

Lower Campaspe Valley Water Supply Protection Area

Groundwater management

The Lower Campaspe Valley Water Supply Protection Area (WSPA) extends from Lake Eppalock in the south to the Murray River in the north. Groundwater resources are managed by Goulburn-Murray Water (GMW) in accordance with the *Lower Campaspe Valley WSPA Groundwater Management Plan* (the Plan) which was approved by the Minister for Water in October 2012.

Allocations

Allocations are determined by comparing the three-year rolling average of the maximum groundwater recovery levels to trigger levels set by the Plan.

In 2018/19 an 100% allocation was announced for all four management zones. The allocation for the Barnadown Zone was reduced to 75% for the 2019/20 year (Figure 2). If recovery levels continue to decline, further restrictions are likely for 2020/21.

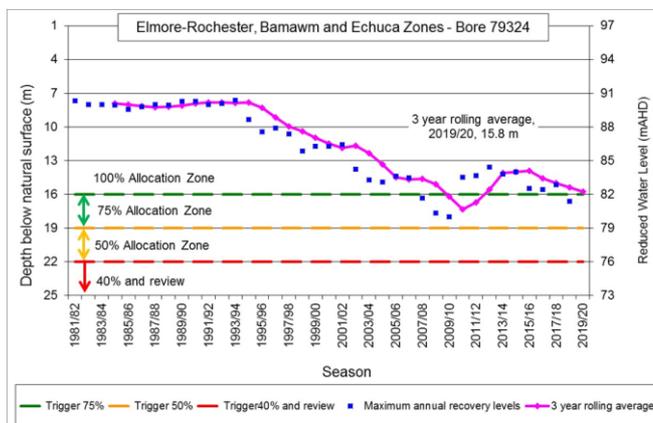


Figure 1 Allocations trigger graph for northern zones; Elmore-Rochester, Bamawm and Echuca

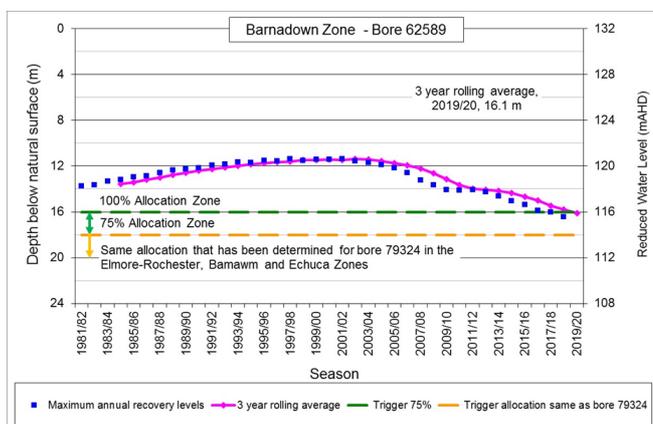


Figure 2 Barnadown Zone allocations trigger graph

Groundwater use

Recorded use in the Lower Campaspe Valley WSPA was 50,258.9 ML in 2018/19, or 90% of total licence volume (Figure 3).

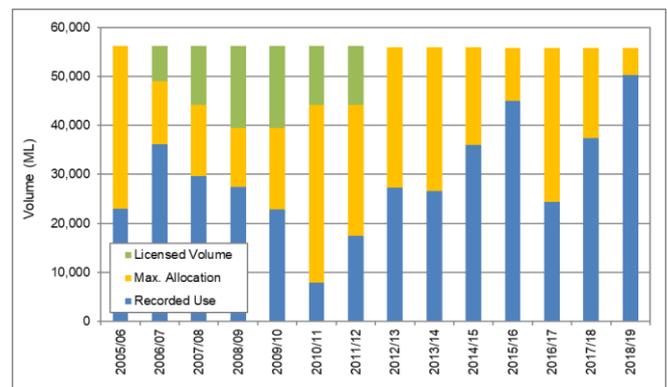


Figure 3 Licence volume, allocation and use

Trading

The Plan allows groundwater licence holders to temporarily or permanently transfer licence volume. In 2018/19 there were 55 temporary transfers for a total of 8,240.1 ML/yr and four permanent transfers for a total of 770 ML/yr (Figure 4).

It is noted that one transfer resulted in 100 ML being temporarily transferred out the WSPA.

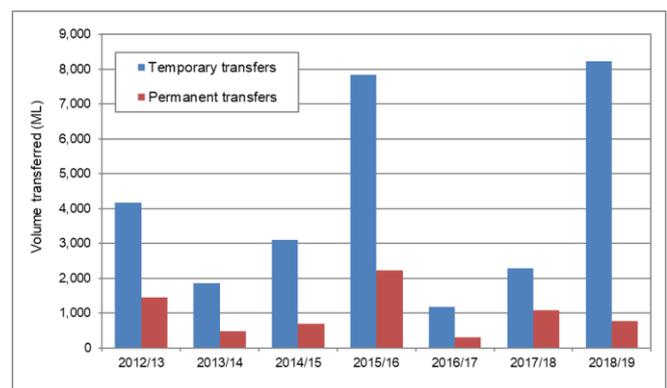


Figure 4 Groundwater trading activity

Licence holders are reminded not to extract more than their licence volume without written approval from GMW.

Licence holders seeking to trade groundwater licence volume are encouraged to visit *Watermatch* (www.watermatch.com.au); an on-line trading forum where people can advertise their interest to buy or sell water.

Carryover

A total of 12,839.7 ML was carried over by licence holders in the Lower Campaspe Valley WSPA for use in the 2018/19 water year.

The volume that has been carried over into the 2019/20 water year is 11,511.8 ML.

Groundwater levels

The Department of Environment, Land, Water and Planning (DELWP), in partnership with GMW, monitored 101 State observation bores in the Lower Campaspe Valley WSPA.

Monitoring indicates that seasonal groundwater recovery levels have been generally declining since Plan implementation in 2012. During 2018/19 groundwater recovery levels in the Deep Lead aquifer, across much of the WSPA, were at their lowest on record. Seasonal drawdown levels also reached their lowest on record.

In the Elmore-Rochester and Bamawm zones, groundwater seasonal drawdown of almost 18 m was observed in intensively pumped areas in 2018/19 (Figures 5 and 6).

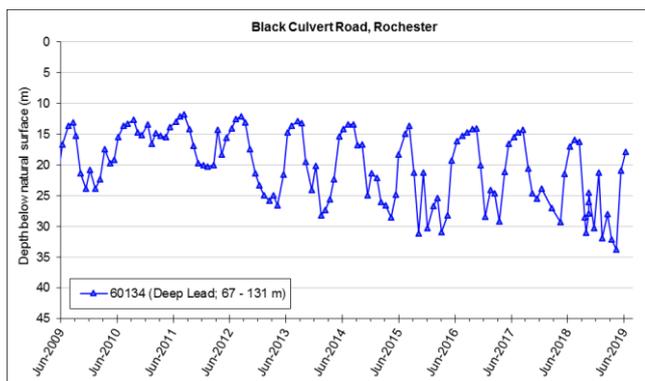


Figure 5 Groundwater levels in the Elmore-Rochester Zone at Rochester

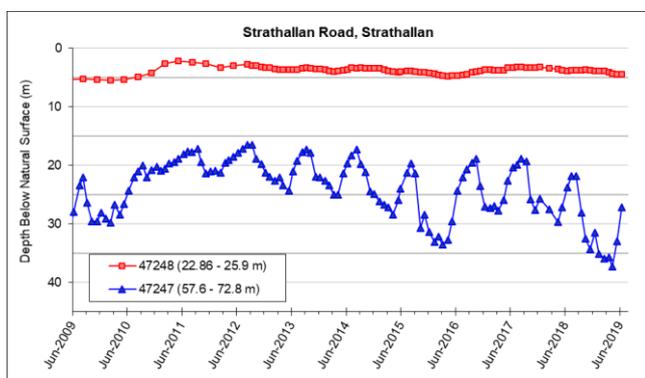


Figure 6 Groundwater levels in the Bamawm Zone at Strathallan

In comparison, seasonal drawdown in the Echuca and Barnadown zones is typically less than 5 m (Figures 7 and 8).

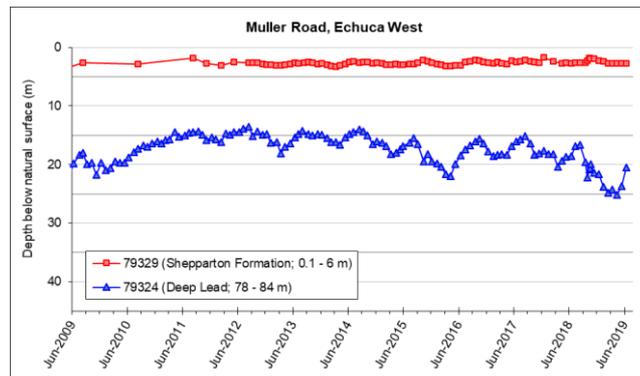


Figure 7 Groundwater levels in the Echuca Zone at Echuca West

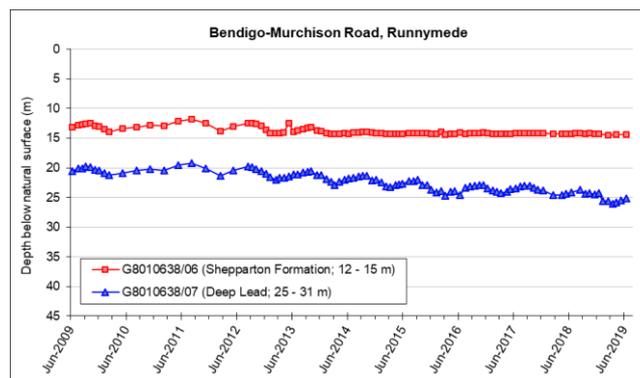


Figure 8 Groundwater levels in Barnadown Zone at Runnymede

Groundwater quality

Each year GMW provides sample bottles to all licensed groundwater users to monitor salinity in their bores, however just 15% of bottles were returned in 2018/19. This was supported by results from targeted sampling of licensed bores and indicates that salinity levels are generally within expected ranges.

The results indicate that less saline groundwater occurs within the Elmore-Rochester Zone. Samples from bores in the Barnadown Zone, west of the Campaspe River, were more saline; likely influenced by groundwater through-flow from the Huntly Deep Lead.

Key State observation bores were also sampled. Salinity levels ranged from 1,600 $\mu\text{S}/\text{cm}$ (EC) near Elmore to 9,600 EC on the north-western margin of the WSPA which is comparable to recent years.

Where can I get more information?

You can download a copy of the *Lower Campaspe Valley WSPA Groundwater Management Plan*, 2018/19 annual report and previous publications from the GMW website www.gmwater.com.au or call 1800 013 357.