

Lower Campaspe Valley Water Supply Protection Area

Groundwater management

The Lower Campaspe Valley Water Supply Protection Area (the 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*, approved by the Minister for Water in 2012 (the Plan).

Annual allocations

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

In the 2020/21 water year, all management zones had an allocation of 75 per cent of groundwater licence entitlement volume (licence volume). Allocations have again been announced at 75 per cent for the 2021/22 year, as the three-year rolling average was below the 100 per cent trigger level for both trigger bores—

- 1.5 m below for the northern zones; i.e., Elmore-Rochester, Bamawm and Echuca zones (Figure 1);
- 0.8 m below for the Barnadown Zone (Figure 2).

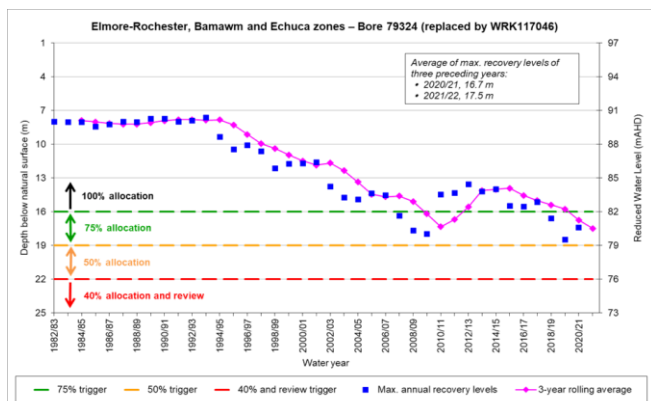


Figure 1. Allocation trigger graph for the northern zones

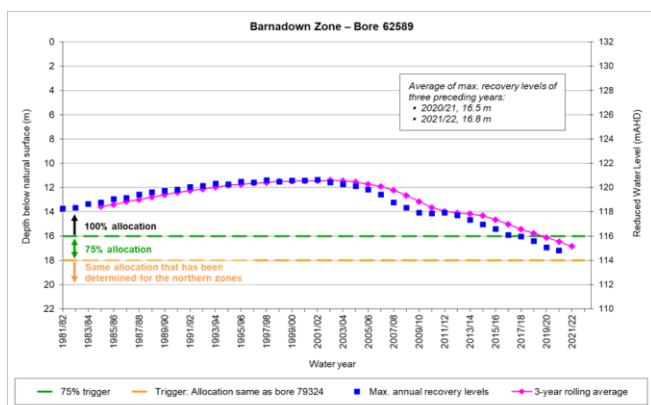


Figure 2. Barnadown Zone allocation trigger graph

Carryover

A total of 12,590.6 ML was carried over by licence holders in the WSPA for use in the 2020/21 water year. The volume that has been carried over into the 2021/22 water year is 11,623.33 ML.

Groundwater licence volume and use

On 30 June 2021, the total licence volume in the WSPA was 55,860.4 ML/yr. For the 2020/21 season, recorded use in the WSPA was 33,050.4 ML, or 59 per cent of licence volume (Figure 3).

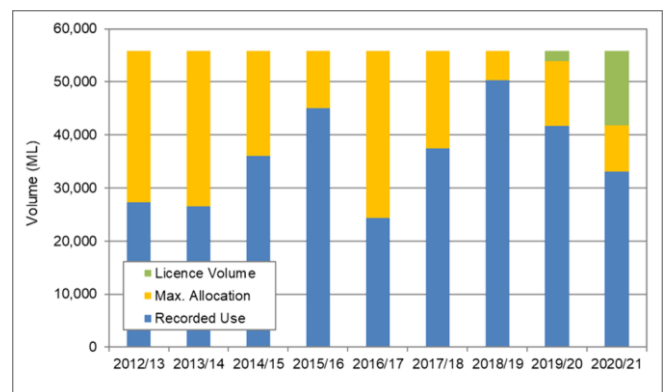


Figure 3. Licence volume, allocation and use

Note, the absence of green bars in Figure 3 signifies that the allocation is equal to the licence volume (i.e., 100% allocation). This is not the case for 2019/20 and 2020/21 when groundwater allocations were restricted.

Licence transfers

In 2020/21 there were 34 temporary transfers for a total of 5,793.9 ML and four permanent transfers for a total of 274.4 ML/yr (Figure 4).

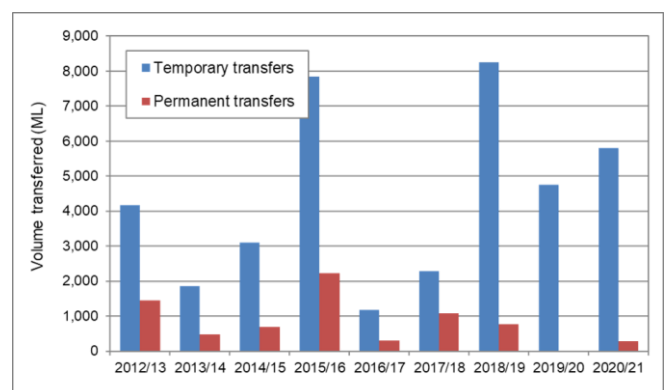


Figure 4. Groundwater trading activity

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

Licence compliance

In 2020/21 there were eight reported instances of alleged unauthorised take of groundwater (incl. overuse) in the WSPA.

GMW has a zero-tolerance approach to unauthorised take of non-urban water. GMW will investigate these incidents and take action, as necessary, in accordance with GMW's Risk-Based Compliance and Enforcement Framework. More information is available on the GMW website, at www.gmwater.com.au/compliance

Groundwater levels

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

Monitoring data indicate that groundwater recovery levels had been declining since the Plan was implemented in 2012. However, in 2020/21 this trend ceased as maximum recovery levels in many Deep Lead monitoring bores exceeded the maximum levels recorded in 2019/20. Additionally, maximum drawdown levels (i.e., lowest recorded levels) were higher in some locations than those observed in the previous year.

The maximum recovery level in a Deep Lead observation bore (60134), located near Rochester in the Elmore-Rochester Zone, was 0.1 m higher in 2020/21 than the maximum level in 2019/20 (Figure 5). Also, the magnitude of drawdown (i.e., the difference between the highest and lowest recorded levels) was 9.2 m, compared to 13.1 m in 2019/20.

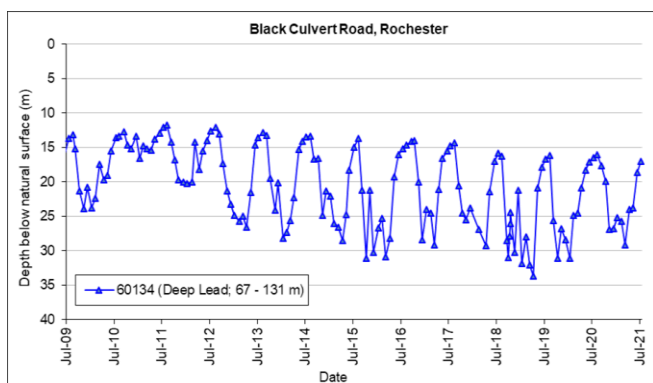


Figure 5. Groundwater level monitoring at Rochester

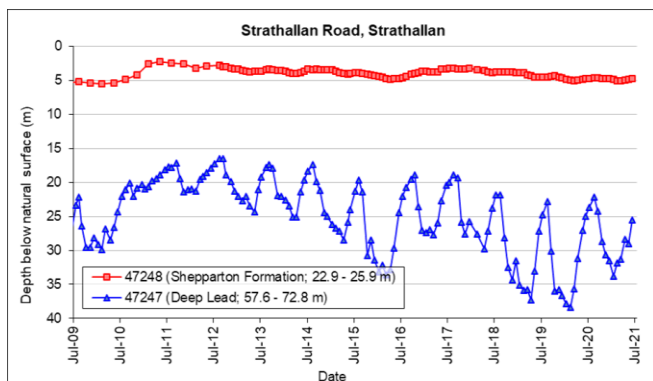


Figure 6. Groundwater level monitoring at Strathallan

At Strathallan, in the Bamawm Zone, levels recorded in Deep Lead bore 47247 indicated that the maximum recovery level was 0.6 m higher during 2020/21 than the previous year (Figure 6).

In the Echuca Zone, the maximum recovery level in the Deep Lead at Echuca West was 2.2 m higher than in 2019/20; and the magnitude of drawdown was 3.2 m, compared to 4.8 m in 2019/20 (Figure 7).

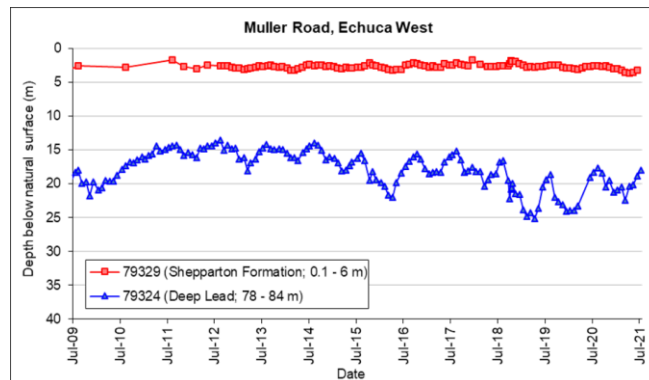


Figure 7. Groundwater level monitoring at Echuca West

In the Barnadown Zone, where less seasonal variation in groundwater levels is typical, the rate of groundwater-level decline eased in 2020/21 (Figure 8).

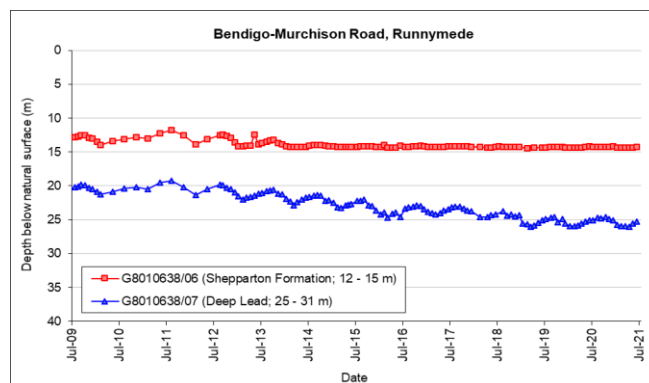


Figure 8. Groundwater level monitoring at Runnymede

Groundwater quality

Samples were collected from 13 State observation bores in 2020/21. Analytical results showed that salinity in the Deep Lead ranged from 1,000 $\mu\text{S}/\text{cm}$ (EC), south of Elmore, to 10,000 EC on the north-western margin of the WSPA, which is comparable to recent years.

Each year, GMW provides sample bottles to all licensed groundwater users in the WSPA, for the purpose of monitoring changes in groundwater salinity. Of the 156 bottles sent out in 2020/21, GMW only received 25 samples.

Where can I get more information?

You can download a copy of the Plan, 2020/21 annual report and previous publications from the GMW website, www.gmwater.com.au or phone GMW on 1800 013 357.