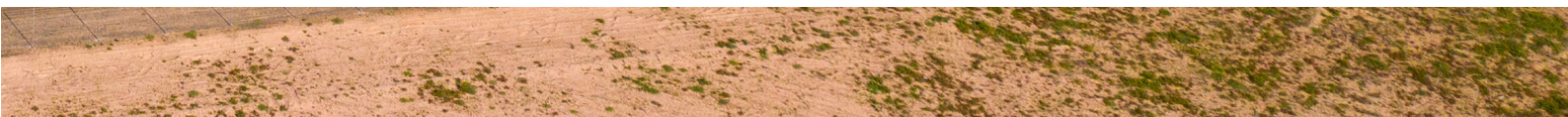


Image: Lake Fyans  
Photographer: Thea Jane



# Annual Water Outlook Report 2024/2025



# Annual water outlook summary 2024/25

Released: 1 December 2024

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

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

A full listing of towns and rural pipelines can be found on [GWMWater's website](#), along with information on the supply source and any current water restrictions.

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## All systems summary

Storages in the Wimmera – Glenelg Headworks System have declined by approximately 97,260 ML, or 17.4% of total storage capacity over the previous 12 months, to hold 304,620 ML or 54.4% capacity as of 13th November 2024. These storages supply the Wimmera-Mallee Pipeline Supply Systems 1, 2, 3, 4, 6, 7; South West Loddon Pipeline; and towns supplied from Grampians reservoirs (note: the East Grampians system is not included). GWMWater currently holds 88,914 ML of available water in this system, which is well in excess of the 15,500 ML of expected demand. As a result, there is no risk of restrictions due to water availability on these systems.

The Murray and Goulburn supplied systems have received 98 percent and 100 percent allocations respectively, providing more than 6,300 megalitres of available water as of 15th November 2024. The volume of available water is sufficient to service the projected 4,500 megalitre combined demand from the Northern Mallee Pipeline, Wimmera-Mallee Pipeline Supply System 5 and Goulburn supplied area of the South West Loddon Pipeline (including recreational lakes). As a result, there is no risk of restrictions due to water availability on these systems.

East Grampians and Pyrenees systems are grouped together but represent three smaller systems which operate in isolation. These systems are:

- Elmhurst – Located on the Hickman’s Creek, servicing the township of Elmhurst,
- Buangor – Located on McLeod’s Creek, servicing the township of Buangor, and
- East Grampians – Located in the East Grampians area, servicing the townships of Moyston, Lake Bolac, Willaura and Wickliffe, along with rural connections from the main trunk lines.

The annual outlook for Elmhurst and Buangor is positive, with water in storage exceeding expected demand. However, the prospect of restrictions in the East Grampians is possible, with GWMWater undertaking measures to improve water security over the next 12 months.

Groundwater towns remain secure over the outlook period, with available resource far exceeding expected demand. As a result, there is no risk of restrictions due to water availability on these systems.

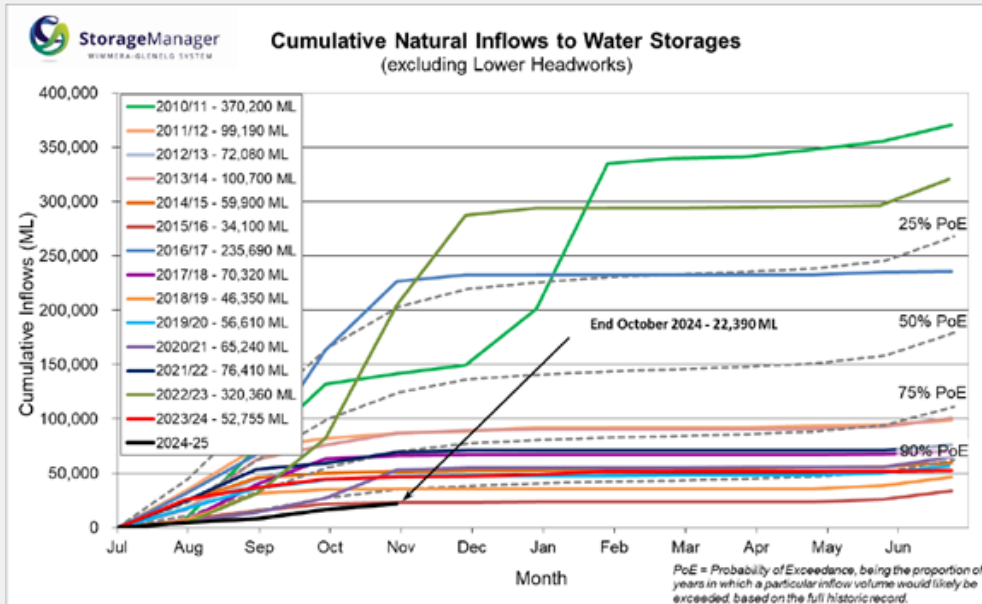
The Quambatook System supplies the township of Quambatook and takes supply from the Normanville Pipeline. GWMWater currently has 100 ML of available water on this system which is sufficient to satisfy the expected demand of between 80 – 90 ML. As a result, there is no risk of restrictions due to water availability on these systems.

Unregulated and Groundwater Licenced Users are subject to licence conditions and local management plans. Extraction under these licences is subject to resource availability and is largely considered opportunistic. Currently licence holders (excluding Domestic and Stock) on the Wimmera River and Avoca River are restricted until diversion triggers on their licences are satisfied. Groundwater licence holders are unrestricted except for Neuarpuir Zone 1 licences, which are restricted to 80% of their entitlement volume as outlined in the West Wimmera Local Management Plan. No additional restrictions are expected to occur on these systems, however restrictions on Wimmera River and Avoca River licences will be lifted if diversion triggers are met.

# Water resource overview

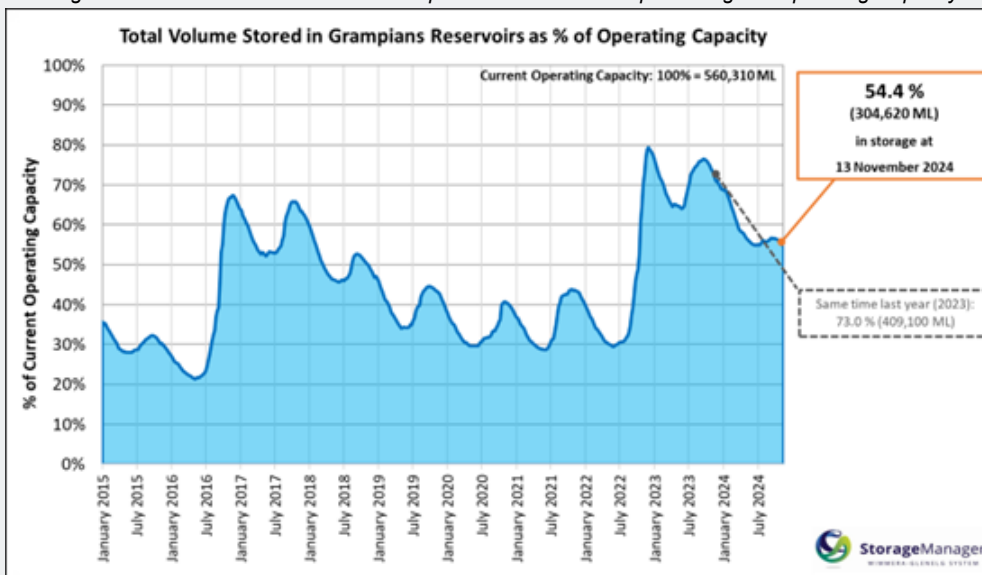
Rainfall during winter and spring 2024 was well below average, with below average monthly rainfall totals extending back to January 2024. As a result, the year-to-date inflows to Wimmera - Glenelg Headworks Reservoirs (6 November 2024) currently sits at 22,390 ML or 14.9% of average for July-October period, refer figure 1.

Figure 1 – Cumulative Natural Inflows to Water Storages



Despite this year's well below average inflows, the Wimmera Glenelg Headworks Reservoirs are holding reasonable volumes, due to well above average inflows in the spring of 2022. The total inflow for 2022/23 season reached 320,360 ML (excluding Taylors Lake), which equates to 160% of the annual historic average inflow. This is greater than the total volume of inflow received over the five years prior (mid-2017 to mid-2022). The recent trend of consecutive dry years broken by a well above average inflow year has dominated since 2010/11, with three years since 2010 being close to or above the Wet Conditions threshold (25% Probability of Exceedance (PoE)) and 11 years below the Dry Conditions threshold (75% PoE). Noticeably only one year has fallen between the 25% PoE and 75% PoE, which on average should represent half of the years. This trend represents a period across the Wimmera – Glenelg Headworks System which is either wet or extremely dry. As of 13th November 2024, Grampians reservoirs were holding 54.4 percent of total storage capacity, refer figure 2.

Figure 2 – Total Volume Stored in Grampians Reservoirs as a percentage of Operating Capacity



## Water resource overview (continued)

Lake Bellfield and Lake Wartook are the key reservoirs which directly supply GWMWater's urban and rural network. Currently Lake Bellfield is holding 85 percent of its operating capacity and Lake Wartook is holding 58 percent. Although both storages are expected to be able to meet the nominated demand for the remainder of the 2024/25 water year, Lake Wartook is projected to draw down to just above its nominated Critical Needs Reserve, at which point restrictions may be applied to Horsham and Natimuk and supply to these towns takes priority over environmental deliveries.

As of 6th November 2024, allocation for WMPP entitlements is 15 percent, with no allocation to other entitlement types. WMPP entitlements carry the highest reliability in the Wimmera – Glenelg Headworks System, with other entitlements (Recreation, Commonwealth Environment Water Office, Wetlands and Glenelg River Compensation Flow) having a lower level of reliability. Although poor system inflow throughout 2024/25 has limited allocations to 15 percent, the ability of entitlement holders to carry forward unlimited carryover, has providing larger entitlement holders, such as GWMWater, to hold large volumes of available water across multiple years. This has provided a high level of security against low allocation years. As of 6th November, GWMWater held more than 88,900 megalitres of available water to service the 15,500 ML of expected demand.

The [Resource Manager for Northern Victoria](#) determines Murray River and Goulburn River water allocations. GWMWater's bulk water entitlements have reached 100 percent allocation in the Goulburn System and 98 percent allocation in the Murray System.

Urban water storages for Pyrenees towns (Buangor and Elmhurst) were holding between 81 and 85 percent of capacity as of 18th November 2024. Projected demand for the remainder of the 2024/25 season remains below the available volume for both these systems.

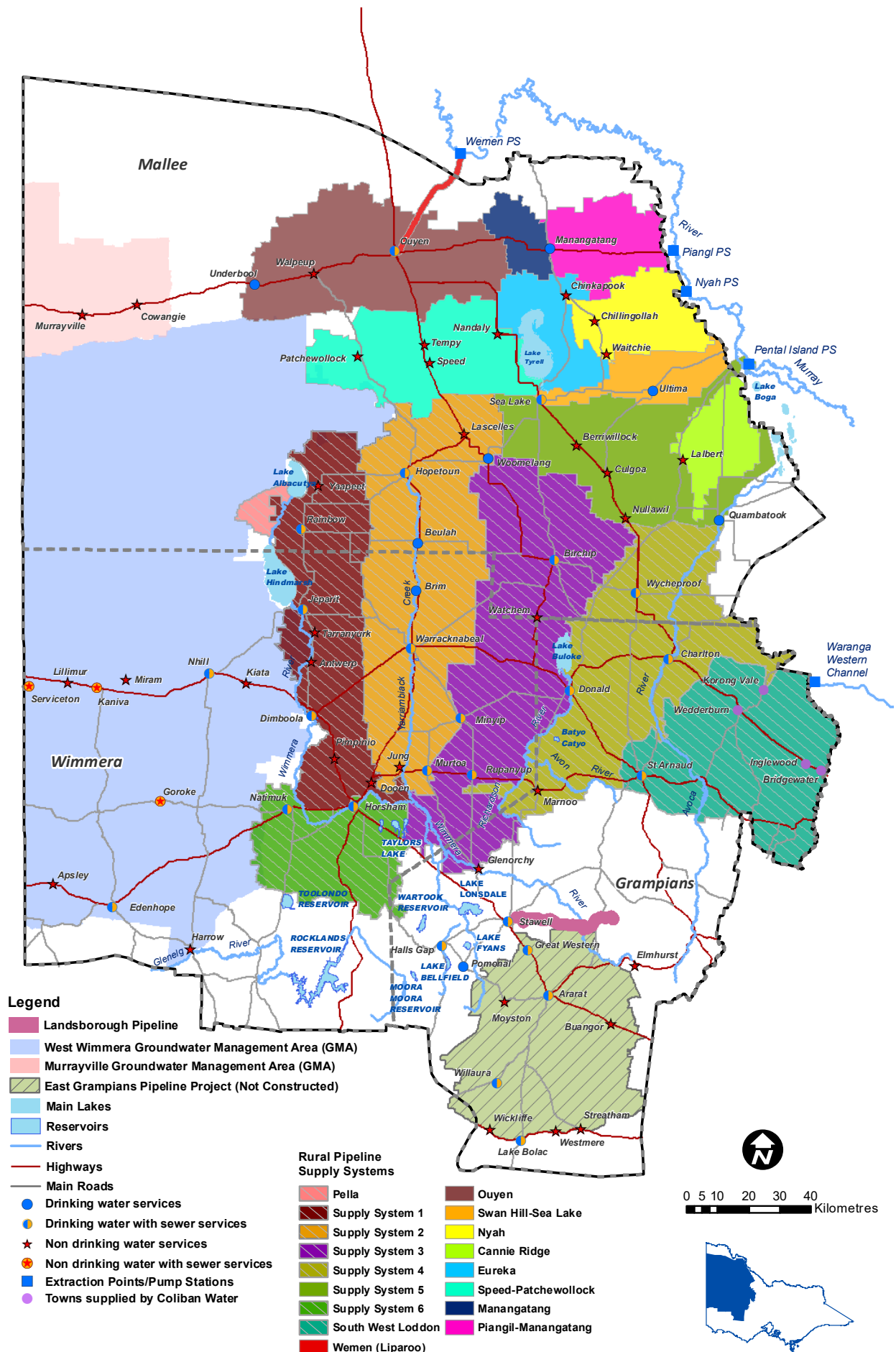
East Grampians storages are currently holding 74% on their maximum operating capacity, which is projected to be less than the forecast demand under dry climatic conditions. Work is currently underway to increase supply for the 2024/25 season.

The main influence on water security for this system is the total volume of water that can be held in storage before peak demand kicks in. The system does have the ability to constantly supply water from the headworks borefield throughout the Summer / Autumn period, but the rate it can be supplied is insufficient to match demand throughout this period, which can be heavily influenced by climatic conditions. This creates a consistent decline in storage volumes over the warmer months of the year, which is only broken by reductions in demand resulting from rainfall or cooler conditions. There is optimism that by implementing early infrastructure reconfiguration works and supplementing supply with water carting, GWMWater will be able to avoid the need to implement restrictions on this system.

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

Despite the strong water resource position GWMWater customers are reminded that [Permanent Water Saving Rules](#) remain in place across the service area. Customers seeking advice on how to save water are directed to the [Smart Watermark Victoria website](#).

# GWMWater service area map showing respective supply networks



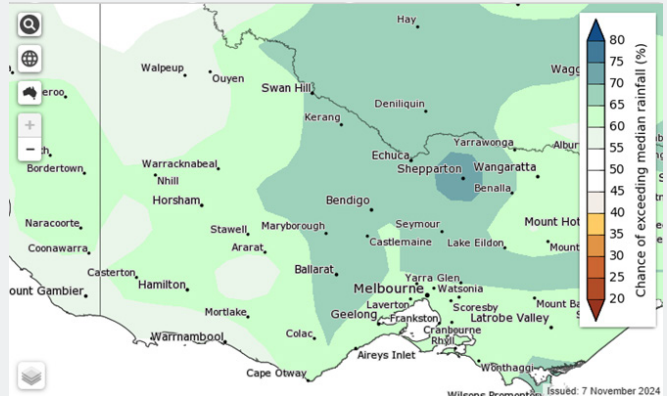
## Climate outlook

The Bureau of Meteorology (BoM) indicate that the El Niño-Southern Oscillation (ENSO) is likely to remain neutral through to February 2025.

Long-range forecasts for the Wimmera-Glenelg headworks area continue to be relatively optimistic, with early indications of average to above average rainfall conditions over the next few months (>60% chance of exceeding median rainfall). Previous predictions of favourable rainfall conditions have so far failed to develop, with consistent dry conditions being experienced across the headworks system since late December 2023 / early January 2024.

Temperature outlooks indicate a greater than 60 percent chance of exceeding median maximum temperatures during the December 2024 to February 2025 period.

Inflow to Wimmera - Glenelg Headworks Storages typically plateau in October, with >75% of historical inflow received between the July to October period. With the current dry conditions, further increases in storage levels are unlikely unless significant rainfall events are experienced over the next few months.

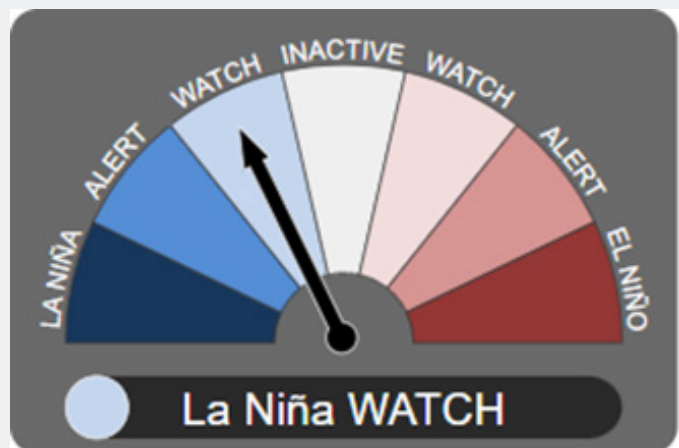


Chance of exceeding median rainfall: December 2024 to February 2025  
Courtesy of Bureau of Meteorology

## El Niño Southern Oscillation (ENSO) and Indian Ocean Dipole (IOD)

The Bureau of Meteorology climate driver update issued on 29th October indicate the ENSO is currently neutral and is likely to remain neutral through to February 2025 and while some atmospheric indices have displayed La Niña-like signals over recent months, a consistent/sustained shift has not been observed.

The Bureau of Meteorology outlooks indicate the Indian Ocean Dipole (IOD) is negative and likely to reach or exceed the negative threshold in November. Global sea surface temperatures remain at near record levels, with temperatures since July being just short of the record temperatures observed during 2023, yet above all other years since observations began in 1854. The sustained nature of this significant global ocean heat suggests that climate indicators such as ENSO and IOD may not behave or evolve as they have in the past. This makes it difficult to interpret the current climate drivers and how they may influence climatic conditions over the next few months.



ENSO outlook at 29 October 2024  
Courtesy of Bureau of Meteorology

## Wimmera-Glenelg Headworks supplied systems water security outlook

As of 24 October 2024, the total volume in Grampians reservoirs was at 56.5 percent (316,380 megalitres). Projected demand from the Grampians reservoir system for the Wimmera-Mallee Pipeline Supply Systems 1, 2, 3, 4, 6, 7; South West Loddon Pipeline; and towns supplied from Grampians reservoirs is approximately 15,500 megalitres for the 2024-25 season. In comparison, GMMWater currently holds more than 88,900 megalitres of available 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 losses such as reservoir evaporation. Although WMPP allocations were at 15% as of 6th November 2024, the Wimmera – Glenelg Headworks System allows for unlimited carryover. This allows GMMWater to carryover large volume of water across multiple years, providing a very high level of security of supply.

As a result of GMMWater’s large available water balance, there is sufficient volume available to meet the projected volume of demand under Permanent Water Saving Rules throughout 2024/25 under all climate scenarios.

Under very dry climatic scenarios, it is projected Lake Wartook will remain just above the Critical Needs Reserve, at which point restrictions may be applied to Horsham and Natimuk and supply to these towns takes priority over environmental deliveries. In the event supply from Lake Wartook becomes critical, GMMWater maintains a borefield which has the capacity to provide supplementary supply for short periods. Although the maximum capacity of the aquifer is untested, GMMWater has the ability to extract 1,200 ML per annum or a maximum of 2,400 ML over a five-year period.

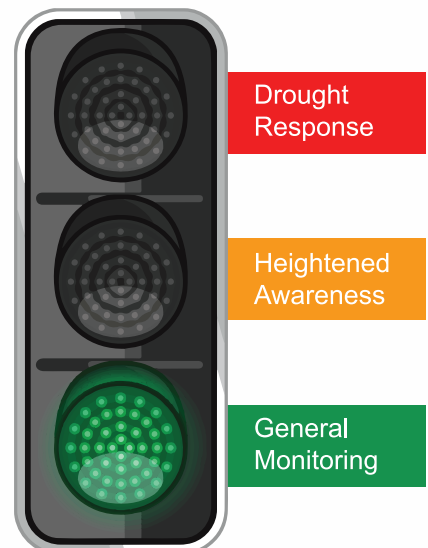
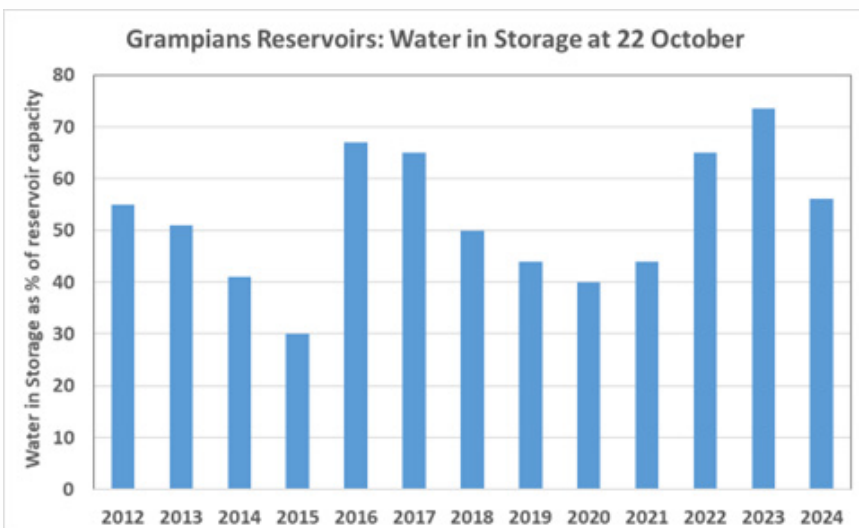
Demand from Lake Wartook has increased significantly since the creation of the Environmental Entitlement in the Wimmera – Glenelg Headworks System, with environmental releases from Lake Wartook representing over 50% of all releases from storage. This has reduced the ability of the storage to operate as a multi-year storage for consumptive demand. GMMWater will continue to explore options to ensure the long-term security of consumptive water for the townships of Horsham and Natimuk - such as formalising water sharing arrangements from Lake Wartook, or augmenting the water system. Consumptive supply from Lake Wartook cannot be secured for any longer than a 12-month period under current system operations.

More information on entitlement holders supplied from the Grampians reservoir system and reservoir operations is available from the [Wimmera-Glenelg Storage Manager website](#).

[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 domestic use. GMMWater does not anticipate the introduction of water restrictions to any town during the remainder of the water year under normal operating conditions.

### GRAMPIANS RESERVOIRS: WATER IN STORAGE AT 22 OCTOBER

### WATER SECURITY TRAFFIC LIGHT



# Murray and Goulburn supplied systems water security outlook

GMMWater has received 100 percent of its possible allocation in the Goulburn system and 98 percent in the Murray system, with more than 6,300 megalitres available from 15 November 2024. The available volume is sufficient to service the projected 4,500 megalitre combined demand from the Northern Mallee Pipeline, Wimmera-Mallee Pipeline Supply System 5 and Goulburn supplied area of the South West Loddon Pipeline (including recreational lakes). The volume of bulk water available to GMMWater to service these supply systems can be supplemented with purchases from the water market if required. This provides a further mechanism to manage and maintain security for these systems, even during times of reduced bulk water allocations.

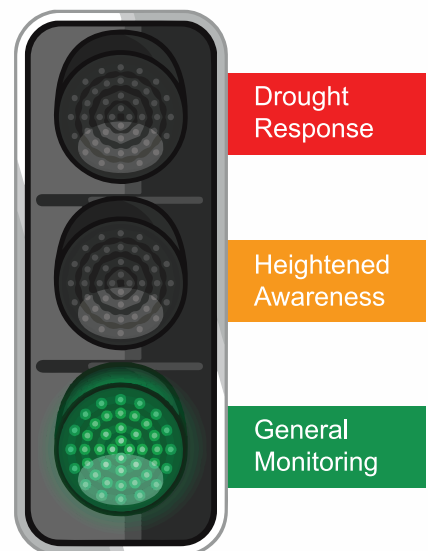
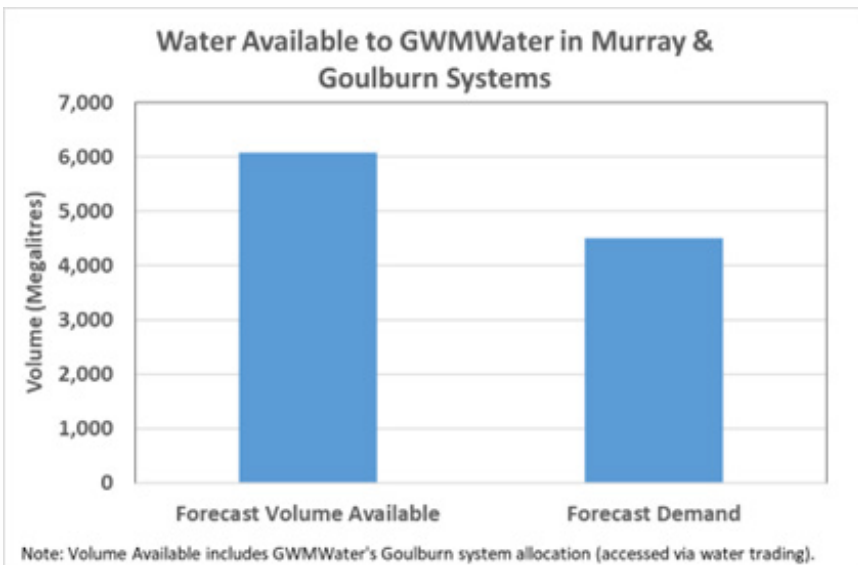
Given this resource position, GMMWater is considered to have sufficient water available in the Murray and Goulburn systems to meet the anticipated level of demand under Permanent Water Saving Rules under all climate scenarios. GMMWater assessed its water resource position by estimating the anticipated carryover at the end of the 2024-25 season and using the method prescribed in GMMWater's [2022 Drought Preparedness Plan](#). The assessment indicated that the water security status for Murray and Goulburn supplied systems is considered to be in 'General Monitoring'. High allocations can be expected in the 2024-25 season which will further bolster GMMWater's water resource security in the Murray and Goulburn systems.

[Permanent Water Saving Rules](#) remain in place across all GMMWater towns supplied from Murray River 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 domestic use. GMMWater does not anticipate the introduction of water restrictions to any town during the remainder of the water year under normal operating conditions.

Despite restrictions being considered unlikely, there is always the potential that they may be required to manage demand in response to extreme events. The risks of flooding, blue-green algae (BGA) and blackwater events on Murray River supplied customers are a consideration every summer. GMMWater routinely monitors water quality, and issues alerts when GMMWater rural pipeline supplies may be affected. Where possible, GMMWater employs a number of operational actions to minimise the impact of BGA and blackwater on supplies to customers. These actions include the isolation of our Murray River pump stations, supplying unaffected water from in-system storages, and the use of pipeline network cross-connections.

## WATER AVAILABLE TO GMMWATER IN MURRAY & GOULBURN SYSTEMS

## WATER SECURITY TRAFFIC LIGHT



## Eastern Grampians and Pyrenees water security outlook

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

Winter and spring streamflow have resulted in Elmhurst Reservoir being 85 percent and Buangor Reservoir being 81 percent as of 18th November 2024. These volumes will be sufficient to satisfy demand until the storages refill the following winter. Under hot and dry summer conditions with high demand, GMMWater may conduct supplementary water carting to maintain adequate reserve volumes in town supply reservoirs. In this event, standpipe access may be temporarily limited to essential use.

Key Eastern Grampians storages are still receiving surface water inflow, supporting supply through to the townships of Moyston, Lake Bolac, Willaura, Wickliffe and rural users between these towns. Under GMMWater's Bulk Entitlement for this system licence conditions currently restrict the take period from surface water streams to between June and December (inclusive). Outside of this period, supply is reliant on groundwater bores to continue supply. While adequate entitlement is available in this system, infrastructure capacity limitations restrict the volume of water able to be harvested or extracted and transferred to storages.

Very dry conditions have limiting streamflow throughout 2024, resulting in current storage volumes being behind historic levels. These storage volumes will need to improve before demand starts to draw down storages throughout the summer / autumn period, at a rate greater than can be replenished. This extended period of drawdown throughout the summer / autumn period is heavily influenced by climatic conditions which are unpredictable, making planning a challenge.

With storages currently at 74 percent, the system status indicates that restrictions are possible during 2024/25. In response to the prospect of restrictions, GMMWater has initiated the following:

- Commenced a period of supplementary water carting to boost the volumes in town storages.
- Standpipe access has been restricted, with alternate carting points provided from the Lake Fyans system.
- Infrastructure works are being planned that will allow access to a significant volume currently held as dead storage.

It is anticipated that these actions are likely to improve the overall resource position of the system to a point where restrictions may be avoided, but this system will be closely monitoring throughout 2024/25.

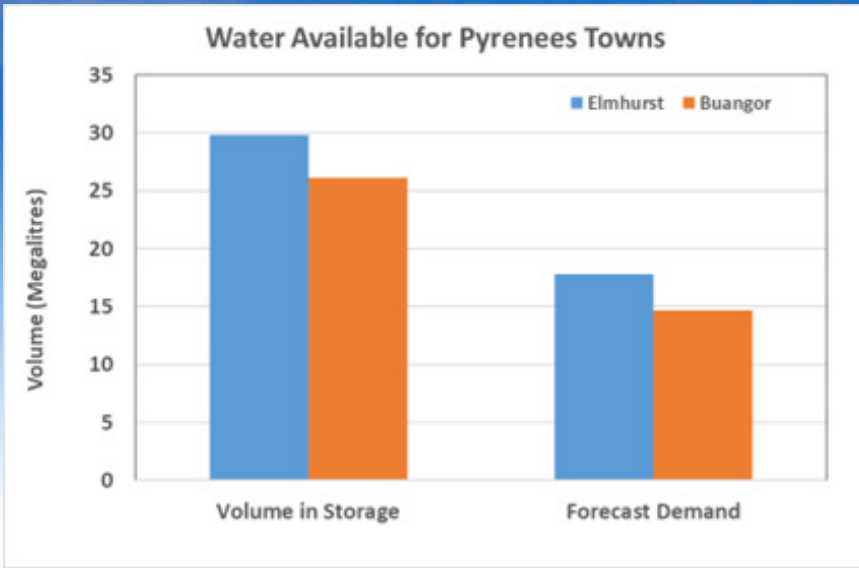
Prior to any restrictions being implemented GMMWater will explore all viable water carting options and strengthen customers communication around appropriate use / permanent water restrictions.

In the longer term, the East Grampians Rural Pipeline Project is expected to connect key storages on this system with a supply from the Wimmera – Glenelg Headworks System, providing a significant increase to water security for towns on this system, including Glenthompson which is managed by Wannon Water. GMMWater are currently investigating options to fast-track this connection, with works subject to project funding.

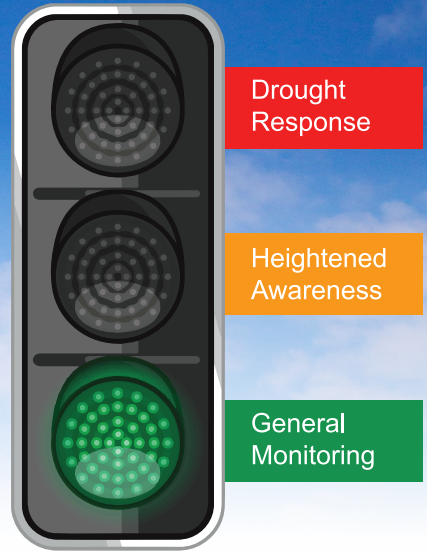
[Permanent Water Saving Rules](#) remain in place across all Eastern Grampians and Pyrenees towns. The East Grampians water supply system remains under Heightened Awareness with the potential for restrictions to be implemented if the resource position deteriorates further. Due to the nature of these supply systems, close monitoring is conducted during the summer months. At the time of this outlook, the Pyrenees supply systems had a water security status of 'General Monitoring'.

# Eastern Grampians and Pyrenees water security outlook (continued)

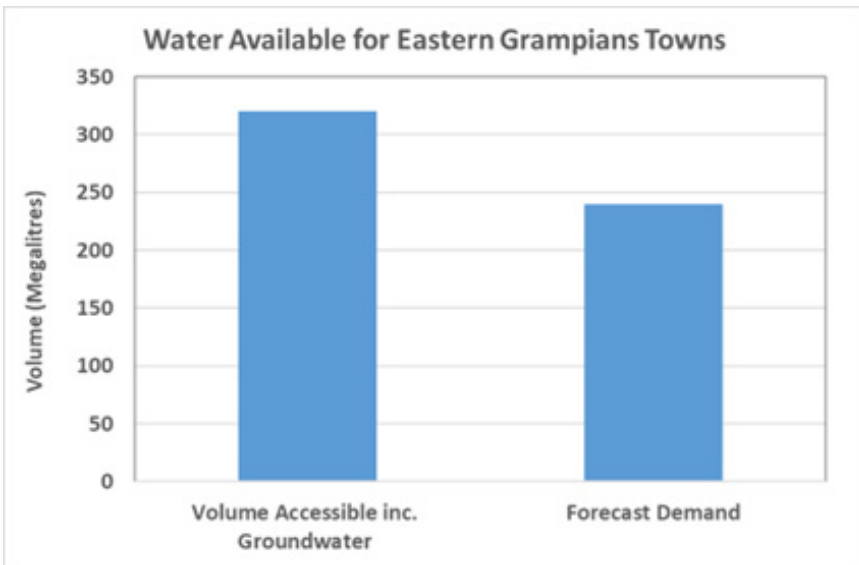
## WATER AVAILABLE FOR PYRENEES TOWNS



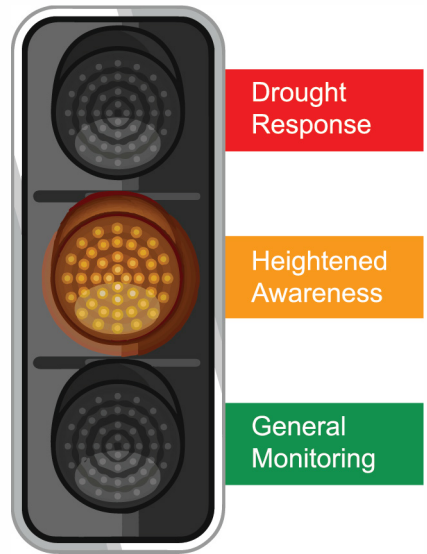
## WATER SECURITY TRAFFIC LIGHT



## WATER AVAILABLE FOR EASTERN GRAMPIANS TOWNS



## WATER SECURITY TRAFFIC LIGHT



Note: Forecast demand is for 12 months of year, and the volume accessible including groundwater is the 30 October volume of surface water, not allowing for inflows over next month/months.

## Groundwater towns water security outlook

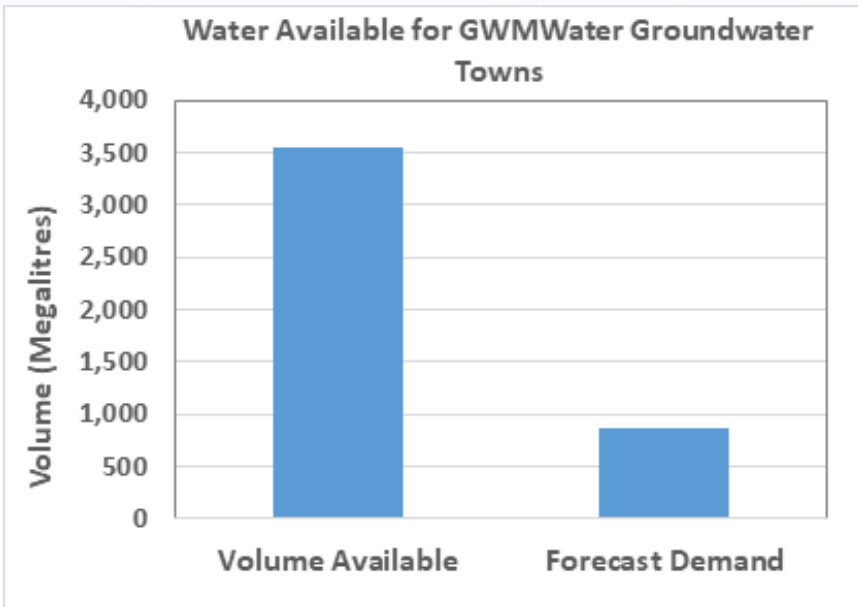
Groundwater towns in GMMWater's operational area have reliable access to water under their entitlements by virtue of the sheer volume of groundwater reserves in these areas.

As a result, groundwater allocations are largely independent of short-term climatic conditions, and GMMWater is able to meet the anticipated level of demand under Permanent Water Saving Rules under all climate scenarios.

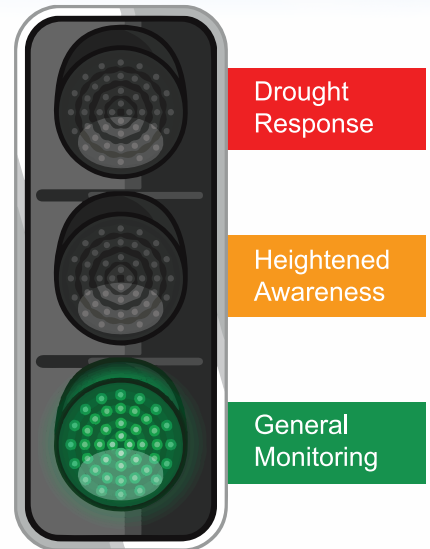
Regional groundwater resources remain secure, with regular water level monitoring conducted across groundwater resource areas.

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

### WATER AVAILABLE FOR GMMWATER GROUNDWATER TOWNS



### WATER SECURITY TRAFFIC LIGHT



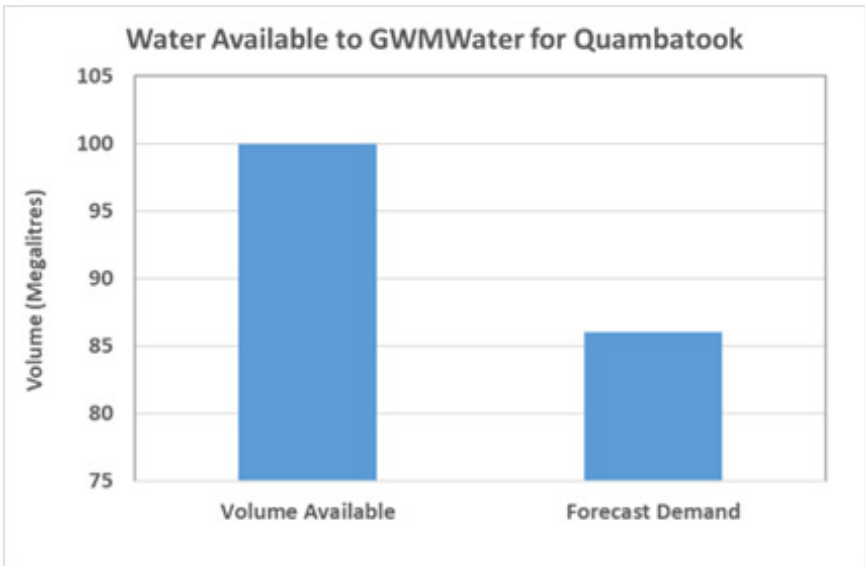
# Quambatook water security outlook

Quambatook's raw water supply comes from the Normanville Pipeline and is considered part of the Goulburn River system but is serviced from its own 100 ML very high security entitlement, separate to GMMWater's HRWS in the Goulburn System.

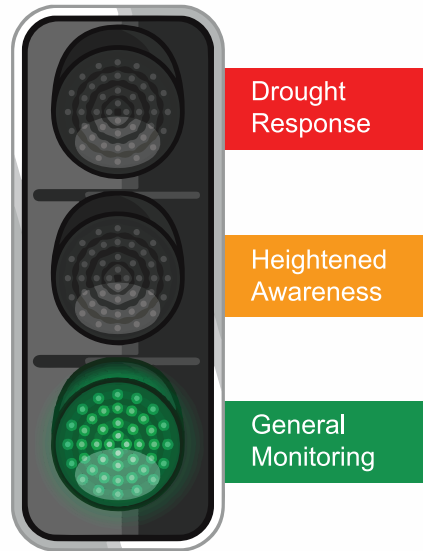
GMMWater has received 100 percent of its possible bulk water allocation for Quambatook this season, in addition to carryover allocation. A total of 100 ML is available to service the projected 80-90 ML demand from Quambatook township, meaning the anticipated level of demand under Permanent Water Saving Rules can be met under all climate scenarios. The volume of bulk water available to GMMWater to service Quambatook can also be supplemented by water trading from GMMWater'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.

[Permanent Water Saving Rules](#) remain in place for Quambatook township. GMMWater does not anticipate the introduction of water restrictions during 2024-2025 under normal operating conditions.

## WATER AVAILABLE TO GMMWATER FOR QUAMBATOOK



## WATER SECURITY TRAFFIC LIGHT



## Unregulated and groundwater licensed 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.

Well below average rainfall and limited streamflow throughout 2024 has meant irrigation diversion triggers, which permit the extraction of water, for both the Wimmera River and Avoca River are yet to be satisfied.

The Wimmera River irrigation diversion trigger requires 10,000 ML of flow to be recorded at the Glenorchy flow gauge on the Wimmera River during the calendar year. As of 23rd October 2024, a total of 841 ML has been recorded against the trigger.

The Avoca River diversion trigger requiring flows to exceed 100 ML per day at the Quambatook South flow gauge, has also not been satisfied for the 2024/25 water year.

The outlook for Wimmera and Avoca River irrigation diverters is subject to climatic conditions, with streamflow determining the level of allocation and availability of water. GMMWater does not provide an outlook for these diverters, as their ability to take is purely opportunistic and doesn't carry any nominated level of security of supply.

The extraction of water for irrigation and commercial uses remains subject to all licence conditions and local management rules. River diverters are asked to notify GMMWater prior to taking water for irrigation purposes. GMMWater monitor these triggers throughout the year and advises irrigation licence holders once satisfied.

Groundwater users throughout GMMWater's operational 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 GMMWater's area of management have been permitted to access 100 percent of their entitlement for the 2024-25 season, except for Neuarpuur Sub-zone 1. Allocations in Neuarpuur Sub-zone 1 are restricted to 80 percent of their entitlement volume, as part of a long-term management plan to address declining groundwater levels, as detailed in the [West Wimmera Groundwater Local Management Plan](#).

GMMWater does not anticipate the introduction of any further restrictions on groundwater entitlements outside of those that already apply to Neuarpuur Sub-zone 1, which are to remain at 80 percent of entitlement volume.

Surface water diverters and groundwater licensed users are reminded that their volume of take must remain within the permitted volume, unless a trade or transfer has been secured. Any trade or transfer must be approved by GMMWater prior to taking additional water volumes. Victoria has a [zero-tolerance policy](#) on unauthorised water take.

## Short-term action plan

GWMWater's Urban and Rural Water Strategy was completed in 2022 and identifies a 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 of possible future climates.

GWMWater continues to pursue opportunities for system cross-connections and expansion of Victoria's Water Grid in order to maximise water security for urban and rural pipeline customers. Augmentation of the Eastern Grampians and Pyrenees supply systems is being progressed through the East Grampians Rural Pipeline Project. Future water security for the Edenhope township is also a consideration within the West Grampians Rural Pipeline Project business case.

Preliminary investigative work is currently underway with an emphasis on increasing GWMWater's overall resource position by investigating projects which fall under the following criteria:

- Create water savings through infrastructure works,
- Increase supply through strengthening cross-connections with external systems, and
- Identifying new sources of groundwater.

This investigative work is expected to produce a number of options to access 'new water' to meet GWMWater's current and future demand requirements.

The table below summarises the progress of the key Urban and Rural Water Strategy actions.

Action	Progress
Working with DEECA and other key agencies on defining equitable water sharing rules for Lake Wartook.	Operational experience has demonstrated that supply from Lake Wartook can become at risk after two years of poor inflows, even if GWMWater holds significant volumes of water available in the collective Wimmera – Glenelg Headworks System. GWMWater continue to table water sharing options at the Lake Wartook Drought Contingency meetings to progress these discussions. Formalising water sharing arrangements from Lake Wartook continue to be a priority in ensuring the long-term security of consumptive water for the townships of Horsham and Natimuk. Until formal water sharing arrangements are agreed to, consumptive supply from Lake Wartook cannot be secured for any longer than a 12-month period.
Investigating the continued use of the Edenhope borefield and planning of augmentation to secure supply, including short term works.	Technical review of bore field completed. Augmentation is proposed for implementation within the upcoming pricing period (2023-28).
Reviewing the operational management of the Murray and Goulburn entitlements and carryover, and update this for changes in inter-valley trade rules and limits.	The current resource position has mitigated the immediate need. Potential options are still be evaluated, with market conditions a significant factor.
Confirming the volume of new Growth Water commitments which can be supported by the projected future yield of existing entitlement over the next 20 years.	To be further considered when there is greater certainty regarding the volume and timing of growth demands which is tied to large developments with unspecified timelines for development.
Implementing upgrades to wastewater treatment plants at Donald, Ararat, Horsham and Dimboola.	Design and construct upgrade works have commenced at Donald waste water treatment plant this financial year. Proposed implementation at the other sites within the upcoming pricing period (2023-28).