



Annual Water Outlook 2020-2021

1 December 2020



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Executive Summary

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

In the Macalister Irrigation District we have opened with an allocation of 100% against high reliability water shares, compared with 45% last season. With a full storage and good rainfall in the catchment, we have passed around 300GL of excess flow so far this season. Our spill period ends on 15 December, and with low demand so far, we will likely need most of the storage volume to meet high reliability entitlements. Therefore, we are unlikely to announce further allocation against low reliability entitlements at that time.

The opening allocation for Werribee and Bacchus Marsh was 30%, which has since increased to 90%. This allocation is additional to a significant amount of carry-over water for irrigators, which equated to around 70% of district entitlement.

At this stage 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 generally stable or higher, which is largely a reflection of 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.

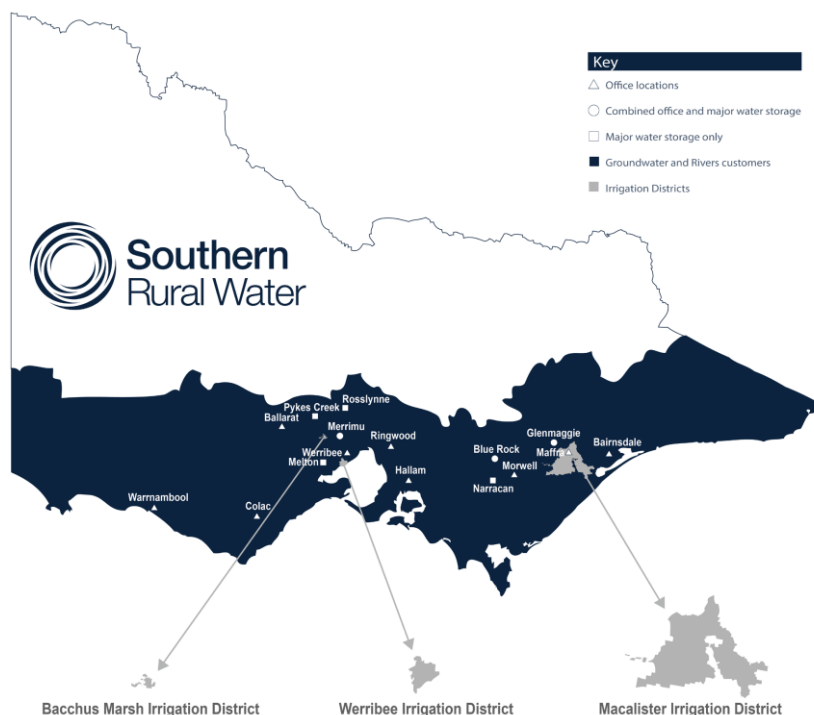


Figure 1 – Southern Rural Water service area

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. The majority 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 major role in providing cooling water for Victoria's brown coal power generation.

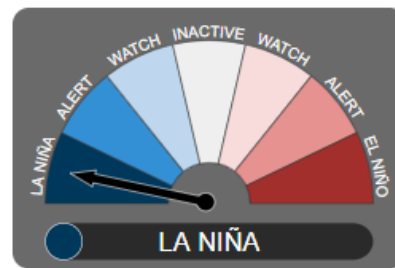
Blue Rock Lake and Lake Glenmaggie also have environmental water entitlements that are managed by the West Gippsland Catchment Management Authority on behalf of the Victorian Environmental Water Holder. Visit SRW's website for further information:

www.srw.com.au

Climate outlook 2020-21

Climate influences

A La Niña is underway in the tropical Pacific and is expected to persist through the southern hemisphere summer 2020–21, peaking in December. La Niña typically increases the chance of above average rainfall across much of Australia during spring. 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 60-80% chance of above median rainfall across the state for the period. The rainfall projections in the central and Gippsland regions are more positive than in the south west region.



Figure 2 - Chance of exceeding the median rainfall December 2020 – February 2021 (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/



Figure 3 - Chance of exceeding the median maximum temperature December 2020 – February 2021 (Source: BOM)

Temperatures are predicted to exceed normal maximums across our entire region. 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 chances 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 from Lake Glenmaggie, and Thomson Reservoir. Lake Glenmaggie is an annual fill and spill reservoir, which means SRW is largely 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 very little rainfall.

Good inflows through early winter allowed for an opening seasonal allocation announcement of 100% of high reliability water shares on July 1 (compared with an opening allocation of 45% last season). 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 500 – 600mm which has resulted in continued high flows through the river systems and low demand from customers. Because of this, we have passed more than 300 GL of excess flow so far this season.

Irrigation deliveries to date are estimated at 37,789 ML which is 12,274 ML below the five-year average of 50,063 ML.

As at 30 November 2020, Lake Glenmaggie is holding 164,500 compared with 135,774 ML at the same time last year, and SRW's share of Thomson Reservoir is holding 43,020 ML compared with 39,917 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 rainfalls along with above average temperatures through to December. This in conjunction with an already wet catchment and district will likely result in median to high flows through the catchment river system.

Under current conditions of spill entitlement recently ceasing, 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 5 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 81% of capacity and Melton Reservoir was also holding 70% of capacity. This is a good turn around for the Werribee catchment compared to the previous two years where it suffered from low rainfall and below average storage levels.

With customers holding 11.2GL of carryover, equivalent to 70% of the total entitlement, the opening allocation for the season was set at 30% of high reliability water shares.

With the continuing rainfall into the catchment causing storages to fill and spill and low customer demand we have been able to increase allocation for customers up to 90% as of 1 December 2020.

Forward outlook

With Pykes Creek and Melton reservoirs now full, irrigators are well placed for the summer ahead. If current conditions continue as per the BOM outlook it is likely we will be able to offer 100% of high reliability water shares by early December, with further opportunity for low reliability water share allocation likely next year dependent of customer demand on recycle water.

Increased carryover this season also provides greater security for district irrigators.

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. Due to the storage running at capacity it has contributed to minor flood events through Lake Narracan and through the Latrobe river.

Forward outlook

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

As we have seen in the past 12 months with median to high streamflows, Blue Rock Reservoir is likely to hold or slightly decline over summer and will quickly refill with winter/autumn rains. Blue Rock Reservoir is highly reliable and has filled in 7 out of the last 10 years.

All normal demands will be able to be met, including supplementation of unregulated licences in the lower Latrobe River. Based on the forecast seasonal conditions there is also the likelihood of lower Latrobe River irrigators seeking access to the drought reserve or additional water from other stakeholders, including interest in the additional 1% when it becomes available.

Maribyrnong System

Current water resource position

Despite the higher than average rainfall on the neighbouring Werribee catchment, the Maribyrnong catchment has had another very poor winter and spring with Rosslynne reservoir receiving little inflows. It is currently only 29% full which is the same as the previous year.

Forward outlook

Given Rosslynne reservoir remains at the same level as one year ago there is unlikely to be any change 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 systems are monitored in accordance with relevant Local Management Rules. These rules set out a framework for trading and how local water issues are managed. SRW releases annual reports each year which report, at a catchments scale, how the rivers fared last season; groundwater level trends; number of irrigation licences in each system; how much water irrigators used last season, compared with previous years; and emerging local water issues. To find a copy of all 12 reports visit our website.

Gippsland Region

Gippsland has seen wetter conditions this season and there are no systems currently on restriction or ban. All eastern rivers are flowing at substantially higher volumes than at the same time last year.

The outlook is indicating a very high chance of either achieving or exceeding median rainfall over the next three months. At this stage it appears unlikely any restrictions will be required this year, and only limited restrictions may apply during the latter part of summer/early autumn.

The Mitchell River is the most significant of the systems in the east due to volume of licences and production. It is likely that restrictions will be less severe and starting later in the season than that of the previous three years and may not be required at all.

In the Latrobe system, the Upper Latrobe River, Morwell River and Moe River have received excellent rainfall during winter and spring meaning a very positive outlook for this season. Restrictions on these systems would be unlikely but may occur mid to late summer depending on seasonal conditions.

In South Gippsland creeks and rivers have been flowing well within the Tarwin, Agnes and Albert River systems with near average rainfall for most of the area. Any restrictions on these systems would be unlikely. The Tarra River system has also recorded near average rainfall and any restrictions or bans are unlikely to be introduced and if required would be mid to late summer depending on seasonal conditions.

In the Thorpdale area, there has been significant rainfall within the catchment and most dams had re-filled earlier than expected. Year to date, some areas within West & South Gippsland have recorded up to 1100mm of rain. Based on predicted rainfall, there should be a good start for the coming irrigation season. Depending on seasonal conditions, rosters and restriction may commence early to mid to late January 2021.

Western Region

The developing La Nina scenario has strengthened resulting in heavy late winter – early spring rainfall in the far South-West of Victoria. Rainfall across the region has been well above the long term average for spring and has seen the major streams, Barwon River, Leigh River, Glenelg River, Wannon River and Hopkins and Mount Emu Creek sustain reasonable flow levels for lengthy periods with minor flood levels being reached.

All on farm storages are now filled and spilling, and unconfined and semi-confined aquifers will have had significant if not full recharge conditions. This allows for streams that have

good baseflows from groundwater to remain high through early summer and will allow for extractions to be available for direct licensed use.

All major river basins in the far south west (Wannon and Glenelg Rivers) will have river rosters or restrictions set in place later in the season compared to the long term average based on current flows and the establishing La Nina cycle.

The Otway system has experienced average to slightly above average rainfall and flows are similar to that of last season. The northern streams are experiencing slightly above average flows with the southern streams average flows. This is the reverse of conditions last year. Rosters and restrictions for the Gellibrand and Curdies Rivers will be in place as per last season.

The Barwon system has experienced slightly above average rainfall for the late winter and early spring. Rivers are experiencing flows significantly higher to that of last year at the same time with some higher flows particularly on the Moorabool River maintaining above average spring average flows. All winterfill licences on the Barwon, Leigh and Moorabool Rivers have been able to take their full allocation.

For the summer period, all the major rivers will have delayed rosters and restrictions in place. The La Nina cycle will allow for access to direct river extraction to meet most allocations until mid summer, well after the average bans being set pre Christmas. Restrictions on both the Barwon and Moorabool Rivers will be managed closely and will align with the CMA's environmental releases so that extraction allows these pulses to pass without a lifting of any bans outside of natural flows.

Central Region

There has been above average rainfall within the Central Region and as a result stream flows have improved and are at a close to a normal flow rate compared to previous years. Forward predictions are for a high amount of rainfall for the November – January period which is likely to result in normal conditions and much less restrictions than previous years.

Annual rainfall across the Dandenong Creek catchment has greatly improved from last year. Average stream flows in the Dandenong Creek are significantly higher than last year and this is reflected in the Mile, Monbulk and Eumemmering Creek tributaries. Further rainfall across the catchment will provide a positive outlook and make restrictions unlikely in this catchment.

The Werribee and Maribyrnong Catchments have had above average rainfall for the first six months of 2020. Considering current water flows within the Maribyrnong system, restrictions may not be implemented in the Maribyrnong Catchment as early as they have in previous years. The Turitable and Willimigongong Creeks are usually subject to a total ban and Qualification of Rights in the summer months. With predicted rainfall this may not occur as early as it has previously.

Rainfall across the Tarago/Bunyip catchment was generally 100 to 200mm more than the mean between October 2019 and September 2020. Tarago/Bunyip system flows were maintained last season mostly via natural flows, due to significant rainfall from late January 2020 onwards. This year, between October 2019 and September 2020 appear to be well above what they were for the same period in 2018-19. If this trend continues the river system should be well placed coming into the 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 2020.

Generally, groundwater levels across the regions are stable or higher, which is largely a reflection of the wet conditions.

Recent groundwater level trend for each groundwater management unit in summarise in Table 1.

Table 1 - Groundwater level trends

Gippsland Region		
Groundwater Management Unit	Annual level comparison	Notes
Wa De Lock GMA	Higher	
Denison GMA	Higher	
Rosedale GMA	Lower	Aquifer is depressurised for LV mines
Sale WSPA	Stable	
Stratford GMA	Lower	Aquifer is depressurised for LV mines & offshore oil and gas
Corinella GMA	Stable	
Giffard GMA	Stable	
Leongatha GMA	Higher	
Tarwin GMA	Higher	
Yarram GMA	Lower	Aquifer is depressurised for offshore oil and gas
Wy Yung GMA	Higher	
Orbost	Higher	
Moe GMA	Higher	
South West Region		
Groundwater management unit	Annual level comparison	Notes
Jan Juc GMA	Higher	
Newlingrook GMA	Stable	
Paaratte GMA	Stable	
South West Limestone GMA	Stable	
Glenormiston GMA		No data available
Condah GMA	Stable	
Glenelg WSPA	Stable	
Portland GMA	Stable	
Colongulac GMA	Higher	
Warrion WSPA	Higher	
Bungaree GMA	Higher	
Cardigan GMA	Higher	
Gerangamete GMA	Higher	
Gellibrand GMA	Stable	

Port Phillip & Westernport Region Groundwater management unit	Annual level comparison	Notes
Koo Wee Rup WSPA	Stable	
Frankston GMA	Higher	
Moorabbin GMA	Higher	
Nepean GMA	Higher	
Deulgam WSPA	Higher	50% allocation
Lancefield GMA	Higher	
Merrimu GMA	Higher	
Cut Paw Paw GMA		No data available
Wandin Yallock GMA	Higher	



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

Water trading information is also available through SRW and on our WaterMatch site www.watermatch.com.au

For all climate and weather predictions and observations, customers should go to the Bureau of Meteorology site at www.bom.gov.au