

The <u>Marne Saunders Water Allocation Plan</u> (WAP) aims to support ecologically sustainable development and support a balance between social, economic, and environmental water needs. The plan establishes the rules for:

- new allocations in management zones where there is water available within water use limits, after allocations have been made to existing users.
- ongoing management of allocations, such as water use efficiency and rollover of allocations from year to year.
- transfer or trade of allocations between users.
- assessment of water affecting activity permits for activities such as dam construction and works in and around watercourses; assessment of drilling or deepening wells
- monitoring and reporting requirements.

An information pack has been developed as an outcome of the Cambrai Water Forum in February 2022. There are 6 papers in the series as supporting information developed for the upcoming meetings in November 2022:

#1: <u>History, Licences, and Allocations</u> #4: <u>Resource and ecosystem condition</u>

#2: <u>Hydrological cycle in the PWRA</u> #5: <u>Frequently asked questions</u>

#3: Water development and use #6: How to address concerns













#### What does the current WAP aim to achieve?

Section 1.1 of the Marne Saunders WAP sets out the objectives for the plan. Central to the water management framework in the WAP are the requirements to balance water demands within the supply and capacity of the water resources. As outlined in section 4.3.1 of the plan, the approach is to:

- Assess the supply of water likely to be available for at least the life of the plan, based on previous water resource behaviour and patterns
- Set aside environmental water provisions
- Set aside non-licensed water needs (primarily stock and domestic use)
- Share remaining available water for licensed consumptive use

### Does the current WAP consider climate change?

The current Marne Saunders WAP does not directly include the potential impacts of climate change. According to the Marne Saunders WAP section 4.3.1.1:

Much of the work to set allocation limits and associated policy for this Plan is based on historical data on resource supply, particularly from the last 30 or so years. This period includes a range of wet and dry years. The climate is quite variable from year to year and also shows patterns of wetter and drier periods. Future climate and hence water availability may not reflect historical patterns.

...

At present [as of WAP adoption in 2010] there is considerable uncertainty about the quantum of climate change likely to be experienced and its impact on water availability and demand. Therefore the potential impacts of climate change have not been incorporated into this Plan, and it is expected that this will be reviewed in future plans when better information is available.'

In the face of this uncertainty, the existing user licensing process and the WAP took a conservative approach to water allocation by:

- Reducing allocations to existing users in areas where entitlements exceeded the sustainable water use limits
- Establishing that no new allocations will occur in areas at higher risk, and no new net dam capacity can be constructed
- Encouraging adherence to the 'securing low flows' policy which requires low flows, when they occur, to be passed by priority dams and watercourse diversions.

# Are Aboriginal water interests included in the current WAP?

The 2010 Marne Saunders WAP did not include Aboriginal water interests but it was updated in 2019 to include information on Aboriginal water interests which was incorporated via consultation with Peramangk, Nganguraku and Ngadjuri First Nation groups. The Murraylands and Riverland Landscape Board (the Board) is committed to engaging with First Nations on water planning and work towards achieving First Nations objectives and outcomes together.









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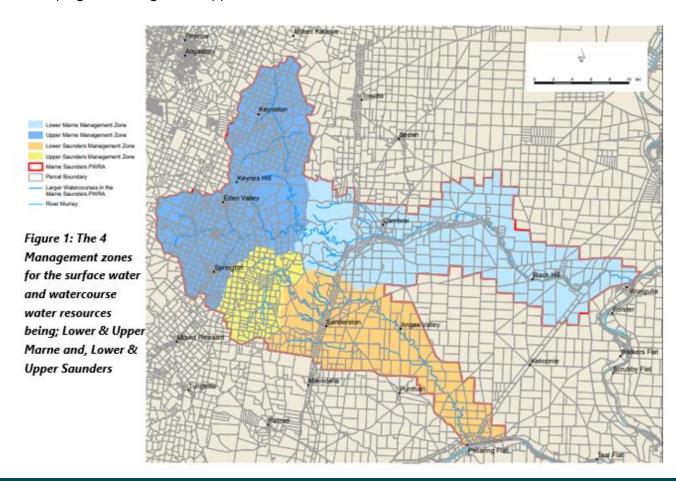
For Aboriginal nations, all water is cultural water – this includes water for spiritual, cultural, environmental, social, and economic purposes. Water is life - it provides life to everyone and everything that ever lived, and everyone and everything that will ever live. In this way, water is the lifeblood of the landscape and is connected to all the other elements of the landscape, supporting a wide range of spiritual, cultural, environmental, social and economic activities. Water and all of the connected elements must be managed as parts of the same living body of the landscape, to allow it to remain healthy and continue to function and support people to live, as it has for many thousands of generations.

## How does the water allocation plan manage the different water resources across the area?

The Marne Saunders PWRA has been divided into a series of management zones that reflect:

- different water resources (surface water + watercourse water and groundwater)
- different parts of water resources (e.g. different types of aquifers)

Management zones are managed as independent units in the plan, each with its own limits and rules (Figure 1). Consideration has been given to the linkages between management zones when developing the management approach for each of one of these zones.

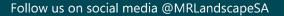














The boundaries of **underground water management zones** are defined by the type of aquifer (e.g. fractured rock, confined / unconfined limestone), and by the primary source of recharge (e.g. rainfall, streamflow). Figure 2 demonstrates the various underground water management zones.

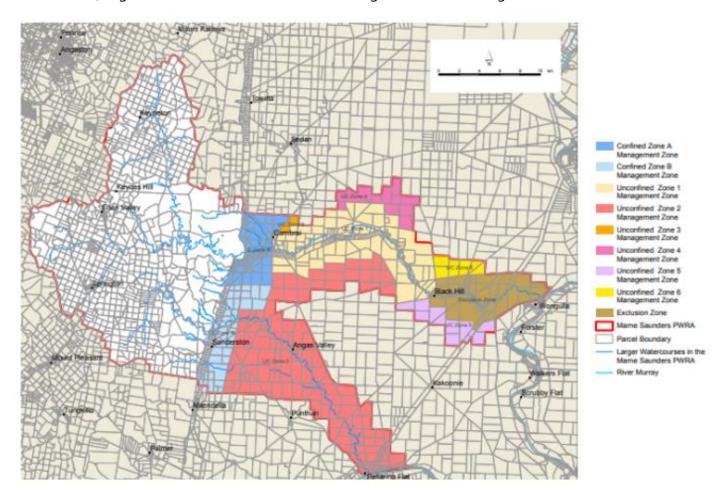


Figure 2: Management zones for aquifers across the Marne Saunders PWRA: Fractured rock zone – solid white; Various Murray group limestone aquifer zones – other colours.

Each management zone has an allocation limit in megalitres (ML), and new allocations must not cause these limits to be exceeded. These limits have been set by considering the available supply of water in different areas and the needs of non-licensed users and the environment. Water allocations cannot be transferred or traded between management zones. Water allocations may be transferred or traded within management zones, subject to WAP rules including more local-scale water use limits.













### Does the WAP manage stock and domestic water use?

A water allocation and licence is not needed to take water for stock and domestic purposes in the Marne Saunders PWRA. The WAP does not directly regulate the volume of water taken for stock and domestic use, but the amount of water estimated to be used for these purposes is considered when determining the amount of water available for licensed use under the plan. Building new infrastructure to take water for stock and domestic use (e.g. new or modified dams and wells) will require a water affecting activity permit or a drilling wells permit, which is managed by the Marne Saunders WAP.

For groundwater, estimates have been made of the annual volume of stock and domestic water requirements from each management zone. These volumes have been set aside when setting the allocation limit for each management zone.

A permit is required for drilling a new stock and domestic well. New stock and domestic wells may still be drilled in management zones that are fully allocated for licensed use, subject to WAP rules and approval of the Minister for Climate, Environment and Water.

For surface water, stock and domestic requirements are estimated as 30% of the non-licensed dam capacity in a surface water sub-management zone. This volume is counted against the zone's water use limit when assessing applications to trade allocations between zones.

A permit (or development approval) is required to build, modify or remove a dam in the Marne Saunders PWRA. The dam construction permit rules in the Marne Saunders WAP set out that no new dams can be built in the Marne Saunders PWRA unless certain conditions are met. This applies to stock and domestic dams as well as licensed dams.

#### Can new dams be built? Can new wells or bores be drilled?

A water affecting activity (WAA) permit (or sometimes a development approval) is required for enlargement or removal of a dam or other water diversion structures. A drilling wells permit is required for the drilling of a new well or plugging, backfilling or sealing of a well. A well permit is also required for repairing, replacing or altering the casing, lining or screening of a well. The Department for Environment and Water assess all well permit applications and can be contacted for further information. A permit is required for all of these activities regardless of whether the water will be used for licensed purposes, or non-licensed purposes such as stock and domestic use.

Under some circumstances a WAA permit may not be required e.g. dam desilting as long as it is carried out in accordance with the WAA Control Policy. Undertaking a water affecting activity without a permit, or in breach of permit conditions is an offence under the Landscape South Australia Act 2019 and penalties may apply. It is recommended that waer users contact the Water Planning and Assessment Officer in the first instance about any water affecting activity prior to undertaking works.

The rules in the Marne Saunders water allocation plan are used to assess WAA permit applications for these activities (and development applications where relevant). These approvals relate to the









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construction or modification of the infrastructure, and don't regulate the volume of water taken from the infrastructure. Permits can include conditions on how the structure is constructed and operated (e.g. including a requirement to pass low flows for new or modified dams and watercourse diversions). Permits can also indirectly affect the amount of water intercepted by a dam by limiting the allowable volume of the dam.

As outlined in information sheet #1 'Water management in the Marne Saunders: history, licences and allocations', water can only be taken from new, modified or existing infrastructure for licensed purposes if the user holds an allocation from the relevant water resource. Taking water for stock and domestic use does not require an allocation and licence in the Marne Saunders PWRA, so the volume taken from new, modified or existing infrastructure for these purposes is not managed under the Marne Saunders WAP.

### Is there any more water available for allocation?

There is no more surface water or watercourse water available for allocation in the Marne Saunders PWRA. The only exception is that new roof runoff allocations may be granted in accordance with WAP rules. Roof runoff allocations are only required where more than 1,500 kL is collected and used for licensed purposes. No allocation is required for water collected for stock and domestic use.

There is no more water available for allocation from the confined Murray Group Limestone groundwater in the Marne catchment, the unconfined Murray Group Limestone groundwater in the vicinity of the Marne River, or the Quaternary aquifer that lies above the Murray Group Limestone (i.e. management zones Confined zone A and B, Unconfined zone 1, Exclusion zone and Quaternary aquifer management zone as per Figure 2').

The only way that a user can obtain a water allocation in those resources is by transfer or trade from an existing licence, subject to WAP rules and approval of the Minister for Climate, Environment and Water. Transactions between buyers and sellers of transferred allocations and licences are private arrangements that are not managed by the WAP.

Small amounts of groundwater are available for allocation in other underground water management zones in the Marne Saunders PWRA, subject to WAP rules, approval of the Minister for Climate, Environment and Water, and payment for the allocation. The underground water that is still potentially available for allocation is generally low quality, low yielding, patchy in availability and/or expensive to drill into. These areas have no or limited movement of water to the fully allocated management zones. Taking new water from these areas is not likely to affect water availability in the fully allocated management zones.











### **Further information**

The Marne Saunders WAP, and the Guide to the draft Plan, can be found here: <a href="https://www.landscape.sa.gov.au/mr/water/water-allocation-plans/marne-saunders">www.landscape.sa.gov.au/mr/water/water-allocation-plans/marne-saunders</a>



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