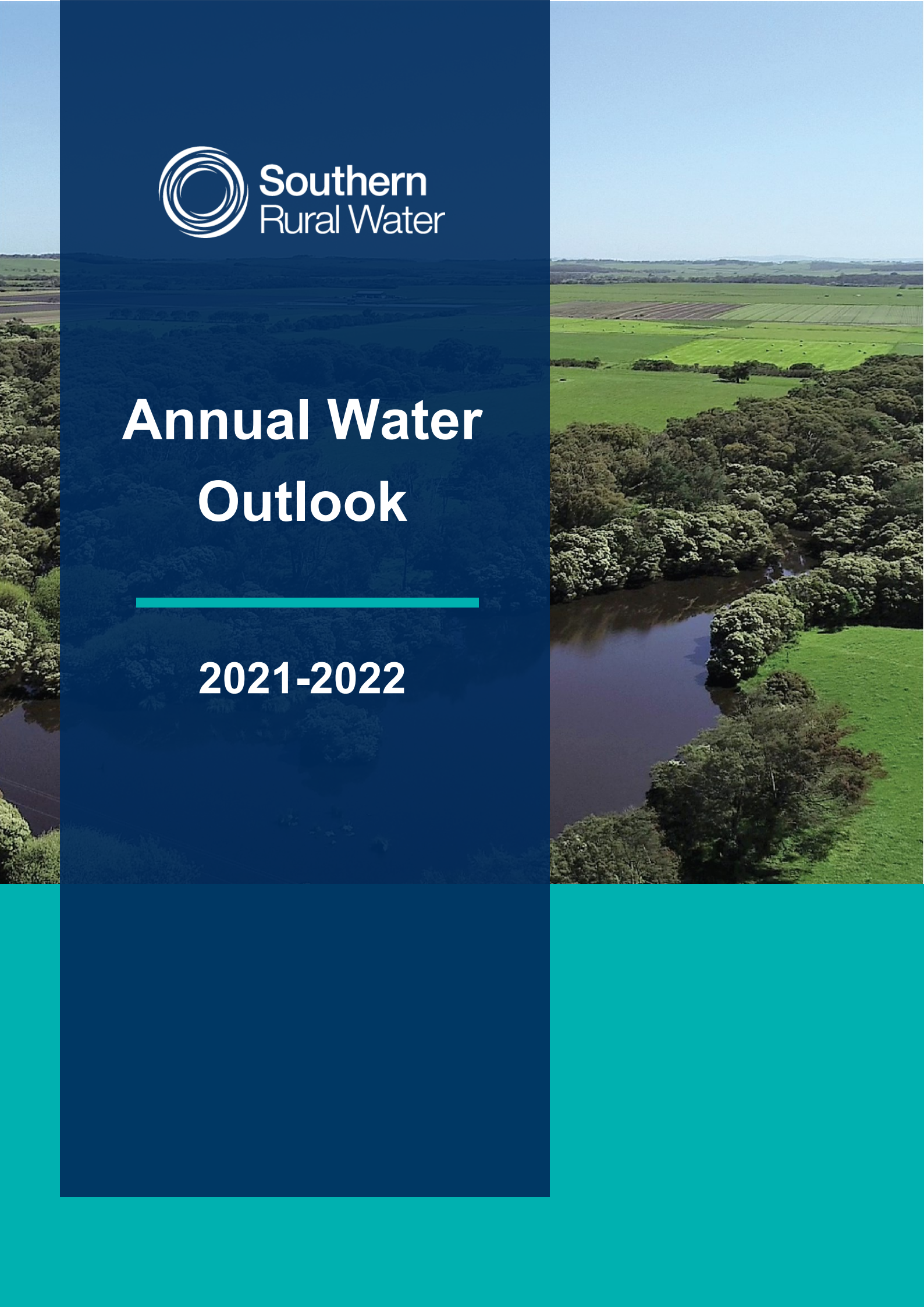




# Annual Water Outlook

---

**2021-2022**



---

# Contents

<b>Executive Summary .....</b>	<b>2</b>
<b>Introduction .....</b>	<b>3</b>
<b>Climate Outlook 2021-21 .....</b>	<b>4</b>
<b>Macalister Irrigation District.....</b>	<b>6</b>
<b>Werribee and Bacchus Marsh Irrigation Districts.....</b>	<b>7</b>
<b>Latrobe System .....</b>	<b>8</b>
<b>Maribyrnong System.....</b>	<b>8</b>
<b>Unregulated Surface Water .....</b>	<b>9</b>
<b>Groundwater.....</b>	<b>11</b>
<b>Further Information.....</b>	<b>12</b>

---

## Executive Summary

Conditions are wet across most of our region, and the forecast is for above average rainfall to continue across spring and summer.

The Macalister Irrigation District opened with an allocation of 100% high reliability water shares. Around 300GL of excess flow has been passed through the Thomson River system due to full storages, low demand and good catchment rainfall. The spill period ends on Wednesday, 15 December. Most of the storage volume will be needed to meet high reliability entitlements, therefore, it is unlikely that a low reliability water announcement will be made at that time.

The opening allocation for Werribee and Bacchus Marsh was 95%, which has since increased to 100%. This allocation is additional to a significant amount of carry-over water for irrigators.

Except for the Deutgam groundwater management area we are not expecting to place bans or restrictions on unregulated systems. Where these are typically applied over the summer period, they are likely to come into effect later this season.

Groundwater levels across the regions are stable or higher, which reflects the wet conditions.

# Introduction

Southern Rural Water (SRW) has responsibility for managing surface water licensing, groundwater extraction, storage dams and irrigation districts across the southern third of Victoria. We supply water for agricultural, urban, power generation and industrial purposes.

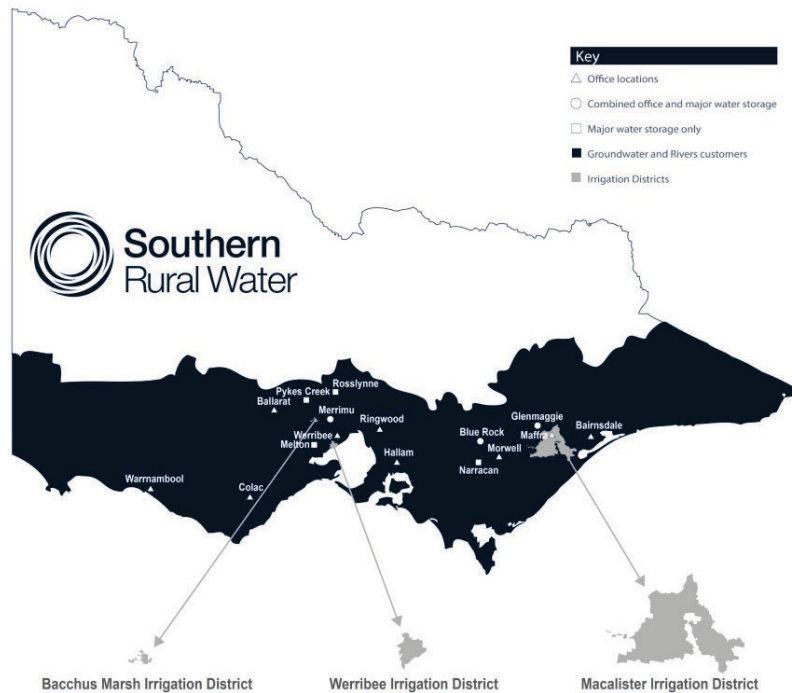


Figure 1 – Southern Rural Water service area

Across this wide geographic area SRW manages:

- seven major dams
- three irrigation districts
- licences for taking water from rivers and groundwater aquifers
- licences for operating farm dams.

As detailed in Figure 1, SRW manages the Macalister Irrigation District (MID) in central Gippsland and the Werribee (WID) and Bacchus Marsh (BMID) irrigation districts west of Melbourne. Much of the water used in the irrigation districts is for primary agricultural production, along with stock and domestic and minor industrial use. Water shares are held by individual customers within the districts and transactions are recorded in the Victorian Water Register.

Blue Rock Lake (part of the Latrobe River system) plays a key role in providing cooling water for Victoria's brown coal power generation.

Blue Rock Lake and Lake Glenmaggie also have environmental water entitlements that are managed by the West Gippsland Catchment Management Authority on behalf of the Victorian Environmental Water Holder. Visit SRW's website for further information:

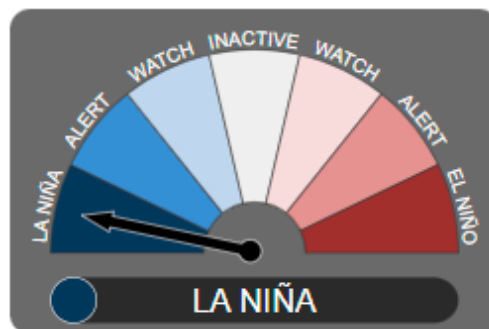
[www.srw.com.au](http://www.srw.com.au)

# Climate Outlook 2021-21

## Climate influences

The ENSO Outlook has been moved to La Niña. The current model outlooks suggest this La Niña will persist until the late southern hemisphere summer or early autumn 2022. All models surveyed by the Bureau La Niña thresholds in December and January with a majority also predicting thresholds will be met in February 2022.

Above average summer rainfall is also typical across eastern Australia.



## Rainfall and temperature ahead

The Bureau of Meteorology's (BOM) seasonal rainfall outlook for the December to February period predicts wetter than average conditions. It is showing a 50-70% chance of above median rainfall across the state for the period. The south-west of the state is less likely to exceed median rainfall than central and east Gippsland regions of the state.

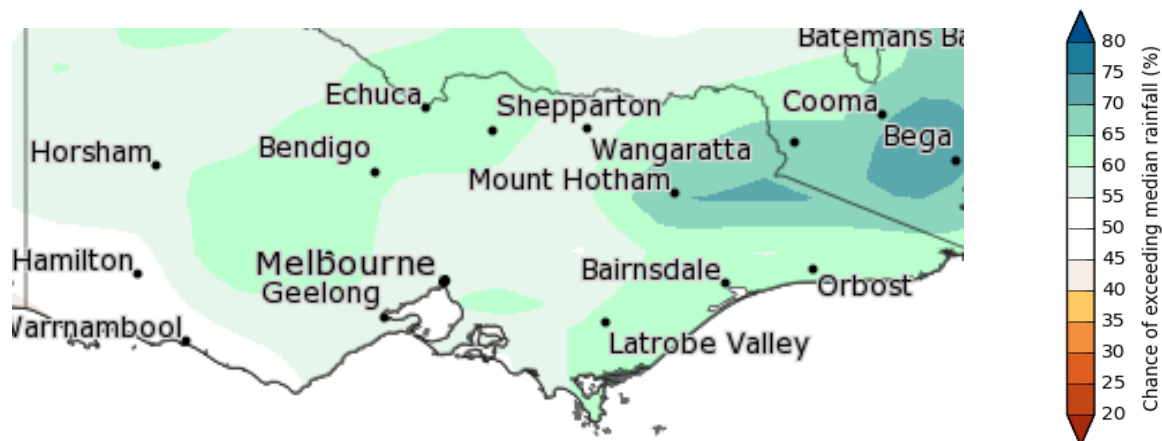


Figure 2 - Chance of exceeding the median rainfall December 2021 – February 2022 (Source: BOM)

Temperature and rainfall influence water use, especially during summer periods. At the same time, they also influence catchment soil moisture levels and inflows to SRW's unregulated waterways and storages. SRW continually monitors flow conditions and the Bureau's seasonal climate outlooks. Waterway flow and rainfall information is made publicly available on the SRW website. For the most up to date weather, temperature and rainfall data and predictions, see the BOM website [www.bom.gov.au/climate/](http://www.bom.gov.au/climate/)



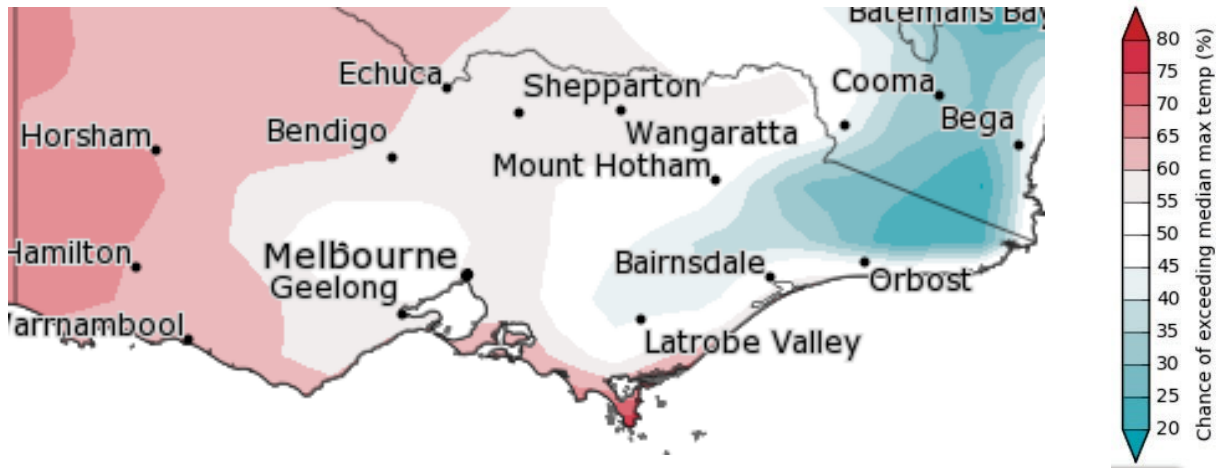


Figure 3 - Chance of exceeding the median maximum temperature December 2021 – February 2022 (Source: BOM)

Temperatures are predicted to exceed normal maximums across most of our entire region except east Gippsland. The timing of warmer weather and rainfall are critical to growing and harvesting crops.

### Longer term trend

Victoria’s climate has shown a warming and drying trend over recent decades, and this trend is expected to continue over the longer-term future.

Although there will still be a lot of variability in Victoria’s climate and streamflow, the chance of experiencing warmer conditions and less streamflow is now higher than in past decades.

More information on the observed changes and longer-term future climate and water projections can be found at <https://www.water.vic.gov.au/climate-change>

---

# Macalister Irrigation District

## Current water resource position

The Macalister Irrigation District's (MID) primary source of water is Lake Glenmaggie, and Thomson Reservoir. Lake Glenmaggie is an annual fill and spill reservoir, which means SRW is reliant on winter and spring rains to fill it to enable a 100% seasonal determination for the Thomson/Macalister Irrigation District. Thomson Reservoir holds the drought reserve which is designed to provide additional allocation in years with little rainfall.

Good inflows through early winter allowed for an opening seasonal allocation announcement of 100% of high reliability water shares on 1 July. For irrigators on the channel system, the irrigation season started on 15 August, while those taking directly from the river can operate all year round.

Rainfall through the catchment and the district since 1 July has ranged between 200–300mm which has resulted in continued high flows through the river systems and low demand from customers. Because of this, we have passed more than 330 GL of excess flow so far this season.

Irrigation deliveries to date are estimated at 5,000 ML which is 43,700 ML below the five-year average of 48,700 ML.

As of 23 November 2021, Lake Glenmaggie is holding 169,400 ML compared with 158,700 ML at the same time last year, and SRW's share of Thomson Reservoir is holding 45,000 ML compared with 43,000 ML at the same time last year.

There will be no further allocation reviews until 15 December which is the end of the spill period. At that time, we will assess storage levels, inflows, customer usage and Thomson Reserve volume and will provide an outlook on when allocation against low reliability water shares will be issued.

## Forward outlook

Because Lake Glenmaggie is a fill and spill system, opening allocations are highly dependent on rainfall over autumn and winter within the Macalister catchment area. Additionally, the Thomson drought reserve volume is used to supplement opening allocations.

The BOM outlook suggests central Gippsland will have above average rainfall along with above average temperatures through to December. This in conjunction with an already wetcatchment and district is likely to result in median to high flows through the catchment river system.

Under current conditions of continuing spill entitlement, we are unlikely to see any announcement of low reliability water share on 15 December. This is due to the need to still supply close to 155,628 ML in five months. The availability of allocation against low reliability water shares will be assessed fortnightly against seasonal conditions and stream flows, with the expectation of further allocation announcements later in the season.

---

# Werribee and Bacchus Marsh Irrigation Districts

## Current water resource position

Following good rainfall and inflows Pykes Creek opened the season at 100% of capacity and Melton Reservoir was also holding 100% of capacity. This is the second successive year of above average storage levels.

The opening allocation for the season was set at 95% of high reliability water shares, with customers holding 11.4 GL of carryover. The continuing rainfall into the catchment has caused storages to fill and spill resulting in low customer demand. The allocation is now at 100% high reliability shares and 10% low reliability shares.

## Forward outlook

The positive BOM outlook and full storages indicate our customers can plan their irrigation with a high degree of confidence, and carryover water into next year.



---

# Latrobe System

## Current water resource position

Blue Rock reservoir is the primary storage for the Latrobe System. Water from Blue Rock reservoir is primarily used for electricity generation in the Latrobe Valley coal fire power plants. It also supplies Gippsland Water with water for urban supply to towns in the Latrobe Valley and secures entitlements for licensed river diverters along the Latrobe River.

Last year Blue Rock reservoir held at or around 100% capacity for the entire year. This has continued into the current season. Our dams have little air space to mitigate the minor and major flooding caused by the high rainfall and wet catchment.

## Forward outlook

The BOM outlook suggests central Gippsland will have above average rainfall along with above average temperatures through to January. This in conjunction with an already wet catchment is likely to result in median to high flows.

Blue Rock reservoir is likely to hold or slightly decline over summer and will quickly refill with winter/autumn rains. Blue Rock reservoir has filled in seven out of the last 10 years which indicates it is a reliable resource.

All entitlements will be able to be met, including supplementation of unregulated licences in the lower Latrobe River. Latrobe River irrigators may seek access to additional water if their share of Blue Rock storage or run of river flows is less than their demand. Additional water may become available from drought storage, seasonal allocation, or transfer of entitlements.

# Maribyrnong System

## Current water resource position

The Rosslynne reservoir on Jackson's Creek near Gisborne provides additional water supplies to the townships of Sunbury and Gisborne and irrigation water to licence holders along the Maribyrnong River

The reservoir has recovered to 52% of capacity compared to 27% at the same time last year. This was due to above average rainfall in the last 12 months and higher inflows from the Maribyrnong catchment.

## Forward outlook

There is unlikely to be a change to the current level of restriction on supply. Any implications on urban supply will be managed by the relevant urban water authority, with information provided in their outlooks.

---

# Unregulated Surface Water

## Overview

Unregulated surface water relates to water accessed from rivers where supply to some or all users is not managed through releases from onstream dams. Most rivers in southern Victoria are therefore unregulated. Access to water in unregulated rivers is governed through rules documented in Local Management Plans. The purpose of these plans is to provide fair and equitable access for consumptive users and the environment. These rules set out a framework for trade, restricting access and managing local water issues. Access to water is therefore linked to streamflow which relates to antecedent and forecast climate conditions such as rainfall.

## Gippsland Region

Conditions in Gippsland's have been wet this season and there are no systems on restriction or ban in spring 2021. All eastern Victorian rivers are flowing at higher rates than 12 months ago.

The rainfall outlook indicates a very high likelihood of achieving or exceeding median rainfall through the remainder of spring and early summer. It appears unlikely that significant restrictions will be imposed on customers this year, though minor restrictions may apply in some systems during late summer and early autumn.

The Mitchell River is the most significant unregulated stream in the east due to the substantial number of licences, and the total area commanded for high value horticultural production. Restrictions may apply late in the season if dry conditions return but are otherwise unlikely.

The Latrobe River system has received above average rainfall with multiple flood events through the winter of 2021. The upper Latrobe River, Morwell River and Moe River continue to flow high into spring and provide a positive outlook for water availability in this system through the irrigation season. Restrictions may apply late in the season if dry conditions return but are otherwise unlikely.

In South Gippsland, creeks and rivers have been flowing strongly. The Tarwin, Agnes and Albert rivers are all benefiting from above average rainfall across their catchments. This region enjoys reliable rainfall and is less prone to restrictions than other regions. The Tarra River has also recorded above average rainfall. Rosters and restrictions on water access in these streams are unlikely. In the Thorpdale area, above average rainfall resulted in farm dams continuing to spill through early spring following re-filling early in the winter.

The first 9 months of 2021 have yielded rainfall totals of up to 1,100mm across much west and south Gippsland. Based on the rainfall forecast, there is confidence in a positive start for the coming irrigation season. Restrictions may apply late in the season if dry conditions return but are otherwise unlikely.

## Western Region

Heavy late winter and early spring rainfall has occurred in western Victoria. Rainfall

---

across the region has been above average for spring and has seen the major streams, Barwon River, Leigh River, Glenelg River, Wannon River and Hopkins River and Mount Emu Creek experiencing bank full and over bank flows through much of the high rainfall season and well into spring.

On farm storages have filled and are overflowing. Saturated catchments will support baseflows through summer supporting licensed use. Major river basins in the far southwest are unlikely to face rosters or restrictions imposed based on current flows and the establishing La Nina forecast.

Rosters and restrictions for the Gellibrand and Curdies rivers are likely to be similar to the 2020-21 season.

The Otway Basin has experienced rainfall well above average while flows remain high as was observed last season. The Barwon system has experienced slightly above average rainfall for the late winter and early spring. Winterfill licences on the Barwon, Leigh and Moorabool rivers have been able to access their full allocation. Restrictions on both the Barwon and Moorabool rivers will be managed closely to align with environmental releases so that extraction does not impact water for the environment while environmental releases do not distort rosters and restrictions.

## Central Region

There has been above-average rainfall within the Central Region and as a result stream flows have remained stable and are at close to long term average flow rates for winter and spring seasons. Forecasts predict above-average rainfall for the period November 2021 to January 2022. This is likely to result in normal conditions with little to no restrictions imposed on consumptive users. All central region catchments will be monitored closely over summer and any restrictions will be imposed in line with relevant operating rules.

Winter and spring rainfall across the Dandenong Creek catchment has remained steady and is consistent with the wetter conditions enjoyed last year. Stream flows in the Dandenong Creek systems have remained similar to last year. Above-average flows have been observed in Mile Creek, Monbulk Creek and Eumemmerring Creek systems. The forecast rainfall across the catchment will provide a positive outlook for licence holders and make restrictions unlikely in this catchment.

The Werribee and Maribyrnong catchments have had above-average rainfall for the first nine months of 2021. The season is developing similar to summer 2020-21 where restrictions were not imposed on the Maribyrnong system. The Turitable Creek and Willimigongong Creek are usually subject to a total ban and "Qualification of Rights" in the summer months though neither system had bans imposed last year. With predicted rainfall, these systems may avoid bans again this year, however, these systems can be quick to change and will be monitored closely.

Rainfall across the Tarago/Bunyip catchment remained above average during winter 2021. Stream flows in the semi regulated Tarago/Bunyip were completely supplied by natural flows last season rather than releases from Tarago Reservoir. This occurred following significant rainfall last year and continuing wet catchment conditions. With the rainfall forecast again expected to be above average for summer the river system should be well placed to meet consumptive demands through the coming irrigation season.

## Groundwater

No groundwater rosters/restrictions are anticipated except for Deutgam Water Supply Protection Area where a 50% allocation was announced on 1 July 2021.

Generally, groundwater levels across the regions are stable or higher, which reflects the wet conditions.

Recent groundwater level trends for each groundwater management unit are summarised in Table 1.

*Table 1 - Groundwater level trends*

<b>Gippsland region</b>		
<b>Groundwater management unit</b>	<b>Recent Trend</b>	<b>Notes</b>
Corinella	Rising	
Denison	Rising	
Giffard	Declining	
Leongatha	Rising	
Moe	Declining	
Orbost	Rising	
Rosedale	Stable	Depressurised for Latrobe Valley mines
Sale	Declining	
Stratford	Declining	Depressurised for Latrobe Valley mines & offshore oil and gas
Tarwin	Stable	
Wa De Lock	Stable	
Wy Yung	Stable	
Yarram	Declining	Depressurised for Latrobe Valley mines & offshore oil and gas

<b>South-west region</b>		
<b>Groundwater management unit</b>	<b>Recent Trend</b>	<b>Notes</b>
Bungaree	Rising	
Colongulac	Rising	
Condah	Rising	
Gellibrand	Stable	
Gerangamete	Stable	
Glenelg	Stable	
Glenormiston		No data available
Jan Juc	Declining	
Newlingrook	Stable	
Paaratte	Rising	
Portland	Rising	
South-west limestone	Rising	
Warrion	Rising	

**Port Phillip & Western Port region**

<b>Groundwater management unit</b>	<b>Recent Trend</b>	<b>Notes</b>
<b>Cut Paw Paw</b>		No data available
<b>Deutgam</b>	Stable	50% allocation
<b>Frankston</b>	Stable	
<b>Koo Wee Rup</b>	Declining	
<b>Lancefield</b>	Rising	
<b>Merrimu</b>	Rising	
<b>Moorabbin</b>	Rising	
<b>Nepean</b>	Stable	
<b>Wandin Yallock</b>	Stable	





## Further Information

SRW provides a variety of information on allocations, streamflows, rosters and restrictions and delivery/availability issues on our website [www.srw.com.au](http://www.srw.com.au)

Water trading information is also available through SRW and on our website <http://www.srw.com.au/customers/water-trading-leasing/>

For all climate and weather predictions and observations, customers should go to the Bureau of Meteorology site at [www.bom.gov.au](http://www.bom.gov.au)