Murrumbidgee Irrigation

Policy & Reform
Water Management 101

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Snapshot

1. Water use is limited to Sustainable Diversion Limits (SDLs), which are now in force, fully complied with, and independently audited.
2. Water use has drastically declined over the past two decades.
3. Water reforms (i.e. buybacks) mean 1 in 3 litres of irrigation water is now for the environment.
4. Across the Basin, only 28% of water is diverted, which includes for agriculture, as well as other users like town water supply and other industries.
5. The amount of water farmers can use varies, based on water availability – water allocations prioritise critical needs like town water supplies and the environment before making water available to farming.

How much water can farmers use?

The amount of water available to farmers is not fixed, but varies (based on water availability, and the type of license the farmer has). This is known as water allocations, or Available Water Determinations (AWDs). Water allocations depend on a range of factors including dam storage levels, river flows and catchment conditions.

For example, while a farmer may have a 10ML general-security water licence, they will only be able to actually access 10ML in a wet year when allocations are at 100%. In a relatively dry year, if allocations are, say, 30%, this farmer could only access 3ML. In a very dry year, such as an extreme drought, allocations may reach 0%, meaning the farmer cannot access any water under that license.

This dynamic system means water access for farming is responsive to climate variability.

Who gets priority when sharing water?

When determining water allocations, there is a hierarchy of water users in legislation, to prioritise water. Under normal circumstances, the needs of the environment (i.e., water for rivers to flow) are the highest priority, followed by basic landholder rights, town water supply and stock & domestic licenses, and then consumptive water licences which are used for agriculture – with high security water licenses first (typically for permanent plantings such as orchards or vineyards), and then, last in line is lower security licenses (which are typically used for annual crops like cotton or rice). In extreme events, like a severe drought, critical human water needs (i.e. town drinking water) becomes highest priority.

The allocation process ensures that high priority water requirements for the next 24 months can be met (including carryover), before allocating new water.

Our industry respects this system. But - it does mean farmers are last in line to receive water, and are hit first and hardest when conditions turn dry.

Priority	Extreme events	Normal circumstances
Highest	• Critical human water needs	• Needs of the environment
High	• Needs of the environment	• Basic landholder rights
	• Stock • High security licences • Commercial and industrial activities authorised by local water utility • Water for electricity generation on a major utility licence • Conveyance in supplying water for any priority 3 take	• Local water utility access licences • Major utility access licences • Stock and domestic access licences
	• General security licences	• Regulated river (high security) access licences
Low	• Supplementary licences	• All other forms of access licences • Supplementary access licences

Image source: NSW Government, NSW Extreme Events Policy

What are the total limits on water used for agriculture?

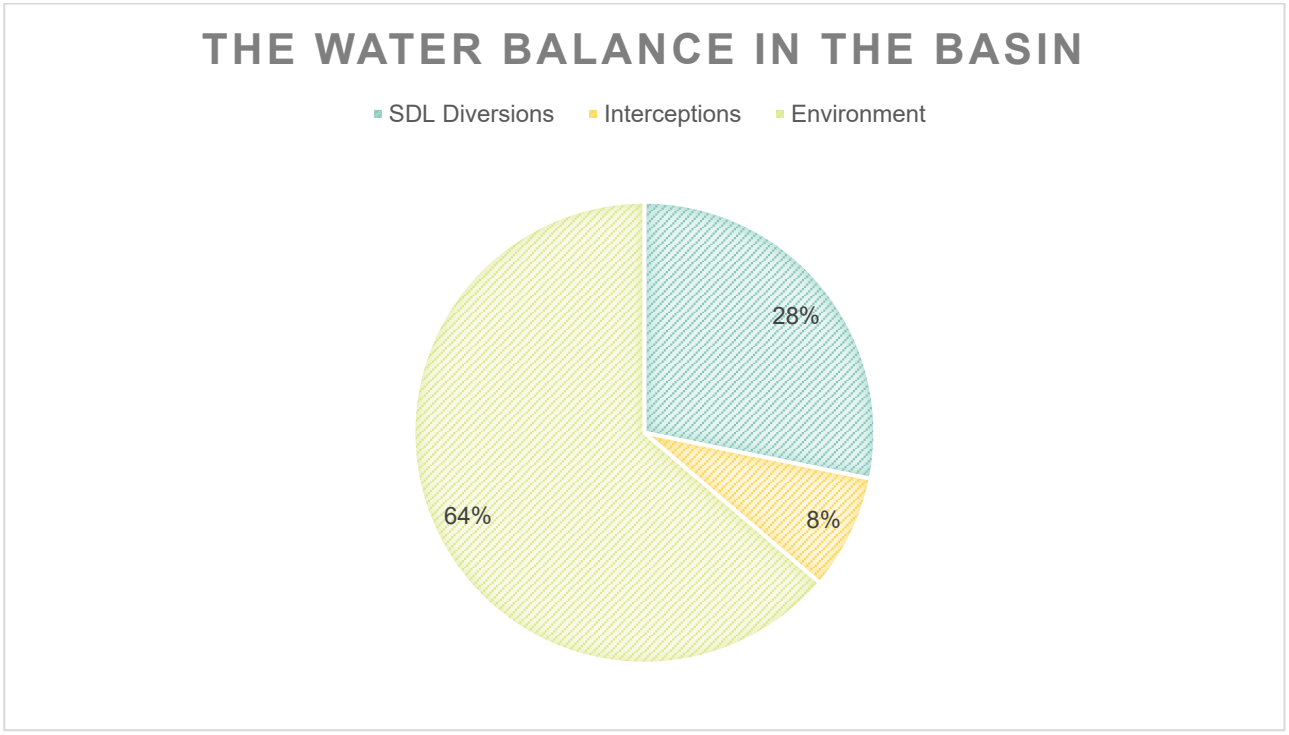
There have been a series of reforms over time to limit the volume of water diverted, at both State and Federal levels. This has seen water use drastically reduce.

Sustainable Diversion Limits (SDLs) came into force in 2019, as part of the Murray Darling Basin Plan. The SDL is the maximum long-term annual average quantities of water that can be taken from the Basin (as a whole), and from individual water sources, such as the Murrumbidgee. This includes water used for agriculture, but also other users, such as town water supply and other industries.

SDLs are now fully enforced, and fully complied with, in the Basin. Compliance with SDLs is reviewed by the Inspector-General of Water Compliance (IGWC). MI expects all States fully comply with SDLs, as a key pillar of our industries commitment to sustainable water use.

How does the agricultural shape of water compare to the total water available?

Across the Basin, total diversions by all users (not just farmers) are now just 28% of inflows – well within global standards.

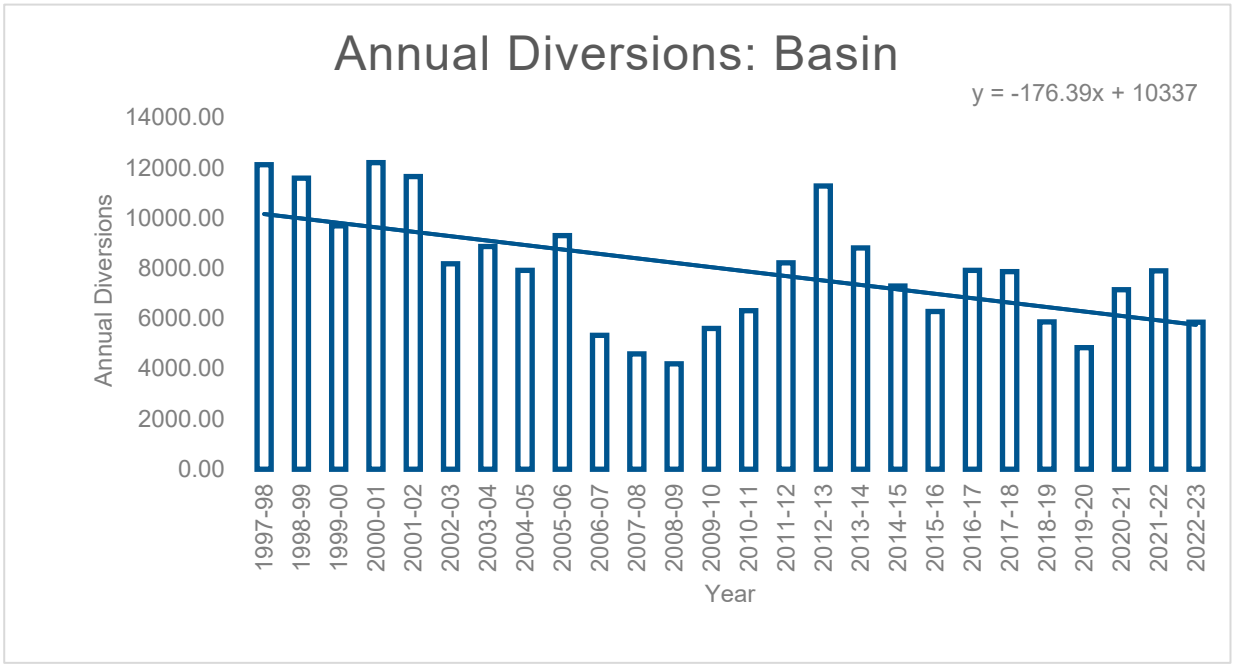


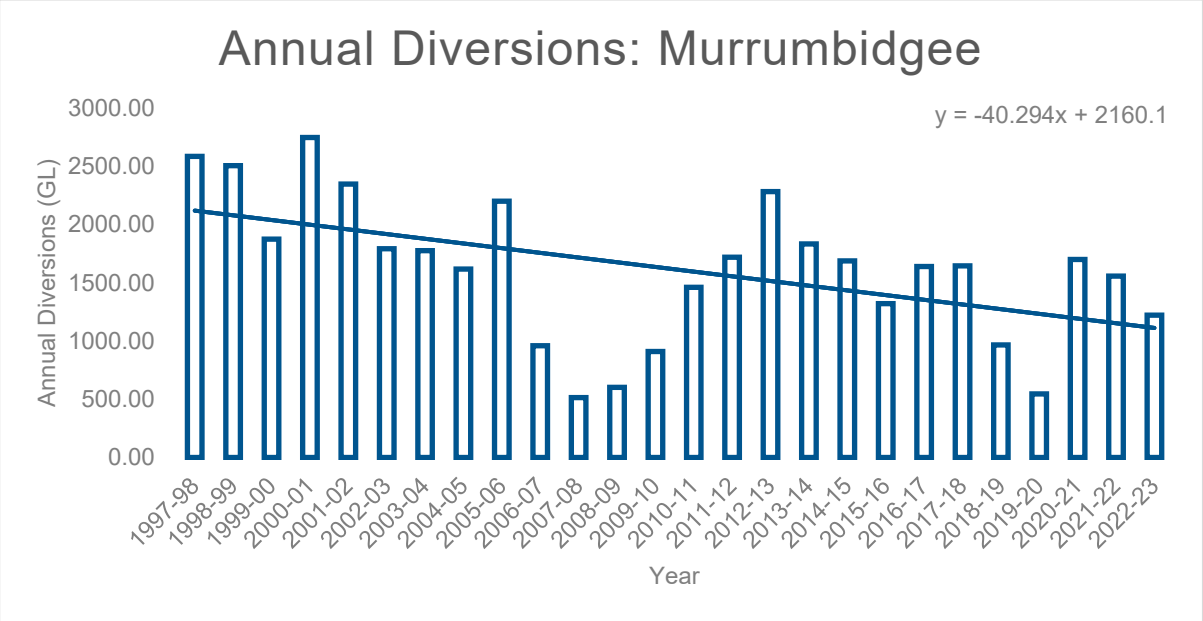
Source: National Irrigators Council (NIC)

Considering this covers Australia's food bowl, vital for Australia's domestic food and fiber supply, as well as export markets, this is exceptionally low. This figure also includes other users, such as town water supplies (including major cities), and other industries (such as mining).

How has the water changed over time?

The amount of water used in the Basin, and in the Murrumbidgee, has drastically reduced. The below diagrams shows annual diversions in the Basin, and in the Murrumbidgee, from 1997-98 to 2022-23, based on the latest Cap Register from the MDBA.





This reduction is due to a range of factors. A key factor has been the buyback of water from farmers by the Federal Government from reforms like the Murray-Darling Basin Plan. These reforms combined have transferred approximately 1 in 3 litres of irrigation water to the environment.

The target for water recovery under the Basin Plan to 'bridge the gap' from historic levels of water use (the BDL) to the new SDL was 2,075 GL/y across the Basin. Now, this target has been exceeded, with over 2,132.7 GL/y recovered. For the Murrumbidgee, 442.4 GL/y has been recovered to date under this program, also exceeding the initial target. This is nearly the same amount of water as in Sydney Harbour, which has come out of agricultural production in the Murrumbidgee valley alone.

Water recovery under the Basin Plan continues, despite SDLs now being in place and being complied with. This includes programs for 'additional' environmental water.

The Basin Plan also includes projects, such as supply and constraints projects. These projects are intended to enhance environmental outcomes with available water, but also offset the need for further water recovery by 605 GL/y in the Southern Basin.

What about water for the environment?

Most water in the Basin is for the environment. There are two ways the environment gets water:

- Water that is not the subject of a water license, so remains in rivers - this is called 'Planned Environmental Water' or PEW in NSW, and is protected under Water Sharing Plans (WSPs)
- Water that is the subject of a water license, but is used for environmental purposes - this is called 'Held Environmental Water' or HEW.

Planned Environmental Water

The WSP for the Murrumbidgee Regulated River Water Source states that:

"By limiting long-term average annual extractions to an estimated 1,925,000 megalitres per year, this Plan ensures that approximately 50% of the long term average annual flow in this water source (estimated to be 4,360,000 megalitres per year) will be preserved and will contribute to the maintenance of basic ecosystem health."

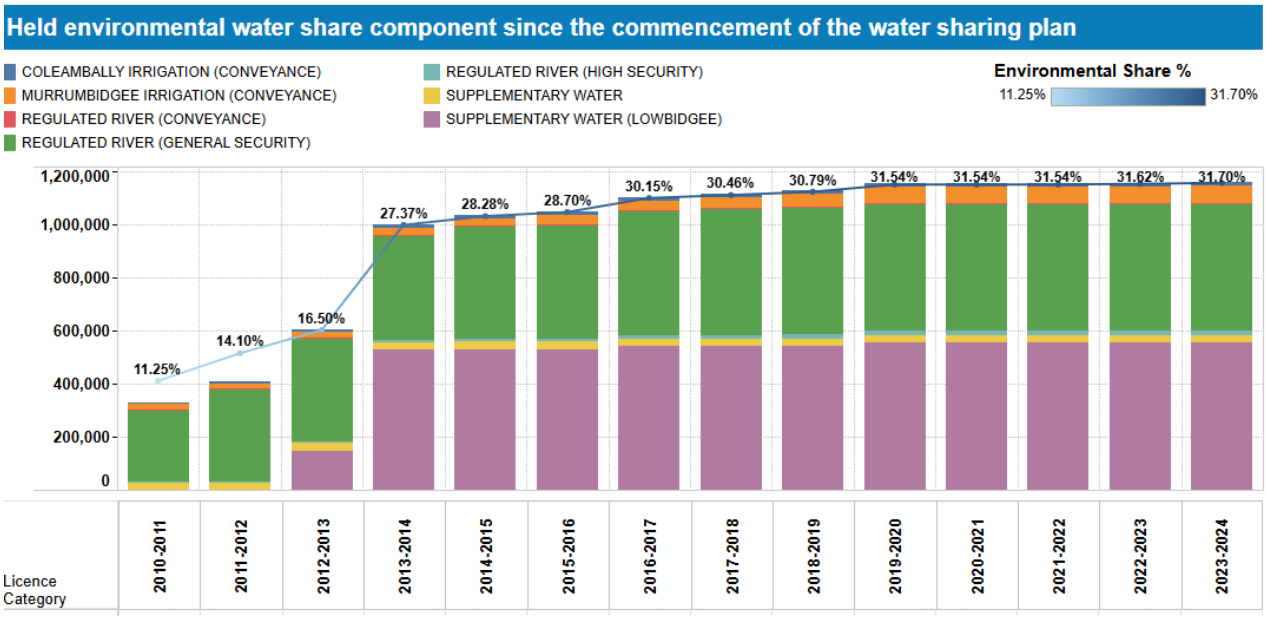
The WSP manages and protects this water in a number of ways, such as minimum daily flow rules, environmental flow rules, and environmental water allowances and release rules.

Held Environmental Water

Across the Basin, approximately one-third of water licenses are now for the environment (in addition to all the water not on a license).

The Federal Government Commonwealth Environmental Water Holder (CEWH) is now the largest water holder in Australia. Across the Basin, the CEWH now holds 2,041,989 ML of water (expressed as the Long-Term Diversion Limit Equivalent, given the portfolio is a mix of entitlement types).

In the Murrumbidgee, 31.7% of entitlements are for the environment. This has increased from 11.25% in 2010-11. This growth over time can be seen in the below diagram sourced from the NSW Government.



A number of Irrigation Infrastructure Operators (IIOs), including MI, partner with environmental water holders to deliver water through the system. This means environmental water can be delivered to sites more efficiently and strategically.

What about sharing plans?

Water Sharing Plans (WSPs) are the main instrument for how water is managed, for each water source. They set the rules for how water is allocated and managed for the next 10 years. WSPs are made under the NSW Water Management Act 2000. The WSPs for our region include:

- WSP for the Murrumbidgee Regulated River Water Source 2016
- WSP for the Murrumbidgee Unregulated River Water Sources 2012
- Murrumbidgee Alluvial Groundwater Sources 2020
- NSW Murray–Darling Basin Fractured Rock Groundwater Sources 2020
- NSW Murray–Darling Basin Porous Rock Groundwater Sources 2020.

WSPs are reviewed by the Natural Resources Commission (NRC).

Metering and compliance

There is a strict metering and compliance regime in NSW.

A new non-urban water metering policy is being rolled out, which is considered one of the highest standards globally.

Compliance of water laws is strictly enforced by the Natural Resources Access Regulator (NRAR).

Fees and charges

Water users are subject to fees and charges on their licenses. This is regulated by IPART, and determined on a four-yearly basis.

Through these, water users actually pay for a lot of water management and planning, including for public interest items. Did you know, current cost-sharing arrangements mean water users pay:

- 100% of surface water quantity monitoring
- 80% of environmental planning and protection
- 80% of water quality monitoring
- 80% of the development of water planning and regulatory framework
- … and more.

Fees and charges have significantly increased over recent years.