



Coliban
WATER

Non-Urban Metering Action Plan

Condensed Website version

November 2020

Aligned with MDBA Compliance Compact

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Document Information

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Executive Summary

Coliban Water commits to meet the requirements of the MDBA metering requirements by June 2025.

Coliban Water has some interesting facts in the way it supplies rural water to its customers:

The Supply System

- Coliban Water supplies its customers through 2 mechanisms
 - Open Channels annually between the months of October to May
 - Metered modernised systems that run year-round (Harcourt system)
- All water supplied to customers is through a regulated system measured primarily at Malmsbury Reservoir offtake, or the superpipe from the Goulburn system.
- Customers do not have access to any environmental flows that are released from our headworks storages.

Customers

- The vast majority of Coliban Rural customers are hobby farmers or stock and domestic
- 19% of our outlets supply more than 1 customer
- Very few outlets on our non-modernized system have conventional meters, majority are physically measured daily by our rural officers using an outlet water height (head calculation) that is averaged over a 24-hour period
- No customers within Coliban Waters region exceed the 5GL (5,000ML) volumes that require mandatory telemetry
- Only 5 outlets exceed 100ML with around 100 customers averaging over 10ML / year
- Only 64 customers trigger the requirement to have AS4747 compliant meters installed
- Coliban Water recently modernised the Harcourt system with NMI compliant meters that will be upgraded to AS4747 based on age, usage or risk.

Compliance

- Coliban Water has seen very few incidents of non-compliance, this is mainly be due to the following factors
 - The regulated system means water theft is more likely to be noticed and investigated.
 - The daily presents of our Staff on the channels deters illegal activity around the outlet.
 - Good relationship with customers through the Rural Community Group
 - Special meter “compliance checks” are underway outside of standard meter read schedules
- Due to the small number of outlets requiring compliance to AS4747, Coliban Water will contract outlet and meter verification and validation in the short term.

Cost and outcome

- It is expected to cost Coliban Water \$150,000 over the next 10 years to meat and maintain the metering requirements for the MDBA Metering Plan

Introduction

Overview of the purpose and scope of the metering action plan

Purpose of this Metering Action Plan

Coliban Water as a rural water corporation is required under their Statement of Obligations to develop non-urban meter action plan in line with the Victorian Non-Urban Metering Policy 2019 produced by DELWP.

This plan identifies Coliban Water's current meter fleet profile relative to the measurement requirements and specify the authorities' current processes to select, inspect, validate, maintain and replace meters and their improvement actions. Along as outlining the internal decision processes for excluding outlets from the compliance requirements.

This Metering Plan will also outline Coliban water data sources and data management required to annually report to DELWP's central meter database that will link to the Water Register. Ensuring that all 11 required fields are captured where possible.

Overview of Coliban Water

Coliban Water is a water corporation located in the North Central region of Victoria, supplying water to approximately 1400 customers with in excess of 1000 outlets, each with their own unique service number.

Coliban Waters Channel system is over 500km in length. It is operated under a regulated system with majority of channel or earthen construction, under 1m² in cross sectional profile.

Coliban Water has one pressurised rural system that exists in Harcourt, with a number of pressurised customers connected to large transfer infrastructure. These customers have individual, meters that are read quarterly, but the majority of rural customer outlets that supply each customer are through locked head calculated flows through pipe outlets or weir type devises.



Typically, the meters are read weekly or fortnightly and the pipe / head type outlets are read daily.

There is a rural team who managed the 6 channel segments of Coliban Waters supply Region with two staff who manage the water orders and water allocations. Each order that is received is entered into the system and checked to ensure the expected take is within the remaining entitlement allocation

The rural customer usage of this water in our region tend to be less about large irrigation but smaller production companies and hobby farmers who need water for farm livestock. Our Water uses consist of but not limited to:

- Vineyards
- Fruit and Nut orchards
- Stock and Domestic Farms
- Market gardens

Multiple Customers of One Outlet

Coliban water runs a unique rural scheme where Coliban Water managed outlets to a community of Customers that manage the water take (division of supplied water) for each customer. Coliban largest community of Customer is the Sandy Creek Co-Op which has 29 active customers off the one outlet. Inclusive of Sandy Creek Co-Op there are 15 Outlets that service over 10 customers, 83 outlets have between 3 to 9 customers, 60 outlets are shared with 2 customers and the remaining 754 are single customer outlets. See Appendix C. These customer channels are owned, maintained and managed by the customers.

Scope of the Metering Plan

Coliban Water Metering Action Plan applies only to Coliban Water rural customers and not bulk water metering.

Although Coliban Water is also highly focussed on improving the efficiency of the channel system including losses from the earthen channels, so included in the Meter investment plan and finances section of this document

All rural outlets (for 1 or many customers) will be included in this plan, and where those customers do not meet the volume criteria to be deemed a water take volume risk, or are excluded for any other reason they will be categorised by being assigned a meter requirements code as in Table below consistent with DELWP guidance, and transparent to how Coliban Water has arrived at that decision.

Non-urban water meter requirement codes

Requirement	Code	Description
Accurate meter required	AM	Site is to have a maximum permissible error of +-5% under in situ conditions
Exempt - outside scope	EXOS	Exempt as water use is for D&S licence, drain diversion licence, stormwater, meters managed by other Water Corporations
Exempt - low use	EXLU	Below the threshold for high accuracy meters
Exempt - high cost	EXHC	Disproportionate cost to benefit. This may be due to extra costs required to overcome technical challenges such as iron bacteria in groundwater causing changes to flow patterns outside the meter requirements. The benefit assessment would consider the use volume together with the management objectives for the water resource area.
Exempt - supply system change planned	MO	Meter is located within an area planned for modernisation or reconfiguration and the meter upgrade, relocation or removal will be part of modernisation or reconfiguration.

All rural outlets will also be assigned a compliance code to categorise the meter configuration and construction status. *As in Table below.*

Non-urban water meter compliance codes

Compliance category	Code	Description
Compliant	AS	Pattern approved meter, <i>installed by a certified installer</i> , complies with the AS4747 standard and has a certificate
Contemporary (also called Interim)	CO	A meter that can operate within the maximum permissible error of +/-5% under in situ conditions and provides for on-going validation. This would include pattern approved meters that fail to meet all the requirements of AS4747.
Outside contemporary standard	OT	All other measurement devices that are unable to meet validation requirements. These devices may or may not measure within the accuracy standards.
Unmetered	UM	Unmetered

Noting: Coliban Waters position is that if an outlet has had a AS4747 approved meter installed prior to 2019, when AS4747 approve installer were not “even a thing”, but it would have been installed under the best appropriate practice at the time. Once that once the meter is verified by an AS4747 approved contractor, Coliban Water intends to obtain the installation and meter verification certification retrospectively. In these cases, older installation will be given the status as Compliant (AS) Otherwise all older meters would need to be reinstalled for little to no benefit.

Victorian Non-Urban Water Metering Policy

Coliban Water is writing this Non-Urban Metering Plan in line with the Victorian Non-Urban Water Metering Policy.

The policy objectives are:

- To encourage comprehensive metering of non-urban water extractions in a way that is consistent with risks to water resources
- To provide for water take to be determined accurately and reliably
- To provide that meters installed are accurate and well-maintained
- The benefits of water measurement outweigh the costs
- Data from meters can be easily transmitted to the Water Register and other relevant systems.

Meter Installations - Beneficial for Customers, Regulator and Coliban Water

Coliban Water supplies many rural customers whose usage is below the thresholds outlined in the policy that will not be affected by this Metering Plan. For those other customers that exceed the low volume threshold Coliban water will endeavour to understand the

- The risk the customer volume take has on Coliban Waters system
- The financial impact and benefits that install a meter would have on the customer
- The viability that a meter would work for that customer based on the water turbidity or debris issues in the area.
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Coliban Water undertakes daily check of the channel system, clearing channel restriction and cleaning trash grates.

Whilst traveling along the channels daily the internal bulk water weirs and customer outlet reads are taken. Coliban is continually looking into the viability of the current processes and procedures to deliver the same level of service more efficiently from a labour and water loss perspective.

Meter fleet profile

For each water resource management area, summarise the volumes measured by meters of different compliance categories plus the metered volume that has telemetry.

Current Meter Fleet for F19/20

Meter Installation & Configuration Status		Outlet Metering Requirements - Exclusion Status Determination						
		Requirement Code & Category						
		Exceeds Volume Threshold				Low Usage		
Compliance Code	Compliance Code Category	AM	EXHC	MO	EXOS	EXLU		
		Accurate meter required	Exempt - high cost	Exempt - supply system change planned	Exempt - outside scope	Exempt - low use		
AS	Compliant	0	0	0	0	0	0	0
AS*	Compliant (need verification)	0	0	0	0	0	0	0
CO	Contemporary (also called Interim)	16	22	0	2	326	366	
OT	Outside contemporary standard	5	20	1	34	601	661	
UM	Unmetered	0	0	0	0	14	14	
		21	42	1	36	941	1041	
		64			36			
		100						

Last Year's Meter Fleet Profile for F18/19

Meter Installation & Configuration Status		Outlet Metering Requirements - Exclusion Status Determination						
		Requirement Code & Category						
		Exceeds Volume Threshold				Low Usage		
Compliance Code	Compliance Code Category	AM	EXHC	MO	EXOS	EXLU		
		Accurate meter required	Exempt - high cost	Exempt - supply system change planned	Exempt - outside scope	Exempt - low use		
AS	Compliant	0	0	0	0	0	16	
AS*	Compliant (need verification)	15	0	0	1	0	0	
CO	Contemporary (also called Interim)	0	22	0	2	333	357	
OT	Outside contemporary standard	3	17	1	36	640	697	
UM	Unmetered	0	0	0	0	15	15	
		18	39	1	39	988	1085	
		58			39			
		97						

Changes from the F18/19 season

Meter Installation & Configuration Status		Outlet Metering Requirements - Exclusion Status Determination						
		Requirement Code & Category						
		Exceeds Volume Threshold				Low Usage		
Compliance Code	Compliance Code Category	AM	EXHC	MO	EXOS	EXLU		
		Accurate meter required	Exempt - high cost	Exempt - supply system change planned	Exempt - outside scope	Exempt - low use		
AS	Compliant	0	0	0	0	0	0	0
CO	Contemporary (also called Interim)	1	0	0	-1	-7	-7	
OT	Outside contemporary standard	2	3	0	-2	-39	-36	
UM	Unmetered	0	0	0	0	-1	-1	
		3	3	0	-3	-47	-44	
		6			-3			
		3						

The following changes have been calculated* for the meter fleet over the last 2 years.

- 44 less customers from F18/19
- An increase in 3 Accurate meters Required
- An increase in 3 meters to be reviewed for the high cost of conversion

Budgets for F21/22 are being adjusted to manage the increase in investment to cover the newly identified outlets.

Noting 5 of the 6 newly identified are open channel outlets that do not currently have an AS4747 complaint solution

**This may be subject to change once the final implementation of the Customer Relationship Systems reporting functionality has been fully rolled out.*