information

Summary Annual Water Outlook 2018

GWMWater
11 McLachlan Street
(PO Box 481)
Horsham Victoria 3402

Tel: 1300 659 961
Fax: 03 5381 9881
Email: info@gwmwater.org.au
Website: www.gwmwater.org.au

Certified to best practice standards
ISO 9001 / 14001 and AS/NZS 4801

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This Summary Annual Water Outlook outlines the key water security information for all towns and rural pipeline customers supplied by GWMWater.

An outlook for licenced surface water diverters and licenced groundwater users is also provided.

A full listing of towns, rural pipelines and their supply sources can be found on GWMWater's website at www.gwmwater.org.au/our-water-supply/check-your-water-supply.

All Systems Summary

With the water resources available across all of GWMWater's supply sources this season, no restrictions to urban or rural pipeline users are anticipated under normal operating conditions.

Water Resource Overview

Winter and spring rainfall during 2018 has been below average to very much below average for most of GWMWater's operational area. The Grampians Reservoir system held 46% of its operating capacity heading into winter, with reservoir levels gradually rising over winter and spring, reaching a maximum of 53%. At 28 November the reservoir system held 48% of its operating capacity. While inflows during winter and spring have been below average, the key reservoirs which directly supply GWMWater's urban and rural network remain at sufficient levels to meet the expected volume of demand.

GWMWater's bulk water entitlements in the River Murray system reached 90% in November and are projected to reach 100% by February 2019 under dry conditions. Water allocations in the Goulburn River system are projected to reach 93% by February, even under dry conditions. Water allocations held by GWMWater in the Goulburn system can be transferred to its Murray supply systems via water trading. The Resource Manager for Northern Victoria (www.nvrm.net.au) determines River Murray and Goulburn River system allocations.

Urban water storages for all Eastern Grampians and Pyrenees towns remain above 70% of capacity. Projected demand for the remainder of the 2018-19 season remains below the volume GWMWater is able to access.

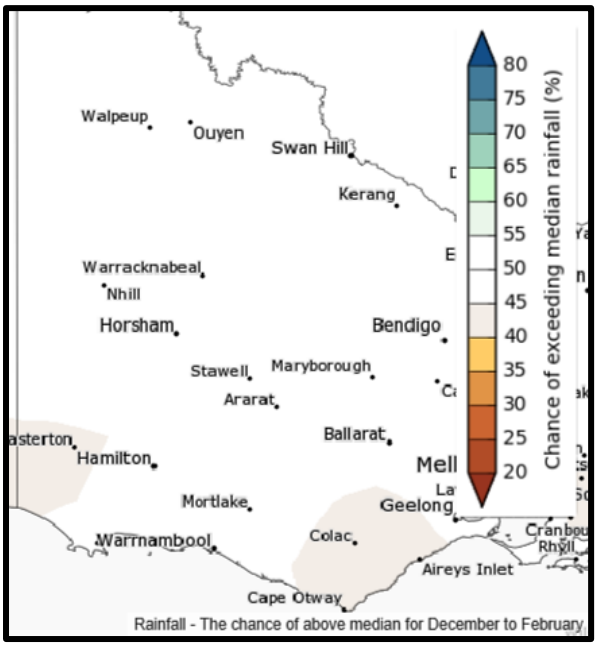
Regional groundwater resources remain secure, with regular water level monitoring conducted across all of our groundwater resource areas.

Climate Outlook

The Bureau of Meteorology weather outlook for the period between December 2018 and February 2019 suggests around a 50% chance of exceeding the median rainfall across GWMWater's operating area.

Temperature outlooks indicate greater than a 60% chance of warmer than normal daily temperatures during summer.

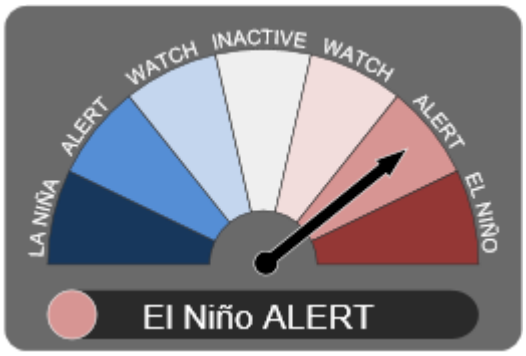
Advice from climate experts is that Victoria's climate has shown a warming and drying trend over recent decades, and this trend is expected to continue.



El Niño Southern Oscillation (ENSO) Outlook

The Bureau of Meteorology (BoM) reports there is approximately a 70% chance of an El Niño event occurring during 2018. While sea surface temperatures have exceeded El Niño thresholds, other atmospheric indicators have not yet shown consistent signs of El Niño conditions. Ocean and atmospheric factors must both demonstrate El Niño characteristics and reinforce each other, before and El Niño event is declared. As a result, BoM's ENSO Outlook status is *El Niño ALERT*. At the time of writing, climate models indicated that tropical pacific sea surface temperatures were likely to persist at El Niño thresholds into early 2019.

Typically El Niño events can result in below average rain during winter and spring for southern Australia summer months, and can also increase the chance of heatwaves occurring.



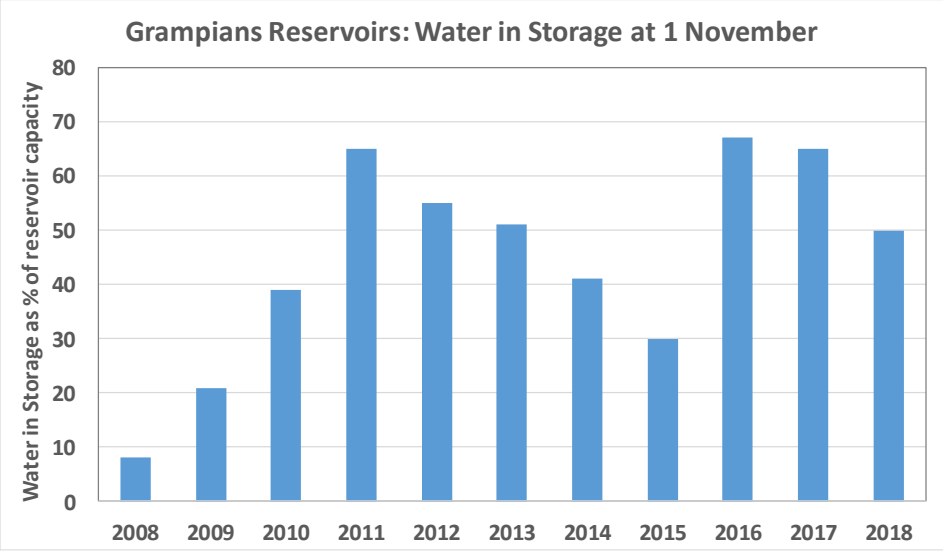
ENSO outlook at 20 November 2018 (image courtesy of the Bureau of Meteorology).

Grampians Supplied Systems Water Security Outlook

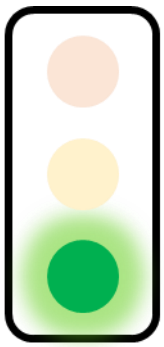
The total volume in Grampians reservoirs peaked at 53% (295,000 megalitres) in mid-September. Reservoir levels will remain at sufficient levels to ensure continued supply for all GWMWater urban and domestic rural demands through 2018-19 and into 2019-20.

Projected demand from the Grampians reservoir system for the Wimmera-Mallee Pipeline Supply Systems 1,2,3,4,6,7, towns supplied from Grampians reservoirs and the South-West Loddon Pipeline is approximately 15,500 megalitres for the 2018-19 season. In comparison, GWMWater currently holds over 80,000 megalitres of water to service this demand. The balance of water held in reservoirs belongs to other entitlement holders or is held in reserve by the Storage Manager for system losses such as evaporation from reservoirs. More information on entitlement holders supplied from the Grampians reservoir system and reservoir operations is available from the Wimmera-Glenelg Storage Manager website (www.storagemanager.com.au).

Permanent Water Saving Rules remain in place across all towns supplied from the Grampians reservoir system. Rural users are also asked to abide by Permanent Water Savings Rules for their domestic use. GWMWater does not anticipate the introduction of water restrictions to any town during the remainder of the water year under normal operating conditions.



Water Security Traffic Light



Drought Response

Heightened Awareness

General Monitoring

Permanent Water Saving Rules Apply

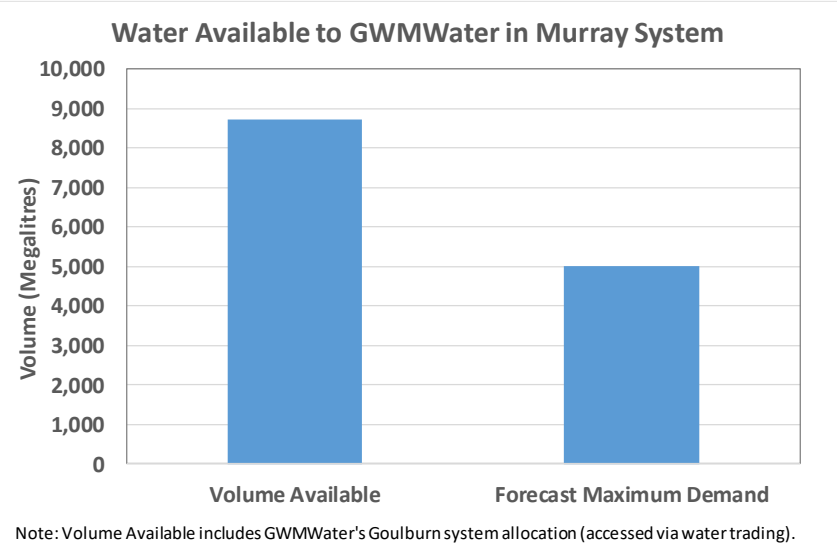
Murray & Goulburn Supplied Systems Water Security Outlook

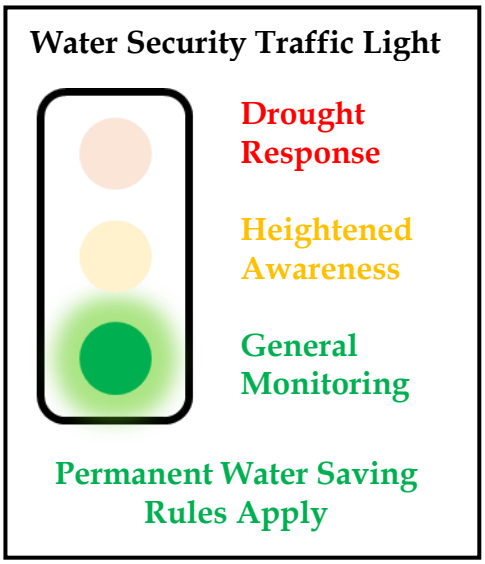
GWMWater had received the equivalent of 89% of its possible allocation at the end of November, with over 8,700 ML available to service the projected 4,800 – 5,000 ML combined demand from the Northern Mallee Pipeline, Wimmera-Mallee Pipeline Supply System 5 and Goulburn supplied area of the South-West Loddon Pipeline. The volume of bulk water available to GWMWater to service these supply systems can be supplemented with purchases of temporary allocation from the water market if and when required. This provides a further mechanism by which security for these systems can be managed and maintained, even during times of reduced bulk water allocations. GWMWater are unlikely to consider temporary water purchases this season

It is anticipated that a useful volume of unused water allocation will be carried over into 2019-20, and will provide additional security for the Murray and Goulburn supplied systems next season.

Permanent Water Saving Rules remain in place across all GWMWater towns supplied from the River Murray via the Northern Mallee Pipeline and Wimmera-Mallee Pipeline Supply System 5. Rural users are also asked to abide by Permanent Water Savings Rules for their domestic use. GWMWater does not anticipate the introduction of water restrictions to any town during the remainder of the water year under normal operating conditions.

Since the significant Blue-Green algae event along the River Murray during early 2016, GWMWater has invested in infrastructure augmentation to increase its ability to meet demand during such situations in the future.





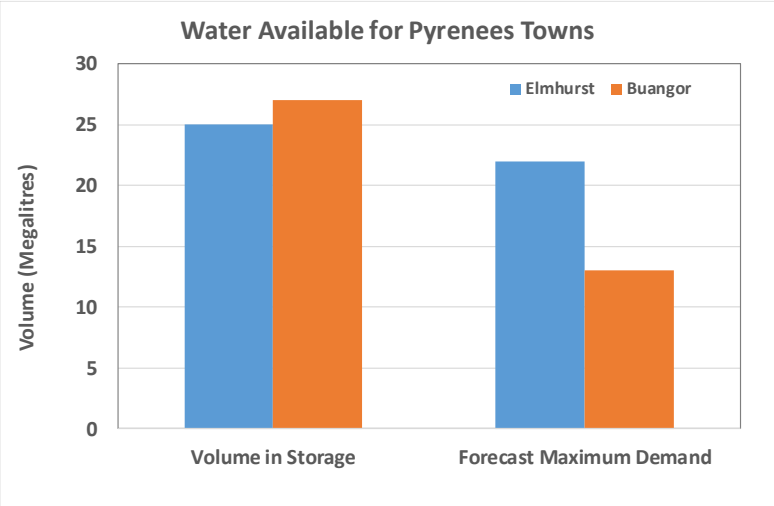
Eastern Grampians and Pyrenees Water Security Outlook

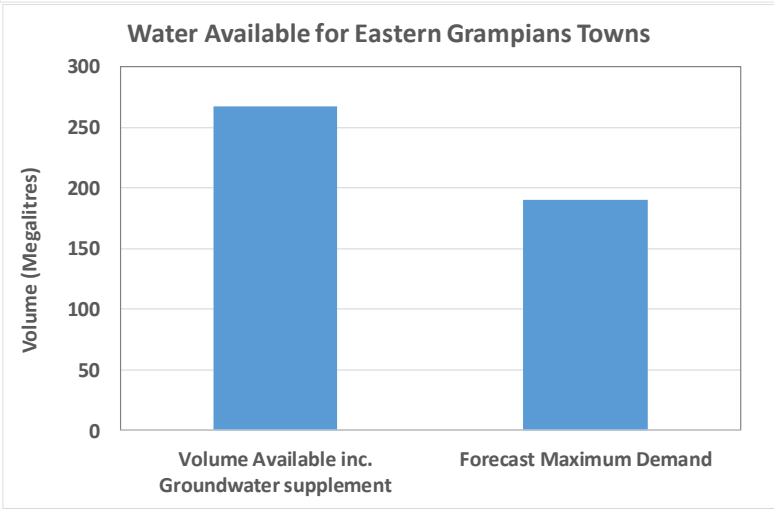
The Eastern Grampians and Pyrenees systems are considered 'annual systems' meaning that they rely on winter and spring streamflow to replenish town supply reservoirs each year.

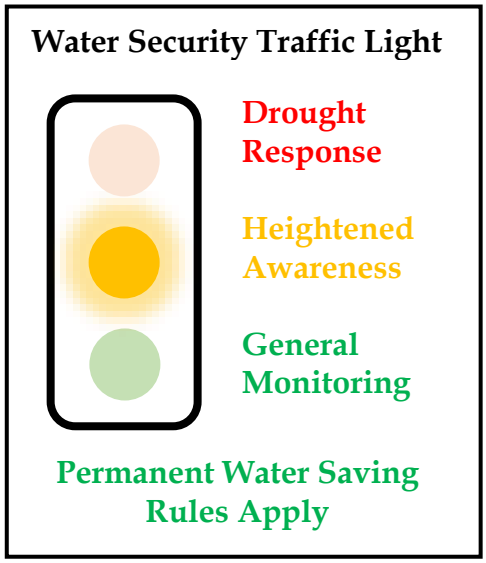
Winter and spring stream flows have been sufficient to fill Elmhurst and Buangor reservoirs and maintain them at above 70% into December. Under hot summer conditions with high demand, GWMWater may conduct supplementary water carting where required, to maintain adequate reserve volumes in town supply reservoirs. In this event, standpipes access may be temporarily limited to essential use.

Eastern Grampians town supply reservoirs remain at 80% at the end of November, with the groundwater supplement to be brought on line as stream flows recede heading into summer. While there are known capacity limitations in this system, the current system status indicates that restrictions are unlikely to be required to manage demand during 2018-19. GWMWater may conduct supplementary water carting if required, to maintain adequate reserve volumes in town supply reservoirs. In this event, standpipes access in Willaura, Lake Bolac, Moyston or Wickliffe may be temporarily limited to essential uses.

Permanent Water Saving Rules remain in place across all Eastern Grampians and Pyrenees towns. GWMWater does not anticipate the introduction of water restrictions during the remainder of the water year under normal operating conditions. Due to the nature of these supply systems, close monitoring is conducted during the summer months, and so this supply system had a water security status of Heightened Awareness.



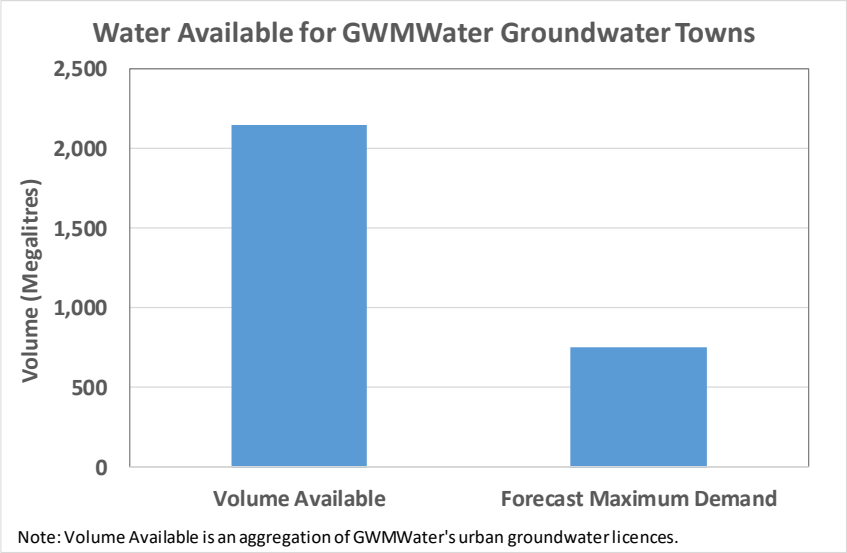


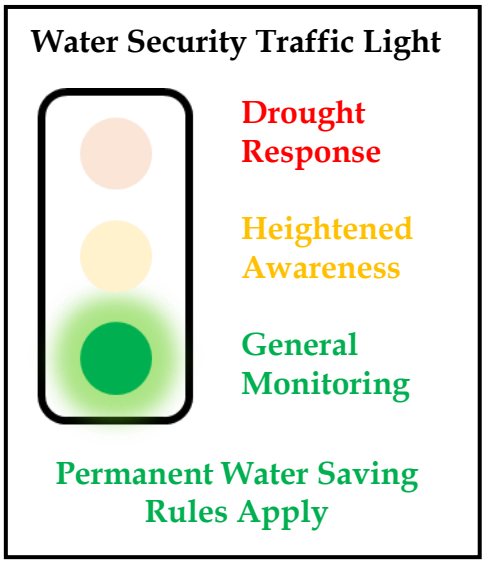


Groundwater Towns Water Security Outlook

Groundwater towns throughout GWMWater's area have reliable access to water under their entitlements by virtue of the sheer volume of groundwater reserves in these areas.
As a result, groundwater allocations are largely independent of short term climatic conditions.
Regional groundwater resources remain secure, with regular water level monitoring conducted across our groundwater resource areas.

Permanent Water Saving Rules remain in place across all towns with groundwater as their primary supply source. GWMWater does not anticipate the introduction of water restrictions to any town during the remainder of the water year under normal operating conditions.

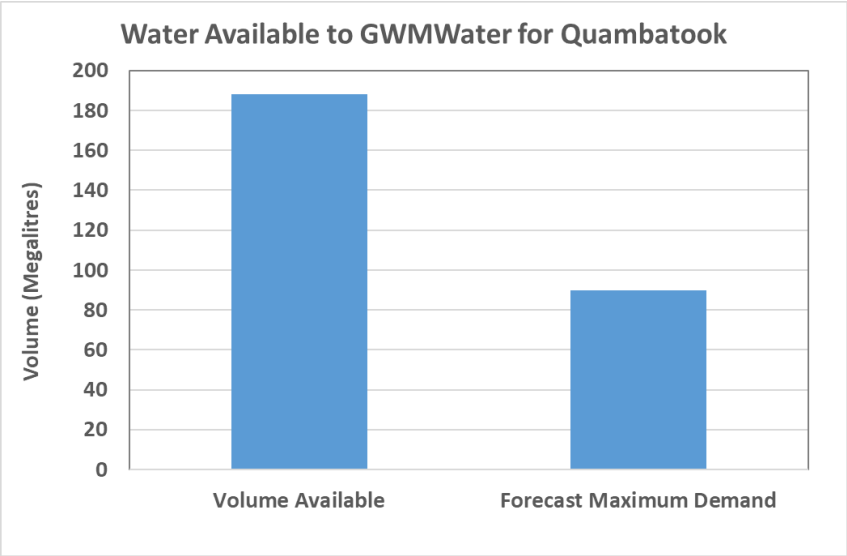


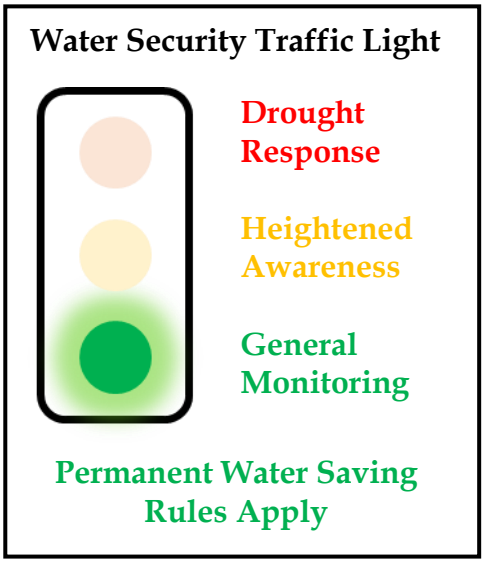


Quambatook Water Security Outlook

Quambatook's raw water supply comes from the Normanville Pipeline, and is considered part of the Goulburn River system.

GWMWater has received 100% of its possible bulk water allocation for Quambatook this season, in addition to its carryover allocation. A total of 188 ML is available to service the projected 90 ML demand from Quambatook township. The volume of bulk water available to GWMWater to service Quambatook can also be supplemented by water trade from GWMWater's Murray and Goulburn water entitlements, or purchases of temporary allocation from the water market if and when required. This provides a further mechanism by which security for Quambatook can be managed and maintained, even during times of reduced bulk water allocations.





Unregulated and Groundwater Licenced Users Water Security Outlook

Rivers and streams in the Wimmera-Mallee region generally only flow in response to good winter-spring rainfall, and sporadically at other times.

Under 'average' or 'wet' conditions the likelihood of restrictions are generally low. The drier the season, the higher the likelihood of reduced river flow and the greater chance of restrictions being implemented.

The dry start to the 2018-19 season resulted in little to no flow in the upper Wimmera River and Avoca catchments, with no unregulated flow recorded at the Glenorchy gauge (Wimmera River) or Coonooer Bridge gauge (Avoca River). Spring flows have been minimal, and it is unlikely that unregulated irrigation entitlements will receive an allocation in 2018/19, unless unseasonably wet conditions occur. Stock and Domestic licences are able to access water based on its availability at the point of take.

Groundwater users throughout GWMWater's area have reliable access to water under their entitlements by virtue of the sheer volume of groundwater reserves in these areas. As a result, groundwater allocations are largely independent of short term climatic conditions.

All groundwater licence holders in GWMWater's area of management have been permitted to access 100% of their entitlements for 2018-19 season, with the exception of Neuarpur Zone 1. Allocations in this area are restricted to 80% as part of a long term management plan to address declining groundwater levels. Restrictions in the Neuarpur Zone 1 area are detailed in the West Wimmera Groundwater Management Strategy.

GWMWater does not anticipate the introduction of any restriction to groundwater allocations during 2018-19, with the exception of Neuarpur Zone 1 which will remain at 80%.

Short Term Action Plan

GWMWater's Urban and Rural Water Strategy was completed in early 2017, and identifies the best mix of measures to provide water services in our towns and cities now and into the future. The Urban and Rural Water Strategy takes a detailed look at projected future water demands and future water availability under a range possible future climates.

While it was determined that no immediate response actions are required to maintain short term water security for towns and rural users, a number of actions were identified which will improve water resource planning and supply system operation. A copy of GWMWater's Urban and Rural Water Strategy is available at www.gwmwater.org.au.

GWMWater continues to pursue opportunities for system cross-connections and expansion of Victoria's Water Grid in order to maximise water security and for its urban and rural pipeline customers. Investigations into augmentation of the Eastern Grampians and Pyrenees supply systems have been deferred to align with the East Grampians Rural Pipeline Project, currently in the planning and design stage. Future water security for the Edenhope township is also a consideration within the West Wimmera Rural Pipeline business case.