
9 DEVELOPMENT AND INFRASTRUCTURE

9.1 RESPONSE TO NOTICE OF MOTION 974 - WATER CONSUMPTION

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Attachments: Nil

Reference: CM20/21

SUMMARY

This report responds to Notice of Motion 974 – Water Consumption made at the 17 February 2019 Council meeting.

RECOMMENDATION

THAT Council receives and notes the information contained in this report.

BACKGROUND

At the 17 February 2019 Council meeting the following Notice of Motion was carried unanimously:

THAT:

1. *Council officers prepare a report detailing water consumption, including a breakdown of water sources, in the following areas:*
 - a) *Parks and gardens across the Shire.*
 - b) *Sporting fields across the Shire*
 - c) *Other facilities*
 - d) *Roads and any other uses*
2. *Explore alternate sustainable water sources.*

This report details Council's water consumption and explores opportunities for alternate sustainable water sources.

ISSUES AND DISCUSSION

Water Consumption

The following table and graph provide a breakdown of Council's 2018/2019 water usage by classification. As the data is sourced by interrogating Council's billing data, it is limited to water used from the reticulated water supply where Council pays the water bill and includes water used by contractors undertaking work for Council.

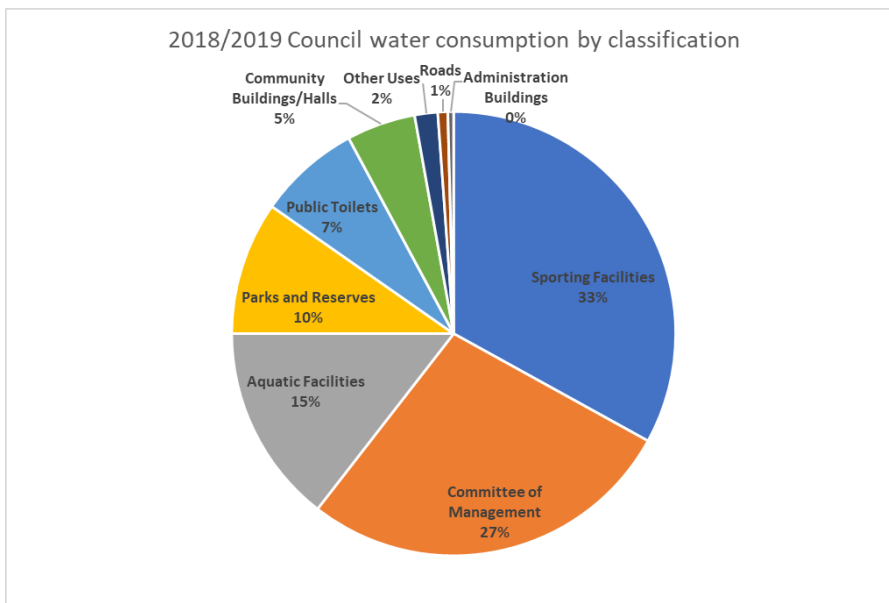
Council's active open space facilities, such as ovals account for 60% of Council's water use (this includes sporting facilities and Committee of Management sites).

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Table 1: 2018/2019 Council water use by classification *

Classification	2018-2019 Consumption (ML)
Sporting Facilities	51.305
Committee of Management	42.708
Aquatic Facilities	22.518
Parks and Reserves	15.065
Public Toilets	11.566
Community Buildings/Halls	7.798
Other Uses	2.606
Roads	1.133
Administration Buildings	0.654
TOTAL	155.353

Graph 1: 2018/2019 Council water use from the reticulated water system by classification



Water Sources

Mitchell Shire Council’s water usage is predominantly sourced from the reticulated water supply from the Goulburn Valley Water and Yarra Valley Water networks. It is estimated that potable water represents 95% of Council’s current water use and in 2018/2019 cost Council approximately \$345,000.

Other water sources include:

- Council water bores;
- Water from the Goulburn River and other waterways;
- Irrigation from water bodies (e.g. Kilmore and Broadford Golf Courses);

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- Rainwater via water tanks; and
- Recycled water from Yarra Valley Water.

These water sources are discussed in detail below.

Council's Grading program

Council's grading program sources water from five (5) different sources, as detailed in table 2.

Table 2 - Council grading water usage 2018/2019 year

Water source	Megalitres
Council Water Bores	4.5
Goulburn River	1.5
Yarra Valley Water	3.1
Goulburn Valley Water	11.6
Coliban Water	0.7

Rainwater tanks

Mitchell Shire Council has 26 water tanks on our assets database totaling a capacity of 806,200 litres. These support a variety of uses including garden beds, oval irrigation and flushing toilets. It is important to note that these tanks are topped up with potable water when levels are low.

Recycled water

Recycled water is classified A, B, C or D. These classes are defined by several water quality objectives, including E. coli levels, turbidity, biochemical oxygen demand, pH, salinity and chlorine levels, as well as the treatment processes applied such as secondary and tertiary treatments.

Council currently receives Class A recycled water from Yarra Valley Water at seven (7) Council managed sites in Wallan and Beveridge. There is also a third (purple) pipe for residential use.

Goulburn Valley Water currently treat water to class C but can treat to class B if needed. Goulburn Valley Water uses recycled water to irrigate its own land, for example woodlots and sells it to nearby farmers to irrigate their land. Recycled water is also used to irrigate several local golf courses, including the Seymour Golf Course.

It is noted that there is another Notice of Motion - 971 for water reuse in Kilmore. This is a separate piece of work currently underway and will be reported to Council at a later stage. However, the information relating to classes of recycled water detailed in this report are relevant to future discussions about recycled water in Kilmore.

It is important that the quality of water being proposed for reuse is 'fit for purpose'. Careful consideration must be given to soil types, vegetation, environmental values and health implications before committing to a recycled water scheme.

The EPA Guidelines for Environmental Management – Use of Reclaimed Water state that *"Reclaimed water is suitable for application under a wide range of urban non-potable uses. The potential level of exposure to reclaimed water determines the Class*

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that is suitable for both urban or municipal reuse schemes. The potential level of exposure is influenced by a number of factors including:

- *the distance from residential or public access areas;*
- *the use of signage and/or fencing to restrict site access;*
- *the irrigation method used; and/or*
- *the use of restricted watering times (for example, night-time watering)."*

"Only Class A reclaimed water may be used for residential or municipal reuse schemes where there is high exposure potential to humans due to limited controls on public access."

This explains why there is no residential water reuse (purple pipe) in the areas of Mitchell Shire serviced by Goulburn Valley Water, as the water is not treated to class A level.

The use of Integrated Water Management principles in development will assist in reducing the use of potable water. Integrated Water Management is defined in the Integrated Water Management Framework for Victoria (DELWP 2017).as *"... a collaborative approach to planning that brings together organisations that influence all elements of the water cycle, including waterways and bays, wastewater management, alternative and potable water supply, stormwater management and water treatment. It considers environment, social and economic benefits"*

To achieve the principles of Integrated Water Management, it is imperative that Council works in collaboration with Goulburn Valley Water and Yarra Valley Water to provide infrastructure and 'fit for purpose' water.

Reducing water use

The first action of water conservation is to reduce water use, regardless of the water source. The second step is to reduce the use of potable water by using alternative water supplies.

As stated in the Victorian Government's Central Region Sustainable Water Strategy *"In addition to being cost effective, (water) conservation actions also reduce pressure on our rivers and aquifers, save energy and greenhouse gas emissions and have widespread community support."*

Steps Council can take to reduce the use of potable water include selecting species for trees, landscaping and turf that are suitable for the soil and climatic conditions and require less watering, pool covers to reduce evaporation and water saving irrigation systems. In the built form, Council can target water saving appliances such as toilets, showers and dishwashers.

The growth in our Shire presents an opportunity to implement integrated water management (IWM) principles into our new developments. Mitchell Shire Council officers continue to advocate for IWM in Mitchell Shire through our involvement in the development of the Upper Merri Catchments Integrated Water Management Plan and Greening Kilmore Integrated Water Management Plan.

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CONSULTATION

Officers of Yarra Valley Water and Goulburn Valley Water were consulted in the preparation of this report.

FINANCIAL, RESOURCE AND ASSET MANAGEMENT IMPLICATIONS

Water conservation aims to reduce reliance on the valuable natural resource of potable water.

The financial, resource and asset management implications to Council of using alternative water must be considered as part of any alternative water scheme and would be project specific. Considerations include; confirmation that the water is fit for purpose, infrastructure to deliver and potentially store the recycled water, alterations to irrigation systems and changes to management practices.

The current rates for water from Yarra Valley Water are;

- Potable Water \$2.9172/kL
- Recycled \$2.7726/kL

The water rates from Goulburn Valley Water are;

- Potable Water \$1.1581/kl
- Goulburn Valley Water does not have residential recycled water.

The development of this report included collaboration from seven (7) Council units taking approximately 20 officer hours.

POLICY AND LEGISLATIVE IMPLICATIONS

In Victoria, the use of recycled water must be in accordance with EPA regulations and guidelines. These guidelines are intended to be used in conjunction with the Australian Guidelines for Water Recycling, which provides the authoritative reference for the supply, use and regulation of recycled water schemes. Specific EPA governance documents include:

- Publication 168 – Guidelines for Environmental Management: Guidelines for Wastewater Irrigation;
- Publication 464.2 – Guidelines for Environmental Management: Use of Reclaimed Water

The recently adopted Mitchell Shire Council Environment Policy includes the 2050 goal that “100% of Councils non potable water use is supplied from alternative water sources”. There is a lot of work that needs to be undertaken to achieve this goal including working together with our local water authorities to ensure we can receive fit for purpose water for municipal use.

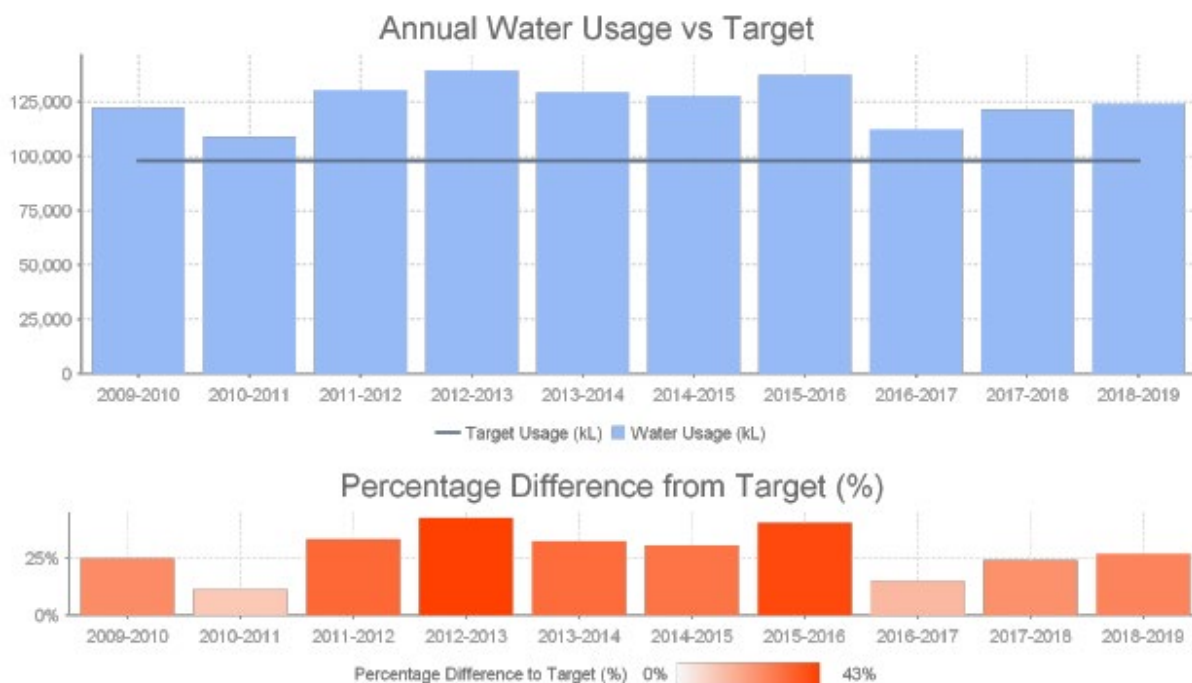
The Mitchell Shire Sustainable Resource Management Strategy was adopted in 2011 and sets the following target:

- *A reduction corporate water usage by 20% on 2009-2010 levels by 2020-2021.*

Mitchell Shire Council’s use of potable water has remained relatively unchanged since 2009/2010 as shown in Graph 2.

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Graph 2 – Mitchell Shire Council Annual Water Usage



Whilst this means it is unlikely that Council will reach our water reduction target, it can be surmised that given the growth Mitchell Shire has experienced, the use of ‘water use efficiencies’ such as the drought resistant turf species and water restrictions have kept Mitchell Shire’s water use from increasing.

It should also be noted that the target was set in a high rainfall year (2010). A decrease in Council water use can also be seen in the 2016/2017 year, again coinciding with higher rainfall events.

Council officers are working on identifying new Council assets that have come on-line since the sustainability targets were set in 2009/2010 to inform the reporting.

RISK IMPLICATIONS

Risk Ranking is determined using [ROHS201-G1- Corporate Risk Matrix](#). Risk is identified as Low, Medium, High or Very High.

Risk	Risk Ranking	Proposed Treatments	Within Existing Resources?
Recycled water offered by water authorities is not fit for purpose	Medium	Continued collaboration with the Water Authorities to investigate water recycling options.	Yes

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SUSTAINABILITY IMPLICATIONS (SOCIAL AND ENVIRONMENTAL)

The efficient and effective use of water is imperative in maintaining social and environmental assets, this is further exacerbated by the effects of climate change and population growth.

CHARTER OF HUMAN RIGHTS IMPLICATIONS

The rights protected in the *Charter of Human Rights and Responsibilities Act 2006* were considered in preparing this report and it's determined that the subject matter does not raise any human rights issues.

CHILDREN AND YOUNG PEOPLE IMPLICATIONS

Water conservation measures are important in securing water for our future generations.

The health implications on children and young people must be considered as part of any recycled water scheme.

OFFICER DECLARATION OF CONFLICT OF INTEREST

No officers involved in the preparation of this report have any direct or indirect interest in this matter.

CONCLUSION

Mitchell Shire Council uses a variety of water sources for municipal purposes, including over 155 mega litres of water from the reticulated water system. This includes a small proportion of Class A recycled water. The majority of water use (60%) is used for recreational open space and committee of management sites.

Council also uses bore water, water extraction from waterways and waterbodies and rainwater from water tanks.

Approximately 95% of Council's water use is from the potable water supply. There are options for alternative water resources such as using recycled water from water treatment plants, however it is critical that this water is fit for purpose.

Mitchell Shire Council officers will continue to work with our industry partners to investigate opportunities for water saving and use of alternative water sources to reach the targets set in the Mitchell Shire Council Environment Policy.