

Lower Campaspe Valley WSPA

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 in accordance with the Lower Campaspe Valley WSPA Groundwater Management 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 recover level to the trigger level.

In 2014/15 all management zones received an allocation of 100%. Allocations are also 100% in 2015/16 (Figure 1 and Figure 2).

Groundwater use

Metered use in the Lower Campaspe Valley WSPA in 2014/15 was 36,057 ML, which is 65% of licence entitlement (Figure 3). This is at the upper end of the historical use range.

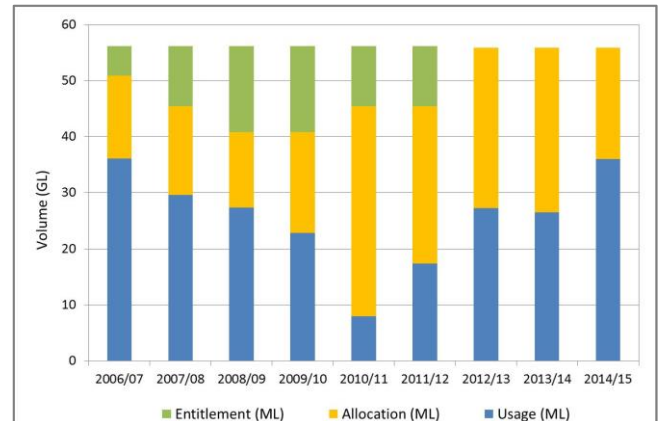


Figure 3. Metered groundwater use

Trading

The Plan allows groundwater licence holders to temporarily or permanently transfer licence entitlement. In 2014/15 there were 22 temporary transfers for a total of 3,095 ML; and 3 permanent transfers for a total of 690 ML (Figure 4).

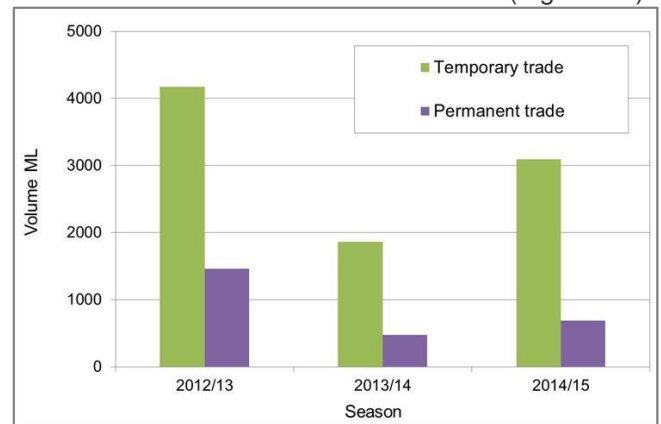


Figure 4. Groundwater trading activity

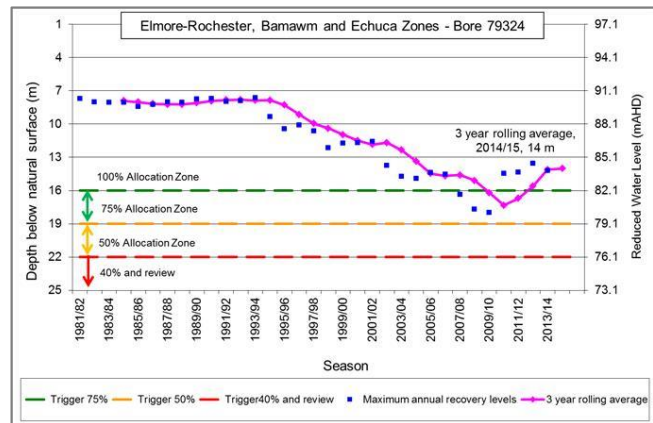


Figure 1. Trigger levels for allocations in the Elmore-Rochester, Bamawm and Echuca Zones

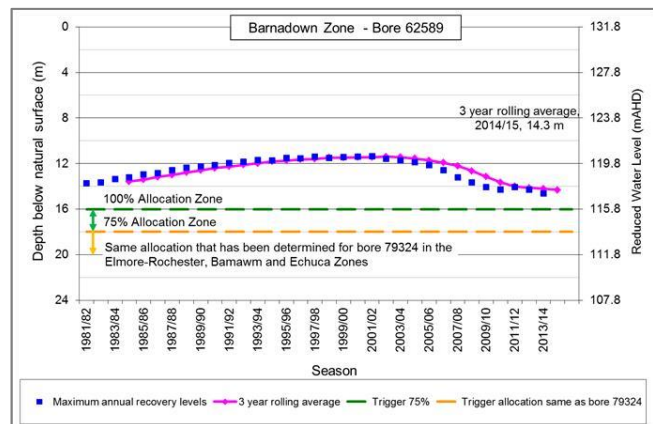


Figure 2. Trigger levels for allocations in the Barnadown Zone

The majority of temporary transfers occurred within the same management zone. There were some transfers between zones with 111 ML transferred out of the Echuca Zone; 11 ML transferred into the Bamawm Zone; and 100 ML transferred into the Elmore-Rochester Zone.

There was 690 ML permanently transferred out of the Bamawm Zone, with 190 ML transferred into the Echuca Zone and 500 ML transferred into the Elmore-Rochester Zone.

Carryover

There was 13,689 ML of carryover available to licence holders in the 2014/15 season. The volume that has been carried over into the 2015/16 season is 13,425 ML.

Groundwater levels

The Department of Environment, Land, Water and Planning (DELWP) monitored 132 bores from the State Observation Bore Network on a quarterly basis in the Lower Campaspe Valley WSPA. GMW monitored 60 of these bores on a monthly basis. Monitoring indicates that seasonal groundwater level recovery is strong and levels are within observed historical ranges.

In the Elmore-Rochester and Bamawm Zones, groundwater recovery levels have continued to decline by up to 6 m following the floods in 2010/11. Seasonal drawdown of up to 18 m was observed in more intensively pumped areas in 2014/15 (Figure 5 and Figure 6).

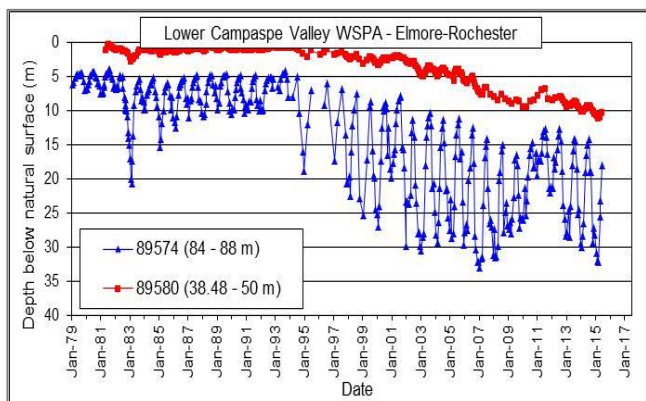


Figure 5 Groundwater levels in Elmore-Rochester Zone

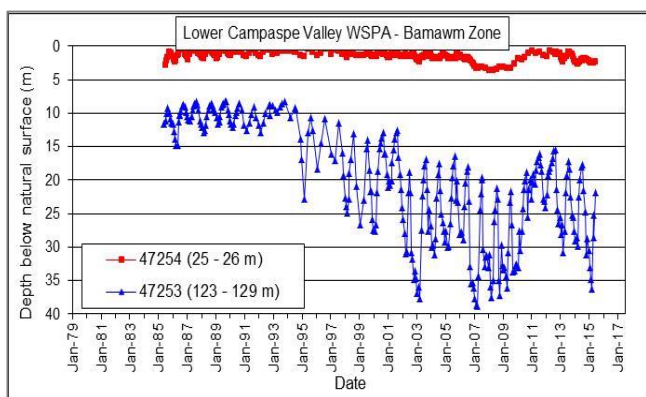


Figure 6 Groundwater levels in Bamawm Zone

In comparison, Groundwater recovery levels in the Echuca and Barnadown Zones have remained relatively steady and seasonal drawdown of up to around 5 m is seen (Figure 7 and 8). In the Barnadown Zone groundwater levels did not recover as strongly following the wet period in 2010/11 as they did in other areas (Figure 8).

Observed responses may be related to the processes and controls influencing groundwater recharge, such as the extent of the deep lead aquifer in the Barnadown Zone.

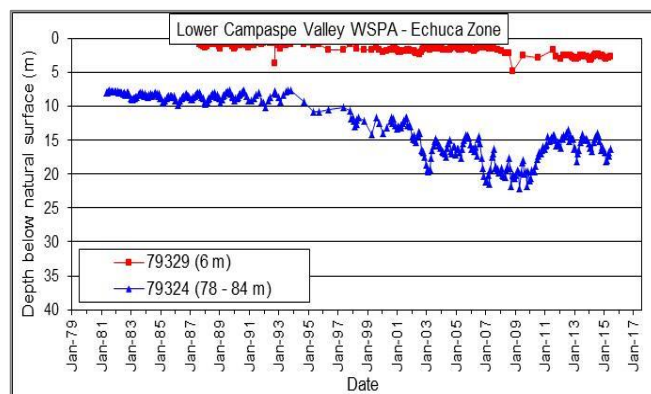


Figure 7 Groundwater levels in Echuca Zone

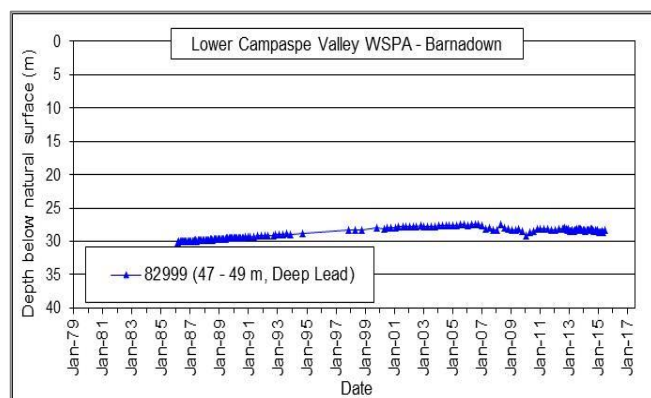


Figure 8 Groundwater levels in Barnadown Zone

Groundwater quality

GMW sent bottles to groundwater users to collect a sample for salinity analysis. Only 25% of bottles were returned with the results suggesting groundwater salinity levels are generally higher in the northern parts of the WSPA. Groundwater users are strongly encouraged to participate in this program so that they can identify any changes in groundwater salinity in their bore. GMW has also enlisted six licence holders to participate in the targeted groundwater salinity monitoring program to assist with future analysis.

Groundwater samples were also collected from key nested State observation bores. Groundwater salinity ranged between 1,740 near Bamawm to 10,700 EC on the north-western margin of the area, which is similar to recent years. Future sampling and analysis will enable any trends in groundwater quality to be identified.

Where can I get more information?

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