

Unregulated Diversions

Water Outlook for Melbourne

25 November 2016



Yarra River at Warburton

Introduction

The Minister for Water has delegated Melbourne Water with the responsibility for managing surface water licensing within the waterways and major drainage systems of the Yarra River, the lower Maribyrnong River, Stony, Kororoit, Laverton and Skeleton Creek catchments.

Within these catchments we currently manage approximately 1300 licenses from waterways and administer approximately 500 farm dam registrations and licences relating to catchment dams. The total allocation issued under these licences is approximately 44,000 Megalitres (ML). Water use is primarily for agricultural, industrial, commercial, sporting grounds and domestic and stock purposes.

All licences managed by Melbourne Water are on unregulated systems except for a small number of licences in the lower Maribyrnong which are semi-regulated.

Background

The Water Act 1989 requires Melbourne Water, as the Minister's delegate, to protect the environment and consider the needs of water users. This is achieved through a number of different mechanisms that include a Drought Response Plan (DRP), Stream Flow Management Plans (SFMPs) and Local Management Rule (LMRs).

During drought or low flow conditions, licenced diverters' access to water may be restricted or banned to protect the environment. Our Drought Response Plan is active at all times, and specifies how water is shared when there is not enough to meet all users' needs.

It states waterway flow levels which trigger restrictions or bans, and how these are applied to different licence types. These trigger points have been developed together with stream flow management plans or local management rules/plans.

The status of restrictions and bans for individual catchments is posted on Melbourne Water's website and updated daily at www.melbournewater.com.au/diverters and is available by calling Melbourne Water on 131 722 at any time. Licence holders need to check their access to water by obtaining this information prior to taking water. In addition the website provides catchment specific stream-flow data including daily and 7-day average stream flow.

Summary of recent winter/spring filling season and current water resource position

Many of our unregulated catchment flows were higher than average across winter/spring due to recent above average rainfalls. Licence holders with dams and storage provision are at maximum capacity ahead of the irrigation season. Winter-fill licence holders in areas reliant on dams for irrigation, such as Yarra Glen and Dixons Creek, have had good access across the licence period with most off-stream dams full. The cooler Spring conditions have also led to reduced water demand in this period and subsequently a later start to the season for many irrigators.

Comparative Streamflows

Flow conditions are above that of 2015. At the same date last year 14 waterways were on pumping bans with 3 on restrictions. As of late November this year only 4 waterways are on bans. The 4 systems on bans are typically dominated by winter-fill licences who have had sufficient access to water to meet their requirements this season.

The following table compares streamflows from early November 2015 to 2016 :

Catchment	Flow 25 November 2015 (ML)	Flow 25 November 2016 (ML)
<u>Arundel Creek</u>	2.2	33.8
<u>Darebin Creek</u>	1.4	78.5
<u>Diamond Creek</u>	3.0	21.6
<u>Dixons Creek</u>	0	2.3
<u>Don River</u>	10.8	16.2
<u>Gardiners Creek</u>	1.4	28.3
<u>Hoddles Creek</u>	4.0	11.4
<u>Kororoit Creek</u>	4.9	45.4
<u>Little Yarra River</u>	44.8	92.7
<u>Maribyrnong River (all year)</u>	2.5	70.2
<u>Maribyrnong River (winter-fill)</u>	2.5	70.2
<u>Merri Creek</u>	4.1	33.5
<u>Moonee Ponds Creek</u>	2.2	33.8
<u>Mullum Mullum Creek</u>	1.0	15.8
<u>Olinda Creek (Lower)</u>	16.5	39.8
<u>Olinda Creek (Upper)</u>	7.7	14.4
<u>Pauls Creek</u>	1.0	3.5
<u>Plenty River</u>	0.1	32.5
<u>Steels Creek</u>	0	4.9
<u>Stringybark Creek (Lower)</u>	0.2	15.5
<u>Stringybark Creek (Upper)</u>	1.1	6.4
<u>Wandin Yallock Creek</u>	2.4	12.9
<u>Watsons Creek</u>	2.5	6.7
<u>Watts River</u>	22.5	163.9
<u>Woori Yallock Creek</u>	55.2	201.1
<u>Yarra River Lower</u>	841.2	1334.7
<u>Yarra River Upper</u>	404.9	1309.4

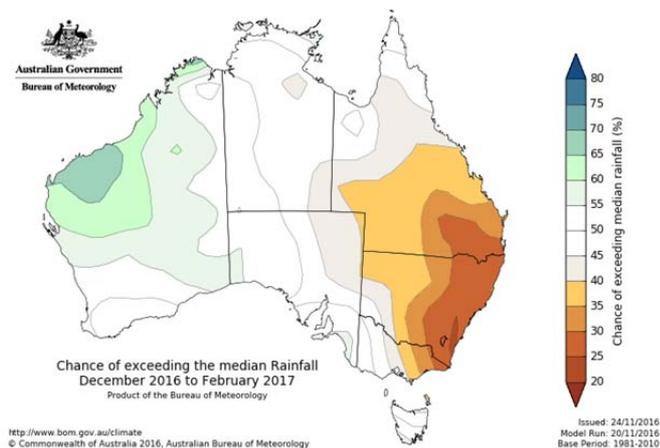
Water availability for rest of 2016/17

Average rainfall and warmer season ahead

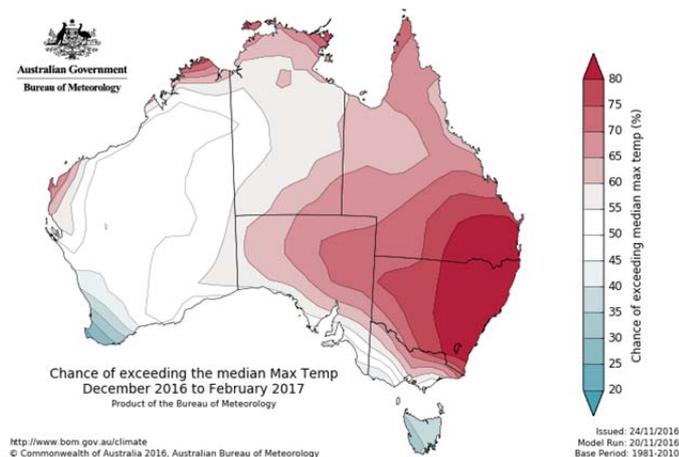
The Bureau of Meteorology seasonal climate outlook for the next three months indicates summer rainfall is likely to be below average and warmer conditions over Victoria for summer.

Temperature and rainfall influence water use, especially during summer periods. At the same time, they also influence catchment soil moisture levels and inflows to Melbourne Water's unregulated waterways. Melbourne Water continually monitor flow conditions and the Bureau's seasonal climate outlooks. Waterway flow and rainfall information is made publically available on the Melbourne Water website.

Rainfall outlook – The Australian Bureau of Meteorology outlook for rainfall (issued on 24 November 2016) for the period from December 2016 to February 2017 indicates that for Melbourne, the chances of a wetter or drier three months are roughly equal, however as you head east rainfall is likely to be below average.



Temperature outlook – The Australian Bureau of Meteorology outlook for temperature (issued on 24 November 2016) for the period from December 2016 to February 2017 indicates that the chances of a warmer season are more likely, particularly in December.



Determining water availability

Predicting Melbourne's future streamflow levels is complex and uncertain.

This is primarily because it is not possible to accurately forecast the timing and extent of rainfall events and consequently the catchments' runoff response to them up to one year ahead. For example, El Niño and La Niña events typically break down over autumn. Therefore, meteorologists face a predictability barrier and typically cannot reliably forecast these events until after the end of autumn.

Conclusion of Future Availability & Likelihood of Rosters, Bans, Restrictions for this summer

The outlook for the rest of 2016/17 is reasonably favourable as most winterfill dams have already been filled and prevailing flow conditions are greater than that experienced last year. The catchment is in a saturated state so declines in streamflow will generally be slower as a result. Even with good flow conditions many catchments will still potentially face periods of restrictions or bans being applied. The difference created by favourable conditions will mean the number and length of bans applied may be reduced from average.

In response to higher than average rain and lower than average temperatures it can be expected that the majority of monitored sub-catchments may not face bans until late January or early February. If favourable conditions persist across Summer then the period in which bans apply may finish as early as March.

If average conditions occur over Summer then bans / restrictions across the majority of systems are likely early in the new year and likely to extend into April.

In drier than average scenario, which is predicted by the BOM's climate outlook, it is possible that streamflows can diminish quite quickly, particularly if coupled with hot temperatures. Under this scenario bans and rosters on the majority of systems could occur by mid December and if such conditions persist can extend the period into May.

Under all scenarios, the occurrence of any significant rain event is likely to provide at least limited relief to licence holders and enable short periods of pumping access.

Water availability for first half of 2017/18

The Winter / Spring period in Melbourne Water's area is generally sufficient to maintain water access for most licence holders, particularly winter-fill licence holders. Demands outside of winter-fill are also low in this period until around November / December. Predominantly it is unusual to see large number of systems on bans or restrictions ahead of mid December.

Other factors affecting entitlement holders and the environment

In unregulated systems Melbourne Water does not make any releases to supply water to licence holders but may make releases for environmental purposes. In partnership with the Victorian Environmental Water Holder (VEWH), may commence an environmental water release to the Yarra River during the coming summer period.

If the flows in Yarra River get low, this means available habitat for aquatic species has been reduced. Releases over the summer have been successful in improving water quality in the lower part of the river.

Potential water releases will benefit the river's many aquatic inhabitants, including the regionally significant River Blackfish, Macquarie Perch and the platypus.