

Transitioning to the new arrangements



Chapter 5

The Basin Plan will establish new long-term average sustainable diversion limits (SDLs) for the Murray–Darling Basin’s water resources. While some parts of the Basin may be required to cut their historical levels of use by up to 35% of current diversion limits, recent experience of the drought has led to even more severe restrictions. Nevertheless, the social and economic effects of SDLs on some Basin communities and industries will be significant. As described in Chapter 4. However, Basin Plan mechanisms and government initiatives will help to mitigate the effects and soften the transition to the Basin’s new water sharing arrangements.

An important transition issue is the timing of the introduction of the SDLs. While the Basin Plan is due to be adopted in 2011, current water resource plans will generally continue to operate, despite any inconsistency with the Basin Plan, until they expire — that is, in most areas, no change will be made in the current levels of permitted extraction until the current water resource plans expire. Although two relatively small groundwater water resource plans in South Australia will expire near the end of 2012, it is not until 2014 that the majority of water resource plans in New South Wales, Queensland and South Australia will expire and then be subject to the SDLs. This means that water users and communities in these states will have up to three years to plan how to manage with less water. In Victoria the current water resource management arrangements expire in 2019. Provided current plans are recognised by regulation under the *Water Act 2007* (Cwlth) as transitional water resource plans, water entitlement holders and communities will have eight years to plan and adjust to the change before the SDLs will apply. Figure 5.1 shows an indicative timeline of the expiry of transitional and interim water resource plans, and the progressive percentages of water use managed under the Basin Plan.

In addition to the time available for communities to plan for the SDLs, new water trading rules will be included in the Basin Plan to improve the operation of the water market and enable market participants to trade more freely, thereby supporting adjustment to new water resource plans and SDLs.

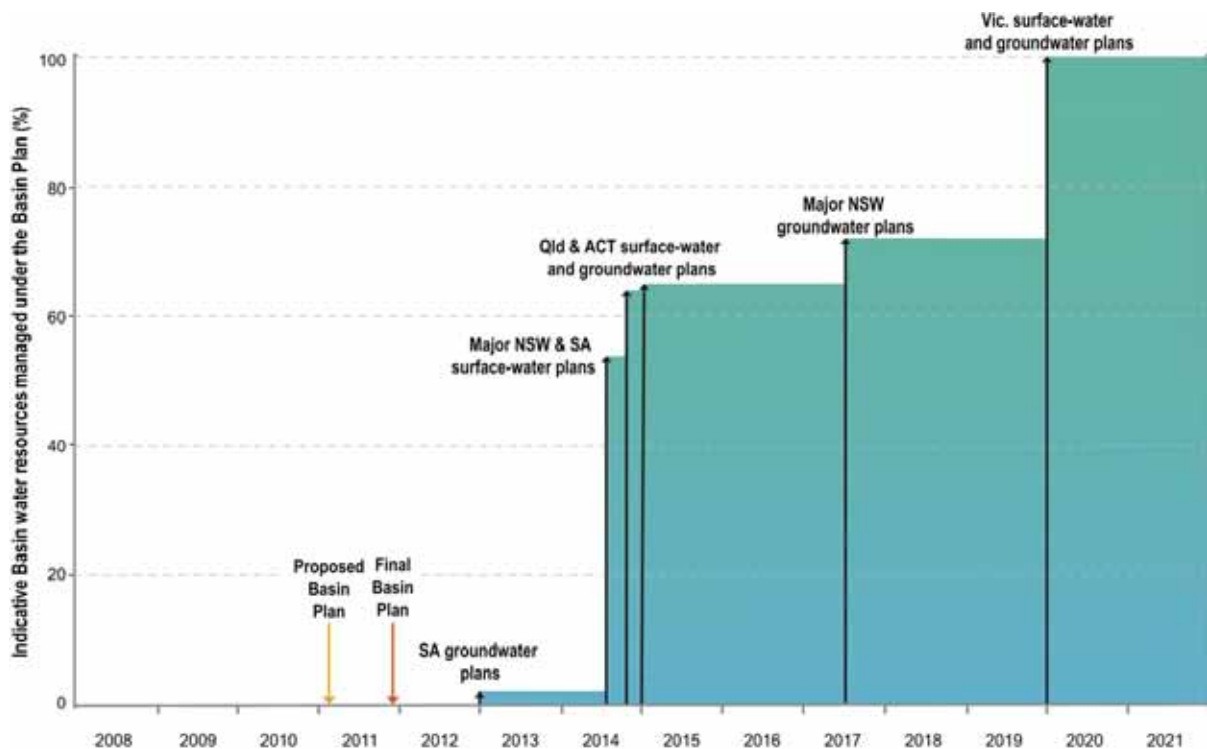
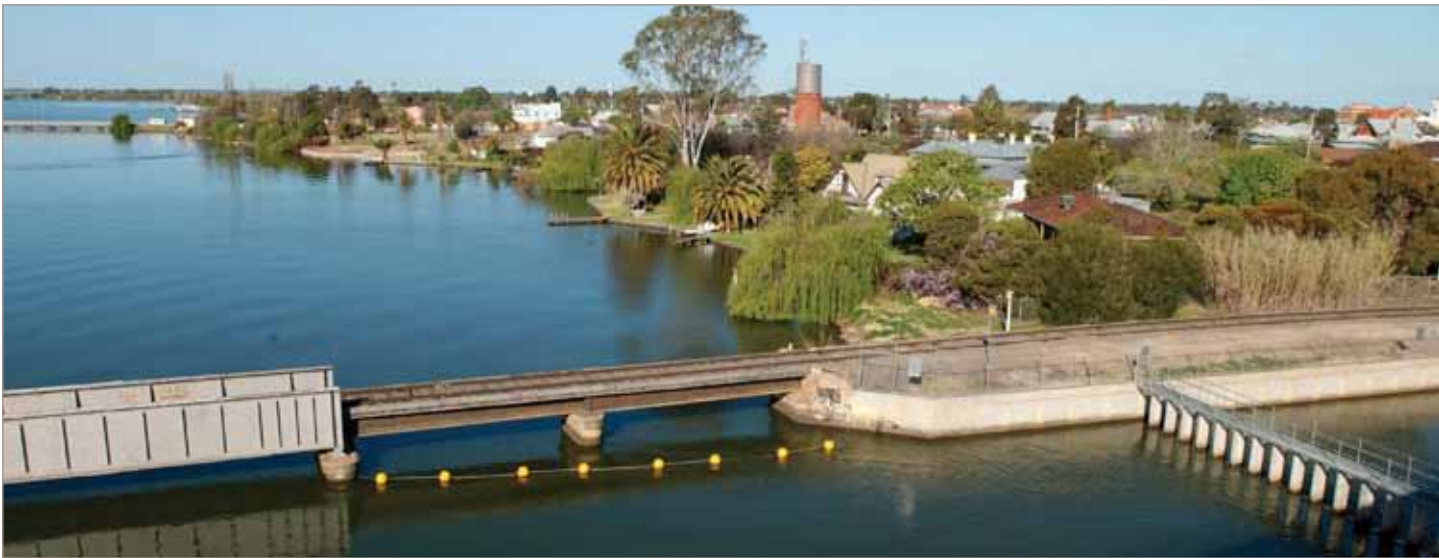


Figure 5.1 Indicative timing and percentages of Basin water resource use managed by the Basin Plan



Yarrawonga Weir on the River Murray over the town of Yarrawonga, Victoria

A range of existing and new government initiatives and Basin Plan provisions will help further with the transition. These include:

- the Australian Government’s Water for the Future initiative and related programs aimed at recovering water for the environment that will help to offset the effects of reductions in current diversion limits
- the risk allocation provisions of the Water Act, under which the Commonwealth will be responsible for managing its share of water availability reductions, as calculated by the Murray–Darling Basin Authority
- the Water Act’s temporary diversion provisions, which will allow for the gradual implementation of SDLs to assist social and economic effects.

5.1 Water for the Future and related programs

The Water for the Future initiative and related government programs will help offset the effects of reduced water availability under the Basin Plan (Department of the Environment, Water, Heritage and the Arts 2010a). Under Water for the Future, the Australian Government is purchasing water entitlements in the Basin water market and also recovering water for the environment through investing with Basin states in more efficient irrigation infrastructure. All of the water recovered through these actions is held on behalf of the Commonwealth by the Commonwealth Environmental Water Holder.

The Commonwealth Environmental Water Holder’s holdings will not affect how a long-term average sustainable diversion limit (SDL) is set, but will offset the effects on individual entitlement holders by lessening the reduction in consumptive allocations required in a water resource plan area to meet the new SDL.

A 2010 report by the Australian Bureau of Agricultural and Resource Economics into the first phase of the buyback program found that the future impact of water purchases on water markets, regional economies and communities in the Murray–Darling Basin would have only modest economic and social effects because of regional communities’ broad economic bases. It also found that any effects would be dwarfed by other pressures (such as drought) on Basin communities (Hone et al. 2010). The study found that a small but sustained increase in productivity growth of 2.5% to 3% — the



Environmental watering event from The Living Murray environmental water portfolio is used at the Gunbower–Koondrook–Perricoota Forest in 2010

type of outcome sought from the Australian Government's investments in irrigation infrastructure — would be sufficient to completely offset any effect of the buyback on irrigated agricultural production (Hone et al. 2010).

In March 2010, the Productivity Commission reported that 'purchasing water from willing sellers (at appropriate prices) is a cost-effective way of meeting the Government's liability for policy-induced changes in water availability' (Productivity Commission 2010).

The Australian Government has committed \$3.1 billion to purchasing water in the Basin (Department of the Environment, Water, Heritage and the Arts 2010b). As at 30 June 2010, total environmental water available after all purchases, including those by the Commonwealth Environmental Water Holder and states, is 705 GL (see Table 5.1). In addition, close to \$3.7 billion has been committed in principle to irrigation infrastructure efficiency improvement projects in the Basin (Council of Australian Governments 2008). This includes, for example, contributions to the Northern Victorian Irrigation Renewal Project and funding for private irrigation infrastructure operators in New South Wales and South Australia.

It is estimated that, together, the water purchasing and infrastructure programs will recover in the order of 2,000 GL for the environment. That is, the overall effect of the SDLs on the Basin's entitlement holders is likely to be in the order of 2,000 GL less than it would have been without these programs.

Other water recovery programs exist, including the NSW RiverBank program. These programs will further add to the water available to meet the needs of the environment and consequently will help mitigate the reductions required of individual water access entitlement holders.

The \$200 million Strengthening Basin Communities program is helping local governments in the Murray–Darling Basin to plan for reduced water availability through grants for projects that reduce demand on potable water supplies (Department of the Environment, Water, Heritage and the Arts 2010f). A number of other Australian Government programs aim to provide a 'safety net' for irrigators. For example, the Exceptional Circumstances Exit Package provides an exit grant of up to \$150,000 for farmers who decide to leave the land. The package includes two additional grants of \$10,000 for retraining and \$10,000 for relocation costs for eligible farmers (Department

of Agriculture, Fisheries and Forestry 2010a). Similar benefits are available under the Climate Change Adjustment program (Department of Agriculture, Fisheries and Forestry 2010b).

It is also possible that further investment will be made in works and measures to improve the efficiency of environmental and agricultural watering. Any water recovered from such investments will be taken into account in Basin Plan revisions.

Table 5.1 Environmental water available for offset

Region	Held environmental water to offset reductions ^a at 30 June 2010 (GL/y)	Range of gap after water recovery ^{b, c} at 30 June 2010 (GL/y)
Paroo	0	0–0
Warrego	8	10–12
Condamine–Balonne	1	204–274
Moonie	1	11–14
Border Rivers	4	82–108
Gwydir	64	26–57
Namoi	6	66–88
Macquarie–Castlereagh	57	47–78
Barwon–Darling	32	12–25
Lower Darling	0	16–20
Lachlan	45	-1–24
Wimmera–Avoca	0	0–0
Ovens	0	10–11
Goulburn–Broken	107	341–492
Loddon	3	35–40
Campaspe	5	35–47
Murrumbidgee region	64	615–846
Murray	309	784–1,155
Eastern Mount Lofty Ranges	0	3–4
Murray–Darling Basin total	705	2,295–3,295

a Includes water held by Basin states and the Australian Government as at 30 June 2010 but does not include water held for The Living Murray initiative.

b The gap is the difference between the current diversion limit and the proposed SDL range for that region, less the held environmental water (previous column) as at 30 June 2010. It is possible that in some regions more water has been secured since 30 June 2010.

c Totals may not be the sum of the figures provided due to rounding.

Note: The held environmental water is the long-term Cap equivalent converted from secured water entitlements to allow direct comparison with SDLs.

5.2 Risk allocation

Risk allocation is about sharing the risks of any changes to the volume and reliability of entitlement holders' water between individual entitlement holders and governments, according to a formula that recognises climate change, new knowledge and policy change.

The risk allocation provisions in the *Water Act 2007* (Cwlth) stem from two intergovernmental agreements between the Commonwealth and Basin states:

- Under the Intergovernmental Agreement on a National Water Initiative 2004 (National Water Initiative), the Commonwealth, state and territory governments agreed to share with water entitlement holders the risks associated with future reductions in available water once known overallocation and overuse had been addressed. The Australian Government's commitment is legislated for in the *Water Act*.
- Under the Intergovernmental Agreement on Murray–Darling Basin Reform 2008, the Commonwealth agreed to assume Basin states' National Water Initiative responsibilities for risks associated with new knowledge, and to bring forward the Commonwealth's assumption of new knowledge risks to when transitional or interim water resource plans cease, provided that a Basin state legislated to implement the National Water Initiative's risk-sharing provisions. To date only New South Wales has passed such legislation and this is recognised in the *Water Act*.

Using the *Water Act*'s risk allocation provisions, the Murray–Darling Basin Authority (MDBA) must identify in the Basin Plan the Commonwealth's share of the water availability reductions. The Commonwealth is required to manage:

- all the reduction that results from changes in Australian Government policy
- some of the reduction that results from improvements in knowledge about the environmentally sustainable level of take.

New South Wales has legislated for the National Water Initiative risk-sharing provisions and water users bear the risk for reductions of up to 3% of the current diversion limit in relation to new knowledge and the Commonwealth bears all of the risk above 3%. Currently, in all other Basin states water users bear the first 3% of risk in relation to new knowledge, between 3% and 6% of the risk is shared between the relevant state or territory (one-third) and the Commonwealth (two-thirds), and beyond 6% the risk is shared equally between the two levels of government.

The Commonwealth is not responsible for any of the reduction that results from long-term changes in climate and periodic natural events such as bushfire or drought.

While MDBA is responsible for determining the Commonwealth's share of any reduction, it is the Commonwealth Water Minister, through the relevant Australian Government department, who will be responsible for managing the effect of the Commonwealth's share of the reduction. This may occur in two ways:

- Water recovery programs under the *Water for the Future* initiative, mentioned in Section 5.1, will contribute to managing the Commonwealth's share. As discussed, the water recovered under these programs will effectively offset impacts on many water entitlement holders.



Fishway and carp separation trap on the River Murray at Lock 1, Blanchetown, South Australia. Native fish can swim through, while carp are caught and processed for bait to be used in the fishing industry

- To the extent that water recovery efforts do not fully offset the Commonwealth's share of the water availability reduction as calculated by MDBA, the Water Act provides for payments to be made to affected entitlement holders. Any such payments would relate to reductions in the market value of eligible water entitlements.

Transitional and interim water resource plans

Transitional and interim water resource plans are existing water sharing arrangements that have been recognised under the Water Act. When a transitional or interim water resource plan is in effect, the water resource plan will prevail over the Basin Plan where the water resource plan and the Basin Plan are inconsistent with each other.

No transitional or interim plans are currently in place in Victoria, but Victoria has sought to have existing water sharing arrangements recognised as transitional water resource plans under the Water Act (s. 241) before the Basin Plan comes into effect.

MDBA has calculated the long-term average limit on the quantity of water that can be taken immediately before the transitional or interim plan ceases to have effect, so as to identify the reduction required to meet the new long-term average sustainable diversion limit (SDL) and hence identify the new Commonwealth policy component, the new knowledge component and the Commonwealth's share of any reduction.



Northern Macquarie Marshes Nature Reserve, New South Wales

Climate change

As indicated above, any reduction in the diversion limit attributed to climate change and periodic events such as bushfires and drought will not be considered part of the Commonwealth's share of risks. MDBA considers that the current diversion limits for surface water incorporate a 3% reduction due to climate change, and that the proposed groundwater SDLs do not incorporate any reduction due to climate change. The specific effect of the 3% climate change reduction on surface-water access entitlement holders will be dependent on how the reductions required to meet the SDLs are distributed within water resource plans. Further detail on considering climate change in developing SDLs can be found in Section 4.2.

Changes in Australian Government policy

Calculating the Commonwealth's liability in relation to 'changes to Commonwealth policy' is complex. There are two competing issues to take into account:

- the National Water Initiative (clauses 44 and 46) makes it clear that existing overallocation and overuse are to be disregarded when applying the risk assignment framework
- there is an argument that the Water Act is a change in Australian Government policy in that the Commonwealth, under the Water Act, now has the statutory policy role to set SDLs across the whole Basin and enforce state compliance, when previously the Commonwealth relied on the states to determine their own diversion limits.



Farmland in the Murrumbidgee region near Griffith, New South Wales

The National Water Initiative goals include the determination and implementation of environmentally sustainable levels of extraction in overallocated and overused systems, and explicit statutory specifications of environmental outcomes. Under the initiative, states and territories were responsible for determining environmental objectives and sustainable levels of extractions for the Murray–Darling Basin for water resource plans. The Commonwealth’s role was to encourage the states and territories to work towards determining and implementing environmental sustainability through the Council of Australian Governments process.

The Water Act specifies in detail the parameters the Commonwealth must consider when determining SDLs. One of the Commonwealth’s considerations is giving effect to relevant international agreements. This goes beyond what was a consideration under the National Water Initiative. The Water Act stipulates Basin-wide benefits that change the scale and emphasis of states individually determining sustainability for their jurisdictions.

MDBA accepts that, notwithstanding the Basin states’ requirements to meet their obligations under the National Water Initiative to address overallocation and overuse, the Commonwealth’s role under the Water Act is a change in Australian Government policy while pursuing the general overall goal of the initiative.

Improvements in knowledge

To quantify the effect of a change in knowledge about the sustainable level of take for a particular water resource on a reduction in a diversion limit, and hence calculate the improvements in knowledge component (as required under the Water Act s. 75(1)(c)), it is necessary to identify the baseline knowledge upon which current Basin state water plans were developed and to compare this with the information used for preparing the Basin Plan. MDBA examined the available information on current water plans and found it was not possible to make a valid comparison. MDBA also notes that relatively little new information on the watering requirements of aquatic ecosystems has come forward since existing state water plans were made.

Consequently, MDBA has concluded that none of the overall reduction can be attributed to the use of new knowledge.

Commonwealth's share of reductions due to SDLs

In summary, after taking into account the 3% reduction for climate change, MDBA proposes that the Commonwealth's share will be 100% of the remaining reduction due to changes in Australian Government policy.

Risks arising from other changes in the Basin Plan

Under the Water Act (ss. 80–86), if a change in the Basin Plan, apart from a reduction in diversion limits, results in a change in reliability of water allocations in a water resource plan area, MDBA will be required to determine the Commonwealth's share (if any) of risks arising from that change in reliability. Changes to the reliability of water allocations may be caused by the implementation of various elements of the proposed Basin Plan, in particular the specific requirements against which new water resource plans will be accredited. However, it will not be possible to specify the magnitude of any changes in reliability caused by the Basin Plan until after the development of Basin Plan-compliant water resource plans.

MDBA will therefore determine the Commonwealth's share of impacts arising from changes in the reliability of water allocations (if any) when new water resource plans are being accredited.

5.3 Temporary diversion provisions

The Murray–Darling Basin Authority (MDBA) is required to specify a temporary diversion provision (which can be zero) wherever a long-term average sustainable diversion limit (SDL) is specified in the Basin Plan. The provisions provide a transition period of up to five years for water users and communities to adjust to the SDLs. They are intended to apply where socioeconomic hardship may occur as a result of SDLs being introduced.

A temporary diversion provision that is not zero will be required to reduce to zero by the end of five years, but the rate at which a provision is reduced may vary over different years. For example, the provision could reduce by an equal volume each year over five years — similar to the method New South Wales has applied in reducing water use in overallocated groundwater systems — or it could remain stable for several years before a large change.

Factors that could be taken into account when considering whether a temporary diversion provision greater than zero will be necessary include:

- socioeconomic effects of the water availability reduction arising from the SDL
- the severity of the reduction
- potential adverse effects on key environmental assets
- time available to make the adjustment before the SDL takes effect
- environmental water recovery efforts by the Commonwealth and others.

The time already available for entitlement holders to adjust to a potentially lower SDL will vary for different water resource plan areas depending on when the relevant interim or transitional plan expires. For example, the surface-water resources of the Murray region shared by New South Wales, Victoria and South Australia are currently covered by water resource plans that expire by 2014 (New South Wales and South Australia) and 2019 in Victoria.



*Farmland near Moama,
New South Wales*

The Commonwealth Environmental Water Holder is purchasing existing entitlements for environmental use, which will reduce the gap between current diversions and the SDL, and will help water users with the transition. The scale of these environmental water purchases may reduce the need for any proposed temporary diversion provision. The difference between the reduction, after disregarding the reduction of 3% attributable to climate change, and any purchases can be considered the ‘residual adjustment’ component for which a temporary diversion provision will be considered.

After considering the range of possible options for setting temporary diversion provisions, MDBA has determined that a principles-based approach will be used. These principles are:

- Where a new SDL does not come into operation in the first five years after the Basin Plan takes effect, the temporary diversion provision for the SDL area will be set at zero.
- Where a new SDL comes into operation within five years of the Basin Plan taking effect and, when the new water resource plan takes effect, the residual adjustment component is greater than 0% of the current diversion limit, then the temporary diversion provision will initially equal the residual amount and reduce to zero in five equal annual steps (see Table 5.2).

Table 5.2 Example of the application of the temporary diversion provision

	Current diversion limit	SDL	Reduction of 3% attributable to climate change	Commonwealth Environmental Water Holder	Residual adjustment	Year					
						1	2	3	4	5	6
Diversion (GL/y)	500	300	15	85	100	400	380	360	340	320	300
Temporary diversion provision (GL/y)						100	80	60	40	20	0