

## Appendix C - COLIBAN SYSTEM SOUTHERN



Figure 1: Coliban Southern showing water sources.

### System Overview

Coliban System Southern (Coliban Southern) services 10,153 residential connections and 1,115 non residential connections as of 30 June 2018. These customers are delivered potable water. It also services 645 rural licenses with a base entitlement of 10,044 ML. Rural customers are delivered raw water.

Raw water is supplied by our upper Coliban River catchment storages: Upper Coliban, Lauriston, and Malmesbury Reservoirs, located near Kyneton.

The Coliban Southern comprises two independent potable water supply systems (Castlemaine and Kyneton) and a number of rural channel supplies.

- McCay Reservoir at Castlemaine receives raw water from the Coliban Headworks Storages via the open Coliban Main Channel. The water is treated at the Castlemaine WTP and supplied to Castlemaine, Elphinstone, Taradale, Maldon, Newstead, Harcourt, Guildford, and Fryerstown.
- Kyneton WTP; supplies Kyneton, Malmesbury, and Tylden. The raw water supply is drawn directly from Lauriston Reservoir (one of three major storages).

The main rural channels are Elphinstone, Harcourt, and Emu Valley. The Harcourt rural network incorporates Barkers Creek Reservoir. The Harcourt rural network has been converted from an open channel to a pressurised pipe system (July 2016).

## Water Resources and Demand

Inflows were only 66% of the median but our storages at the end of 2017-18 were at 67% capacity, with more than two years of supply in hand. The urban and rural demands for 2017-18 increased by around 23% from 2016-17.

**Table 1: Rural channel usage for 2017-18.**

System	Channel	Total Licence Volume (ML)	Total Usage (ML)	No. of Licences	No. of Licences Supplied	% of Licences Supplied
Coliban Headworks	Lauriston Reservoir	10	0	5	0	0
	Malmsbury Reservoir	4	0	2	0	0
	Upper Coliban Reservoir	1	0	1	0	0
<b>System Total</b>		<b>15</b>		<b>8</b>		
Coliban Main	Coliban Main - 1	5737.2	153.2	41	25	61
	Coliban Main - 4/1	203	35.8	32	12	38
	Coliban Main - 4/3	473.8	206.2	79	59	75
<b>System Total</b>		<b>6415</b>	<b>395.2</b>	<b>149</b>	<b>96</b>	<b>64</b>
Emu Valley South	Abbotts	405.4	225	104	84	81
	Emu Valley No. 1	351.6	167.8	81	64	79
	Emu Valley No. 2	363.1	142	65	49	75
	Mannes	93.8	19.9	16	12	75
	Strathfieldsaye	5	1	2	2	100
<b>System Total</b>		<b>1218.9</b>	<b>555.7</b>	<b>268</b>	<b>211</b>	<b>79</b>
Harcourt	Harcourt Modernised Pipeline	2165.7	976.4	169	136	80
<b>System Total</b>		<b>2165.7</b>	<b>976.4</b>	<b>169</b>	<b>136</b>	<b>80</b>
Poverty Gully	Campbells Creek	0	0	0	0	0
	Poverty Gully	12.4	2.6	6.0	4.0	67
<b>System Total</b>		<b>12.4</b>	<b>2.6</b>	<b>6.0</b>	<b>4.0</b>	<b>67</b>
Spring Gully	Diamond Hill	64.3	17.1	12.0	9.0	75
	Spring Gully	153.3	74.1	33.0	25.0	76
<b>System Total</b>		<b>217.6</b>	<b>91.2</b>	<b>45.0</b>	<b>34.0</b>	<b>76</b>
<b>Southern System Total</b>		<b>10043.6</b>	<b>2021.1</b>	<b>645.0</b>	<b>481.0</b>	<b>75</b>

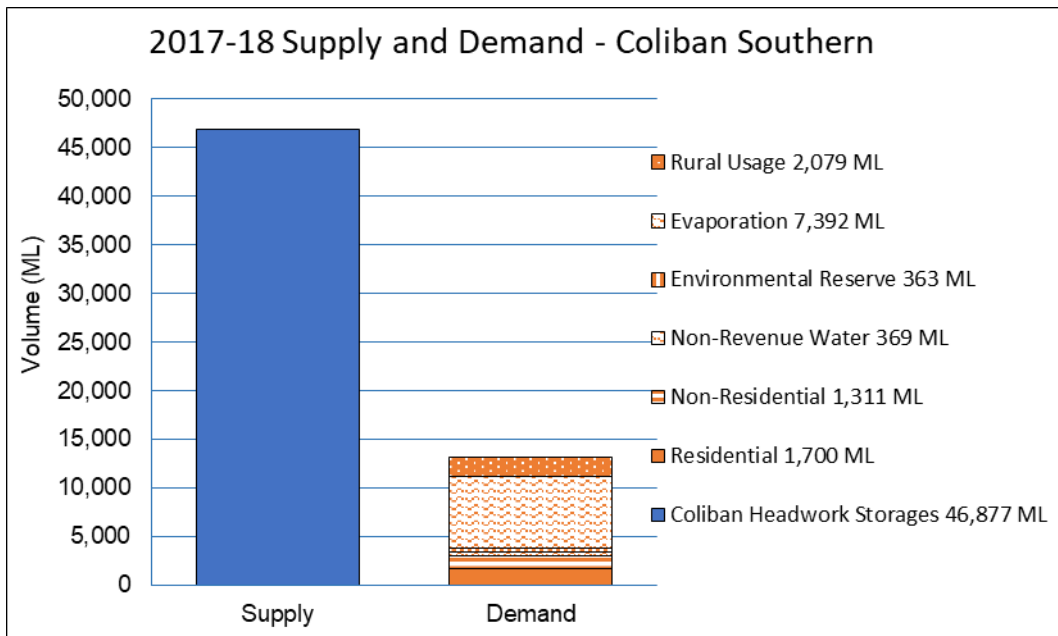


Figure 2: 2017-18 Supply and Demand for the Coliban Southern excluding Coliban Northern.

In 2017-18 the demand for the Coliban System Southern was within the estimated demand range.

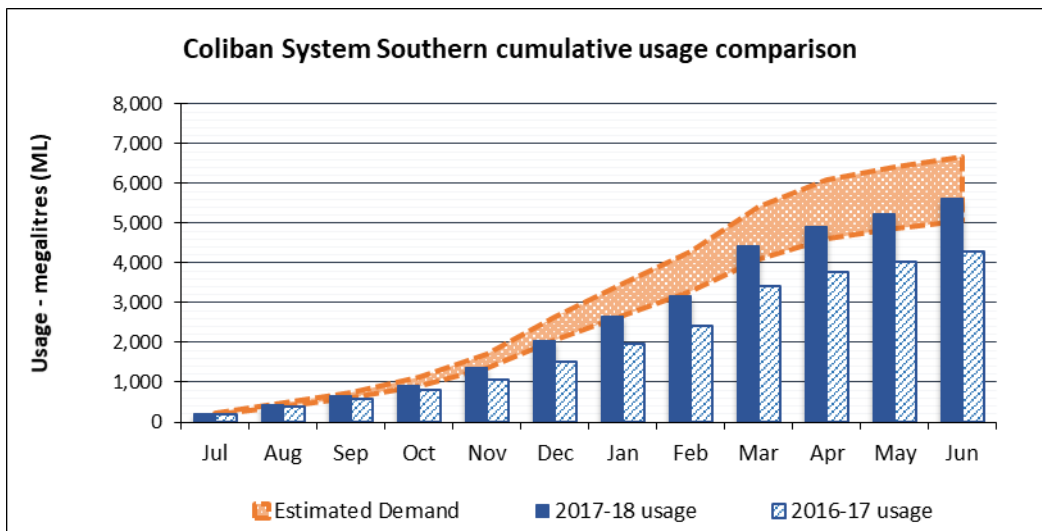


Figure 3: 2017-18 cumulative water usage for the Coliban Southern compared with the same period last year and estimated demand. The usage and demand include urban and rural without losses.

## Resource Status

With high volumes in storage, restrictions are highly unlikely for the next 12 months.

Table 2: Supply and demand.

System	Primary Supply Secondary Supply	Supply <sup>1</sup> 1 Oct' 2018	Demand 'dry weather'	Reserve Status
Coliban Southern	Coliban Headwork Storages	60,712 ML	18,375 ML	>24 months

Note 1: Storage volume held in Coliban Headworks Storages excludes predicted future inflows

## Forward Outlook

Our major storages are at 87% capacity with the potential for further inflows over the next 3-4 months. However inflows to date have been below the current climate median.

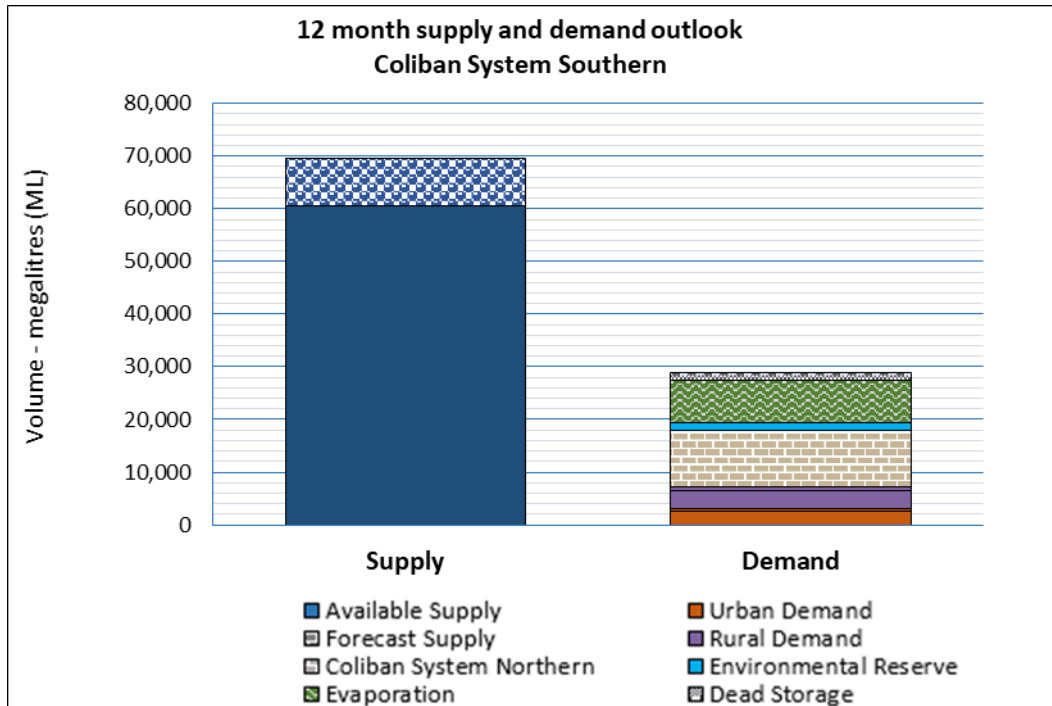


Figure 4: Raw water 12 month supply and demand outlook for the Coliban Southern.

## Actions

**Raw Water Supply System - Reduce Evaporation from Storages (Investigation):** Evaporation reduction measures for the Coliban Headworks Storages and minor service basins (McCay and Barkers Creek Reservoirs). This could include mechanical covers on minor basins or evaporation resistant barriers for larger storages.

Coliban Water has continued to engage with stakeholders and customers in relation to the Urban Water Strategy (UWS). Detailed analysis on each system will commence during the latter part of 2018-19.