



Australian
Competition &
Consumer
Commission

A detailed report for regulated industries

ACCC WATER MONITORING REPORT

2011–12

March 2013



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ACCC Water Monitoring Report 2011–12

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Contents

List of abbreviations	v
Glossary	vi
Summary	ix
Chapter 1. Introduction and approach to monitoring	1
1.1 Overview of the Murray-Darling Basin	2
1.2 The rural water supply chain	2
1.3 ACCC's monitoring role in the water sector	5
1.4 Information gathering and requests	6
1.5 Purpose of this report	8
1.6 Structure of report	8
PART A RURAL WATER MARKETS IN THE MDB	9
Chapter 2. Water markets in the MDB	11
2.1 ACCC role in water market reform	12
2.2 Benefits of water trade	14
2.3 Types of tradeable water rights	14
2.4 Trading zones	14
2.5 Types of restrictions on trade in water rights	16
2.6 Future water market reform	21
2.7 Water trade in 2011-12	22
Chapter 3. Transformations and terminations in 2011-12	35
3.1 Transformation of irrigation rights in 2011-12	36
3.2 Transformation processing times in 2011-12	41
3.3 Terminations of water delivery rights in 2011-12	42
3.4 Termination fees and revenue from termination fees	47
3.5 Transformation and termination relationships	49
PART B RURAL WATER CHARGING IN THE MDB	51
Chapter 4. Regulated water charges in 2011-12	53
4.1 Introduction to the Water Charge (Infrastructure) Rules	54
4.2 Bulk water charges	54
4.3 Irrigation infrastructure operator charges	59
4.4 Water planning and management activities and charges	66

Chapter 5. Price regulation under the Water Charge (Infrastructure) Rules	73
5.1 WCIR requirements for Tier 2 operators	74
5.2 Network Service Plan summary	74
5.3 WCIR requirements for Tier 3 operators	83
PART C COMPLIANCE WITH WATER CHARGE RULES AND WATER MARKET RULES	85
Chapter 6. Compliance with Rules made under the Water Act	87
6.1 The Rules enforced by the ACCC under the <i>Water Act 2007</i>	88
6.2 Approach to compliance	88
6.3 Compliance activities for 2011–12	89
6.4 Compliance and enforcement outcomes	89
6.5 Comments on compliance in 2011–12	93
6.6 Compliance agenda for 2012–13	94
Appendices	95
Appendix A Hypothetical bulk water bills	96
Appendix B Hypothetical irrigator bills	99
Appendix C Water planning and management activities and charges	107

List of abbreviations

ABS	Australian Bureau of Statistics
CIT	Central Irrigation Trust
DNRM	Department of Natural Resources and Mines
DSE	Department of Sustainability and Environment
ESDD	ACT Environment and Sustainability Development Directorate
GMW	Goulburn-Murray Water
GWMW	Grampians Wimmera Mallee Water
IIO	Irrigation Infrastructure Operator
IPART	Independent Pricing and Regulatory Tribunal
LMW	Lower Murray Water
MDB	Murray-Darling Basin
MDBA	Murray-Darling Basin Authority
MI	Murrumbidgee Irrigation Limited
MIL	Murray Irrigation Limited
NOW	NSW Office of Water
NSP	Network Service Plan
NWC	National Water Commission
NWI	National Water Initiative
PIIOP	Private Irrigation Infrastructure Operators Program (NSW)
PIIP	Private Irrigation Infrastructure Program (SA)
QCA	Queensland Competition Authority
SEWPAC	Department of Sustainability, Environment, Water, Population and Communities
SRWUIP	Sustainable Rural Water Use and Infrastructure Program
WCIR	Water Charge (Infrastructure) Rules 2010
WCPMIR	Water Charge (Planning and Management Information) Rules 2010
WCR	Water Charge Rules (Infrastructure, Planning and Management Information and Termination Fees)
WCTFR	Water Charge (Termination Fees) Rules 2009
WMI	Western Murray Irrigation
WMR	Water Market Rules 2009
WPM	Water Planning and Management
WTR	Water Trading Rules

Glossary

100 per cent water allocation	When 100 per cent of the nominal volume of the water access entitlement is allocated
customer service point	a water service location that may or may not have a measurement device at which a customer is provided with a rural water service from an infrastructure operator or irrigation infrastructure operator. This could be either a water supply or a drainage collection point
infrastructure operator	<p>any person or entity who owns or operates infrastructure for one or more of the following purposes:</p> <ul style="list-style-type: none"> (i) the storage of water (ii) the delivery of water (iii) the drainage of water <p>for the purpose of providing a service to another person</p>
irrigation network	a distribution network of carriers (typically open channels, pipes and/or natural waterways) used to convey water from a water source through customer service points to customer properties. An irrigation delivery network may be either a gravity-fed network or a pressurised network
irrigation infrastructure operator (IIO)	any person or entity who owns or operates water service infrastructure for the purpose of delivering water to another person for the primary purpose of being used for irrigation
irrigation right	a right that a person has against an IIO to receive water and is not a water access right or a water delivery right
private diverter	an irrigator that extracts water directly from a natural water source (either a regulated or unregulated river)
regulated water charge	<p>includes a water charge to which any of the three sets of water charge rules applies:</p> <ul style="list-style-type: none"> • Water Charge (Infrastructure) Rules • Water Charge (Planning and Management Information) Rules • Water Charge (Termination Fees) Rules
reporting bulk water operators	<p>bulk water operators that:</p> <ul style="list-style-type: none"> • hold, or whose customers hold, more than 10 GL of water access entitlement • impose regulated water charges for the provision of bulk water services in the MDB <p>Reporting bulk water operators participate in the ACCC's water monitoring regime</p>
reporting IIOs	<p>irrigation infrastructure operators (IIOs) that:</p> <ul style="list-style-type: none"> • hold, or whose customers hold, more than 10 GL of water access entitlement • impose regulated water charges for services provided in regard to access to an irrigation infrastructure network <p>Reporting IIOs participate in the ACCC's water monitoring regime</p>
termination	when a person terminates or surrenders the whole or part of a right of access to the IIO's network
termination fee	a fee that may be imposed by an IIO when an irrigator terminates

total network access charge	<p>the amount on which the termination fee multiple is applied in order to calculate a maximum termination fee. The total network access charge is the sum of all fixed access fees payable by an irrigator in a financial year for access to an operator's irrigation network, excluding:</p> <ul style="list-style-type: none"> • any amount in respect of a service for the storage of water • connection/disconnection fees • any amount that exceeds the cost of providing irrigators with access to an operator's irrigation network • fees under ACCC approved contracts
transformation arrangements	<p>the process by which an irrigator permanently transforms their entitlement to water under an irrigation right against an IIO into a water access entitlement held by the irrigator (or anybody else other than the IIO), thereby reducing the share component of the operator's water access entitlement</p>
water access entitlement	<p>perpetual or ongoing entitlement, by or under a law of a state, to exclusive access to a share of the water resources of a water resource plan area</p>
water access entitlement trade	<p>the trade of an ongoing entitlement providing exclusive access to a share of a water resource</p>
water access right	<p>any right conferred by or under a law of a state to hold water from a water resource or to take water from a water resource. This includes stock and domestic rights, riparian rights, a water access entitlement, a water allocation and any other right relating to the taking or use of water prescribed by regulations made under the <i>Water Act 2007</i></p>
watercourse	<p>means a river, creek or other natural watercourse (whether modified or not) in which water is contained or flows (whether permanently or intermittently) and includes:</p> <ul style="list-style-type: none"> (i) a dam or reservoir that collects water flowing in a watercourse (ii) a lake or wetland through which water flows (iii) a channel into which the water of a watercourse has been diverted (iv) part of a watercourse (v) an estuary through which water flows
water allocation	<p>the specific volume of water allocated to water access entitlements in a given water accounting period</p>
water allocation trade	<p>trade in seasonal water allocations that involves transferring some or all of the water allocated to the entitlement for the current irrigation season or for an agreed number of seasons</p>
Water Charge (Infrastructure) Rules 2010 (WCIR)	<p>water charge rules for fees and charges payable to an infrastructure operator for:</p> <ul style="list-style-type: none"> • bulk water charges¹ • access to the irrigation infrastructure operator's network or services provided in relation to that access² • matters specified in regulations made for the purposes of s. 91(1)(d) of the <i>Water Act 2007</i>³

Water Charge (Planning and Management Information) Rules 2010 (WCPMIR)	rules relating to charges for water planning and water management activities in the Murray-Darling Basin and requiring the publication of information on the details of the charge and the process for determining the charge
Water Charge (Termination Fees) Rules 2009 (WCTFR)	water charge rules for fees or charges payable to an IIO in relation to terminating access to an operator's irrigation network (or services relating to such termination), or surrendering a right to delivery of water through the operator's irrigation network
water delivery right	a right to have water delivered by an infrastructure operator
Water Market Rules 2009 (WMR)	rules dealing with actions or omissions of an IIO that prevent or unreasonably delay transformation arrangements or trade
water service infrastructure	<p>infrastructure for one or more of the following purposes:</p> <ul style="list-style-type: none">(i) the storage of water(ii) the delivery of water(iii) the drainage of water <p>for the purpose of providing a service to another person</p>

1 Section 91(1)(b) of the Water Act.
2 Sections 91(1)(a)(i) and (ii) of the Water Act.
3 Unless otherwise indicated, all legislation in this publication is Commonwealth legislation.

Summary

This is the Australian Competition and Consumer Commission's (ACCC) third annual water monitoring report to the Commonwealth Minister responsible for water⁴ as required under the *Water Act 2007* (Cwlth) (the Act).

The report provides information for the 2011-12 year on regulated water charges, transformation arrangements, termination of network access, compliance with the Commonwealth Water Market and Water Charge Rules, and related issues.

The following is a summary of issues and findings identified in this report which draw on data collected by the ACCC for its monitoring role under the Act.

The report highlights the success of the water market reform process and the benefits that are flowing from the operation of water markets in the Murray-Darling Basin (the MDB), while recognising the value of further reform.

4 The Hon Tony Burke, Minister for Sustainability, Environment, Water, Population and Communities.

Water markets allow irrigators to take advantage of high water storage levels

The 2011 calendar year was the second wettest year on record in the MDB since records commenced in 1900. Dam storage levels increased from around 18 per cent in June 2009 to around 90 per cent in June 2012. Irrigators took advantage of high storage levels by increasing their water use. The volume of water delivered by irrigation infrastructure operators (IIOs) increased by 97 per cent from 2010–11 to 2011–12.

The abundance of water in this period brought about a reduction in the market price of water allocations to approximately \$18 for one million litres (ML). By comparison, at the height of the drought during 2007–08 water allocations were selling at around \$1000/ML. The volume of water allocation trade increased by 23 per cent from 3417 GL in 2010–11 to 4216 GL in 2011–12. This follows an increase of 49 per cent in 2010–11.

The relatively low price and high availability of water along with favourable commodity prices gave rise to increased agricultural production in the MDB in this period. For example, in 2011–12 water allocation trade in the NSW Murray (a major rice growing area) increased by 36 per cent and the volume of water delivered through Murray Irrigation Limited's network increased by 126 per cent. The high water availability and low price of allocations enabled rice growers to increase the planted area of their crops by 46 per cent in 2011–12.

Outcomes this year again show how markets facilitate the movement of water resources to their highest value use. Annual crop farmers have taken advantage of low water prices by purchasing additional water allocations and increasing production. In dryer years, annual crop farmers responded to higher water allocation prices by selling allocations to growers of long-lived plantings, while shifting resources to dryland farming activities.

This flexibility was not uniformly available prior to water market reform when, in extreme circumstances, perennial crops could be abandoned due to lack of water while other irrigators had excess water that could not be traded.

While the success of water markets in allocating water resources is widely recognised, a number of market restrictions still remain in place in the MDB.

Barriers to water trade remain

Governments at all levels have worked together over a long period to put in place a legislative framework that promotes effective water markets.

However, some states continue to impose restrictions on the operation of water markets which create inconsistencies in trading arrangements across the MDB and can have the effect of distorting market outcomes. Government restrictions of this nature can also hamper the ability of irrigators to utilise the water market in managing their businesses.

In Victoria, a 4 per cent limit still applies to water trade out of certain districts. While there are some exemptions for the Australian Government purchasing water in certain districts, other market participants still face restrictions.

In January this year the NSW Government imposed a new limit on trades of surface water access entitlements in NSW MDB. The restriction caps the amount of water traded for environmental purposes at 3 per cent of current extraction limits per valley per decade.

These restrictions are inconsistent with the Basin water market and trading principles contained in the Water Act, efficiently functioning water markets and the objectives of the Water Trading Rules (WTR), which form part of the Murray Darling Basin Plan.⁵

⁵ The WTR will commence on 1 July 2014 and will be enforced by the Murray Darling Basin Authority.

Compliance with the water Rules continues to improve

The ACCC is responsible for enforcing the Water Market Rules 2009 (WMR), Water Charge (Termination Fees) Rules 2009 (WCTFR), Water Charge (Infrastructure) Rules 2010 (WCIR), and Water Charge (Planning and Management Information) Rules 2010 (WCPMIR—collectively the Rules).

The WMR and the WCTFR were introduced three years ago and the ACCC has adopted and maintained a proactive approach to monitoring and enforcing compliance with the Rules. In 2011–12, the ACCC conducted a number of investigations arising from complaints and initiated several compliance reviews. Where compliance concerns were identified, the ACCC took proportionate enforcement action and ensured that infrastructure operators took practical steps to remedy any detriment to customers and to address future compliance with the Rules.

The ACCC has continued to educate regulated entities and other participants in the water market including irrigators, water brokers and other water specialists, about the requirements of the Rules. The ACCC has published targeted fact sheets, produced articles for journals and newspapers, and held meetings and information sessions to assist stakeholders in developing the necessary understanding of the Rules.

The ACCC's approach has changed the attitude of infrastructure operators towards compliance with the Rules. Operators are responding positively to the guidance provided by the ACCC by amending their policies and water charges so that they are consistent with the Rules.

Where non-compliance occurred in 2011–12 it was mainly as a result of infrastructure operators misinterpreting the Rules or making inadvertent errors. Operators are becoming more proactive in engaging with the ACCC in circumstances where they believe they may have breached the Rules or have become aware that a specific policy or procedure may put them at risk of contravention.

Looking ahead, the ACCC will continue to work on strategies to raise the understanding of and compliance with the Rules to further improve the operation of the water market and the transparency and efficiency of water charges.

The majority of irrigators that transform their irrigation rights continue irrigating

The ACCC collects data on the amount of irrigation rights transformed and water delivery rights terminated by irrigators that are supplied by IIOs. Transformation is the process where an irrigator transforms an irrigation right held against an IIO into a water access entitlement independently held by the irrigator or another party. This enables trade of the water entitlement. Termination occurs where an irrigator decides to stop receiving water delivery services from its IIO and may occur in connection with an irrigator selling water access entitlements and exiting irrigation.

In 2011–12, 80 per cent of irrigators who transformed an irrigation right did not terminate any delivery rights immediately after transformation, demonstrating that transformation is being used mainly to enable water trade rather than for the purpose of exiting irrigation.

Terminations are not driving increases in IIO charges

The ACCC has estimated that irrigator bills in piped networks have on average increased by around 9 per cent in nominal terms between 2010–11 and 2011–12. The price increases are due in part to increases in electricity charges for pumped water. Up to 30 per cent of some piped network costs are for electricity. Irrigator bills in gravity-fed networks have generally increased by around 5 per cent in nominal terms in this period. In line with these increases, changes in termination fees have also been relatively moderate.

The ACCC has previously acknowledged⁶ that IIOs have certain fixed costs and when irrigators terminate access to an IIO's network the IIO faces revenue uncertainty. Remaining irrigators may also face a risk of higher fixed charges as the unavoidable fixed costs of operating the network are spread

⁶ See the ACCC's final advice to the minister on the Water Charge (Termination Fees) Rules 2009 at <www.accc.gov.au/water>.

over fewer irrigators. Consequently, in 2008 the ACCC recommended that IIOs should be allowed to charge terminating irrigators a termination fee of up to 10 times their annual fixed charges. This recommendation was implemented through the Water Charge (Termination Fees) Rules 2009.

Following increased activity in the water market, in particular the Australian Government purchasing water access entitlements, some stakeholders have raised concerns about a 'Swiss cheese' effect which it is claimed results from irrigators terminating access to IIO's networks. The 'Swiss cheese' effect has been described by a House of Representatives Standing Committee⁷ as "the creation of holes in irrigation areas, reducing the efficiency of delivering water down channels, stranding assets and increasing the maintenance costs and delivery fees for entitlement holders who remain".⁸

The ACCC has considered this issue in the context of the data it has collected for this report. The data indicates that many of the irrigators that have sold water access entitlements to the Australian Government and other buyers over the past three years are continuing to receive water delivery services from their IIOs rather than exit their IIO's network and irrigation farming altogether. These irrigators may have downsized their operations or shifted their resources to less water intensive crops, but are continuing to pay network charges and contribute to the cost of their IIO's network.

Data collected by the ACCC for this report shows that since 1 July 2009, the total volume of terminations in the MDB has been only 3 per cent of total water entitlements. Of the 3 per cent of entitlements terminated, over half (i.e. 1.8 per cent of total water entitlements) have occurred in four large IIOs in NSW and South Australia.⁹ Notably, the percentage change in average irrigator bills forecast by these four IIOs over the next five years (2012-13 to 2016-17) is generally less than 5 per cent in real terms.¹⁰ This is broadly consistent with the average level of price increases implemented by IIOs across the MDB over the past two years.

While further analysis will be undertaken for future Water Monitoring Reports, it would appear that the fees which IIOs are able to levy on terminating irrigators have been sufficient to date to mitigate in the medium term the level of network charges levied on remaining irrigators serviced by IIOs that have experienced terminations in their networks.

Customers of large IIOs have been consulted on Network Service Plans

The ACCC's final advice to the Minister on the WCIR¹¹ recommended that the level of regulatory oversight of IIOs should vary depending on their size and ownership. This resulted in a tiered approach to regulation under the WCIR.

Under the WCIR all IIOs and infrastructure operators (IOs) are required to provide basic transparency to their customers by providing them with a schedule of charges (tier one requirements). Additional requirements apply to member owned IIOs in relation to discriminatory pricing and to IOs and IIO that service in excess of 10 GL of managed water resources who must also publish their schedule of charges.

The largest IOs (tier three) are required to have their regulated charges approved or determined by an independent regulator. Medium sized IIOs (tier two) are required to consult with their customers and develop five-year Network Service Plans (NSPs) which are independently reviewed for prudence and efficiency.

In 2011-12 the tier two requirements came into effect and all tier two IIOs¹² formally consulted with their customers about planned service levels, estimates of capital and recurrent expenditure and estimates of regulated charges for the 2012-17 period. The tier two IIOs then developed NSPs, drawing on comments from irrigators made during the consultation process.

7 House of Representatives Standing Committee on Regional Australia Inquiry into the impact of the Guide to the Murray-Darling Basin Plan: *Of drought and flooding rains*.

8 *ibid*, p. 104.

9 Central Irrigation Trust, Coleambally Irrigation Co-operative Limited, Murray Irrigation Limited and Murrumbidgee Irrigation Limited.

10 The forecasts were provided in the IIOs' 2012-17 Network Service Plans.

11 See <www.accc.gov.au/water>.

12 Central Irrigation Trust, Coleambally Irrigation Co-operative Limited, Murray Irrigation Limited, Murrumbidgee Irrigation Limited and SunWater.

The ACCC engaged consultants to independently review the NSPs and report on their prudence and efficiency. In general the NSPs were found to be prudent and efficient with some recommendations for improvements. The consultant's findings were made available to customers of the IIOs.

The ACCC considers that this process has been beneficial in formalising the planning conducted by IIOs, providing the opportunity for customers to be involved in that process, and ultimately providing for independent scrutiny of IIOs' plans and greater transparency of their future price paths.

An ongoing reform process

The MDB remains Australia's most important agricultural region, providing for economic development and the wealth of communities across a vast area while supporting a wide range of significant ecosystems.

Recent reforms have facilitated the operation of market forces for water resource allocation in the MDB, however government policy and regulatory arrangements will continue to play an important role in steering the MDB's future and achieving an appropriate balance between environmental sustainability and economic development outcomes.

Water reform in the MDB will achieve an historic milestone with the implementation of the Murray-Darling Basin Plan. While the reform process is now at a mature stage, the ACCC considers that there are still benefits to be had from further water reform, even once the Basin Plan and its water trading rules are in place.

A key area for future reform is developing alternative trading arrangements, such as allowing trade between areas with limited connectivity and improving the way in which trades are accounted for, especially between Basin States. This would further improve the scope and efficiency of the water market in allocating scarce water resources.

Many of the areas for further reform will be challenging and will require co-ordinated action from Commonwealth and state agencies, IIOs and water users. The ACCC will continue to work with governments and other stakeholders to facilitate the reform process.



Chapter 1.

Introduction and approach to monitoring

The Australian Competition and Consumer Commission (ACCC) is required to provide to the relevant minister an annual report on regulated water charges, transformation arrangements, termination of network access and compliance with the Water Market Rules and the Water Charge Rules. This is the third such report and provides data and analysis for the 2011-12 year.

1.1 Overview of the Murray-Darling Basin

There are 23 major rivers in the Murray-Darling Basin (MDB), each with unique geographic features according to their locality. These major rivers in turn have hundreds of tributaries, flood plains and wetlands.

Water in the MDB is shared between the environment, agricultural and other industries, and human consumption. The ABS has estimated that the agricultural industry consumes approximately 96 per cent (agriculture 83 per cent and system losses 13 per cent¹³) of consumptive water in the MDB, while households, manufacturing and other industries collectively consume the remaining 4 per cent of consumptive water.

1.2 The rural water supply chain

The rural water supply chain involves bulk water operators storing water and delivering it to its customers, including irrigation infrastructure operators (IIOs) and irrigators extracting water directly from the watercourse.

Bulk water operators

The rural water supply chain includes both regulated and unregulated rivers. A regulated river generally has a structure such as a dam, which provides storage and the ability to control river flows and the release of water downstream. Structures that regulate river flows (such as dams, weirs and locks) with storage and delivery services are commonly referred to as bulk water infrastructure and are typically provided and maintained by government-owned entities.

Bulk water operators manage bulk water storage facilities and deliver water through watercourses to customers when requested. Bulk water operators can also undertake other activities such as flood mitigation and urban, rural and commercial water delivery.

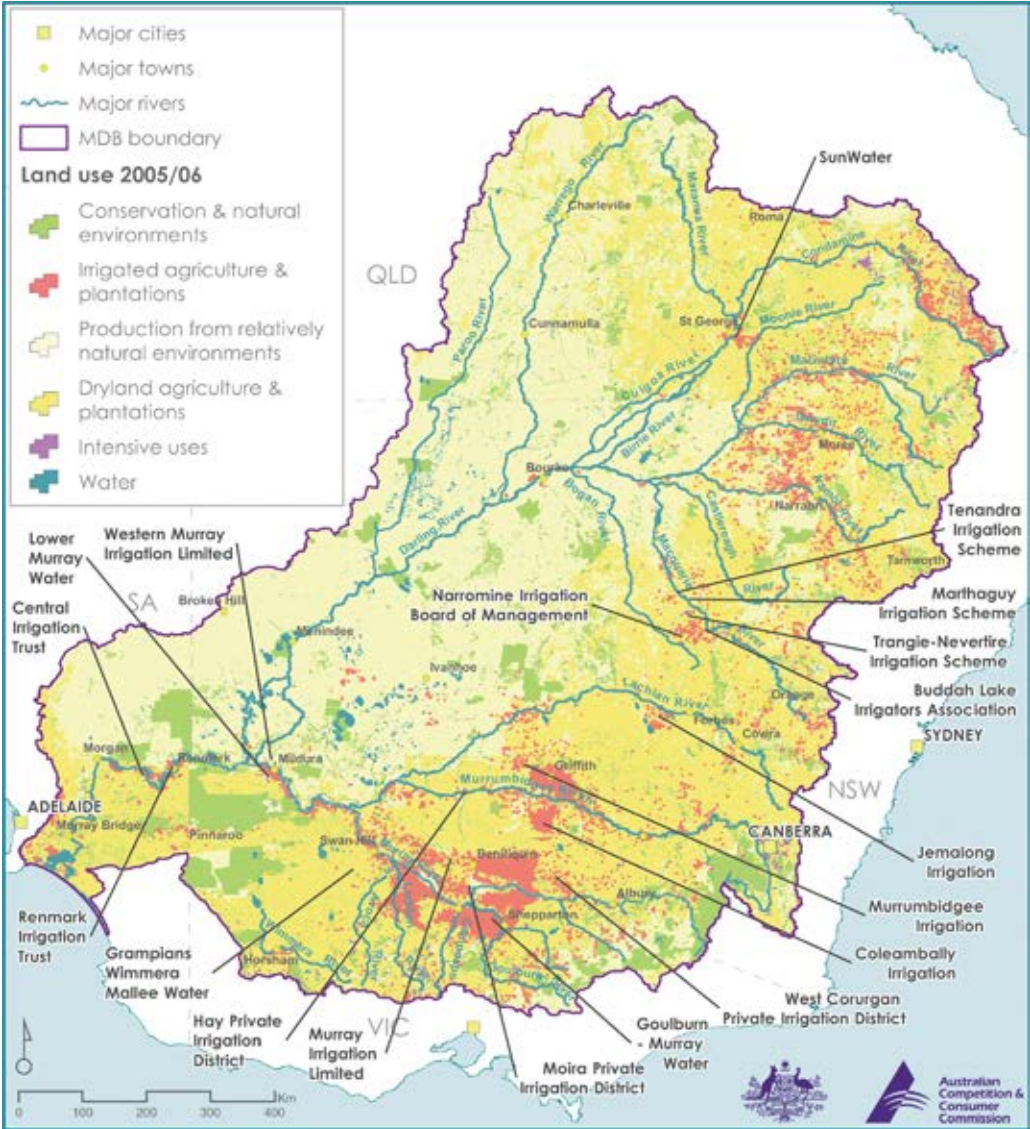
There is typically a three-stage process in providing bulk water services:

1. **Water harvesting**—the collection or accumulation of surface water for storage. The effectiveness of water harvesting is largely dependent on rainfall, the physical environment and regional hydrology.
2. **Bulk water storage**—facilities such as dams, lakes and reservoirs allow water, once harvested, to be stored and released on demand.
3. **Bulk water delivery**—surface water stored in bulk water storages is transported and delivered either through naturally occurring watercourses or through man-made infrastructure such as channels and pipes.

Figure 1.1 provides an overview of the bulk water storage facilities in the MDB with a capacity in excess of 10 GL.

¹³ Defined by the ABS as water supply industry consumption—losses from water delivery systems.

Figure 1.2: Irrigation infrastructure operators in the MDB



Sources: Topo 250K © Geoscience Australia (2006); land use 2005/06 © ABARE-BRS (2010); NSW irrigation corporation areas © ABARE-BRS (2008-09) from data provided by Murray Irrigation Limited and the Murray-Darling Basin Authority; VIC, SA & QLD irrigation corporation areas sourced from data collated for the National Performance Report - rural water service providers, NWC (2007-08). Produced by SKM, November 2010.

1.3 ACCC's monitoring role in the water sector

To manage MDB water resources in an integrated and sustainable way, the Australian Government enacted the *Water Act 2007* (Cwth)¹⁴ (the Water Act). The Water Act created new institutional and governance arrangements for water resources in the MDB and new functions for the ACCC.

The Water Act gives the ACCC the following four main functions in the MDB:¹⁵

- a monitoring role—for charges, transformation and rule compliance
- a price setting role—for bulk water operators under the Water Charge Rules
- an enforcement role—enforcing the Water Market Rules and the Water Charge Rules
- an advisory role—providing advice to the minister on Water Charge Rules and Water Market Rules, as well as advice to the Murray-Darling Basin Authority (MDBA) on Water Trading Rules.

In undertaking its monitoring role, the ACCC is required to monitor:

- regulated water charges¹⁶
- transformation arrangements, and¹⁷
- compliance with rules made under Part 4 of the Water Act.¹⁸

There are four sets of rules made under Part 4 of the Water Act:

- *Water Market Rules 2009* (WMR)—prohibit the actions or omissions of an IIO that prevent or unreasonably delay an irrigator from transforming an irrigation right into a water access entitlement.
 - These Rules came into full effect on 1 January 2010.
 - These Rules were amended in October 2012.
- *Water Charge (Termination Fees) Rules 2009* (WCTFR)—regulate the fees or charges payable to an IIO relating to the termination or surrender of access to an IIO's irrigation network.
 - These Rules came into full effect on 1 September 2009.
 - These Rules were amended in February 2011 and October 2012.
- *Water Charge (Infrastructure) Rules 2010* (WCIR)—set requirements relating to the fees and charges payable to infrastructure operators for bulk water services and to IIOs for access to the irrigation network and related services. These Rules came into full effect on 12 April 2011.
- *Water Charge (Planning and Management Information) Rules 2010* (WCPMIR)—provide for the publication of information on fees and charges imposed by, or on behalf of, governments relating to water planning and management (WPM) activities. These Rules came into full effect on 1 July 2011.

These Rules can be accessed through the ACCC's website, www.accc.gov.au.

The ACCC's monitoring and enforcement roles require the provision of an annual water monitoring report to the relevant minister. In accordance with an agreement with the Minister, the ACCC publicly releases this report.

¹⁴ The *Water Act 2007* came into effect on 3 March 2008.

¹⁵ The ACCC also has a role enforcing fair trading legislation, applicable to all businesses including those in the water industry under the *Competition and Consumer Act 2010*.

¹⁶ Water Act, s. 94(1)(a).

¹⁷ Water Act, s. 94(1)(b) and s. 99(1)(b).

¹⁸ Water Act, s. 94(1)(b).

1.4 Information gathering and requests

To fulfil its enforcement and monitoring obligations, the ACCC gathers information on both a formal and informal basis. Its informal information gathering includes activities such as:

- examination of information provided by infrastructure operators on their websites, including pricing schedules, transformation policies and other relevant announcements
- data collection and compilation from direct liaison with irrigators and infrastructure operators
- information obtained in the course of the ACCC assessing and investigating potential breaches of the WMR and the Water Charge Rules (WCR).

The ACCC's formal information gathering involves annually collecting data from relevant stakeholders, including infrastructure operators and government entities, on regulated water charges, transformation arrangements, termination of network access and compliance with the WMR and WCR.

Information requests were provided to reporting entities in July 2012 with responses received from September 2012.¹⁹ It is the responses to the information requests that largely inform this report. The ACCC has also collected data from other sources for this report.

The information requests were in three formats:

- *IIO information request (Part A and B)*—contains reporting requirements for reporting IIOs on regulated water charges, compliance with the WMR and WCR and contextual information about the IIO's network.
- *Bulk water information request*—contains reporting requirements for bulk water operators on regulated water charges and compliance with the WCR.
- *Water planning and management information request*—contains reporting requirements for state government departments and water authorities on charges levied and revenues received for WPM activities and their associated costs in 2011–12.

Table 1.1 provides a summary of the reporting entities and the type of information request(s) they received.

¹⁹ Reporting entity bulk water operators and irrigation infrastructure operators are those who hold (or whose customers hold) more than 10 GL of water access entitlement.

Table 1.1: Information request recipients

Reporting entity	IIO information request (Part A & B)	Bulk information request	WPM information request
Buddah Lake Irrigators' Association	☑		
Central Irrigation Trust	☑		
Coleambally Irrigation	☑		
Environment and Sustainable Development Directorate (ACT)			☑
Department of Natural Resources and Mines (Qld)		☑	☑
Department of Sustainability and Environment (Vic)			☑
Department of Environment, Water and Natural Resources (SA)			☑
Eagle Creek Pumping Association	☑		☑
Goulburn-Murray Water	☑	☑	☑
Grampians Wimmera Mallee Water	☑	☑	☑
Hay Private Irrigation District	☑		
Jemalong Irrigation Limited	☑		
Lower Murray Water	☑	☑	☑
Marthaguy Irrigation Scheme	☑		
Moirra Private Irrigation District	☑		
Murray Irrigation Limited	☑		
Murrumbidgee Irrigation	☑		
Narromine Irrigation Board of Management	☑		
NSW Office of Water	☑		☑
Renmark Irrigation Trust	☑		
State Water Corporation (NSW)	☑	☑	
SunWater	☑	☑	
Tenandra Irrigation Scheme	☑		
Trangie-Nevertire Irrigation Scheme	☑		
West Corurgan Private Irrigation District	☑		
Western Murray Irrigation	☑		

Although the ACCC has formal information-gathering powers under the *Competition and Consumer Act 2010* (Cwlth)²⁰, reporting entities provided the ACCC with the information requested on a voluntary basis.

²⁰ s.155, *Competition and Consumer Act 2010*.

1.5 Purpose of this report

The annual water monitoring report informs the minister and stakeholders (including irrigators, infrastructure operators and relevant government departments) about regulated water charges, transformation arrangements, termination events and the degree of compliance with the rules.

The report focuses on surface water and does not cover groundwater resources. Groundwater infrastructure and trade is limited compared to surface water infrastructure and trade, and the role of infrastructure operators is primarily restricted to surface water. As such, the WMR and WCR generally apply to surface water only.²¹

1.6 Structure of report

This report consists of three parts:

Part A—Rural water markets in the MDB

Chapter 2 provides an introduction to water markets and how they function, and the level of trading activity in the MDB. Chapter 3 presents data on the extent of transformation and termination in the MDB during 2011–12.

Part B—Rural water charging in the MDB

Chapter 4 provides analysis of the regulated charges imposed by bulk water operators, irrigation infrastructure operators and water planning and management entities in 2011–12. Chapter 5 provides an overview of the Network Service Plan review process conducted in 2012 as well as a summary of its findings.

Part C—Compliance with WCR and WMR

Chapter 6 provides an overview of compliance activities and outcomes for 2011–12.

21 The WCPMIR may relate to charges imposed in relation to groundwater activities.

Part A

Rural water markets in the MDB





Chapter 2.

Water markets in the MDB

This chapter discusses the ACCC's role in facilitating efficiently functioning water markets. The chapter also discusses the benefits of water trading and the operation of water markets in the MDB, including the types of tradeable water rights and trading zones, as well as the barriers to trade that currently exist. The chapter also summarises water trade activity in the MDB during 2011-12.

Key points

- In 2011-12 the volume of water access entitlement trade in the MDB increased by 22 per cent (999 GL in 2010-11 to 1219 GL in 2011-12).
- This increase in water access entitlement trade consisted of a 41 per cent increase in water purchases by the Australian Government in 2011-12. Purchases of water access entitlements occurred in all states, with most purchases occurring in Victoria (175 GL), followed by NSW, South Australia and Queensland.
- The volume of water allocation trade increased by 23 per cent (from 3417 GL in 2010-11 to 4216 GL in 2011-12). This follows an increase of 49 per cent in 2010-11.
- The large volume of water available in both 2010-11 and 2011-12 due to increased rainfall was a major contributor to these increases. The volume of water delivered by IIOs in 2011-12 also increased by 97 per cent compared to 2010-11.
- The Water Market Rules 2009 and the Water Charge (Termination Fees) Rules 2009 have minimised barriers to trade previously imposed by irrigation infrastructure operators (IIOs).
- There are various restrictions on water trading, some of which are due to geographic characteristics of the MDB, while others arise from government policies on water. These government imposed restrictions can distort the efficient functioning of water markets.
- A key area for future reform in the water market is developing alternative trading arrangements, such as allowing trade between areas with limited connectivity and improving the way in which trades are accounted for, especially between MDB states, which could improve the scope and efficiency of the water market in allocating scarce water resources.

2.1 ACCC role in water market reform

As the enforcement agency for both the Water Market Rules 2009 (WMR) and Water Charge Rules (WCR)²² the ACCC has a role in facilitating the trade in water rights by removing barriers to trade.

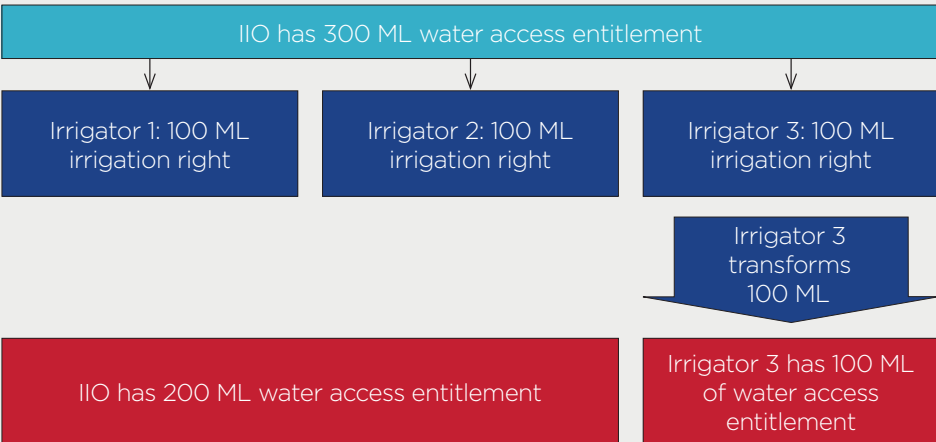
The WMR and Water Charge (Termination Fees) Rules 2009 (WCTFR) were established to address a range of practices which were previously used by IIOs to impede water trade. IIOs have incentives to prevent trade out of irrigation areas to preserve their customer base and to address concerns they may have about the ongoing viability of their operations. These barriers to trade limit MDB water market operations by distorting the decisions of market participants and dampening the signals for investment.

2.1.1 The Water Market Rules

In NSW and South Australia many irrigators' rights to water are specified as a share of their IIO's water access entitlement, and are referred to as their irrigation right. In such circumstances, if an irrigator wishes to sell their right to water outside the IIO, the irrigator would transform that right into a water access entitlement held in their name or the name of the purchaser of the water access entitlement. This process is known as 'transformation'.

Box 2.1: The process of transformation

Irrigator 3 wishes to transform all of their irrigation right. The diagram below shows that Irrigator 3 transforms all of their irrigation right and is issued with a 100 ML water access entitlement. The water access entitlement held by the IIO is then reduced to 200 ML. Irrigator 3 can now hold their new water access entitlement, or sell it to a third party.



IIOs have an incentive to preclude irrigators from transforming their water rights to prevent irrigators from selling their water and possibly terminating access to the IIO's network.

The Water Act and WMR provide a legal framework for irrigators to 'transform' their entitlement to water under an irrigation right with an IIO into an independently held water access entitlement, thereby reducing the share component of the IIO's water access entitlement. Under the WMR an IIO cannot act in a way that prevents or unreasonably delays an irrigator from undertaking transformation.

²² The ACCC is responsible for ensuring compliance with the WMR under s. 99(1)(b), and the WCTFR under s. 94(1)(b) of the *Water Act 2007*. More information regarding the ACCC compliance activities relating to the WMR and all of the WCR is provided in chapter 6 of this report. For more information on the water market rules and water charge rules refer to the ACCC website <www.accc.gov.au/water>.

The WMR contribute to the objective of facilitating efficient water markets and the opportunities for water trading by ensuring that an IIOs' policies and administrative requirements for transformation are not a barrier to trade. This improves the opportunities available to irrigators to trade their water rights.

2.1.2 Water Charge (Termination Fees) Rules

Prior to the commencement of the WCTFR, IIOs had the discretion to impose termination fees which discouraged their customers from leaving the network and participating in the water market.

Termination fees are a transaction cost for irrigators seeking to trade their water entitlements and to terminate access to the IIO's irrigation network. The higher the termination fee, the lower the net returns received by the selling irrigator and the lower the incentive for the individual to trade their water for a given price.²³ Therefore, if termination fees are set too high by the IIO they can act as a barrier to the trade of water.

The WCTFR address this by capping termination fees to 10 times the total network access charge and limiting the circumstances in which those fees can be charged.

If the WCTFR requirements are met, the IIOs can charge termination fees up to the cap to help cover the fixed costs previously paid by the exiting irrigators. This reduces the impact of termination on remaining irrigators who may bear a larger share of the fixed costs following termination (in the absence of rationalisation of the IIOs network).

2.1.3 The Water Trading Rules

Water trade in the MDB is primarily governed by state based water management laws. However, certain provisions within these laws have constrained opportunities for trade. The Water Trading Rules (WTR), which form part of the Murray-Darling Basin Plan, present a consistent approach to managing water trade. The WTR contribute to the removal of barriers to trade, minimise transaction costs, enable the appropriate mix of water products to develop, recognise and protect the needs of the environment, and provide appropriate protection of third-party interests.

The WTR apply only to types of water access rights that can be traded under state water management law, and only apply to water delivery rights and irrigation rights held against IIOs.

The WTR primarily deal with the following matters:

- restrictions on the trade of water access rights
- restrictions on the trade of water delivery rights within irrigation networks
- processes for determining when certain restrictions are necessary and permissible because of physical or environmental considerations
- obligations on IIOs to provide information in relation to water delivery rights and irrigation rights
- the disclosure obligations of approval authorities
- other information that MDB states and IIOs must make available, and
- restrictions on persons trading water access rights that are aware of certain information before it is generally available to the market.

The WTR contained in the Basin Plan will commence on 1 July 2014, and will be enforced by the Murray-Darling Basin Authority (MDBA).

²³ ACCC, *Final advice on water charge (termination fees) rules*, 2009, p. xv.

2.2 Benefits of water trade

Water markets in the MDB enable water to be traded between different water users. Trade enables water users to modify their water use by buying and selling water in response to production needs and external drivers. Water users are able to trade between each other and to and from different locations to obtain an appropriate mix of water rights (including water access entitlements of differing reliabilities, water allocations, irrigation rights and water delivery rights) to suit their water needs and risk preferences. This flexibility and reallocation of water between users facilitates an efficient allocation of water resources.

2.3 Types of tradeable water rights

Water markets in the MDB involve the trading of four main types of tradeable water rights:

- water access entitlement trade—the trade of an ongoing entitlement providing exclusive access to a share of a water resource
- water allocation trade—the trade of volumes of water that are allocated to a water access entitlement holder in the current irrigation season or for an agreed number of seasons
- irrigation right trade—the temporary or permanent trade of a right to water under an irrigation right held against an IIO, and
- water delivery right trade—the trade of the right to have water delivered by an infrastructure operator.

Water markets across the MDB have differing levels of maturity, with some markets being well-established and having high trade volumes, such as water allocation trade, and others, such as markets for water delivery rights, being relatively new.

2.4 Trading zones

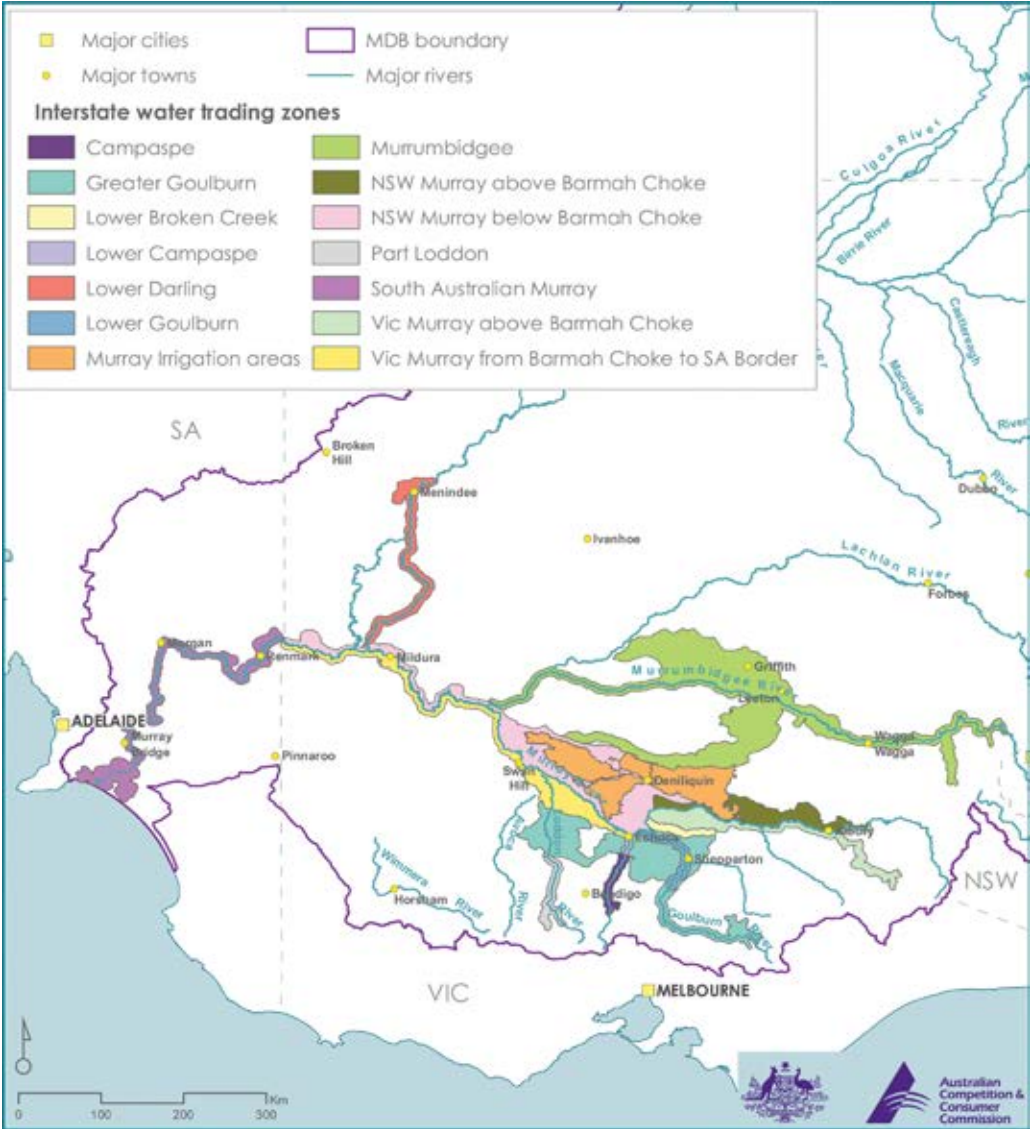
Trading zones are in place in the MDB for most surface water systems and reflect both administrative boundaries (e.g. state borders) and physical constraints (e.g. hydrological connectivity between the rivers).

The Southern MDB is the most interconnected part of the MDB and as a result accounts for the majority of Australia's water trading, with over 90 per cent of activity occurring within this region.²⁴ The Southern MDB is made up of 14 distinct interstate trading zones. Trade is generally permitted within and between the various trading zones in Victoria, South Australia, Australian Capital Territory²⁵ and New South Wales. Figure 2.1 shows the interstate water trading zones in the southern connected MDB.

²⁴ National Water Commission, *Water markets in Australia; a short history*, 2011, p. 25.

²⁵ Trade is currently only permitted *within* the ACT. See the ACT Government website for more information <www.environment.act.gov.au/water/act_water_resources/water_trading>.

Figure 2.1: Interstate water trading zones in the southern connected MDB



Sources: Topo 250K © Geoscience Australia (2006); interstate water trading zones in the Murray-Darling Basin © ABARE-BRS (2008-09) from data provided by the Murray-Darling Basin Authority, NSW Department of Water and Energy, Murray Irrigation Limited, Victoria Department of Sustainability and Environment and SA Department of Water, Land and Biodiversity Conservation.

2.5 Types of restrictions on trade in water rights

2.5.1 Delivery issues/physical restrictions

Some parts of the southern MDB are almost always interconnected, making trade more feasible in these regions.²⁶ In other areas (more commonly in the northern regions of the MDB) the rivers are intermittently connected, which means trade between the water resources may not always be feasible. There are also more obvious limitations on trade between water resources which are not connected at all. Trades of water access entitlement and water allocation to a different water resource or location are generally prohibited where it is not possible to deliver the water to the new location.

Some areas within the MDB, although hydrologically connected, have capacity constraints which limit the volume of water that can be traded between areas. An example of a capacity constraint is the Barmah Choke on the Murray River.

Box 2.2: The Barmah Choke

The Barmah Choke is an area on the Murray River (between Cobram and Echuca) where the banks of the Murray have limited capacity. When the flow of the Murray reaches about 8500 ML per day downstream of Picnic Point the surrounding Barmah-Millewa forest floods, limiting the amount of water that can be delivered downstream in times of high flow. The constraint has led to a restriction in water trade from areas upstream to downstream of the Barmah-Choke.²⁷

Figure 2.2: Barmah Forest



Barmah Forest © MDBA; Photographer Denise Fowler

²⁶ This is why the southern region of the MDB is often referred to as the 'southern connected system'.

²⁷ MDBA, *Introduction to Barmah Choke Study*, viewed 4 January 2012, <www.mdba.gov.au/programs/tlm/programs_to_deliver/works_measures/barmah-choke-study>.

It is possible for water trade to have an adverse environmental impact, and therefore trading restrictions are sometimes imposed to protect environmental assets. Examples of environmental impacts which may result in a trade being prevented are incidences of algal blooms and higher salinity levels, which are indicators of poor water quality. These impacts can be local, but can also intensify as water flows through the system.²⁸

Hydraulic connectivity also needs to be considered before trade occurs to ensure there is no adverse environmental impact resulting from the trade. Hydraulic connectivity means the ease with which, or the rate at which, groundwater moves within an aquifer, between aquifers or between aquifers and the surface water system.²⁹

2.5.2 Government restrictions

There are other impediments to water trade that are imposed by governments which are not based on considerations of physical connectivity and environmental impacts. In providing its advice to the MDBA on the WTR, the ACCC has recommended that certain types of government imposed restrictions should be removed as they prevent water markets from functioning effectively and distort price signals within water markets. To the extent that government restrictions on trade remain, MDB states need to be able to justify them in the future under the WTR.³⁰

Current government restrictions include:

- **Victorian 4 per cent limit**³¹—Victoria imposes a 4 per cent limit (with some adjustments) on the volume of water shares which can be traded out of certain irrigation areas in northern Victoria each year.³² The limit was originally designed to “address the risk of stranded assets” and “manage the rate of community adjustment as water is traded out of local areas.”³³ Exemptions to the 4 per cent limit are generally granted to water users selling water to the Australian Government if the sale aligns with investment in the Goulburn-Murray Water (GMW) Connections Project (previously known as Northern Victoria Irrigation Renewal Project). In 2011–12 exemptions to the limit were available for the following:
 - trades of water to the Australian Government from areas not identified as a priority for modernisation
 - transfers of water savings from the Australian Government’s On-farm Irrigation Efficiency Program
 - transfers to the Australian Government that were refused in the July 2011 ballot due to the 4 per cent limit and other transfers to the Australian Government arising from tenders it conducted in 2010–11.³⁴

Table 2.1 shows that in 2011–12, the annual 4 per cent limit for high reliability water shares was reached in all irrigation areas except Campaspe and the combined areas of Nyah, Tresco and Woorinen.

28 MDBA fact sheet, *Water Quality and Salinity Management Plan*, 2010, viewed 4 January 2012, <www.mdba.gov.au/services/publications/water-quality-salinity-management-plan>.

29 MDBA, *Proposed Basin Plan*, definitions, p. 6.

30 The Water Trading Rules are discussed in more detail in section 2.5.3.

31 The limit is managed by rules 25, 25A, 25B and 25C of the Trading Rules for Declared Water Systems, under the *Water Act 1989* (Vic).

32 The limit is implemented with reference to the association of water use licenses (which in turn are linked to individual properties) with water shares. Water may only be used under a water share on the property specified in an associated water use licence. This association must be revoked before a different water use licence (or registration) in a different area can be associated with the water share. The 4 per cent limit applies to a volume of water shares where an association with a water use licence to a property within certain irrigation areas has been revoked.

33 Victorian Government, *Northern Region Sustainable Water Strategy*, November 2009, p. 108.

34 Victorian Department of Sustainability and Environment, *Victorian Annual Water Trading Report 2011/12*, October 2012, p. 13.

Table 2.1: Irrigation areas in Victoria and 4 per cent limit for trade in high reliability water shares, 2011–12

Irrigation Area	4 per cent trade out limit (ML)	4 per cent limit reached in 2011–12	Exemption approvals granted (ML)³⁵	Net trade out including exemptions (ML)
Campaspe	23	No	74	74
Central Goulburn	12 031	Yes	27 871	40 183
Loddon Valley	6 199	Yes	10 583	18 381
Murray Valley	8 714	Yes	13 348	21 990
Nyah, Tresco and Woorinen	1 097	No	0	–901
Robinvale, Red Cliffs, Merbein and Mildura	5 599	Yes	1 340	6 919
Rochester	5 806	Yes	12 644	10 957
Shepparton	5 862	Yes	6 249	12 335
Torrumbarry	10 512	Yes	14 962	25 374
TOTAL	55 842	n/a	87 071	135 311

Source: *Victorian Annual Water Trading Report 2011/12*

Approximately 135 GL of high reliability water shares were traded out of irrigation areas (net), including 87 GL of exemptions. Notably, in most irrigation areas the volume of water traded out under an exemption was markedly higher than the volume set under the 4 per cent limit. However the benefits of trade under the exemptions were not accessible to market participants other than the Australian Government.

- NSW Government restrictions on trade of water access entitlements to recover environmental water**—On 23 September 2009 a memorandum of understanding (MoU) between the NSW Government and the Australian Government was signed to limit the total amount of water the Australian Government can purchase from NSW for the environment. The limit was 890 GL of general security entitlement.³⁶ The MoU was implemented in response to NSW Government concerns that the water buyback was being unfairly biased towards NSW water users. On 15 January 2013, the NSW Government imposed a new limit on water purchased for environmental purposes. The new limit, with some exceptions,³⁷ restricts trades of surface water access entitlements in the NSW MDB, where the traded water will be used for environmental purposes, to 3 per cent of current extraction limits per valley per decade. The NSW Government has stated that trade is being restricted to enable “a more sustainable rate of purchase which will provide much needed breathing space and time for rural economies to adjust.”³⁸ It appears that this restriction may also inhibit the trade of held environmental water between different users (for example, between environmental water holders).

35 Exemptions to the 4 per cent limit are generally granted to water users selling water to the Australian Government if the sale aligns with investment in the GMW Connections Project.

36 SEWPAC, *Memorandum of Understanding in relation to water for the environment*, 2009, viewed 30 November 2012, <www.environment.gov.au/water/publications/mdb/pubs/nsw-mou.pdf>.

37 NSW Office for Water, *Three percent limit on water licence purchases for environmental purposes in the NSW Murray-Darling Basin*, viewed 30 January 2013, <www.water.nsw.gov.au/Water-management/Law-and-policy/National-reforms/Murray-Darling-Basin-Plan/Three-percent-limit>. “The limit also does not apply to environmental entitlements created from water savings works. The transfer of water entitlement where water savings have been generated by investment in water supply or water use infrastructure, including on-farm, within supply channels and in river systems, will not be limited provided the [NSW] Minister is satisfied the savings are equivalent to the entitlement being transferred. Agreed strategic purchases may also be exempted”.

38 Katrina Hodgkinson MP, Media Release, *NSW limits water buybacks for environmental purposes*, 15 January 2013, <<http://www.water.nsw.gov.au/About-us/Ministerial-media-releases/Ministerial-releases>>.

- Suspension of allocation trade**—In the autumns of 2011 and 2012, the Victorian Government introduced suspensions on water allocation trading from NSW into Victoria and from the Goulburn, Campaspe and Loddon systems to the Victorian Murray system, or interstate. The suspensions were introduced to protect the following season's water allocations to owners of high reliability water shares.³⁹ In response to this, the NSW Government introduced a suspension on water allocation trades from the NSW Murray and Lower Darling Rivers into South Australia from 1 April to 30 June 2012. The NSW Government's rationale was to protect the rights of NSW water users.⁴⁰ The South Australian Government subsequently introduced a suspension on water allocation trade from 23 March to 31 March 2012, again to protect the property rights on water access entitlements holders, this time in South Australia.⁴¹ Box 2.3 below provides further details.

39 Department of Sustainability and Environment, *news report 19 March 2012*, 2012, viewed 7 January 2013, <waterregister.vic.gov.au/Public/News.aspx>.

40 NSW Office for Water, *media release 22 March 2012*, 2012, viewed 30 November 2012, <www.water.nsw.gov.au/About-us/Media-releases/Media-releases-2012>.

41 Government of South Australia, *SA Government Announces Immediate Suspension of Water Trade from NSW*, 2012, viewed 30 November 2012, <www.waterforgood.sa.gov.au/2012/03/sa-government-announces-immediate-suspension-of-water-trade-from-nsw/>.

Box 2.3: Suspensions of water allocation trading in 2011 and 2012

In April 2011 and March 2012, the Victorian Government suspended water allocation trading from NSW into Victoria and from the Goulburn, Campaspe and Loddon systems to the Victorian Murray system, or interstate.

The situation that led to the decision to suspend allocation trading was the culmination of:

- high levels of carryover
- subsequent wet conditions, and
- limited unused storage in the Victorian share of the Hume Dam.⁴²

These factors meant that trade into the Victorian share of the Hume Dam would ‘spill’ internally into the NSW share of Hume Dam or into the river, thereby creating a liability for Victoria to deliver water it does not hold.

In response to the Victorian suspension in 2012, the NSW Government suspended water allocation trades from the NSW Murray and Lower Darling Rivers into South Australia from 1 April to 30 June 2012. This was to prevent possible obligations on NSW to deliver significant amounts of water to South Australia in the following year. This could result in lower water availability for NSW users if undelivered water traded to South Australia displaced inflows that would ordinarily be allocated to NSW users.⁴³

In response to both NSW and Victoria’s suspensions, the South Australian Government also suspended water allocation trade from NSW from 23 March to 31 March 2012. The suspension was implemented “to protect South Australia’s entitlement flow in the coming water year.”⁴⁴

Such ad-hoc suspensions on water allocation trade reduce confidence in the water market and limit the transparency of information for users. To minimise the risk of ‘ad hoc’ trade suspensions, the Victorian Government changed its carryover policy and introduced permanent trading controls in November 2012.⁴⁵ From 10 January 2013, trade will not be allowed into Victoria from NSW if the risk of spill from Victoria’s share of dams in the rest of the season is more than 50 per cent, or if net trade from NSW in the season is more than 200 GL. The Victorian Government considers that these limits avoid the need for future sudden trade suspensions, and provide transparency about trading conditions to the market.⁴⁶ However, these measures by the Victorian Government do not address the underlying issues in water accounting that triggered the suspensions. These underlying issues are being discussed by the MDBA, state water authorities, the Australian Government and the ACCC as part of the review of Schedule D (and its protocols) to the MDBA Agreement. The ACCC supports current discussions on reforms to better align the obligations on states to deliver traded water with the amount of water they have access to in storages.

Various trading restrictions are currently in place in the MDB. While the WTR, which come into effect on 1 July 2014, aim to remove barriers to trade they will not prevent all types of trading restrictions. Restrictions that are in place after 1 July 2014 will be individually assessed by the MDBA for consistency with the WTR. Where a restriction is inconsistent with the WTR, the restriction will be invalid unless it forms part of a transitional or interim water resource plan.⁴⁷

42 National Water Commission, Understanding the Victorian decision to suspend intervally water allocation trading 2010–11, 2011, p. 1.

43 NSW Office for Water, media release 22 March 2012, viewed 30 November 2012, <www.water.nsw.gov.au/About-us/Media-releases/Media-releases-2012>.

44 Government of South Australia, SA Government Announces Immediate Suspension of Water Trade from NSW, 2012, viewed 30 November 2012, <www.waterforgood.sa.gov.au/2012/03/sa-government-announces-immediate-suspension-of-water-trade-from-nsw/>.

45 Department of Sustainability and Environment, Victorian water register, 2012, viewed 30 November 2012, <waterregister.vic.gov.au/Public/RulesMaps.aspx>, see also <www.premier.vic.gov.au/media-centre/media-releases/5437-new-carryover-rules-for-victorian-water-holders.html>.

46 Department of Sustainability and Environment, Victorian water register, 2012, viewed 10 January 2013, <waterregister.vic.gov.au/Public/Documents/Victoria%20refines%20controls%20on%20allocation%20trade%20between%20valleys_November2012.pdf>.

47 See section 245 of the Act.

2.6 Future water market reform

The ACCC considers that there are still significant benefits to be had from water reform, even once the Basin Plan and its WTRs are in place. Many of these areas will be challenging and will require co-ordinated action from the Commonwealth and states agencies, IIOs and water users.

One key area for reform, recognised in the ACCC's advice to the MDBA on the WTR, is the development of new and alternative trading mechanisms, particularly in relation to the following:

- improving mechanisms for interstate and inter-valley trade, for example by investigating tagged allocation trading and establishing rights for water access entitlement holders to hold capacity shares in storage facilities. Improving mechanisms for wholesale water accounting and water sharing arrangements should also be considered.
- allowing trade in and between unregulated systems, and between unregulated systems and regulated systems.
- exploring mechanisms for trade between areas with limited connectivity.

Two key opportunities for reform in these areas over the short to medium term are:

Reviews of the Murray-Darling Basin Agreement

The MDBA is required to undertake various reviews of the Murray-Darling Basin Agreement (the Agreement) and its Schedules and protocols, both to provide ongoing feedback on the operation of the Agreement and to ensure its consistency with the Basin Plan. Of particular relevance is the review of Schedule D of the Agreement, which relates to interstate and intervalley trade. This review will evaluate the current mechanisms for trade contained in the Schedule, and recommend where improvements can be made, particularly about late season water allocation trade. The review will also give consideration to accounting for delivery losses, which is key to developing new trading mechanisms for trade in and between unregulated systems, and between areas with limited connectivity.

Extending opportunities for water shepherding to irrigators

The WTR currently contain an exemption from certain rules for restrictions on trade that form part of, or are made pursuant to, certain inter-governmental agreements. In effect, the exemption is to ensure that the WTR do not impact on certain arrangements for shepherding water for the environment.⁴⁸ While the development of such shepherding arrangements for held environmental water will likely assist the Commonwealth Environmental Water Holder to contribute to the environmental objectives of the Basin Plan, further benefits could be obtained if shepherding were to be made available for non-environmental water users. The ACCC has long been supportive of water shepherding, and encourages the development of the water shepherding methodology to cater for all users. This is consistent with the ACCC's position that water held by environmental water holders should be treated no differently to water held by any other person.⁴⁹

⁴⁸ At present, the exemption facilitates arrangements under the *Memorandum of understanding in relation to shepherding of water for the environment* (September 2009) between New South Wales and the Commonwealth that was finalised in July 2010, available at <www.environment.gov.au>. Under these arrangements, water shepherding is only available for held environmental water, and the exemption provides that this can occur without being inconsistent with the water trading rules. Also see the Basin Plan explanatory statement (2012), p. 123.

⁴⁹ ACCC (2010) Water trading rules – Final Advice, p. 53 [Recommendation 3-F].

2.7 Water trade in 2011-12

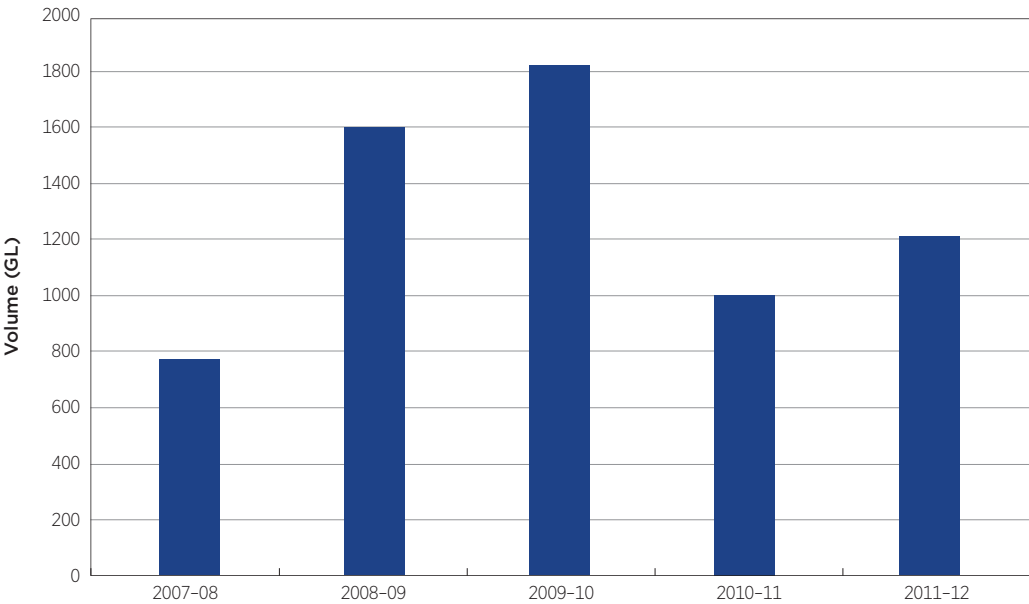
This section provides a brief overview of trade in water access entitlements and water allocations in the MDB, and the factors influencing such trades in 2011-12.

Water trading in the MDB has been occurring since the early 1980s. Reforms in the 1990s, including a cap on extractions and the unbundling of water and land rights, saw the volume of water allocation trade increase four-fold. In the mid 2000s water access entitlement and water allocation trade again increased significantly due in part to the drought and the Australian Government's *Water for the Future Initiative*.⁵⁰

2.7.1 Trade in water access entitlements in 2011-12

Trade of water access entitlements totalled 1219 GL in 2011-12, an increase of 22 per cent from the previous year. However, this figure is still well below the peak volume of entitlement trade of 1818 GL in 2009-10. Chart 2.1 shows the volume of trade in water access entitlements in the MDB over the past five years.

Chart 2.1: Trade in water access entitlements in the MDB, 2007-08 to 2011-12

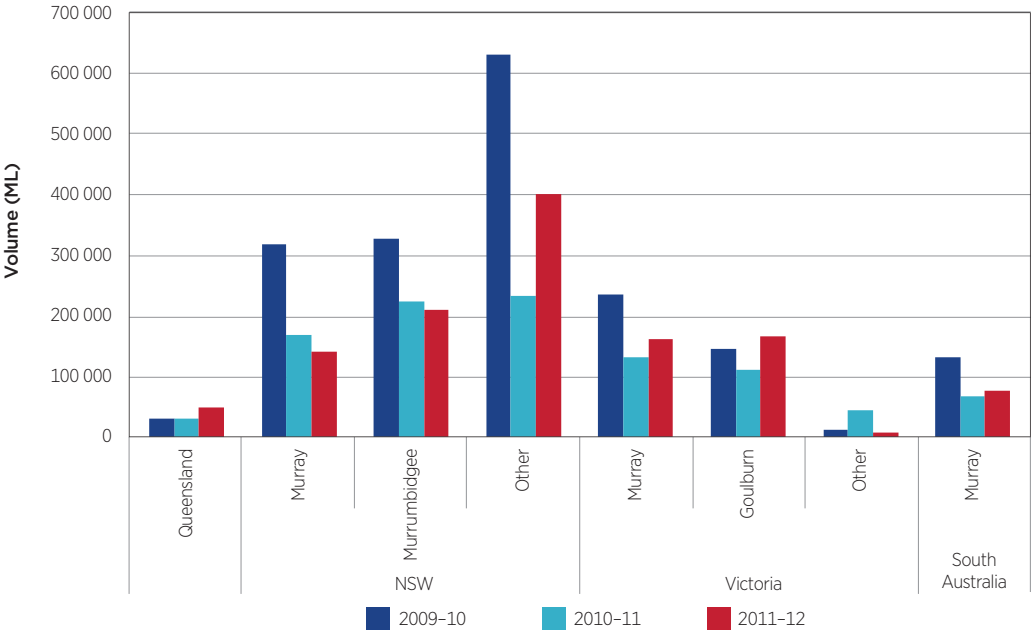


Source: National Water Commission

Chart 2.2 shows that the 22 per cent increase in trade in 2011-12 consisted of increases in Northern NSW (NSW MDB Other), Victorian Murray, Goulburn, Queensland and South Australia.

⁵⁰ MDBA, 2011.

Chart 2.2: Trade in water access entitlements by MDB systems, 2009–10 to 2011–12

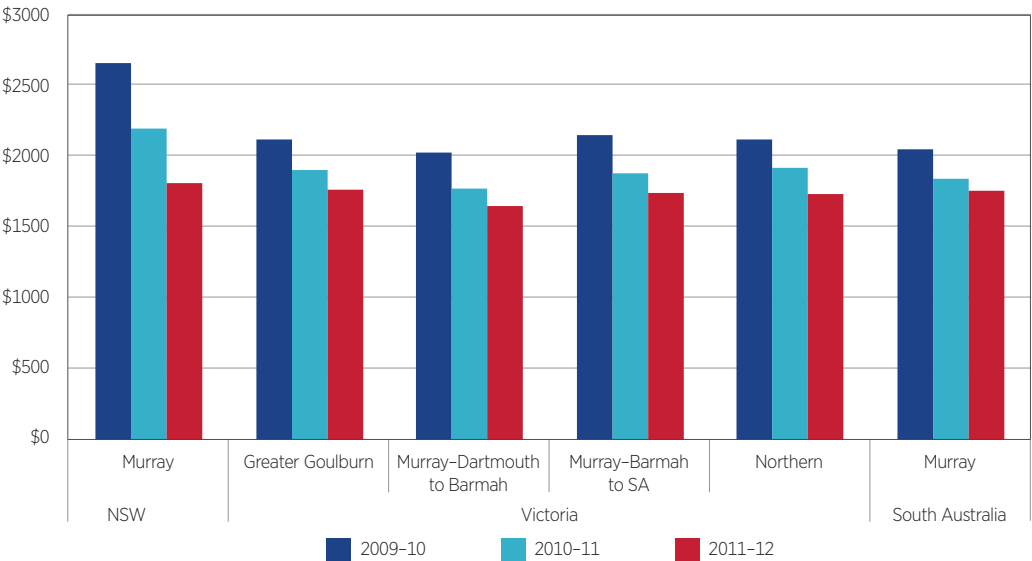


Source: National Water Commission

This increase consists of a 41 per cent increase in government purchases and a 18 per cent increase in trading between non-government water access entitlement holders.

Chart 2.3 shows the decline in the price of water access entitlements for high security entitlements in the MDB over the past three years.

Chart 2.3: Prices for high security water access entitlements, 2009–10 to 2011–12 (\$/ML)



Source: National Water Commission

Prices for both high and general security water access entitlements have generally declined over the three years from 2009–10 to 2011–12 in response to increased water availability. However, the decline is not as significant as that experienced in the water allocation market (see Box 2.5), reflecting the longer term nature of water access entitlements.

Factors influencing trade in water access entitlements in 2011–12

The Australian Government has been a significant participant in the market for water access entitlements over the past four years. The Australian Government's Water for the Future initiative has been acquiring water access entitlements from irrigators. The *Sustainable Rural Water Use and Infrastructure Program* (SRWUIP) acquires water through infrastructure investment and the *Restoring the Balance in the MDB* program (the water buyback) purchases water through individual tenders. These programs are designed to bridge the gap between the Sustainable Diversion Limit set in the Basin Plan and historic consumptive water use. As at 30 June 2012 the Australian Government has recovered 1342 GL of water for the environment.⁵¹

51 Reporting on the Restoring the Balance and SRWUIP includes both a volume of water secured under contracts, and a volume of water secured under contract and also registered. The registering of secured water can occur in the year following the exchange of a contract. In this report, when referring to water obtained under the SRWUIP and the water buyback, the ACCC is using volumes of water that are registered.

Box 2.4: Commonwealth entitlement purchases for the environment

Restoring the Balance Program

Often referred to as the water buyback, this program has committed \$3.1 billion, plus \$310 million per year from 2014–15, to enable water to be purchased for the environment.⁵²

The Inquiry into the impact of the Guide to the Murray-Darling Basin Plan in Regional Australia (the Windsor Inquiry) stated that government purchases through the water buyback helped many irrigators maintain the liquidity of their businesses, but that this needs to be balanced against the loss of irrigation farming to the community.⁵³

The water buyback has also been associated with a claimed ‘Swiss cheese effect’ in some irrigation districts.⁵⁴ The ‘Swiss cheese’ effect has been described by a House of Representatives Standing Committee⁵⁵ as “the creation of holes in irrigation areas, reducing the efficiency of delivering water down channels, stranding assets and increasing the maintenance costs and delivery fees for entitlement holders who remain”.⁵⁶ Although such ‘holes’ appear whenever water is sold and delivery is terminated, including to other irrigators, the Windsor Inquiry was primarily concerned with sales to the Australian Government.

In response to the recommendations from the Windsor Inquiry, the Australian Government has stated that it will:

- prioritise spending on infrastructure investment
- integrate water purchases with infrastructure reconfiguration
- not consider general tenders for water buyback in the Southern connected MDB in 2012.⁵⁷

Sustainable Rural Water Use and Infrastructure Program

A major component of the Water for the Future initiative is the \$5.8 billion SRWUIP, of which \$4.8 billion is allocated to upgrading irrigation infrastructure in the MDB.⁵⁸

The program includes \$650 million for the Private Irrigation Infrastructure Operators Program (PIIOP) in New South Wales and up to \$110 million for the Private Irrigation Infrastructure Program (PIIP) in South Australia. Projects under these programs are funded for activities to improve the efficiency of irrigation systems through measures such as modernising irrigation channels, upgrading or installing pumps and pipeline systems and constructing secure stock and domestic water delivery systems. More information on the PIIOP is provided in Chapter 5.

The SRWUIP also includes an On-Farm Irrigation Efficiency Program to help irrigators in the Lachlan and southern connected MDB to improve the efficiency and productivity of their on-farm irrigation.

In October 2012, the Australian Government announced an additional \$1.8 billion of funding over 10 years from 2014–15 for infrastructure projects to assist in obtaining an additional 450 GL of water for the environment under the Basin Plan.

52 SEWPAC, *Restoring the Balance in the Murray-Darling Basin*, 2013, viewed 4 February 2013, <www.environment.gov.au/water/policy-programs/entitlement-purchasing/index.html>.

53 Parliament of Australia, *Of Drought and Flooding Rains: Inquiry into the impact of the Guide to the Murray-Darling Basin Plan*, 2011, p. 103.

54 *ibid.*, p. 101.

55 House of Representatives Standing Committee on Regional Australia Inquiry into the impact of the Guide to the Murray-Darling Basin Plan: Of drought and flooding rains.

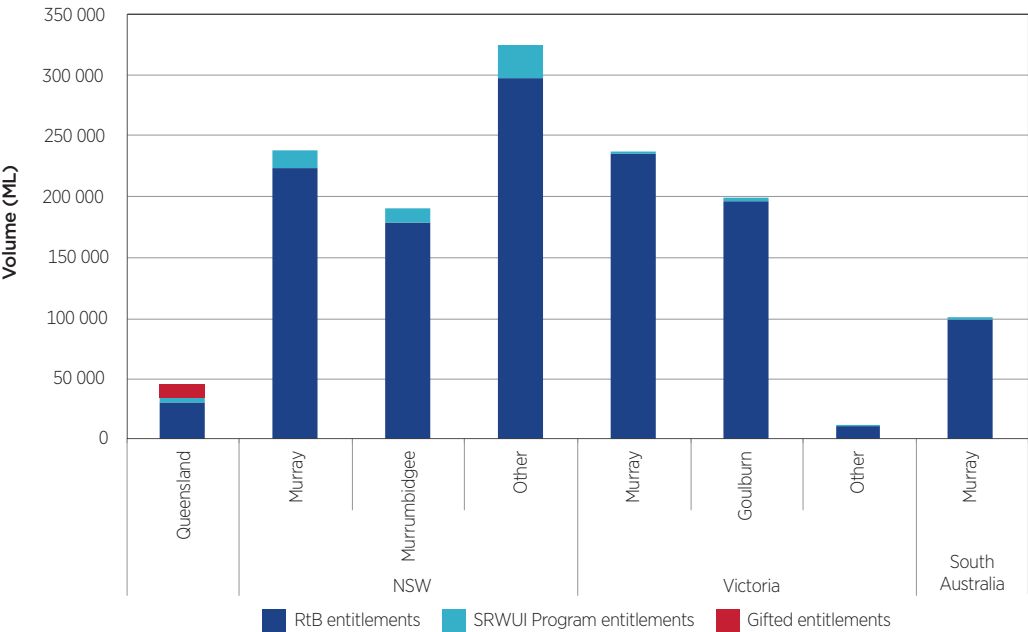
56 *Ibid.*, p 104.

57 SEWPAC, *Restoring the balance in the Murray-Darling Basin*, 2013, viewed 10 January 2013, <www.environment.gov.au/water/policy-programs/entitlement-purchasing/index.html#future>.

58 SEWPAC, *Programs in the Murray-Darling Basin*, 2011, viewed 23 January 2013, <www.environment.gov.au/water/basin-plan/programs.html>.

Chart 2.4 shows the total volume of water entitlements registered to the Commonwealth as at 30 June 2012. The chart shows that entitlements purchased under the buyback so far represent the vast majority of registrations. Around 83 per cent of entitlements registered under the SRWUIP have been from irrigation areas in NSW.

Chart 2.4: Volume of entitlements registered to the Commonwealth in the MDB, as at 30 June 2012

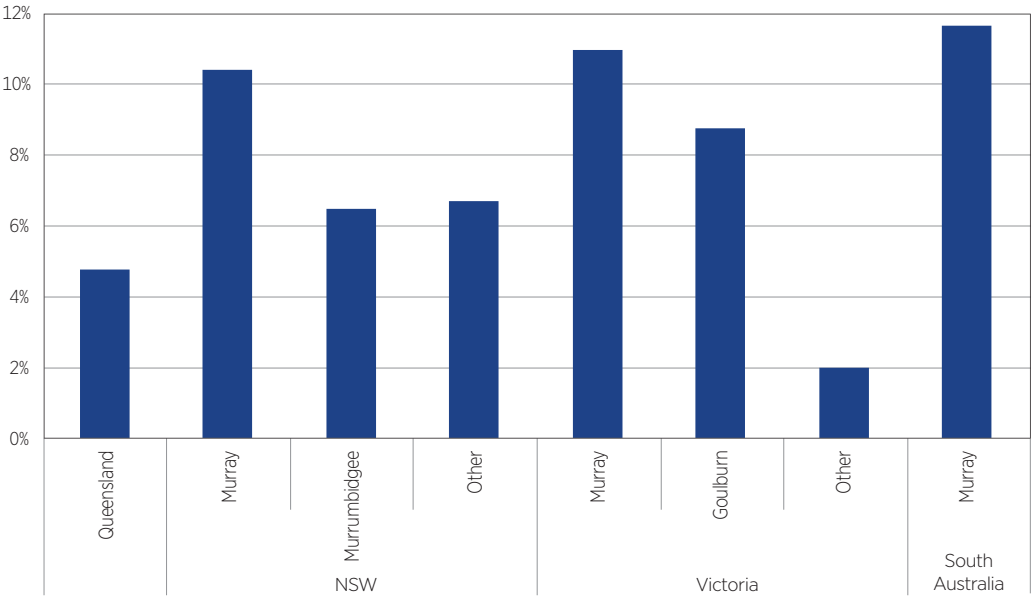


Notes: RtB means the *Restoring the Balance* program (the ‘water buyback’).

Source: National Water Commission

Chart 2.5 shows that Australian Government registrations in aggregate represent approximately 10 per cent of water access entitlements in the NSW Murray, 11 per cent in the Victorian Murray and nearly 12 per cent in the South Australian Murray.

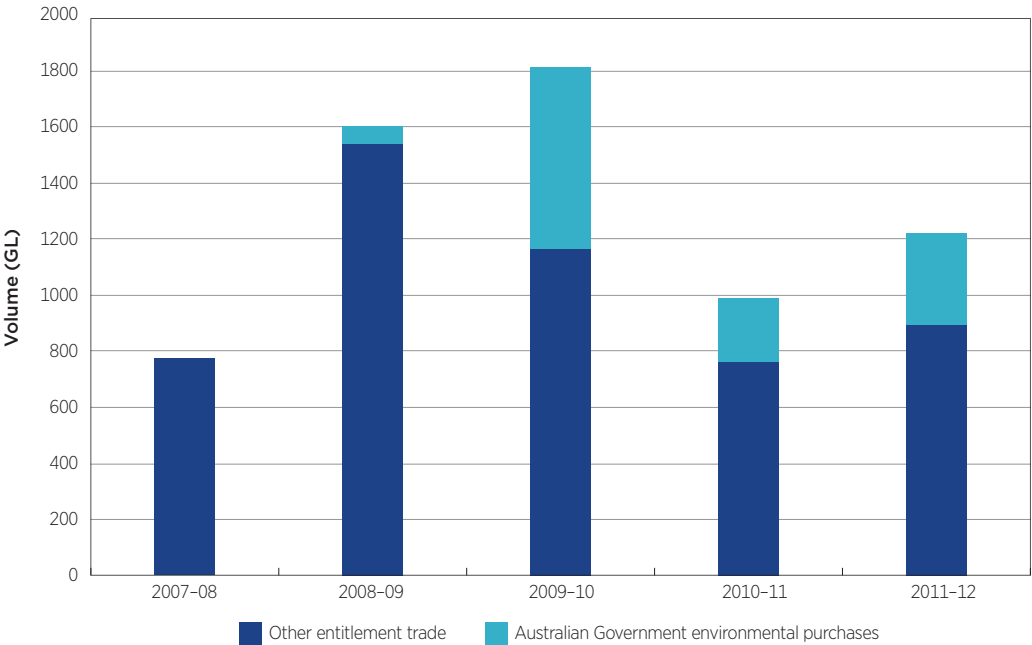
Chart 2.5: Australian Government registrations at 30 June 2012 as a proportion of water access entitlements in the MDB



Source: National Water Commission

Since 2009 the Australian Government has been a significant participant in the market for water access entitlements. Chart 2.6 shows that purchases under the water buyback have varied from being 36 per cent of entitlement trade in 2009-10 to 27 per cent of entitlement trade in 2011-12.

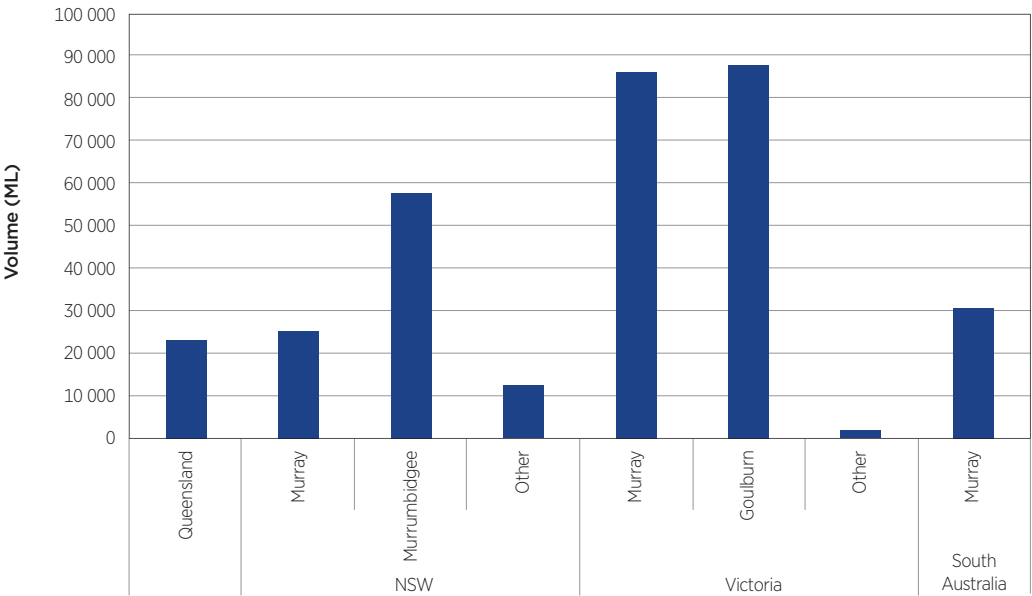
Chart 2.6: Volume of trade in water access entitlements by source, 2007-08 to 2011-12



Source: National Water Commission

In 2011-12, the Australian Government purchased approximately 324 GL of water access entitlements under the water buyback. This is a 41 per cent increase from 2010-11. Purchases of water access entitlements occurred in all states, with most purchases occurring in Victoria (175 GL), followed by NSW, South Australia and Queensland. Chart 2.7 shows the volume of Australian Government water purchases in 2011-12 under the water buyback.

Chart 2.7: Volume of water access entitlements purchased by the Australian Government under the Restoring the Balance program in 2011-12

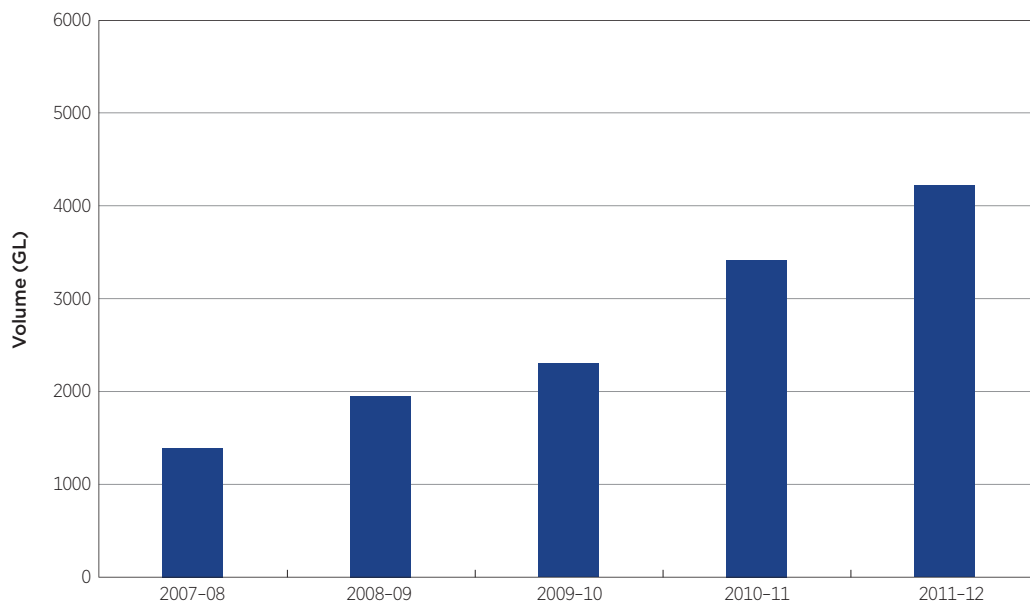


Source: National Water Commission

2.7.2 Trade in water allocations in 2011-12

In 2011-12 trades in water allocations totalled 4216 GL, a 23 per cent increase from 2010-11. Chart 2.8 shows the volume of trade in water allocations from 2007-08 to 2011-12.

Chart 2.8: Trade in water allocations in the MDB, 2007-08 to 2011-12



Source: National Water Commission

Chart 2.9 shows that the increase in allocation trades in 2011-12 reflected noticeable increases in allocation trades in Northern NSW (NSW MDB Other)⁵⁹, Queensland and the NSW Murray Valley. In 2011-12 there were decreases in allocation trades in Victoria's Goulburn Valley and NSW's Murrumbidgee Valley.

⁵⁹ NSW MDB Other consists of all valleys in NSW other than Murrumbidgee and Murray.

Chart 2.9: Change in the volume of water allocation trade between 2010-11 and 2011-12

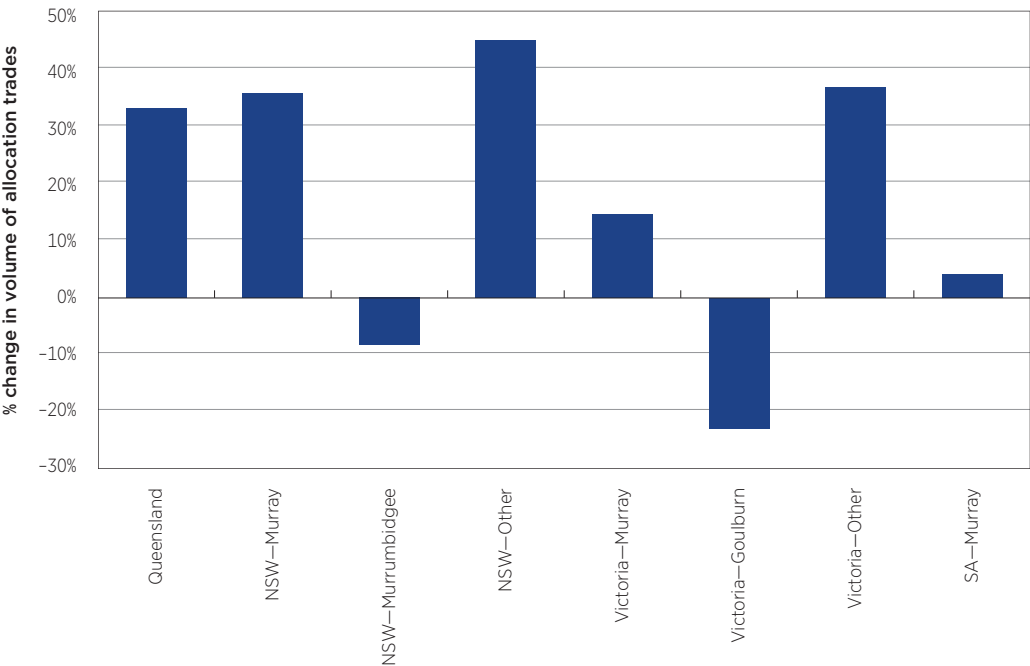


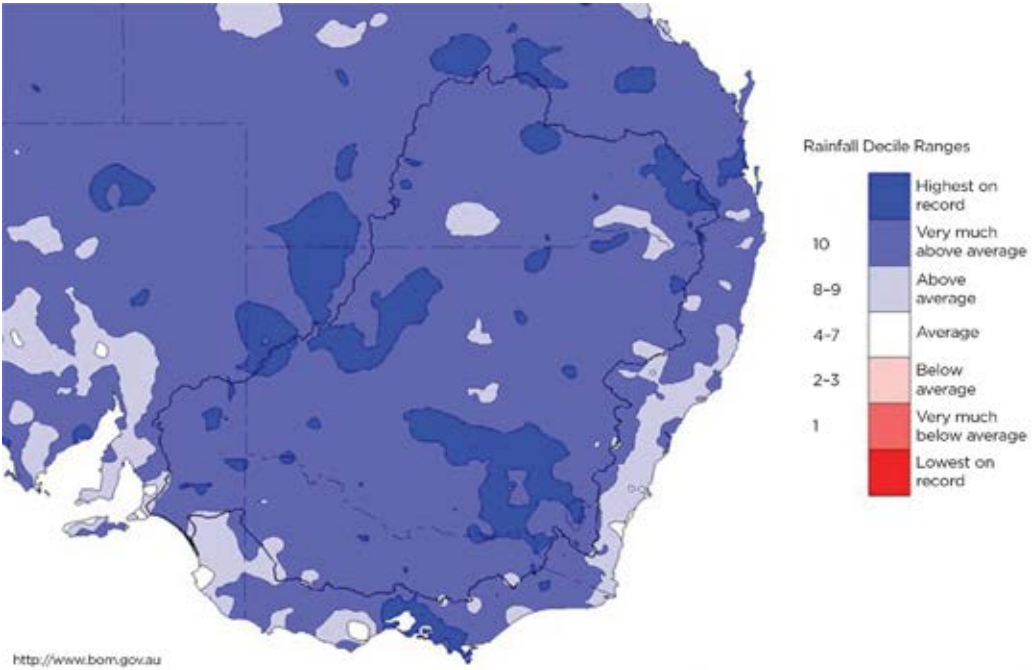
Chart refers to the change in trade intensity, which includes internal trades plus inbound and outbound trades.
Source: National Water Commission

Factors influencing trade in water allocations in 2011-12

Water allocation trade is most responsive to seasonal conditions. Rainfall was above average from October 2011 to March 2012, with the 2011 calendar year being the second wettest on record (the wettest year on record in the MDB was 2010).⁶⁰ Figure 2.3 shows rainfall deciles for the MDB from 1 July 2010 to 30 June 2012.

60 Australian Bureau of Meteorology, *Record rainfall and widespread flooding*, 2012, viewed 4 January 2013, <www.bom.gov.au/climate/enso/history/ln-2010-12/rainfall-flooding.shtml>.

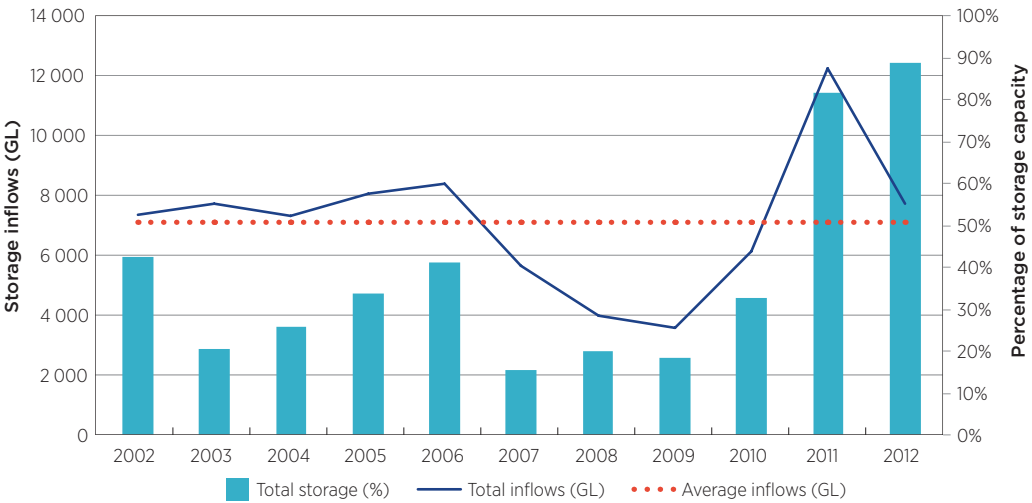
Figure 2.3: MDB rainfall deciles, 1 July 2010 to 30 June 2012



Source: Australian Bureau of Meteorology

Heavy rainfall during 2010–11 and the first part of 2012 created significant inflows into the MDB's major dams. Chart 2.10 shows that at 30 June 2012 storage levels for major dams in the southern MDB were at their highest level in the last decade.

Chart 2.10: Storage levels and inflows for major dams in the southern MDB, 2002 to 2012



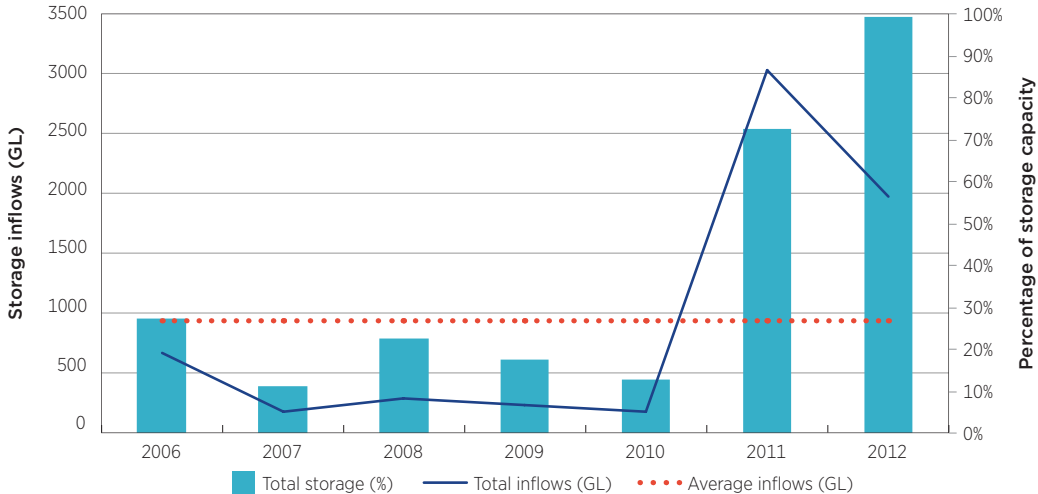
Note: Major dams are Dartmouth, Eildon, Hume, Blowering and Lake Victoria.⁶¹ Storage levels are as at 30 June each year.

Source: National Water Commission

Chart 2.11 shows storage levels and inflows in the northern MDB from 2006 to 2012.

61 Inflow data for Lake Victoria was unavailable for 2012.

Chart 2.11: Storage levels and inflows for selected dams in the northern MDB, 2006 to 2012



Note: Dams are Burrendong, Copeton and Glenlyon. Dams were selected based on data availability and are not necessarily the largest dams in the northern MDB. Storage levels are as at 30 June each year.

Source: National Water Commission

The high storage levels enabled early water allocations in 2011-12 for the GMW valleys, the Murrumbidgee and NSW Murray to be higher than initial allocations in 2010-11.⁶² Further, the volume of water delivered through the IIO networks increased by 97 per cent in 2011-12 from 2010-11.

In general, when there is more water available (or allocated) in a season, the price of water in the allocations market decreases. When there is less water available, the price increases. To illustrate, the average price for water allocations in the Southern connected MDB was approximately \$18/ML in 2011-12, down from an average of \$32/ML in 2010-11.⁶³ These prices compare starkly to the price of water allocations during the recent drought, when prices peaked in 2007-08 at over \$1000/ML in some areas.⁶⁴

The 23 per cent increase in allocation trades, shown in Chart 2.8, can be attributed to carryover arrangements, environmental trade and increased water availability. Increased water availability, favourable commodity prices and lower water prices encourages growers of annual crops such as cotton and rice to buy large volumes of water and increase their production.⁶⁵ Box 2.5 discusses this in more detail.

62 See announcements from July through the December in 2010-11 and 2011-12 on the GMW website and NSW Office of Water, < http://www.g-mwater.com.au/news/media-releases/2010_media_releases/.html>, <<http://www.water.nsw.gov.au/Water-management/Water-availability/Water-allocations/Available-water-determinations-2010-11>>.

63 National Water Commission, Australian water markets report 2010-11, 2011, p. 34.

64 National Water Commission, *Australian water markets: trends and drivers 2007-08 to 2010-11*, 2011, p. 26.

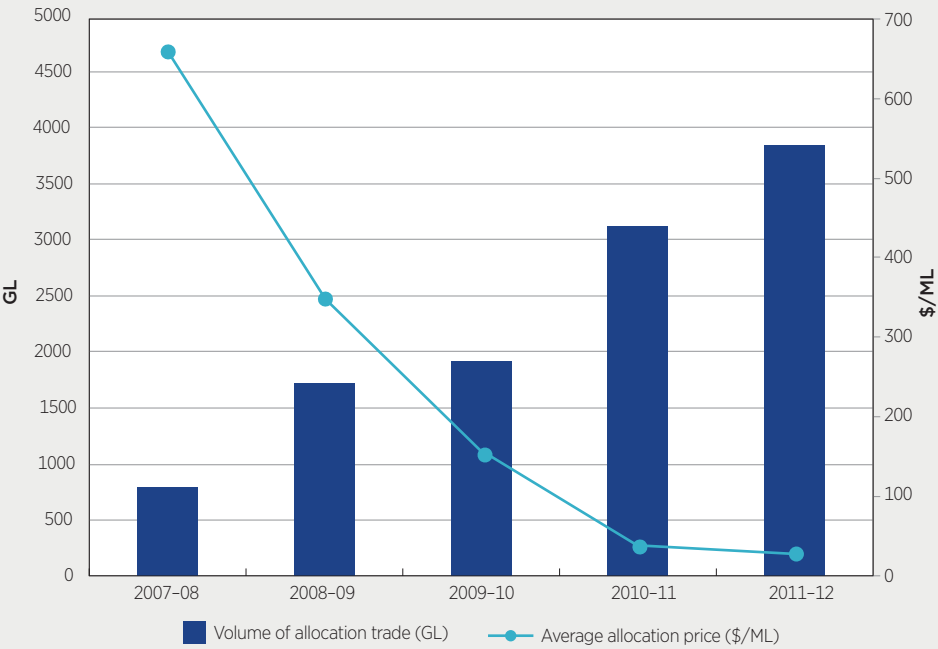
65 A significant amount of environmental water was also traded late in the 2011-12 season.

Box 2.5: Water allocation prices, allocation levels and rice production in southern NSW

Water allocation trading provides an efficient mechanism for water users to respond to seasonal conditions.

During 2011–12 water was abundant in the MDB. Allocations were high in most areas of the MDB, and as a result the price of water allocations was very low, averaging \$18/ML. When the price of water is low, the quantity of water allocations traded increases. Chart 2.12 shows this relationship over a five year period.

Chart 2.12: Volume of water allocation trade and average prices of water allocations in the southern MDB, 2007–08 to 2011–12

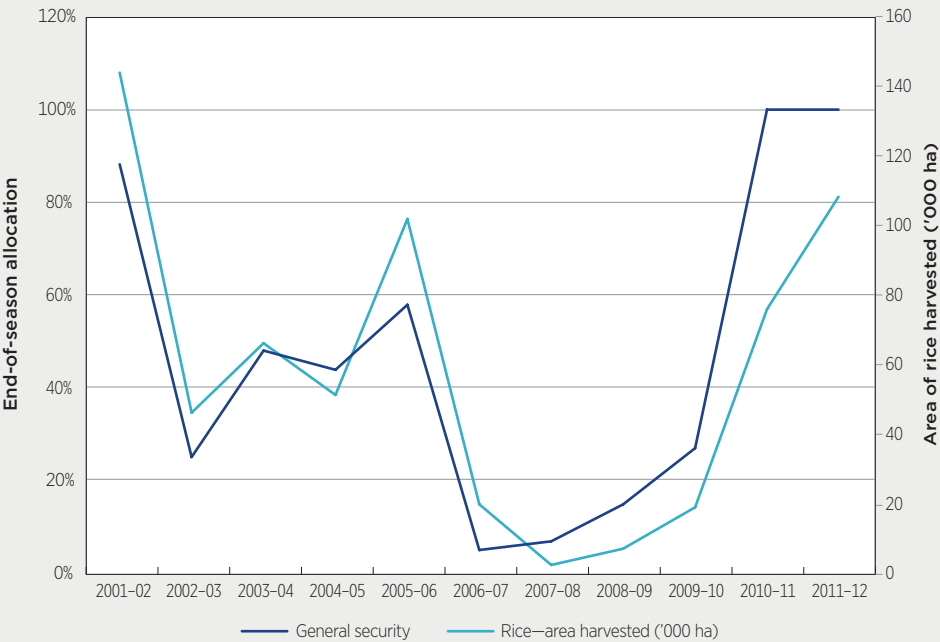


Source: National Water Commission, Australian Water Markets: Trends and Drivers 2007–08 to 2010–11, December 2011 and Department of Agriculture, Fisheries and Forestry, Australian Crop Report: December No. 164 2012, 4 December 2012; Department of Agriculture, Fisheries and Forestry, Agricultural Commodities Statistics 2011, 1 December 2011.

Box 2.5 (continued)

Growers of annual crops, such as rice and cotton, will often purchase water allocations in wet years when the price of water is low to supplement their general security entitlements and expand production. In 2011-12 water allocation trade in the NSW Murray (a major rice growing area) increased by 36 per cent. Further, the volume of water delivered through Murray Irrigation Limited's network increased by 126 per cent in 2011-12. The high water availability and low price of allocations enabled rice growers to increase the planted area of rice crops by 46 per cent in 2011-12.⁶⁶ Chart 2.13 shows, over a 10 year period, the strong relationship between water availability and rice harvesting in Southern NSW.

Chart 2.13: Area of rice harvested and end of season allocations in the southern MDB, 2001-02 to 2011-12



Source: National Water Commission, Australian Water Markets Report 2007-08, 2008-09, 2009-10, 2010-11, and Australian Water Markets: Trends and Drivers 2007-08 to 2010-11, December 2011

66 ABARES, *Australian Crop Report*, June 2012.

Chapter 3.

Transformations and terminations in 2011-12

This chapter discusses transformations of irrigation rights, terminations of water delivery rights and the factors driving transformations and terminations in 2011-12.

Key Points

- The volume of transformations of irrigation rights into water access entitlements in the MDB decreased in 2011-12 compared to 2010-11.
- In 2011-12 irrigation infrastructure operators (IIOs) in NSW reported that the median time to process a transformation application was 41 days. In SA the median time to process a transformation application was 16 days. IIO processing times can lengthen when there are high volumes of applications and complex IIO administrative processes. The time it takes for state government authorities to process applications improved in 2011-12.
- The volume of terminations of water delivery rights in the MDB increased in 2011-12 compared to 2010-11.
- Termination fees levied by IIOs have been increasing in line with increases in fixed network access charges.
- In 2011-12, 80 per cent of irrigators who transformed an irrigation right did not terminate any delivery rights immediately after transformation. This shows that transformation is being used mainly to enable water trade rather than for the purpose of existing irrigation farming.

3.1 Transformation of irrigation rights in 2011-12

Transformation is the process whereby an irrigator transforms their entitlement to water under an irrigation right into a water access entitlement. As discussed in Chapter 2, many irrigators who are members of IIOs in NSW and SA must transform an irrigation right into a water access entitlement in order to sell a water access entitlement to a buyer who is not a member of the same IIO. Irrigators in Victoria, the ACT and Queensland already hold their own statutory water access entitlements.

In 2011-12 there were 320 transformations relating to approximately 76 GL of irrigation rights. The annual volume of irrigation rights transformed has halved since 2009-10.

Table 3.1: Number and volume of transformations, 2009-10 to 2011-12

Year	Number of transformations	Volume of irrigation right transformed
2009-10	480	157 GL
2010-11	318	102 GL
2011-12	320	76 GL

Source: ACCC from data provided by reporting IIOs

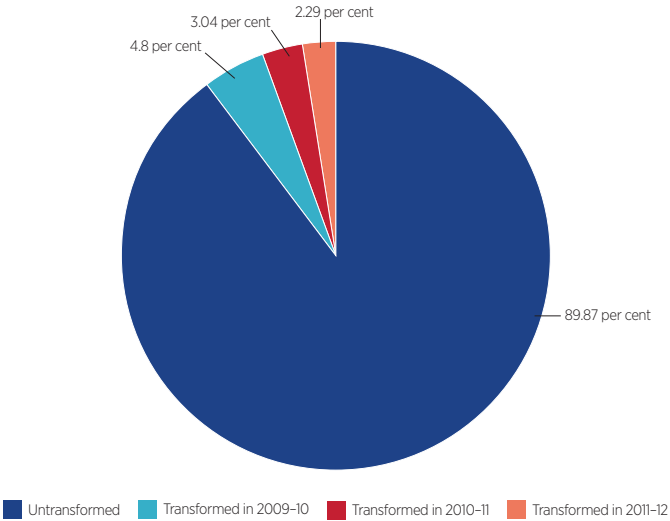
This decrease is predominately due to the cessation of the Small Block Irrigators Exit Grant and a reduction in entitlement purchases under the water buyback.⁶⁷

Chart 3.1 shows that just over 10 per cent of irrigation rights held against reporting IIOs have been transformed since 1 July 2009, with most being transformed in 2009-10, which was the year the Water Market Rules started. This was also the year the water buyback and Small Block Irrigators Exit Grant programs were most active in the southern connected MDB.⁶⁸ With just over 10 per cent of irrigation rights transformed and able to be traded, at present without transformation most water in NSW and South Australia cannot be permanently traded outside of an IIO's network.

67 The Small Block Irrigators Exit Grant was announced in September 2007 and was designed to assist small block irrigators, particularly horticultural producers in the MDB, to leave irrigation while remaining on their farms. Applications for the Small Block Irrigators Exit Grant closed on 30 June 2009. See <www.climatechange.gov.au/minister/previous/wong/2008/media-releases/November/mr20081102.aspx>.

68 National Water Commission, *Australian water markets: trends and drivers 2007-08 to 2010-11*, 2011, p. 50.

Chart 3.1: Transformation of irrigation rights in reporting entities since July 2009



Source: ACCC from data provided by reporting IIOs

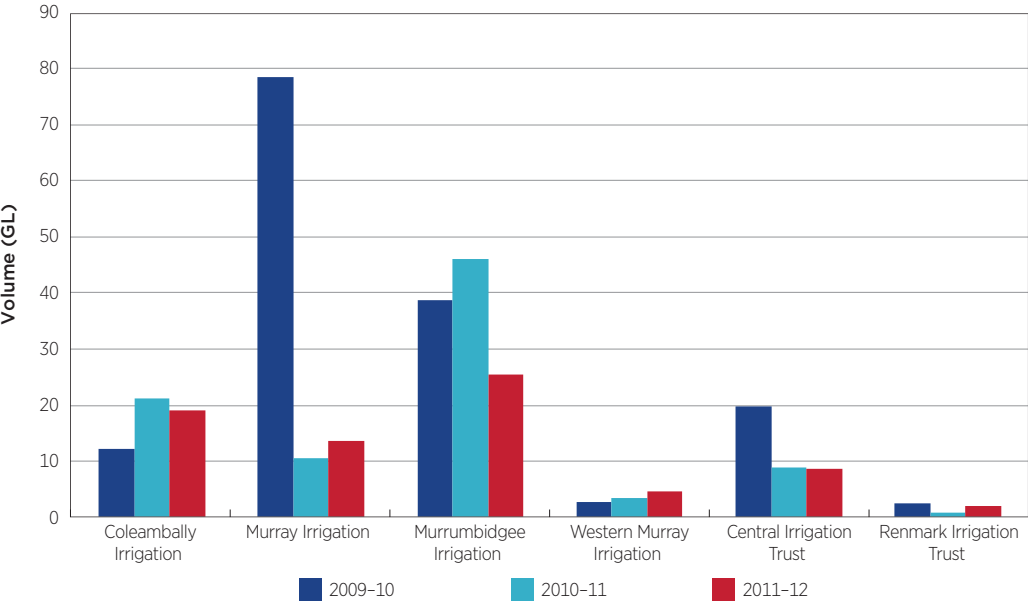
Figure 3.1 illustrates the location of transformations as a percentage of irrigation rights in large IIOs in the MDB. These IIOs are situated in the southern MDB. Central Irrigation Trust (CIT) and Western Murray Irrigation (WMI) have had the highest proportion of irrigation rights transformed, with 27 per cent and 18 per cent of their irrigation rights transformed respectively since 1 July 2009. This higher rate of transformation is most likely due to the high take up of the Small Block Irrigators Exit Grant in the predominately horticultural areas serviced by CIT. Aside from the IIOs pictured, small volumes of irrigation rights have also been transformed in the northern MDB.

Sources: Topo 250K © Geoscience Australia (2006). Produced by SKM, November 2010.



Chart 3.2 shows the volume of transformations in large reporting IIOs since 2009–10.

Chart 3.2: Volume of transformations in large IIOs, 2009–10 to 2011–12



Source: ACCC from data provided by reporting IIOs

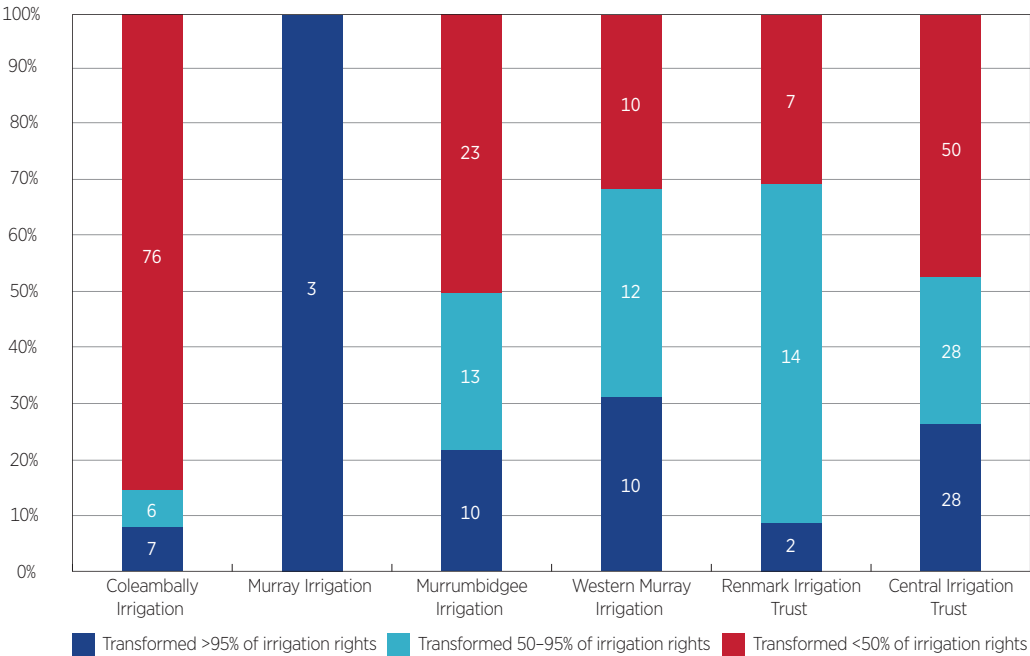
Volumes of irrigation rights transformed have varied considerably in the past three years. For example, almost 80 GL of irrigation rights in Murray Irrigation Limited (MIL) were transformed in 2009–10, whereas in the following year just 10 GL were transformed. Conversely, although only modest volumes of irrigation rights have been transformed in WMI, these amounts have steadily increased each year.

There was a 45 per cent decrease in the volume of irrigation rights transformed in Murrumbidgee Irrigation (MI) in 2011–12. The Australian Government purchased water in MI's network (approximately 7 GL in 2011–12) through an internal transfers account. Under this arrangement, irrigators transferred the water on their irrigation right to the Australian Government's MI account instead of transforming their irrigation rights and selling them to the Australian Government. This will enable the Australian Government to transform all of its purchased water in its MI account in one process and minimise transformation processing times and administrative costs. It is anticipated that the Australian Government will transform all the water in its MI account (approximately 24 GL) in 2012–13.⁶⁹

Chart 3.3 shows the diversity, both within and between IIOs, in the percentage of irrigation rights transformed for each transforming irrigator.

69 ACCC staff discussion with Murrumbidgee Irrigation Limited staff, 29 November 2012.

Chart 3.3: Percentage of irrigation rights transformed and number of transforming customers in large IIOs in 2011-12



Source: ACCC from data provided by reporting IIOs

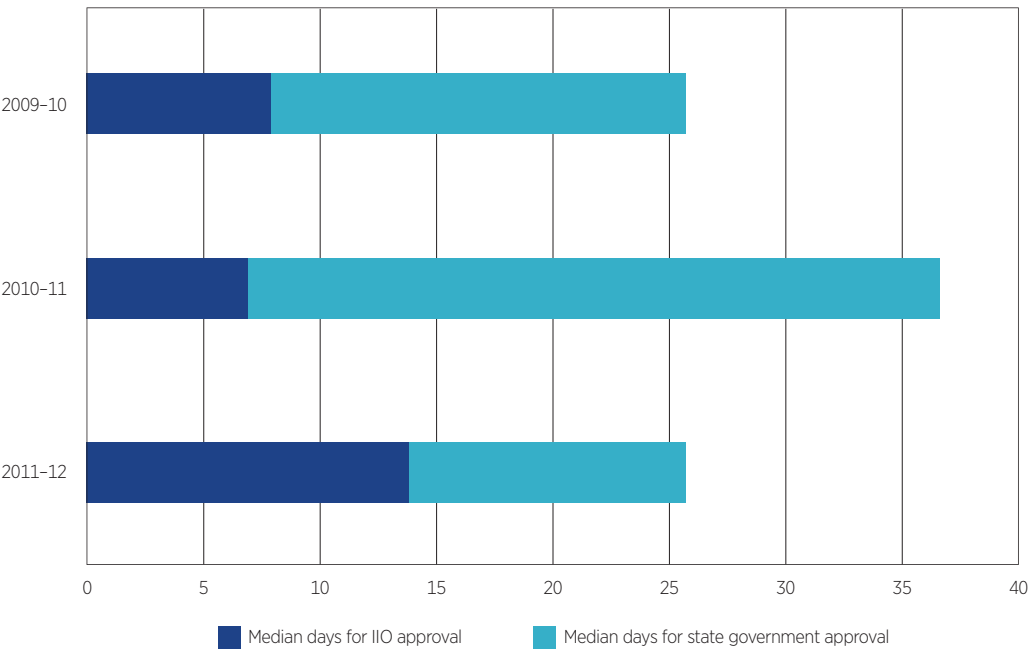
The chart shows that approximately 85 per cent of transforming customers in Coleambally Irrigation (CICL) (76 customers) transformed less than half of their irrigation right. This is due to irrigators selling water to the Australian Government, either through water buyback or CICL's successful PIOP Round 1 funding application, which included funding to upgrade water delivery infrastructure on 93 farms.

In contrast, MIL had only three transforming customers, all of whom transformed their entire irrigation right. Two of the three transformation events were undertaken by the Australian Government as it transformed water on its irrigation right, acquired from earlier purchases from irrigators in MIL.

3.2 Transformation processing times in 2011–12

For a transformation application to be completed, it must first be approved by the relevant IIO, and then approved by relevant state government authorities. The ACCC collects data on the time taken by reporting IIOs to approve a transformation application, and the time taken for a transformation to be completed after IIO approval.

Chart 3.4: Median days for approving a transformation application, 2009–10 to 2011–12



Source: ACCC from data provided by reporting IIOs

Chart 3.4 shows that in 2011–12 state government authorities notably improved processing times, reducing the median days for approval from 30 to 12 days. Of the transformations that were approved in 2011–12, 98 per cent were approved by state government authorities within 30 days.

In contrast, IIOs have increased their median days for approval from seven to 14 days. However, there is significant variation in processing times for IIOs. Some IIOs take between one and 12 days to process applications, while others take between six and 177 days. The factors which can influence approval times include:

- complications with requests linked to the water buyback, PIIOP or other trades external to the IIO, and
- the fulfilment of requirements by irrigators set by the IIO to process the transformation including payment of outstanding fees and the provision of acceptable security.

Chapter 6 discusses transformation processing arrangements in the context of compliance with the water rules.

3.3 Terminations of water delivery rights in 2011-12

To receive regular delivery of water through an irrigation network, an irrigator typically has a right of access to the irrigation network which includes a right to the delivery of water. If an irrigator wishes to modify or permanently reduce access to that irrigation network, the irrigator may wish to terminate some or all of their water delivery rights.⁷⁰ For example, an irrigator may wish to change the type of crop they produce which would require less water to be delivered. In this case, the irrigator may choose to terminate some of their water delivery rights.

In 2011-12 there were 280 terminations relating to approximately 93 GL of water delivery rights in the MDB. The number of termination events and volume of water delivery rights terminated in 2011-12 has significantly decreased since 2009-10, but has increased from the previous year.

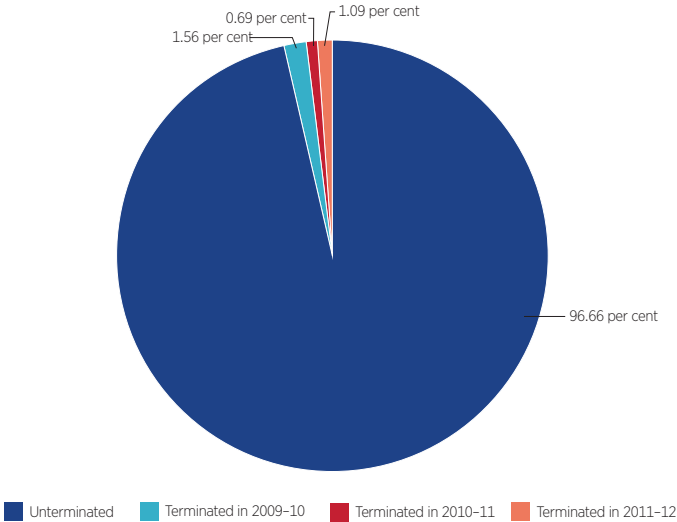
Table 3.2: Number and volume of terminations, 2009-10 to 2011-12

Year	Number of terminations	Volume of terminations
2009-10	554	129 GL
2010-11	202	59 GL
2011-12	280	93 GL

Source: ACCC from data provided by reporting IIOs

Chart 3.5 shows the percentage of water delivery rights terminated at 30 June 2012 as a portion of water delivery rights held by reporting IIOs on 1 July 2009.

Chart 3.5: Terminations of water delivery rights in reporting IIOs since July 2009



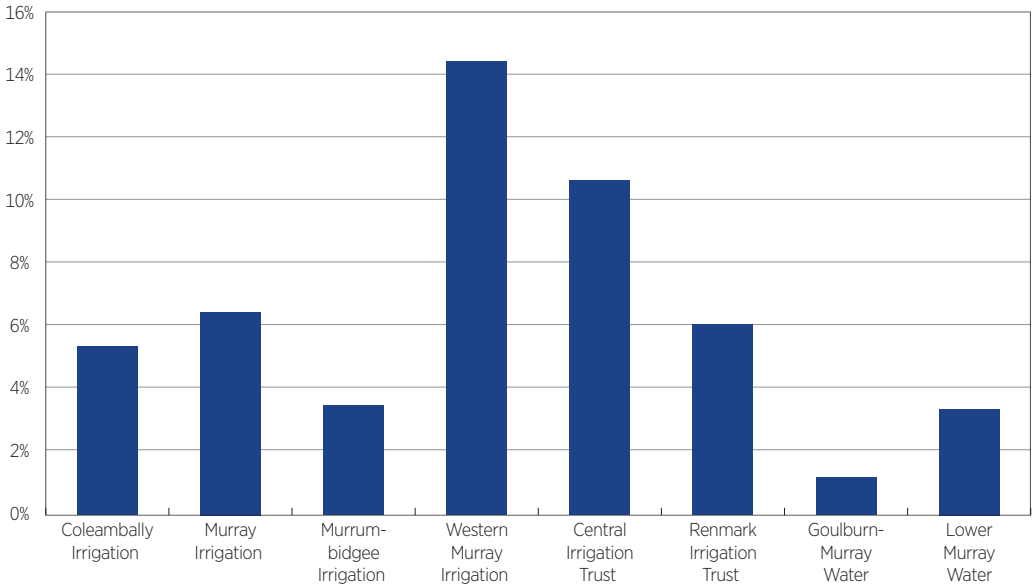
Source: ACCC from data provided by reporting IIOs

⁷⁰ Note that a water delivery right in one network is not equivalent to a water delivery right in another network. In general, in irrigation networks in NSW and SA irrigators hold water delivery rights in proportion to their irrigation rights or water access entitlements. For example, for each 1 ML of irrigation right held, an irrigator would typically also hold 1 ML of water delivery right. For Victorian irrigation networks water delivery rights are expressed differently. For instance a water delivery right in a Goulburn-Murray Water irrigation network is expressed in terms of ML/day. In Lower Murray Water's irrigation network water delivery rights are expressed in terms of ML/14 days. For the purpose of this report, water delivery rights reported to be terminated have been converted to an annual delivery allowance.

Chart 3.5 shows that just over 3 per cent of water delivery rights have been terminated since 1 July 2009, with most terminations occurring in 2009–10.

Chart 3.6 shows terminations as a percentage of water delivery rights in IIOs in the MDB. WMI has had the highest proportion of its water delivery rights terminated since 1 July 2009, followed by CIT. Terminations in CIT are most likely linked to the Small Block Irrigators Exit Grant. However for most reporting IIOs, terminations since 1 July 2009 are less than 7 per cent of their water delivery rights.

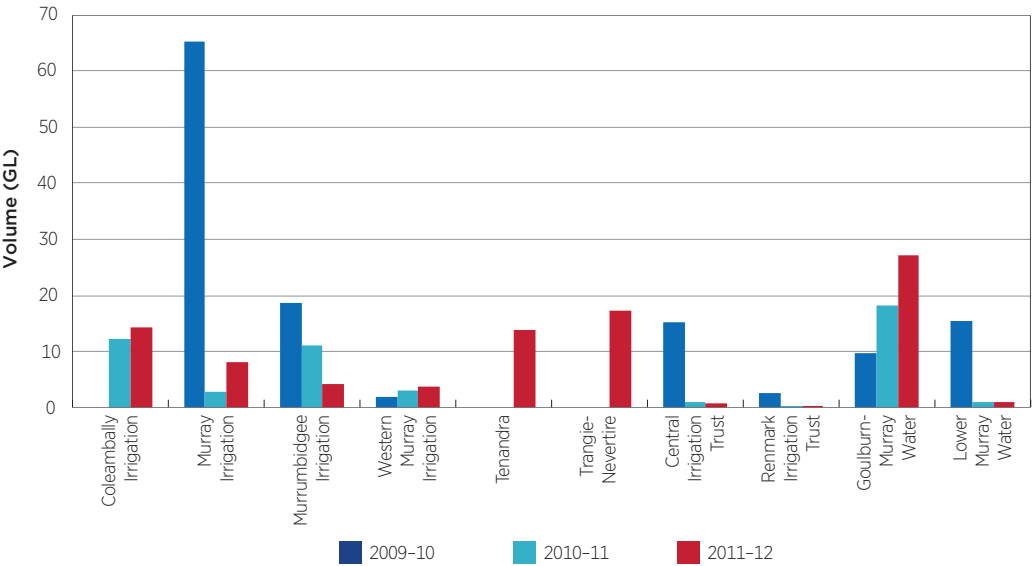
Chart 3.6: Terminations as a percentage of water delivery rights in large and selected IIOs since 1 July 2009



Source: ACCC from data provided by reporting IIOs

Chart 3.7 shows the volume of water delivery rights terminated in each IIO since 2009–10. The chart shows that, consistent with the volume of irrigation rights transformed, most IIOs had their largest quantity of water delivery rights terminated in 2009–10. The exceptions to this were WMI, Goulburn-Murray Water (GMW) and CICL.

Chart 3.7: Volume of water delivery rights terminated in selected reporting IIOs, 2009-10 to 2011-12



Source: ACCC from data provided by reporting IIOs

In 2011-12, GMW experienced a large increase in the volume of water delivery rights terminated (47 per cent). Under the GMW Connections Project (previously the Northern Victoria Irrigation Renewal Project), eligible irrigators may receive incentive payments to surrender their delivery shares and establish a dryland enterprise, or terminate access to the irrigation network and avoid paying termination fees.⁷¹ Despite the significant volume of terminations in 2011-12, terminations from GMW remain low at around 1 per cent of all water delivery rights since 1 July 2009.

In 2011-12, Murrumbidgee Irrigation experienced a significant decrease in the volume of water delivery rights terminated (62 per cent). This decrease could be as a result of irrigators transforming and selling their water to the Australian Government, but maintaining access to the network (thereby not paying termination fees). These irrigators have the opportunity to purchase water in the allocations market, where prices in 2011-12 were at record lows.

The only terminations that have occurred in Tenandra and Trangie-Nevertire happened in 2011-12. These terminations represented 50 per cent and 28 per cent of Tenandra and Trangie-Nevertire's water delivery rights respectively. In both cases the terminations can be attributed to the decommissioning and rationalisation of their channel systems funded under PIOP, to secure water for the environment. This is discussed in more detail in Box 3.1.

⁷¹ Northern Victoria Irrigation Renewal Project, *NVIRP Connections Program – Key Funding Principles: Ensuring Transparency and Consistency*, viewed 24 January 2013, <www.g-mwater.com.au/downloads/connections/Connections/Connections_Program/Connections_Program_Key_Funding_Principles_February_2012.pdf>.

Box 3.1: PIIOP funding in the Macquarie Valley

Under PIIOP NSW Round 1, Tenandra received funding of \$37 million to return 5251 ML of water (\$7000 per ML) on average every year over the long term to the Australian Government for environmental purposes. The project involves:

- constructing two new pumping stations
- installing 1100 metres of syphons under creeks and water courses
- constructing 22km of new water delivery channels and 34 new structures
- clay lining 16 km of existing water delivery channels
- decommissioning 58 km of water delivery channels, 22 structures and an existing pump site
- installing 54 new meters and control points, and
- upgrading water delivery infrastructure on three farms.

This project resulted in 15 irrigators selling their water to the Australian Government and terminating all their water delivery rights, totalling 14 GL in 2011-12. These terminating irrigators were not required to pay a termination fee. The 14 GL terminated is approximately half of Tenandra's water delivery rights.

Under PIIOP NSW Round 1, Trangie-Nevertire received funding of \$115 million to return 11 177 ML of water (\$10 300 per ML) on average every year over the long-term to the Australian Government for environmental purposes. The project involves:

- removing 82 km of water delivery channels and removing the irrigation supply to 19 properties
- reshaping and lining 153 km of water delivery channels
- installing 58 upgrades of structure
- installing 64 new structures, 20 unmetered gates, 38 metered farm outlets and nine metered telemetry structures
- upgrading the water delivery infrastructure on 28 farms, and
- installing a 250 km stock and domestic water supply pipeline to supply water to 85 properties.

This project resulted in 17 irrigators selling their water to the Australian Government and terminating 23 GL of water delivery rights in 2011-12. These terminating irrigators were not required to pay a termination fee. This 23 GL represents approximately 28 per cent of Trangie-Nevertire's water delivery rights.⁷²

72 Department of Sustainability, Environment, Water, Population and Communities, Private Irrigation Infrastructure Operators Program in New South Wales, viewed 25 January 2013, <www.environment.gov.au/water/policy-programs/srwui/piio/index.html>.

Figure 3.2: Channel lining at Trangie-Nevertire



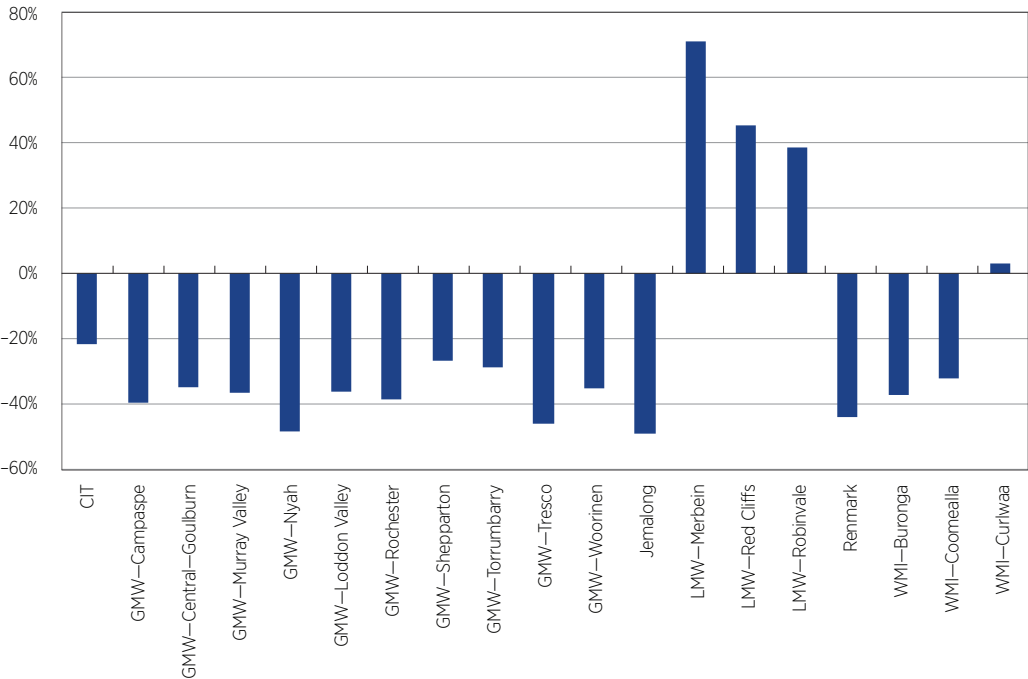
Source: Department of Sustainability, Environment, Water, Population and Communities, Delivering a healthy working Basin for Australia: Water for the Future Local Story

3.4 Termination fees and revenue from termination fees

On termination of whole or part of a right of access, an IIO may levy a termination fee subject to the Water Charge (Termination Fees) Rules (WCTFR). As explained in Chapter 2, the WCTFR impose a cap on the termination fee that an IIO can levy on a terminating irrigator. The maximum termination fee is the lesser of 10 times the annual fixed access fees payable in the year in which notice of the termination is given (excluding bulk water charges), or the termination fee specified in a contract between the IIO and the owner of the water delivery right.

As reported in previous ACCC water monitoring reports, after the introduction of the WCTFR average termination fees decreased significantly in most IIOs. Chart 3.8 shows the percentage changes in termination fees from 2008–09 to 2009–10. The observed decreases in termination fees in this period were largely driven by the change in the multiple used for calculating termination fees rather than the change in the access fee(s) against which that multiple is applied.

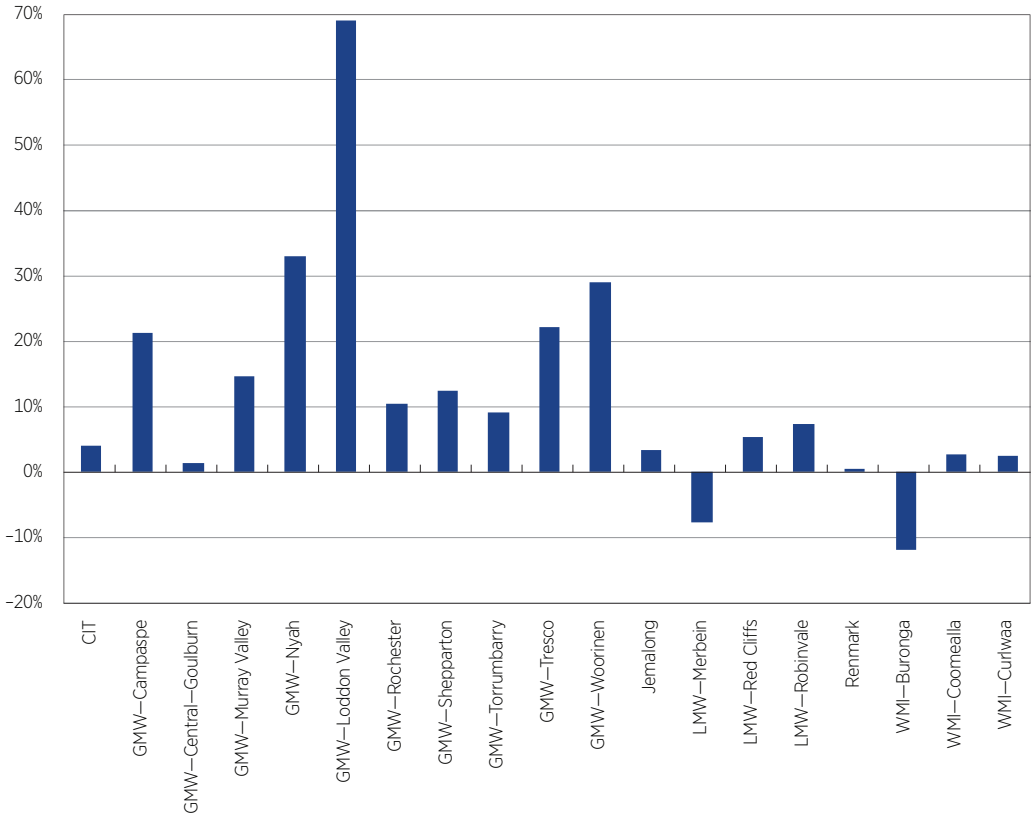
Chart 3.8: Percentage change in termination fees, 2008–09 to 2009–10



Source: ACCC from data provided by reporting IIOs

Since 2009–10, most termination fees have been gradually increasing in line with increases in fixed network access charges. Chart 3.9 shows the percentage change in termination fees from 2009–10 to 2011–12. The most significant increases have occurred in GMW’s network, and are consistent with increases in GMW’s fixed charges over this period.

Chart 3.9: Percentage change in termination fees, 2009-10 to 2011-12

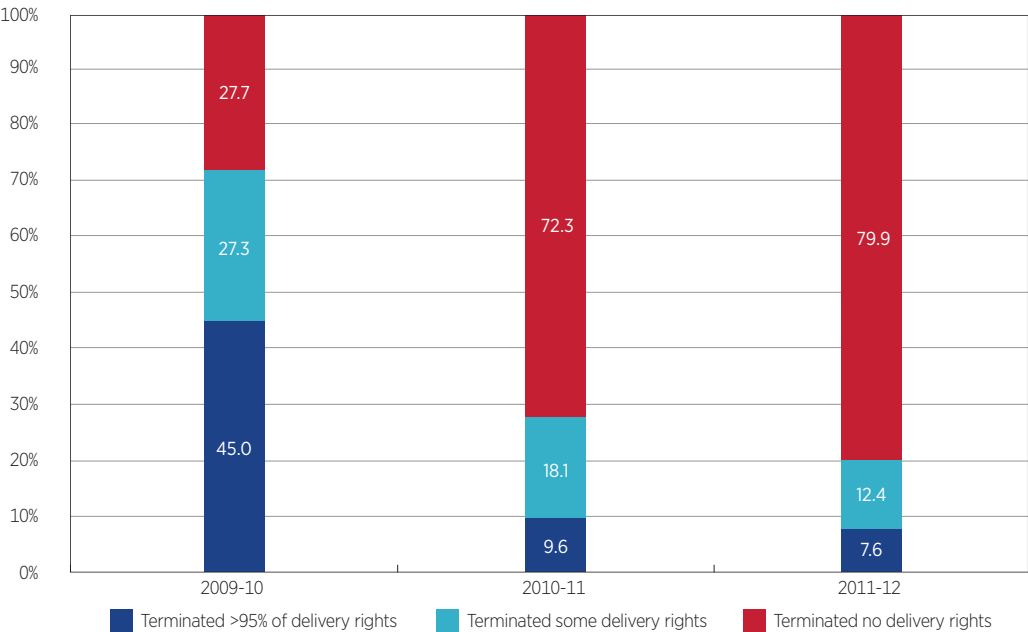


Source: ACCC from data provided by reporting IIOs

3.5 Transformation and termination relationships

Similar to 2010-11, a proportion of irrigators who transformed irrigation rights did not terminate any water delivery rights in 2011-12. Chart 3.10 shows that 80 per cent of transforming irrigators did not terminate any water delivery rights in 2011-12. This varies from 2009-10 when 28 per cent of transforming irrigators did not terminate any water delivery rights.

Chart 3.10: Terminations from transforming irrigators, 2009-10 to 2011-12



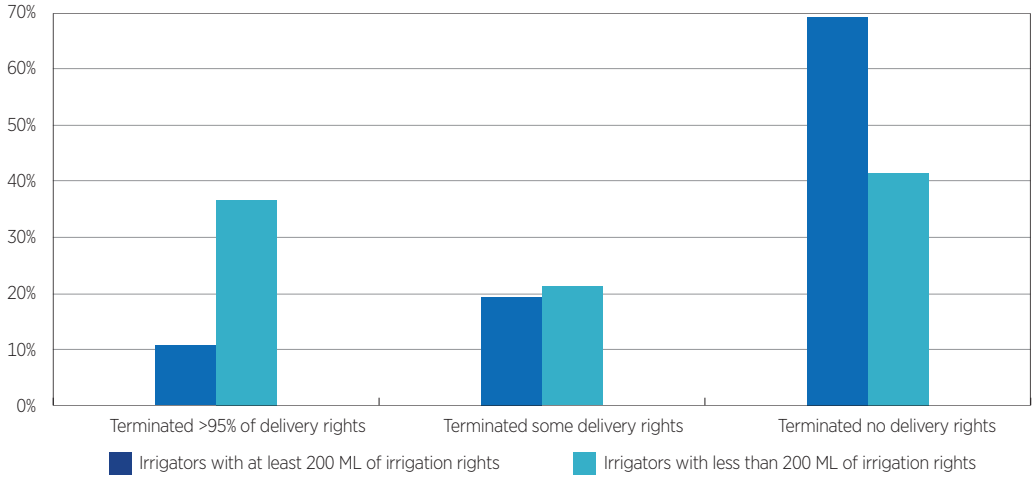
Source: ACCC from data provided by reporting IIOs

This variance between transformation and termination levels suggests that increasingly the flexibility to trade water is the driving factor behind transformation rather than exit from irrigation farming. This is most evident in CICL, where approximately 85 per cent of transforming customers transformed less than half their irrigation right. These same customers, typically, did not terminate any water delivery rights.

In 2009-10, 45 per cent of transforming customers terminated more than 95 per cent of their delivery rights immediately after transformation. This was likely due to irrigators exiting in response to drought, uncertainty about water availability in the future and government water buybacks. Since the breaking of the drought and reductions in the level of government water buybacks, a greater proportion of transformations are not coinciding with termination of access to an irrigation network.

Chart 3.11 shows the percentage of transforming irrigators, holding different volumes of irrigations rights, which terminated different proportions of water delivery rights.

Chart 3.11: Terminations from transforming irrigators, 2009-10 to 2011-12⁷³



Source: ACCC from data provided by reporting IIOs

The chart shows that of those irrigators that have transformed irrigation rights to date, a subsequent immediate termination of delivery rights is less common for irrigators that hold larger volumes of irrigation right prior to the transformation. For example, of the irrigators with at least 200 ML (larger irrigators) who transformed their irrigation rights, almost 70 per cent did not terminate any water delivery rights. This suggests that larger irrigators tend to trading part of their water access entitlement without terminating water delivery rights. In contrast, irrigators with smaller volumes of irrigation right have been the focus of the Australian Government's Small Block Irrigators Exit Grant, which required applicants to sell their water and terminate their water delivery rights.

⁷³ This chart only includes terminations that were requested in conjunction with a transformation in 2011-12.

Part B

Rural water charging in the MDB





Chapter 4.

Regulated water charges in 2011-12

This chapter discusses the nature and structure of regulated charges that bulk water operators and irrigation infrastructure operators (IIOs) levy on their customers, and under broad assumptions, presents hypothetical annual bills for a typical customer of each reporting entity. Comparisons are made with annual water bills in 2009-10 and 2010-11.

The chapter also provides an overview of the activities carried out by MDB state governments for water planning and management and the charges imposed to recover costs associated with these activities.

Key Points

- Total hypothetical bulk water bills have increased by an average of 10 per cent for private diverters and 15 per cent for other customers (such as IIOs) since 2010-11.
- Hypothetical irrigator bills in piped networks have increased by around 9 per cent since 2010-11.
- Hypothetical irrigator bills in gravity-fed networks have increased by around 5 per cent since 2010-11.
- Annual hypothetical bills payable by a private diverter bulk water customer holding 250 ML of water access entitlement with delivery of 100 per cent allocation range from \$1325 to \$14 190.
- Annual hypothetical bills payable by an IIO serviced irrigator holding 250 ML of water access entitlement with delivery of 100 per cent allocation range from:
 - \$12 963 to \$46 459 for services provided through a piped network
 - \$4745 to \$30 173 for services provided through a network comprised of gravity-fed channels.
- Regulated water planning and management charges did not change significantly in 2011-12. In the majority of MDB state departments and water authorities, the cost of water planning and management activities exceeded the revenue collected for these activities in 2011-12.

4.1 Introduction to the Water Charge (Infrastructure) Rules

The Water Charge (Infrastructure) Rules 2010 (WCIR) govern water infrastructure fees and charges levied by bulk water operators and irrigation infrastructure operators (IIOs). The WCIR follow a three-tiered regulatory structure applicable to different operators depending on the ownership and size of each operator. Tier 1 operators are subject to light-handed regulation whereas Tier 2 and Tier 3 operators are subject to more direct forms of regulation.

Tier 1 rules apply to all infrastructure operators in the MDB. All operators are required to publish regulated water charges, with wider publication requirements applying to infrastructure operators that provide services in relation to more than 10 GL of water from managed water resources. Tier 1 rules also include non-discriminatory pricing requirements for member owned infrastructure operators.

Chapter 5 discusses the regulatory arrangements for Tier 2 and 3 operators. This chapter discusses the levels of charges levied by Tier 1, 2 and 3 operators in 2011–12 based on the ACCC’s hypothetical bill methodology. The reasons for differences in charges across operators and large increases compared to 2010–11 are also discussed.

4.2 Bulk water charges

Bulk water charges are levied by bulk water operators and contribute to recovering the costs associated with:

- water harvesting and storage (including flood mitigation and asset management of dams, lakes, weirs and other water storage structures), and
- water transportation and delivery (taking customer orders, determining and implementing storage releases, monitoring water usage and administering customers’ water accounts).

In the MDB these charges are levied by Goulburn-Murray Water (GMW), Lower Murray Water (LMW)⁷⁴, State Water and SunWater on a range of users, including:

- IIOs
- private diverters
- urban and rural water authorities/corporations, and
- other commercial operations such as power stations and mines.

4.2.1 Current regulatory arrangements

Different regulatory bodies determine the maximum prices that may be levied by bulk water operators in each state. Table 4.1 briefly summarises the current regulatory arrangements.

Table 4.1: Summary of regulatory arrangements for prices levied by bulk water operators in the MDB

Bulk water operator	Regulatory oversight
GMW and LMW	Essential Services Commission Victoria under WCIR accreditation arrangements.
State Water Corporation	IPART until 30 June 2014. ACCC will approve or determine prices from 1 July 2014.
SunWater	Queensland Competition Authority and Queensland Minister for Energy and Water Supply.

⁷⁴ LMW manages the licensing of private diverters, but does not manage bulk water storage facilities, and bulk water is a pass-through charge for LMW which is paid to GMW.

4.2.2 Level of bulk water charges

As in past water monitoring reports, the ACCC has reported on bulk water charges by constructing hypothetical bulk water bills for 2011-12. A hypothetical bulk water bill is a simple representation of how bulk water charges translate into individual bulk water customer bills. Each bill is based on certain assumptions about the characteristics of a bulk water customer.

The analysis uses information provided by each bulk water operator in response to the ACCC's information request. The assumptions and methodology used to construct hypothetical bulk water bills are explained in Appendix A.

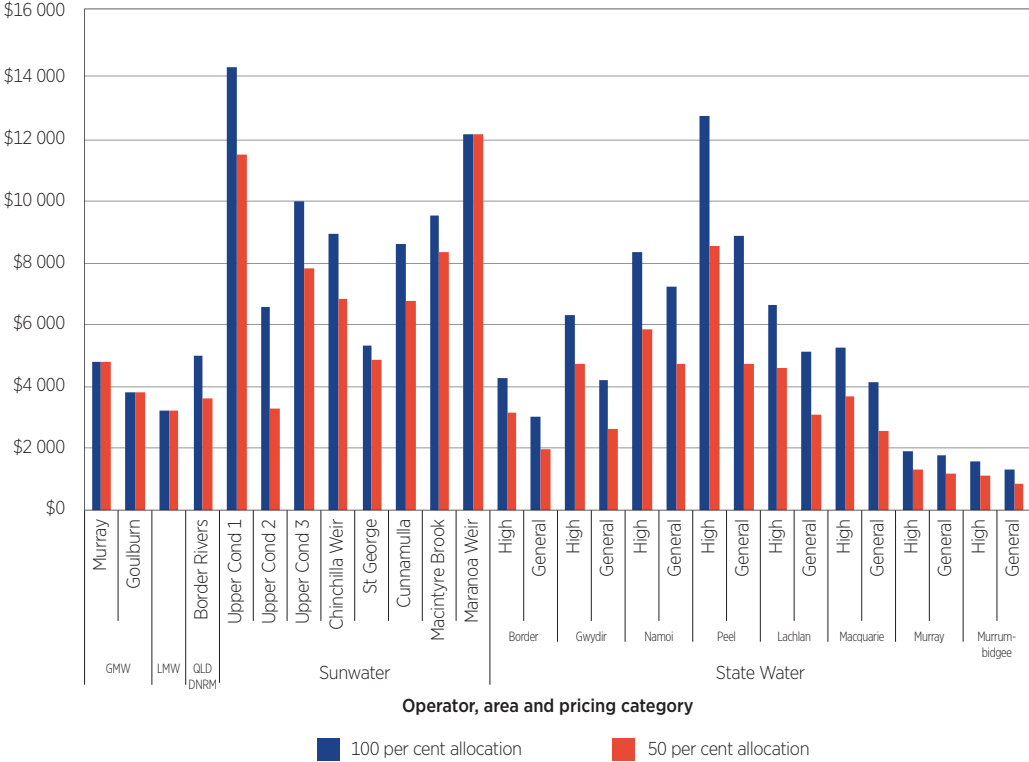
Hypothetical bulk water bills have been constructed for both private diverters and other bulk water customers in 2011-12. The ACCC has used smaller volumes of water entitlement for private diverter customers, such as individual irrigators, and larger volumes for other bulk water customers, such as IIOs.

Private diverters

Chart 4.1 shows annual hypothetical bills faced by private diverter customers holding 250 ML of water access entitlement with delivery of 100 per cent and 50 per cent allocations in 2011-12. Included in the chart are bills for customers of GMW, LMW, QLD Department of Natural Resources and Mines (DNRM), SunWater (lower-bound pricing) and State Water. Chart 4.1 shows that:

- Total charges for private diverter customers vary significantly between bulk water operators. These differences may be explained by:
 - the relative size of bulk water operators—their customer base and the volume of water they deliver—given the significant economies of scale inherent in the provision of bulk water services
 - the extent to which the operator is recovering its costs
 - the extent to which costs are partly funded by governments, and
 - relative levels of efficiency and investment.
- Total charges for private diverter customers vary significantly between different geographic regions for a given bulk water operator. For example, State Water's service areas with lower charges tend to be those with larger numbers of customers and quantities of water supplied, such as the Murrumbidgee and Murray valleys.
- Total charges for private diverter customers of State Water in NSW vary by the security class of water access entitlement held by the customer. High security water access entitlement holders pay greater charges than general security water access entitlement holders. This reflects the greater reliability of high security water allocations and therefore the greater use of storage infrastructure by high security entitlement holders.

Chart 4.1: Bulk water hypothetical bills—250 ML of entitlement with delivery of 100 per cent and 50 per cent allocation—private diverters, 2011–12



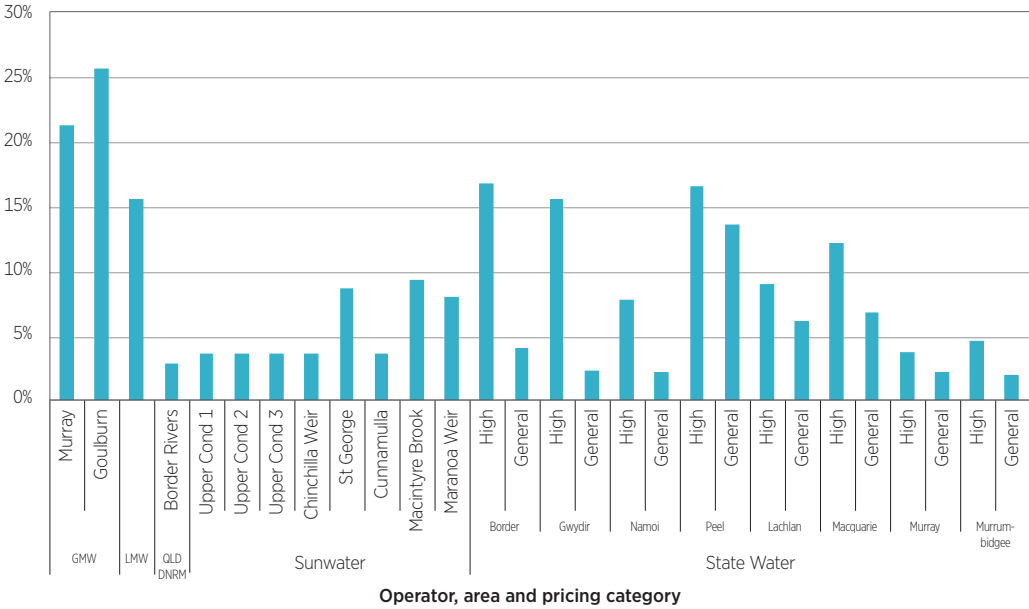
Source: ACCC from data provided by bulk water operators

Observations

Chart 4.2 shows the nominal percentage change in private diverter bills from 2010–11 to 2011–12. Notably:

- all customer bills increased from 2010–11 to 2011–12
- increases were most significant in Victoria (GMW and LMW)
- increases were less than 10 per cent in areas of Queensland (SunWater)
- increases varied across NSW valleys (State Water)
- in NSW valleys the increases in general security customer bills were all below 10 per cent, with the exception of the Peel Valley where private diverter bills increased by 13.7 per cent.

Chart 4.2: Nominal percentage change in bulk water hypothetical bills—250 ML of entitlement with delivery of 100 per cent allocation—private diverters, 2010–11 to 2011–12



Source: ACCC from data provided by bulk water operators

Other customers

Bulk water customers other than private diverters may include:

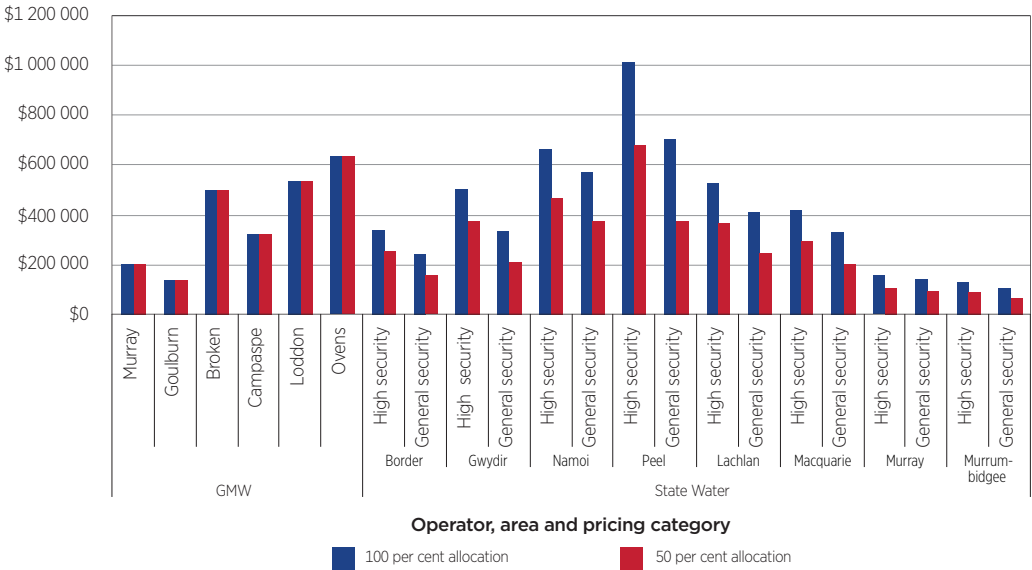
- rural and urban water authorities
- commercial businesses such as mines and power stations, and
- IIOs.

IIOs are a single bulk water customer and the charges they pay to bulk water operators for the storage and delivery of bulk water are passed through to their irrigation customers, along with the IIO's own costs of distributing water to these customers. For example, Murrumbidgee Irrigation is a customer of State Water in the Murrumbidgee Valley and passes through State Water charges to irrigation customers.

Chart 4.3 shows annual hypothetical bulk water bills of 'other bulk water customers' for GMW and State Water, assuming 20 GL of water entitlement is held.⁷⁵

⁷⁵ Excludes the Bullarook Basin within GMW's area of operations – the significantly greater charges would distort the chart.

Chart 4.3: Bulk water hypothetical bills—20 GL of entitlement with delivery of 100 per cent and 50 per cent allocation—other bulk water customers (GMW and State Water), 2011–12



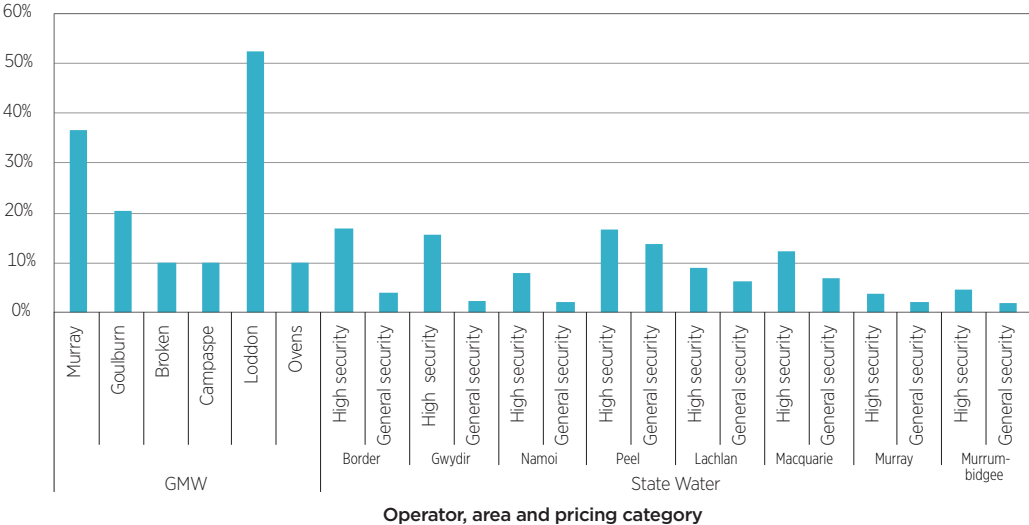
Source: ACCC from data provided by bulk water operators

Observations

Chart 4.4 shows the nominal percentage change in other bulk water customer bills from 2010–11 to 2011–12. It is noteworthy that:

- all customer bills increased from 2010–11 to 2011–12
- increases in bills were most significant for GMW customers in the Murray and Loddon valleys
- increases in bills in NSW varied for customers of State Water.

Chart 4.4: Nominal percentage change in bulk water hypothetical bills—20 GL of entitlement with delivery of 100 per cent allocation—other bulk water customers (GMW and State Water), 2010–11 to 2011–12



Source: ACCC from data provided by bulk water operators

4.3 Irrigation infrastructure operator charges

The ACCC has also used hypothetical bills to analyse IIO charges in 2011–12. A hypothetical irrigator bill is a simple representation of how regulated water charges levied for irrigation water delivery and/or drainage services translate into a typical customer’s annual bill.

The assumptions and methodology used to construct hypothetical irrigator bills are explained in Appendix B. The analysis relates to charging arrangements for the 2011–12 year.

4.3.1 Structure of IIO charges

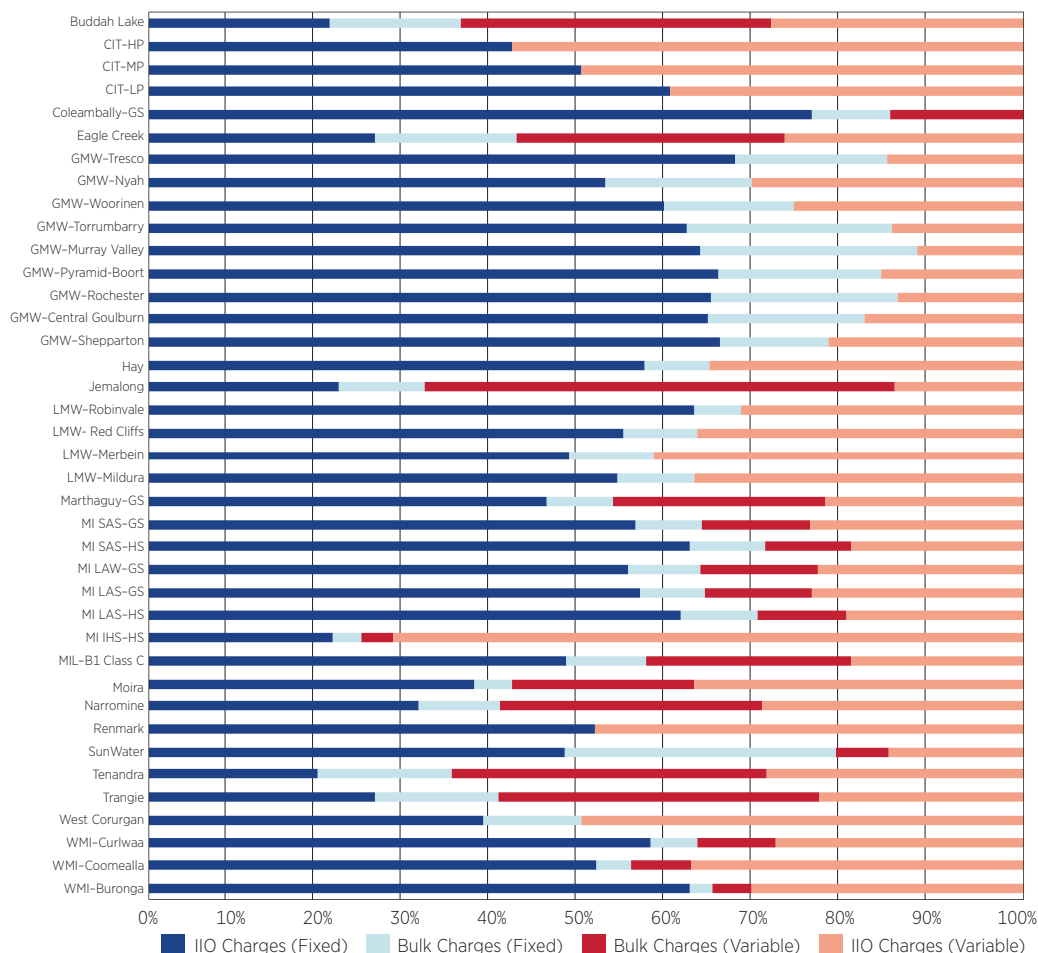
There are broadly two types of charges: fixed and variable (or volumetric) charges. The structure and quantum of these charges may reflect underlying fixed and variable costs and revenue risks faced by IIOs. Bulk water charges levied on IIOs are passed through to irrigator customers and contribute to the fixed and variable charge components where applicable.

Fixed charges generally recover the cost of making network capacity available, including capital financing costs associated with expanding and renewing the irrigation network. IIOs apply a range of methods for levying fixed charges across irrigation network users to recover these costs. The most common approach is based on the customer’s water delivery right. However, other approaches include charging per account, per property, per hectare, per connection and per service point, or a combination of these. Fixed charges levied by some reporting IIOs also vary between irrigation districts, reflecting differences in geography, hydrology and physical characteristics, as well as differences in irrigation infrastructure networks and related costs.

Variable charges generally recover the variable cost of using the network to deliver water (physical delivery and/or drainage of water), including pumping and other costs that vary with the volume of water delivered. The method typically used by IIOs for levying variable charges is to set the charge on the basis of per ML of water delivered. However, there are some variations to this method, such as IIOs applying peak and off-peak charges that have regard to capacity constraints, tiered usage charges that provide discounts to larger water users, and separate volumetric charges for water delivered in excess of a water delivery right.

Chart 4.5 shows the fixed and variable composition of hypothetical irrigator bills for 2011–12 across 19 reporting IIOs and 39 irrigation districts, for customers holding 250 ML of water access entitlement with delivery of 100 per cent allocation. The chart also shows the proportion of fixed and variable bulk water charges as part of an IIO customer bill, where they are applicable.⁷⁶

Chart 4.5: Fixed and variable components of hypothetical irrigator bills (including bulk water charges)—250 ML of entitlement with delivery of 100 per cent allocation, 2011–12



Notes: HS, GS, HP, MP and LP mean high security, general security, high pressure, medium pressure and low pressure, respectively. SAS, LAW, LAS and IHS represent different types of farms serviced by MI (see Appendix B for details).

Source: ACCC from data provided by reporting IIOs

Chart 4.5 shows that the mix of fixed and variable charges varies widely across the sample of 39 hypothetical bills. Notably:

- Bulk water charges are a more significant portion of irrigator bills in smaller IIOs. For example, around 45 per cent of an Eagle Creek customer's annual bill reflects bulk water charges.
- The proportion of variable charges relative to total charges in pressurised networks increases with the level of pressure, to account for greater electricity costs. For example, for irrigators in high pressure districts of CIT, variable charges represent around 58 per cent of total bills, whereas variable charges represent around 40 per cent of total bills for irrigators in low pressure districts.

⁷⁶ In this analysis water planning and management (WPM) charges are included as part of IIO charges, except where an IIO does not report bulk water charges and WPM charges separately. WPM charges and activities are discussed later in this chapter.

4.3.2 Level of IIO charges

The hypothetical IIO irrigator bill analysis indicates that the amount of charges levied on irrigator customers varies widely, depending on the irrigation area customers are located in, the type of entitlement they hold, their level of water usage and the type of network used by the IIO to provide water delivery services.

Table 4.2 shows annual hypothetical irrigator bills across the sample for 50 ML, 250 ML and 1000 ML with delivery of 100 and 50 per cent allocation.

Table 4.2: Total hypothetical irrigator bills for 2011–12 year, 50 ML, 250 ML and 1000 ML of entitlement with delivery of 100 and 50 per cent allocation

		Total annual bills (\$ 2011–12)					
Operator	Hypothetical irrigator	100 per cent allocation			50 per cent allocation		
		50 ML	250 ML	1000 ML	50 ML	250 ML	1000 ML
Buddah Lake		1 749	8 743	34 970	1 186	5 930	23 720
CIT	High pressure	3 721	18 603	74 410	2 634	13 170	52 680
	Medium pressure	3 132	15 658	62 630	2 285	11 698	46 790
	Low pressure	2 593	12 963	51 850	2 070	10 350	41 400
Coleambally	General Security	2 777	7 231	23 933	2 667	6 682	21 738
Eagle Creek	General Security	949	4 745	18 980	674	3 370	13 480
GMW	Tresco	3 308	16 007	63 630	3 058	14 757	58 630
	Nyah	3 506	16 698	66 168	2 988	14 107	55 803
	Woorinen	3 880	18 742	74 478	3 388	16 286	64 653
	Torrumbarry	2 589	11 847	46 564	2 412	10 959	43 009
	Murray Valley	2 473	11 265	44 236	2 336	10 580	41 496
	Loddon Valley	2 640	12 098	47 566	2 443	11 117	43 641
	Rochester	2 321	10 506	41 201	2 171	9 754	38 191
	Central Goulburn	2 972	12 608	48 741	2 743	11 463	44 161
	Shepparton	4 099	18 212	71 136	3 285	16 176	62 991
Hay		2 417	10 459	40 617	2 042	8 584	33 117
Jemalong		2 191	10 953	43 810	1 441	7 203	28 810
LMW	Robinvale	9 372	46 459	185 537	7 874	38 970	155 582
	Red Cliffs	6 088	30 173	120 392	4 987	24 536	97 842
	Merbein	5 295	26 075	103 998	4 194	20 571	81 983
	Mildura	6 025	28 872	114 549	4 940	23 447	92 849
Marthaguy	General Security	2 574	12 870	51 480	1 971	9 853	39 410

		Total annual bills (\$ 2011–12)					
MI	SAS—General Security	2 915	8 891	27 896	2 588	7 258	21 366
	SAS—High Security	3 454	11 034	34 321	3 127	9 401	27 791
	LAW—General Security	3 317	8 127	23 960	3 016	6 623	17 945
	LAS—General Security	3 520	8 968	26 645	3 193	7 335	20 115
	LAS—High Security	3 965	10 747	32 032	3 638	9 114	25 502
	IHS—High Security	7 125	30 094	111 374	4 846	18 699	65 797
MIL	B1 Class C	4 210	10 362	31 317	3 425	8 123	24 683
Moirá		1 662	8 308	33 230	1 175	5 876	23 505
Narromine		2 220	10 300	40 600	1 604	7 220	28 280
Renmark		4 150	20 750	82 999	3 135	15 675	62 699
SunWater	St George	2 856	14 280	57 120	2 549	12 745	50 980
Tenandra		1 721	8 603	34 410	1 158	5 790	23 160
Trangie-Nevertire		1 873	9 365	37 460	1 312	6 558	26 230
West Corurgan		1 668	8 338	33 350	1 246	6 231	24 925
WMI	Curlwaa	3 231	16 155	64 080	2 173	10 863	43 450
	Coomealla	4 214	21 068	82 170	2 691	13 456	53 825
	Buronga	6 481	32 403	129 610	4 326	21 628	86 511

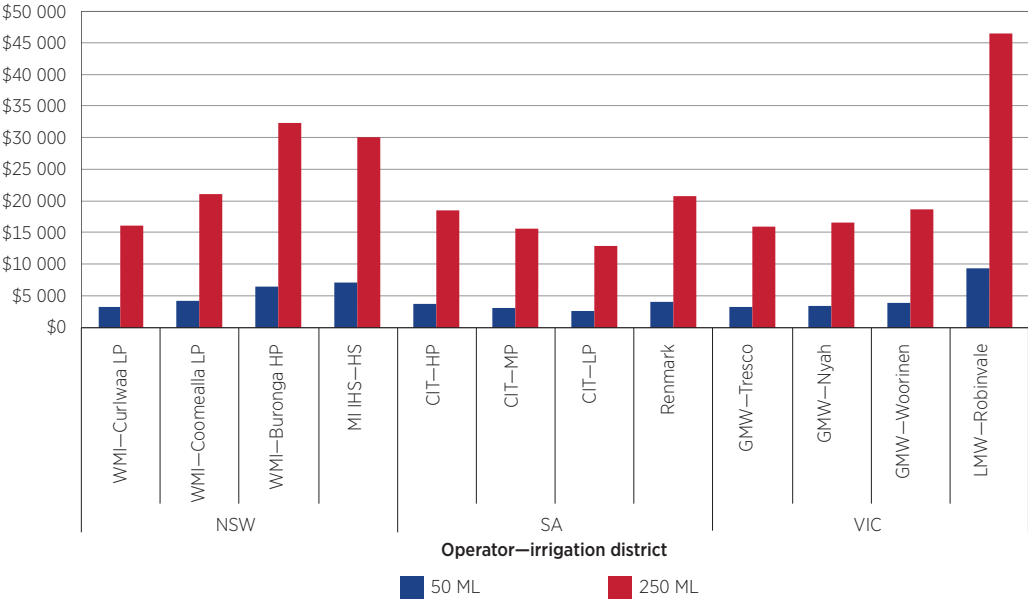
Source: ACCC from data provided by reporting IIOs

4.3.3 Charges by infrastructure network

Piped irrigation networks

Chart 4.6 shows annual hypothetical irrigator bills for 50 ML and 250 ML of water access entitlement with delivery of 100 per cent allocation for IIOs operating piped networks. The chart shows that total charges vary considerably across piped network and within IIOs, where total charges are dependent on the level of pressure associated with each district.

Chart 4.6: Annual hypothetical irrigator bills by state for 50 ML and 250 ML of entitlement with delivery of 100 per cent allocation—pipework networks, 2011-12

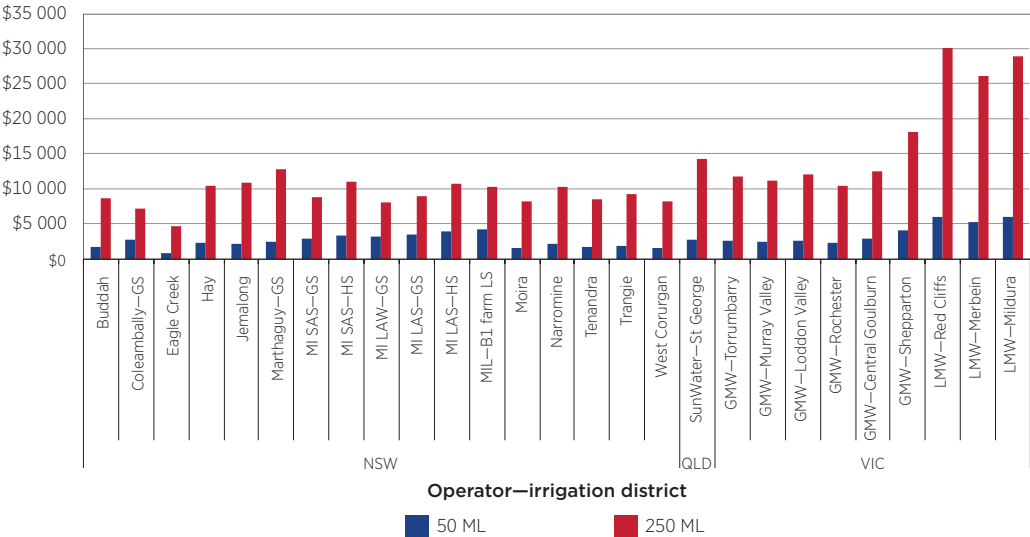


Notes: LP, MP and HP mean low pressure, medium pressure and high pressure, respectively.
Source: ACCC from data provided by reporting IIOs

Gravity-fed channel networks

Chart 4.7 shows annual hypothetical irrigator bills for 50 ML and 250 ML of water access entitlement with delivery of 100 per cent allocation for gravity-fed channel networks. The chart shows that total charges for customers of gravity-fed channel networks also varied across IIOs, and can vary considerably across irrigation districts within the same IIO. For example, within GMW's channel networks, total bills (for a 250 ML customer) vary from \$10 506 in the Rochester irrigation district to \$18 212 in the Shepparton irrigation district.

Chart 4.7: Annual hypothetical irrigator bills by state for 50 ML and 250 ML of entitlement with delivery of 100 per cent allocation—gravity-fed channel networks, 2011-12



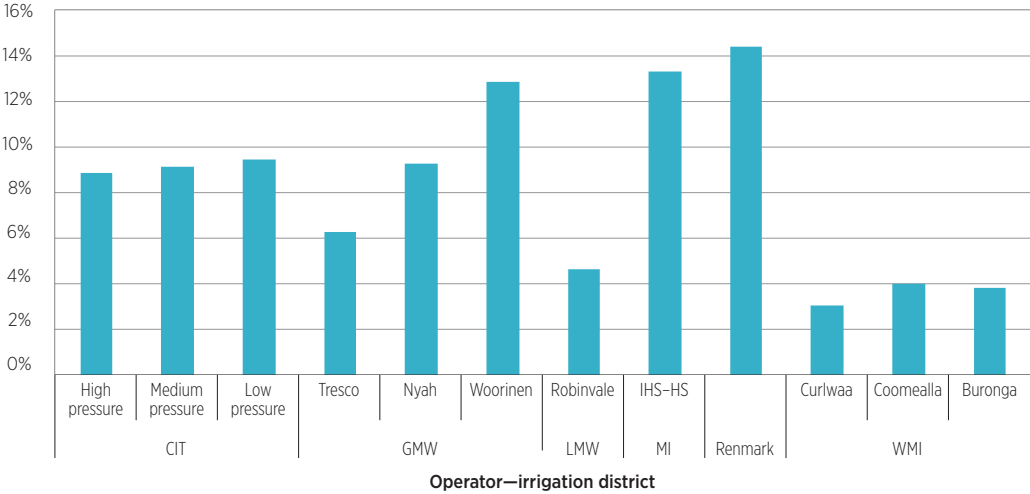
Notes: HS and GS mean high security and general security, respectively.
Source: ACCC from data provided by reporting IIOs

Observations

In the majority of IIOs and irrigation districts, hypothetical irrigator bills increased marginally in 2011-12. The increases in irrigator bills are similar to those observed from 2009-10 to 2010-11.

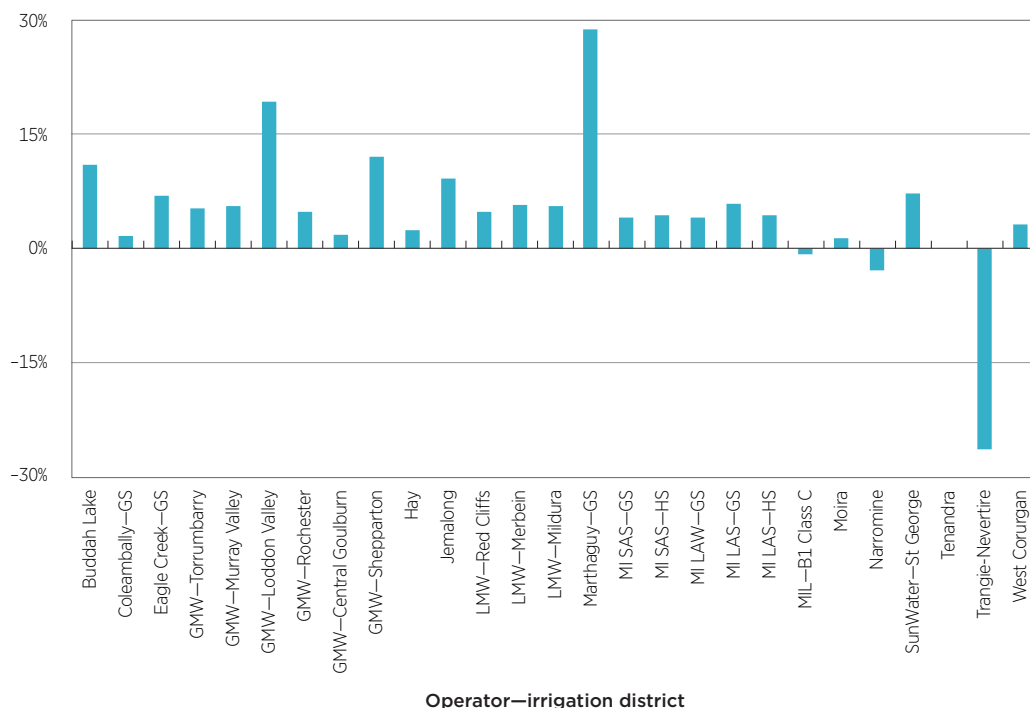
Chart 4.8 shows the nominal percentage change in hypothetical irrigator bills since 2010-11 for 50 ML of water access entitlement with delivery of 100 per cent allocation for piped networks. Chart 4.9 shows the nominal percentage change in hypothetical irrigator bills since 2010-11 for 250 ML of water access entitlement with delivery of 100 per cent allocation for gravity-fed networks.

Chart 4.8: Nominal percentage change in irrigator bills for 50 ML of entitlement with delivery of 100 per cent allocation—piped networks—2010-11 to 2011-12



Notes: HS means high security.
Source: ACCC from data provided by reporting IIOs

Chart 4.9: Nominal percentage change in irrigator bills for 250 ML of entitlement with delivery of 100 per cent allocation—gravity-fed networks—2010-11 to 2011-12



Notes: HS and GS mean high security and general security, respectively.

Source: ACCC from data provided by reporting IIOs

Notable changes in irrigator bills in 2011-12 were observed in:

- Renmark irrigation district, where increases to the Natural Resources Management Catchment Levy (collected by the Department for Water and unsubsidised by the SA Government in 2011-12 because seasonal water allocations were 100 per cent) were the driver of increases in total bills.
- Murrumbidgee Irrigation's Integrated Horticulture Supply (IHS) irrigation area, where increases in charges were primarily due to increases in the electricity price.
- Woorinen, Loddon Valley and Shepparton districts of GMW. Increases to bulk water charges and infrastructure access fees in these districts were driven by capital works programs and a reduction in the number of delivery shares in the districts.
- Marthaguy Irrigation Scheme, where the 'Riparian Charge' levied on irrigators in 2011-12 caused irrigator bills to increase by around 28 per cent.
- Trangie-Nevertire, where both fixed and variable charges decreased in 2011-12. As discussed in Chapter 3 of this report, Trangie-Nevertire received funding under PIIOP to rationalise its irrigation network. While approximately 28 per cent of the network's water delivery rights were terminated in 2011-12, the remaining irrigators experienced decreases in their annual water bills.

4.4 Water planning and management activities and charges

4.4.1 Structure of water planning and management activities and charges

Water planning and management (WPM) activities are undertaken by, or on behalf of, governments to plan for and manage water resources to ensure their sustainability. These activities address issues such as:

- maintaining the health of water resources and promoting sustainable use
- managing the impact of past, present and future water extraction
- improving understanding of the hydrology of surface and groundwater systems, and
- protecting the integrity of the water entitlement system and user access to water.

WPM charges are levied on water users to recover the costs of WPM activities. The Water Act applies to a subset of charges for WPM activities levied in the MDB. These charges are referred to as regulated WPM charges.

Regulated WPM charges:

- relate primarily to the management of water resources and do not relate to delivery of urban water services
- are typically determined by a minister or a water department/authority
- are levied across a broad range of users, including irrigators and water authorities, and
- comprise a relatively small proportion of irrigator bills, compared to IIO and bulk water charges.⁷⁷

Regulated WPM charges fall into three broad categories:

- *Fees and charges for holders of water access rights or water use approvals*—these charges relate to:
 - the granting, holding or use of a statutory right of access to water
 - ‘take and use’ licences from a water resource, or
 - undertaking an activity in relation to that water resource.

In most cases these charges are fixed on an entitlement basis, but in some cases a variable (usage) component may also be levied.

- *Broad based levies*—such levies may be applied directly or indirectly on water users to fund a number of WPM activities. An example of a direct levy is the South Australian Natural Resources Management Levy and an example of an indirect levy is the Victorian Environmental Contribution which is collected through third parties (e.g. water authorities).
- *Transaction fees*—these include fees for applications for trade or transfer of water access entitlements, applications to vary a water access right, lodgement of a transaction with a water registry and search of a water registry.

⁷⁷ In the 2010–11 Water Monitoring Report (pp.64–66), the ACCC calculated that WPM charges represented between one and 13 per cent of the hypothetical irrigator bills in New South Wales, South Australia and Victoria.

4.4.2 ACCC reporting of WPM activities and regulated WPM charges

The ACCC provided its 2011-12 RFI⁷⁸ to eight MDB state departments and water authorities (WPM reporting entities) to allow the ACCC to report on the extent of cost recovery for water planning and management in the MDB.⁷⁹ Under the *Water Act 2007*, the ACCC is responsible for monitoring and reporting to the Minister on regulated WPM charges and compliance with the Water Charge (Planning and Management Information) Rules 2010 (WCPMIR). The WCPMIR require publication of information about regulated WPM charges and costs of WPM activities.

The 2011-12 RFI sought information regarding regulated WPM charges, WPM activities and the associated costs.⁸⁰ In response, the ACCC received the following information from the MDB state departments and water authorities:

- Queensland, Victoria and South Australia provided data about WPM charges and water usage
- New South Wales and the Australian Capital Territory provided total WPM revenue amounts, but did not provide data about WPM charges and water usage
- Victoria, South Australia and New South Wales provided cost data for WPM activities
- Queensland and the Australian Capital Territory did not provide cost data.

The responses did not disaggregate information about:

- regulated WPM charges from broader WPM charges,⁸¹ and
- costs of WPM activities that relate to water access entitlement holders from costs relating to a broader category of water users.⁸²

Given the information provided by MDB state departments and water authorities, the report presents information on the:

- total cost of WPM activities
- breakdown of the total WPM cost by categories of WPM activities
- estimated total WPM revenue
- comparison between the total WPM cost and the estimated total WPM revenue, and
- comparison between the in-Basin WPM cost and the estimated in-Basin WPM revenue.

⁷⁸ Request for Information for the ACCC's 2011-12 water monitoring report.

⁷⁹ Chapter 1 lists the departments and water authorities that received the RFI. The 2011-12 monitoring RFI was expanded to include GWMW, as the ACCC identified in 2011-12 that GWMW levies regulated water charges that fall under Part 4 of the Water Act. Coliban Water also received the ACCC's RFI but was not included for reporting purposes because the majority of its charges fall outside Part 4 of the Water Act.

⁸⁰ The 2011-12 RFI only requested cost information for those WPM activities that were recovered from water users through regulated WPM charges (i.e. not including WPM activities paid for through taxation).

⁸¹ *Regulated water charges*, as defined under section 91(2) of the Water Act, are a subset of *WPM charges* that are levied by Basin states.

⁸² *Water access entitlement holders* are a subset of a broader category of *water users* who have an entitlement to water within the Basin. Water users may cover rural and urban customers in a Basin State and not just irrigators.

4.4.3 Reported total costs and estimated revenues of WPM activities

Total cost of WPM activities

Table 4.3 shows the total cost of WPM activities reported by the MDB state departments and water authorities in 2010–11 and 2011–12.

Table 4.3: Total cost of WPM activities, 2010–11 and 2011–12

Reporting entity	2010–11 (\$)	2011–12 (\$)
Goulburn-Murray Water	2 180 806 ⁸³	2 970 578
Grampians Wimmera Mallee Water (GWMW)	not requested	1 088 005
Lower Murray Water	486 528	1 706 325
Department of Sustainability and the Environment (Vic)	48 324 640	43 263 300
Department of Environment, Water and Natural Resources (SA)	37 009 190	39 665 445
Office of Water (NSW)	66 136 788	67 527 000
Environment and Sustainable Development Directorate (ACT)	not provided	not provided
Department of Natural Resources and Mines (Qld)	not provided	not provided

Source: ACCC from data provided by WPM reporting entities

Table 4.3 shows that in 2011–12 the:

- total WPM cost for reporting water authorities has increased significantly. The water authorities attributed this to changes in government policy (e.g. introduction of water metering), increases in costs of meeting government licensing requirements and/or increases in the cost of delivering water services (e.g. groundwater monitoring).
- change in the total WPM cost for government departments was not significant.

Breakdown of the total WPM cost by categories of WPM activities

In 2011–12, the ACCC asked the MDB state departments and water authorities to provide the breakdown of the WPM costs by the following categories of WPM activities⁸⁴:

- water planning (state and regional)
- water monitoring and evaluation
- water management (environmental works, non-capital headworks)
- water industry regulation
- water administration and regulation (management of the entitlement system)
- development of inter-governmental agreements
- information management and reporting, and
- other.

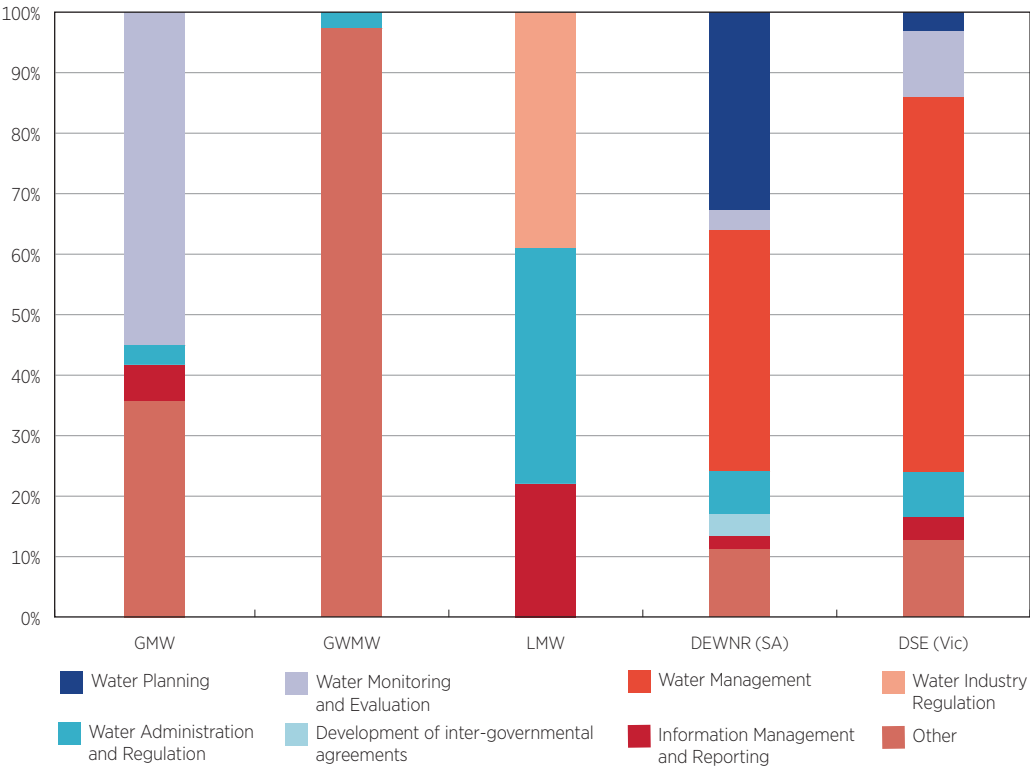
Chart 4.10 shows the breakdown of the total WPM cost for 2011–12.⁸⁵

⁸³ In response to the 2011–12 RFI, GMW informed the ACCC that the figure quoted in table 4.3 more accurately reflects its total WPM cost for 2010–11 than the figure of \$3 411 251 it provided to the ACCC in response to 2010–11 RFI (reported by the ACCC in 2010–11 Monitoring Report).

⁸⁴ These categories were developed by the COAG Water Pricing Principles Steering Group in the *National Water Initiative Pricing Principles on Cost Recovery of Water Planning and Management*.

⁸⁵ The NOW (NSW) did not provide the breakdown of its total WPM cost, while the ESDD (ACT) and the DNRM (Qld) did not provide any cost data.

Chart 4.10: Breakdown of the total WPM costs by categories of WPM activities, 2011-12



Source: ACCC from data provided by WPM reporting entities

Chart 4.10 shows that in 2011-12, the costs relating to:

- water management and water planning comprised a large proportion of the total WPM cost for the state departments, but an insignificant proportion for the water authorities
- water monitoring and evaluation, water administration and regulation and water industry regulation comprised a large proportion of the total WPM cost for the water authorities, but generally an insignificant proportion for the state departments, and
- development of inter-governmental agreements comprised an insignificant proportion of the total WPM cost for all departments and water authorities.

Estimated total WPM revenue

Table 4.4 shows the ACCC’s estimates of the total revenue from WPM charges for the MDB state departments and water authorities in 2010–11 and 2011–12.

Table 4.4: Total estimated revenue from WPM charges, 2010–11 and 2011–12

Reporting entity	2010–11 (\$)	2011–12 (\$)
Goulburn-Murray Water	2 349 755	2 359 005
Grampians Wimmera Mallee Water	not requested	522 444
Lower Murray Water	825 423 ⁸⁶	930 995
Department of Sustainability and the Environment (VIC)	70 712 445	71 333 322
Department of Environment, Water and Natural Resources (SA)	32 548 679	31 809 280
Office of Water (NSW)	33 904 339	36 925 000
Environment and Sustainable Development Directorate (ACT)	21 867 000	21 600 000
Department of Natural Resources and Mines (Qld)	2 858 706	11 219 454

Source: ACCC from data provided by WPM reporting entities

Table 4.4 shows that in 2011–12, there was no significant change in the estimated total WPM revenue for the MDB state departments and water authorities, except for the DNRM (Qld). This is primarily because most existing WPM charges only change by a pre-determined amount from year to year (usually CPI), as prescribed under state legislation or set out in fixed-term price determinations or orders made by state regulatory agencies. In addition, only one agency (GMW) reported that it levied new WPM charges in 2011–12.

While the table shows a significant increase in the estimated total WPM revenue for the DNRM (Qld), this is due to the difference in the charges the DNRM reported to the ACCC for 2011–12 compared to 2010–11. In 2011–12, DNRM reported to the ACCC a number of WPM charges that were levied by the DNRM in 2010–11 but not reported to the ACCC. Accordingly, the 2010–11 estimated total WPM revenue shown in the table understates the WPM revenue for DNRM in that year. The change in the estimated total WPM revenue for 2011–12, relating only to charges that were reported by the DNRM in 2010–11, was not significant.

Comparison between the total WPM cost and estimated total WPM revenue

Table 4.5 shows the comparison between the total WPM cost and estimated total WPM revenue for 2011–12. This provides a broad measure of the extent to which costs for WPM activities are recovered through WPM charges levied on water users. Where the total WPM cost exceeds the total WPM revenue, the difference is funded through other sources (e.g. general taxation or revenue from other charges).

86 In response to the 2011–12 RFI, GMW informed the ACCC that the figure quoted in table 4.3 more accurately reflects its total WPM cost for 2010–11 than the figure of \$3 411 251 it provided to the ACCC in response to 2010–11 RFI (reported by the ACCC in 2010–11 Monitoring Report).

Table 4.5: Comparison between the total WPM cost and estimated total WPM revenue, 2011-12

Reporting entity	Total WPM cost (\$)	Estimated total WPM revenue (\$)
Goulburn-Murray Water	2 970 578	2 359 005
Grampians Wimmera Mallee Water	1 088 005	552 444
Lower Murray Water	1 706 325	930 995
Department of Sustainability and the Environment (VIC)	43 263 300	71 333 322
Department of Environment, Water and Natural Resources (SA)	39 665 445	31 809 280
Office of Water (NSW)	67 527 000	36 925 000
Environment and Sustainable Development Directorate (ACT)	not provided	21 600 000
Department of Natural Resources and Mines (QLD)	not provided	11 219 454

Source: ACCC from data provided by WPM reporting entities

In 2011-12, the total WPM cost exceeded estimated total WPM revenue for each of the MDB state departments and water authorities, except the DSE (Vic).⁸⁷ This was also the case in 2010-11.

Comparison between the in-Basin WPM cost and estimated in-Basin WPM revenue

In 2011-12, the ACCC requested the MDB state departments and water authorities to identify which WPM costs and charges were specifically related to the MDB. Only the Victorian water authorities and the DEWNR (SA) were able to report on this basis.

Table 4.6 shows the comparison between the WPM cost for activities undertaken in the MDB and the estimated WPM revenue collected from water users in the MDB in 2011-12.

Table 4.6: Comparison between the in-Basin WPM cost and estimated in-Basin WPM revenue, 2011-12

Reporting entity	In-Basin WPM cost (\$)	Estimated in-Basin WPM revenue (\$)
Goulburn-Murray Water	2 970 578	2 359 005
Grampians Wimmera Mallee Water	1 088 005	427 384
Lower Murray Water	1 706 325	930 995
Department of Sustainability and the Environment (VIC)	not provided	not provided
Department of Environment, Water and Natural Resources (SA)	39 665 445	6 622 194
Office of Water (NSW)	not provided	not provided
Environment and Sustainable Development Directorate (ACT)	not provided	not provided
Department of Natural Resources and Mines (QLD)	not provided	9 986 377

Source: ACCC from data provided by WPM reporting entities

Table 4.6 shows that in 2011-12, the in-Basin WPM cost exceeded the estimated in-Basin WPM revenue for each of the MDB state departments and water authorities. In the case of the DEWNR (SA), this difference was significant.

GMW and LMW reported that all of their WPM costs and charges are in-Basin.

⁸⁷ DSE (Vic) indicated that over the period of its Environmental Contribution (2008-2012), the WPM costs and revenues are expected to balance out.



Chapter 5.

Price regulation under the Water Charge (Infrastructure) Rules

This chapter provides information on regulatory arrangements and outcomes for Tier 2 and Tier 3 water infrastructure operators under the Water Charge (Infrastructure) Rules (WCIR).

Key Points

- Each Tier 2 irrigation infrastructure operator (IIO) prepared and consulted on a Network Service Plan and provided it to their customers in 2012.
- The Network Service Plans provided customers with plans for service levels, estimates of capital and recurrent expenditure, details of any capital works grants and estimates of regulated charges for the 2012–17 period.
- The Network Service Plans were independently reviewed by Deloitte/Aurecon in 2012 and the reports by Deloitte/Aurecon were made available to IIO customers.
- Deloitte/Aurecon concluded that the Network Service Plans were generally prudent and efficient, however in some cases Deloitte/Aurecon disagreed with the assumptions and forecasts made by IIOs and made recommendations to these IIOs where necessary.
- Tier 3 bulk water operators will have their future charges approved or determined under the WCIR and in accordance with ACCC pricing principles.
- The Essential Services Commission will approve or determine the maximum prices for Goulburn-Murray Water (GMW) and Lower Murray Water (LMW) from 1 July 2013.
- The ACCC will approve or determine the maximum prices for State Water from 1 July 2014.

5.1 WCIR requirements for Tier 2 operators

The Water Charge (Infrastructure) Rules 2010 (WCIR) establish a three-tiered regulatory framework. Under Tier 2, each large member-owned and medium sized non-member-owned infrastructure operator is required to develop a Network Service Plan (NSP) for a five year period and consult with their customers on the Plan. This requirement improves transparency in the processes used by operators to determine their charges. Tier 2 rules apply to the following irrigation infrastructure operators:

- Central Irrigation Trust (CIT)
- Coleambally Irrigation Co-operative Limited (CICL)
- Murray Irrigation Limited (MIL)
- Murrumbidgee Irrigation Limited (MI)
- SunWater.⁸⁸

The NSP must provide details of the IIO's plans for service levels, estimates of capital and recurrent expenditure, details of any capital works grants and estimates of regulated charges for each financial year of the 2012-17 period. The NSPs for this period were required to be completed by 1 July 2012.

The Tier 2 rules require that each NSP must be independently reviewed by a qualified engineer, with the reviewer to provide advice on the prudence and efficiency of the NSP. Deloitte and Aurecon consultants (Deloitte/Aurecon) were engaged by the ACCC to conduct reviews of each of the five Tier 2 IIO's NSPs. As required by the rules, the reports by Deloitte/Aurecon were made available to the customers of each operator.

In advising on the prudence and efficiency of the NSPs, Deloitte/Aurecon were asked to consider whether the NSP represented a plan that would be expected of a commercially successful water infrastructure operator in the same position, and whether the operator is able to cost effectively deliver the services outlined.

5.2 Network Service Plan summary

An IIO's NSP is intended to communicate to its customers the regulated charges it expects to levy over a five year period. In doing so, under the WCIR each IIO is required to provide details relevant to regulated charges over the NSP period, including:

- capital and maintenance expenditure expected to affect charges
- expected levels of service
- the expected cost of providing infrastructure services
- how infrastructure services are financed
- the revenue required to provide infrastructure services
- how regulated charges are determined.

IIOs are expected to provide this information to customers in a way that enables them to understand the regulated charges they pay, how revenue from regulated charges funds expenditure on infrastructure services, and the factors that contribute to the need for this expenditure.

The following discusses some of the key findings of the NSP reviews conducted by Deloitte/Aurecon, covering the areas of capital expenditure, operating expenditure, service levels, demand forecasts and tariffs.

⁸⁸ SunWater is a government-owned corporation that is subject to price regulation by the Queensland Competition Authority (QCA) and the Queensland Minister for Energy and Water Supply. In 2010 the Queensland Government directed the QCA to review irrigation prices to apply to the water supply schemes of SunWater from 1 July 2012 to 30 June 2017. As part of this review, SunWater consulted with its customers and prepared NSPs for each of its water supply schemes and distribution systems in the MDB.

5.2.1 Capital expenditure

For capital expenditure to be prudent there must be a clearly identified need for the expenditure. Examples include fulfilling regulatory obligations, meeting new growth, providing for the renewal or rehabilitation of existing infrastructure, or increasing the reliability of water supply.

For CICL, MI and MIL, a major source of funding for future capital expenditure is the Private Irrigation Infrastructure Operators Program (PIIOP). This is an Australian Government funded program which is intended to improve the efficiency and productivity of water use and management in NSW. Box 5.1 provides details.

Box 5.1: Private Irrigation Infrastructure Operators Program in New South Wales

Under the first round of the NSW PIIOP, a total of \$255.6 million in funding was granted to five IIOs. Under the second round up to \$386.4 million in grant funding has been offered to four IIOs. The projects will provide 112 GL of water for the environment under the Murray Darling Basin Plan.⁸⁹ Tables 5.1 and 5.2 provide details of funding amounts and associated projects under round one and two of the program.

Table 5.1: Projects funded under Round 1 of the NSW PIIOP

IIO	Total funding	Water to be returned (annual long-term average)
Marthaguy	\$9.41m	2 070 ML
CICL	\$43.76m	9 568 ML
Tenandra	\$37.47m	5 251 ML
Trangie-Nevertire	\$115m	11 177 ML
MI	\$50m	5 700 ML

Table 5.2: Projects funded under Round 2 of the NSW PIIOP

IIO	Total funding	Water to be returned (annual long-term average)
CICL	\$7.35m	1 641 ML
Narromine	\$60.24m	8 411 ML
MJ ⁹⁰	\$149.62m	30 870 ML
MIL	\$169.23m	37 596 ML

Source: Department of Sustainability, Environment, Water, Population and Communities, *Private Irrigation Infrastructure Operators Program in New South Wales, 2012*

Capital projects which were the subject of PIIOP funding applications were assessed by the Australian Government before funding was granted. Technical feasibility and a sound project management capability, including a realistic budget and implementation program were key components of the assessment process.

⁸⁹ Measured in long-term average annual yield.

⁹⁰ At the time of writing Murrumbidgee Irrigation had not yet taken up this offer of funding.

Projects funded under PIOP vary in size and nature.

The Round 1 funding is principally being used:

- by CICL to line channels and upgrade water delivery infrastructure on farms, and
- by MI to replace an existing concrete-lined channel with a system of new pipelines.

The Round 2 funding will principally be used:

- by CICL to construct a 2700 ML in-line storage and replace existing meters with flume gates
- by MI to continue replacing existing channels with pipelines and to upgrade on-farm infrastructure, and
- by MIL to line channels, upgrade outlet meters to facilitate remote operation and monitoring, and to reconfigure and decommission channel sections.

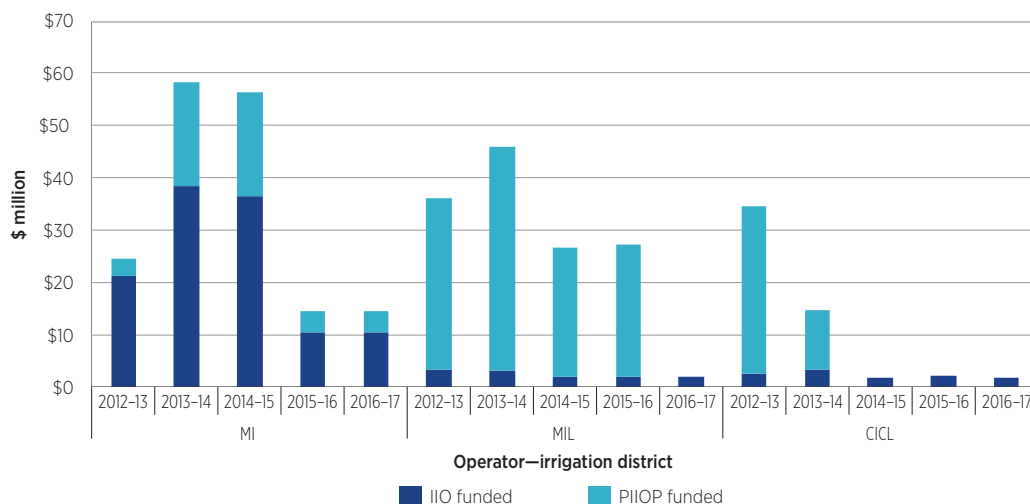
Figure 5.1: Flumegate installed in the Murray Irrigation area



Source: ACCC; Photographer Shane Grosser

Chart 5.1 illustrates the scale of PIIOP funding to be provided to MI, MIL and CICL relative to capital expenditure funded by IIO customers over the NSP period.

Chart 5.1: Forecast capital expenditure of NSW IIOs over the NSP period



Note: Excludes PIIOP Round 2 funding for MI and CICL. MI has been offered funding of approximately \$150 million, which at the time of publication was still being negotiated with the Government. Since completing its NSP CICL has agreed to receive a further \$7.35 million under Round 2 of the PIIOP.

Deloitte/Aurecon concluded that the planned capital expenditure of each IIO was prudent and efficient based on the information provided in each NSP and supporting documents. Most IIOs were able to demonstrate that its historical and forecast capital expenditure was planned strategically and incorporated appropriate risk mitigation measures.

5.2.2 Operating expenditure

Operating expenditure by IIOs can encompass:

- activities such as water ordering, planning, delivery, meter reading, pumping, monitoring and operating assets
- asset maintenance and repair, and
- billing, customer enquiries, corporate support, board management, taxes and interest payments.⁹¹

The forecast operating expenditure of each IIO was generally considered by Deloitte/Aurecon to be prudent and efficient. The IIOs' operating expenditure was reviewed through analysis of historical costs and high level benchmarking. Deloitte/Aurecon made recommendations to IIOs in relation to their assumptions underpinning labour costs, bulk water costs, depreciation and electricity costs.

⁹¹ National Water Commission, 2012 National Performance Report rural water service providers.

Box 5.2 discusses the nature of CIT's electricity costs and Deloitte/Aurecon's conclusions.

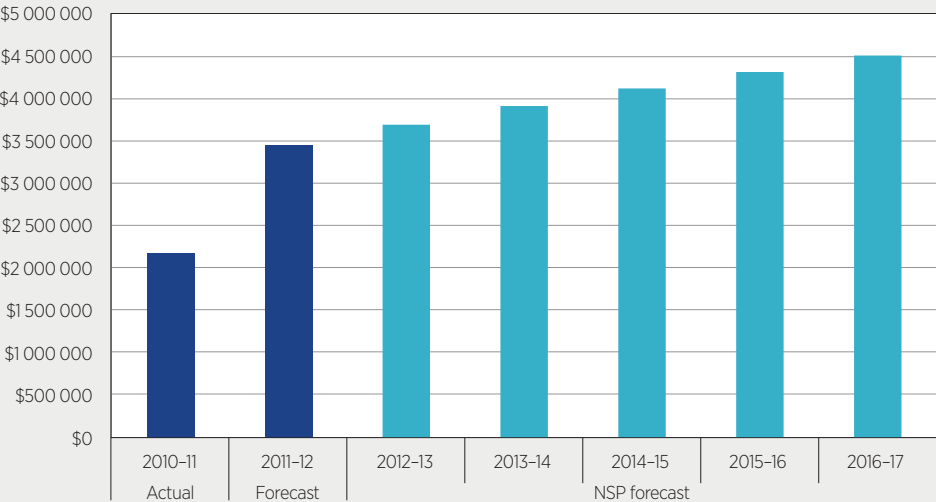
Box 5.2: Central Irrigation Trust electricity costs

Electricity costs represent CIT's largest single expenditure item, apart from asset replacement funding. As system lift and delivery pressure varies between the different service areas of CIT, so does the electricity required to deliver water to each area. For example, the water delivery systems of Sunlands and Golden Heights, which deliver high-pressure water using high-lift pumps, give rise to higher costs per ML of water delivered compared to low-pressure systems that require little lift.

CIT's billing structure contains peak and off-peak charges, while its demand profile is roughly 60 per cent off-peak and 40 per cent peak. CIT encourages its customers to use water during off-peak periods, however this remains the customer's decision.

CIT forecast nominal electricity costs of \$20.49 million for the five years to 2016-17, rising from \$3.68 million per annum in 2012-13 to \$4.50 million per annum in 2016-17. This compares with nominal expenditure on electricity of \$11.41 million for the five years to 2011-12. Chart 5.2 shows CIT's historical and forecast electricity costs over these two periods.

Chart 5.2: CIT actual and forecast electricity costs, 2010-11 to 2016-17 (nominal dollars)



Source: Review of Network Service Plan 2012-17 (CIT), Deloitte/Aurecon 2012

Between 2010-11 and 2011-12 there was a 58 per cent increase in electricity costs, however this was largely due to two additional service areas (Sunlands and Golden Heights) joining the CIT group in 2011. These areas require more electricity to deliver high-pressure water. During the NSP period CIT's total electricity costs are forecast to increase by around 5 per cent each year. CIT expects that increases in electricity costs will be caused by higher electricity charges, rather than higher usage levels (or changes in the peak/off-peak usage rates).

While the retail component of CIT's electricity charges may be 'locked in' for the next three years, other elements of the charges such as network costs are largely uncertain and may have a material impact on CIT's costs. CIT has no ability to influence these costs, other than by encouraging irrigators to use water in off-peak periods. Despite uncertainty about future electricity costs, Deloitte/Aurecon considered CIT's forecasts of water deliveries to be high which may have overstated its electricity costs.

5.2.3 Customer service standards

During the NSP reviews, IIOs noted that although there are various government obligations that indirectly influence customer service levels, there are generally no specific regulatory obligations for customer service and service quality. At the firm level most IIOs have historically reported service level metrics such as delivery efficiency and water losses. However the nature of some reporting means that it is difficult to determine whether future targets in NSPs represent the status quo or an actual improvement in service. Box 5.3 discusses how CICL's delivery efficiency has changed over time.

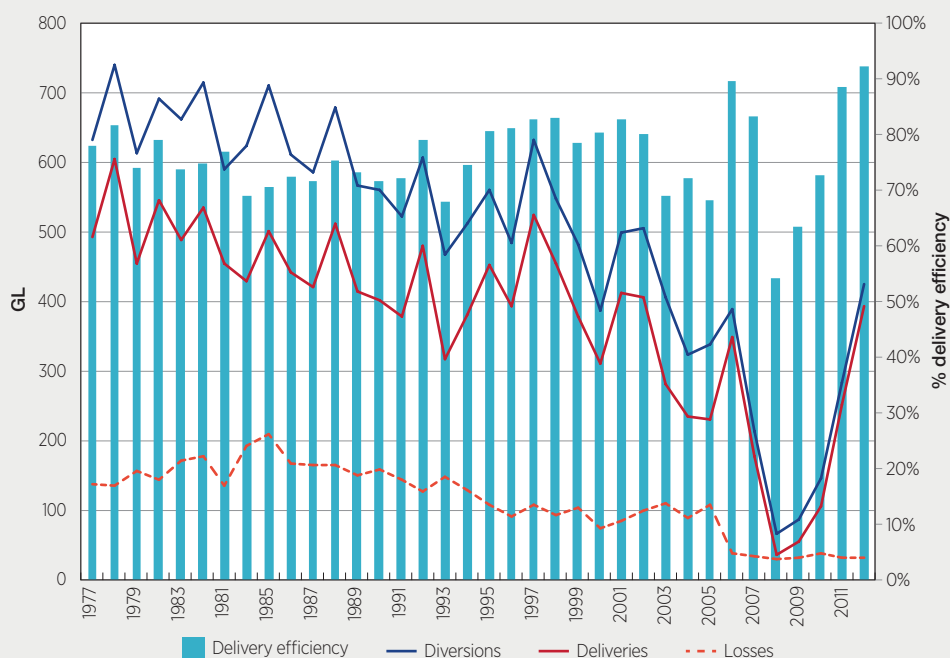
Box 5.3: Coleambally Irrigation historical service delivery standards

Although there is no public information on historical performance for the particular service standards that are outlined in CICL's NSP or annual reports, during the review of its NSP CICL provided information that has been collected internally.

Chart 5.3 shows a time series of CICL's diversions, deliveries, losses and delivery efficiency for the past 35 years. The chart shows:

- Losses (the difference between diversions and deliveries) show a generally declining trend from 1985 (209 GL) to 1996 (91 GL) which is in line with declining diversions and deliveries over this time. Losses were steady from 1997 to 2005.
- In 2005 there was a step change reduction in losses which coincided with the implementation of Total Channel Control (TCC). Losses have remained low since 2005 despite high variability in deliveries.
- A significant factor affecting delivery efficiency is allocation levels, as losses per GL delivered are more likely to be higher when less water is flowing through the network as a whole. Since the implementation of TCC in 2005 CICL have recorded four years where efficiency was 83 per cent or more. In the 28 years prior to 2005 this level of efficiency was only achieved three times.

Chart 5.3: Diversions, deliveries, losses and delivery efficiency of CICL, 1977 to 2012



Source: Review of Network Service Plan (Coleambally Irrigation), Deloitte/Aurecon 2012

Deloitte/Aurecon supported the various customer service initiatives planned in each NSP, and suggested that IIOs provide transparency for customers by publishing service performance metrics regularly on their websites or in customer publications.

5.2.4 Demand forecasts

Demand forecasts (projected water sales) have an effect on the forecast revenues of IIOs in NSPs as IIOs levy volumetric charges (except for CICL which levies fixed charges only). However, if water sales are higher than forecast, the operator may receive revenues from its volumetric charges that are higher than what it needs to recover the costs forecast in the NSP. Conversely, if water sales are lower than forecast, the operator may not recover enough revenue to recover its forecast costs. The extent to which differences between forecast and realised demand impact on cost recovery depends on how closely the ratio of fixed to variable charges reflects the ratio of fixed to variable costs.

Forecasting demand has a number of challenges. There are a range of factors to consider when forecasting, such as rainfall variability, current and predicted allocation levels, the proportion of high and general security entitlements within the IIO's network, expected commodity prices for annual crops, the proportion of customers with permanent crops and the potential for reductions in demand as a result of trade out of the IIO's network.

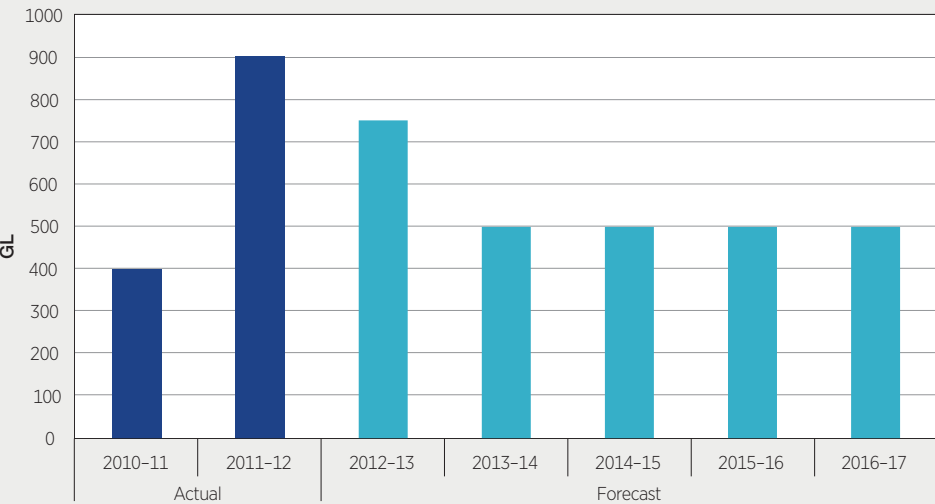
Deloitte/Aurecon found that the approaches to forecasting demand varied between IIOs. Although demand forecasts were generally considered to be prudent and efficient, in some cases Deloitte/Aurecon disagreed with forecasting assumptions and considered forecasts to be overly conservative. Box 5.4 discusses the demand forecasts made by MIL and MI.

Box 5.4: Demand forecasts of Murray Irrigation (MIL) and Murrumbidgee Irrigation (MI)

MIL has historically experienced high variability in water sales due to rainfall variability and allocations, the high proportion of general security entitlements within the irrigation network and variability in demand associated with annual cropping. In its NSP MIL forecast demand of 750 GL for 2012–13 and 500 GL per annum for the years 2013–14 to 2016–17. However, MIL delivered over 900 GL of water in 2011–12 and storages and allocations remained high at the beginning of the 2012–13 irrigation season.

Chart 5.4 shows MIL’s actual water sales for the past two years and forecast sales for the NSP period. MIL’s demand forecast was considered by Deloitte/Aurecon to be overly conservative given that storages (and therefore allocations) would remain relatively high under the assumption of average rainfall over the next five years.

Chart 5.4: MIL actual and forecast water sales, 2010–11 to 2016–17



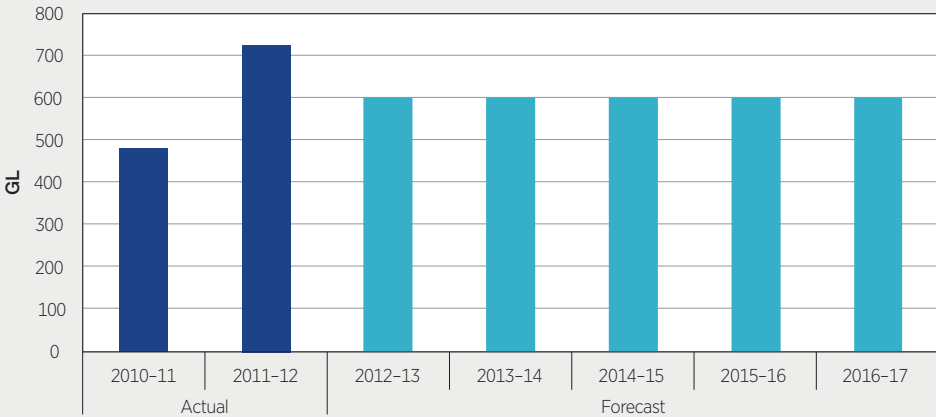
Source: Review of Network Service Plan 2012–17 (Murray Irrigation Limited), Deloitte/Aurecon 2012

Similarly, the demand forecast made by MI of 600 GL per annum was considered by Deloitte/Aurecon to be too conservative for the first two years of the NSP. As at 30 June 2012, storages were close to full capacity and allocations were high in the Murrumbidgee Valley. During the NSP review MI advised Deloitte/Aurecon that it expected the NSP period to be wetter than average. Due to the relatively high proportion of MI customers with high security licences (33 per cent of total) and permanent crops, Deloitte/Aurecon concluded that there will be a stable base demand of around 200–300 GL per annum regardless of general security allocation levels, and maintained its view that MI’s forecast was overly conservative.

Box 5.5 continued

Chart 5.5 shows MI's actual water sales for the past two years and forecast sales for the NSP period.

Chart 5.5: MI actual and forecast water sales, 2010-11 to 2016-17



Source: Review of Network Service Plan 2012-17 (Murrumbidgee Irrigation Limited), Deloitte/Aurecon 2012

5.2.5 Tariffs

As part of the NSP, each IIO provided estimates of future annual water tariffs for the 2012-13 to 2016-17 period. The review process conducted by Deloitte/Aurecon involved an examination of the various tariffs and pricing structures of each IIO. Deloitte/Aurecon's key findings and recommendations were:

- MIL is in a sound financial position and, given the prospect of increased water sales in the future, may have scope to reduce its tariffs in real terms (rather than increase by CPI as proposed in the NSP).⁹²
- The existing tariff structures of MI are overly complex, and MI should strongly consider the benefits to customers of a simplified tariff structure.
- CICL proposed to increase all tariffs by 1.5 per cent for the NSP period, given that it is unsustainable to leave charges at or below cost recovery, as is currently the case. This decision was considered prudent however it was recommended by Deloitte/Aurecon that CICL examine its cost base and identify variable components which may prompt the introduction of a volumetric charge.
- It was recommended that CIT consider a method of cost recovery that better reflects the drivers of its variable costs, such as the volume of water delivered or electricity consumed.

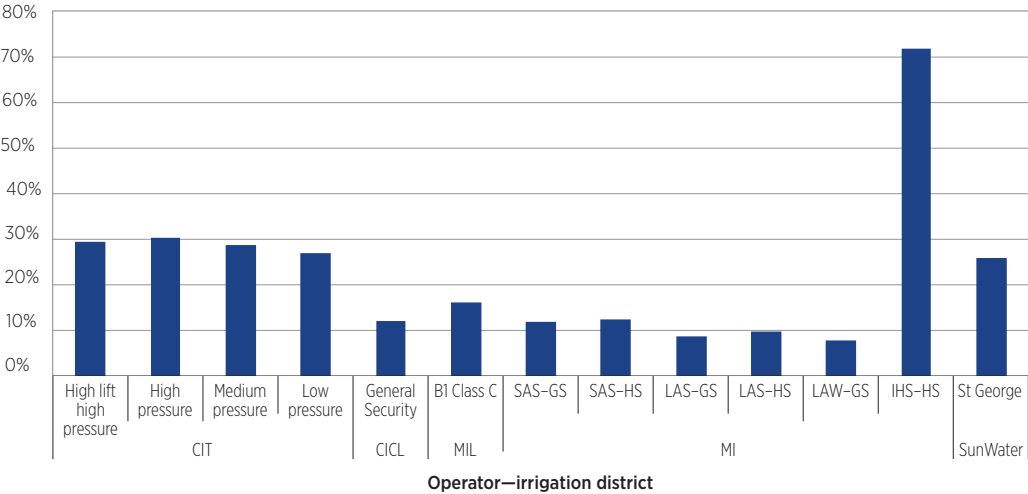
Overall, Deloitte/Aurecon found the tariffs proposed by IIOs over the NSP period to be reasonable, but encouraged some IIOs to modify their tariff structures.

Chart 5.6 shows the projected nominal increases in irrigator bills over the five year NSP period. These increases are based on the ACCC's hypothetical irrigator bill assumptions used in Chapter 4 of this report and are representative of the average size irrigator in each IIO and irrigation district.

92 Based on Deloitte/Aurecon's view that MIL's demand forecast was too conservative.

The largest increases in irrigator bills are projected to occur in pressurised irrigation networks (MI-IHS and CIT), which can largely be attributed to forecast increases in electricity costs. The projected increases in NSW IIO gravity-fed network irrigator bills are smaller, and range from 7 to 16 per cent (nominal) over the entire five year NSP period. This translates to real increases of less than 5 per cent per annum for most irrigation areas in each year of the NSP period.

Chart 5.6: Projected nominal changes in irrigator bills, 2011-12 to 2016-17



Source: ACCC from data provided in Network Service Plans

5.3 WCIR requirements for Tier 3 operators

The Tier 3 rules provide for the approval or determination of regulated water charges levied by large non-member-owned operators. Approvals or determinations will be undertaken in the future by either the ACCC or an accredited state regulator.

Tier 3 rules address the potential misuse of market power and resulting inefficiencies of monopoly pricing, and apply to larger non-member-owned infrastructure operators. These infrastructure operators will apply to the ACCC or an accredited state regulator for approval or determination of their maximum charges.

In February 2012 the Essential Services Commission (ESC) was accredited to approve or determine charges in Victoria in accordance with ACCC Pricing Principles. The ESC will approve or determine bulk water charges levied by Goulburn-Murray Water and Lower Murray Water from 1 July 2013.

In NSW, the ACCC will approve or determine bulk water charges levied by State Water from 1 July 2014.

Part C

Compliance with water charge rules and water market rules





Chapter 6.

Compliance with Rules made under the Water Act

Under the *Water Act 2007* (Cwlth) (the Water Act), the ACCC is the responsible enforcement agency for rules made under Part 4 of the Water Act. This chapter provides a review of the compliance and enforcement activities carried out in 2011-12 by the ACCC in relation to those rules.

The ACCC uses the information that it collects through routine monitoring, specific information requests and the complaints and inquiries it receives to monitor compliance with the Water Market Rules and the Water Charge Rules (collectively, the Rules).

Key Points

- The ACCC has observed that knowledge of, and attitude towards compliance with the Rules among infrastructure operators has generally improved since 2010-11.
- The ACCC continues to provide targeted compliance information to individual infrastructure operators and to publish and update short and long-form guidance materials to assist infrastructure operators, irrigators and water specialists to understand the Rules.
- The ACCC has observed that infrastructure operators are becoming more proactive in responding to the ACCC's compliance activities—identifying, addressing and self-reporting compliance concerns.
- The information published by the DNRM (QLD), the NOW (NSW) and the ESDD (ACT) in 2011-12, and the first half of 2012-13, did not meet the key publication requirements of the Water Charge (Planning and Management Information) Rules. The ACCC is continuing to work with these state and territory departments to advance the pricing transparency of water planning and management charges.
- In October 2012, technical amendments to the Water Market Rules and Water Charge (Termination Fees) Rules came into effect.

6.1 The Rules enforced by the ACCC under the Water Act 2007

Under the Water Act, the ACCC is the enforcement agency for the following rules within the MDB:

- *Water Market Rules 2009* (WMR)
- *Water Charge (Termination Fees) Rules 2009* (WCTFR)
- *Water Charge (Infrastructure) Rules 2010* (WCIR), and
- *Water Charge (Planning and Management Information) Rules 2010* (WCPMIR).⁹³

Under the *Competition and Consumer Act 2010*⁹⁴, the ACCC is also responsible for monitoring the compliance of infrastructure operators, water brokers and other water specialists with fair trading requirements under that Act.

Infrastructure operators subject to the Rules are also subject to obligations under other state and Commonwealth water legislation.

6.2 Approach to compliance

In 2011–12, building on the approach outlined in the 2010–11 water monitoring report, the ACCC pursued an approach to compliance and enforcement activities designed to:

- foster a culture of compliance among infrastructure operators as well as state and territory departments and water authorities
- ensure that infrastructure operators as well as state and territory departments and water authorities understand their obligations and provide accurate, relevant information to customers, and
- encourage selfdisclosure of rule breaches by infrastructure operators.

These objectives are consistent with the approach to compliance and enforcement set out in the *ACCC Enforcement Guide—Water Market and Water Charge Rules* (revised in April 2011).⁹⁵

During 2011–12, the ACCC has observed an improved level of understanding of the Rules amongst infrastructure operators. However, some infrastructure operators are still seeking to understand how certain requirements of the Rules apply to their practices.

The ACCC has responded to this by refining its approach to the provision of guidance. The ACCC has released two targeted Guidelines on specific aspects of the Rules to complement its more extensive guides. One guideline sets out information to assist irrigation infrastructure operators (IIOs) to set transformation application fees and the other covers the treatment of bulk water charges under the Rules. The ACCC has also revised the WMR and the WCTFR guides and provided targeted guidance to individual IIOs. All guidance materials are available on the ACCC website and have been circulated to the subscribers of the ACCC water mailing list.

In October 2012, the Minister for Sustainability, Environment, Water, Population and Communities made amendments to the WMR and the WCTFR based on advice provided by the ACCC in March 2010. The ACCC released a guideline summarising the changes and providing information on the steps that need to be taken by IIOs to comply with the amended rules.

The ACCC recognises that some technical aspects of the Rules can be difficult to interpret and has taken this into consideration in assessing the appropriate enforcement response for alleged breaches of the Rules.

⁹³ See Chapter 1 for further information.

⁹⁴ Including the Australian Consumer Law.

⁹⁵ Available on the ACCC website: <www.accc.gov.au/content/index.phtml/itemId/890596>.

6.3 Compliance activities for 2011-12

In 2011-12, the ACCC completed a wide range of activities designed to assess levels of compliance with the Rules by regulated entities and to improve stakeholder awareness of the requirements and opportunities arising from the Rules. These activities included:

- *Review of information provided by infrastructure operators and state and territory departments and water authorities in response to the ACCC's monitoring request for information*—ACCC staff reviewed information provided by infrastructure operators and state and territory departments and water authorities for 2011-12 to assess their compliance with the requirements of the Rules. ACCC staff followed up with individual entities where clarification or further information was required.
- *Engagement with state and territory government departments and water authorities on the requirements of the WCPMIR*—ACCC staff liaised with departments and water authorities delegated with responsibility to publish information on WPM charges to ensure they understood the requirements of the rules. ACCC staff assisted some of these entities to determine whether certain charges levied by them are WPM charges and therefore fall within the scope of the WCPMIR.
- *Education sessions for water specialists*—ACCC staff presented information sessions for water brokers and other water specialists to explain technical aspects of the Rules.
- *Meetings with infrastructure operators*—ACCC staff met with a number of infrastructure operators as part of its monitoring road show in 2011 and provided guidance on the requirements of the Rules and compliance.
- *Public education on the Rules and the role of the ACCC*—the ACCC published information on the Rules and the role of the ACCC in specialised industry journals and regional newspapers.
- *Revision of existing guidance materials*—the ACCC revised the guides to the WCTFR and the WMR.
- *Release of Guidelines on specific requirements of the Rules*—the ACCC released Guidelines on Bulk Water Charges, Transformation Application Fees and Amendments to the WMR and the WCTFR.⁹⁶

Throughout 2011-12, the ACCC also assisted the MDBA with the development of its approach to compliance and enforcement of the Water Trading Rules (WTR). The WTR will commence on 1 July 2014 and will be enforced by the MDBA.

6.4 Compliance and enforcement outcomes

6.4.1 Complaints and inquiries

Over 2011-12, the ACCC dealt with a total of 71 complaints and inquiries about water-related matters, fewer than in 2010-11 (101 matters) and 2009-10 (232 matters). Of these matters, 32 required detailed assessment and response, compared to 29 in 2010-11 and 126 in 2009-10.

The ACCC received fewer inquiries and complaints from irrigators—20 in 2011-12 compared to 42 in 2010-11. Most of these were about charges levied by infrastructure operators, particularly termination fees. The decline in the number of irrigator complaints and inquiries can be attributed to better familiarity with the Rules among irrigators, infrastructure operators and water specialists. Information about the processes of transformation and termination being provided by infrastructure operators to their customers has also improved. Another contributing factor may be the involvement of government in the transformation process, with a number of the transformations in 2011-12 being part of government water buyback and infrastructure investment programs (see Chapter 3).

⁹⁶ Available on the ACCC website: <www.accc.gov.au/content/index.php/ml/itemId/944643>.

Infrastructure operator inquiries were also significantly lower than previously—seven in 2011–12 compared to 25 in 2010–11 and 68 in 2009–10. Infrastructure operator inquiries typically involved requests for guidance on how to comply with specific requirements of the Rules or self-reporting of minor rule breaches. The lower level of infrastructure operator inquiries is likely to be due to a better understanding of the Rules. Increased incidence of self-reporting of rule breaches indicates an improved compliance culture among infrastructure operators.

The ACCC initiated 22 inquiries throughout 2011–12, compared to 21 in 2010–11 and nine in 2009–10. The number of ACCC initiated inquiries can be attributed to the ACCC's proactive approach to compliance monitoring and an increased number of rules monitored by the ACCC in 2011–12, with the WMR, WCTFR, WCIR and WCPMIR all being in effect for the entire financial year for the first time.

The ACCC received an increased number of inquiries and complaints from water specialists, interest groups and government agencies—22 in 2011–12 compared to 13 in 2010–11.

6.4.2 Investigations

In 2011–12, the ACCC conducted a number of investigations into suspected breaches of the Rules based on compliance concerns raised through complaints and staff analysis. In seven of these investigations, the ACCC reached a view that the regulated entity was likely to be in breach of the Rules.

The ACCC considered that the identified alleged breaches by infrastructure operators were generally minor and/or resulted from a genuine misunderstanding of the requirements of the Rules, rather than deliberate attempts by infrastructure operators to avoid their legal obligations. Accordingly, the ACCC generally resolved its compliance concerns administratively rather than by taking formal legal action. The ACCC responses were proportionate to the nature of the alleged breaches identified, and ensured that infrastructure operators took practical steps to remedy any detriment to customers and to address future compliance with the Rules.

The ACCC also identified failure by some state and territory departments and water authorities to adequately meet the publication requirements of the WCPMIR. The ACCC will continue to work with these entities to improve the accuracy and the scope of published water planning and management information to allow water users in those jurisdictions to better understand their water planning and management charges.

Details of some of the investigations conducted by the ACCC are set out below.

Termination fees in excess of the maximum allowed—date of written notice of termination

The ACCC received a complaint that an IIO charged termination fees in excess of the maximum permitted under the WCTFR by calculating the termination fees based on an incorrect date of the written notice of termination. The WCTFR set out that calculation of the maximum termination fee must be based on the date the written notice of termination is given. The IIO incorrectly calculated the termination fees based on the date a complete application for transformation and termination was received by the IIO, rather than the date written notice of termination was first given by the applicant to the IIO.

The investigation revealed that as a result of its incorrect application of the WCTFR, the IIO overcharged 5 customers by calculating their termination fees based on access charges payable in the wrong financial year. The ACCC chose to resolve this matter administratively, with the IIO agreeing to provide refunds, with interest, to the overcharged irrigators and committing to calculate termination fees in the future based on the correct date of the written notice of termination.

Termination fees in excess of the maximum allowed—late changes to access fees rates

An IIO self-reported to the ACCC that it had inadvertently demanded a termination fee from one customer in excess of the maximum permitted under the WCTFR. The IIO explained that new access fees for 2011-12 came into effect part way through the year rather than on 1 July 2011. The IIO made the mistake of calculating the termination fee for a customer (who gave written notice of termination in 2011-12) solely based on the new 2011-12 charges, rather than a pro-rata combination of 2010-11 charges (which applied for part of 2011-12) and 2011-12 charges. Under the WCTFR, the maximum termination fee must be calculated based on charges that are actually payable by the irrigator to the IIO in respect of the financial year in which written notice of termination is given.

The ACCC chose not to pursue enforcement action on the basis that the IIO had identified and immediately rectified the error. The IIO issued a revised invoice to the affected customer, amended its methodology for calculating the termination fees and reported the matter to the ACCC.

Excessive transformation application fees

The ACCC received a complaint that an IIO charged excessive application fees from customers seeking to transform their irrigation right into a water access entitlement. The WMR permit IIOs to charge an administrative fee for processing a customer's application for transformation, but limit the amount of the fee that can be charged to the recovery of reasonable and efficient costs of processing the application.

The ACCC reached a view that the IIO sought to recover costs in its transformation application fee that were in excess of the reasonable and efficient costs of processing a transformation application. For example, the IIO sought to recover costs that were not incurred by the IIO strictly for the purpose of processing transformation applications and costs that the IIO would have incurred regardless of an application for transformation being made.

The ACCC chose to resolve this matter administratively, with the IIO agreeing to provide refunds, with interest, to customers who were overcharged in 2011-12. The IIO agreed to set its transformation application fee consistent with the WMR and the principles set out in the ACCC's guidance materials.

In 2011-12, the ACCC released a Guideline on Transformation Application Fees setting out information to assist IIOs to set transformation application fees in compliance with the WMR. Box 6.1 provides an extract from the Guideline on the costs that must be excluded from transformation application fees.

Box 6.1: Costs that must be excluded from transformation application fees

The following are generally the types of costs that are unlikely to be considered reasonable and efficient costs of processing a transformation application and should be excluded from any transformation application fee:

- costs associated with activities undertaken by an IIO that are not directly related to the processing of a customer's application for transformation
- costs to the business that would have been incurred regardless of an application for transformation being received, such as overheads
- costs arising from activities undertaken by an IIO for the purpose of meeting internal or external reporting obligations not directly related to the processing of a particular application for transformation
- costs (including legal costs) that have been incurred to become generally compliant with other provisions of the WMR or the Water Act
- costs arising from activities undertaken by an IIO as part of its usual business practices that are already recovered through other fees and charges
- costs for which an IIO has already been compensated by a government agency.

Unreasonable delays in processing transformation

The ACCC received a complaint that an IIO caused an unreasonable delay to the registration of a transformation after the transformation was approved by the state authority. Under the WMR, there are only limited conditions under which an IIO can reasonably delay the processing of an application for transformation. The investigation by the ACCC revealed that the IIO's justification for the delay was unlikely to meet these conditions. The IIO's justification included waiting for other applications to be finalised so that it could send a batch of the applications to the state registration office.

The ACCC chose to resolve this matter administratively, with the IIO agreeing to amend its transformation procedures and policies to be consistent with the IIO's obligations under the WMR.

Publication of information about water planning and management charges

ACCC monitoring revealed that in 2011–12, and the first half of 2012–13, the New South Wales Office of Water, the Queensland Department of Environment and Resource Management (now Natural Resources and Mines) and the ACT Environment and Sustainable Development Directorate did not publish adequate information about water planning and management charges to meet the requirements of the WCPMIR. These entities can achieve compliance with the WCPMIR requirements by disclosing:

- all regulated water planning and management charges
- the current amounts of those charges, and
- the costs of the water planning and management activities to which those charges relate.

The ACCC recognises the challenges faced by some of these entities in achieving compliance with these requirements. For example, the DNRM (Qld) informed the ACCC that to publish cost information required under the WCPMIR would require the Department of Natural Resources and Mines to modify its accounting systems.

Publication of this information will improve pricing transparency and promote the water charging objectives and principles under the Water Act. In particular, disclosure of cost information will improve the water users' understanding of the relationship between the water planning and management charges that are levied and the costs of the related water planning and management activities.

The ACCC is committed to assisting each of these entities to meet the requirements of the WCPMIR.

6.4.3 Enforcement action

In all investigations undertaken in 2011–12, the ACCC assessed there was no need to litigate or to impose infringement notices on infrastructure operators. In making this assessment, the ACCC took into account a variety of factors including:

- the deliberateness of the contravention and the period over which it extended
- whether the conduct had caused, or was likely to cause, detriment to another party, and
- whether and how the infrastructure operator sought to remedy the contravention.

For further information on the factors the ACCC takes into account regarding enforcement of the Rules, see the *ACCC Enforcement Guide—Water Market and Water Charge Rules*, which is available on the ACCC's website.

6.4.4 Monitoring of compliance with enforceable undertakings

Under s.163 of the Water Act, the ACCC may accept an undertaking to perform a set of actions or to refrain from certain actions from a person it believes has breached the Rules. If the ACCC believes that the person has breached the undertaking, the ACCC can take legal action in court to enforce the terms of the undertaking.

Undertakings provided to the ACCC typically involve the infrastructure operator providing an agreement to redress behaviour that resulted in a breach, as well as providing a commitment to report to the ACCC on compliance with the undertaking for a fixed period of time. The ACCC periodically monitors compliance with the requirements of the undertaking and will take remedial action in the event of a failure to meet the requirements of the undertaking or further breaches of the Rules.

Table 6.1 sets out the two enforceable undertakings the ACCC has accepted, and its assessment of compliance by those infrastructure operators with their ongoing obligations.

Table 6.1: Enforceable undertakings under the Water Act

Operator	Description of undertaking	Status
Murrumbidgee Irrigation Limited	Committed to report on its compliance program to the ACCC annually until October 2013	Compliant with obligations for 2011–12
Murray Irrigation Limited	Committed to report on its compliance program to the ACCC annually until September 2013.	Compliant with obligations for 2011–12

Details of these undertakings are available in the public registers section of the ACCC website.⁹⁷

6.5 Comments on compliance in 2011–12

The ACCC has generally observed an improved attitude towards compliance with the Rules by regulated entities in 2011–12 compared to previous years. Where non-compliance by infrastructure operators occurs, it continues to be mainly as a result of infrastructure operators misinterpreting the Rules or making inadvertent errors. While several state and territory departments and agencies have not yet achieved compliance with all the publishing requirements of the WCPMIR, they have generally indicated a commitment to meeting those obligations.

Infrastructure operators are becoming more proactive in engaging with the ACCC in the circumstances where they self-identify likely breaches of the Rules or become aware that a specific policy or procedure may put them at risk of contravening the Rules. By bringing these matters to

⁹⁷ <www.accc.gov.au/content/index.phtml/itemId/949515>.

the attention of the ACCC early, infrastructure operators give themselves the best opportunity of addressing any potential compliance concerns and minimising potential detriment to customers. The ACCC takes this into consideration when assessing the appropriate enforcement response.

Infrastructure operators are also responding positively to the guidance provided by the ACCC on the requirements of the Rules. For example, the ACCC has observed that transformation application fees charged by infrastructure operators across the MDB have generally fallen within the \$250–350 range following release of the ACCC's Guideline on Transformation Application Fees. This improvement in pricing consistency promotes the water charging objectives and principles under the Water Act, considering the process of transformation is substantially uniform across the MDB.

In 2011–12, the ACCC has refined its approach to monitoring and enforcing compliance, consistent with the commitment it made in last year's water monitoring report. The ACCC released a series of targeted Guidelines on key topics and common areas of misunderstanding to assist infrastructure operators, irrigators and water specialists to understand specific requirements of the Rules. The ACCC also reviewed and re-released its guides on the Rules. Further, the ACCC has provided targeted guidance to infrastructure operators and state and territory departments and water authorities on the steps that they can take to achieve compliance with specific requirements of the Rules.

The ACCC will continue to work on strategies to raise the awareness and understanding of the Rules by infrastructure operators, irrigators, water specialists and state and territory departments and water authorities.

6.6 Compliance agenda for 2012–13

In 2012–13, the ACCC anticipates further improvements in awareness of, and compliance with, the Rules by infrastructure operators and other stakeholders, as the processes of transformation and termination become truly business-as-usual in the water industry.

The ACCC will continue with its proactive approach to monitoring and enforcing compliance with the Rules. The ACCC intends to develop and distribute further Guidelines on specific aspects of the Rules and will monitor infrastructure operator responses to the guidance provided. The ACCC will also continue to provide targeted guidance to regulated entities and, in particular, assist smaller infrastructure operators to understand how their policies and practices can be applied to meet the requirements of the Rules.

The ACCC will also focus on identifying any infrastructure operator policies or practices that may have the effect of discriminating between transformed and non-transformed customers or discouraging customers from transforming. This will assist the ACCC to assess the effectiveness of the Rules and the ACCC's compliance activities against the objectives of the Water Act.

The ACCC will continue to assist the MDBA to develop its approach to enforcing compliance with the WTR and engage with government departments and other stakeholders on the broader water reform agenda.

Appendices



Appendix A

Hypothetical bulk water bills

Objective

A hypothetical bulk water bill is a simple representation of how bulk water charges translate into individual bulk water customer bills. The approach is used by the ACCC for reporting on regulated bulk water charges, and enables assessment of the structure and level of regulated bulk water charges levied by bulk water operators. The method allows a more meaningful comparison of bulk water charges across bulk water operators.

The ACCC's analysis is based on certain assumptions about the characteristics of a hypothetical bulk water customer. The general methodology used and assumptions made by the ACCC in constructing hypothetical bulk water bills are discussed in the following sections.

General Methodology

The ACCC identified applicable fixed and variable charges that would be levied on bulk water customers by bulk water operators in 2010–11. This was based on the charges as shown in each bulk water operator's charging schedule. The ACCC then defined a charging profile(s) that was representative of most bulk water customers in each geographic charging area (e.g. MDB or valley) and/or of most bulk water customers holding a specific type of water entitlement (e.g. high or general security).

The ACCC hypothetical bulk water bill analysis differentiates between two main types of bulk water customers—private diverters and other bulk water customers, which include IIOs, urban/rural water authorities and commercial businesses.

In order to examine the sensitivity of the results to different assumptions, the methodology was applied to different volumes of water entitlement for each type of bulk water customer. In the case of private diverters, the volumes of entitlement used are 50 ML, 250 ML and 1000 ML. In relation to other bulk water customers, the volumes of entitlement used are 20 GL and 100 GL. The volumes were chosen to be representative of the amounts of water that might be held by each customer type.

The analysis was also carried out for the delivery of two levels of water allocation: 50 per cent and 100 per cent. It was assumed that the bulk water customer would use bulk water services for the relevant level of water allocation. The customer may have access to that allocation through allocation against a water access entitlement during the water year, trade of water allocation or the use of carryover.

In total, 59 hypothetical bulk water bills were constructed across the sample of four reporting bulk water operators. The number of bills constructed for each reporting bulk water operator is determined by the number of different geographic charging areas and whether charges are differentiated by entitlement security.

Assumptions

Goulburn-Murray Water

Private diverters

The analysis assumes two GMW hypothetical private diverters (one sourcing from the Murray Basin and one from the Goulburn Basin), each holding 50 ML, 250 ML or 1000 ML of high reliability water access entitlement.

Each private diverter is assumed to hold 0.5, 2.5 or 10 extraction shares, based on the Victorian conversion rules used at the time of unbundling.

Other GMW bulk water customers

These include GMW's internal retail arm, urban and rural water authorities and commercial businesses.

The analysis assumes seven GMW hypothetical 'other bulk water customers' holding a specific volume of high reliability entitlement (e.g. 20 GL, 100 GL), sourcing water from each of the following basins:

- Broken
- Goulburn
- Campaspe
- Loddon
- Bullarook
- Murray
- Ovens.

Lower Murray Water

Private diverters

The analysis assumes one LMW hypothetical private diverter holding 50 ML, 250 ML or 1000 ML of high reliability water access entitlement who sources water from the Murray Basin. The irrigator has one account and incurs the relevant operational, water share, environment and salinity fee.

Queensland Department of Natural Resources and Mines (DNRM)

The analysis assumes one DNRM hypothetical private diverter holding 50 ML, 250 ML or 1000 ML of water access entitlement (Queensland water allocation) in the Border Rivers area.

State Water

Private diverters

The analysis assumes 16 State Water hypothetical private diverters, two per valley—one holding 50 ML, 250 ML or 1000 ML of high security water access entitlement and the other holding 50 ML, 250 ML or 1000 ML of general security water access entitlement—for the following valleys:

- Border
- Gwydir
- Namoi
- Peel
- Lachlan
- Macquarie
- Murray
- Murrumbidgee.

Other State Water bulk water customers

The analysis assumes 16 State Water ‘other bulk water customers’, such as IIOs and urban water authorities. It is assumed that there are two customers per valley—one holding a specific volume of high security water access entitlement and the other holding the same volume of general security water access entitlement (e.g. 20 GL and 100 GL)—for the same eight valleys as for the private diverters.

SunWater

Private diverters

The analysis assumes eight SunWater hypothetical private diverters holding 50 ML, 250 ML or 1000 ML of water access entitlement (Queensland water allocation); one for each of the following areas:

- Upper Condamine (1)—North branch
- Upper Condamine (2)—North branch risk A
- Upper Condamine (3)—Sandy Creek or Condamine River
- Chinchilla Weir
- St George
- Cunnamulla
- Macintyre Brook
- Maranoa Weir.

Appendix B

Hypothetical irrigator bills

Objective

A hypothetical irrigator bill is a simple representation of how regulated water charges levied for irrigation water delivery and/or drainage services translate into individual irrigator customer bills. The approach is used by the ACCC for reporting on regulated water charges levied by IIOs for irrigation water delivery and/or drainage services, and enables the assessment of the structure and level of water charges levied by IIOs. The method allows a more meaningful comparison of charges across IIOs.

The ACCC's analysis is based on certain assumptions about the characteristics of a hypothetical irrigator customer. The general methodology used and assumptions made by the ACCC in constructing hypothetical irrigator bills are discussed in the following sections.

General Methodology

The ACCC identified applicable fixed and variable charges that would be levied on an irrigator customer provided with water infrastructure services by each reporting IIO in 2011-12. The charges were taken from the appropriate charging schedule as provided by each reporting IIO. The ACCC then defined a charging profile that was representative of most irrigators in each IIO's irrigation area(s) and/or most holdings of a specific type of water entitlement (high or general security). The ACCC assessed the most representative charging profile using each IIO's response to the ACCC's information requests.

The ACCC constructed an annual bill that would be faced by a hypothetical irrigator customer for 2011-12 assuming a certain volume of irrigation right (or water access entitlement). The ACCC also determined a corresponding amount of water delivery right (as discussed for each IIO below).

This methodology was applied to three different volumes of irrigation right (or water access entitlement): 50 ML, 250 ML and 1000 ML; and across two levels of delivery of water allocation; 50 per cent and 100 per cent. The ACCC assumed that the irrigator customer received water equal to the relevant level of water allocation. The customer may have access to that level of allocation through either allocation made against the access entitlement during the year, trade of water allocation or the use of carryover.

In total, 39 hypothetical irrigator profiles were defined and associated bills were constructed, across the sample of 19 reporting IIOs. The number of bills constructed for each reporting IIO is determined by the variations in their charging schedule as well as levels of water entitlement. The ACCC incorporated relevant feedback from IIOs to determine the assumptions used in the analysis.

The hypothetical irrigator bill analysis does not account for irrigator behaviour that may alter the amount of the bills. Irrigators may seek to alter their bills through using allocation trade and termination, in addition to receiving water through an irrigation network. The hypothetical bill analysis necessarily assumes that irrigators maintain their particular level of water delivery right and does not alter their amount of water from the delivery of 50 per cent or 100 per cent allocation scenarios through the sale of water allocation, irrigation right or water access entitlement during the year.

Assumptions

Buddah

The analysis assumes one Buddah hypothetical irrigator who holds a specific share of water access entitlement (e.g. 50 ML, 250 ML, 1000 ML) and also holds an equivalent amount of delivery right (e.g. 50 ML, 250 ML or 1000 ML, respectively).⁹⁸

Central Irrigation Trust

The analysis assumes three CIT hypothetical irrigators: one provided with a high pressure service, one provided with a medium pressure service and one provided with a low pressure service. It is also assumed that each of these hypothetical irrigators:

- holds a specific share of water access entitlement (e.g. 50 ML, 250 ML, 1000 ML) and also holds an equivalent amount of delivery right (e.g. 50 ML, 250 ML or 1000 ML, respectively)
- has an irrigation connection on the property—meaning no drainage charge applies (as this charge is only levied on customers that do not have an irrigation connection)
- is supplied with irrigation water at a proportion of 60 per cent at off-peak times and 40 per cent at peak times.

Coleambally

The analysis assumes one Coleambally hypothetical irrigator who holds a specific share of water access entitlement (e.g. 50 ML, 250 ML, 1000 ML) and also holds an equivalent amount of delivery right (e.g. 50 ML, 250 ML or 1000 ML, respectively).

The analysis also assumes that the hypothetical irrigator's farm is connected to the irrigation network through one large common irrigation outlet.

Coleambally's charging schedule also has an outlet peak flow charge which is levied on the basis of the maximum flow capacity of the relevant outlet. For a large common irrigation outlet, the flow ranges from 6 to 30 ML per day and an irrigator can select any number within that range. The analysis assumes that the hypothetical irrigator has a maximum peak flow of 16.3 ML per day.

Eagle Creek

The analysis assumes one Eagle Creek hypothetical irrigator who holds a specific share of general security water access entitlement (e.g. 50 ML, 250 ML, 1000 ML) and also holds an equivalent amount of general security delivery right (e.g. 50 ML, 250 ML or 1000ML, respectively).

Goulburn Murray Water

The analysis assumes nine GMW hypothetical irrigators, one in each of the following irrigation districts:

- | | |
|--|---------------|
| • Shepparton | • Torrumbarry |
| • Central Goulburn | • Woorinen |
| • Rochester | • Nyah |
| • Loddon Valley (formerly Pyramid-Boort) | • Tresco. |
| • Murray Valley | |

Each of these hypothetical irrigators holds 50 ML, 250 ML or 1000 ML of high reliability (HRR) water share and holds an equivalent number of delivery shares (e.g. 0.5 ML/day, 2.5 ML/day or 10 ML/day).

⁹⁸ In calculating hypothetical bills, delivery rights were reduced by 10 per cent to account for conveyance losses.

Given the structure of GMW's charge schedule, the analysis also makes additional assumptions specific to each irrigation district.⁹⁹

Shepparton

The following fixed charges apply to a GMW Shepparton hypothetical irrigator:

- Goulburn Basin HRR water share entitlement storage charge
- Water delivery service charge
- Infrastructure access charge
- Water delivery outlet fee
- Surface drainage service fee
- Surface drainage area charge, assuming a 100 per cent application of the drainage tariff
- Community surface drainage charge.

The following variable charges apply:

- Infrastructure use charge
- Surface drainage use charge, assuming a 100 per cent application of the drainage tariff.

Central Goulburn

The following fixed charges apply to a GMW Central Goulburn hypothetical irrigator:

- Goulburn Basin HRR water share entitlement storage charge
- Water delivery service charge
- Infrastructure access charge
- Water delivery outlet fee
- Surface drainage service fee
- Surface drainage area charge, assuming a 100 per cent application of the drainage tariff
- Community surface drainage charge.

The following variable charges apply:

- Infrastructure use charge
- Surface drainage use charge, assuming a 100 per cent application of the drainage tariff.

Rochester

The following fixed charges apply to a GMW Rochester hypothetical irrigator:

- Goulburn Basin HRR water share entitlement storage charge
- Water delivery service charge
- Infrastructure access charge
- Water delivery outlet fee
- Surface drainage service fee
- Surface drainage area charge, assuming a 100 per cent application of the drainage tariff.

The following variable charges apply:

- Infrastructure use charge
- Surface drainage use charge, assuming a 100 per cent application of the drainage tariff.

⁹⁹ GMW has developed pricing simulators to help their customers accurately estimate their annual fees and charges. See the GMW website for more details: <www.g-mwater.com.au>.

Pyramid-Boort

The following fixed charges apply to a GMW Pyramid-Boort hypothetical irrigator:

- Goulburn Basin HRR water share entitlement storage charge
- Water delivery service charge
- Infrastructure access charge
- Water delivery outlet fee.

The following variable charges apply:

- Infrastructure use charge.

Murray Valley

The following fixed charges apply to a GMW Murray Valley hypothetical irrigator:

- Murray Basin HRR water share entitlement storage charge
- Water delivery service charge
- Infrastructure access charge
- Water delivery outlet fee.

The following variable charges apply:

- Infrastructure use charge.

Torrumbarry

The following fixed charges apply to a GMW Torrumbarry hypothetical irrigator:

- Murray Basin HRR water share entitlement storage charge
- Water delivery service charge
- Infrastructure access charge
- Water delivery outlet fee.

The following variable charges apply:

- Infrastructure use charge.

Woorinen

The following fixed charges apply to a GMW Woorinen hypothetical irrigator:

- Murray Basin HRR water share entitlement storage charge
- Water delivery service charge
- Infrastructure access charge
- Subsurface drainage service fee
- Subsurface drainage area fee, assuming a 100 per cent application of the drainage tariff.

The following variable charges apply:

- Infrastructure use charge
- Subsurface drainage use charge, assuming a 100 per cent application of the drainage tariff.

Nyah

The following fixed charges apply to a GMW Nyah hypothetical irrigator:

- Murray Basin HRR water share entitlement storage charge
- Water delivery service charge
- Infrastructure access charge
- Additional delivery outlet charge
- Subsurface drainage service fee.

The following variable charges apply:

- Infrastructure use charge
- Subsurface drainage use charge, assuming a 100 per cent application of the drainage tariff.

Tresco

The following fixed charges apply to a GMW Tresco hypothetical irrigator:

- Murray Basin HRR water share entitlement storage charge
- Water delivery storage charge
- Infrastructure access charge
- Additional delivery outlet charge.

The following variable charges apply:

- Infrastructure use charge.

Hay

The analysis assumes one Hay hypothetical irrigator who:

- holds a specific share of water access entitlement (e.g. 50 ML, 250 ML, 1000 ML) and also holds an equivalent amount of delivery right (e.g. 50 ML, 250 ML or 1000 ML, respectively)¹⁰⁰
- incurs an administration fee for a property over four ha
- has one 12 ML outlet connected to its farm
- incurs the Channel System variable delivery charge.

Jemalong

The analysis assumes one Jemalong hypothetical irrigator who holds a specific volume of general security irrigation right (e.g. 50 ML, 250 ML or 1000ML) and also holds an equivalent amount of general security delivery entitlement (e.g. 50 ML, 250 ML, or 1000 ML, respectively). This means that the premium delivery charge does not apply.

Lower Murray Water

The analysis assumes four LMW hypothetical irrigators: one located in Merbein, one in Red Cliffs, one in Robinvale and one in Mildura Irrigation District.¹⁰¹ It is assumed that each of these hypothetical irrigators holds 50, 250 or 1000 ML of water access entitlement—and holds an equivalent number of delivery shares—respectively six, 30 or 120 delivery shares (i.e. the amount of water share multiplied by 0.12).

The analysis also assumes that each of the three LMW hypothetical irrigators:

- has one assessment with LMW (meaning that the service fee is incurred once)
- holds high reliability Murray Basin water shares
- is provided with a full drainage service
- incurs the regional environment fee (except Mildura)
- incurs the district environment fee (except Mildura)
- incurs the MCMA salinity levy (except Mildura)
- does not incur the excess water charge
- does not incur the spillable water charge.

¹⁰⁰ Customer information provided by Hay indicates that no actual Hay irrigator holds water access entitlement as large as 1000 ML. However, the ACCC's general conclusions in Chapter 3 remain unchanged.

¹⁰¹ For the purpose of calculating the fixed charge revenue in the Mildura irrigation district the 'Delivery Capacity share – other areas' charge is used.

Marthaguy

The analysis assumes one Marthaguy hypothetical irrigator who holds a specific volume of general security irrigation right (e.g. 50 ML, 250 ML and 1000 ML) and also holds an equivalent amount of general security delivery entitlement (e.g. 50 ML, 250 ML or 1000 ML, respectively). The irrigator also paid the 'Riparian Charge' (per ML) in 2011–12.

Moira

The analysis assumes one Moira hypothetical irrigator who holds a specific volume of irrigation right (e.g. 50 ML, 250 ML or 1000 ML) and also holds an equivalent amount of delivery right (e.g. 50 ML, 250 ML or 1000 ML, respectively).

Murray Irrigation Limited

The analysis assumes one Murray Irrigation Limited hypothetical irrigator who holds a specific volume of general security irrigation right (e.g. 50 ML, 250 ML and 1000 ML) and also holds an equivalent amount of general security delivery entitlement (e.g. 50 ML, 250 ML or 1000 ML, respectively).

The analysis also assumes that the hypothetical irrigator:

- operates a single property and therefore incurs the landholding access fee once
- incurs the large irrigation outlet charge
- incurs the account administration fee.

Variable charges are structured into three tiers:

- Tier 1: MIL Variable Charge and Government Variable Charge (0–5 ML).
- Tier 2: MIL Variable Charge and Government Variable Charge (6–100 ML).
- Tier 3: MIL Variable Charge and Government Variable Charge (>100 ML).

The application of variable charges therefore depends on the level of water entitlement.

For example, for a water entitlement of 250 ML, the hypothetical irrigator pays for 5 ML in Tier 1, 95 ML in Tier 2 and 150 ML in Tier 3.

Murrumbidgee Irrigation

The analysis applies to four pricing groups of Murrumbidgee Irrigation: Integrated Horticulture Supply (IHS), Large Area Supply (LAS), Large Area Supply Wah Wah excluding IHS (LAW) and Small Area Supplies (SAS).

It is assumed that Murrumbidgee has six hypothetical irrigators. Within SAS and LAS pricing groups, there is:

- one hypothetical irrigator holding a specific volume of high security irrigation right (e.g. 50 ML, 250 ML or 1000ML) with an equivalent amount of high security delivery entitlement (e.g. 50 ML, 250 ML or 1000 ML, respectively)
- one hypothetical irrigator holding a specific volume of general security irrigation right (e.g. 50 ML, 250 ML or 1000ML) with an equivalent amount of general security delivery entitlement (e.g. 50 ML, 250 ML or 1000 ML, respectively).

Within the IHS pricing group there is one hypothetical irrigator who holds a specific volume of high security irrigation right (e.g. 50 ML, 250 ML or 1000 ML) with an equivalent amount of high security delivery entitlement (e.g. 50 ML, 250 ML or 1000 ML, respectively). IHS customers must also pay electricity charges, which Murrumbidgee passes on at cost. 75 per cent of electricity charges are based on water use, and the remaining 25 per cent are socialised across all customers and included in fixed charges. Electricity usage charges depend on several factors, including the level of water pressure and the time period of electricity use (peak/off peak periods).

Within the LAW pricing group there is one hypothetical irrigator who holds a specific volume of general security irrigation right (e.g. 50 ML, 250 ML or 1000 ML) with an equivalent amount of general security delivery entitlement (e.g. 50 ML, 250 ML or 1000 ML, respectively).

The analysis also assumes the following characteristics for the irrigators in each pricing group and security type, based on MI's information returns:

	LAS		SAS		IHS	LAW
Type of delivery entitlement held	High security	General security	High security	General security	High security	General security
Number of farms connected	1	1	1	1	1	1
Number of outlets connected	2	2	1	1	1	2
EnviroWise—Landholding <4ha	No	No	No	No	No	No
EnviroWise—Landholding >4ha	Yes	Yes	Yes	Yes	Yes	Yes
EnviroWise—HS type 3	Yes	No	Yes	No	Yes	No
EnviroWise—GS type 1	No	Yes	No	Yes	No	Yes
Bulk Water—Licence	Yes	Yes	Yes	Yes	Yes	Yes
Bulk Water—Usage	Yes	Yes	Yes	Yes	Yes	Yes
Rice crop	No	No	No	No	No	No

Narromine

The analysis assumes one Narromine hypothetical irrigator who:

- holds a specific volume of irrigation right (e.g. 50 ML, 250 ML or 1000 ML) and holds an equivalent amount of delivery entitlement (e.g. 50 ML, 250 ML or 1000 ML, respectively)
- operates one farm and one account, and therefore incurs outlet and administration charges once.

Renmark

Renmark levies its access charge based on the farm size in hectares. The ACCC uses a conversion rule of 9.28 ML for 1 hectare.¹⁰² The analysis assumes that Renmark has one hypothetical irrigator who:

- holds a specific volume of irrigation right (e.g. 50 ML, 250 ML or 1000 ML)
- has an equivalent farm size—e.g. 5.38 ha, 26.94 ha or 107.76 ha, respectively for each of the volumes of irrigation right above
- has one irrigation connection on its farm—implying that the drainage charge does not apply.

SunWater (St George)

The analysis assumes one SunWater hypothetical irrigator located in the St George Water Supply Scheme channel area who:

- holds a specific volume of water allocation (e.g. 50 ML, 250 ML or 1000 ML)
- does not incur any channel harvesting fees.

¹⁰² This conversion is assumed following information provided to the ACCC by Renmark.

For the purpose of calculating drainage charges, the analysis also assumes a corresponding farm size (20 ha, 100 ha and 400 ha respectively).¹⁰³

Tenandra

The analysis assumes one Tenandra hypothetical irrigator who holds a specific share of water access entitlement (e.g. 50 ML, 250 ML or 1000 ML) and holds an equivalent amount of delivery right (e.g. 50 ML, 250 ML or 1000 ML, respectively).¹⁰⁴

Trangie-Nevertire

The analysis assumes one Trangie-Nevertire hypothetical irrigator who:

- holds a specific share of water access entitlement (e.g. 50 ML, 250 ML or 1000 ML) and holds an equivalent amount of delivery right (e.g. 50 ML, 250 ML or 1000 ML, respectively)¹⁰⁵
- does not incur the supplementary water or contract pumping surcharges.

West Corugan

The analysis assumes one West Corugan hypothetical irrigator who holds a specific volume of irrigation right (e.g. 50 ML, 250 ML or 1000 ML) and holds an equivalent amount of delivery right (e.g. 50 ML, 250 ML or 1000 ML, respectively).

Western Murray Irrigation

The analysis assumes three WMI hypothetical irrigators: one in each of WMI's three charging districts (Buronga, Coomealla and Curlwaa). It is assumed that each hypothetical irrigator holds a specific volume of irrigation right (e.g. 50 ML, 250 ML or 1000 ML) and holds an equivalent amount of delivery entitlement (e.g. 50 ML, 250 ML or 1000 ML, respectively).

The analysis further assumes that a WMI hypothetical irrigator:

- incurs the joint venture repayment and the infrastructure loan repayment as applicable
- does not incur meter reading or administration charges.

WMI does not levy a usage charge as long as water usage is below or equal to the access fee allowance (which is 54 per cent, 42 per cent and 60 per cent of delivery entitlement for Buronga, Coomealla and Curlwaa, respectively). This implies that an irrigator who uses more water than the access allowance percentage is charged a fee equal to the access fee for each ML of water used above that access allowance.

¹⁰³ These farm sizes were assumed following the ACCC's consultation with SunWater.

¹⁰⁴ In calculating hypothetical bills, delivery rights are reduced by 10 per cent to account for conveyance losses.

¹⁰⁵ Customer information provided by Trangie-Nevertire indicates that no actual Trangie irrigator holds water access entitlement as small as 50 ML or 250 ML. However, the ACCC's general conclusions in Chapter 3 remain unchanged.

Appendix C

Water planning and management activities and charges

This appendix provides background information to water planning and management (WPM) activities and charges discussed in Chapter 4, including:

- the departments and water authorities that deliver WPM activities in the MDB
- disclosure of WPM activities and regulated WPM charges by the MDB states and the Australian Government, and
- assumptions for the 2011–12 estimated total WPM revenue and cost data.

Departments and water authorities that deliver WPM activities in the MDB

In *Queensland*, most WPM activities are carried out by the Department of Natural Resources and Mines (DNRM). SunWater also undertakes some of these activities as part of its water licence conditions.

In *New South Wales*, WPM activities are primarily undertaken by the NSW Office of Water (NOW). State Water Corporation also carries out some of these activities as part of its water licence conditions. The Land and Property Information office undertakes some water registry functions.

In the *Australian Capital Territory*, WPM activities are undertaken by the ACT Environment and Sustainable Development Directorate (ESDD), the Environment Protection Authority and ACTEW Corporation.

In *Victoria*, WPM activities are carried out by the Office of Water and the Victorian Water Register within the Department of Sustainability and Environment (DSE). Some activities are delegated to rural water authorities (e.g. Goulburn Murray Water (GMW), Lower Murray Water (LMW), Grampians Wimmera Mallee Water (GWMW) and Coliban Water), catchment management authorities and the Environment Protection Authority.

In *South Australia*, the Department of Environment, Water and Natural Resources (DEWNR) plays a major role in WPM along with the SA Murray-Darling Basin Natural Resources Management Board. Some WPM activities are also undertaken by SA Water.

In the *Australian Government*, WPM activities are carried out by the Murray-Darling Basin Authority. The Department of Sustainability, Environment, Water, Population and Communities also coordinates the purchase of water for the environment.

The ACCC's 2011–12 RFI was provided to the MDB state departments and water authorities responsible for publishing information under the *Water Charge (Planning and Management Information) Rules 2010* (WCPMIR).

Disclosure of WPM activities and regulated WPM charges by the MDB states and the Australian Government

Water management is primarily a state government responsibility. In the past, the information reported by the MDB states on the WPM activities they carried out and the charges they determined varied according to different definitions of a WPM activity and the reporting requirements of state legislation. In most MDB states this reporting is carried out by the department responsible for water, although delivery of the activity and collection of the charges may be carried out by other bodies. For example, in Victoria, the Minister has delegated some powers to water authorities to set WPM charges.

Through the National Water Initiative (NWI), the MDB states and the Australian Government have established a framework for the identification of WPM activities and pricing principles for charges that recover the costs of WPM activities.¹⁰⁶

The WCPMIR build on commitments made in the NWI for greater pricing transparency and presentation of cost recovery information. The WCPMIR apply to the MDB states and the Australian Government, although the Commonwealth currently levies no direct regulated WPM charges on water users.

The WCPMIR require individuals or agencies who determine regulated WPM charges to publish, or delegate publication of, details about the regulated WPM charges they determine. The objective of these rules is to increase the level of transparency for such charges and the processes by which the MDB states determine such charges.

The WCPMIR set out detailed requirements for the information that must be published in relation to a regulated WPM charge that includes:

- the amount of the charge
- who determines the charge
- the water users to whom the charge applies
- the activities associated with the charge and their costs, and
- the relationship between the activity costs and the charges levied.

Assumptions for the 2011–12 estimated total WPM revenue and cost data

Queensland Department of Natural Resources & Mines (formerly Environment & Resources Management)

Regulated WPM charges determined by the Queensland Government are covered in Schedules 14, 15A and 16 of the Water Regulations 2002 made under the *Water Act 2000* (Qld).

The DNRM total WPM revenue estimate of \$11.22 million for 2011–12 is based on revenue collected from:

- surface and groundwater management area fees (both entitlement and usage)
- metering charges
- water licence fees and other transaction charges.

¹⁰⁶ Discussion of the definition and categorisation of WPM activities is presented in the following: NWI Steering Committee on Water Charging, *Water Planning and Management Stocktake—Cost recovery for Water Planning and Management in Australia*, February 2007. Discussion of the pricing principles is presented in the document *The National Water Initiative Pricing Principles 'Principles for recovering the costs of water planning and management activities'*, April 2010.

The water surface and groundwater management fees and metering charges are only collected from the MDB, while the licence fees are levied on a state-wide basis.

The DNRM was not able to provide the exact amount of metering charges levied on water users. The *Water Act 2000* (Qld) allows the DNRM to levy metering charges to recover the costs of installation and reading of water meters. The DNRM levies a range of metering charges on water users in the MDB. For the purpose of estimating total WPM revenue, the ACCC assumed that in 2011-12 the DNRM levied the lowest metering charge on all water users.

The DNRM did not provide cost data for WPM activities in 2011-12.

New South Wales Office of Water

The NOW total WPM revenue estimate of \$36.93 million for 2011-12 is based on revenue collected from the following water management fees levied under the *Water Management Act 2000* (NSW):

- regulated surface and groundwater charges
- unregulated surface and groundwater charges
- metering charges.

This total revenue estimate does not include charges allowed under the *Water Act 1912* (NSW) (WA). In 2010-11, the NOW informed the ACCC that these WA charges were likely to raise an additional \$1-2 million, but noted that its accounting systems lacked the capacity to separate out these revenues from other revenues it collected. In late 2012, the NOW informed the ACCC that it will no longer collect WA charges in the MDB from October 2012.

The NOW's total WPM cost of \$67.53 million for 2011-12 is based on the total efficient water management costs determined by IPART.¹⁰⁷

Australian Capital Territory Environment and Sustainable Development Directorate

The ESDD total WPM revenue estimate of \$21.60 million for 2011-12 relates only to revenue collected from the Water Abstraction Charge (WAC) levied under the *Water Resources Act 2007* (ACT). The majority of this revenue relates to charges levied on urban water users, rather than irrigators.

The ESDD also collects revenue from other regulated WPM charges (mostly water licensing), but no data about these charges was provided as the ESDD could not disaggregate these charges from other non-regulated WPM charges.

The ESDD did not provide cost data that could be directly attributed to specific WPM activities in 2011-12.

Victorian Department of Sustainability and the Environment

The DSE total WPM revenue estimate of \$70.71 million for 2011-12 is based on revenue collected from:

- the *Environmental Contribution Order 2008-12* (Environmental Contribution)
- other charges levied by the Victorian Water Register.

The majority of this revenue (\$69.4 million) is collected from rural and urban water authorities through the Environmental Contribution.

The total DSE WPM cost of \$43.26 million for 2011-12 incorporates costs for a specific set of WPM activities identified in the Victorian Government's *Our Water Our Future* policy. Under the *Water Industry Act 1994* (Vic), the DSE is required to report annually on the expenditures funded by the Environmental Contribution.¹⁰⁸

¹⁰⁷ IPART, *Review of prices for the Water Administration Ministerial Corporation – Final Report*, February 2011, p.10.

¹⁰⁸ Department of Sustainability and Environment, *2010-11 Annual Report*, Aug 2011, p. 209.

Goulburn Murray Water, Lower Murray Water and Grampians Wimmera Mallee Water

GMW, LMW and GWMW have been delegated responsibilities under the *Water Act 1989 (Vic)* to determine certain WPM charges.¹⁰⁹ All three water authorities determine fixed entitlement and transaction charges for customers within their districts.

The table below sets out the total WPM cost and the estimated total WPM revenue for 2011–12 for GMW, LMW and GWMW.

Total WPM cost and estimated revenue for GMW, LMW and GWMW, 2011–12

Operator	Total WPM Revenue (\$)	Total WPM Cost (\$)
GMW	2 359 005	2 970 577
LMW	930 995	1 706 355
GWMW	522 444	1 088 005

Source: ACCC from data provided by reporting WPM operators

The estimated total WPM revenue for 2011–12 for

- GMW is based on transaction charges and the groundwater intensive management fee levied in the MDB.
- LMW is based on transaction charges and salinity charges levied in the MDB.¹¹⁰
- GWMW is based on fixed and variable entitlement fees and transaction charges levied in the MDB.

South Australian Department of Environment, Water and Natural Resources

The DEWNR total WPM revenue estimate of \$31.81 million for 2011–12 is based on revenue collected from three broad charge groups:

- the Save the River Murray Levy
- the Division 2 Natural Resource Management Levies

other transaction charges (water licences, approvals and other permits) levied under the *Natural Resource Management Act 2004 (SA)* and the *Waterworks Act 1932 (SA)*.

The WPM revenue estimate related to WPM charges levied both inside and outside the MDB.

The total WPM cost of \$39.67 million for 2011–12 is based on activities identified that specifically relate to the MDB.

¹⁰⁹ The charges must be set consistent with the pricing principles developed by the Essential Service Commission of Victoria.

¹¹⁰ The transaction charges relate to a number of registry functions delegated to LMW. The salinity charge is the MCMA salinity management fee levied by LMW for the Mallee Catchment Management Authority.

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