

## **Schedule E and Water Act Section 71 Water Use Report 2012-13 Long-Term, Diversion Cap for South Australia**

### **Schedule E Compliance Requirements**

As a result of decisions of Ministerial Council in December 1996 and March 2001 and the amendment of Schedule E in March 2008, the components of the South Australian Cap are:

- a five-year rolling non-tradeable cap on diversions of 650 GL for Metropolitan Adelaide;
- a fully tradeable cap on diversions of 50 GL per year for Country Towns;
- a cap on diversions of 94.2 GL per year for the Lower Murray Swamps with the following components;
  - 72 GL per year for swamp use with unrestricted trade;
  - 22.2 GL per year non-tradeable Environmental Land Management Allocation (ELMA);  
and
- an average cap on diversions of 449.9 GL per year for 'All Other Purposes' in South Australia which is fully tradeable including 9.3 GL per year for what was previously the Highlands associated with the Lower Murray Swamps.

A climate adjusted Cap model for Metropolitan Adelaide has been previously discussed with the Murray-Darling Basin Authority. South Australia is working to finalise the model and model report and will provide these for independent auditing once complete.

South Australia has used a method of adjusting for environmental water usage in 2012-13 consistent with that applied 2011-12. MDBA officers are currently investigating other options to adjust annual cap targets for environmental water, in consultation with Basin State officials. At the time of preparing this report, this work had not been concluded and the method used in 2011-12 was applied.

### **Water Resource Management Overview**

During the 2012-13 water year, South Australia received its full annual Entitlement Flow of 1,850 GL and an extended duration of 'Unregulated Flow'. River Murray licence holders received a 100 percent allocation and no carryover was available from the 2011-12 water year due to South Australia not being able to utilise the Storage Right under Schedule G of the Murray-Darling Basin Agreement.

South Australia received a total flow at the border of approximately 6,900 GL, including the transfer of New South Wales and Victorian allocations held by the Commonwealth Environmental Water (CEW) (98.8 GL) and The Living Murray (TLM) Program (45 GL). The flow to South Australia peaked at about 50 GL/day on 3 October 2012, unregulated flow ceased on 28 October 2012 (unregulated flow conditions were experienced from 1 July 2012). Additional Dilution Flow was received from 1 July to 7 January 2013.

The high flow conditions resulted in only a small volume of environmental water being required to be pumped from the River Murray to elevated wetlands. No active decisions were made about the delivery of allocations against environmental entitlements that are part of South Australia's Entitlement Flow.

The extended duration of high flow conditions provided opportunities to further dilute the salinity in Lake Albert. This was achieved through a water level management program, which drew down and then restored water levels in the Lower Lakes, enabling flushing of salt from Lake Albert to the Coorong via Lake Alexandrina.

### **Water Use Overview**

South Australian water access entitlement holders had access to 100 percent of their entitlement from 1 July 2012 and no private carryover was provided. No South Australian Entitlement was deferred for private carryover or critical human water needs (CHWN) purposes during 2012-13.

Diversions from the River Murray during 2012-13 totalled 546.3 GL and comprised:

- 81.7 GL for Metropolitan Adelaide and Associated Country Areas;
- 37.4 GL for Country Towns;
- 20.9 GL for the Lower Murray Swamps (including water for Environmental Land Management Allocation Purposes); and
- 406.3 GL for metered and un-metered diversions (including stock and domestic) for All Other Purposes.

South Australia experienced a long hot dry summer followed by a prolonged autumn heatwave. This resulted in high irrigation demands and the highest diversion since 2006-07, but remained below the average of 575 GL (since the Murray-Darling Basin Ministerial Council Cap on Diversions was implemented in 1997).

### **Metropolitan Adelaide and Associated Country Areas**

The Metropolitan Adelaide Water Supply System sources water from two primary water resources: natural catchment inflows into the Mount Lofty Ranges storages; and the River Murray. Water from the Mount Lofty Ranges storages is used as the preferred water source because of the substantial costs of pumping and treating water from the River Murray.

The amount of water available from the Mount Lofty Ranges storages is the principal factor influencing the amount of water required to be pumped from the River Murray in any one year. In 2012-13 the total water consumed in Metropolitan Adelaide and associated country areas from the River Murray and the Mount Lofty Ranges storages was 171 GL. The useable inflow to the Mount Lofty Ranges storages was approximately 74 GL. Diversions from the River Murray for Metropolitan Adelaide and Associated Country Areas totalled 81.7 GL.

The five-year rolling actual total diversion under the Metropolitan Adelaide licence was 403.5 GL, which is 246.5 GL less than the 650 GL five year rolling licence entitlement (Table 1).

**Table 1: Metropolitan Adelaide Licence Assessment**

	2008-09	2009-10	2010-11	2011-12	2012-13	Total
Rolling 5 year actual total diversion against 650 GL Licence	149.5	56.9	56.4	59	81.7	<b>403.5</b>
<b>Five Year Licence Entitlement</b>						<b>650</b>
<b>Amount Below Rolling Licence Entitlement</b>						<b>246.5</b>

**Country Towns**

Country Towns has a fully tradeable cap on diversions of 50 GL. In 2012-13 diversions under the River Murray Country Towns licences totalled 37.4 GL. Water provided to Country Towns also includes diversions through the Morgan-Whyalla pipeline, which accounted for 30.8 GL of the 37.4 GL annual diversion. The allocation provided to Country Towns was 50 GL and 10.6 GL was traded by SA Water from the Country Towns to Victoria, which reduced the annual Cap target to 39.4 GL.

**Lower Murray Swamps**

One of Australia's earliest large-scale irrigation developments took place by reclaiming nearly all of the wetlands adjacent to the River Murray between Wellington and Mannum in South Australia. This area is known informally as the 'Lower Murray Swamps'. The Lower Murray Swamps irrigation areas include former Government owned irrigation areas and the privately owned irrigation districts of Cowirra, Neeta, Pompoota, Wall Flat, Mypolonga, Burdett, Long Flat, Monteith, Mobilong and Jervois. Levee banks protect these areas from permanent inundation as the elevation of the irrigation areas is below the normal river level. This makes flood irrigation possible over extensive areas of highly productive agricultural land.

Improved irrigation practices, including laser-levelling of paddocks, have provided opportunities for improved water use efficiency and pasture production. The Lower Murray Swamps and areas around the Lower Lakes previously supported much of South Australia's dairy industry. This has significantly changed over the last eight years as a result of lost production during the millennium drought, low commodity prices and high costs associated with remediation of pasture and infrastructure damaged by low water levels in the River channel during the drought.

The Lower Murray Swamps have a cap on diversions of 94.2 GL per year with the following components;

- 72 GL per year for swamp use with unrestricted trade;
- 22.2 GL per year non-tradeable Environmental Land Management Allocation (ELMA).

During 2012-13, a total of 20.9 GL was diverted for irrigation and ELMA on the Lower Murray Swamps. Although a total volume of 22.2 GL was allocated for ELMA within the Lower Murray Swamps, as land on the Lower Murray Swamps has been removed from production, ELMA has not been applied to the land and remains in-river to provide an environmental benefit.

A small volume (1.25 GL) of allocation trade occurred in 2013-14 along with 1 GL of entitlement trade. This increases the total cumulative permanent trade from the Lower Murray Swamps to 49.1 GL. The Cap for the Lower Murray Swamps adjusted for permanent trade and allocation trade is 43.85 GL.

### **All Other Purposes of Water from the River Murray**

The 'All Other Purposes' average cap on diversions of 449.9 GL per year encompasses all other diversions from the River Murray within South Australia other than those described above, which includes stock, domestic, irrigation, industrial and recreation entitlements.

Diversions associated with the All Other Purposes licence categories totalled 406.3 GL, which was the fifth highest annual diversion for this licence since 1997 when the Cap was introduced. The high use is reflective of the climatic conditions experienced during summer and autumn when several heatwaves were experienced. The climate adjusted annual cap target was 471.9 GL and net allocation trade to the cap valley was 3.5 GL. No permanent trades occurred from the All Other Purposes Cap in 2012-13 and the total permanent trade adjustment is 81.5 GL.

Pumped use of environmental water was 0.189 GL, therefore the annual cap target adjusted for net trade and environmental diversions is 556.7 GL.

### **Water Trade**

Substantial trade of allocations into and out of South Australia occurred in 2012-13. A total of 1,004.5 GL of allocation, including 932.1 GL of environmental allocations and 72.4 GL of non-environmental allocations were traded to SA. 79.5 GL was traded out of South Australia. Ignoring transfers of environmental water, South Australia had a net interstate trade out of South Australia of 7.1 GL.

Table 2 provides details of the temporary allocation trades including where the water was sourced from for the 2012–13 water year.

**Table 2: SA River Murray Interstate Temporary Water Allocation Trade 2012-13**

	Temporary Trade (GL)	Environmental Trade (GL)	Non-Environmental Trade (GL)
Interstate Trade			
From South Australia to Victoria	53.8	0.0	53.8
From South Australia to New South Wales	25.7	0.0	25.7
<b>Total out of South Australia</b>	<b>79.5</b>	<b>0.0</b>	<b>79.5</b>
Into South Australia from Victoria	590.8	399.3	58.0
Into South Australia from New South Wales	413.7	532.8	14.4
<b>Total into South Australia</b>	<b>1,004.5</b>	<b>932.1</b>	<b>72.4</b>
<b>Net Trade into South Australia</b>	<b>925.0</b>	<b>932.1</b>	<b>-7.1</b>

### Environmental Watering

South Australia received a large volume of environmental allocations (932.1 GL) from New South Wales and Victoria associated with the entitlements held by The Living Murray program and the Commonwealth Government. Table 3 provides details of the environmental water delivered to South Australia in the 2012-13 water year.

Some of this environmental water was delivered as part of the 2012-13 Multi-Site Environmental Watering Trial and for other individual actions. The River Murray channel, associated wetlands and the Lower Lakes, Coorong and Murray Mouth benefited from the delivery of environmental water in a range of ways, including improving vegetation health, discharging salt from the Lower Lakes and providing for ongoing fish passage between the Lower Lakes and the Coorong. Environmental water bids, trades, delivery, accounting and monitoring were undertaken in partnership with a range of organisations and community groups.

**Table 3: Environmental Water Delivered to South Australia in 2012-13**

Source	Site	Volume ML	Total Volume ML
<b>CEW</b>	Channel and LLCMM	785,912	786,918
	Berri Evaporation Basin	557	
	Dishers Creek	250	
	Whirlpool Corner	92	
	Ramco Lagoon	7	
	Clarks Floodplain	100	
<b>TLM</b>	LLCMM	289,004	289,103
	Chowilla (Brandybottle)	99	
<b>SA Environmental Water Holding</b>	Channel and LLCMM	12,000	14,000
	Managed wetlands	2,000	
<b>Total</b>			<b>1,090,021</b>

# **WATER ACT 2007 (SECTION 71) REPORT 2012-13**

## **SOUTH AUSTRALIA**

### **PURPOSE**

Section 71 of the *Water Act 2007* (Cth) defines a number of annual reporting requirements related to water allocation, water use, trade and compliance with diversion limits for each of the Water Resource Plan (WRP) areas defined under the Basin Plan (2012). A written report must be provided to the Murray-Darling Basin Authority by the 31 October each year that contains these requirements.

This report fulfils South Australia's requirements under section 71 for the 2012-13 water year, for those areas not covered under Schedule E of the Murray-Darling Basin Agreement 2008. The report contains a summary of relevant data (Attachment A) and an explanation of the available information and approach to reporting.

### **SECTION 71 REQUIREMENTS - DESCRIPTION**

Under section 71(1) of the *Water Act 2007* (Cth), South Australia must, within 4 months after the end of a water accounting period for a water resource plan area in the Basin State give the Authority a written report that sets out the following:

- a) the quantity of water available from the water resources of the water resource plan area during that water accounting period;
- b) the quantity of water permitted to be taken from the water resources of the water resource plan area during the water accounting period;
- c) the quantity of water actually taken from the water resources of the water resource plan area during the water accounting period;
- d) details of the water allocations made in relation to the water resources of that area in relation to that water accounting period;
- e) details of any other decisions made by, or under the law of, the Basin State, that permit the taking of water from the water resources of that area during that water accounting period;
- f) details of the trading or transfer of tradeable water rights in relation to the water resources of that area during that water accounting period:
  - i. within the area; and
  - ii. into the area; and
  - iii. from the area;
- g) an assessment of compliance with any long-term annual diversion limit for the water resources of the area, or for a particular part of those water resources, in accordance with the method specified in the Basin Plan;
- h) if there has been non-compliance with any long-term annual diversion limit for the water resources of the area, or for a particular part of those water resources—the actions that the Basin State proposes to take to ensure that the limit is complied with in the future.

## **SUSTAINABLE DIVERSION LIMIT RESOURCE UNITS**

The WRPs in the Basin Plan are subdivided into sustainable diversion limit (SDL) resource units and the information provided in this report is presented at the SDL resource unit level.

Many of the groundwater SDL resource units also have sub-units based on aquifer type. For 2012-13 it has not been possible to report on each aquifer defined sub-unit. Given this difficulty, and the fact that for most groundwater SDL resource units the majority of extraction occurs from one aquifer, the MDBA have agreed that South Australia can provide an aggregated report on each groundwater SDL resource unit for 2012-13.

The SDL resource unit areas covered by this report are listed below.

### Surface Water SDL Resource Units

- South Australian Non-Prescribed Areas (SS10)
- Marne-Saunders (SS12)
- Eastern Mount Lofty Ranges (SS13)

### Groundwater SDL Resource Units (with aquifer sub-units denoted in italics)

- Angas Bremer (GS1)
  - *Quaternary Sediments*
  - *Murray Group Limestone*
- Eastern Mount Lofty Ranges (GS2)
- Mallee (GS3)
  - *Pliocene Sands*
  - *Murray Group Limestone*
  - *Renmark Group*
- Marne Saunders (GS4)
  - *Fractured Rock*
  - *Murray Group Limestone*
  - *Renmark Group*
- Peake, Roby and Sherlock (GS5)
  - *Unconfined*
  - *Confined*
- SA Murray (GS6)
- SA Murray Salt Interception Schemes (GS7)

## STATE WATER RESOURCE MANAGEMENT

South Australia has not previously been required to report on water use (or other similar variables) to the MDBA for any of the SDL resource units listed above (with the exception of the SDL resource unit covering Salt Interception Schemes). The current level of water resource management is commensurate with the level of risk and influences the availability of information to fulfil the section 71 reporting requirements.

The State Natural Resources Management Plan is the overarching management plan that covers all geographical areas defined by the SDL resource units. Regional Natural Resources Management Plans for the SA Murray-Darling Basin Region, SA Arid Lands Region and the South East Region then cover one or more of the SDL resource unit areas. These plans provide general policies for managing the water resources within the areas they cover.

A number of the areas that represent the SDL resource units have been prescribed under the *Natural Resources Management Act 2004 (SA)* and are managed under a Water Allocation Plans (WAPs). With the exception of the SDL resource unit covering Salt Interception Schemes, each SDL resource unit is categorised as being either prescribed or unprescribed. This description indicates the extent of surface water or groundwater management (including monitoring and compliance) that is currently undertaken at a State level.

### Prescribed Area with a Water Allocation Plan

The water resources within these areas are under development pressure and require intensive management. Water licences are issued and a WAP developed to sustainably manage and monitor the available resources. Licensed purposes generally include irrigation, industrial, intensive animal keeping, recreation and town water supply.

Those SDL resource units that are represented by a prescribed area with one or more WAPs are as follows:

- Marne-Saunders (SS12)
- Angas Bremer (GS1)
- Mallee (GS3)
- Marne Saunders (GS4)
- Peake, Roby and Sherlock (GS5)

### Prescribed Area with a draft Water Allocation Plan

The water resources within these areas have also been considered to be under development pressure requiring more intensive management. However the WAP is still to be adopted and metering has not yet been fully implemented. Those SDL resource units that are represented by a prescribed area with a draft WAP are:

- Eastern Mount Lofty Ranges (SS13)
- Eastern Mount Lofty Ranges (GS2)

### Unprescribed Areas

The water resources within these areas are generally considered to be at a low risk from current or future development. Development across these areas is generally low due to a number of factors including low rainfall and high evaporation, which results in low water availability, as well as high groundwater salinity. Those SDL resource units that are within unprescribed areas are as follows:

- South Australian Non-Prescribed Areas (SS10)
- SA Murray (GS6)

## Salt Interception Schemes

The SA Murray Salt Interception Schemes (GS7) SDL resource unit refers to a particular function (groundwater extracted through Salt Interception Schemes in South Australia) rather than a geographic area. The salt interception schemes located in South Australia and reported on here are as follows:

- Rufus River
- Woolpunda
- Waikerie
- Sunlands-Qualco
- Bookpurnong
- Loxton
- Pike

With the exception of Sunlands-Qualco, the annual volume pumped from these salt interception schemes is provided annually to the MDBA.

## **SECTION 71 REQUIREMENTS - AVAILABLE INFORMATION**

2012-13 reporting has focused on sections 71(1)(c) to 71(1)(f) consistent with advice from MDBA officers. As no decisions were taken as set out in s 71(1)(e), Attachment A provides a summary of the information available for the reporting requirements under s 71(1)(c), s 71(1)(d) and s 71(1)(f) together with a summary of the data available for each of these requirements.

A more detailed explanation of the information available for each section 71 reporting requirement, with reference to the current extent of management (prescribed or unprescribed) undertaken at a State level is provided below.

### **Water Availability (s 71(1)(a))**

The term “available water” is not defined in the *Water Act 2007* (Cth) nor in the Basin Plan (2012). The MDBA advised in July 2013 that until additional work is undertaken on the definition of available water for section 71 reporting, no new information (other than that already provided through the Schedule E reporting process) is required.

### **Water Permitted to be Taken (s 71(1)(b))**

As there are currently no accredited water resource plans setting out the methods for determining annual permitted take, the MDBA have advised (July 2013) that further consultation is required before this matter can be reported on.

### **Water Take (s 71(1)(c))**

#### Prescribed Areas with a Water Allocation Plan

Licensed purposes:

- All licensed use is metered.
- Meters record managed aquifer recharge in the Angas Bremer groundwater SDL resource unit area but no separation is currently done between the use of recharged water allocations and other allocations.
- Some water users extract groundwater and pump it into a surface water dam from where it is extracted for use. It is therefore possible that part or all of a volume recorded against a

groundwater allocation may also be subsequently recorded against a surface water allocation. No assessment is currently undertaken to separate this type of conjunctive use unless there is a potential over-use penalty.

- Some non-licensed use may be taken through the meters for licensed use but it is currently difficult to separate licensed and non-licensed use. No assessment is currently undertaken to do this unless there is a potential over-use penalty.
- For the Angas-Bremer SDL resource unit (GS1), the use of an allocation for managed aquifer recharge water does not form part of the total annual water take within this SDL resource unit (refer to description below under Annual Water Allocation). However, no assessment is currently undertaken to separate the use of recharged water allocations and other allocations. Hence, there may be some overestimation of water take in this area.
- The Mallee Prescribed Wells area covers part of the Mallee groundwater SDL resource unit. This area is currently undergoing a transition from the area based licences measured in hectare irrigation equivalents (haIE) to volumetric allocations. For 2012-13, there were still allocations, water use and trades conducted in haIE. An approximate conversion factor is 10.052 ML per hectare, which has been applied to estimate the actual volumes.

Non-licensed purposes:

- Non-licensed purposes are not metered.
- Water use for stock and domestic purposes is unlikely to change significantly from year to year. Hence, the volume presented in the WAP for non-licensed purposes is a reasonable estimate for annual use.
- For the Marne Saunders (SS12), the estimate for farm dam losses is the long-term average (1895 to 2009) that was calculated as part of the method used to determine the Basin Plan baseline diversion limit (BDL) and SDL.

#### Prescribed Areas with a draft Water Allocation Plan

The Eastern Mount Lofty Ranges SDL resource unit areas (SS13, GS2) are prescribed but the WAP is only in draft form. The area is not fully metered at this time. The following describes the availability of water take information for 2012-13.

GS2 (groundwater):

- It has not been possible to provide an estimate of annual water take. The best estimate of long-term annual water use from groundwater for the Eastern Mount Lofty Ranges is that provided in the Basin Plan.

SS13 (surface water):

- The total water take from farm dams and watercourses has been estimated for the 2012-13 water year using a method consistent with that used for both the draft EMLR WAP and for determining the Basin Plan BDL and SDL. This has two components as follows:
  - Surface water modelling for those areas that are gauged and for which surface water models have been developed. The majority of the SDL resource unit, both in terms of area and volume of water take, falls into this category.
  - Estimate of maximum demand for those areas that are ungauged and for which no surface water models have been developed.
- The estimate for the net take from commercial plantations is the long-term average (1895 to 2009) that was calculated as part of the method used to determine the Basin Plan BDL and SDL.

- The estimate for farm dam losses is the long-term average (1895 to 2009) that was calculated as part of the method used to determine the Basin Plan BDL and SDL.
- Watercourse diversions in the lower reaches of the Angas and Bremer rivers are generally in the form of flood irrigation. Water is taken once certain flow triggers are met. As such, the actual volume taken from this area (and hence from the SDL resource unit overall) can vary significantly from year to year. In many years there will be little flow through the lower reaches of these catchments and no flow diversions will take place. In other years, the volume diverted will be much greater than the long-term average.

#### Unprescribed Areas

It has not been possible to provide an estimate of annual water take. The best estimate of long-term annual water use from groundwater and surface water is that provided in the Basin Plan.

#### Salt Interception Schemes

Water pumped from each bore within each SIS is recorded by SA Water.

### **Annual Water Allocation (s 71(1)(d))**

#### Prescribed Areas with a Water Allocation Plan

The quantity of water allocated each year is in the form of a sustainable limit under the WAP, that is, the total volume allocated annually is the cumulative volume issued on licences plus any private carryover allocations.

The maximum volume allocated from year to year is therefore unlikely to change, except through a WAP amendment process.

Private carryover is dependent on each individual WAP as follows:

- Marne-Saunders (SS12) - An unused portion of up to 20% of a water allocation for any water year may be taken and used after the end of that water year (at any time over the subsequent two water years) with an allocation for a subsequent water year. The maximum use in any water year is 120% of the annual allocation.
- Angas Bremer (GS1) - An unused portion of up to 30% of a water allocation for any water year (excluding recharged water) may be taken and used after the end of that water year (at any time over the subsequent three water years) with an allocation for a subsequent water year. The maximum use in any water year is 130% of the annual allocation.
- Mallee (GS3) - Allocations are for use within the water year for which they are granted.
- Marne Saunders (GS4) - An unused portion of up to 20% (Fractured Rock Aquifer Management Zone) or 10% (other Aquifer Management Zones) of a water allocation in one water year may be taken and used in the following water year.
- Peake, Roby and Sherlock (GS5) - Allocations are for use within the water year for which they are granted.

Recharged water allocations in the Angas-Bremer SDL resource unit (GS1) are managed as follows:

- In a given water year, some water users may choose to undertake managed aquifer recharge. A permit is required under section 128 (3) of the *Natural Resources Management Act 2004* (SA) to do this. Water users may undertake managed aquifer recharge for the purposes of recharging the pressure of the aquifer, in order to use the recharged water in a subsequent year, or for freshening the aquifer and improving the salinity of water taken via their Angas-Bremer allocations.
- The source of the water used for managed aquifer recharge generally comes from a River Murray allocation (which is currently accounted for against the River Murray Cap) or from water flowing in the Angas and Bremer watercourses (which is not currently licensed but take will be counted against the Eastern Mount Lofty Ranges surface water SDL resource unit in the future). As such, an allocation of recharge water does not form part of the total annual allocation within the Angas-Bremer SDL resource unit.

#### Prescribed Areas with a draft Water Allocation Plan

As the draft WAP for the Eastern Mount Lofty Ranges SDL resource unit areas (SS13, GS2) has not been enacted, it is not possible to provide a value for the annual water allocation for 2012-13.

#### Unprescribed Areas

The area is unlicensed and as such it is not possible to provide a value for the annual water allocation for 2012-13.

#### Salt Interception Schemes

There are no current controls on water allocated or permitted to be taken. Schemes are generally operated (volume pumped) to achieve a target groundwater level.

### **Other Allocation Decisions (s 71(1)(e))**

#### Prescribed Areas with a Water Allocation Plan

Allocation decisions are not made outside of a WAP, unless specific circumstances occur (such as drought). No other allocation decisions have been made in 2012-13.

#### Prescribed Areas with a draft Water Allocation Plan

No annual allocations and therefore no other allocation decisions to report.

#### Unprescribed Areas

No annual allocations and therefore no other allocation decisions to report.

#### Salt Interception Schemes

No annual allocations and therefore no other allocation decisions likely at present.

### **Trade (s 71(1)(f))**

#### Prescribed Areas with a Water Allocation Plan

Trade (transfers) are limited and only permitted within the individual WAP areas.

#### Prescribed Areas with a draft Water Allocation Plan, Unprescribed Areas and Salt Interception Schemes

No trade.

## **SECTION 71 REQUIREMENTS – RECORDED / ESTIMATED DATA**

The section 71 reporting templates provided by the MDBA have been completed and will be provided electronically to support this report. Every effort has been made to ensure the accuracy of the water use data provided. However, given the timeframe for reporting, it is possible that further analysis and validation of water use data may identify data issues that may require correction.

Attachment A provides a summary of the information available for the reporting requirements under s 71(1)(c), s 71(1)(d) and s 71(1)(f) together with a report on the data available for each of these requirements.

## ATTACHMENT A

**Table 1: Summary of Available Information**

	Water Take (s 71(1)(c))	Annual Water Allocation (s 71(1)(d))	Trade (s 71(1)(f))
<b>SURFACE WATER</b>			
<b>South Australian Murray Region WRP Area (SW5)</b>			
South Australian Non-Prescribed Areas (SS10)	No annual estimate available <sup>2</sup>	No annual water allocation made	No trade possible
<b>Eastern Mount Lofty Ranges WRP Area (SW7)</b>			
Marne-Saunders (SS12)	Licensed - metered data Non-licensed - WAP estimate	Licensed - total volume issued on licence plus any private carryover allocations Non-licensed - WAP estimate	Trade within WAP area only
Eastern Mount Lofty Ranges (SS13)	Estimate via surface water modelling	No annual water allocation made	No trade possible
<b>GROUNDWATER<sup>1</sup></b>			
<b>South Australian Murray Region WRP Area (GW4)</b>			
Mallee (GS3)	Licensed - metered data Non-licensed - WAP estimate	Licensed - total volume issued on licence plus any private carryover allocations Non-licensed - WAP estimate	Trade within WAP area only
Peake, Roby and Sherlock (GS5)	Licensed - metered data Non-licensed - WAP estimate	Licensed - total volume issued on licence Non-licensed - WAP estimate	Trade within WAP area only
SA Murray (GS6)	No annual estimate available <sup>2</sup>	No annual water allocation made	No trade possible
SA Murray Salt Interception Schemes (GS7)	Metered data	No annual water allocation made	No trade possible
<b>Eastern Mount Lofty Ranges WRP Area (GW5)</b>			
Angas Bremer (GS1)	Licensed - metered data Non-licensed - WAP estimate	Licensed - total volume issued on licence plus any private carryover allocations Non-licensed - WAP estimate	Trade within WAP area only
Eastern Mount Lofty Ranges (GS2)	No annual estimate available <sup>2</sup>	No annual water allocation made	No trade possible
Marne Saunders (GS4)	Licensed - metered data Non-licensed - WAP estimate	Licensed - total volume issued on licence plus any private carryover allocations Non-licensed - WAP estimate	Trade within WAP area only

Notes:

- For 2012-13 it has not been possible to report on each aquifer defined sub-unit. Given this difficulty, and the fact that for most groundwater SDL resource units the majority of extraction occur from one aquifer, the MDBA have agreed that South Australia can provide an aggregated report on each groundwater SDL resource unit for 2012-13.
- No annual estimate available. The best estimate of long-term annual water use from these SDL resource units is that provided in the Basin Plan.

**Table 2: Data for relevant s71 requirements**

	Water Take (s 71(1)(c)) <sup>9,10</sup>			Annual Water Allocation (s 71(1)(d))			Trade (s 71(1)(f))
	Licensed Take (GL)	Non-Licensed Take (GL) (stock, domestic, interception)	Total (GL)	Licensed Take (GL)	Non-Licensed Take (GL) (stock, domestic, interception) <sup>6</sup>	Total (GL)	
<b>SURFACE WATER</b>							
<b>South Australian Murray Region WRP Area (SW5)</b>							
South Australian Non-Prescribed Areas (SS10)	-	-	_ <sup>2</sup>	-	-	-	-
<b>Eastern Mount Lofty Ranges WRP Area (SW7)</b>							
Marne-Saunders (SS12)	0.591	1.600	2.191	1.671	1.600	3.271	No trades
Eastern Mount Lofty Ranges (SS13)	-	-	28.700	-	-	-	-
<b>GROUNDWATER<sup>1</sup></b>							
<b>South Australian Murray Region WRP Area (GW4)</b>							
Mallee (GS3)	38.146	2.278	40.424	63.524 <sup>5</sup>	2.278	65.802	0.533 GL Permanent <sup>7</sup> 0.635 GL Temporary <sup>8</sup>
Peake, Roby and Sherlock (GS5)	1.393	0.600	1.993	2.210	0.600	2.810	No trades
SA Murray (GS6)	-	-	_ <sup>3</sup>	-	-	-	-
SA Murray Salt Interception Schemes (GS7)	-	-	9.935	-	-	-	-
<b>Eastern Mount Lofty Ranges WRP Area (GW5)</b>							
Angas Bremer (GS1)	1.996	0.068	20.64	8.266	0.068	8.334	0.005 GL Permanent
Eastern Mount Lofty Ranges (GS2)	-	-	_ <sup>4</sup>	-	-	-	-
Marne Saunders (GS4)	1.817	0.270	2.087	4.474	0.270	4.744	0.034 GL Permanent 0.020 GL Temporary

Notes:

- For 2012-13 it has not been possible to report on each aquifer defined sub-unit. Given this difficulty, and the fact that for most groundwater SDL resource units the majority of extraction occur from one aquifer, the MDBA have agreed that South Australia can provide an aggregated report on each groundwater SDL resource unit for 2012-13.
- No annual estimate available. The best estimate of long-term annual water use from the SS10 SDL resource units is 3.5 GL as provided in the Basin Plan.
- No annual estimate available. The best estimate of long-term annual water use from the GS6 SDL resource units is 1.8 GL as provided in the Basin Plan.
- No annual estimate available. The best estimate of long-term annual water use from the GS2 SDL resource units is 34.7 GL as provided in the Basin Plan.
- Includes annual allocations of 4778 haE, which has been estimated at 48.03 GL using an approximation of 10.052 ML/ha.
- Annual allocation for non-licensed purposes is assumed to be equal to the annual take for non-licensed purposes.
- Permanent trade of 53 haE, which has been estimated at 0.533 GL using an approximation of 10.052 ML/ha.
- Includes temporary trade of 58.9 haE, which has been estimated at 0.592 GL using an approximation of 10.052 ML/ha.
- Some water users extract groundwater and pump it into a surface water dam from where it is extracted for use. It is therefore possible that part or all of a volume recorded against a groundwater allocation may also be subsequently recorded against a surface water allocation. No assessment is currently undertaken to separate this type of conjunctive use unless there is a potential over-use penalty. This may result in an overestimation of water take.
- Some non-licensed use may be taken through the meters for licensed use but it is currently difficult to separate licensed and non-licensed use. No assessment is currently undertaken to do this unless there is a potential over-use penalty. This includes the take of recharged water allocations in the Angas Bremer SDL resource unit (GS1). This may result in an overestimation of water take.