



# 2013–14 Water Monitoring Report— monitoring approach and assumptions

This document accompanies the Australian Competition and Consumer Commission (ACCC)'s 2013–14 Water Monitoring Report. This document sets out the ACCC's approach to monitoring, assumptions used for the calculation of hypothetical bills analysis provided in the report, as well as additional information.

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# 1. Reporting entities

The table below provides a list of all reporting entities and the request for information (RFI) format received.

Reporting entity	Type of information request		
	IIO	Bulk	WPM
Buddah Lake Irrigators' Association (NSW): <b>Buddah Lake</b>			
Central Irrigation Trust (SA): <b>CIT</b>			
Coleambally Irrigation Co-operative Limited (NSW): <b>Coleambally</b>			
Department of Natural Resources and Mines (Qld): <b>DNRM</b>			
Department of Environment and Primary Industries (Vic) 1: <b>DEPI</b>			
Department of Environment, Water & Natural Resources (SA): <b>DEWNR</b>			
Eagle Creek Pumping Syndicate (NSW): <b>Eagle Creek</b>			
Environment & Sustainable Development Directorate (ACT): <b>ACT ESDD</b>			
Goulburn-Murray Water (Vic): <b>GMW</b>			
Grampians Wimmera Mallee Water (Vic): <b>GWMW</b>			
Hay Private Irrigation District (NSW): <b>Hay</b>			
Jemalong Irrigation Limited (NSW): <b>Jemalong</b>			
Lower Murray Water (Vic): <b>LMW</b>			
Marthaguy Irrigation Scheme (NSW): <b>Marthaguy</b>			
Moira Private Irrigation District (NSW): <b>Moira</b>			
Murray Irrigation Limited (NSW): <b>MIL</b>			
Murrumbidgee Irrigation Limited (NSW): <b>MI</b>			
Narromine Irrigation Board of Management (NSW): <b>Narromine</b>			
Office of Water (NSW): <b>NOW</b>			
Renmark Irrigation Trust (SA): <b>RIT</b>			
State Water Corporation (NSW) <sup>2</sup> : <b>State Water</b>			
SunWater (Qld): <b>SunWater</b>			
Tenandra Irrigation Scheme (NSW): <b>Tenandra</b>			
Trangie-Nevertire Irrigation Scheme (NSW): <b>Trangie-Nevertire</b>			
West Corurgan Private Irrigation District (NSW): <b>West Corurgan</b>			
Western Murray Irrigation Limited (NSW): <b>WMI</b>			

<sup>1</sup> DEPI changed its name on 1 January 2015 to the Department of Environment, Land, Water and Planning (DELWP)

<sup>2</sup> State Water changed its name to Water NSW on 1 January 2015 after merging with the Sydney Catchment Authority

## 2. Water planning and management charges and cost

This section refers to the analysis presented in chapter 3 (water planning and management (WPM)) of the 2013–14 Water Monitoring Report

Basin State departments and water authorities undertake water planning and management (WPM) activities. Charges to recover associated costs for these activities are imposed on water market participants by Basin State departments and water authorities.

For further information on Basin State departments and water authorities, their WPM activities, associated costs and charges and the ACCC's analysis please see the 2013–14 Water Monitoring Report.

This section sets out the assumptions and background information for the WPM chapter in the Water Monitoring Report and includes the:

- reporting of WPM activities and regulated WPM charges in the Basin
- Basin State departments and water authorities that deliver WPM activities
- ACCC approach to monitoring WPM activities and regulated WPM charges by Basin States and the Commonwealth Government
- 2013–14 estimated total WPM revenue and cost assumptions, and
- assumptions for the water trade application fees analysis.

### 2.1. Reporting of WPM activities and regulated WPM charges

The objective of the Water Charge (Planning and Management Information) Rules 2010 (the WCPMIR) is to increase the level of transparency for regulated WPM charges and the processes by which each Basin State determines such charges. The WCPMIR require individuals or agencies that determine regulated WPM charges to publish, or delegate the publication of, details about the regulated WPM charges they determine.

The WCPMIR sets out detailed requirements for the information that must be published in relation to a regulated WPM charge. These requirements include:

- 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
- the relationship between the activity costs and the charges levied.

This information must be published before a charge, or an amendment to the charge comes into effect.

## **2.2. Basin State departments and water authorities that deliver WPM activities**

### **2.2.1. Queensland**

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.

### **2.2.2. NSW**

In NSW, WPM activities are primarily undertaken by the NSW Office of Water (NOW) within the Department of Primary Industries. Similar to SunWater in Queensland, State Water (now Water NSW) also carries out some of these activities as part of its water licence conditions. In addition to NOW and State Water, the Land and Property Information office also undertakes some water registry functions.

### **2.2.3. ACT**

In the ACT, the ACT Environment and Sustainable Development Directorate (ACTESDD), the Environment Protection Authority and ACTEW Water undertake WPM activities.

### **2.2.4. Victoria**

In Victoria, WPM activities are carried out by the Victorian Water Register and the Department of Environment and Primary Industries (DEPI) (now Department of Environment, Land, Water and Planning). Some activities are delegated to the three rural water authorities: in Victoria, Goulburn Murray Water (GMW), Lower Murray Water (LMW) and Grampians Wimmera Mallee Water (GWMW). Further activities are delegated to catchment management authorities and the Environment Protection Authority.

### **2.2.5. SA**

In SA, the Department of Environment, Water and Natural Resources (DEWNR) carry out the majority of WPM activities along with the SA Murray Darling Basin Natural Resources Management Board. SA Water collects some WPM charges.

### **2.2.6. Commonwealth Government**

WPM activities are carried out by the Murray-Darling Basin Authority (MDBA). However, in 2013–14 the MDBA did not impose any regulated WPM charges.

## **2.3. ACCC approach to monitoring WPM activities and charges**

The ACCC's 2013–14 request for information (RFI) was sent to eight Basin State departments and water authorities responsible for publishing information under the WCPMIR.

This RFI sought information on the number of times regulated WPM charges were imposed, which WPM activities were undertaken and the associated costs.<sup>3</sup> To reduce the regulatory burden on reporting entities, the ACCC collected information on WPM charges from

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<sup>3</sup> The 2013-14 RFI requested cost information for those WPM activities for which the costs were recovered from water users through regulated WPM charges (i.e. not including WPM activities paid for from other revenue sources).

published information of Basin State departments and water authorities and pre-filled questions where possible.

Information from the 2013–14 RFIs was used to report on the extent of cost recovery for WPM in the Murray-Darling Basin (MDB).<sup>4</sup> The ACCC received the following information from the Basin State departments and water authorities:

- data on all WPM charges and the number of times the charge was imposed
- cost data for WPM activities undertaken in Victoria, SA and NSW and Queensland and the ACT did not provide cost data.

The RFI responses did not disaggregate information about:

- whether the WPM charges relate to water resources outside the MDB and
- whether the WPM charges relate to urban water supply activities.

Under section 91(2) and 91(3) of the Water Act 2007 (the Act), regulated charges are those charges that relate to MDB resources, infrastructure carrying MDB water resources and water access rights, irrigation rights or water delivery rights in relation to MDB water resources and do not apply to charges for urban water supply activities. As such the Act does not regulate water resources that are either outside the MDB or relate to urban water supply and the WCPMIR do not apply in these circumstances.

However, information provided by Basin State departments and water authorities is not disaggregated between water resources within and outside the MDB and between urban and rural water as some WPM charges are not levied on such a basis. For many WPM activities undertaken by Basin State departments and water authorities, attribution between MDB and non-MDB water resources, and between urban and rural water, is not clear.

## **2.4. Assumptions for the 2013–14 estimated WPM revenues and WPM costs**

### **2.4.1. Department of Natural Resources and Mines, Queensland**

Regulated WPM charges are determined by the Queensland Government as per schedules 14, 15A and 16 of the Water Regulations 2002 made under the Water Act 2000 (Qld).

The DNRM total WPM revenue estimate of almost \$1.01 million for 2013–14 is based on revenue collected from:

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

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

The DNRM did not provide cost data for WPM activities in 2013–14.

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<sup>4</sup> In addition to the eight departments and water authorities identified, the ACCC provided Coliban Water a reduced RFI for its one WPM charge. This RFI was to monitor compliance with the WCPMIR.

#### **2.4.2. NSW Office of Water – Department of Primary Industries, NSW**

Regulated WPM charges are determined by the NSW Government as per the Water Management Act 2000 (NSW).

NOW total WPM revenue estimate of \$44.5 million for 2013–14 is based on revenue collected from:

- regulated surface and groundwater charges
- unregulated surface and groundwater charges and
- other transaction charges.

In contrast to previous years, NOW's 2013–14 RFI response provided actual revenue receipts collected inside and outside the MDB rather than accrual data (revenue accrued but not yet received) which was provided in previous years.

In their RFI, NOW reported a total WPM cost amount of \$61.8 million for 2013–14. This was the sum of the:

- user share of WPM costs of \$46.1 million and
- government share of WPM costs, estimated at \$15.7 million.

#### **2.4.3. Environmental and Sustainable Development Directorate, ACT**

Regulated WPM charges are determined by the ACT Government and as per the Water Resource (Fees) Regulations made under the Water Resources Act 2007 (ACT).

The ACTESDD total WPM revenue estimate of \$25.3 million for 2013–14 is based on revenue collected from:

- the Water Abstraction Charge and
- other transaction charges.

The majority of the revenue collected was received from urban water users rather than irrigators.

The ACTESDD did not provide any cost data for WPM activities in 2013–14.

#### **2.4.4. Department of the Environment and Primary Industries (now Department of Environment, Land, Water and Planning), Victoria**

Regulated WPM charges are determined by the Victorian Government and made by regulation under the Water (Resource Management) Regulations 2007 and the Water Industry Act 1994 (Vic).

The DEPI total WPM revenue estimate of almost \$156.2 million for 2013–14 is based on revenue collected from

- the Environmental Contribution Order 2012-16
- charges levied by the Victorian Water Register and
- salinity management charges imposed in special salinity management zones.

The majority of this revenue (\$112.5 million) is collected from rural and urban water authorities through the Environmental Contribution. The Victorian Water Register collects a number of transaction charges (totalling \$2.6 million). DEPI also identified three sets of

salinity management charges which recovered over \$41 million in 2013–14. These salinity charges are determined by the Minister, imposed by LMW and assist the salinity management activities of the Mallee Catchment Management Authority.

In their RFI, DEPI reported a total WPM cost amount of almost \$71 million for 2013–14. This was the sum of:

- \$68.7 million for a specific set of WPM activities funded by the Environmental Contribution
- \$1.2 million for outlays for the Victorian Water Register and
- \$1.1 million for expenditures relating to salinity management

#### **2.4.5. Goulburn-Murray Water, Lower Murray Water and Grampians Wimmera Mallee Water, Victoria**

The rural water authorities GMW, LMW and GWMW were delegated responsibilities under the Water Act 1989 (Vic) to determine certain WPM charges within their irrigation districts. All three water authorities determine water access right charges and transaction charges for their customers related to WPM activities.

The GMW total WPM revenue estimate of just under \$1.03 million for 2013–14 is based on revenue collected from

- transaction charges levied in the MDB.

In their RFI, GMW reported a total WPM cost amount of \$2.74 million for 2013–14.

The GWMW total revenue estimate of more than \$0.53 million for 2013–14 is based on revenue collected from:

- fixed and variable water access right charges and
- transaction charges levied in the MDB.

In their RFI, GWMW reported a total WPM cost of \$0.69 million for 2013–14.

The LMW total revenue estimate of \$1.12 million for 2013–14 is based on revenue collected from:

- transaction charges and
- fixed water access right charges (salinity charges) levied in the MDB.

In their RFI, LMW reported a total WPM cost amount of \$1.22 million for 2013–14.

#### **2.4.6. Department of Environment, Water and Natural Resources, SA**

Regulated WPM charges are determined by the SA government and covered under the Natural Resource Management Act 2004 (SA), the Water Industry Act 2012 (SA) and Variation of Natural Resources Management (General) Regulations 2005.

The DEWNR total WPM revenue estimate of \$27.1 million for 2013–14 is based on revenue collected from:

- the Save the River Murray Fund and Levy
- Division 2 Natural Resource Management Levies and
- other transaction charges (water licences, approvals and other permits).



The estimated WPM revenue relates to WPM charges levied both inside and outside the MDB.

In their RFI, DEWNR reported a total WPM cost amount of \$37.7 million for 2013–14. This is based on the following activities which specifically relate to the MDB:

- \$25.7 million for River Murray improvement program
- \$3.1 million for DEWNR departmental costs and
- \$8.9 million for SA MDB costs (Division 2 levies).

## **2.5. Assumptions for water trade application fees applied by Basin States**

In the 2013–14 Water Monitoring Report, the ACCC has presented the fees applied by Basin States in 2013–14 to process a water trade<sup>5</sup> application. Similar to other WPM charges, these charges may be applied by a Basin State department or water authority. The data presented in table 3.4 in chapter 3 (water planning and management) in the 2013–14 Water Monitoring Report was for a hypothetical water trade of 50 ML of water access entitlement or 50 ML of annual water allocation.

The analysis assumes that the trade involves both a:

- change in the ownership of the right and
- change in the location at which water pertaining to the right can be extracted.

The hypothetical water trade also assumes the following:

- both buyer and seller have the necessary licenses to engage in the trade (be it within a state or interstate)
- the trade is from one regulated river system to another regulated water system that are hydrologically connected<sup>6</sup>
- the trade of the water access entitlement or water allocation took place between 1 July 2013 and 30 June 2014
- the buyer does not intend to change the category of the water access entitlement (for example convert a water access entitlement for surface water to a water access entitlement for groundwater)
- the buyer does not intend to change the reliability of the water access entitlement (for example convert a high security water access entitlement to a general security entitlement)
- the buyer is not intending to change/ split the entitlement between properties (for example a proportion of the water access entitlement is used on Property 1 and the remainder is used on Property 2)
- only government (legislated) charges relating to the water trade are applicable (for example excludes broker fees or any IIO charges for processing a water trade into or out of their network) and
- any other administrative charges applied by a water authority are excluded.

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<sup>5</sup> Trade includes transfer – see sections 1.07(2) and (3) of the Murray-Darling Basin Plan 2012.

<sup>6</sup> However, for water allocation trades in Queensland, trade application charges are also presented for trades involving unsupplemented (unregulated) systems (including trades between a supplemented and unsupplemented system).

For interstate trades, the applicable charge in both the state of origin and state of destination must be paid.

Water trade processes differ slightly in each Basin State. The next section provides further information on the basic application processes and the charges imposed.

### **2.5.1. Queensland**

In Queensland, water supply is either supplemented or unsupplemented. If an irrigator is in a supplemented system, their water is delivered through a supply scheme controlled by SunWater. An unsupplemented supply is unregulated and is managed by DNRM.

In 2013–14, DNRM applied no charges for an application to trade water access entitlements (referred to as a trade of holder in Queensland) in either supplemented or unsupplemented systems for trade that did not require subdivision or amalgamation. However, water users conducting the trade must pay \$157.40 to register the trade with the titles registry and must notify either DNRM or SunWater of the trade of water access entitlement.

To change the location of a water access entitlement, buyers pay \$109.80 for the first trade within a water season within the state and a reduced amount for any further trades. This fee applies to both supplemented and unsupplemented systems. Users must also pay \$157.40 to register the trade with the titles registry. The figure presented in the report is the total of these two amounts (\$267.20)

For trade of annual water allocation (referred to as a seasonal allocation in Queensland) of unsupplemented water, a charge of \$146.40 applies. For trade of allocation in supplemented systems, the water user does not pay any additional WPM charges for the trade but must apply to SunWater to approve the trade.

### **2.5.2. NSW**

In 2013–14, a trade of a water access entitlement with no change in location from where the water is extracted attracts two NSW Land and Property Information office registry charges totalling \$308.

If there was a change of location connected to the trade of the water access entitlement then the NOW applies a water dealings charge of \$391.2 to assess the application. Once NOW has assessed the application, the application is provided to Land and Property Information NSW for registration and the irrigator is provided with a copy of the amended license. This process attracts the same two registry charges applied when the trade does not include a change in location.

For a water allocation trade, State Water applies a \$50 application charge and \$0.50 per ML charge for the volume of water with a maximum of \$150 for any given trade.

### **2.5.3. ACT**

In 2013–14, the fee for a change in ownership or a change in location within the ACT was \$148.50.

This is incurred if no previous change to location of that water access entitlement has been made; if there have been previous changes to the location of the water access entitlement there is no charge.

The ACT does not deliver water allocations. However, it is possible to purchase water allocation to use within the ACT. For water allocation trade to occur an application must be

provided and the buyer must have sufficient licence volume to allow for the trade. This trade application would incur a trade charge of \$148.50.

It is not possible to trade inter-state either water access entitlements or water allocations out of or into the ACT. As such, it is only possible to trade within the ACT.

#### **2.5.4. Victoria**

The Victorian Water Register sets water trade application charges, but has devolved responsibility for setting and processing these transactions to water authorities such as GMW, LMW and GWMW. These water authorities have the power to set the charges they impose for trades. These are comparable to the Victorian Water Register charges.

In 2013–14, the fee for a trade of ownership was \$111.80. A trade of location was \$174.20. Water users are required to submit different forms for intra-valley, intrastate and interstate trades.

For water allocation trades, water users paid \$77.60 for a physical hardcopy application and \$41.40 for completing the application online using the Victorian Water Register.

#### **2.5.5. SA**

In 2013–14, the DEWNR applied a \$394 charge for trades of either ownership and / or location on the River Murray. This trade would also incur the water allocation trade application charge of \$232.

DEWNR applies a \$232 charge whether intra-valley intra-state or interstate for water allocation. To set up a tag to trade inter-state requires payment of a one-off charge of \$232.

## 3. Bulk water charges

This section refers to the analysis presented in chapter 4 (Bulk water suppliers) in the 2013–14 Water Monitoring Report.

A bulk water supplier (BWS) manages bulk water storage facilities and is responsible for the harvest, storage and delivery of water through water courses to customers. A BWS imposes bulk water charges to recover associated costs.

The ACCC produces a number of hypothetical bills to assist in making a meaningful comparison of regulated water charges across different BWSs that use different tariff structures. The hypothetical bills and corresponding analysis provides a simple representation of how regulated charges translate into a typical BWS customer bill.

This section sets out the assumptions used in the production of hypothetical bills for BWSs.

### 3.1. ACCC approach to monitoring BWS charges

Hypothetical bills were constructed for 36 charge categories within a number of systems across six BWSs. The analysis consists of two scenarios for each BWS and their respective charge categories, 1000 ML of water access entitlement (or equivalent volume of bulk water entitlement) and either 50 per cent or 100 per cent of that volume being delivered.

The ACCC defines each BWS's typical customer charging profile as representative of most bulk water customers. The typical customer charging profile is assessed from each BWSs response to the ACCC's annual requests for information (RFI) and through discussions with each BWS.

The ACCC also conducted teleconferences with GMW and LMW as part of the teleconferences undertaken for all irrigation infrastructure operators (see Part 4 of this document). These teleconferences confirmed the assumptions used to produce each hypothetical bill as well as the regulated charges included in each hypothetical bill.

The ACCC's 2013–14 analysis also reports on the component of BWS bills attributable to WPM charges. These WPM charges would be payable by BWS customers and either levied directly by the BWS, or collected by the BWS on behalf of a Basin State department. Only WPM water access right charges are included in the hypothetical bill. Broad based levies and transaction fees are not included in the hypothetical bill analysis as these are difficult to differentiate from bulk water charges and relate to a particular activity the customer may or may not undertake. The inclusion of these charges is aimed at producing hypothetical bills that reflect all the regulated water charges imposed on a typical BWS customer.

Actual individual BWS customer bills will depend on the nature of their water holdings and will not correspond directly with the ACCC's hypothetical bills. Further, the ACCC's analysis does not account for behaviour that may alter the amount of the bill.

## **3.2. BWS specific assumptions**

### **3.2.1. Goulburn-Murray Water (GMW), Victoria**

The analysis assumes nine hypothetical customers in two systems.

In the Goulburn system, it is assumed there are six customers:

- Bulk – Loddon
- Bulk – Bullarook
- Bulk – Campaspe
- Bulk – Goulburn
- Bulk – Broken
- Private Diverter – all basins

In the Murray system, it is assumed there are three customers:

- Bulk – Ovens
- Bulk – Murray
- Private Diverter – all basins

It is further assumed that a:

- bulk customer holds 1000 ML of high reliability bulk water entitlement. A bulk water entitlement customer includes GMW's retail arm, urban and rural water authorities and commercial businesses.
- private diverter
  - is an irrigator who extracts water directly from a natural watercourse
  - holds 1000 ML of water access entitlement (Victorian water share)
  - holds 10 extraction shares based on the Victorian conversion rules used at the time of unbundling and
  - assumes the same charges are imposed for private diverters in any of the basins in either the Murray or Goulburn system.

The 2013–14 hypothetical bill analysis includes the following charges for bulk water entitlement holders listed on GMW's schedule of charges.

Fixed:

- bulk water high reliability entitlement storage fee

The 2013–14 hypothetical bill analysis includes the following charges for private diverters listed on GMW's schedule of charges.

Fixed:

- high reliability entitlement storage fee
- service fee

Variable:

- water delivery fee

### **3.2.2. Lower Murray Water (LMW), Victoria**

The analysis assumes a private diverter in the River Murray.

It is further assumed that the private diverter:

- holds 1000 ML of high reliability water access entitlement (Victorian water share)
- holds 10 extraction shares based on the Victorian conversion rules used at the time of unbundling and
- has one account, and thus incurs the service charge once.

The 2013–14 hypothetical bill analysis includes the following charges for private diverters listed on LMW's schedule of charges.

Fixed:

- service charge
- operational fee
- entitlement storage fee
- DEPI water share fee

The entitlement storage fee is a bulk charge imposed on LMW by GMW. LMW classifies the service charge and DEPI water share fee as a WPM charge.

The MCMA was previously included in all hypothetical bills produced for LMW's irrigation networks. However, LMW advised only irrigators who bring in new water are required to pay the MCMA charge. As such the MCMA charge is not payable by a typical LMW irrigator.

### **3.2.3. SA Murray private diverter, SA**

SA does not have a BWS, however private diverters along the Murray River in SA are required to pay WPM charges and therefore BWS hypothetical bills have been produced.

The 2013–14 hypothetical bill analysis includes the following WPM charges for private diverters:

- NRM Levy
- Save the River Murray Levy and Fund

### **3.2.4. State Water Corporation (State Water) (now Water NSW), NSW**

State Water has both private diverter customers and other bulk water customers such as IIOs and urban water authorities. The charges imposed on these different types of customers do not vary. As such, the ACCC has produced one set of hypothetical bills for a customer holding 1000 ML of water access entitlement (NSW water access licence).

The analysis assumes 16 State Water customers, two per valley – one holding high security water access entitlement and the other holding general security water access entitlement. The valleys considered are:

- Murray
- Murrumbidgee
- Lachlan

- Macquarie
- Namoi
- Peel
- Gwydir
- Border

The 2013–14 hypothetical bill analysis includes the following charges for customers listed on State Water’s schedule of charges.

Fixed:

- Access fee
- NOW access fee

Variable:

- Usage fee
- NOW usage fee

The NOW access and usage fee refers to WPM charges imposed by NOW and payable by State Water’s customers. The inclusion of NOW charges in the hypothetical bill provides an analysis that is more representative of a typical State Water customer.

### **3.2.5. Department of Natural Resources and Mines (DNRM), Queensland**

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

The 2013–14 hypothetical bill analysis includes the following charges for customers listed on DNRM’s schedule of charges.

Fixed:

- Fixed entitlement charge (Part A)

Variable:

- Variable usage charge (Part B)

### **3.2.6. SunWater, Queensland**

The analysis assumes eight SunWater private diverters holding 1000 ML of water access entitlement (Queensland water allocation).

- Macintyre Brook
- Cunnamulla
- Chinchilla Weir
- St George
- Upper Condamine
  - North branch
  - North branch risk A

- Sandy Creek / Condamine River
- Maranoa Weir

The 2013–14 hypothetical bill analysis includes the following charges for customers listed on SunWater’s schedule of charges.

Fixed:

- allocation charge

Variable:

- allocation water



## 4. Irrigation network charges

This section refers to the analysis presented in chapter 5 (Irrigation infrastructure operators—regulated charges) and chapter 6 (Irrigation infrastructure operators—transformation, termination and trade) in the 2013–14 Water Monitoring Report.

Irrigation infrastructure operators (IIOs) own or operate infrastructure that delivers water to irrigators through irrigation networks. Irrigation network charges recover costs associated with owning and operating the infrastructure used to deliver water to irrigators.

To analyse these irrigation network charges, the ACCC produces a number of hypothetical bills. These assist in making a meaningful comparison of regulated water charges across different IIOs that use different tariff structures. The hypothetical bills and corresponding analysis provides a simple representation of how regulated charges translate into a typical irrigator's bill. The ACCC produces hypothetical bills for:

- a typical irrigator who has water delivered through an IIO's irrigation network and/or drainage services and
- the maximum termination fee an IIO can levy on an irrigation customer terminating their right of access.<sup>7</sup>

This section sets out the assumptions used in the production of hypothetical bills and hypothetical termination fees. Where an IIO delivered water on a casual usage basis, this section also sets out the assumptions behind that analysis.

### 4.1. ACCC approach to monitoring IIO charges

#### 4.1.1. IIO hypothetical bills

Hypothetical bills were constructed for 38 irrigation network profiles across 19 reporting IIOs. The analysis consists of six scenarios for each IIO and their respective irrigation networks: three different volumes of water access entitlement (or an equivalent volume of irrigation right) and a corresponding volume of water delivery right and two different water allocation volumes. It is assumed the irrigators hold a water access entitlement of 50 ML, 250 ML or 1000 ML, with either 50 per cent or 100 per cent of the water access entitlement volume delivered. For example, for the 250 ML of water access entitlement scenario, hypothetical bills were constructed assuming either 125 ML or 250 ML water is delivered. In the 2013–14 Water Monitoring Report, the majority of analysis presented relates to an irrigator holding 250 ML of water access entitlement with either 50 per cent or 100 per cent water delivery.

The ACCC defines each IIO's typical irrigator charging profile as being representative of most irrigators in the IIO's irrigation network(s). The typical irrigator charging profile is assessed from each IIO's response to the ACCC's annual requests for information (RFI) and informal discussions with each IIO.

The ACCC conducted teleconferences with all reporting IIOs during the preparation of the 2013–14 Water Monitoring Report. These teleconferences confirmed the assumptions used to produce each hypothetical bill as an accurate and relevant representation of all regulated charges a typical irrigation customer would face. Consequently, some additional assumptions have been included in the 2013–14 Water Monitoring Report. All relevant changes made to each IIO hypothetical bill are identified in this document.

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<sup>7</sup> The maximum termination fee analysed is in accordance with the Water Charge (Termination Fees) Rules.

Where possible, 2013–14 assumptions have been applied to all previous hypothetical bills to ensure an accurate time-series analysis across years. Where the ACCC was unable to apply the 2013–14 assumptions to all previous years for time-series analysis, the assumptions used during 2009-10 were applied across all years. This ensures an accurate comparison of hypothetical bills across years.

The ACCC also separately identifies all charges listed on an IIO's schedule of charges that relate to WPM and bulk water which are passed onto its customers.<sup>8</sup> The 'Save the River Murray Levy and Fund' is a WPM charge imposed on SA irrigators directly (rather than collected through IIOs). Nevertheless, to enable a meaningful comparison across the MDB of regulated charges that IIO customers will pay, this charge is included in the hypothetical bills for SA IIOs (as a WPM charge).

New in 2013–14, the ACCC hypothetical bill analysis includes the separation of bulk water and WPM charges from the irrigation network charges levied by the IIO. Previously the ACCC represented hypothetical bills as a total of all types of charges imposed by IIOs which included bulk water and WPM charges.

In circumstances where an IIO presents a single 'government charge' on their schedule of charges, the ACCC has separated out the components attributable to bulk water charges and the components attributable to WPM charges in conjunction with the relevant IIO. This assumptions document sets out all the IIO-specific assumptions and calculations used to separate the bulk water and WPM charge components.

Actual individual irrigator bills for IIO customers will depend on the nature of their water holdings and irrigation network access and will not correspond directly with the ACCC's hypothetical bills. Further, the ACCCs' analysis does not account for irrigator behaviour that may alter the amount of the bill, for example allocation trade, casual user arrangements, carryover decisions and the timing of water delivery.

#### **4.1.2. Hypothetical termination fees**

Hypothetical termination fees were constructed for 35 irrigation network profiles, across the 19 reporting IIOs.<sup>9</sup> The ACCC's analysis consists of two scenarios for each hypothetical irrigator where the irrigator holds 250 ML of water delivery right and terminates either 50 per cent or 100 per cent of their water delivery right.

The ACCC constructs the hypothetical termination fee from the fixed irrigation network charge(s) on the IIO's schedule of charges, multiplied by 10, unless:

- a termination fee is explicitly listed on the schedule of charges or
- the IIO has advised that certain irrigation network charges are not included in the calculation of the termination fee.

In these cases, the analysis includes the termination fee or charge(s) advised by the IIO to present in the analysis.

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<sup>8</sup> Bulk water charges are levied directly onto customers when the IIO is also the bulk water supplier. The bulk water charges are passed onto the customer when the IIO is not also the bulk water supplier.

<sup>9</sup> This is in contrast to the 38 irrigation network profiles used in the calculation of IIO hypothetical bills. Although CIT has three irrigation networks, the same fixed irrigation network charges used in the calculation of their hypothetical termination fees are levied in all three irrigation networks. As such, only one hypothetical termination fee is reported for CIT. Further, SunWater does not impose a termination fee on customers who terminate their right of access to the irrigation network

In some IIOs, a right of access includes a right to drainage as well as delivery of water. Irrigation network charges for drainage services are imposed either:

- on the basis of the volume of water delivery right held, or
- with reference to something other than the volume of water delivery right held, for example a fixed charge per outlet, property or account.

In the first case, it is assumed that an equivalent amount of delivery and drainage components are terminated in both the 50 per cent and 100 per cent termination scenarios. In the second case, it is assumed that drainage components are only terminated when 100 per cent of the irrigator's water delivery right is terminated.<sup>10</sup>

The Water Charge (Termination Fee) Rules (WCTFR) 2009 allows an IIO to increase their termination fee by the amount of GST payable. Where it is explicit from the schedule of charges that GST is included, the charge(s) is adjusted to exclude the GST for the purpose of the ACCC's analysis. However, many schedule of charges are silent as to whether GST is payable. Therefore, the amount of the charge as listed on the schedule is taken as given, unless the IIO has indicated to the ACCC otherwise. The GST adjustment is made in order to allow for more accurate comparisons across IIOs.

The ACCC's analysis of hypothetical termination fees does not account for certain, varied circumstances under which an IIO may waive or discount the termination fee payable by a terminating irrigator.

#### **4.1.3. Casual usage charges**

Casual use is generally the term used to describe when an irrigator has a volume of water delivered by their IIO above the volume of water delivery right that they hold. The analysis in chapter 5 of the 2013–14 Water Monitoring Report uses standard usage charge to mean the usage charge(s) that the irrigator would pay for volumes up to their water delivery right volume. The casual usage charge includes all fees the irrigator would be required to pay for each ML of water delivered above their water delivery right volume.

Casual usage charges were only calculated for IIOs that either reported that they delivered water under casual user arrangements or that explicitly state a casual usage charge on their schedule of charges.

## **4.2. IIO specific assumptions**

### **4.2.1. Central Irrigation Trust (CIT), SA Murray**

#### ***IIO hypothetical bill***

The analysis assumes three CIT irrigators which each receive the following:

- a high pressure service
- a medium pressure service or
- a low pressure service.

Further, each of these irrigators:

- holds a specific share of water access entitlement (50 ML, 250 ML or 1000 ML)

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<sup>10</sup> Where a fixed drainage charge is set with reference to something other than the volume of water delivery right held, the level of drainage service is assumed to be equivalent to that used for the IIO hypothetical bills (set out above).

- holds an equivalent amount of water delivery right (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) and
- is supplied with irrigation water at a proportion of 65 per cent at off-peak times and 35 per cent at peak times.

In 2013–14, CIT provided updated information on the peak and off-peak ratios. The ACCC has updated its assumption accordingly. In previous reports, the analysis assumed the ratio of off-peak to peak times to be 60:40.

The 2013–14 hypothetical bill analysis includes the following charges for each of the three irrigation networks listed on CIT’s schedule of charges.

Fixed:

- Irrigation service charge
- Natural Resource Management levy
- Save the River Murray Levy and Fund

Variable:

- Water consumption charge (peak), high, medium and low pressure depending on the irrigation network
- Water consumption charge (off-peak), high, medium and low pressure depending on the irrigation network.

A weighted average for each charge is used to account for the CIT schedule of charges coming into effect on 1 October each year.

Both the Natural Resource Management levy and the Save the River Murray Levy and Fund are WPM charges. CIT’s irrigation customers do not pay any bulk water charges as there is no bulk water supplier in SA.

### ***Hypothetical termination fee***

The hypothetical termination fee is calculated assuming 250 ML of water delivery right is held, with either 50 or 100 per cent of this volume terminated. CIT report on their schedule of charges a GST exclusive termination fee which is the same across their high, medium and low pressure irrigation networks. This listed termination fee is used in the hypothetical termination fee analysis.

### ***Casual usage charge***

CIT do not impose a separate or additional casual usage charge on irrigators who use water above their water delivery right in all their irrigation networks. As such, the casual usage charge used in the ACCC’s casual usage analysis is the standard water consumption charge, high, medium and low pressure depending on the irrigation network. The analysis assumes the irrigator uses water above their water delivery right off-peak.

The dollar per ML for usage within a water delivery right and dollar per ML for usage above water delivery right is presented in the table below for all irrigation networks. The ratio is also provided for each irrigation network. An average ratio is presented in chapter 5 of the 2013–14 Water Monitoring Report.

	<b>Irrigation network / entitlement category</b>	<b>\$ / ML for usage with a water delivery right assuming water delivery right of 250 ML</b>	<b>\$ / ML for usage above water delivery right assuming water delivery right of 250 ML</b>	<b>Ratio of usage above water delivery right over usage charge included in water delivery right</b>
<b>CIT11</b>	High pressure	\$44.20	\$44.20	1.00
	Medium pressure	\$32.20	\$32.20	1.00
	Low pressure	\$21.80	\$21.80	1.00

#### **4.2.2. Renmark Irrigation Trust (RIT), SA Murray**

##### *IIO hypothetical bill*

The analysis assumes one irrigator in RIT's irrigation network who:

- holds a specific volume of irrigation right (50 ML, 250 ML or 1000 ML)
- has an equivalent farm size—5.38 ha, 26.94 ha or 107.76 ha, respectively for each of the volumes of irrigation right above and
- has one irrigation connection on its farm (as such, drainage charges do not apply).

The analysis applies the conversion of irrigation right to an equivalent farm size because Renmark levies its access charge based on farm size in hectares. The conversion rule is 9.28 ML for one hectare.<sup>12</sup>

The 2013–14 hypothetical bill analysis includes the following charges listed on RIT's schedule of charges.

Fixed:

- Irrigation access charge<sup>13</sup>
- NRM catchment environment levy
- Save the River Murray Levy and Fund below 4ha

Variable:

- Water delivery charge<sup>14</sup>

Both the Natural Resource Management levy and the Save the River Murray Levy and Fund are WPM charges. RIT irrigation customers do not pay any bulk water charges as there is no bulk water supplier in SA.

##### *Hypothetical termination fee*

<sup>11</sup> This assumes the casual use is off-peak consumption

<sup>12</sup> This conversion is assumed after consultation between the ACCC and RIT

<sup>13</sup> This charge is levied every six months. For the hypothetical bill construction it is converted to a single, yearly charge.

<sup>14</sup> This charge is levied per kilolitre and is converted to ML for the hypothetical bill construction.

The hypothetical termination fee is calculated assuming a farm size of 26.94 rated hectares (equivalent to 250 ML of water delivery right), with either 50 per cent or 100 per cent of this area terminated.

The irrigation access charge, listed on RIT's schedule of charges, is included in the calculation of the hypothetical termination fee.<sup>15</sup>

#### **4.2.3. Goulburn Murray Water (GMW), Victoria Goulburn / Murray**

##### ***IIO hypothetical bill***

The analysis assumes nine irrigators, three in a pressurised irrigation network and six in a gravity-fed irrigation network.

The three pressurised irrigation networks are:

- Nyah
- Woorinen
- Tresco

The six gravity-fed irrigation networks are:

- Loddon Valley<sup>16</sup>
- Rochester
- Central Goulburn
- Shepparton
- Torrumbarry
- Murray Valley

The analysis assumes that each irrigator in both the pressurised and gravity-fed irrigation networks:

- holds 50 ML, 250 ML or 1000 ML of high reliability water share and
- holds a volume of water delivery shares (in ML/day) equal to 1/100 of the water share volume (0.5 ML/day, 2.5 ML/day or 10 ML/day).

The 2013–14 hypothetical bill analysis includes the following charges for all GMW irrigation networks:

Fixed:

- High reliability water share entitlement storage fee
- Service
- Infrastructure access
- Service point (irrigation) (payable by gravity-fed irrigation networks only)
- Additional service point (payable by pressurised irrigation networks only)

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<sup>15</sup> A disconnection fee for meter removal, listed on RIT's schedule of charges, is not included in the calculation of the hypothetical termination fee.

<sup>16</sup> This was previously known as Pyramid-Boort.

Variable:

- Infrastructure use

The high reliability water share entitlement storage fee is the bulk water charge passed on to irrigation customers. GMW's IIO customers do not pay a specific WPM charge. However, a proportion of GMW's total revenue collected from irrigation network charges imposed on customers is used to recover costs associated with the Victorian Environmental Contribution (see section 1 of the assumptions document or chapter 3 of the 2013–14 Water Monitoring Report for more information on the Environmental Contribution).

The 2013–14 analysis assumes drainage charges are also levied on customers in all irrigation networks. GMW provided updated information on the inclusion, and calculation, of drainage charges payable by their irrigation customers. The ACCC has updated these assumptions accordingly. In previous reports, the drainage component was only included for: Shepparton, Central Goulburn, Rochester and Woorinen.

The analysis assumes an irrigator in a pressurised irrigation network:

- has one property and
- drainage water use is consistent with the water access entitlement.

The 2013–14 hypothetical bill analysis includes the following drainage charges for pressurised irrigation networks:

- Nyah:
  - Subsurface drainage service fee
  - Subsurface drainage water use
- Woorinen
  - Subsurface drainage service fee
  - Subsurface drainage area fee
  - Subsurface drainage water use
- Tresco
  - Subsurface drainage fee

The subsurface drainage area fee is charged per hectare. Previously, the hectare size was equal to the average property size (total hectares / number of properties) as provided in the RFI. This information was not asked in the 2013–14 RFI. GMW provided the ACCC with its analysis for their typical irrigator bills. GMW provided typical irrigator bills for medium and large customers. GMW also produced that the size of the medium and large customers vary across irrigation networks and the area for drainage is also different between medium and large customers within the same irrigation network. The ACCC has calculated a hectare to ML ratio for each irrigation network using this additional information provided by GMW.<sup>17</sup>

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<sup>17</sup> The hectare to ML ratio was calculated as the average of ML ratio for a medium customer and the hectare to ML ratio for a large customer. The ratio calculates a different drainage area depending on the water access entitlement scenario.



The hectare to ML ratio assumed for each pressurised irrigation network for the drainage area fee is provided in the table below.

<b>Pressurised irrigation network</b>	<b>Hectare to ML ratio</b>
Nyah	0.155 ha to 1 ML
Woorinen	0.2 ha to 1 ML

The analysis assumes an irrigator in a gravity-fed irrigation network:

- has one property and
- drainage water use is equivalent to the water access entitlement.

The 2013–14 hypothetical bill analysis includes the following drainage charges for gravity-fed irrigation networks:

- surface drainage service fee
- surface drainage area fee
- surface drainage water use fee

Similar to pressurised irrigation networks, the ACCC calculated a hectare to ML ratio for irrigators in a gravity-fed irrigation network for the surface drainage area fee. The hectare to ML ratio assumed for each gravity-fed irrigation network for the drainage area fee is provided in the table below.

<b>Gravity-fed irrigation network</b>	<b>Hectare to ML ratio</b>
Loddon Valley	0.5 ha to 1 ML
Rochester	0.2 ha to 1 ML
Central Goulburn	0.275 ha to 1 ML
Shepparton	0.354 ha to 1 ML
Torrumbarry	0.419 ha to 1 ML
Murray Valley	0.208 ha to 1 ML

Further to other changes made to the 2013–14 hypothetical bills outlined above include removing the community surface drainage charge for Shepparton and Central Goulburn. This charge was excluded from the ACCC's analysis in 2013–14 after GMW provided additional information to the ACCC.

### ***Hypothetical termination fees***

The hypothetical termination fees are calculated assuming 2.5 ML/day of water delivery share is held, with either 50 or 100 per cent of this volume terminated. The analysis assumes GMW does not include service and service point charges in the calculation of termination fees. Further, GMW does not provide for the termination of a right to drainage, so fixed drainage fees are not included in the calculation of the hypothetical termination fee. The listed termination fee is used in the ACCC's 2013–14 hypothetical termination fee which is equivalent to 10 times the fixed infrastructure access fee.



### **Casual usage charge**

GMW imposes a separate casual usage charge on irrigators who use water above their water delivery right. The ACCC's analysis of casual usage charges includes the following charges for water use:

- within an irrigator's water delivery right
  - infrastructure use
  - surface drainage water use for gravity-fed irrigation networks
  - subsurface drainage water use fee for pressurised irrigation networks (excluding Tresco)
- above an irrigator's water delivery right
  - casual infrastructure use fee for water

The dollar per ML for usage within a water delivery right and dollar per ML for usage above a water delivery right is presented in the table below for all irrigation networks. The ratio is also provided for each irrigation network, an average ratio is presented in chapter 5 of the 2013–14 Water Monitoring Report.

<b>Irrigation network / entitlement category</b>	<b>\$ / ML for usage with a water delivery right assuming water delivery right of 250 ML</b>	<b>\$ / ML for usage above water delivery right assuming water delivery right of 250 ML</b>	<b>Ratio of usage above water delivery right over usage charge included in water delivery right</b>
<b>Tresco</b>	\$10.46	\$96.01	9.18
<b>Nyah</b>	\$23.62	\$87.59	3.71
<b>Woorinen</b>	\$19.45	\$109.47	5.63
<b>Torrumbarry</b>	\$9.35	\$63.85	6.83
<b>Murray Valley</b>	\$8.35	\$60.82	7.28
<b>Loddon Valley</b>	\$10.44	\$69.41	6.65
<b>Rochester</b>	\$8.65	\$58.49	6.76
<b>Central Goulburn</b>	\$9.05	\$67.24	7.43
<b>Shepparton</b>	\$16.38	\$102.64	6.27

#### **4.2.4. Lower Murray Water (LMW), Victoria Murray**

##### ***IIO hypothetical bill***

The analysis assumes one irrigator in each of LMW's four irrigation networks:

- Merbein
- Red Cliffs
- Robinvale and

- First Mildura Irrigation District.

It is assumed that each of these four irrigators:

- holds a high reliability water share
- a volume of delivery share equal to 12 per cent of the water share volumes, 50 ML, 250 ML or 1000 ML of water access entitlement,
- holds an equivalent number of delivery shares—respectively six, 30 or 120 delivery shares (for example the amount of water share multiplied by 0.12)
- has one assessment with LMW (meaning that the service fee is incurred once)
- holds high reliability Murray Basin water shares and
- is provided with a full drainage service.

The 2013–14 hypothetical bill analysis for irrigation customers in Robinvale, Red Cliffs and Merbein includes the following charges:

Fixed:

- service fee
- delivery share fee
- property drainage fee division 1
- entitlement storage fee Murray Basin – high reliability
- DEPI water share fee

Variable:

- Delivery fee

The 2013–14 hypothetical bill analysis for irrigation customers in the First Mildura Irrigation District includes the following charges

Fixed:

- service point charge
- delivery capacity share
- drainage fee
- entitlement storage fee Murray Basin – high reliability
- DEPI water share fee

Variable:

- Metered use charge

The entitlement storage fee Murray Basin – high reliability paid in all irrigation networks is a bulk water charge imposed on LMW and passed down to its customers. The DEPI water share fee is a WPM fee. LMW also contribute to the Victorian Environmental Contribution in a similar way to GMW.

The 2013–14 hypothetical bill analysis' assumptions have been updated to reflect changes in LMW's charge structure and to incorporate additional information provided by LMW.<sup>18</sup> The additional and adjusted assumptions are outlined below:

- The MCMA was previously included in all hypothetical bills produced for LMW's irrigation networks. However, during the teleconference conducted with LMW to confirm assumptions, it was provided that only irrigators who bring in new water are charged the MCMA charge. As such the MCMA charge is not payable by a typical LMW irrigator.
- The DEPI water share fee is included in the 2013–14 hypothetical bill analysis for all four of LMW's irrigation networks. 2013–14 was the first time this charge was imposed on customers in Robinvale, Red Cliffs and Merbein.<sup>19</sup> However, this fee has been listed on LMW's schedule of charges for First Mildura Irrigation District customers prior to 2013–14 but had not been included in the ACCC's hypothetical bill analysis.
- The delivery capacity share fee and drainage fee listed on LMW's 2013–14 schedule of charges for First Mildura Irrigation District customers are levied per delivery share. In previous years, the delivery capacity share fee was levied as a maximum ML per 14 day period; the drainage fee was levied as a per ML of drainage AUL. Although these charges were levied differently in previous years, the charge across years is roughly comparable.<sup>20</sup>

### ***Hypothetical termination fees***

The hypothetical termination fees are calculated assuming 30 delivery shares are held, with either 50 or 100 per cent of this volume, and an equivalent number of delivery shares for drainage, terminated.

The 2013–14 hypothetical termination fee analysis includes the following charges listed on LMW's schedule of charges:

- delivery share fee
- drainage fee

### ***Casual usage charge***

LMW impose a separate casual usage charge on irrigators who use water above their water delivery right but it is equivalent to the delivery share fee or standard usage fee in all irrigation networks.

The dollar per ML for usage within a water delivery right and dollar per ML for usage above water delivery right is presented in the table below for all irrigation networks. The ratio is also provided for each irrigation network, an average ratio is presented in chapter 5 of the 2013–14 Water Monitoring Report. The report presented an average of the ratios presented below.

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<sup>18</sup> LMW provided to the ACCC that the purpose of the changes to their charging structure are to increase the transparency in the charges passed through to its irrigation network customers and to improve comparability across its different irrigation networks. In particular, LMW provided that the updated charge structure seeks to better align the structure of charges in the First Mildura Irrigation Trust to the three other networks.

<sup>19</sup> The addition of this charge was a result of aligning charging regimes across all of LMW's irrigation networks.

<sup>20</sup> This change was a result of aligning charging regimes across all of LMW's irrigation networks.

Irrigation network / entitlement category	\$ / ML for usage with a water delivery right assuming water delivery right of 250 ML	\$ / ML for usage above water delivery right assuming water delivery right of 250 ML	Ratio of usage above water delivery right over usage charge included in water delivery right
Robinvale	\$903.80	\$903.80	1.00
Red Cliffs	\$453.88	\$453.88	1.00
Merbein	\$368.88	\$368.88	1.00
Mildura	\$536.68	\$536.68	1.00

#### 4.2.5. West Corugan Private Irrigation District (West Corugan), NSW Murray

##### *IIO hypothetical bill*

The analysis assumes one irrigator in the West Corugan irrigation network who:

- holds a specific volume of irrigation right (50 ML, 250 ML or 1000 ML) and
- holds an equivalent amount of water delivery right (50 ML, 250 ML or 1000 ML, respectively).

The 2013–14 hypothetical bill analysis includes the following charges listed on West Corugan’s schedule of charges.

Fixed:

- annual network access fee
- annual fixed government fee

Variable:

- allocation, supplementary and temporary water consumption

The annual fixed government fee and the allocation, supplementary and temporary water consumption fee recover State Water and NOW fixed and variable charges imposed on West Corugan and passed through to its customers. However, these charges are not passed through to irrigation customers directly as there is a volume of water that is used for transportation or conveyance loss costs. These costs also incur State Water and NOW charges which are then socialised across all customers with water access entitlements and those that have water delivered. The hypothetical bill analysis makes the following assumptions to separate the State Water and NOW charge components within each of the two relevant West Corugan charges.

- Annual fixed government fee – the components of West Corugan’s listed annual fixed government fee are separated using a ratio calculated with the sum of the actual State Water<sup>21</sup> and NOW<sup>22</sup> fixed charges. This ratio is then applied to the annual fixed government fee to estimate the amount of the charge recovering the State Water fixed charge component and the amount recovering the NOW fixed charge component.<sup>23</sup>

<sup>21</sup> The State Water ratio is equal to the actual State Water fixed charge divided by the State Water fixed charge plus the NOW fixed charge.

<sup>22</sup> The NOW ratio is equal to the actual NOW fixed charge divided by the State Water fixed charge plus the NOW fixed charge.

<sup>23</sup> The difference between the actual NOW and State Water fixed charges and what is used in the ACCC’s hypothetical bills is due to the volume of conveyance loss water whose costs are socialised across water access entitlement holders.

- Allocation, supplementary and temporary water consumption fee – the components of West Corurgan’s listed allocation, supplementary and temporary water consumption fee is separated using the following formulas. This calculation accounts for the volume of water socialised across water access entitlement holders for transportation costs.

NOW component =

$$\text{NOW usage charge} + \frac{\text{NOW usage charge} \times \text{volume of transportation water}}{\text{Volume of total water delivered 2013–14}}$$

State Water component =

$$\text{State Water usage charge} + \frac{\text{State Water usage charge} \times \text{volume of transportation water}}{\text{Volume of total water delivered 2013–14}}$$

### ***Hypothetical termination fee***

The hypothetical termination fee is calculated assuming 250 ML of water delivery right is held, with either 50 or 100 per cent of this volume terminated.

The 2013–14 hypothetical termination fee analysis uses the listed (GST exclusive) termination fee on West Corurgan’s schedule of charges.

### ***Casual usage charge***

West Corurgan impose an additional fee to the standard usage charge for irrigators who use water above their water delivery right. The ACCC’s analysis of casual usage charges includes the following charges for water use:

- within an irrigator’s water delivery right
  - allocation, supplementary and temporary water fee
- above an irrigator’s water delivery right
  - allocation, supplementary and temporary water fee
  - ancillary flow fee

The dollar per ML for usage within a water delivery right and dollar per ML for usage above water delivery rights are presented in the table below.

<b>Irrigation network / entitlement category</b>	<b>\$ / ML for usage with a water delivery right assuming water delivery right of 250 ML</b>	<b>\$ / ML for usage above water delivery right assuming water delivery right of 250 ML</b>	<b>Ratio of usage above water delivery right over usage charge included in water delivery right</b>
<b>West Corurgan</b>	\$19.60	\$24.60	1.26

## **4.2.6. Moira Private Irrigation District (Moira), NSW Murray**

### ***IIO hypothetical bill***

The analysis assumes one irrigator in Moira’s irrigation network who:

- holds a specific volume of irrigation right (50 ML, 250 ML or 1000 ML) and

- holds an equivalent amount of water delivery right (50 ML, 250 ML or 1000 ML, respectively).

The 2013–14 hypothetical bill analysis includes the following charges listed on Moira’s schedule of charges.

Fixed:

- administration operating costs
- electricity connection charge

Variable:

- MPID delivery fee
- government usage fee

Moira’s administration operating costs and government usage charge recover both State Water and NOW charges imposed on Moira and passed through to its customers. The hypothetical bill analysis makes the following assumptions to separate the State Water and NOW charge components within each of the two relevant Moira charges.

- Administration operating costs – the actual State Water and NOW fixed charges are fully passed through to Moira customers as part of the administration operating costs. The difference between the actual State Water and NOW fixed charges and the total administration operating costs is taken to be Moira’s fixed irrigation network charge.
- Government usage fee – the actual State Water and NOW usage charges are fully passed through to Moira customers through the government usage fee. The difference between the actual State Water and NOW usage charges, and the government usage fee reflects an additional Moira variable irrigation network charge.<sup>24</sup>

### ***Hypothetical termination fee***

The hypothetical termination fees are calculated assuming 250 ML of water delivery right is held, with either 50 or 100 per cent of this volume terminated.

The 2013–14 analysis uses the listed termination fee on Moira’s schedule of charges.

## **4.2.7. Murray Irrigation Limited (MIL), NSW Murray**

### ***IIO hypothetical bill***

The analysis assumes one irrigator in MIL’s B1 Class C irrigation network who:

- holds a specific volume of general security irrigation right (50 ML, 250 ML or 1000 ML) and
- holds an equivalent amount of general security delivery entitlement (50 ML, 250 ML or 1000 ML, respectively).

The 2013–14 hypothetical bill analysis includes the following charges listed on MIL’s schedule of charges.

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<sup>24</sup> Although this is listed differently on Moira’s schedule of charges, the ACCC has confirmed with Moira that this was how charges were passed down to its customers.

Fixed:

- account administration fee – maximum
- water entitlement fee Class C general security
- landholding access fee
- large irrigation outlet fee
- drainage fixed fee
- delivery entitlement fee

Variable:

- Government Tier 1 variable fee
- Government Tier 2 variable fee
- Government Tier 3 variable fee
- MIL Tier 1 variable fee
- MIL Tier 2 variable fee
- MIL Tier 3 variable fee
- drainage variable fee

The water entitlement fee Class C general security and the Government Tier 1, 2 and 3 variable fees include State Water and NOW fixed and variable charges.

The analysis makes the following assumptions to account for the way in which some charges are levied.

- Each irrigator operates a single property, incurring the landholding access fee once.
- Each irrigator has one account, incurring the account administration fee once.
- Irrigators with 50 ML and 250 ML have one large irrigation outlet, incurring the large irrigation outlet fee once.
- Irrigators with 1000 ML have two large irrigation outlets, incurring the large irrigation outlet fee twice.

This last assumption has been updated for the 2013–14 hypothetical bill analysis. This is to reflect additional information provided by MIL to the ACCC during the teleconference.<sup>25</sup>

The MIL variable fee and government variable fee are levied in a tiered system with the following structure:

- Tier 1: 0–5 ML
- Tier 2: 6–100 ML
- Tier 3: >100 ML

Charges are imposed against the tiers starting at Tier 1. For example, for an irrigator with 250 ML water access entitlement who have 100 per cent water delivered, the irrigator would

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<sup>25</sup> In previous reports, it was assumed that an irrigator with 1000 ML would have one large irrigation outlet similar to irrigators with 50 ML and 250 ML of water access entitlement. It was noted that the two outlets held by the irrigator could both be large, or one large and one extra-large, or one extra-large. It was assumed for the analysis that the size of the two outlets is large.

pay for 5 ML at Tier 1 charges, 95 ML at Tier 2 charges and the remaining 150 ML at Tier 3 charges.

The hypothetical bill analysis makes the following assumptions to separate the NOW and State Water charge components of the water entitlement fee and government variable fee (Tier 1, 2 and 3).

- Water entitlement fee – this is equivalent to the sum of actual NOW and State Water fixed charges.
- Government variable fee – the components of MIL’s listed government variable fee are separated using a ratio calculated using the sum of the actual State Water and NOW usage charges. This ratio is then applied to each tier of the government variable fee to determine the amount of the charge (for each tier) that recovers the State Water usage charge and the amount recovering the NOW usage charge.<sup>26</sup>

### ***Hypothetical termination fee***

The hypothetical termination fee is calculated assuming 250 ML of general security delivery entitlement, with either 50 or 100 per cent of this volume terminated.

The 2013–14 hypothetical termination fee analysis includes the following (GST exclusive) charges listed on MIL’s schedule of charges:

- delivery entitlement fee
- landholding access fee (for the 100 per cent termination scenario only)
- large irrigation outlet (for the 100 per cent termination scenario only).

The landholding access fee and large irrigation outlet fee are only included in the calculation of the hypothetical termination fee when the irrigator terminates 100 per cent of their water delivery right. This is because the irrigator is assumed to be disconnecting from the irrigation network, thereby disconnecting their property and the outlet.

### ***Casual usage charge***

MIL imposes a casual usage charge for irrigators who use water above their water delivery right. MIL’s casual usage fee is tiered in a similar way to their standard usage charge. MIL’s casual usage charge is also only imposed once the irrigator used more than 120 per cent of their water delivery right. The casual usage charge included in the report is the charge that would apply once this 120 per cent threshold has been met. The ACCC’s analysis of casual usage charges includes the following charges for water use:

- within an irrigator’s water delivery right
  - Tier 1 total<sup>27</sup> usage charge
  - Tier 2 total usage charge
  - Tier 3 total usage charge
- above an irrigator’s water delivery right
  - Tier 1 total casual usage charge

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<sup>26</sup> During discussions with the ACCC, MIL agreed that this was the most appropriate approach to separate the State Water and NOW charge components for monitoring purposes.

<sup>27</sup> The total usage charge as listed on MIL’s schedule of charges includes both MIL’s variable charges and government variable charges imposed on MIL and passed down to its customers.



- Tier 2 total casual usage charge
- Tier 3 total casual usage charge

The dollar per ML for usage within a water delivery right and dollar per ML for usage above a water delivery right is presented in the table below.

Irrigation network / entitlement category	\$ / ML for usage with a water delivery right assuming water delivery right of 250 ML	\$ / ML for usage above water delivery right assuming water delivery right of 250 ML	Ratio of usage above water delivery right over usage charge included in water delivery right
MIL	\$16.8028	\$37.2429	2.22

#### 4.2.8. Eagle Creek Pumping Syndicate (Eagle Creek), NSW Murray

##### *IIO hypothetical bill*

The analysis assumes one irrigator in Eagle Creek's irrigation network who:

- holds a specific share of general security water access entitlement (50 ML, 250 ML or 1000 ML) and
- holds an equivalent amount of general security water delivery right (50 ML, 250 ML or 1000 ML, respectively).

The 2013–14 hypothetical bill analysis includes the following charges listed on Eagle Creek's schedule of charges.

Fixed:

- EC fixed charge
- Government fixed charge

Variable:

- EC usage charge
- Government usage charge

Eagle Creek's government fixed charge and government usage charge recover both State Water and NOW charges imposed on Eagle Creek, however is slightly less than the total of these two charges. The hypothetical bill analysis makes the following assumptions to separate the State Water and NOW charge components.

- Government fixed charge – the actual NOW fixed charge is fully passed through to Eagle Creek's customers as part of the government fixed charge. The difference between the actual NOW fixed charge and the government fixed charge is taken to be the State Water component of the government fixed charge.

<sup>28</sup> The dollar per ML usage provided here is for the average dollar per ML for 250 ML of water delivered of the total amount for each usage tier.

<sup>29</sup> This is the usage charge for the first ML above 120 per cent of the irrigator's water delivery right for up to 100 ML of water delivered above the water delivery right, the usage charge for more than 100ML above an irrigators water delivery right is reduced to \$24.06.

- Government usage charge – the actual NOW usage charge is fully passed through to Eagle Creek’s irrigation network customers in the government usage charge. The difference between the actual NOW usage charge and the government usage charge is taken to be the State Water component of the government usage charge.

### ***Hypothetical termination fee***

The hypothetical termination fee is calculated assuming 250 ML of general security water delivery right is held, with either 50 or 100 per cent of this volume terminated.

The separately listed (GST exclusive) termination fee on Eagle Creek’s schedule of charges is included in the hypothetical termination fee analysis.

## **4.2.9. Western Murray Irrigation (WMI), NSW Murray**

### ***IIO hypothetical bill***

The analysis assumes one irrigator in each of WMI’s three irrigation networks:

- Buronga
- Coomealla and
- Curlwaa.

It is assumed that each irrigator:

- holds a specific volume of irrigation right (50 ML, 250 ML or 1000 ML)
- holds an equivalent amount of delivery entitlement (50 ML, 250 ML or 1000 ML, respectively) and
- does not incur meter reading or administration charges.

The 2013–14 hypothetical bill analysis for Coomealla includes the following charges listed on WMI’s schedule of charges

Fixed:

- access fee for delivery entitlement
- asset replacement fund
- fixed government charge
- membership levy
- joint venture repayment

Variable:

- water usage above access fee allowance
- variable government charge

The 2013–14 hypothetical bill analysis for Buronga includes the following charges listed on WMI’s schedule of charges.

Fixed:

- asset replacement fund
- land and water management plan charge

- fixed government charge
- access fee for delivery entitlement
- membership levy
- infrastructure loan repayment

Variable:

- water usage above access fee allowance
- variable government charge

The 2013–14 hypothetical bill analysis for Curlwaa includes the following charges listed on WMI's schedule of charges.

Fixed:

- access fee for delivery entitlement
- asset replacement fund
- fixed government charge
- membership levy

Variable:

- water usage above access fee allowance
- variable government charge

The fixed government charge and the variable government charge recover State Water and NOW charges imposed on WMI and passed through to its customers.

WMI does not levy its usage charge as long as water usage is below or equal to the access fee allowance. The access fee allowances for each irrigation network are:

- 54 per cent for Buronga
- 45 per cent for Coomealla
- 60 per cent for Curlwaa

An irrigator who uses water above the access allowance percentage incurs the water usage above access fee for each ML of water used above that allowance level. In 2013–14, WMI increased the percentage nominated for the Coomealla irrigation network from 42 per cent to 45 per cent.

The hypothetical bill analysis makes the following assumptions to separate the State Water and NOW charge components within each of the two relevant WMI charges.

- Fixed government charge – the actual NOW fixed charge is fully passed through to WMI's customers as part of the fixed government charge. The difference between the actual NOW fixed charge and the fixed government charge is taken to be the State Water component of the fixed government charge.
- Variable government charge – this is equivalent to the sum of the actual State Water and NOW usage charges.

### ***Hypothetical termination fees***

The hypothetical termination fees are calculated assuming 250 ML of delivery entitlement is held, with either 50 or 100 per cent of this volume terminated.

The termination fee, separately listed on WMI's schedule of charges is used for the hypothetical termination fee analysis.

### **Casual usage charges**

MIL impose a casual usage charge on irrigators who use water above their water delivery right. The ACCC's analysis of casual usage charges includes the following charges for water use:

- within an irrigator's water delivery right
  - water usage above access fee allowance
  - variable government charge
- above an irrigator's water delivery right
  - casual users access fee

The dollar per ML for usage within a water delivery right and dollar per ML for usage above water delivery right is presented in the table below. The report presents the average of the ratios presented below.

<b>Irrigation network / entitlement category</b>	<b>\$ / ML for usage with a water delivery right assuming water delivery right of 250 ML</b>	<b>\$ / ML for usage above water delivery right assuming water delivery right of 250 ML</b>	<b>Ratio of usage above water delivery right over usage charge included in water delivery right</b>
<b>Buronga</b>	\$55.65	\$69	1.24
<b>Coomealla</b>	\$67.35	\$95	1.41
<b>Curlwaa</b>	\$104.15	\$152	1.46

#### **4.2.10. Coleambally Irrigation Cooperative Limited (Coleambally), NSW Murrumbidgee**

##### ***IIO hypothetical bill***

The analysis assumes one irrigator in Coleambally's irrigation network who:

- holds a specific share of general security water access entitlement (50 ML, 250 ML or 1000 ML)
- holds an equivalent amount of water delivery right (50 ML, 250 ML or 1000 ML respectively) and
- is connected to the irrigation network through one large common irrigation outlet.

The 2013–14 hypothetical bill analysis includes the following charges listed on Coleambally's schedule of charges.

Fixed:

- CICL access fee
- compliance fee

- CIMCL Levy
- large outlet charge – common irrigation outlet for water access entitlements of 1000 ML
- peak flow charge – large flume 12 to 30 ML / day
- government water access fee

Variable:

- government usage fee

The outlet peak flow charge on Coleambally's schedule of charges is levied on the basis of the maximum flow capacity. For a large common irrigation outlet, the flow ranges from 6ML to 30 ML per day. The maximum flow is nominated by the irrigator within this range. In 2013–14, Coleambally provided updated information on the volumetric assumption of the maximum peak flow capacity that informs this charge. Coleambally has provided to the ACCC that irrigators typically nominate a peak flow of 15 ML and most irrigators hold a water access entitlement of at least 1000 ML.

As such, the 2013–14 analysis assumes that under the 1000 ML scenario, the irrigator has a maximum peak flow of 15 ML per day; and under the 50 ML and 250ML scenarios, the irrigator has a maximum peak flow of 6 ML per day. The assumption in previous reports was a maximum peak flow of 16.3 ML per day for all scenarios.

The government water access fee and the government usage fee recover both State Water and NOW fixed and usage charges imposed on Coleambally and passed on to customers.

- Government water access fee - this is equivalent to the sum of the actual State Water and NOW fixed charges.
- government usage fee - this is equivalent to the sum of the actual State Water and NOW usage charges.

### ***Hypothetical termination fee***

The hypothetical termination fee is calculated assuming 250 ML of water delivery right is held, with either 50 or 100 per cent of this volume terminated.

The fixed irrigation network charges on Coleambally's schedule of charges are included in the calculation of the hypothetical termination fee.

The large common irrigation outlet charge and maximum peak flow charge are only included in the calculation of the termination fee under the 100 per cent termination scenario (where the irrigator is assumed to be disconnecting from the irrigation network).

## **4.2.11. Murrumbidgee Irrigation Limited (MI), NSW Murrumbidgee**

### ***IIO hypothetical bills***

The analysis applies to six irrigators across MI's four pricing groups:

- Integrated Horticulture Supply (IHS),
- Large Area Supply (LAS),
- Large Area Supply Wah Wah excluding IHS (LAW), and
- Small Area Supplies (SAS).

Within each of the SAS and LAS pricing groups, there is one irrigator holding:

- a specific volume of high security irrigation right (50 ML, 250 ML or 1000 ML) with an equivalent volume of high security delivery entitlement (50 ML, 250 ML or 1000 ML, respectively),
- a specific volume of general security irrigation right (50 ML, 250 ML or 1000 ML) with an equivalent volume of general security delivery entitlement (50 ML, 250 ML or 1000 ML, respectively).

Within the LAW pricing group there is one irrigator holding:

- a specific volume of general security irrigation right (50 ML, 250 ML or 1000 ML) with an equivalent volume of general security delivery entitlement (50 ML, 250 ML or 1000 ML, respectively).

Within the IHS pricing group there is one irrigator holding:

- a specific volume of high security irrigation right (50 ML, 250 ML or 1000 ML) with an equivalent volume of high security delivery entitlement (50 ML, 250 ML or 1000 ML, respectively).

IHS customers must pay electricity charges, which MI passes on at cost. Water use accounts for 75 per cent of the electricity charge; the remaining 25 per cent is socialised across all customers. Electricity usage charges depend on several factors, including the level of water pressure and the time period of electricity use (peak/off peak periods). The electricity price calculated for the 2013–14 hypothetical bill analysis is a weighted average of peak, shoulder and off-peak times across all IHS pump stations.<sup>30</sup>

Further assumptions for irrigators in the LAS and LAW pricing groups include:

- irrigator has one farm connected and thus pays the landholding charge once
- irrigator has two outlets connected and thus pays the outlet charge twice.

Further assumptions for irrigators in the SAS and IHS pricing groups include:

- irrigator has one farm connected and thus pays the landholding charge once
- irrigator has one outlet connected and thus pays the outlet charge once.

The 2013–14 hypothetical bill analysis for each of MI's six irrigation network customers includes the following charges listed on MI's schedule of charges.

Fixed:

- landholding charge
- outlet charge
- facilities charge, tier 1, 2 and 3
- government bulk water licence
- government bulk water conveyance
- envirowise charge – landholding > 4 ha

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<sup>30</sup> The electricity price included in the ACCC's analysis for 2013–14 is based on the charges actually paid by irrigators as on Murrumbidgee's schedule of charge. It is calculated as the weighted average for peak, shoulder and off-peak times weighted across all IHS pump stations. This is the same method used to calculate 2012-13 electricity charges. However, there is insufficient information available to use this method of calculation of electricity charge for all previous years.

Variable:

- normal usage charge
- government usage charge
- In addition to these charges:
  - high security customers pay the envirowise charge (usage) - high security type 3
  - general security customers pay the envirowise charge (usage) - general security type 1

In addition to these charges LAS High Security, LAS general security and LAW general security customers pay the rice monitoring fee. The facilities charge is levied in a tiered system with the following structure:

- Tier 1: 0-50 ML
- Tier 2: 51-250 ML
- Tier 3: > 250 ML

Charges are imposed against the tiers starting at Tier 1. For example, for an irrigator with 300 ML water delivery right, the irrigator would pay Tier 1 charges for the first 50 ML, Tier 2 charges for the next 200 ML and Tier 3 charges for the last 50 ML.

The government fixed licence and conveyance charge and the government variable usage and conveyance charge recover both State Water and NOW fixed and usage charges imposed on MI and passed on to customers.

The hypothetical bill analysis makes the following assumptions to separate the State Water and NOW charge components for the three relevant Murrumbidgee government charges.

- Government bulk water licence - the components of MI's listed government bulk water licence charge are separated using a ratio calculated with the sum of the actual State Water and NOW fixed charges. This ratio is then applied to the government bulk water licence charge to determine the State Water fixed charge component and the NOW fixed charge component of the government bulk water licence charge.
- Government bulk water usage - the components of MI's listed government bulk water charge are separated using a ratio calculated with the sum of the actual State Water and NOW usage charges. This ratio is then applied to the government bulk water charge to determine the State Water usage charge component and the NOW usage charge component of the government bulk water usage charge.
- Government bulk water conveyance - the components of MI's listed government bulk water conveyance charge are separated using a ratio calculated with the sum of the actual State Water and NOW usage charges. This ratio is then applied to the government bulk water conveyance charge to determine the State Water usage charge component and the NOW usage charge component of the government bulk water conveyance charge.

The 2013–14 hypothetical bill analysis' assumptions have been updated to reflect additional information provided by MI to the ACCC regarding the charges that a typical MI irrigator in each pricing group would pay. MI advised the ACCC that most irrigators in the LAS and LAW irrigation networks produce rice and would therefore be required to pay the rice monitoring fee. The 2013–14 analysis includes the rice monitoring fee.

Additionally, the 2013–14 analysis includes the conveyance component of the government bulk water licence and government bulk water charge which had not previously been included.

### ***Hypothetical termination fees***

The hypothetical termination fees are calculated assuming 250 ML of delivery entitlement is held, with either 50 or 100 per cent of this volume terminated.

The (GST exclusive) fixed irrigation network charges included in the calculation of the hypothetical termination fees include:

- facilities charge, tiers outlined below
- envirowise charge – landholding
- landholding charge
- outlet charge
- envirowise charge usage (either the HS type 3 or GS type 1, depending on security level).

In calculating which tier should apply to termination for the fixed facilities charge, MI sets out the following structure in its schedule of charges:

- Tier 3 water delivery rights, if any, are terminated first
- Tier 2 water delivery rights, if any, are terminated next
- Tier 1 water delivery rights, if any, are terminated last.

For example, an irrigator who holds 300 ML of water delivery right and decides to terminate 50 per cent, their termination fee would include 50 ML at the Tier 3 facilities charge and the remaining 100 ML would be at the Tier 2 facilities charge. If the irrigator terminates 100 per of their water delivery right, their termination fee would include 50 ML at the Tier 3 facilities charge, 200 ML at the Tier 2 facilities charge and the last 50 ML at the Tier 1 facilities charge.

### ***Casual usage charge***

MI imposes a casual usage charge for irrigators who use water above their water delivery right as well as the facilities charge at the relevant tier. For example an irrigator holding 250 ML of water delivery right and uses 251 ML, the last 1 ML will be charged the casual usage variable charge and the Tier 3 facilities charge.

The ACCC's analysis of casual usage charges includes the following charges for water use:

- within an irrigator's water delivery right
  - normal use usage charge
- above an irrigator's water delivery right
  - causal use usage charge
  - Tier 3 facilities charge<sup>31</sup>

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<sup>31</sup> Tier 3 facilities charge is used as the analysis assumes the irrigator holds 250 ML of water delivery right



The dollar per ML for usage within a water delivery right and dollar per ML for usage above water delivery right is presented in the table below. The report represent an average of these ratios presented below.

Irrigation network / entitlement category	\$ / ML for usage with a water delivery right assuming water delivery right of 250 ML	\$ / ML for usage above water delivery right assuming water delivery right of 250 ML	Ratio of usage above water delivery right over usage charge included in water delivery right
SAS – GS	\$9.01	\$20.54	2.28
SAS – HS	\$9.01	\$25.48	2.83
LAW – GS	\$7.95	\$15.84	1.99
LAS – GS	\$9.01	\$18.64	2.07
LAS – HS	\$9.01	\$22.62	2.51
IHS – HS	\$9.01	\$24.66	2.74

#### 4.2.12. Hay Private Irrigation District (Hay), NSW Murrumbidgee

##### *IIO hypothetical bills*

The analysis assumes one irrigator in Hay’s irrigation network who:

- holds a specific share of water access entitlement (50 ML, 250 ML or 1000 ML)
- holds an equivalent amount of water delivery right (50 ML, 250 ML or 1000 ML, respectively)<sup>32</sup>
- has a property over 4 ha and incurs an administration fee for that property size and
- has one 12 ML outlet connected to its farm.

The 2013–14 hypothetical bill analysis includes the following charges listed on Hay’s schedule of charges.

Fixed:

- access fee general
- bulk water charges
- asset levy – general
- outlet charge – 12 ML outlet
- administration charge (>4 ha)
- resource management charge

Variable:

- delivery charge – channel system general

<sup>32</sup> 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 5 and 6 remain unchanged.

The bulk water charge listed on Hay's schedule of charges recover both State Water and NOW fixed charges imposed on Hay and passed on to irrigation customers. In addition, the delivery charge also includes State Water and NOW variable charges.

The hypothetical bill analysis makes the following assumptions to separate the State Water and NOW charge components within each of the two relevant Hay charges.

- Bulk water charges - this is equivalent to the sum of the actual State Water and NOW usage charges.
- Delivery charge - the actual State Water and NOW usage charges are fully passed through to Hay customers through the delivery charge. The difference between the sum of the actual State Water and NOW fixed charges and the delivery charge – channel system general is equivalent to Hay's variable irrigation network charge.

### ***Hypothetical termination fee***

The hypothetical termination fee is calculated assuming 250 ML of water delivery right is held, with either 50 or 100 per cent of this volume terminated.

The following (GST exclusive) fixed irrigation network charges are included in the calculation of the hypothetical termination fee:

- access fee general
- asset levy
- administration charge (>4 ha) (for the 100 per cent termination scenario only) and
- outlet charge – 12 ML outlet (for the 100 per cent termination scenario only).

The administration and outlet charges are only included in the calculation of the hypothetical termination fee when the irrigator terminates 100 per cent of their water delivery right. This is because the irrigator is assumed to be disconnecting from the irrigation network.

## **4.2.13. Jemalong Irrigation Limited (Jemalong), NSW Lachlan**

### ***IIO hypothetical bill***

The analysis assumes one irrigator in Jemalong's irrigation network who:

- holds a specific volume of general security irrigation right (50 ML, 250 ML or 1000 ML) and
- holds an equivalent amount of general security delivery entitlement (50 ML, 250 ML, or 1000 ML, respectively).

The 2013–14 hypothetical bill analysis includes the following charges listed on Jemalong's schedule of charges.

Fixed:

- Jemalong fixed access charge
- government fixed charge
- conveyance fixed charge

Variable:

- Jemalong usage charge

- government usage charge

Jemalong's listed government usage charge, government fixed charge and conveyance fixed charge recover both State Water and NOW fixed and variable charges imposed on Jemalong and passed through to its customers. The hypothetical bill analysis makes the following assumptions to separate State Water and NOW fixed and variable charge components.

- Government fixed charge - the actual NOW fixed charge listed on NOW's schedule of charges, is fully passed through to Jemalong's irrigation network customers. The difference between the actual NOW fixed charge and the government fixed charge is the State Water fixed charge component of the government fixed charge.
- Conveyance fixed charge - the components of Jemalong's conveyance fixed charge are separated using a ratio calculated with the sum of the actual State Water and NOW fixed charges. This ratio is then applied to the conveyance fixed charge to determine the State Water fixed charge component and the NOW fixed charge components of the conveyance fixed charge.
- Government usage charge - the components of Jemalong's listed government usage charge are separated using a ratio calculated with the sum of the actual State Water and NOW usage charges. This ratio is then applied to the government usage charge to determine the amount of the charge recovering the State Water usage charge component and the amount recovering the NOW usage charge component of the government usage charge.

### ***Hypothetical termination fee***

The hypothetical termination fee is calculated assuming 250 ML of general security delivery entitlement is held, with either 50 or 100 per cent of this volume terminated.

The termination fee listed on Jemalong's schedule of charges is included in the calculation of the hypothetical termination fee.

## **4.2.14. Narromine Irrigation Board of Management (Narromine), NSW Macquarie**

### ***IIO hypothetical bill***

The analysis assumes one irrigator in Narromine's irrigation network who:

- holds a specific volume of irrigation right (50 ML, 250 ML or 1000 ML), and
- holds an equivalent amount of delivery entitlement (50 ML, 250 ML or 1000 ML, respectively).

The 2013–14 hypothetical bill analysis for Narromine includes the following charges listed on Narromine's schedule of charges.

Fixed:

- NIBM access fee
- State Water fixed charge
- NOW fixed charge
- metering charge
- administration charge

Variable:

- NIBM variable charge
- State Water usage charge
- NOW usage charge

The analysis assumes that the irrigator:

- operates one farm, incurring the metering charge once and
- operates one account, incurring the administration charge once.

### ***Hypothetical termination fee***

The hypothetical termination fee is calculated assuming 250 ML of delivery entitlement is held, with either 50 or 100 per cent of this volume terminated.

The (GST-exclusive) charges included in the hypothetical termination fee include:

- NIBM access fee
- administration charge (only incurred when 100 per cent of the water delivery right is terminated)
- metering charge (only incurred when 100 per cent of the water delivery right is terminated)

#### **4.2.15. Buddah Lake Irrigators' Association (Buddah Lake), NSW Macquarie**

### ***IIO hypothetical bill***

The analysis assumes one irrigator in Buddah Lake's irrigation network who:

- holds a specific share of water access entitlement (50 ML, 250 ML or 1000 ML) and
- holds an equivalent amount of water delivery right (50 ML, 250 ML or 1000 ML, respectively).

The 2013–14 hypothetical bill analysis includes the following charges listed on Buddah Lake's schedule of charges.

Fixed:

- operating and maintenance fee

Variable:

- water charge

The operating and maintenance fee and the water charge fee include WPM charges and bulk water charges.

Buddah Lake's operating and maintenance fee and water charge recover both variable and fixed State Water and NOW charges imposed on Buddah Lake and passed through to its customers. The hypothetical bill analysis makes the following assumptions to separate the State Water and NOW charge components within each of the two relevant Buddah Lake charges.

- Operating and maintenance fee - the actual State Water and NOW fixed charges are fully passed through to Buddah Lake customers as part of the operating and maintenance fee. The difference between the sum of the actual State Water and NOW fixed charges, and the total operating and maintenance fee is equivalent to Buddah Lake's fixed irrigation network charge.
- Water charge - the actual State Water and NOW usage charges are fully passed through to Buddah Lake's customers. The difference between the sum of the actual State Water and NOW usage charges and the water charge is equivalent to Buddah Lake's variable irrigation network charge.

This process was used for both 2012-13 and 2013-14 charges to allow comparison across these years.

The fixed operating and maintenance fee is listed as a monthly fee for a defined volume of water delivery right. To enable comparisons across IIOs, the fee was adjusted to a per ML, per annum amount for inclusion in the IIO hypothetical bill.<sup>33</sup>

In 2013-14, Buddah Lake provided updated information on the way in which water delivery rights are adjusted for conveyance losses. The ACCC has updated its assumption accordingly. In previous reports, the water delivery right was reduced by 10 per cent to account for conveyance losses. The 2013-14, analysis assumes there is no adjustment to the water delivery right for conveyance losses.

### ***Hypothetical termination fee***

The hypothetical termination fee is calculated assuming 250 ML of water delivery right is held, with either 50 or 100 per cent of this volume terminated.

The charge included in the calculation of the hypothetical termination fee is the termination fee listed on Buddah Lake's schedule of charges. The termination fee is slightly lower than ten times Buddah Lake's fixed irrigation network charge once State Water and NOW fixed charges are removed from the operating and maintenance charge listed on their schedule of charges.

## **4.2.16. Trangie-Nevertire Irrigation Scheme (Trangie-Nevertire), NSW Macquarie**

### ***IIO hypothetical bill***

The analysis assumes one irrigator in the Trangie-Nevertire irrigation network who:

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

The 2013-14 hypothetical bill analysis for Trangie-Nevertire includes the following charges listed on Trangie-Nevertire's schedule of charges.

Fixed:

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<sup>33</sup> The operating and maintenance fee is listed as \$1450 per month for 1250 ML of water delivery right. To adjust to a per annum, per ML amount, \$1450 was multiplied by 12 (months) and then divided by 1250 ML which is the assumed volume of water that was required for each hectare of irrigated land.

- operating and maintenance
- State Water / NSW fixed charge

Variable:

- TNIS pumping charge
- State Water usage charge

The State Water / NOW fixed charge and the State Water usage charge recover both State Water and NOW fixed and variable charges imposed on Trangie-Nevertire and passed on to their customers. The usage charge also recovers State Water and NOW charges connected with conveyance water.

The hypothetical bill analysis makes the following assumptions to separate the NOW and State Water charge components.

- State Water/NSW - the components of Trangie-Nevertire's listed State Water/NSW charge are separated using a ratio calculated with the actual State Water and NOW fixed charges. This ratio is then applied to the State Water/NSW charge to determine the State Water fixed charge component and the NOW fixed charge component of the State Water/NSW charge.
- State Water usage - the components of Trangie-Nevertire's listed State Water usage charge are separated using a ratio calculated with the sum of the actual State Water and NOW usage charges. This ratio is then applied to the State Water usage charge to determine the State Water usage charge component and the NOW usage charge component of the State Water usage charge.

The 2013–14 hypothetical bill analysis' assumptions have been updated to reflect additional information provided by Trangie-Nevertire to the ACCC regarding the way in which charges are levied on a typical irrigator. The charges listed on Trangie-Nevertire's schedule of charges are levied on the basis of whether the water is pumped 'at river' or 'at farm gate'. Trangie-Nevertire has advised the ACCC that most irrigators receive their water 'at farm gate'. Previous analysis used the 'at river' rates. The 2013–14 analysis assumes charges are levied 'at farm gate'.

### ***Hypothetical termination fee***

The hypothetical termination fee is calculated assuming 250 ML of water delivery right is held, with either 50 or 100 per cent of this volume terminated.

The separately listed termination fee on Trangie-Nevertire's schedule of charges is included in the hypothetical termination fee analysis.

#### **4.2.17. Tenandra Irrigation Scheme (Tenandra), NSW Macquarie**

##### ***IIO hypothetical bill***

The analysis assumes one irrigator in Tenandra's irrigation network who:

- holds a specific share of water access entitlement (50 ML, 250 ML or 1000 ML) and
- holds an equivalent amount of water delivery right (50 ML, 250 ML or 1000 ML, respectively).

To account for conveyance losses, it is assumed that the water delivery right is reduced by 10 per cent.<sup>34</sup>

The 2013–14 hypothetical bill analysis includes the following charges listed on Tenandra’s schedule of charges.

Fixed:

- operating and maintenance fee

Variable:

- water pumping fee

Tenandra’s operating and maintenance fee and water pumping fee recover both State Water and NOW fixed and usage charges imposed on Tenandra and passed through to its customers. The hypothetical bill analysis makes the following assumptions to separate the State Water and NOW charge components within each of these two charges.

- Operating and maintenance fee - the actual State Water and NOW fixed charges are fully passed through to Tenandra customers through the operating and maintenance fee. The difference between the sum of the actual State Water and NOW fixed charges and the operating and maintenance fee is Tenandra’s fixed irrigation network charge.
- Water pumping fee - the actual State Water and NOW usage charges are fully passed through to Tenandra customers through the water pumping fee. The difference between the sum of the actual State Water and NOW variable charges and the water pumping fee is Tenandra’s variable irrigation network charge.

### ***Hypothetical termination fee***

The hypothetical termination fee is calculated assuming 250 ML of water delivery right is held, with either 50 or 100 per cent of this volume terminated.

The hypothetical termination fee is calculated as ten times the fixed operating and maintenance fee minus State Water and NOW charges.

### ***Casual usage charge***

Tenandra do not impose a casual usage charge for irrigators who use water above their water delivery right. The ACCC’s analysis of casual usage charges includes the following charges for water use:

- within an irrigator’s water delivery right
  - water pumping fee
- above an irrigator’s water delivery right
  - water pumping fee

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<sup>34</sup> This reduction is assumed following information provided to the ACCC by Tenandra. For example an irrigator who holds 200 ML of water access entitlement, they would only receive a maximum of 180 ML of water when there is 100 per cent allocation.

The dollar per ML for usage within a water delivery right and dollar per ML for usage above water delivery right is presented in the table below.

Irrigation network / entitlement category	\$ / ML for usage with a water delivery right assuming water delivery right of 250 ML	\$ / ML for usage above water delivery right assuming water delivery right of 250 ML	Ratio of usage above water delivery right over usage charge included in water delivery right
Tenandra	\$33	\$33	1.00

#### 4.2.18. Marthaguy Irrigation Scheme (Marthaguy), NSW Macquarie

##### *IIO hypothetical bill*

The analysis assumes one irrigator in Marthaguy's irrigation network who:

- holds a specific volume of general security irrigation right (50 ML, 250 ML or 1000 ML) and
- holds an equivalent amount of general security delivery entitlement (50 ML, 250 ML or 1000 ML, respectively).

The 2013–14 hypothetical bill analysis includes the following charges listed on Marthaguy's schedule of charges.

Fixed:

- operating and maintenance charge
- State Water general security
- Office of Water general security
- MRFF
- NSW Irrigators Council

Variable:

- MIS pumping charge

The MIS pumping charge includes State Water and NOW variable charges imposed on Marthaguy and passed on to its customers. The actual State Water and NOW variable charges are fully passed through to Marthaguy's customers through the government usage charge. The difference between the sum of the actual State Water and NOW variable charges and the MIS pumping charge is equivalent of Marthaguy's variable irrigation network charge.

The 2013–14 hypothetical bill analysis' assumptions have been updated to reflect additional information provided by Marthaguy to the ACCC regarding the charges that a typical irrigator would pay.

Previously the riparian charge was included in the hypothetical analysis. However, this charge is only imposed as a casual usage charge imposed when an irrigator takes water from the river above their water delivery right.



### ***Hypothetical termination fee***

The hypothetical termination fee is calculated assuming 250 ML of general security delivery entitlement is held, with either 50 or 100 per cent of this volume terminated.

The operating and maintenance charge is included in the calculation of the hypothetical termination fee.

#### **4.2.19. SunWater Corporation (SunWater), Qld Condamine-Balonnee**

##### ***IIO hypothetical bill***

The analysis assumes one irrigator in SunWater's St George Water Supply Scheme channel irrigation network who:

- holds a specific volume of water allocation (50 ML, 250 ML or 1000 ML)
- has an equivalent farm size (20 ha, 100 ha and 400 ha respectively) for each of the volumes of irrigation right above and
- does not incur any channel harvesting fees.

The analysis applies the conversion of irrigation right to an equivalent farm size because SunWater levies its drainage charge based on farm size in hectares.<sup>35</sup>

The 2013–14 hypothetical bill analysis includes the following charges listed on SunWater's schedule of charges.

Fixed:

- allocation charge – bulk water charge – part A (fixed)
- allocation charge – channel distribution – part C (fixed)
- drainage charge

Variable:

- allocation water – bulk water charge – part B
- allocation water – channel distribution – part D

### ***Hypothetical termination fee***

Hypothetical termination fee analysis is not conducted for SunWater. The termination fee listed on SunWater's schedule of charges for the St George irrigation network is zero.

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<sup>35</sup> These farm sizes were assumed following ACCC consultation with SunWater.