



Basin Plan amendments Proposed changes to groundwater

This snapshot provides an insight into the proposed Basin Plan amendments. There are two more snapshots available, covering the themes of practical amendments and the northern basin review.

The Murray-Darling Basin Plan aims to safeguard one of Australia's key national assets, the Murray-Darling Basin. The basin covers more than one million square kilometres, provides water to almost three million Australians, houses 40 percent of Australia's farms and generates around \$19.4 billion annually from agricultural produce. It is also home to more than 46 species of native fish and 98 species of waterbirds.

The Murray-Darling Basin Authority (MDBA) is the agency responsible for establishing the Basin Plan in consultation with state and Commonwealth governments, industries and communities. The MDBA has a role in implementing, monitoring and adapting the Plan.

Snapshot

- The Murray–Darling Basin Plan is about ensuring a healthy and productive system for future generations.
- At the time the Basin Plan was established, it was identified that there was a need to review the SDLs of three groundwater areas.
- The independent reviews were conducted by groundwater specialists from research institutions, CSIRO, Geoscience Australia, the MDBA, and state governments.
- There are proposed amendments to the sustainable diversion limits (SDLs) for groundwater in these three areas:
 - Eastern Porous Rock (New South Wales)
 - Western Porous Rock (New South Wales)
 - Goulburn–Murray (Victoria)
- The proposed changes from the three reviews and some other minor changes in South Australia will see the sustainable diversion limit for the extraction of the basin's groundwater increase from 3,334 gigalitres (GL) per year to 3,494 GL per year.
- The increases in extraction limits will have minimal potential impacts on the environment.
- These proposed amendments to the Basin Plan are open for public comment from 22 November 2016 to 24 February 2017. Any member of the public can make a submission in relation to what is being proposed.

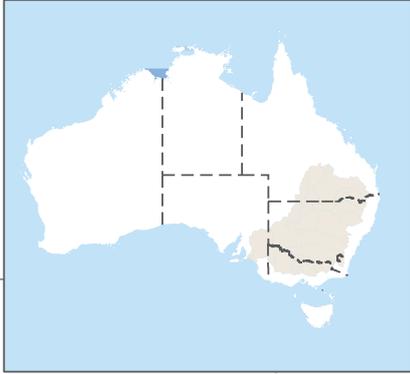
Groundwater in the Murray–Darling Basin

At the time the Basin Plan was established, it was recognised that scientific reviews of the SDLs were needed in relation to three groundwater areas in New South Wales and Victoria.

Groundwater is water that sits beneath the earth's surface contained in porous sands and fractured rocks, called aquifers. The level of the saturated portion of ground closest to the soil surface is called the water table.

Groundwater is a finite resource that is only replenished when rainfall or surface water seeps into the aquifers. Groundwater in the basin is used for a wide range of things — such as agriculture, mining, manufacturing and town water supply. Water quality in many groundwater areas is not as good as surface water because of high salt levels. This limits the ways it can be used.

Proposed changes to SDLs in New South Wales and Victoria are a result of the three reviews that were required to be undertaken as part of the Basin Plan. These reviews were requested by the New South Wales and Victoria governments.



Proposed Basin Plan Groundwater Amendment WRP Areas

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|  Eastern Porous Rock (GW16) |  Wimmera - Mallee (GW3) |
|  Western Porous Rock (GW6) |  South Australian Murray Region (GW4) |
|  Goulburn-Murray (GW2) | |

Basin Plan amendments

Proposed changes to groundwater

Proposed changes to the Basin Plan

When the Basin Plan came into effect in 2012, it placed limits on how much water could be extracted from groundwater resources across the basin to ensure the continued sustainability of this water resource.

Based on the recommendations of the independent review panels, the MDBA is proposing changes to increase the amount of groundwater that can be extracted.

The proposed changes will see the extraction limit for the basin's groundwater increase from 3,334 GL per year to 3,494 GL per year.

However, certain management controls will need to be introduced by basin government states to ensure the water take is still within sustainable limits.

The independent review panels recommended the increased SDLs on the provision that the states demonstrate they could 'limit impacts from the increased SDLs to acceptable levels'. To ensure any potential impacts of increasing the SDLs above their current levels are minimal, management rules must be included in the water resource plans for the three review areas.



Eastern Porous Rock

This area covers inland north-east New South Wales within the bounds of Goondiwindi, Tamworth and Dubbo. The proposed SDL limit for this area will increase by 14.9 GL per year.

Eastern Porous Rock (groundwater) catchment areas	Current SDL (GL/y)	Proposed SDL (GL/y)	Change (GL/y)
Gunnedah — Oxley Basin Murray–Darling Basin catchment	114.5	127.5	+13.0
Sydney Basin Murray–Darling Basin SDL resource unit (GS41)	17.2	19.1	+1.9
Total	131.7	146.6	+14.9

Western Porous Rock

This area covers south-western New South Wales within the bounds of Broken Hill, Ivanhoe, Wentworth and the NSW/SA border. The proposed SDL for groundwater in this area will increase by 109.4 GL per year.

	Current SDL (GL/y)	Proposed SDL (GL/y)	Change (GL/y)
Total	116.6	226.0	+109.4

Goulburn–Murray

This area covers the eastern half of the basin in Victoria, from the upper Murray to the Avoca River. The proposed SDL for groundwater in this area will increase by 37.7 GL per year.

Goulburn–Murray (groundwater) catchment areas	Current SDL (GL/y)	Proposed SDL (GL/y)	Change (GL/y)
Goulburn–Murray: sedimentary plain SDL resource unit (GS8)	203.5	223.0	+19.5
Goulburn–Murray highlands SDL resource unit (GS8)	50.5	68.7	+18.2
Total	254	291.7	+37.7

Minor SDL adjustments

There are minor adjustments to SDLs for two groundwater areas.

A minor change has been proposed in the Wimmera–Mallee water resource plan area to align with the proposed boundary changes. There is no change in the overall SDL — 0.6 GL/y has moved from one SDL resource unit to another.

A minor change (<2.5 GL) to the South Australian Murray water resource plan area has been proposed, at the request of the South Australian government. This corrects an issue relating to which SDL resource unit some entitlement was located in.

Other practical changes

There are a range of practical changes to groundwater within the Basin Plan. These complement the proposed changes to the SDLs for the eastern and western porous rock and Goulburn–Murray groundwater areas.

We are also changing the descriptions of the NSW and Queensland SDL resource units to better align the Basin Plan with the state descriptions of the groundwater units.

Sustainable diversion limit resource units and compliance methodology

The MDBA is proposing a 10-year rolling average compliance method be used for groundwater areas. Under this method, a non-compliance with the SDL in a water year will occur if the average annual extraction, over the 10 year period, is greater than:

- the average annual permitted extraction over the same period, and
- the basin state government does not have a reasonable excuse for taking excess water.

Local management rules and adjustment to review provision

As a result of the formal reviews into groundwater, management rules are proposed to be made mandatory so as to limit local impacts to acceptable levels. Management rules aim to deal with whether a water resource plan needs to include rules to protect the structural integrity of groundwater units and water quality.

The MDBA is also proposing an additional change, which will provide an opportunity for New South Wales and Victoria to review the effectiveness of the local management rules whenever the water resource plan is reviewed.

The MDBA's decision making process

The limitations placed on extracting groundwater are designed to protect the aquifers, including their structural integrity, hydraulic properties, surface and groundwater connectivity, groundwater dependent ecosystems and water quality.

The expert review panel, which assessed groundwater extraction in these three areas, comprised of an independent chair and representatives from Geosciences Australia, National Centre for Groundwater Research & Training, the MDBA, CSIRO, independent consultants, and the NSW Office of Water.

Following these reviews, the MDBA is confident that through these proposed changes, enough groundwater will be available for the environment, but if its use is required, it can be effectively maximised by communities and industries.

The increases in extraction limits will have minimal potential impacts on the environment, as mandatory rules will be in place for basin state governments to offset any effects. Any potential effect from the changes will only occur when the current limits are exceeded, which is unlikely in the short to medium term.



More information

Underpinning this proposed Basin Plan amendment is substantial background research and materials from reviews of groundwater. These can be found on the MDBA website mdba.gov.au and include:

- legal materials outlining proposed amendments
- review panel reports
- technical research reports

You can also contact us on 1800 230 067 or by email engagement@mdba.gov.au and we will do our best to answer your questions. The website will be regularly updated with frequently asked questions.

Next steps

The *Water Act 2007* requires that any changes the MDBA proposes to the Basin Plan requires a minimum eight week public consultation. The MDBA invites submissions from interested parties to provide feedback or to support the proposed changes to the Basin Plan.

Formal submissions can be received up until **5pm (AEST) 24 February 2017.**

To make a submission visit our website
mdba.gov.au/BPamendments

You can also send an email to
submissions@mdba.gov.au

or post a submission to:

Basin Plan Amendment Submissions
Murray–Darling Basin Authority
GPO BOX 2256
CANBERRA ACT 2601

After all submissions are received, they will be reviewed and a report will be drafted. The MDBA will finalise any proposed amendments and make a recommendation to the Minister for Agriculture and Water Resources.

Once the Minister makes a decision the amendments will be tabled in parliament.

Images: Arthur Mostead
Front cover: Farmer with bore pump, Darling Downs QLD
Page 4: Solar powered bore pump, Coorong SA
Page 7: Silverbeet crop irrigated with groundwater, Toowoomba, QLD

