



Australian Government



## Basin Plan amendments Northern Basin Review

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

The Murray–Darling Basin Plan aims to safeguard one of Australia’s key national assets, the Murray–Darling Basin. 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 and monitoring the Basin Plan and reviewing it in light of experience.

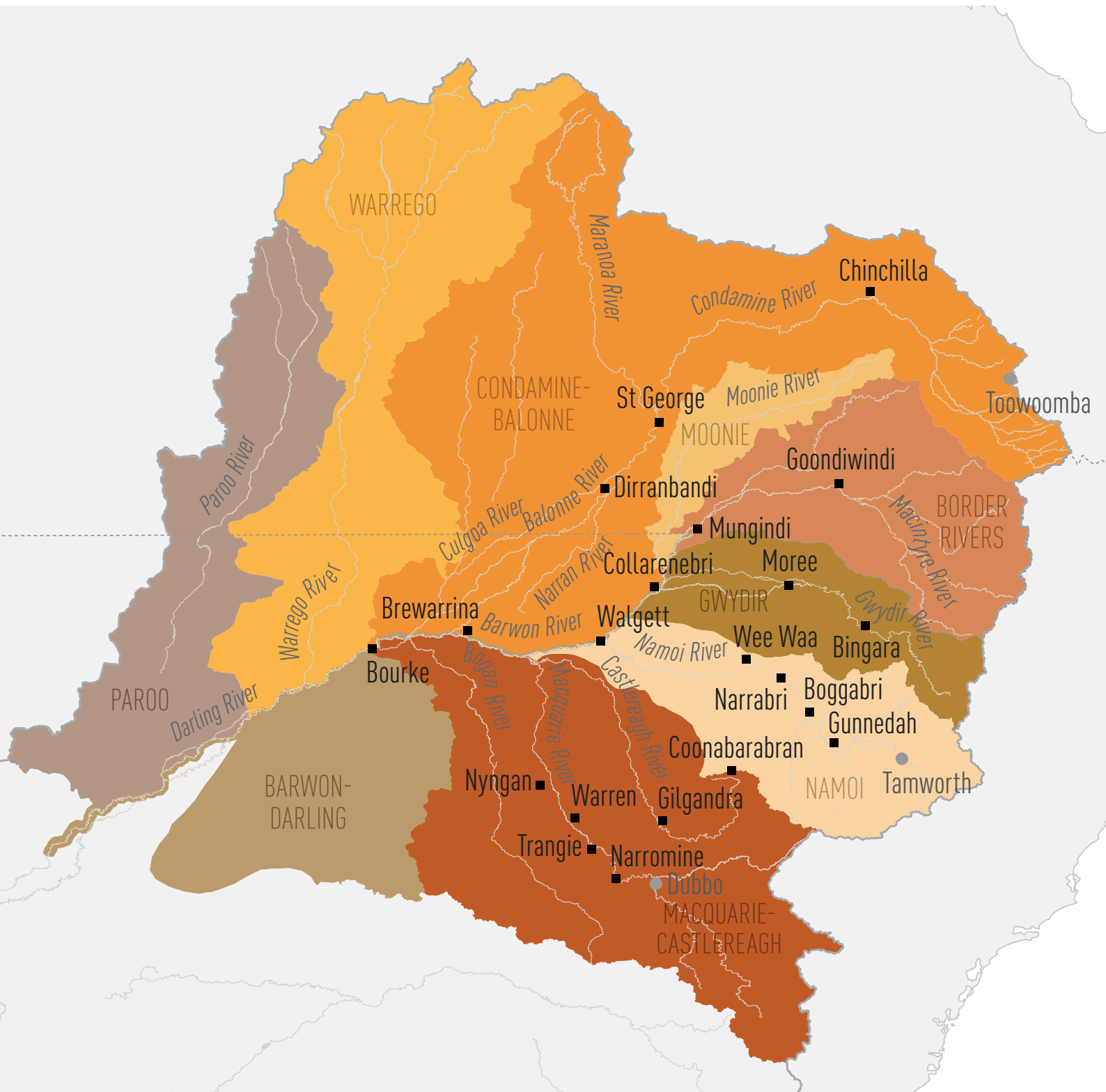
At the time the Basin Plan was established, the MDBA recognised more work in the north was needed to improve understanding of the hydrology, environment and socio-economic implications of the Basin Plan settings. A commitment was made, supported by all basin governments, to undertake a review and assess whether Basin Plan settings in the north are appropriate.

# Basin Plan amendments

## Northern Basin Review

### Snapshot

- The Basin Plan seeks to deliver vibrant communities, productive industries and healthy rivers. It does this by establishing a framework for consistent and integrated water management across the Murray–Darling Basin. The Basin Plan sets the amount of water which can be taken in future from the basin’s surface water and groundwater resources (sustainable diversion limits – SDL).
- A review of the northern basin water recovery target has been completed by the Murray–Darling Basin Authority (MDBA). The need to review the target was identified in 2012 when the Basin Plan was passed in recognition that knowledge of some northern areas was not as well developed as others. The three year review involved substantial new research into socio-economic, hydrology and environmental aspects of the northern basin. It also included consultation with northern basin communities.
- An 11 member Northern Basin Advisory Committee was established comprising of people from places in the northern basin with industry, community, Aboriginal and environmental expertise. This group, along with substantial feedback from people within communities, has been invaluable during the review and has advised on the research and helped ground truth the findings. The Northern Basin Advisory Committee also identified the opportunity to implement a range of actions (such as the protection of environmental flows and temporary trade) as a means of reducing economic impacts but delivering environmental outcomes.
- The Basin Plan current recovery target for the northern basin is 390 gegalitres (GL) of water. This target is made up of 247 GL within local catchments and 143 GL to be found from across the northern basin, called shared reductions.
- Based on research and feedback from communities, the MDBA is proposing the water recovery target be reduced from 390 GLs to 320 GLs, provided there are commitments from Australia, Queensland and New South Wales governments to implement a range of measures aimed at improving water management in the north.
- This reduction minimises socio-economic impacts in northern basin communities and delivers almost equivalent environmental outcomes by taking a more targeted approach to water recovery.
- The socio-economic research shows how communities have already been affected by water recovery in the north. The proposed change should reduce further impacts in many northern basin communities but some communities will feel further effects, especially in the Lower–Balonne. The MDBA recommends governments consider priority assistance for communities to help them adjust to the proposed changes, especially Dirranbandi and Warren.
- The MDBA further recommends governments and communities find ways to improve access to waterways for Aboriginal people and improve engagement in water planning and management.
- The proposed amendments to the Basin Plan are open for public comment from 22 November 2016 to 10 February 2017. Members of the public are encouraged to learn about the proposal and make a submission.
- More information on the review and submission process can be found on the MDBA website.



Map of the northern Murray-Darling Basin catchments

■ Locations included in Northern Basin Review

# Basin Plan amendments

## Northern Basin Review

### Proposed changes to the Basin Plan

The MDBA proposes changing the total water recovery in the northern basin from 390 GL to 320 GL on the basis governments commit to implementing certain measures aimed at improving water management. This means more water will be available for industries and communities.

It is also proposed to change the way water is recovered by reducing the shared reduction amount and increasing local reduction targets in some areas. For some catchments this will see water recovery targets increase, while others will remain the same.

#### Proposed change to northern basin water recovery target



### What this means for your catchment area

The breakdown of what changes are proposed for each catchment area is listed in the following table:

State	Catchment area	Current local recovery targets (GL/y)	Current assumed shared recovery (GL/y)	Proposed local recovery targets (GL/y)	Assumed shared recovery* (GL/y)	
QLD	Paroo	0	0	0	0	
	Warrego	8	0	8	0	
	Nebine	1	0	1	0	
	Moonie	0	2	0	2	
	Condamine-Balonne	100	42	100	0	
	Queensland Border Rivers	8	15	14	15	
	<b>Queensland total recovery</b>	<b>117</b>	<b>59</b>	<b>123</b>	<b>17</b>	
NSW	Intersecting Streams	0	8	0	8	
	Gwydir	42	14	42	0	
	NSW Border Rivers	7	9	7	0	
	Namoi	10	14	20	0	
	Macquarie-Castlereagh	65	18	55	16	
	Barwon-Darling Watercourse	6	22	32	0	
	<b>NSW total recovery</b>	<b>130</b>	<b>85</b>	<b>156</b>	<b>24</b>	
<b>Local and shared subtotals</b>		<b>247</b>	<b>+</b>	<b>143</b>	<b>+</b>	<b>41</b>
<b>Northern basin total water recovery</b>		<b>= 390</b>		<b>= 320</b>		

\*The New South Wales and Queensland governments may determine the distribution of the shared reduction amount, otherwise a default arrangement will apply.

## Why the shared reduction target has changed

The northern basin is a connected system, with some catchments more connected than others. Local recovery in any catchment can provide benefits for the catchments below it, and the overall health of the system. The shared reduction is the volume required in addition to the local reduction in each catchment to meet environmental outcomes at the bottom of the system in the Barwon–Darling.

The new environmental science and hydrological modelling shows Barwon–Darling environmental outcomes are best achieved by recovering water within the catchment itself, which is why the Authority has proposed to increase the local recovery target in the Barwon–Darling to 32 GL. This volume recognises both recovery-to-date, and the negative social and economic effects of a larger water recovery amount.

Well-connected tributaries also contribute to flows in the Barwon–Darling, specifically the contributions of the Macquarie and the Border Rivers to baseflows, and in wet years the contributions of the Condamine–Balonne and the Namoi to peak flows.

To further improve environmental outcomes in the Barwon–Darling, targeted recovery combined with management and protection of environmental flows, would make the most of recovered water.

On this basis, the Authority is proposing that the shared reduction be reduced from 143 GLs to 41 GLs.

For the environmental science aspects of the review we looked in more detail at three areas, the Lower-Balonne, Narran Lakes and the Barwon–Darling.

These areas were selected because of their high ecological value and they act to represent the needs of the broader area. A key assumption is — if the needs of these downstream areas are met, there will be benefits for upstream regions as water flows through the system.

Any decisions to sell water that has been over-recovered will be a decision for the Commonwealth

Environmental Water Office and the relevant basin state governments, if the proposed amendments are adopted.

## Implications for the southern basin

Northern Basin Review modelling shows that, as a long-term average, around 45% of water recovered from the northern basin reaches Menindee Lakes. However, this value is dependent on both the location and type of water entitlement recovered and the pattern in which it is used.

Compared to the existing water recovery target of 390 GLs, the proposed 320 GLs option represents a more efficient pattern of water recovery and use. A more targeted recovery strategy includes recovery of water from tributaries with connections that allow for different flows to be restored in the Barwon–Darling system.

The reduction in the water recovery of 70 GLs results in 7 GLs less flows reaching Menindee Lakes. This translates to a 4 GLs reduction in flows to South Australia, and a 3 GLs reduction in barrage flow, compared to the benchmark. The Authority did not consider this reduction to have a material impact on achieving Basin Plan outcomes.

Further, the SDL adjustment mechanism is operating in the southern-connected basin to determine whether there will be a change to the recovery volume in the south. The outcomes of the Northern Basin Review will not alter the way the mechanism operates, but will be used to establish a new modelling benchmark from which adjustments are calculated.

### Key terms

**Sustainable diversion limits** — limit the amount of water that can be used for consumptive purposes in the basin.

**Local reduction amount** — the amount of water that is required to be recovered in each catchment to satisfy local environmental needs.

**Shared reduction amount** — further reduction required, in addition to the local reduction amounts, to satisfy the environmental needs of the northern basin.

# Basin Plan amendments

## Northern Basin Review

### Economy

Short and long term economic implications of water recovery

### Social

Community needs and influence of water on well-being

Murray–Darling Basin northern water recovery target considered:

### Environment

Effects of water recovery and other approaches that can influence environmental health

### The MDBA's decision-making process

The *Water Act 2007* and the Basin Plan require the basin's water resources to be managed in a way that considers outcomes for all water users. In forming the proposed amendment the MDBA was tasked with making what is referred to as a triple-bottom line decision, considering the needs of industries, communities and the environment.

A three-year research program was undertaken to better understand these needs. A considerable volume of new information was developed that added to the existing stock of knowledge. Over this time the MDBA closely reviewed the extensive results across the economic, social and environmental areas.

Assessing this research and coming to a recommendation are the six member Authority, who draw on a breadth of expertise and experience in water, economics, the environment, natural resource management and agriculture. These members have weighed up the research, feedback from communities, industries and key representative groups as well as the implications for the economic, social and environmental outcomes (see Triple Bottom Line report).

### Communities (Social)

The MDBA has listened to people and has a good understanding of how communities respond to water recovery. The research covered how 21 northern basin communities respond to water recovery and its effects.

The MDBA has used what we've heard, together with our detailed analysis of economies and the environment to understand what supports communities. We held almost 30 community meetings across 2016 to share our research, ground truth our findings and to gain a holistic approach to concerns in the north.

The MDBA also identified a number of measures that could address some of the serious concerns of Aboriginal people and their connection to country and rivers. The measures have emerged through our discussions and work with the Northern Basin Aboriginal Nations and consist of a number of initiatives, including increased access to waterways and improving engagement of Aboriginal people in water planning.



## Industries (Economy)

This recommendation offers better social and economic outcomes for irrigation communities compared with the current Basin Plan settings. For many irrigation communities no further water needs to be recovered. Communities told us that other things would help the health of the river as well as recovering water. The use of other measures, together with water recovery, will keep further impacts to a minimum.

The recommendation means different things for different communities. Ultimately, the reduction in water recovery needed means that in most of the studied 21 northern basin communities the economic effects are relatively small. In many cases, the effects are much smaller than those caused by other contributing factors. However, we recognise that any job losses in regional Australia has an impact on its communities.

## Environment

Even under the current Basin Plan settings we can't return the northern basin rivers to full health.

We can't do quite as much with less water. Under 320 GL recovery, the environmental outcomes are slightly reduced compared to the current target in the Basin Plan.

We all need to be smarter with how we manage water. This is why our recommended approach includes other measures in addition to water recovery to help achieve river health with less water.

What we have learnt through this process is that different river flows at different times can achieve better results for the environment. It's about maximising these flows.

The information we have will guide future water recovery strategy, both in terms of what we recover, where and how.

## More information

Underpinning this proposed Basin Plan amendment is substantial background research and materials from the Northern Basin Review. These can be found on the MDBA website [mdba.gov.au](http://mdba.gov.au) and include:

- legal materials outline proposed amendments
- research summaries, and
- technical research reports and any relevant peer reviews.

You can also contact us on 1800 230 067 or by email [engagement@mdba.gov.au](mailto:engagement@mdba.gov.au) and we will do our best to answer your questions. The website will be regularly updated with frequently asked questions. There will also be some town information sessions in northern basin communities. Details can be found on the MDBA website.

## 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) 10 February 2017.**

To make a submission visit our website  
**[mdba.gov.au/BPamendments](http://mdba.gov.au/BPamendments)**

You can also send an email to  
**[submissions@mdba.gov.au](mailto: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: Irene Dowdy

Front cover: Agronomist with Farmer, St George QLD  
Pages 6 & 7 (L to R): Street scene, Mungbean crop and farmer,  
Balonne River, St George QLD

