2. MEETING CUSTOMER NEEDS

As part of the scheme implementation, Aquacell reviews the availability of the water source, and the ability to meet the customer's needs in terms of:

- Volume
- Source quality
- Required treatment
- Fitness of treated water for its intended purpose
- Seasonal fluctuations
- Continuity of Supply (see below)

This review is part of the engineering analysis at the inception of the project, and is reviewed from time-to-time as the project matures.

3. POTENTIAL RISKS

Typical Aquacell activities are treatment of waste water for reuse, or disposal by irrigation. Generally, there are a number of risks associated with these types of schemes.

Water quality risks may range from aesthetic problems (odour / colour / taste) to chemical related damage to the plants. In a worst case situation these can include acute or chronic health problems. Potential water quality risks include:

Physical characteristics:	colour, foam, suspended solids, odour, bad taste, eye or skin irritation.
Chemical contaminants:	excessive salts (chlorides, sulphates, nitrates), heavy metals (Iron, cadmium, chromium, copper, lead, mercury, nickel, zinc), poisons (arsenic cyanide, pesticides) and in rare cases radioactive substances.
Microbial infestations:	bacteria (cholera, dysentery, gastro-enteritis, salmonella, or streptococcal infections, hepatitis) Viruses (hepatitis, rotaviruses, MS2 choliphages, clostridia) Parasites that may cause gastro-enteritis: (giardia, cryptosporidia)
Intestinal worms:	(Tape worm)
Toxic bacteria:	cyanobacteria

These risks are addressed in the IOP for each site. Typically, for reuse schemes risks are identified and documented in the Recycled Water Management Quality Management Plan which ensures the schemes that meet the 12 elements of the Australian Recycled Water Guidelines. Where sewage services are provided, the risk assessment will form part of the Sewage Management Plan.

Aquacell do not undertake retail activities for potable water at this time.

4. EVENTS THAT COULD ADVERSELY AFFECT THE ABILITY OF AQUACELL TO SUPPLY WATER

Aquacell is aware of the requirement to ensure continuity of service to customers, and to that end identifies and mitigates risks associated with supply interruptions. Alternate supply measures are also considered as a contingency where an extended outage does occur.

Aquacell's retail activities are typically on sites where potable water is available to substitute for recycled water, and excess sewage can be disposed of directly to the sewer. Where these facilities are not available, the scale of the plants is such that pumping out buffer tanks and disposing of waste off site is practical.

A detailed and specific risk assessment is undertaken for each customer and is documented in the related Infrastructure Operating Plan. Each risk is assessed and quantified before and after mitigation to ensure the residual risk is acceptable. As an indication, the table below outlines some reasons for supply interruption that may be encountered in Aquacell's Retail activity.



Typical Supply Interruption Events and Control Measures

Scenario	Reason	Occurrence	Preventative measures	Typical options for alternate supply/disposal for the customer
Loss of feed which impacts treated water availability	<ul style="list-style-type: none"> • Feed out of specification • Breakdown or maintenance of equipment upstream of the treatment plant 	Will occur periodically	<ul style="list-style-type: none"> • Buffer tanks to capture high levels of feed and process it during periods of low flow • Have an alternate source of feed water such as sewer mining. 	<ul style="list-style-type: none"> • Use of potable water to top up treated water tanks and maintain supply to the treated water reticulation system
Plant is not able to treat volume of feed at a sufficient rate	<ul style="list-style-type: none"> • Peak or unusual flows • Plant is in maintenance or breakdown state and can't process feed • Breakdown or maintenance of equipment downstream of the treatment plant • Treated water is out of specification and cannot be disposed of 	Will occur periodically	<ul style="list-style-type: none"> • Use buffer tanks upstream and downstream to even out flows • Infrastructure designed to accommodate peak flows • Set treatment plant rate to treat all expected flows given the upstream buffering. 	<ul style="list-style-type: none"> • Dispose of excess feed directly to sewer where available • Pump out excess feed or and dispose off site. • If practical, adjust treated water so that it returns to specification, eg pH correction
Plant unavailable due to maintenance activities	<ul style="list-style-type: none"> • Plant stopped for routine maintenance or extended maintenance activity such as CIP 	Unlikely to happen	<ul style="list-style-type: none"> • Routine maintenance can be carried out without interrupting supply due to buffering capacity at each end of the process. • Extended maintenance activities such as CIP's are scheduled to minimise disruption 	<ul style="list-style-type: none"> • Use of potable water to top up treated water tanks and maintain supply to the treated water reticulation system • Dispose of excess feed directly to sewer where available • Pump out excess feed or treated water and dispose



Scenario	Reason	Occurrence	Preventative measures	Typical options for alternate supply/disposal for the customer
				off site.
Treatment plant unavailable due to breakdown	<ul style="list-style-type: none"> Mechanical or electrical failure of a plant component 	Will happen periodically	<ul style="list-style-type: none"> Aquacell follows a maintenance schedule documented in the Operations and Maintenance Manual prepared specifically for each plant. Appropriate redundancy is built-in (such as duty/standby pumps). Maintenance risk assessment and asset replacement schemes developed for each customer Redundancy built into design through duty-standby arrangement on critical equipment Remote monitoring which allows early identification of breakdowns which stop normal operation of the plant Plant components readily available or substitutable to minimise downtime 	<ul style="list-style-type: none"> Use of potable water to top up treated water tanks and maintain supply to the treated water reticulation system Dispose of excess feed directly to sewer where available Pump out excess feed or treated water and dispose off site.
Treated water is not fit for purpose	<ul style="list-style-type: none"> Breakdown or equipment damage Insufficient chemicals available Dosing rates or other plant parameters require adjusting 	Will occur periodically	<ul style="list-style-type: none"> Critical control points (CCP's) ensures the plant alarms and enters a safe state. CCP's plant parameters such as pH, free and turbidity Where possible, plant will switch to alternate supply automatically to ensure continuity of supply Remote monitoring of plant to allow early detection and the ability to change operating parameters to bring treated water back into specification 	<ul style="list-style-type: none"> Use of potable water to top up treated water tanks and maintain supply to the treated water reticulation system Dispose of excess feed directly to sewer where available Pump out excess feed or treated water and dispose off site.
Natural disaster, site issue or other problem which is beyond control of Aquacell	Any such event is likely to have broader effects on infrastructure, eg, electricity supply. In this case Aquacell would work with the customer to ensure a timely and efficient restoration of services			
Cancellation of operating contract with the scheme owner	IPART to be notified and appropriate licensing changes made.			

5. CUSTOMER CONTRACTS

Aquacell will ensure that a contract, typically in the form of a Service Agreement, is put into place with each retail customer prior to the commencement of retail services. Aquacell has a small number of customers who are typically commercial entities, and retail operations are supplied to a diversity of schemes. For this reason, the contract for retail services will be negotiated and tailored to each customer. Each contract will fully define the scope of supply and detail the commercial arrangements including payment terms.

6. CUSTOMER COMPLAINTS AND DISPUTE RESOLUTION

Aquacell has a Complaints Handling and Dispute Resolution policy which outlines how customer complaints will be handled. Further, a Code of Conduct for Customer Complaints has been developed which provides customers with an overview of the how Aquacell will handle complaints.

7. DEBT RECOVERY

Aquacell has developed a Code of Conduct for Debt Recovery. This document has been developed to outline to customers how Aquacell will handle Debt Recovery.

8. MARKETING AND TRANSFER

For each retail customer, Aquacell holds a corresponding Network Operator's License and services and maintains the network to which the retail operations apply. Whilst this is an unusual arrangement, this does not mean customers cannot transfer away from Aquacell. Where requested, Aquacell will advise the customer openly and honestly of their options to continue operations and maintain compliance with the WIC Act.

Where a customer no longer wishes to use Aquacell's services under either WICA license, Aquacell will in good faith:

- Advise the customer of all regulatory requirements relating to the plant, as known by Aquacell, to ensure the customer is not entering a new agreement that may not comply with appropriate regulations;
- Facilitate a smooth hand over of responsibilities. This may include operational responsibilities;
- Advise IPART or any other authorities of the change and ensure that any requirements are appropriately documented

Notwithstanding the above, Aquacell are committed to complying with any relevant Codes of Conduct in relation to marketing and transfer operations within the water industry.

9. REVIEW OF RETAIL MANAGEMENT PLAN

Aquacell will review this Management Plan annually or sooner, as part of its annual compliance review.