



Marne Saunders water resources

#6 How to address concerns

In 2022, the Murraylands and Riverland Landscape Board (the landscape board) began discussions with the community in the Marne Saunders Prescribed Water Resources Area (PWRA) about the recent series of dry years that have resulted in declining water resources and dependent ecosystems in the catchments.

The landscape board is initiating a subsequent community engagement process to enable discussion about possible measures to address concerns. The primary cause of these water resource declines – lower rainfall – is not something that can be changed, however actions can be taken to moderate these impacts over the shorter and longer term.

This fact sheet (#6) focuses on possible actions the landscape board could undertake and/or support to address issues related to water resource decline, in addition to ideas that have been raised during community meetings. It is expected that more actions will be identified via the upcoming meetings taking place in November. Once a list of actions has been collated and discussed, these will be assessed using an independently managed risk / benefit approach.

An [information pack](#) has been developed as an outcome of the Cambrai Water Forum in February 2022. A series of 6 papers provides supporting information developed for the upcoming meetings in November 2022:

- #1: History, Licences, and Allocations
- #2: Hydrological cycle in the PWRA
- #3: Water development and use
- #4: Resource and ecosystem condition
- #5: Frequently asked questions
- #6: How to address concerns



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Actions that are already in progress

The Marne Saunders water allocation plan (WAP) and the water licensing system in the Marne Saunders PWRA aim to support sustainable water management in the area by providing rules for sharing water between users, including the environment.

As part of WAP development, the effects of dams and watercourse diversions on environmental water requirements were analysed in the Marne Saunders PWRA. Environmental flow requirements relating to high flows were found to be little affected by dam development. The major impact of dams on environmental water requirements was a reduction in the amount and duration of low to medium flows.

As a result, a priority for the WAP and existing user licensing process was the introduction of the securing low flows policy. This requires that flows that are less than a locally-defined threshold flow rate, are returned or not captured at priority licensed dams and watercourse diversions. This policy aims to address the issue of watercourses drying out which threatens fish populations and other environmental assets in the hills zone. Passing low flows, when they occur, will support critical refuge habitats.

The securing low flows policy started to be implemented on-ground from spring 2017 through the Flows for the Future program. The program has made good progress installing devices to pass low flows but low rainfall has meant that there has been limited opportunity for low flows to be passed.

For more detail regarding the Flows for the Future Program as it relates to the Marne Saunders PWRA, please see section 3.3.6 of the 2009 Marne Saunders WAP Guide to consultation:

https://cdn.environment.sa.gov.au/landscape/images/2009_Draft-WAP-Guide-for-consultation_complete-website.pdf#asset:41784:url

The WAP and existing user licensing process also introduced a range of other ongoing measures to support sustainable water management, such as:

- Volumetric allocation limits for all local water resources (including reductions in existing user entitlements in areas of high demand)
- An ongoing ban on construction of new dams unless they meet specific criteria
- Exclusion zones around key environmental assets, and
- Local-scale water taking limits and buffer rules to reduce the impact of allocation trade on other users and the environment.



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Ideas to address concerns – for community discussion

This section compiles some ideas already suggested as actions that may help to address the impacts of the current decline in water resources on consumptive users and/or dependent ecosystems. Tables 1, 2 and 3 (overleaf) demonstrate a number of actions to start the discussion around addressing this decline. Each table is grouped according to potential measures that *may* be undertaken – outcomes of which may either increase net water availability across the catchment (Table 1); change the way water is allocated (Table 2); or directly benefit environmental outcomes (Table 3). The landscape board's role in undertaking potential actions is classified as:

- *direct involvement*- through making changes to the existing water allocation plan (WAP) policy
- *indirect involvement*- where the landscape board can facilitate/support measures that could be undertaken by other organisations.

It is important to note that no actions or measures to address declining water resource condition presented here have been decided upon at this stage. The material presented in this document is put forward only to promote discussion among community members and enable the landscape board to gauge the community's thoughts on different actions. Following community discussion, all actions (including those arising from the discussion process) will be independently analysed via a risk/benefit assessment. Community input regarding the potential measures will be integral to that analysis process.

Note: review process for the Marne Saunders water allocation plan (WAP)

The last column of Table 1 refers to the landscape board's direct or indirect role. Some actions have identified the landscape board's role as '*Direct: via WAP provisions amendment following consultation*' meaning changes could occur during a WAP amendment process. The key stages to undertake a WAP amendment are:

- Actions and potential measures are described and developed through community meetings
- These action and measures will be analysed independently via a risk/benefit assessment
- An outcome of the risk/benefit assessment may be a recommendation/option for the landscape board to consider a comprehensive WAP review
- If a WAP review is undertaken (pursuant to section 54 of the *Landscape South Australia Act 2019*), the risk/benefit assessment will be used to inform the community assessment section of the review
- An outcome of the review would likely recommend that amendments be made to the WAP
- A WAP amendment process would require further community engagement and statutory consultation.



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The amendment process could include updating current and projected future water availability as well as updates to water-taking limits, including reconsidering the balance between different water needs, better integration of Aboriginal water interests and amending WAP policies.

Amendments to WAP policies need to be within the legislative scope of the plan. This includes the amount of water available for allocation and how this may change over time; how new allocations may be granted; how allocations may be taken, used and transferred; and the rules for assessing applications for specified activities that require approval, including construction and modification of wells and dams, managed (artificial) aquifer recharge, works in and around watercourses, and using effluent and imported water in some circumstances.

The review process could also identify actions that are outside the scope of the WAP.



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Table 1: Possible actions to address declining water resource condition which may promote a net increase in consumptive water availability in the Marne Saunders PWRA (*Note: WAP= water allocation plan; WAA= water affecting activity)

Action	Potential measure(s)	Landscape board's potential role**
		<p>*Direct – achieved through measures undertaken by landscape board directly (via either existing or new policy);</p> <p>*Indirect – supported by landscape board policy relating to the action (measures undertaken externally)</p>
1) Vary total consumptive pool volumes across the catchment	<ul style="list-style-type: none"> Adjust total capacity of the resource via WAP, and volume available for consumptive use, to account for climatic changes since WAP adoption. Vary allocation volumes year to year, to reflect water availability. 	<ul style="list-style-type: none"> Direct: via WAP provisions amendment following consultation
2) Access allocations from water sources within PWRA which are currently restricted	<ul style="list-style-type: none"> Support sustainable harvesting of additional runoff from low permeability surfaces (e.g. stormwater, roaded catchments) 	<ul style="list-style-type: none"> Direct: via WAP provisions amendment following consultation (<i>and</i>); Indirect: WAP to take on a regulatory role following external agency (e.g. Council) harvesting project implementation <p><i>Note: Primary landscape board role- amend WAP provisions to allow additional water to be conditionally allocated from low permeability surfaces.</i></p>
3) Get more out of available water	<ul style="list-style-type: none"> Improve water use efficiency Accept that less water is available, transition to alternative purposes which use less water 	<ul style="list-style-type: none"> Direct: via existing WAP provisions. <p><i>Note: The landscape board has a long-standing program to support water use efficiency for irrigators</i></p> <ul style="list-style-type: none"> At landholder's individual discretion



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4) Access external or non-prescribed water supplies	<ul style="list-style-type: none"> • Reuse of local wastewater 	<ul style="list-style-type: none"> • Direct: via existing WAP provisions, (and/or); • Direct: via WAP provisions amendment following consultation, (and/or); • Indirect (depending on measure): WAP to take on a regulatory role, dependant on scale – e.g. individual businesses, town wastewater <p><i>Note: Likely to require approvals from other agencies – e.g. SA Health, EPA. WAA permits also likely required.</i></p>
	<ul style="list-style-type: none"> • Importing water into the Marne Saunders PWRA 	<ul style="list-style-type: none"> • Direct: via existing WAP provisions, (and/or); • Direct: via WAP provisions amendment following consultation, (and/or); • Indirect (depending on measure): External agencies currently examining this option for Eden Valley. WAP policies may be amended to support this action. <p><i>Note: WAA permit required under certain circumstances. If effluent water, similar approvals as above likely required</i></p>
5) Improved security of current water resources	<ul style="list-style-type: none"> • Deepen wells 	<ul style="list-style-type: none"> • Direct: via existing WAP provisions. • <i>Note: At landholder's individual discretion. Requires a DEW Drilling wells permit</i>
	<ul style="list-style-type: none"> • Dam maintenance / improvement 	<ul style="list-style-type: none"> • Direct: via WAP provisions amendment following consultation, (and/or); • Direct: via existing WAP provisions. <p><i>Note: WAA permit required for most dam improvement measures. Contact WAA officer for information mrlandscape.water@sa.gov.au</i></p>
	<ul style="list-style-type: none"> • Water storage improvements (e.g. tanks, underground) 	<ul style="list-style-type: none"> • Direct: via existing WAP provisions. <p><i>Note: WAA permit required to recharge aquifer if underground storage is utilised</i></p>
	<ul style="list-style-type: none"> • Alternative groundwater supply 	<ul style="list-style-type: none"> • Direct: via existing WAP provisions. <p><i>Note: 500 ML available (unused) in Plains zone Renmark group aquifer. May be expensive to drill, supply unknown</i></p>



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Table 2: Possible actions to address declining water resource condition which may change the way water is allocated in the Marne Saunders PWRA

(*Note: WAP= water allocation plan; WAA= water affecting activity)

Action	Potential measure(s)	Landscape board's potential role**
		<p>*Direct – achieved via measures undertaken by landscape board directly (via either existing or new policy);</p> <p>*Indirect – supported by landscape board policy relating to the action (measures undertaken externally)</p>
6) Manage unregulated water use	<ul style="list-style-type: none"> Explore mechanisms for managing purposes that are currently unregulated, such as stock use, domestic use and commercial forestry 	<ul style="list-style-type: none"> Direct: via WAP provisions amendment following consultation, <i>(and/or)</i>; Indirect (depending on measure): Could also require WAP to take on a regulatory role following State Government regulation
7) Fully implement / expand passing low flows initiatives	<ul style="list-style-type: none"> Explore options to increase or expand participation in low flows program 	<ul style="list-style-type: none"> Direct: via existing WAP provisions, <i>(and/or)</i>; Direct: via WAP provisions amendment following consultation
	<ul style="list-style-type: none"> Adjust method of passing low flows 	<ul style="list-style-type: none"> Direct: via WAP provisions amendment following consultation, if changing environmental water provisions, <i>(and/or)</i>; Indirect: Low flows program managed by DEW (Flows for the Future). WAP policies may be amended to support this action. <p><i>Note: Potentially involves adjusting method to 1) ensure sufficient environmental provision in changing climate; and/or 2) support water security of consumptive users. These two aims may not be compatible.</i></p>
8) Reduce dam volumes	<ul style="list-style-type: none"> Explore options for reducing dam volumes 	<ul style="list-style-type: none"> Direct: via existing WAP provisions, <i>(and/or)</i>; Direct: via WAP provisions amendment following consultation, <i>(and/or)</i>; Indirect (depending on measure): Could also require WAP to take on a regulatory role following State Government regulation <p><i>Note: WAP does not have capacity to regulate reduction of dam capacity, except as part of approvals for dam modifications</i></p>



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Table 3: Possible actions to address declining water resource condition which may directly benefit environmental outcomes in the Marne Saunders PWRA

(*Note: WAP= water allocationpPlan; WAA= water affecting activity)

Action	Potential measure(s)	Landscape board's potential role**
		<p>*Direct – achieved through measures undertaken by landscape board directly (via either existing or new policy);</p> <p>*Indirect – supported by landscape board policy relating to the action (measures undertaken externally)</p>
9) Direct environmental actions	<ul style="list-style-type: none"> • Bolstering threatened species populations • (for example establish back up populations in suitable dams or permanent pools; translocate individuals / restock pools once water supply has improved) 	<ul style="list-style-type: none"> • Direct: via existing WAP provisions; (and/or) • Indirect: via collaboration with conservation groups and/or other agencies
	<ul style="list-style-type: none"> • Direct provision of water to key environmental assets • (for example drip fed water to freshen salty refuge pools, or to prevent pools drying up – from tanks, or suitable groundwater) 	<ul style="list-style-type: none"> • Direct: via existing WAP provisions; (and/or) • Direct: via WAP provisions amendment following consultation <p><i>Note: WAA permit likely required to discharge water into watercourse</i></p>

As mentioned above, the options listed in Tables 1-3 are intended to promote discussion between the landscape board and community members only. No decision to undertake a WAP review with a view to amending policy has been made. Community opinion derived through upcoming community meetings in November will be factored into a risk/benefit assessment.



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Further information sources:

Marne Saunders WAP

The Marne Saunders WAP, and the guide to the draft plan, can be found here
www.landscape.sa.gov.au/mr/water/water-allocation-plans/marne-saunders

Water licensing

For information on water licensing in the Marne Saunders PWRA, please see:
<https://www.environment.sa.gov.au/licences-and-permits/water-licence-and-permit-forms/sa-murray-darling-basin>

Water affecting activities

For information on water affecting activities in the Marne Saunders PWRA, please see:
<https://www.landscape.sa.gov.au/mr/water/managing-water-resources/water-affecting-activities>

Flows for the Future

For greater detail on the Flows for the Future Program across the Eastern Mount Lofty Ranges, please see:
<https://www.environment.sa.gov.au/topics/water/flows-for-future>

Citizen science

A number of opportunities exist for community members to contribute to landscape management by sharing their local knowledge and assisting with water resource monitoring. An outline of these opportunities can be found here:
<https://www.landscape.sa.gov.au/mr/get-involved/citizen-science>



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