

Drought impact on the rural water sector in northern Victoria

Graeme Hannan

Goulburn-Murray Water

Goulburn-Murray Water is the authority responsible for rural and bulk water supplies in Northern Victoria. There are several major supply systems. All have been severely affected by drought and the impacts have varied from system to system. The Goulburn system is the largest and is secured by the water resource developments in the Goulburn River Basin and Loddon River Basin, with supplements from the Broken River and the Campaspe River. The drought in the Goulburn is in its seventh year and the 2002/03 El-nino related drought has compounded the impact of the prolonged drought. On the Murray system a better storage reserve at the start of 2002/03 provided some buffer. On the Campaspe, Lake Eppalock was drawn down to 6% of capacity after 2 years of virtually no inflows.

The current on-going drought event has depleted water storages to historically low levels, resulting in lowest ever water allocations and water usage. The final water allocation for the Goulburn system irrigators was 57% of Water Right in 2002/03, lower than the minimum values predicted from simulation modelling using over 100 years of climate data.

The water shortage led to unprecedented prices for temporary water trading as water users sought to secure supplies. The high water price, combined with high fodder prices, led to a downturn in production in the dairy industry. Horticultural production was maintained but at higher input costs.

Goulburn-Murray Water uses the Bureau of Meteorology's climate outlook to assist in developing projections for improvements in water availability. Close attention was paid to the analogue years identified in the seasonal climate outlooks published in July, August and September 2002. The Streamflow package developed by the Bureau and DPI Queensland was applied to estimate probabilities of future inflows.

Goulburn-Murray Water frequently updated advice to the community on expected water availability for the 2002/03 season. In September 2002 the expectations were dramatically downgraded after very low inflows in August and early September. The rapid decline in outlook, together with long lead times for getting some information articles published caused some confusion.

On the question of usability of Bureau products G-MW must assess how to translate the general nature of the climate outlook to probabilities of streamflow volumes. Identification of appropriate analogues is one way of providing correlation between climate outlooks and streamflow forecasts and water demand forecasts. More work could be done in this area. It may be useful to undertake hindsight analysis of the information presented at this time last year.