

Angas Bremer Irrigation Management Zone 2017 – 2018 Annual Report



Project Coordinator: Leah Hunter
Angas Bremer Water Management Committee Inc

Supported by



Government of South Australia
South Australian Murray-Darling Basin
Natural Resources Management Board



Natural Resources
SA Murray-Darling Basin

2017-18 Annual Irrigation Report

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Angas Bremer Water Management Committee

Members 2017-2018

Presiding Member – David Kohl

Treasurer – Michael Clements

Committee Members

George Borrett, Mac Cleggett,
Barry Potts, Ken Follett, Michael Cutting,
Dave Hemmings

Non-elected members of the Committee

Secretary – Keren Stagg
Project Coordinator – Leah Hunter

Report of the Activities of the Committee 2017-2018

The Angas Bremer Water Management Committee has focussed on its core duties this year holding five committee meetings and an Annual Public Meeting during August.

Throughout the year the committee heard concerns from Irrigators and residents of the Langhorne Creek area about the flow of the Bremer River and possible impacts the developments in Mount Barker are having on the quality and quantity of the water in the watercourse. The committee invited representatives from Mount Barker Council to come and discuss the new developments in their council and the rules and restrictions applied to the developers during construction. Two representatives from the Mount Barker Council attended the committees May meeting to discuss the groups concerns.

The committee wrote to the Alexandrina Council to invite a representative to present at the Annual Public Meeting to discuss the flood management plan for Langhorne Creek Township and the groups concern regarding the Bremer River. Unfortunately council did not believe they were in a position to provide a presentation on this topic and had limited knowledge particularly from a catchment perspective. However, the Alexandrina Council passed on the groups concern to the Rangers to River Group who invited the Angas Bremer Water Management Committees Presiding Member, David Kohl, and the Project Coordinator, Leah Hunter, to come and discuss the concerns for the region regarding the Bremer River.

David and Leah presented these concerns to the group during September 2018. The Rangers to River Group have agreed to help pursue the groups concern and facilitate a meeting between all involved parties early 2019.

Irrigation Annual Report Forms Data Summary and Comment

Irrigation Annual Report forms (IARs) were mailed to 134 irrigators within the Angas Bremer Irrigation Management Zone. 110 irrigators who returned their completed forms to the Angas Bremer Water Management Committee on time have achieved “Accredited Irrigator” status. Online submissions were low this year with only 82 irrigators reporting online, 24 irrigators did not respond/ provide data and did not achieve accreditation. The data from 110 irrigators (82 %) has been collated and that data is presented in the following graphs and tables.

Flooding: Flooding by diversion or pumping was reported by 23 irrigators. Flooding was recorded in all months from July through to November. 1180 hectares was recorded as being flooded this year, lower than last year but still high.

Revegetation: The total area of revegetation reported in the Irrigation Annual Reports is around 1,890 ha. This includes 40 hectares revegetated during the Biodiversity Landcare Projects.

Red Gum Health: 103 Irrigators reported on the health of the red gums on their properties. Health, or otherwise, was rated from 0 to 5, 5 being healthy and 0 being dead. Red gums were generally noted to be once again in relatively good health. 28 irrigators reported that their red gums were all 100% healthy, while most of the remainder listed the majority of their trees to be in relatively good health. 1 irrigator listed their red gums as getting worse this year.

Water Leasing: Table 1 below shows the amount of water leased in 2017-18 compared with water leased in previous years. Overall, more water was leased by irrigators this year than last. The amount of River Murray water leased out to Outside Irrigators decreased by only 224ML and the amount leased in from irrigators outside of the Angas Bremer Irrigation Management Zone increased by almost 262ML. The volume of River Murray water leased to other irrigators within the Angas Bremer Irrigation Management Zone is much higher than last year with seven leases reported. For the last four years no reports of leased groundwater within the zone were received.

Table 1: Water Leasing

Type of Lease	Megalitres 2015-2016	Megalitres 2016-2017	Megalitres 2017-2018
RM water leased from ABIMZ to outside ABIMZ	2,280.50	2187.00	1963.60
RM water leased from outside ABIMZ to inside ABIMZ	5,023.90	1681.48	1943.00
RM water leased from inside ABIMZ to inside ABIMZ	192	10.00	418

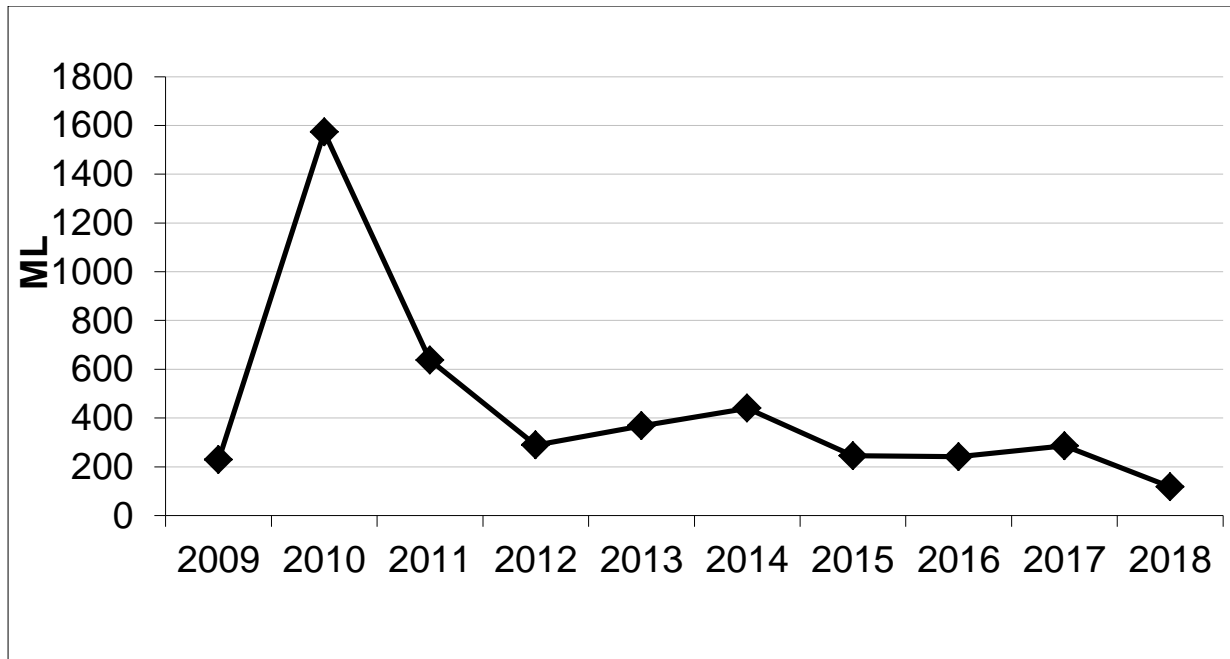


Figure 1: Angas and Bremer Rivers Water Extractions 2009-2018: Not all of the water taken from these rivers, such as the water diverted through weirs and sluices, is accounted for in this chart. The volumes on this graph are metered volumes from irrigators with meters installed, as well as the amount recharged into the aquifer from these rivers, as reported on the Irrigation Annual Reports. The amount of water that was recorded as having been extracted from these rivers is lower than previous years including 2009.

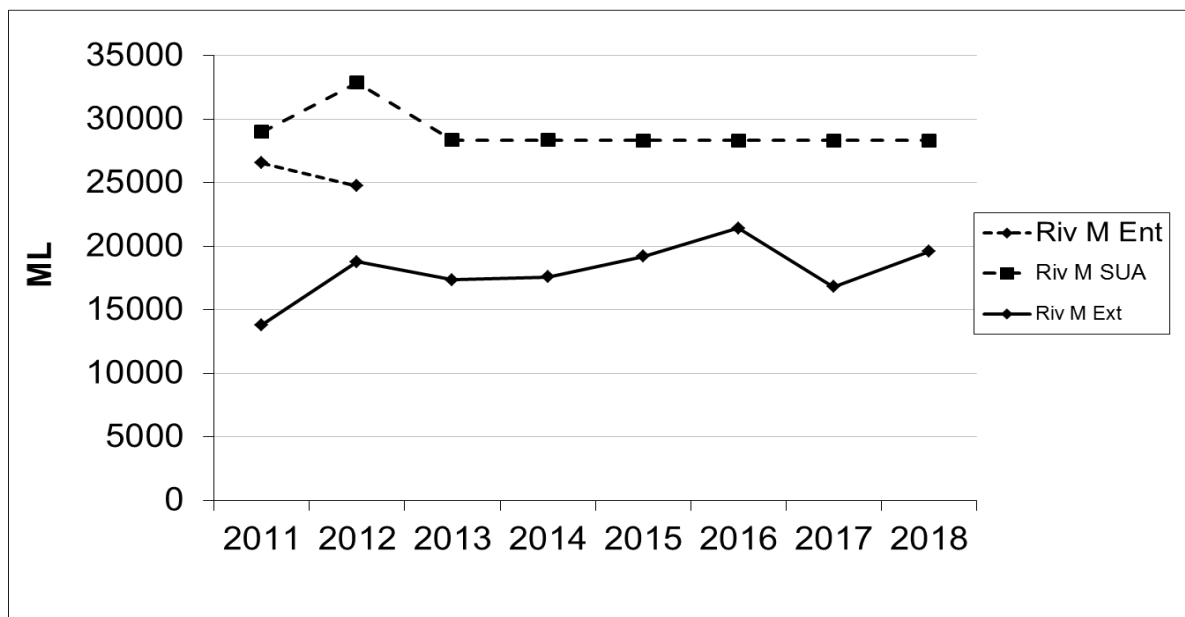


Figure 2: River Murray Water Entitlement, Site Use Approval and Extraction 2011-2018: Entitlement (RivM Ent) is the volume of water endorsed on licenses and does not include any credits for rollover, recharge etc. The River Murray Site Use Approval (RivM SUA) is the maximum quantity of River Murray water that can be used for irrigation on land identified as being in the Angas

Bremer Irrigation Management Zone in 2017-2018. Extraction (RivM Ext) is the volume of water that was used during the irrigation year. As Site Use Approval volumes give a more accurate description of the amount of water that could potentially be used in the region, it is now being recorded on the charts instead of the Entitlement volume. The total Site Use Approval volume for 2017-18 remained at 28,382 ML, and the recorded use was 19, 578 ML, higher than the 16,814 ML last year.

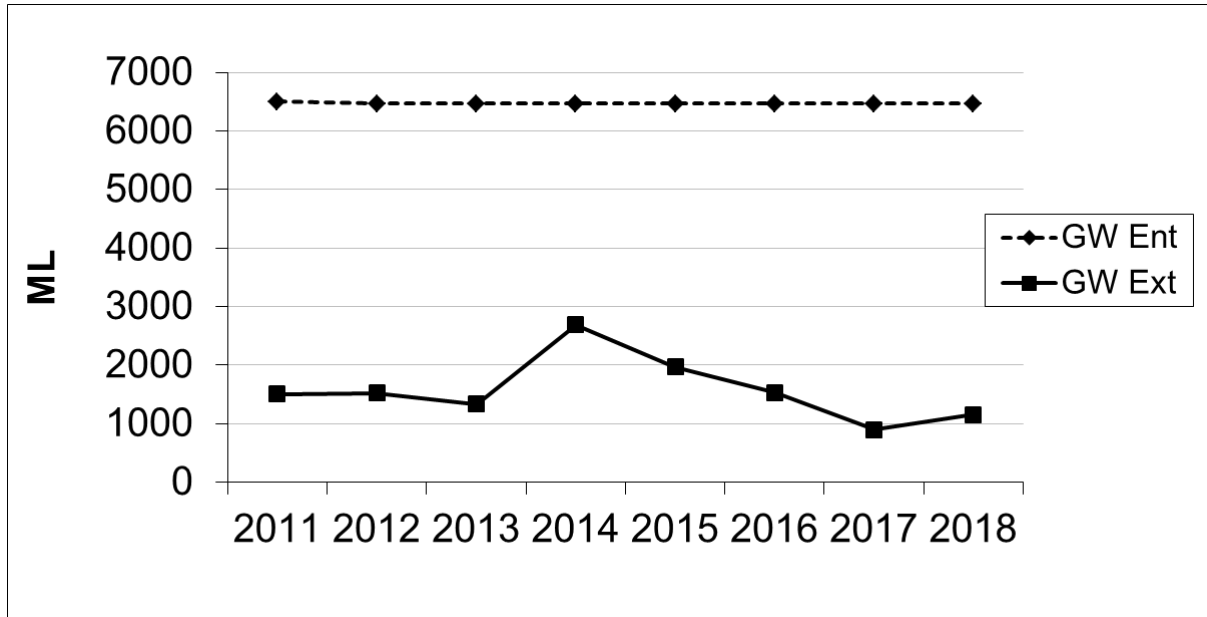


Figure 3: Groundwater Entitlement and Extraction 2011-2018: The maximum entitlement for 2017-18 was 6,500ML and the recorded use was 1,154 ML more than the volume of 892.06 ML used in the previous year. This is much lower than the 7,700 ML used during the “Millennium Drought”.

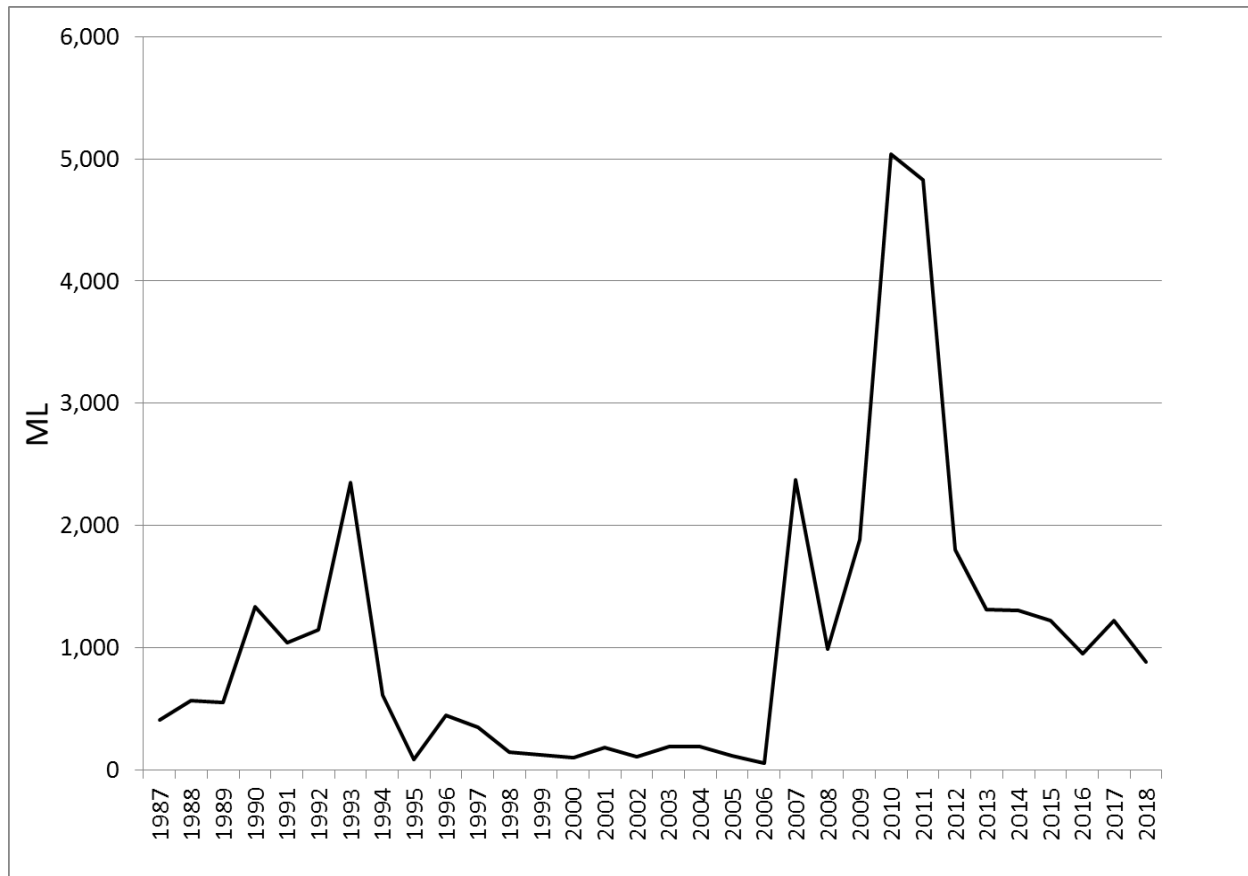


Figure 4: Managed Aquifer Recharge (formerly termed Aquifer Storage and Recovery (ASR)) : This chart shows the total volume of water artificially recharged to the aquifer from 1987 to 2018. The **884 ML** recharged from the Angas, Bremer and Murray rivers in 2017-2018 was lower than last year's volume and still substantially lower than the record levels achieved in 2010.

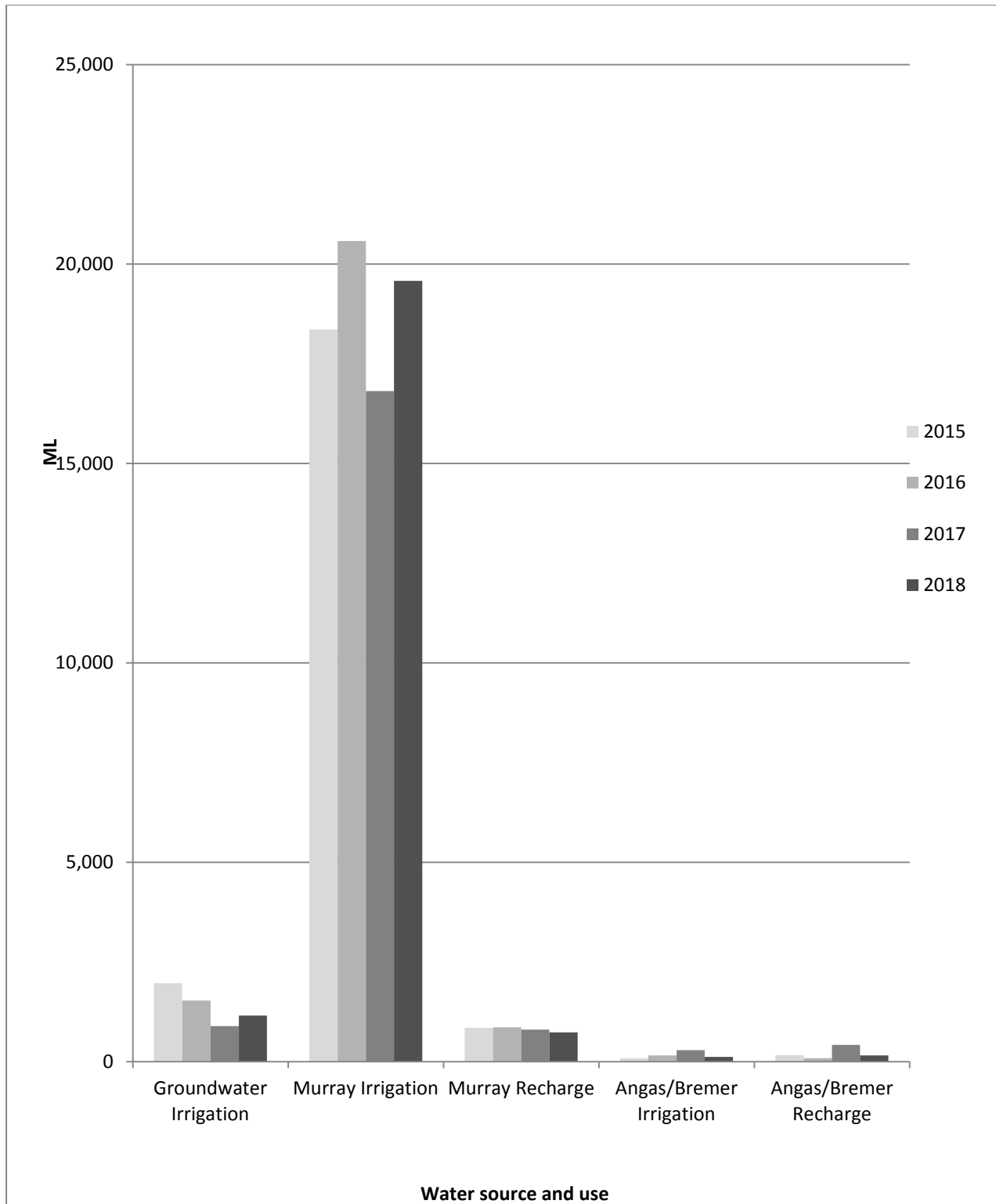


Figure 5: Total volume of water used 2017-2018: The total volume of water extracted from all sources within the region over the 2017-18 year was **21,736 ML**, which is higher than the previous year, 2016-17 = 19,216ML but lower than 2015-16 = 23,205 ML and very similar to 2014-15 = 21,409 ML.

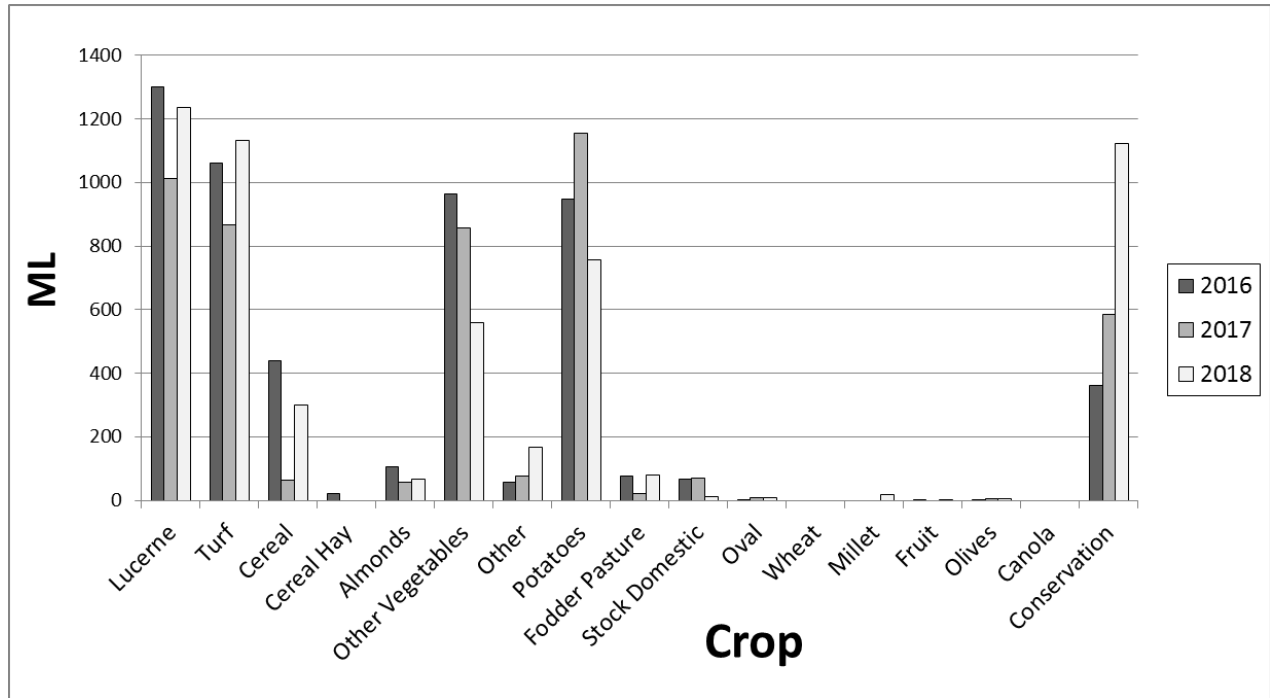


Figure 6: Total volume of water used for each crop type: This volume is the total used from all sources; groundwater, Angas/Bremer water and River Murray water that was applied to each crop type (grapes excluded). **The total volume of water applied to grapes was 14,819 ML in 2017-2018 with an increase from 9,998 ML in 2016-17.**

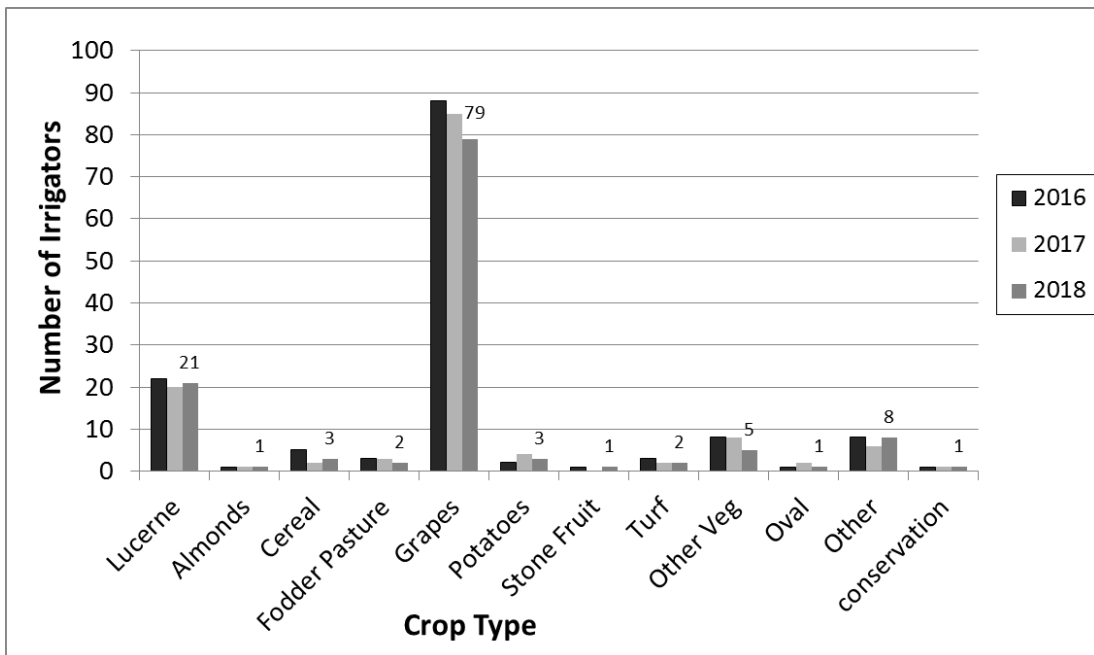


Figure 7: Number of Irrigators for Each Crop Type: The number of irrigators growing each crop type in the region appears to have remained relatively stable except for Other Vegetables and Grapes which have decreased (This may be due to a reduction in returned Annual Irrigation Reports).

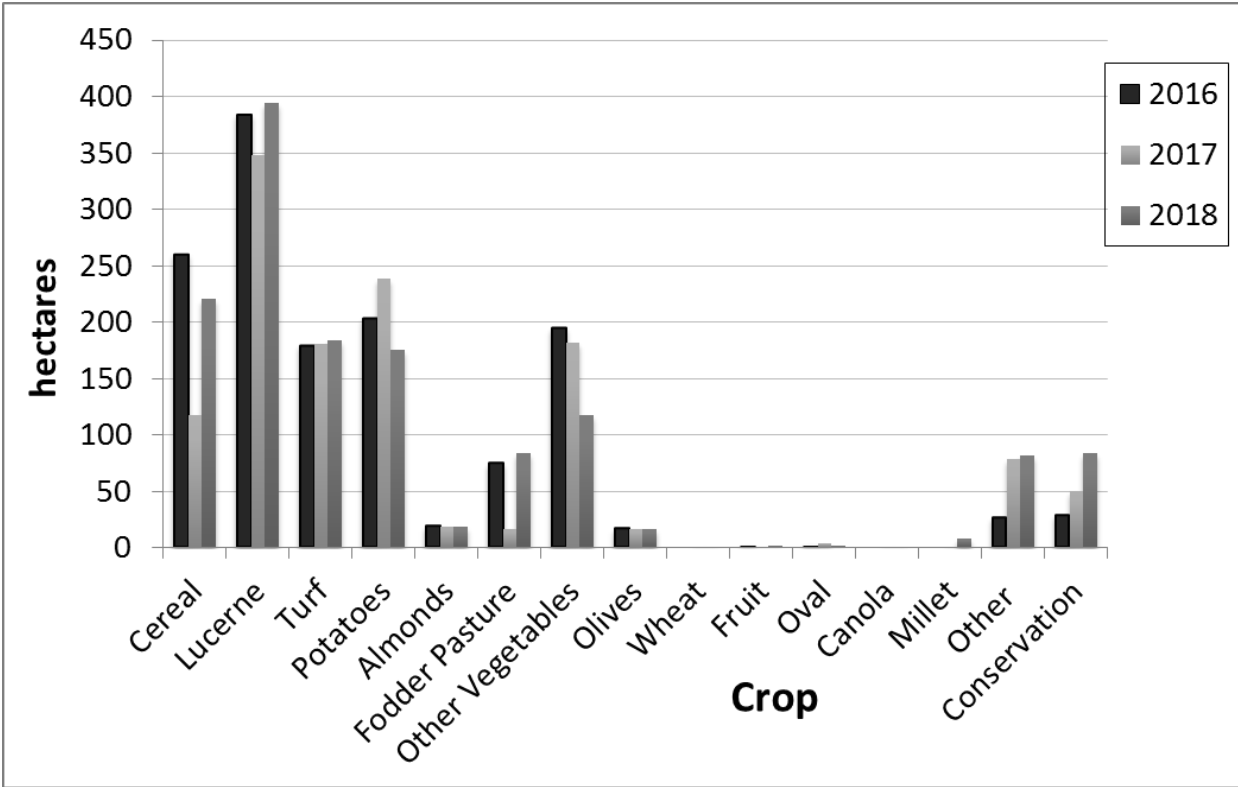


Figure 8: Area Irrigated by Crop Type: The area of each crop irrigated is shown in hectares. **The area of grapes irrigated in 2017-18 was 5,407 ha, very similar to the 5,391 ha recorded last year.** The total area under irrigation in 2017-18 was 6,792 ha, which is higher than the 6,638 ha recorded last year.

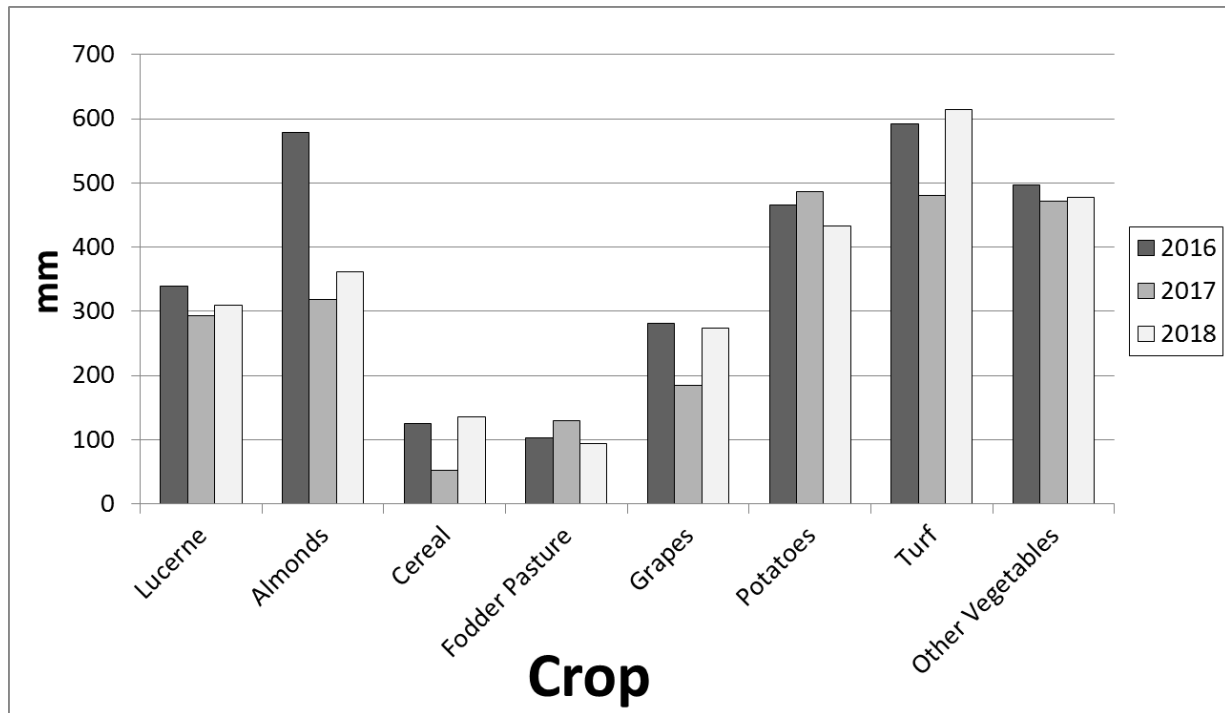


Figure 9: Average total irrigation rate for the year by crop type: Irrigation is shown in mm for 2015-16, 2016-17 and 2017-18.

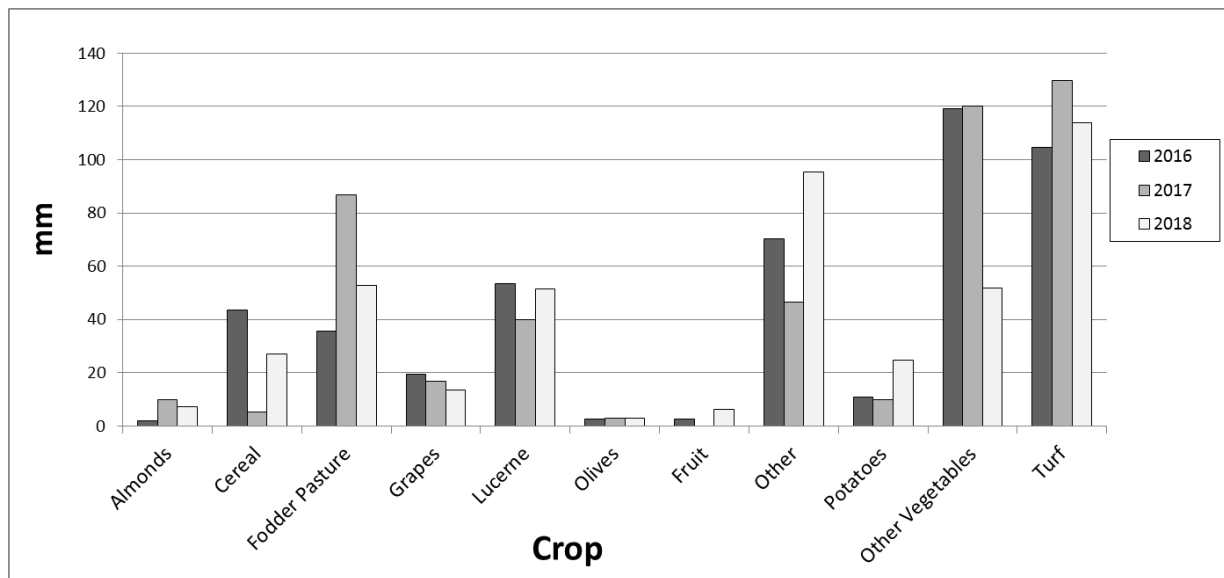
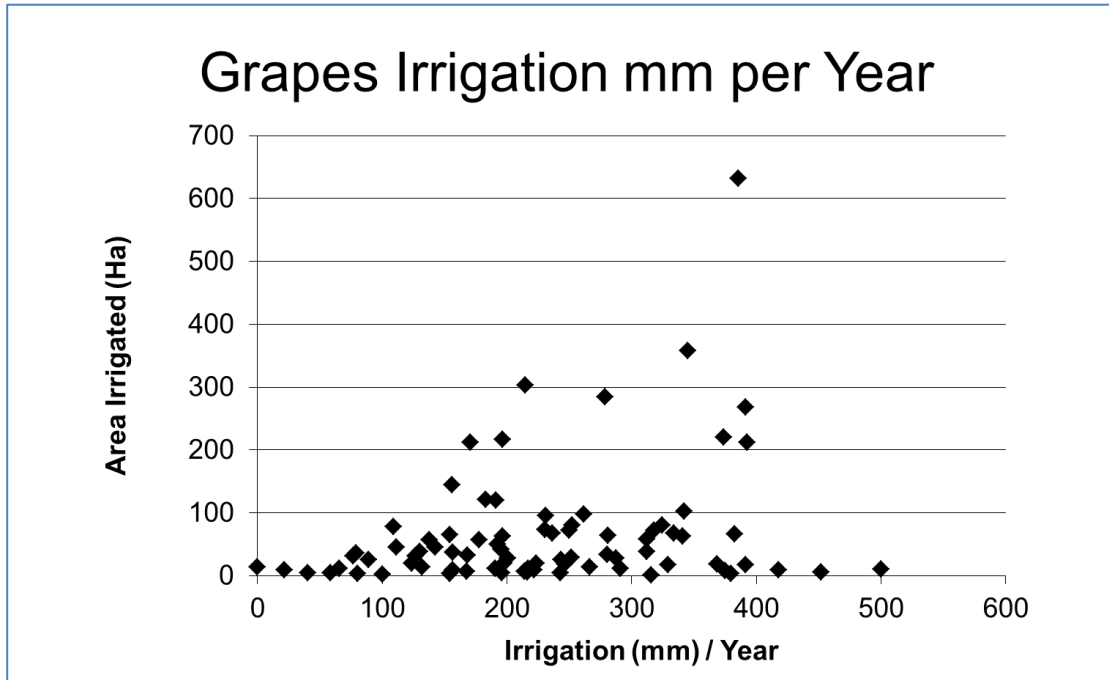
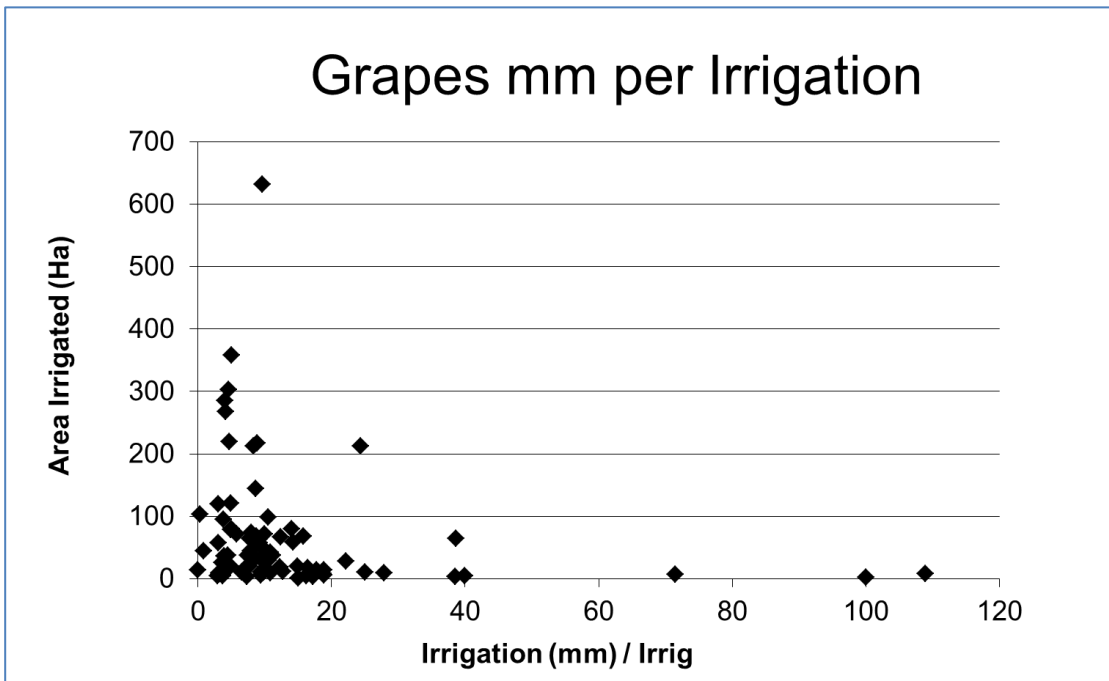


Figure 10: Average mm of water applied per irrigation for each crop type for the last three years.

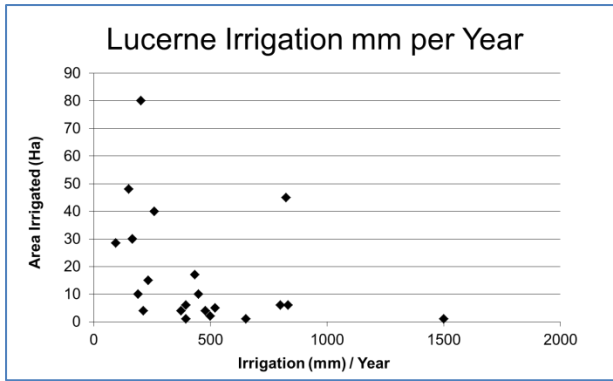
Figures 11-14: These charts show the irrigation rate per property for the more common crops. For each crop one chart shows (a) the mm per year and (b) the mm per irrigation.



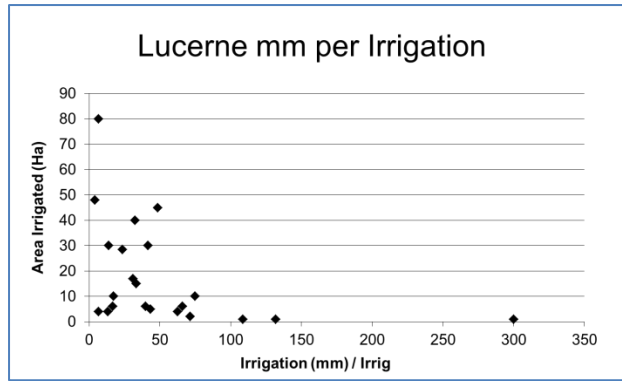
11a)



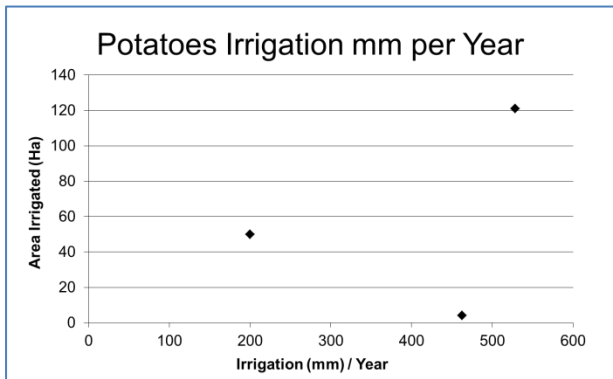
11b)



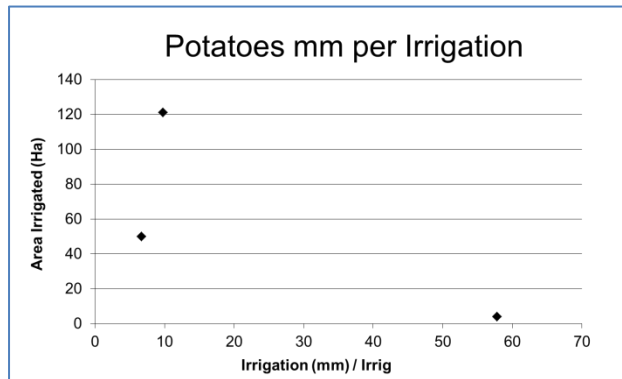
12(a)



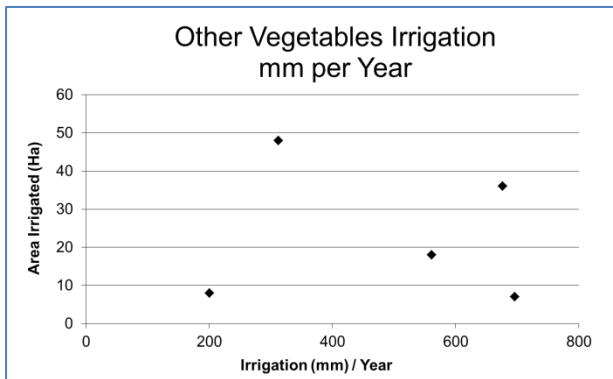
12(b)



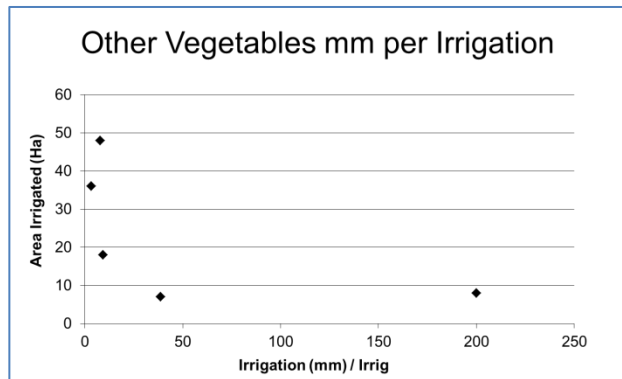
13(a)



13(b)



14(a)



14(b)

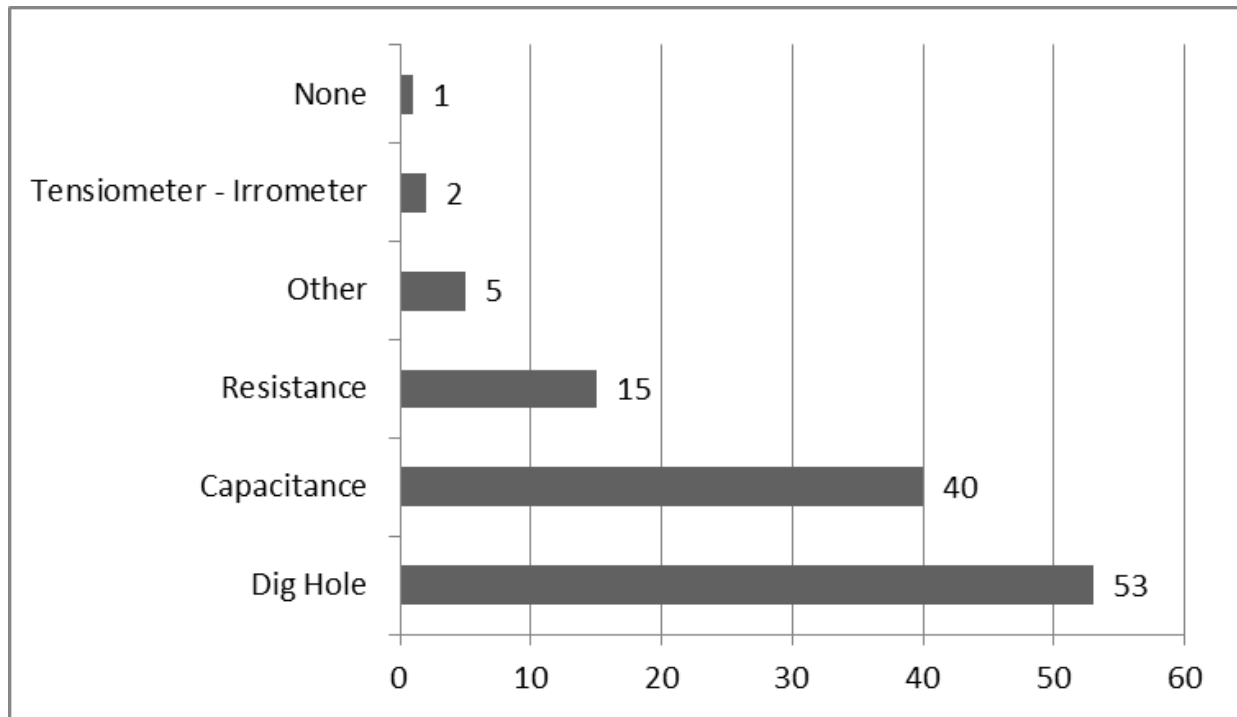


Figure 15: Number of growers using Soil Moisture Monitoring devices in 2017-18: “Resistance” includes Gypsum Blocks. “Capacitance” includes Agwise soil moisture probes, Agrilink C probe, Dataflow Gopher, Sentek Diviner and Sentek EnviroSCAN. “Dig hole” includes Dig stick, spade, auger and post hole digger.

Table 2: Average ML/ha per crop per year: This table shows the average ML/ha of irrigation water applied to different crop types and compares 2018 with previous years. This information is also displayed in the following Figure 16. Note: 1ML/ha is equivalent to 100mm of irrigation.

Year	Grape	Lucerne	Vegetable	Potato	Fodder	Almond	All Crops
2017-2018	2.74	3.14	4.78	4.33	0.9	3.61	2.99
2016-2017	1.85	2.92	4.71	4.86	1.3	3.18	2.23
2015-2016	2.82	3.38	4.96	4.66	1.02	5.79	2.99
2014-2015	2.68	3.8	5.39	5.41	3.03	4.15	3.13
2013-2014	2.26	4.24	4.02	4.92	1.98	4.56	2.51
2012-2013	2.62	4.53	6.35	4.01	1.58	3.91	2.62
2011-2012	2.25	4.52	7.76	4.13	1.22	4.37	2.55
2010-2011	1.9	2.2	2.4	3.1	0.5	3.4	2
2009-2010	2.3	4.32	3.6	3.72	1.2	5.11	2.47
2008-2009	1.73	2.99	4.38	1.74	1.24	1.04	1.78
2007-2008	1.97	4.36	7.8	2.51	2.36	5.24	2.07
2006-2007	2.04	5.13	6.43	4.12	1.7	5.23	3.67
2005-2006	1.8	4.23	5.04	2.99	1	4.06	2.95
2004-2005	1.99	5.22	5.18	3.67	2.74	4.79	2.25
2003-2004	1.97	4.5	8.8	3.5	2.7	4.2	2.28
2002-2003	2.2	6.8	6	3.8	4.3	4	2.61
2001-2002	2.1	4.4	5.1	4	3.3	4.5	2.5
2000-2001	2.1	4.8	5.7	3.6	4.7	3.1	2.6
1999-2000	2.1	6	6.3	3.7	3.7	2.8	2.6
1998-1999	2.2	5.1	4.5		3.8	2	2.7

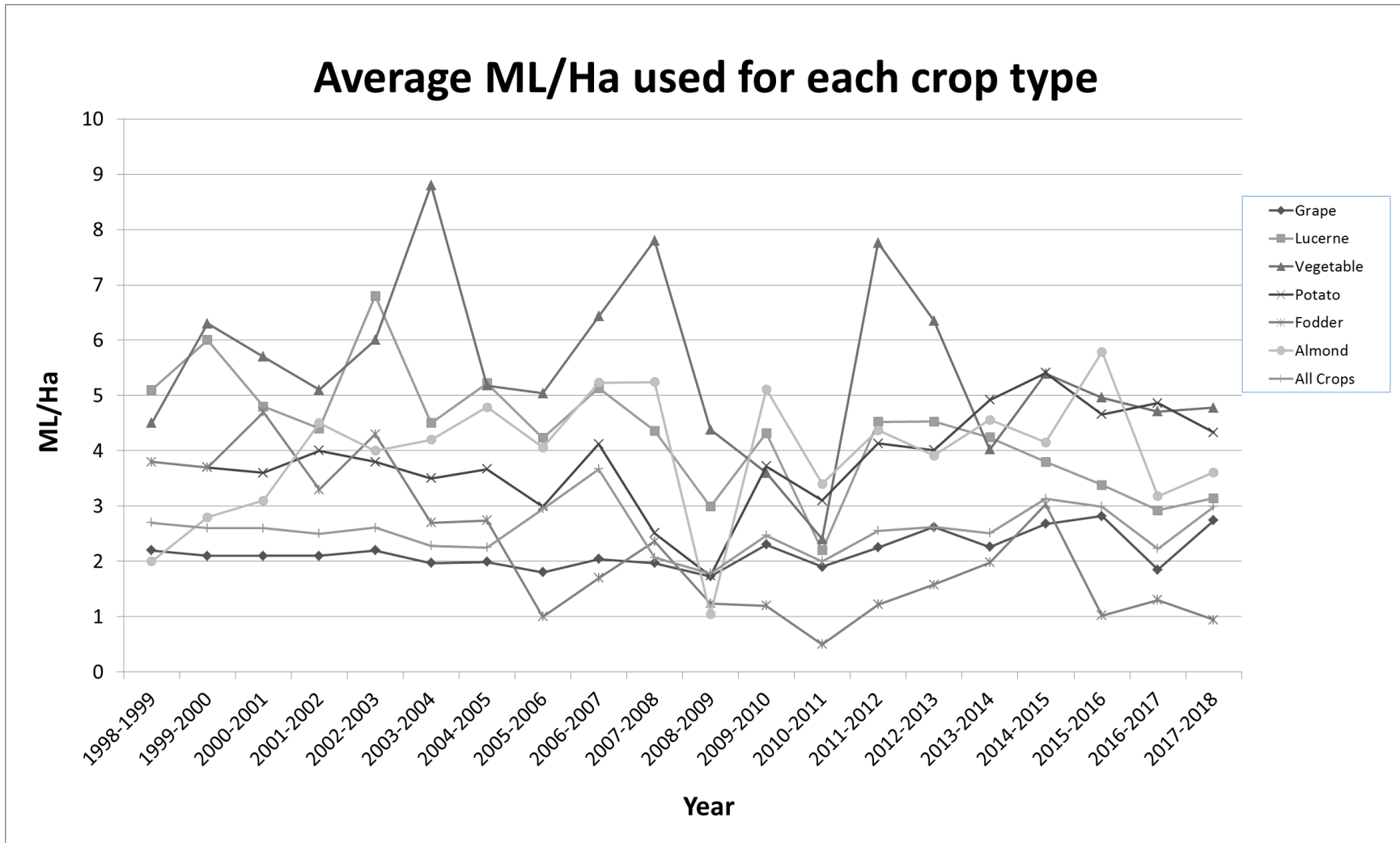


Figure 16: Average ML / ha used for each crop type

Table 3: ML used and ha irrigated comparison chart:

	2017-2018	2016-2017	2015-2016	2014-2015	2013-2014	2012-2013	2011-2012	2010-2011	2009-2010	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005	2003-2004	2002-2003	2001-2002	2000-2001	1999-2000
Total ML	20,279	14,772	20,932	20,408	18,605	18,617	17,056	13,346	16,241	12,001	14,743	20,911	15,811	17,719	17,154	20,715	17,428	17,467	16,961
Total ha	6,792	6,637	7,011	7,380	7,406	7,107	6,687	6,687	6,578	6,748	7,049	8,370	7,739	7,869	7,509	7,934	7,089	6,788	6,625
Grape ML	14,819	9,998	15,961	15,972	13,230	13,129	11,990	11,275	13,718	10,738	12,330	12,827	11,293	11,688	11,927	13,165	11,159	10,626	10,021
Grape ha	5,407	5,391	5,658	5,954	5,850	5,641	5,323	5,965	5,971	6,199	6,245	6,271	6,170	5,876	6,059	6,059	5,357	4,991	4,665
Lucerne ML	1,236	1,013	1,300	1,668	1,446	1,820	1,477	376	657	326	675	1,437	1,378	1,791	1,608	2,560	2,051	2,040	2,491
Lucerne ha	393	348	384	439	341	402	327	170	152	109	155	280	325	343	354	376	471	429	418
Veg ML	559	856	963	964	580	610	877	193	36	57	179	373	363	638	605	647	651	769	761
Veg ha	117	182	194	179	144	96	113	81	10	13	23	58	72	123	69	108	103	134	121
Potato ML	758	1,156	947	1,238	1,073	1,232	1,283	555	320	131	136	1,200	1,171	1,278	1,280	1,504	1,719	1,773	1,812
Potato ha	175	238	203	229	218	307	311	179	86	75	54	291	392	348	360	394	425	490	485
Fodder ML	79	21	76	109	107	90	78	22	47	32	53	222	144	505	399	752	316	742	358
Fodder ha	84	16	74	36	54	57	64	43	39	26	23	130	144	184	146	173	97	157	96
Almond ML	65	57	104	166	187	180	188	148	225	193	231	251	195	230	203	188	246	172	164
Almond ha	18	18	18	40	41	46	43	43	44	44	44	48	48	48	48	47	55	55	58
Other crops ML	2,763	1,671	1,581	2,069	1,935	1,556	1,094	777	1,238	524	795	2,004	900	1,589	1,132	1,899	1,286	1,259	1,354
Other crops ha	598	444	480	503	573	558.5	501	206	276	282	505	906	588	936	443	777	583	533	777

Charts of Standing Water Level and Salinity in Unconfined and Confined Aquifers

Figures (s) 17 a, b, c & d (Pg. 19-22): These and the following charts were produced by the Department of Environment and Water. The first four charts are contour maps of the Quaternary (Q) aquifer. The first **a)** is from the 2017-2018 water use year (March 2018), the second **b)** from 2016-2017 (March 2017), the third **c)** from 2017-2018 (September 2017) and the fourth **d)** from 2016-2017 (September 2016). The data for each map came from the State Government's Angas Bremer groundwater observation network. This data is available to the public on the Groundwater Data application of the WaterConnect website (www.waterconnect.sa.gov.au). The numbers on the maps are metres below ground level of the standing water table. When comparing the March 18 and March 17 charts it appears the levels were very similar with some dropping near the Bremer River, below the township of Langhorne Creek. When comparing the September 17 and September 16 charts the watertable levels have risen in wells closer to the Angas and Bremer Rivers. This is probably due to increased rainfall for that season.

Figure 18a & b (Pg. 23-24): The next two charts show the potentiometric surface elevation contours of the Murray Group Limestone aquifer in **a)** March 2018, **b)** March 2017, using data from the State Government's Angas Bremer groundwater observation network only. March data (post irrigation season) has previously been chosen as it shows the greatest level of impact due to extraction from the aquifer. In this season the watertable depth is very similar across the prescribed wells area compared to March 2017.

Figure 19 a & b (Pg. 25-26): These charts display the salinity of the confined aquifer using **a)** data collected in March 2018 and **b)** April 2017 from the State Government's Angas Bremer groundwater observation network as well as the samples supplied by the irrigators to the NRM Board.

Ground water data can also be accessed via the WaterConnect website located at www.waterconnect.sa.gov.au. This website will let you view and download groundwater level and salinity data in the Angas Bremer area.

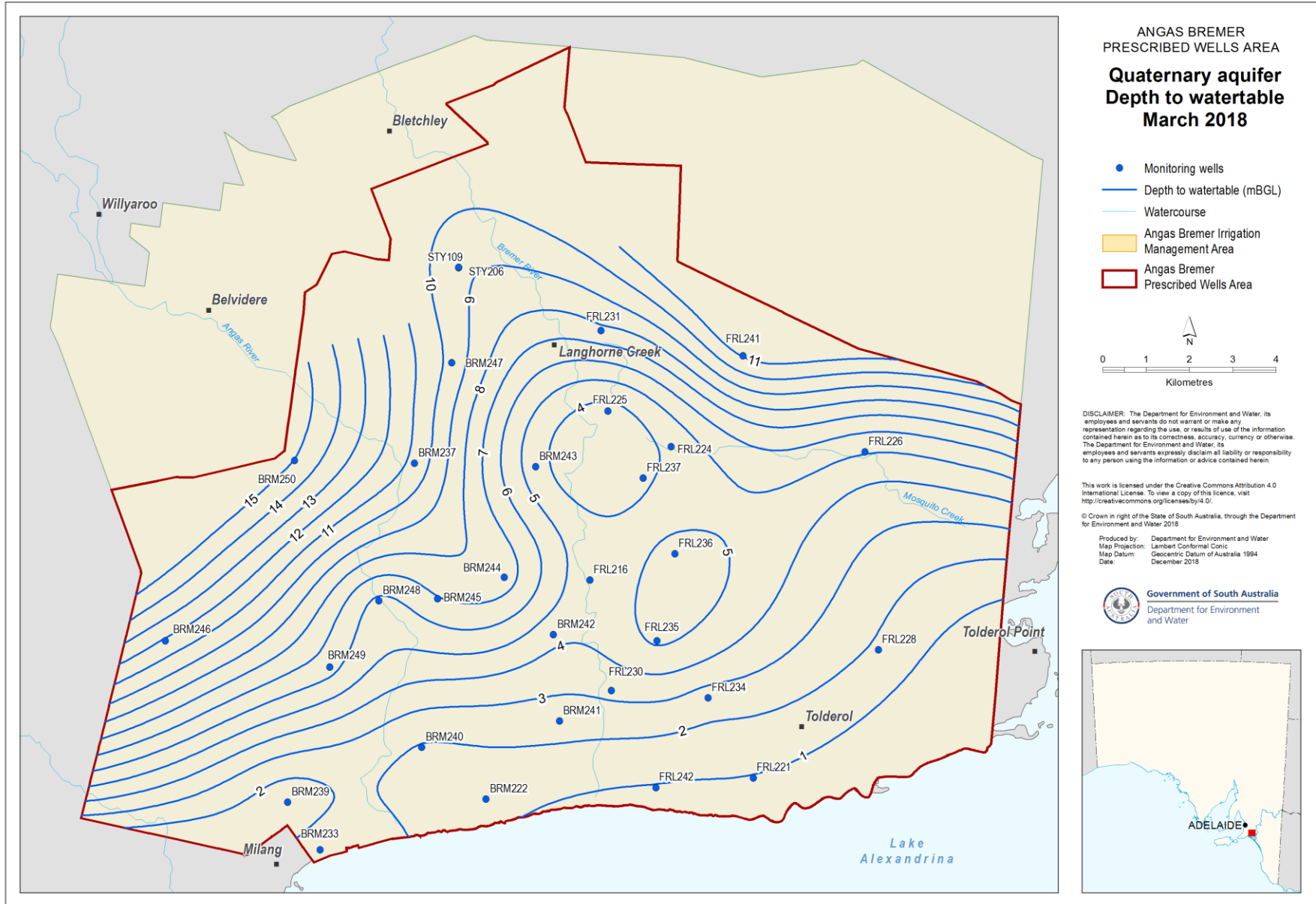


Figure 17a Standing Water Level in Quaternary Aquifer March 2018

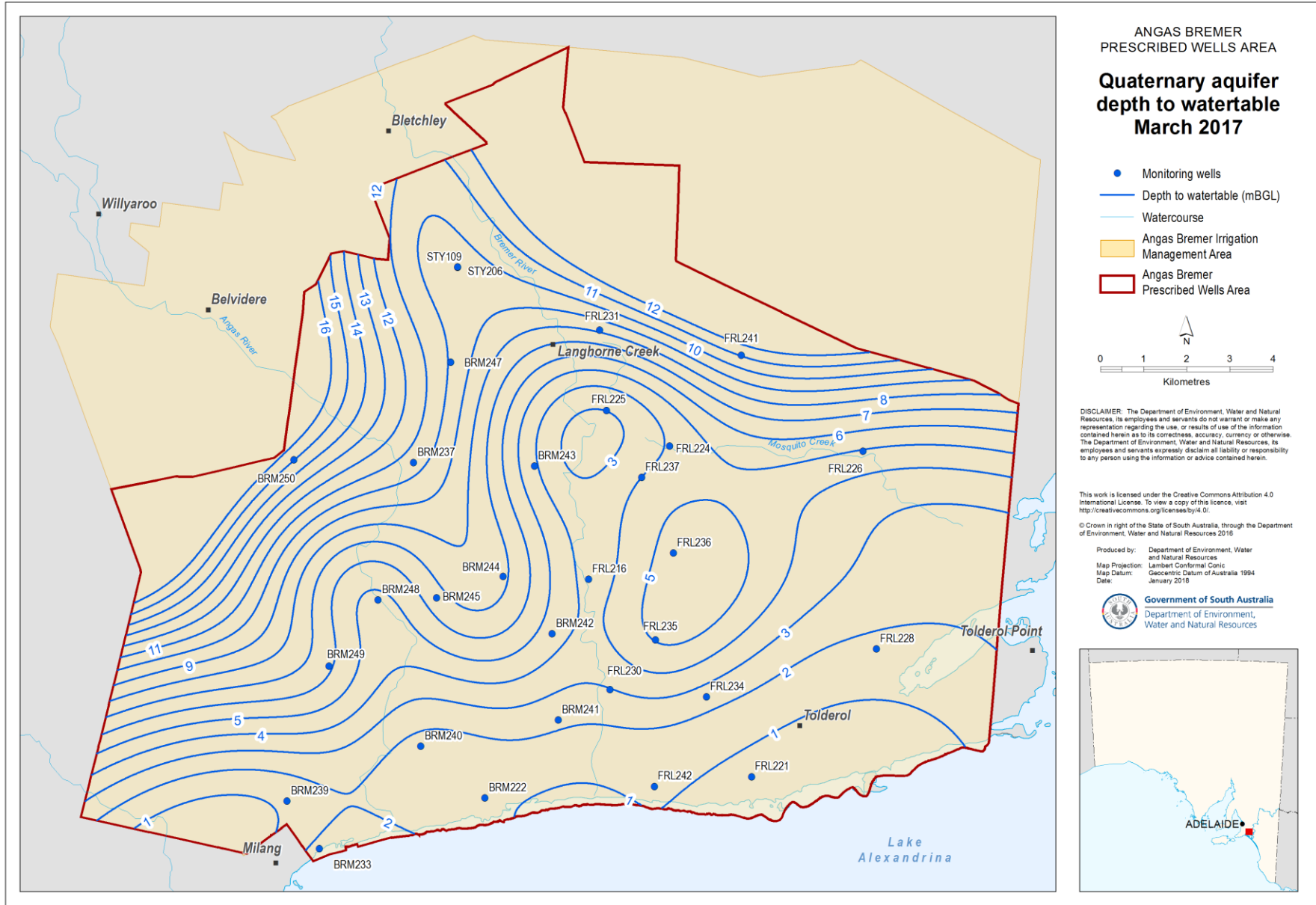


Figure 17b Standing Water Level in Quaternary Aquifer March 2017

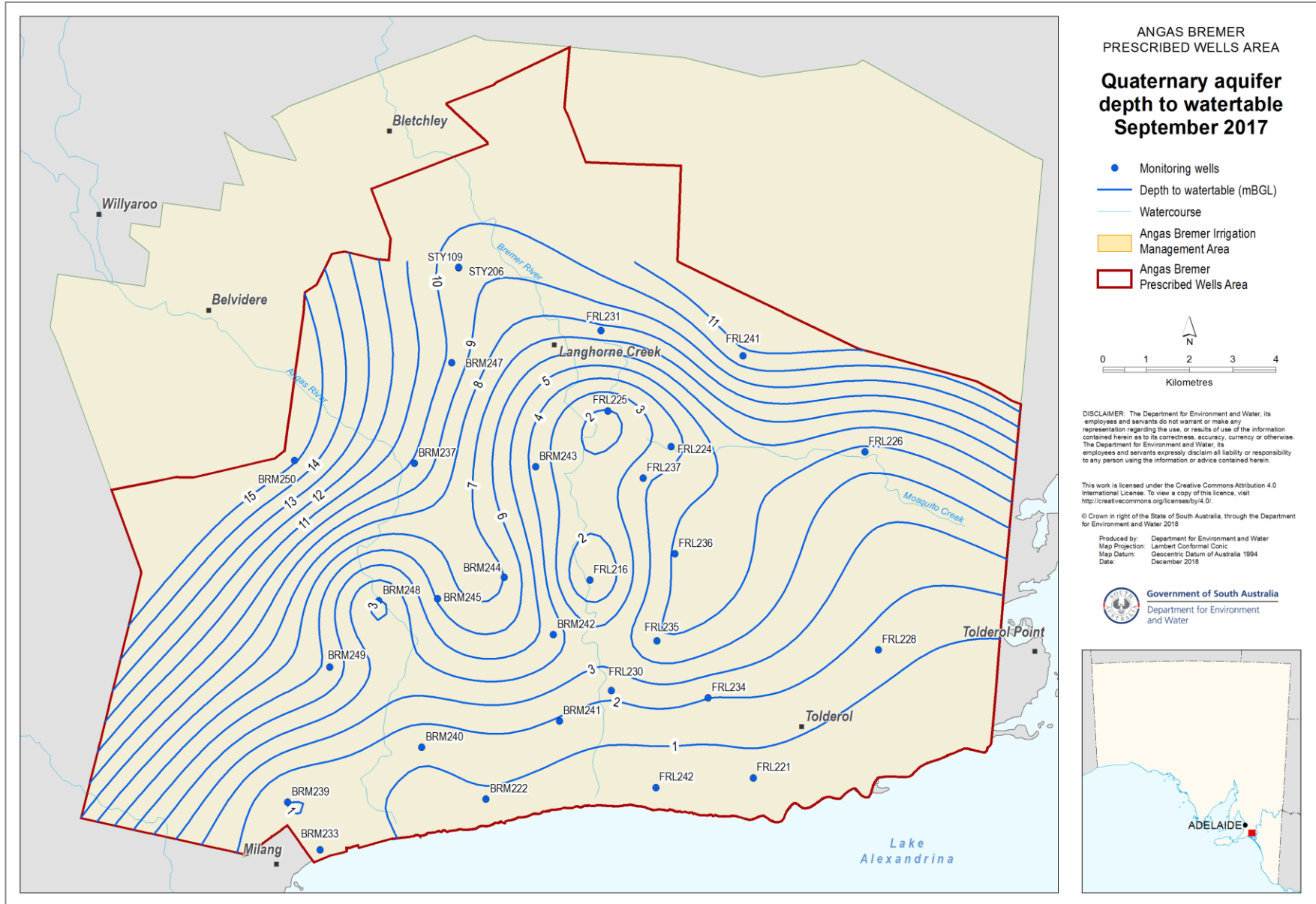


Figure 17c Standing Water Level in Quaternary Aquifer September 2017

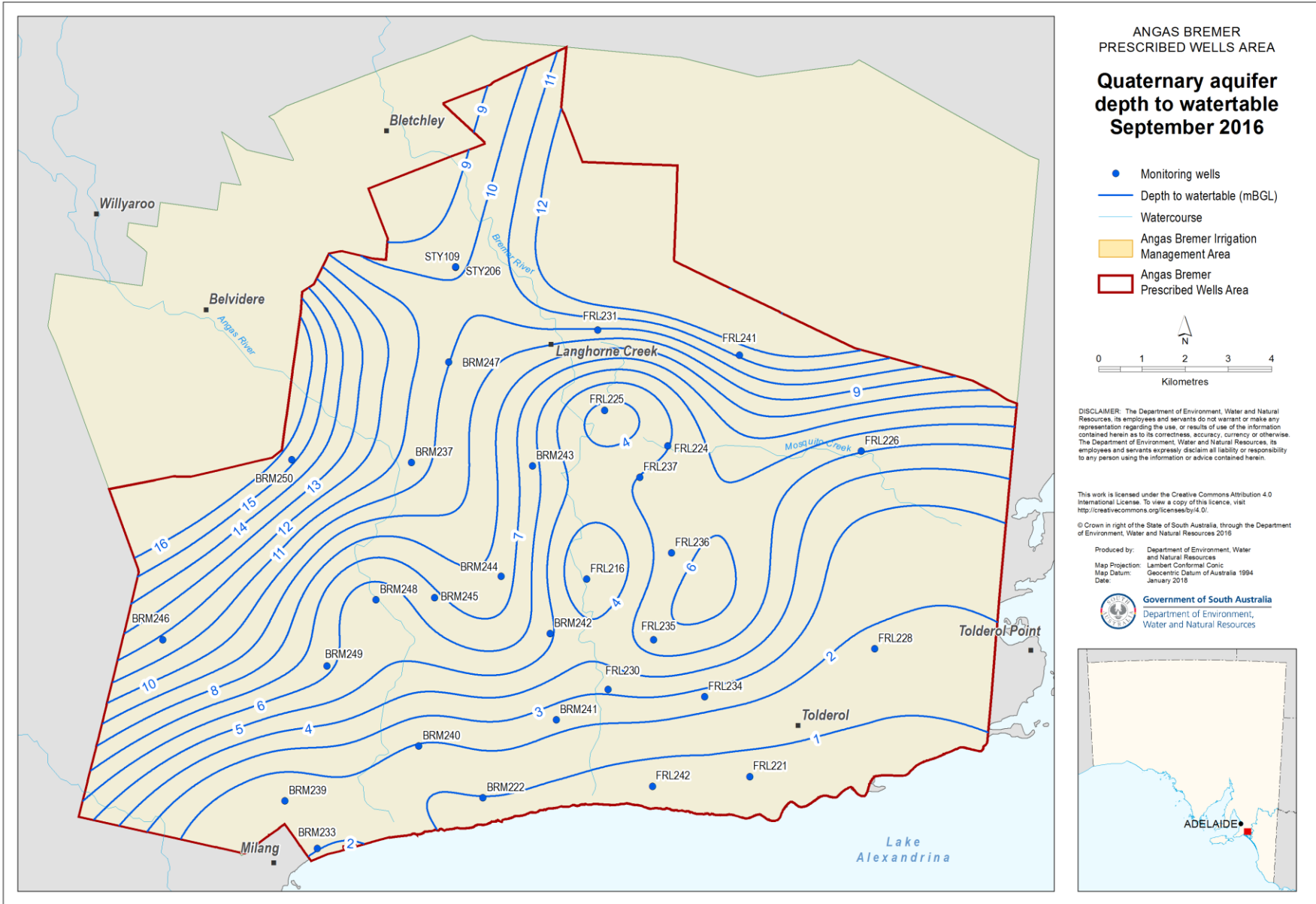


Figure 17d Standing Water Level in Quaternary Aquifer September 2016

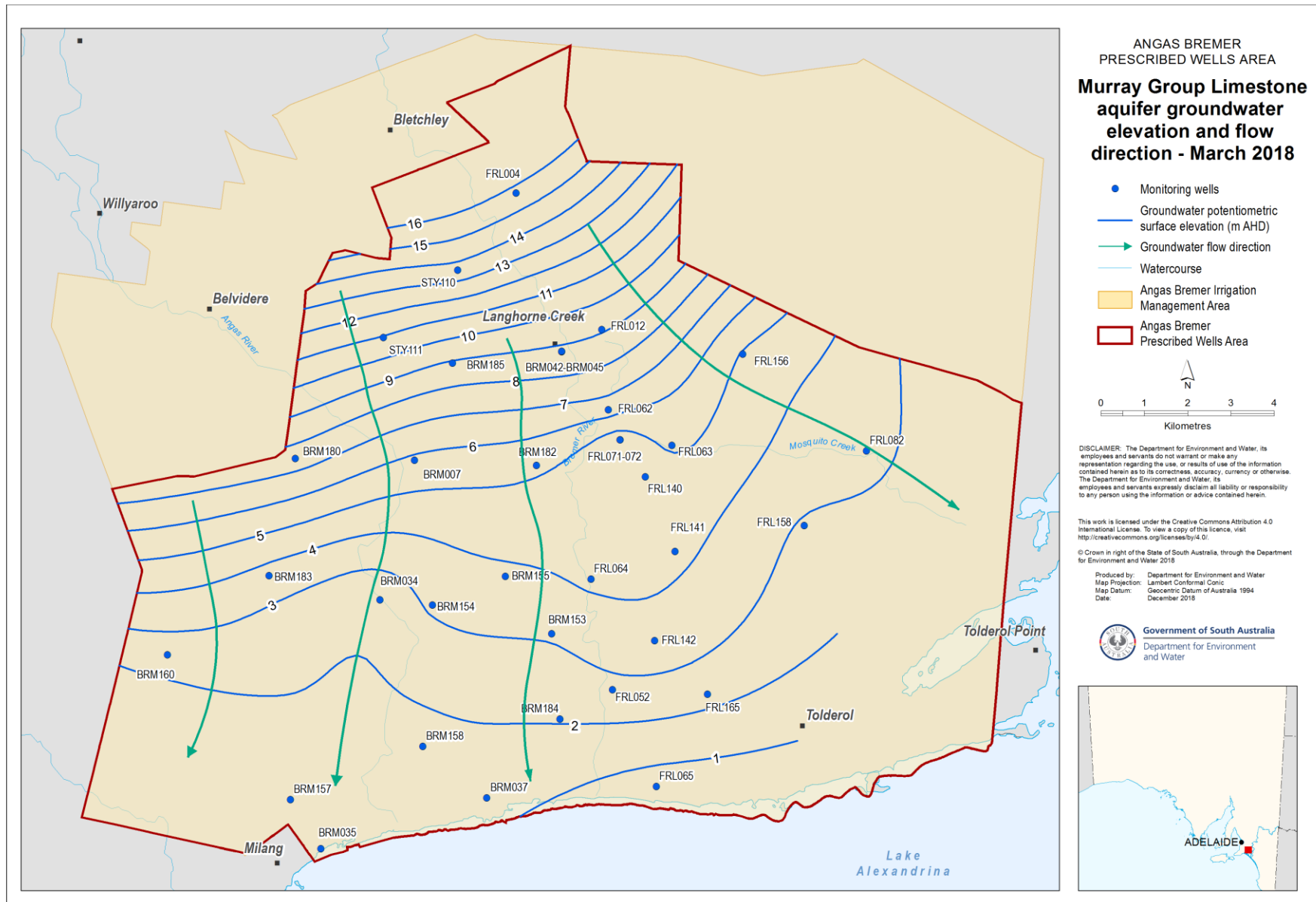


Figure 18a Water Level Elevation and Flow - Murray Group Limestone Aquifer March 2018.

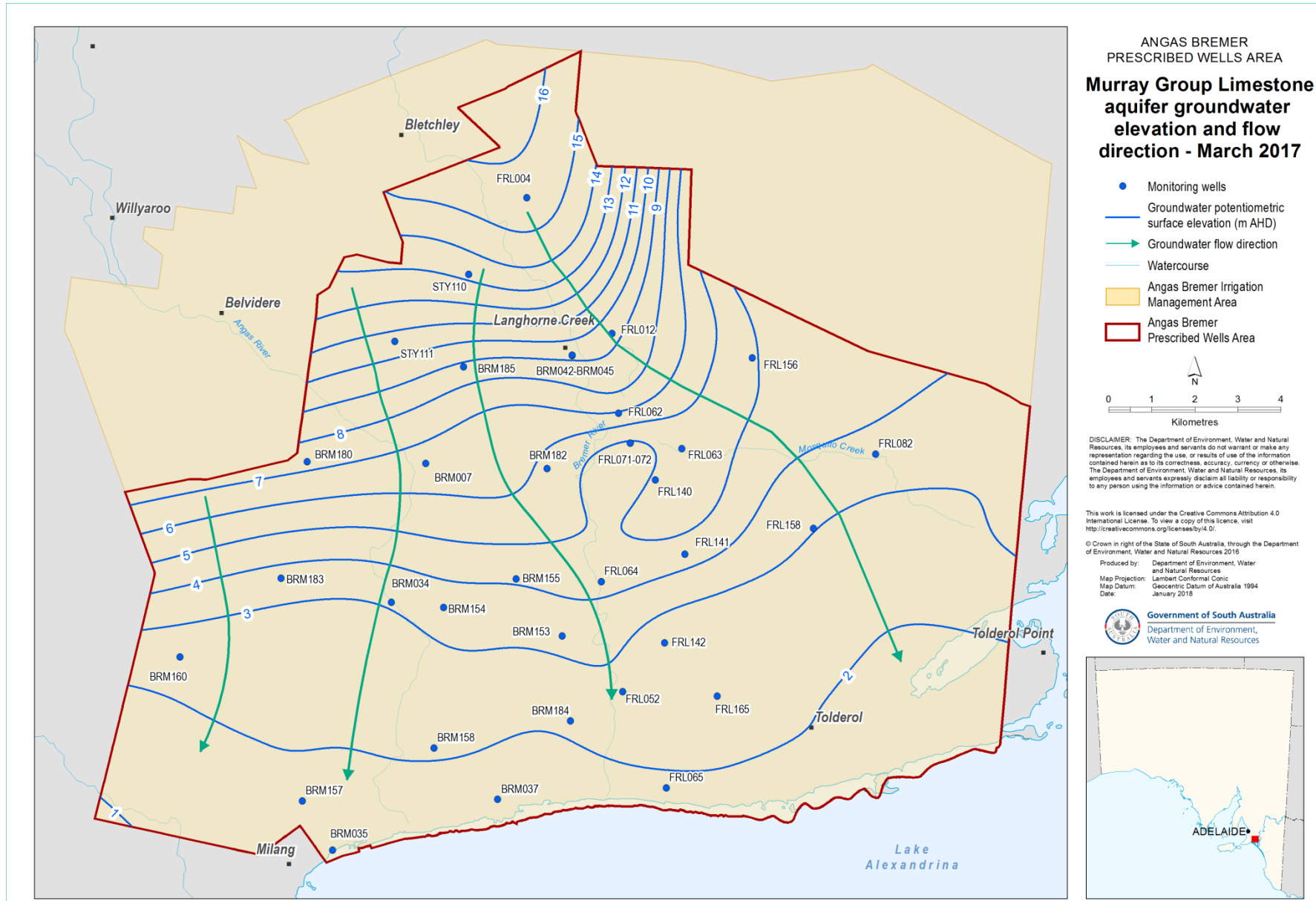


Figure 18b Water Level Elevation and Flow - Murray Group Limestone Aquifer March 2017.

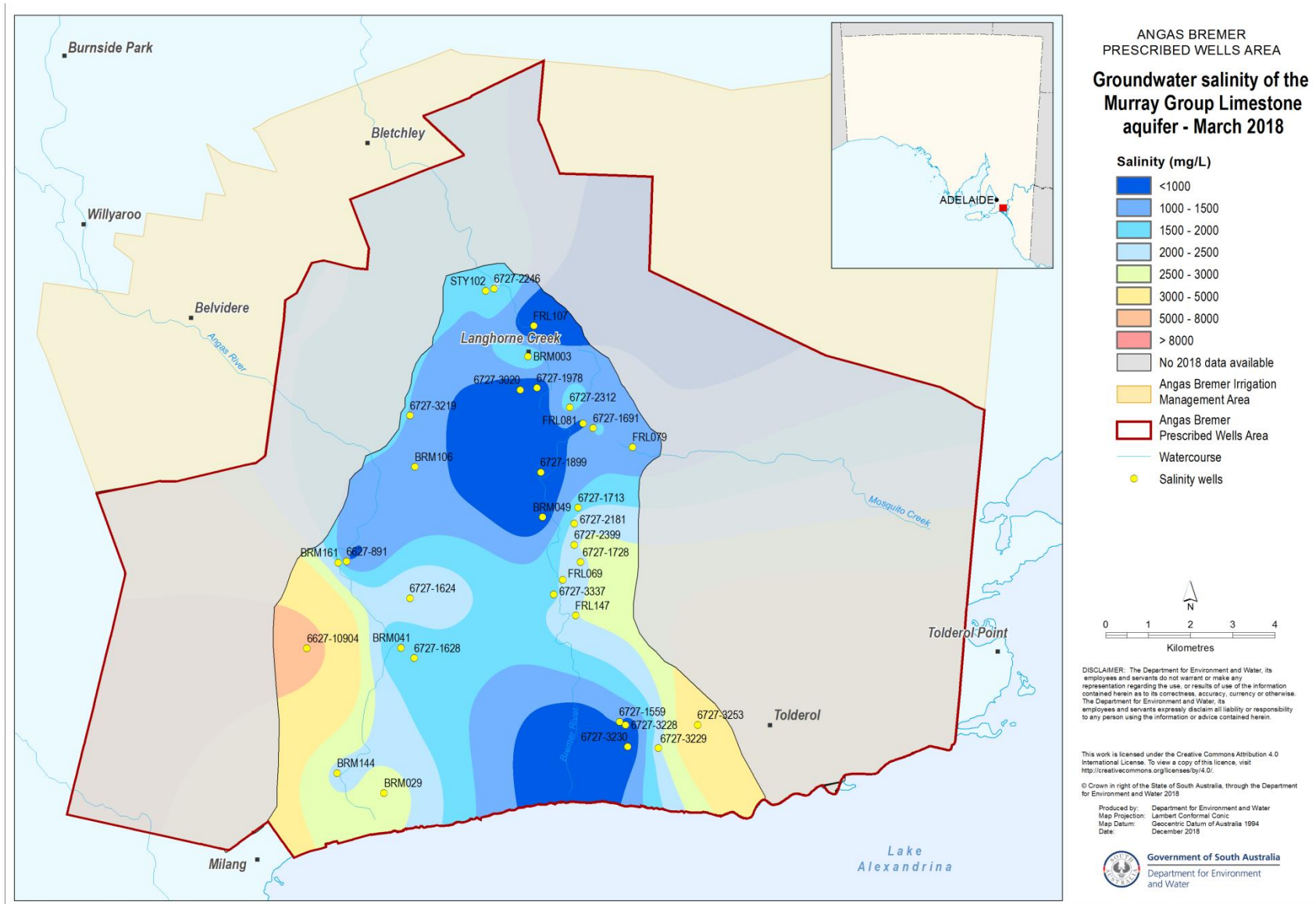


Figure 19a Salinity of the Murray Group Limestone Aquifer March 2018

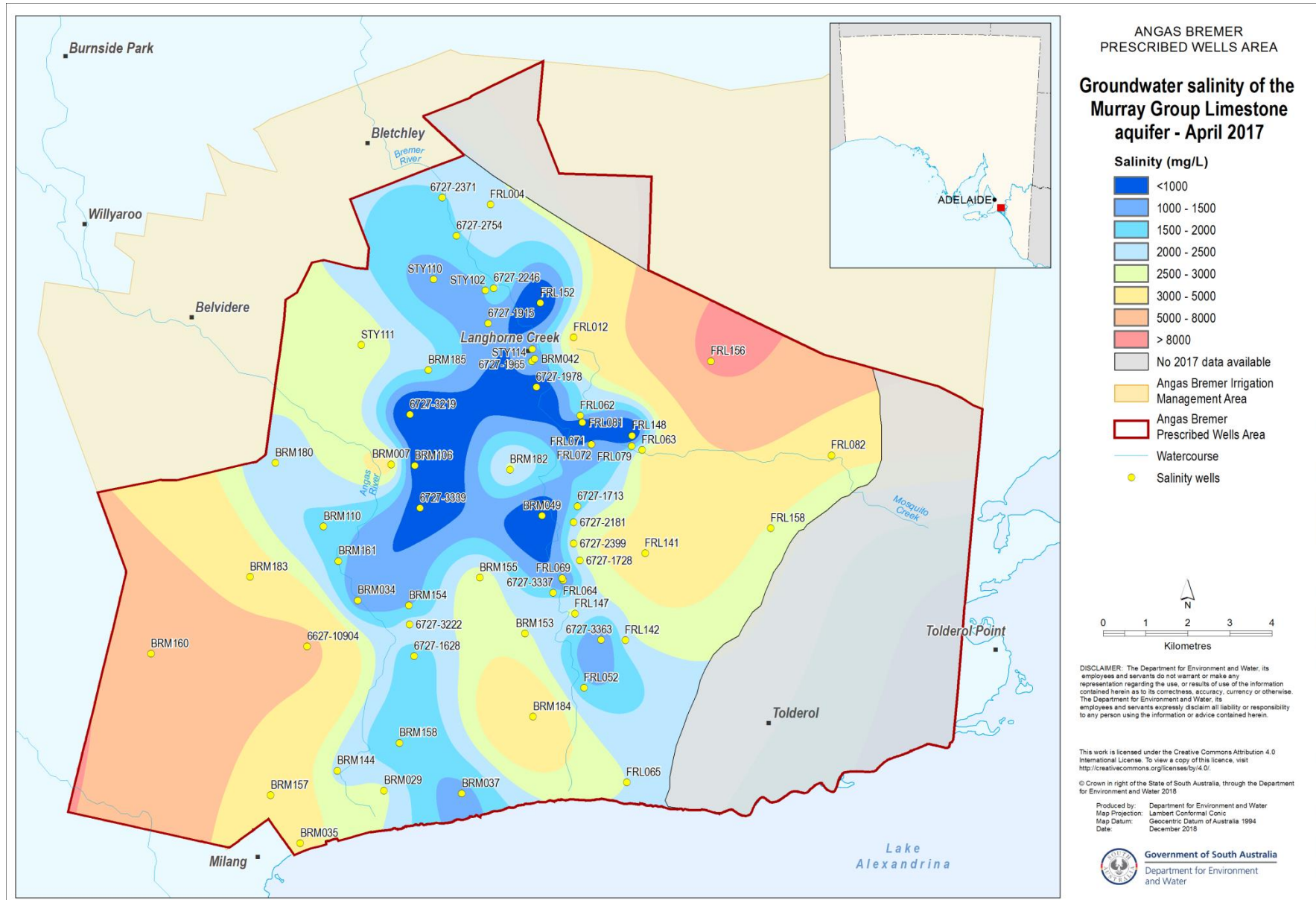


Figure 19b Salinity of the Murray Group Limestone Aquifer April 2017

Langhorne Creek Weather Station Statistics

Michael Cutting, Natural Resources SA Murray Darling Basin

2017/18 Seasonal Summary

As shown in Figure 20 339.6 of **rainfall** was recorded during 2017/18 (July – June) at the Langhorne Creek Central (Lake Breeze) weather station site which was significantly less than the 464.6mm that was recorded in the 2016/17 season.

The 2017/18 **evapotranspiration (ET)** figure of 1,090.1mm was less than the 2016/17 total of 1,183.5mm.

This resulted in an evaporative deficit (ET - rainfall) of 750.5mm for the 2017/18 season which was a slight increase from the 2016/17 figure of 718.9

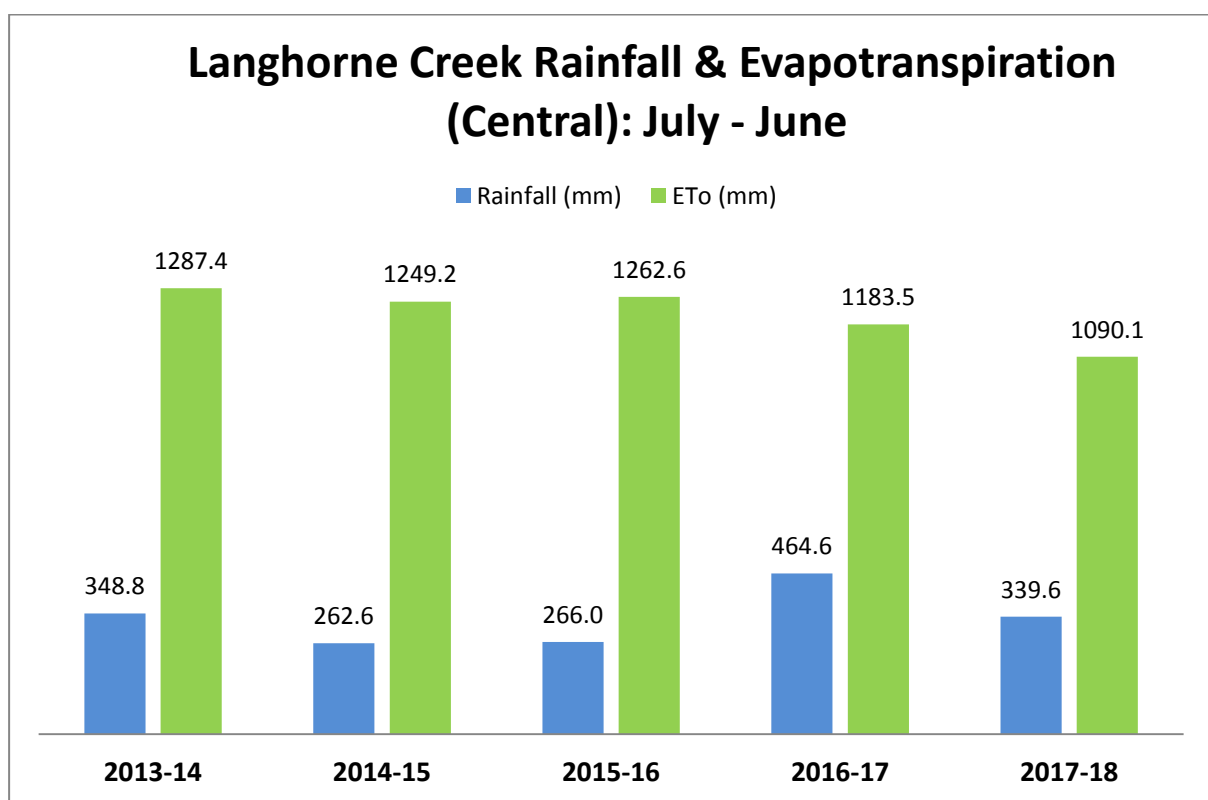


Figure 20: 2017/18 Rainfall and Evapotranspiration – Langhorne Creek Central

The highest **daily maximum temperature** for 2017/18 of 42.7C was observed on the 21st January 2018 while **the minimum daily temperature** of -3.2C was recorded on the 26th June 2017.

The highest **daily evapotranspiration** figure occurred on the 18th January 2018 when a total of 7.6mm was recorded.

As was the case in 2016/17 the **highest daily rainfall** total observed in 2017/18 occurred in summer when 32.2mm was received on the 15th January 2018.

Monthly rainfall distribution for the 2017/18 season is shown below in Figure 21 with a very dry 3 month period recorded from February to April 2018 when a combined total of only 10.8mm of rain was received.

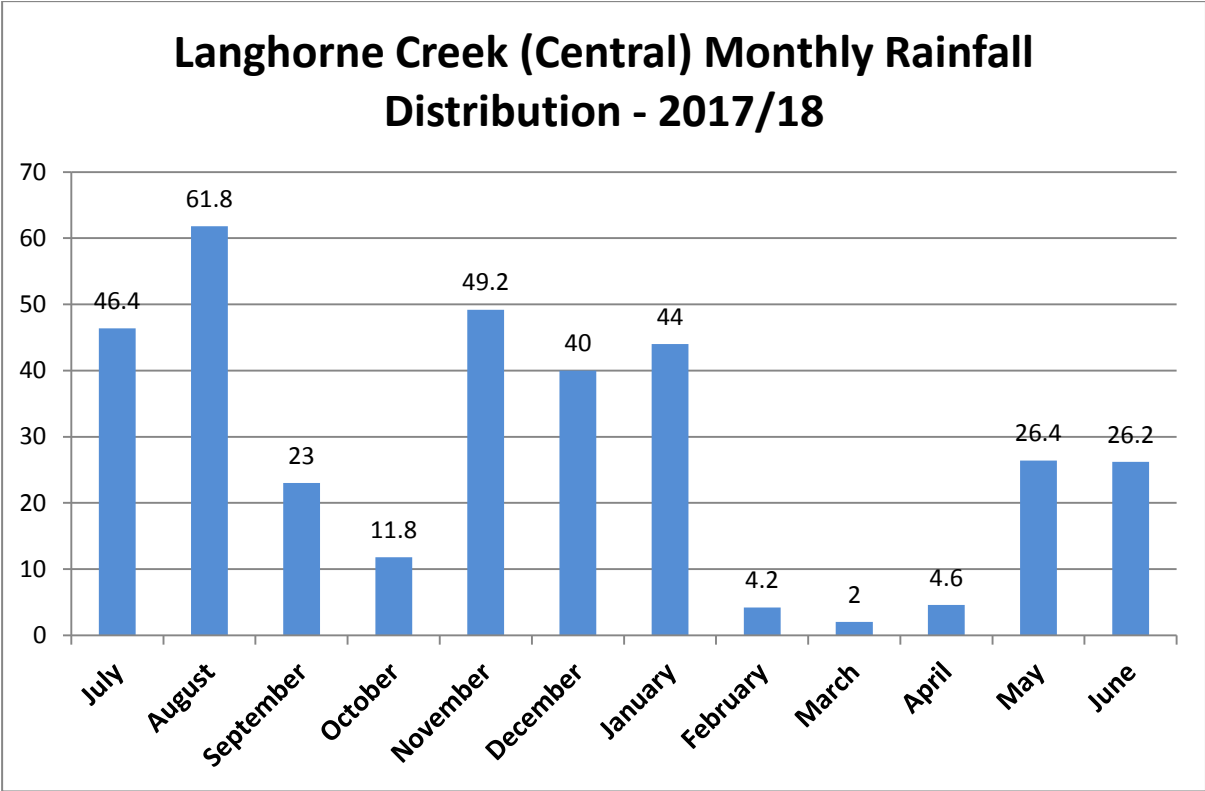


Figure 21: Monthly Rainfall Totals within the Langhorne Creek District

The Twentieth Annual Public Meeting of the Angas Bremer Water Management Committee Incorporated

Wednesday 29th August, 2018 at 7:00pm.

The Hub, Langhorne Creek.

Attendees: Kate Mason, Bill Scutchings, George Borrett, David Kohl, David Hender, Ann Scutchings, Geoff Warren, Brett Ibbotson, Heather Webster, Justin Cleggett, Ken Follett, Trevor McLean, Dave Hemmings, Lian Jaensch, Leah Hunter, Keren Stagg, Michael Cutting.

Apologies: Shen Mann, Brian Meakins.

1. Opening Address

The meeting was opened at 7:30pm by David Kohl, Presiding Member who welcomed all attendees and guest speakers.
David thanked the committee for their contribution over the past 12 months.

2. Minutes of the last Annual Public Meeting

A motion was raised that the minutes from last year's APM be accepted.
Moved: Geoff Warren Seconded: George Borrett

3. Annual Report

The Annual Report was presented by David Kohl.
During the past 12 months the committee focussed on its core role, continuing to consult with multiple agencies regarding the changes to the Eastern Mt Lofty WAP, Flows for the Future and the Murray Darling Basin plan.
Ongoing funding challenges have necessitated the need for some plans to be put on hold, however Grant funding was again received from DEW to support the IAR. The Committee continues to look for new funding opportunities and seeks feedback from irrigators regarding the current challenges they face and the future direction of the ABWMC.
David welcomed all attendees to attend future Committee meetings.

4. Tolderol Wetland, Kate Mason – Natural Resources, SAMDB

Kate thanked everyone for their attendance and gave a presentation on Environmental watering at the Tolderol Game Reserve Wetlands.

The presentation included a brief history of Tolderol, its importance as a RAMSAR wetland and an overview of how environmental watering takes place. David thanked Kate for her presentation.

5. Update on Australian Federal Funding – Michael Cutting, Natural Resources, SAMDB

Michael gave an update on the COFFIE 'Pilot' Programme which is due to conclude 5th October 2018 before being superseded by the Murray-Darling Basin Water Infrastructure Program. The SA MDB board has submitted a tender to be a delivery partner.

The Murray-Darling Basin Water Infrastructure Program will fund eligible projects across 5 themes: on-farm, off-farm, urban, industrial and water metering. Changes to crop type may also be considered so the program is not solely related to infrastructure.

David thanked Michael for his presentation.

6. Summary of 2017/2018 Irrigation Annual Report – Leah Hunter, Project Officer, ABWMC.

Leah presented a summary of the interim Irrigation Annual reporting for the 2017/18 irrigation year. Only 63% of reports were received by the close off date, therefore it was difficult to make comparisons to prior years at this stage.

Based on data received to date, it would appear that there was an increase in River Murray Water extracted whilst the ground water extraction was the second lowest since 2009. Total water use increased from last year.

Leah thanked all who did reports online and submitted them on time. She highlighted the need to assess why returns are dropping off.

Leah thanked SA MDB for their ongoing funding and also the Committee members for their continued support.

David thanked Leah for her hard work throughout the year.

7. Financial Report – David Kohl, Presiding Member

The Annual Financial Report of the Angas Bremer Water Management Board 2017-18 was presented by David.

8. Langhorne Creek Flood Management – Open discussion lead by David Kohl

David Kohl advised the attendees that representatives from Mount Barker Council had attended a recent Committee meeting where Committee members had raised concerns about the extent of the Mount Barker development and the potential impacts it has on those in the Langhorne Creek area. The Committee has also approached Alexandrina Council regarding their flood management plan for the Langhorne Creek Region. Leah Hunter and David Kohl have been

invited to discuss this further at the next Ranges to River meeting which is due to be held 5th September 2018.

A general discussion took place about the Mt Barker development and the potential issues that it could cause. Major points that were considered during the discussion included:

- Concerns regarding the increase in the speed and turbidity of water coming down from the Mt Barker Creek
- Lack of monitoring of turbidity, sediment and erosion
- Potential sediment and erosion issues

Some attendees felt that a lack of management of rivers could be leading to water moving via different channels and causing flooding in different spots as a result of the developments at Mt Barker, whilst others were of the opinion that the change in watercourse and turbidity was a natural occurrence.

9. Election of members

The constitution of the Angas Bremer Water Management Committee requires that a minimum of 5 members and a maximum of 10 members be elected. Three positions have been carried over from the previous committee, and nominations were called for up to 7 positions.

Mac Cleggett will not be re-standing due to health reasons. Mac was thanked for his time on the Committee and wished all the best for the future.

Members mid-way through their term and continuing are: David Kohl, Barry Potts and George Borrett.

Members electing to renominate were: Michael Clements, Michael Cutting, Dave Hemmings and Ken Follett.

Justin Cleggett and Trevor McLean were newly nominated to join the Committee. A motion was raised to accept the above nominations and welcome them to the Committee.

Moved: Ken Follett Seconded: Geoff Warren

10. General Business

There was no other business.

David thanked everyone for coming to the 2018 APM and reiterated the need for continued support of the Committee and the welcome input from new people and ideas.

David thanked the Committee, Leah and Keren.

11. The meeting was closed at 8.42pm, followed by a light supper.

Financial Accounts 2017-18

ANGAS BREMER WATER MANAGEMENT COMMITTEE INC.

FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2018

STATEMENT OF FINANCIAL PERFORMANCE

STATEMENT OF FINANCIAL POSITION

NOTES TO THE FINANCIAL STATEMENTS

STATEMENT BY THE MANAGEMENT COMMITTEE

REPORT BY THE MANAGEMENT COMMITTEE

SUMMARY OF PROJECT FINANCIAL PERFORMANCE

ANGAS BREMER WATER MANAGEMENT COMMITTEE INC.

STATEMENT OF FINANCIAL PERFORMANCE

FOR THE YEAR ENDED JUNE 30, 2018

	2018		2017	
	\$	\$	\$	\$
INCOME				
Grants				
Grants (C'wealth) Op-Non Rec	15,000.00		0.00	
Grants (State) Op-Non Rec			11,000.00	
Grants (Local) Op-Non Rec			0.00	
<i>Total Grants</i>		15,000.00		11,000.00
Interest-Unrestricted		1.95		2.82
<i>Total Income</i>		15,001.95		11,002.82
EXPENSES				
Advertising & Promotion		340.10		182.40
Audit Fees		600.00		600.00
Bank Fees		4.21		0.00
Board/Governance Expenses		0.00		57.73
Client Support Services				
CSS Community Engagement	863.64		1,296.12	
CSS Project Co-ord/Manag	12,977.27		23,163.67	
CSS Revegetation	0.00		0.00	
CSS Threat Abatement	1,000.00		0.00	
<i>Total Client Support Services</i>		14,840.91		24,459.79
Insurance		2,689.46		2,684.92
Meetings Expense		162.00		165.08
Postage, Freight & Courier				0.00
Printing & Stationery				165.45
Sundry Expenses				0.00
Telephone, Fax & Internet Exp				0.00
<i>Total Expenses</i>		18,636.68		28,315.37
Net Surplus / (Deficit)		(3,634.73)		(17,312.55)

ANGAS BREMER WATER MANAGEMENT COMMITTEE INC.

STATEMENT OF FINANCIAL POSITION

FOR THE YEAR ENDED JUNE 30, 2018

	2018	2017
CURRENT ASSETS	\$	\$
Cash at Bank (Unrestricted)	13,419.95	16,284.30
TOTAL CURRENT ASSETS	<u>13,419.95</u>	<u>16,284.30</u>
 TOTAL ASSETS	 <u>13,419.95</u>	 <u>16,284.30</u>
 CURRENT LIABILITIES		
GST Payable		100.00
Less GST Receivable	<u>(300.00)</u>	<u>(1,170.38)</u>
TOTAL CURRENT LIABILITES	<u>(300.00)</u>	<u>(1,070.38)</u>
 Less TOTAL LIABILITES	 <u>(300.00)</u>	 <u>(1,070.38)</u>
 NET ASSETS	 <u>13,719.95</u>	 <u>17,354.68</u>
 EQUITY		
Unexpended Funds as at July 1, 2017	17,354.68	34,667.23
Current Year Surplus (Deficit)	<u>(3,634.73)</u>	<u>(17,312.55)</u>
Unexpended Funds as at June 30, 2018	<u>13,719.95</u>	<u>17,354.68</u>

ANGAS BREMER WATER MANAGEMENT COMMITTEE INC.

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2018

NOTE 1: STATEMENT OF SIGNIFICANT ACCOUNTING POLICIES

This financial report is a special purpose financial report prepared in order to satisfy the financial reporting requirements of the Associations Incorporation Act 1985 (SA). The Committee have determined that the Association is not a reporting entity.

This financial report has been prepared in accordance with the requirements of the Associations Incorporation Act 1985 (SA) and the following Australian Accounting Standards:

AASB 101 - Presentation of Financial Statements

AASB 1031 - Materiality

AASB 110 - Events after the Reporting Period

No other applicable Accounting Standards, Urgent Issues Group Consensus Views or other authoritative pronouncements of the Australian Accounting Standards Board have been applied.

The following material accounting policies, which are consistent with the previous period unless otherwise stated, have been adopted in the preparation of this financial report.

- a) **Accounting Method** - Accrual Accounting
- b) **Currency** - All values are presented in Australian Dollars
- c) **Measurement Basis** - The financial report is based on historical costs. It does not take into account changing money values, or, except where specifically stated, current valuations of non-current assets
- d) **Goods & Services Tax** - Revenue and expenses are recognised exclusive of the amount of GST
- e) **Plant & Equipment** - Plant and equipment is recorded as an expense for the reporting period.

**STATEMENT OF THE MANAGEMENT COMMITTEE OF
ANGAS BREMER WATER MANAGEMENT COMMITTEE**

In accordance with Section 35(2)(c) of the Associations Incorporations Act 1985, it is the opinion of the Members of the Committee that,

- (a) The accompanying Statement of Financial Performance is drawn up so as to give a true and fair view of the operations of the Association for the year ended 30/6/18;
- (b) The accompanying Statement of Financial Position is drawn up so as to give a true and fair view of the state of affairs of the Association as at 30/6/18;
- (c) At the date of this Statement there are reasonable grounds to believe that the Association will be able to pay its debts as and when they fall due.

Signed in accordance with a resolution of the Committee

Signed: 

David Kohl, Chairperson

Date: 20/8/18

Signed: 

Michael Clements, Treasurer

Date: 14/12/18

**REPORT OF THE MANAGEMENT COMMITTEE OF
ANGAS BREMER WATER MANAGEMENT COMMITTEE**

In accordance with section 35 (5) of the Associations Incorporations Act, 1985 the Committee hereby states that during the financial year ended June 30, 2018:

- (a) (1) no officer of the association;
 (2) no firm of which an officer is a member; and
 (3) no body corporate in which an officer has a substantial interest,

has received or become entitled to receive a benefit as a result of a contract between the officer, firm or body corporate and the association.

- (b) no officer of the association has received directly or indirectly from the association any payment or other benefit of a pecuniary nature.

Signed in accordance with a resolution of the Committee.

Signed: 

David Kohl, Chairperson

Date: 20/8/18

Signed: 

Michael Clements, Treasurer

Date: 19/12/18

ANGAS BREMER WATER MANAGEMENT COMMITTEE INC.

PROJECT INCOME, EXPENDITURE AND BALANCES

FOR THE YEAR ENDED JUNE 30, 2018

Project Name	Balance at June 30, 2017	Total Income	Total Expenses	Balance at June 30, 2018
ABIRA funds	8,370.30	0.00	0.00	8,370.30
Angas Bremer Rivers and Wetlands Grant	0.00	0.00	0.00	0.00
Angas Bremer Water Management Committee Funds	6,471.12	1.95	2,636.68	3,836.39
Cover Crops Grant	1,513.26	0.00	0.00	1,513.26
Irrigation Annual Reporting Project	0.00	15,000.00	15,000.00	0.00
Volunteer Small Grant	1,000.00	0.00	1,000.00	0.00
Totals	17,354.68	15,001.95	18,636.68	13,719.95

Appendix A – Tolderol Game Reserve Wetlands – Kate Mason – DEWNR, Natural Resources, SAMDB





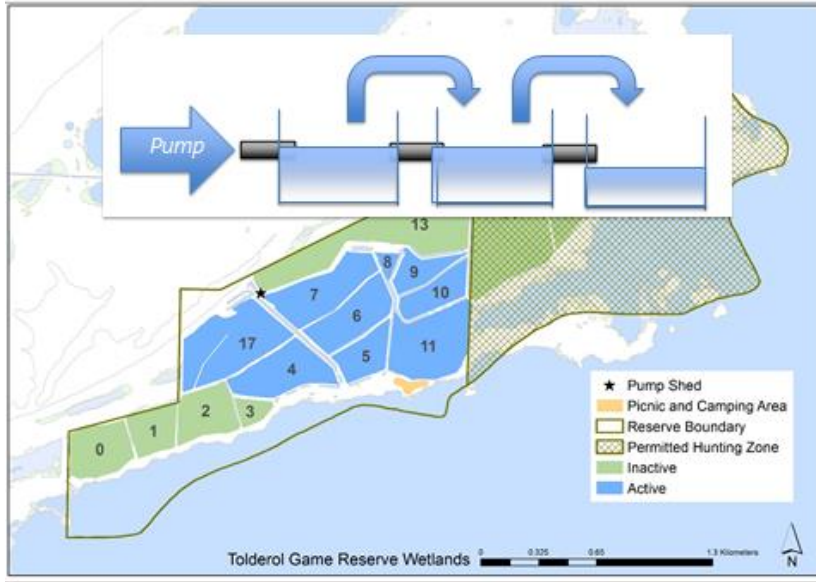


Environmental Watering at
**Tolderol Game Reserve
 Wetlands**

Wetlands & Floodplains Team
 Kate Mason

Natural Resources
 SA Murray-Darling Basin



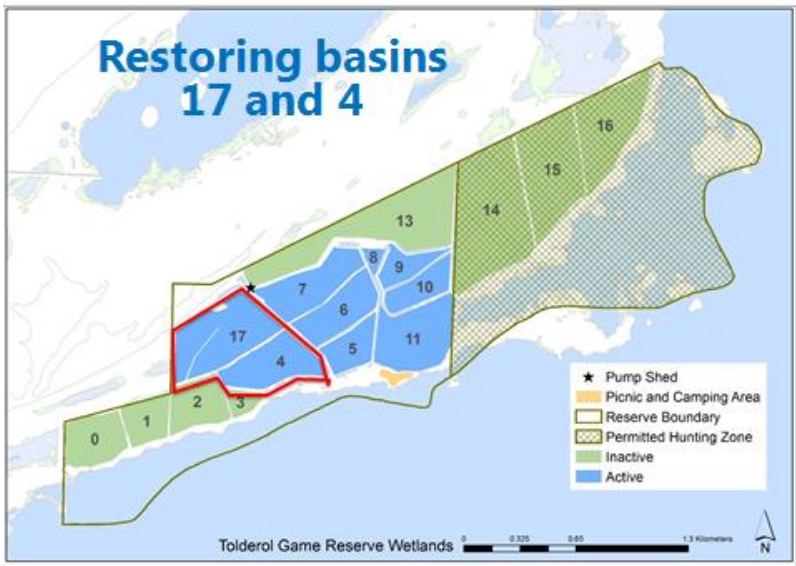





9
nationally
EPBC-listed
species

9 NPWA
of SA-listed
waterbird
species

1. Re-instate Tolderol as an ecological and community asset
2. Foraging habitat for migratory waders



Watering Overview

Year	Water used (ML)	Area watered (ha)	Number of Basins
2014/15	415.717	28.35	3
2015/16	361.526	28.35	3
2016/17	586.244	84.44	9
2017/18	1101.85	84.44	9

Data Collection

- Monthly surveys with volunteers
- Community and club surveys
- Opportunistic sightings



Results Snapshot 2014-present



86 wetland dependent species



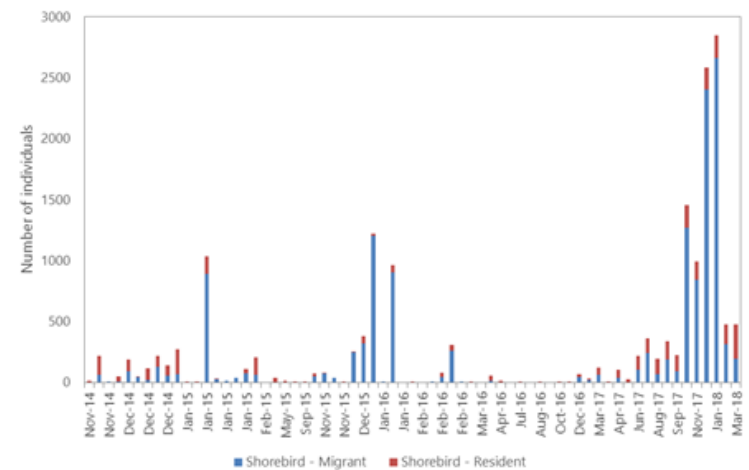
22 species of conservation significance

Critically endangered: Curlew Sandpiper
Endangered: Australasian Bittern



16* EPBC-listed migratory wading bird species

Wader abundance 2014-2018





What makes a site important?

International

- 1 per cent of the flyway population of a single species or subspecies of migratory shorebird or ✓
- 20,000 migratory shorebirds.

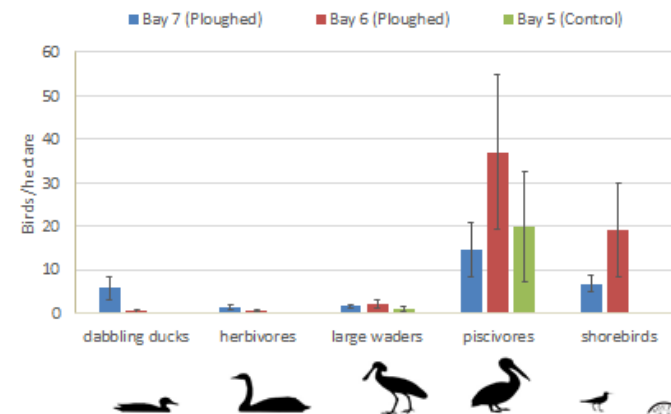
National

- 0.1 per cent of the individuals in a population of one species of migratory shorebird or ✓
- 2000 migratory shorebirds or ✓
- 15 migratory shorebird species (Commonwealth of Australia 2015a). ✓

Natural Resources
SA Murray-Darling Basin



Ploughed vs un-ploughed



Management Tools - Living, breathing lawnmowers



Management Issues - *Bolboschoenus caldwellii*



06 March 2016

28 October 2015



 Natural Resources
SA Murray-Darling Basin

Bolboschoenus caldwellii

- Reduced migratory wader foraging habitat
- Provided habitat for cryptic species
 - Spotless Crake
 - Latham's Snipe
 - Purple Swampphen
 - Australasian Bittern



<https://www.environment.gov.au/photo/16/16/16/16/16>



Latham's Snipe - Colin Rogers


 Natural Resources
SA Murray-Darling Basin



Interesting sightings... just a few


White-winged Black Tern



 Bay11 Tolderol Game Reserve SA 28/4/2018

Oriental Pratincole



 Tolderol Game Reserve SA

Australian Spotted Crake



 Tolderol Game Reserve SA 2017



Variegated Fairywren (Photo: Colin Rogers)



FrogWatch SA

Calling all FrogSpotters!

FrogWatch is your chance to help us understand how our frogs are tracking in South Australia. We need more people to contribute to frog surveys and you don't have to be an expert to take part!

All you need is your smart phone and the FrogSpotter app is FREE!

www.frogwatchsa.com.au

Download the free FrogSpotter app plus heaps of information at www.frogwatchsa.com.au

Need help getting started in the SA Murray-Darling Basin? Email Kate Mason, kate.mason@sa.gov.au

www.frogwatchsa.com.au

Acknowledgements

Thank you to the Tolderol GRW Working Group members Chris Eckert, John Gitsham, Peter Koch, Colin Rogers, Regina Durbridge, Anna Peek and Stuart Hicks. Thanks also to the many volunteers who provide photos, sightings, assistance with surveys,

Natural Resources SA Murray-Darling Basin

This project is supported by the South Australian Murray-Darling Basin Natural Resources Management Board, through funding from the Australian Government's National Landcare Program and the NRM Levy and donations by BirdsSA, Conservation and Hunting Alliance of SA, Conservation and Wildlife Research Trust, Signal Point Riverine Environment Group and Fleurieu Birdwatchers.



Appendix B – Australian Government Funding - Update – Michael Cutting– DEWNR, Natural Resources, SAMDB

Australian Government Funding - Update

Michael Cutting
Natural Resources SA MDB Region

 Natural Resources
SA Murray-Darling Basin

 Government of South Australia
South Australian Murray-Darling Basin
Natural Resources Management Board

COFFIE Pilot Program - Status:

- SA COFFIE Pilot commenced in September 2016 and will now conclude on 5 October 2018
- Must be able to return SA Murray (Class 3a) water access entitlements (\$5,868.62/ML)
- \$15m has been allocated to the SA Pilot of which \$8.7m has been committed to date
- COFFIE Pilot will be superseded by the **Murray-Darling Basin Water Infrastructure Program** which was announced on 13 July 2018
- SA MDB NRM Board has applied to act as a Delivery Partner under MDBWIP – outcome to be advised ~ mid September 2018



 Natural Resources
SA Murray-Darling Basin

 Government of South Australia

MDB Water Infrastructure Program:

- Linked to recovery of 450GL but whole of Basin focus
- Projects can be delivered across 5 themes: on-farm, off-farm, urban, industrial and water metering
- If successful NRM Board will seek projects from EMLR also (surface & watercourse only)
- Challenge with EMLR is valuing water entitlements as minimal trade data available
- Maximum of 1.75x market price will be paid for recovered water entitlements



 Natural Resources
SA Murray-Darling Basin



What activities are eligible for funding?

All projects must include a water savings component:

- Drip – drip conversions
- Pump & Filtration Upgrades
- Automation and control systems
- Soil moisture monitoring – new and upgraded networks
- Crop type/variatal changes where justifiable water savings exist
- Soil amelioration activities e.g. compost/mulch
- Other integrated activities/items improving farm productivity



 Natural Resources
SA Murray-Darling Basin



Natural Resources SA Murray-Darling Basin

More Information:

Strathalbyn Office 8536 5619
michael.cutting@sa.gov.au



Appendix C – Update on Angas Bremer Water Management Committee – Leah Hunter – Project Coordinator

**Angas Bremer
Irrigation Management Zone**

2017 – 2018 Interim Annual Report

Angas Bremer Water Management Committee Inc

Leah Hunter


 **Government of South Australia**
South Australian Murray-Darling Basin
Natural Resources Management Board

 **Natural Resources**
SA Murray-Darling Basin




**Irrigation Annual Report
2017-2018**

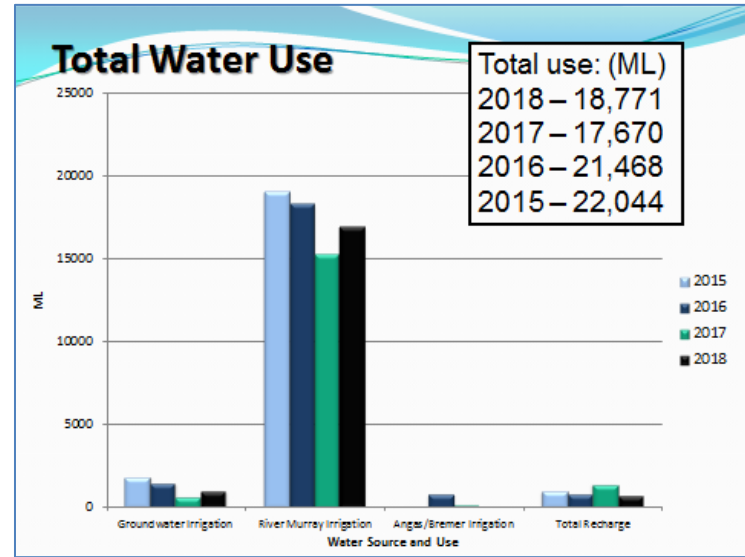
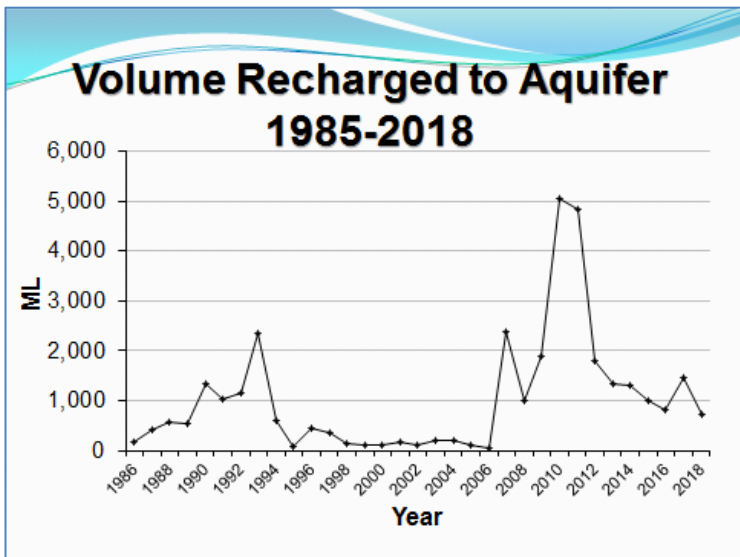
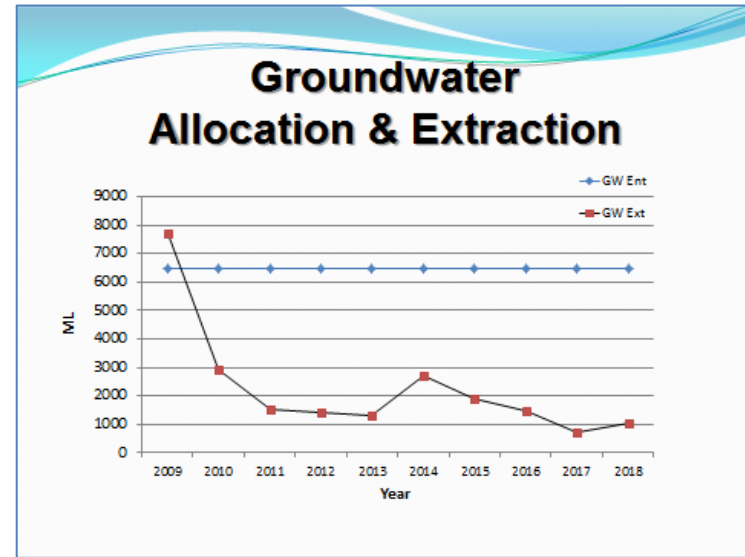
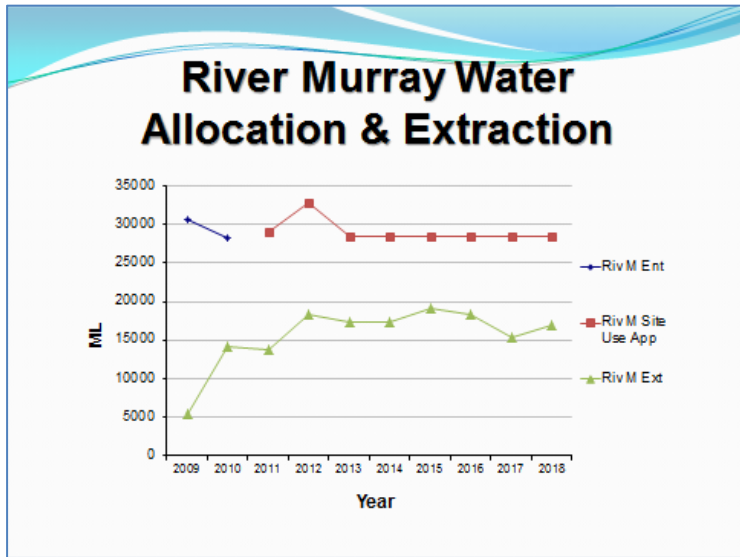
- **Annual Report Summary**
 - Online reporting
 - Allocations and Usage
 - Irrigation
 - Crop Types

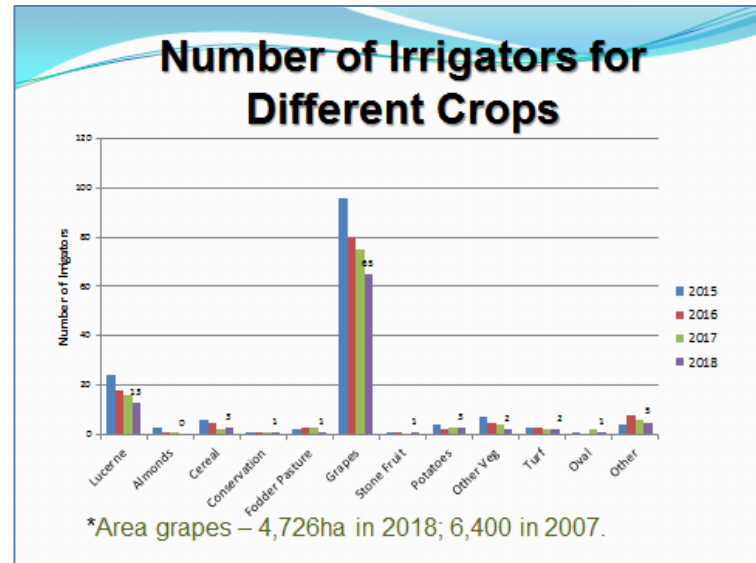
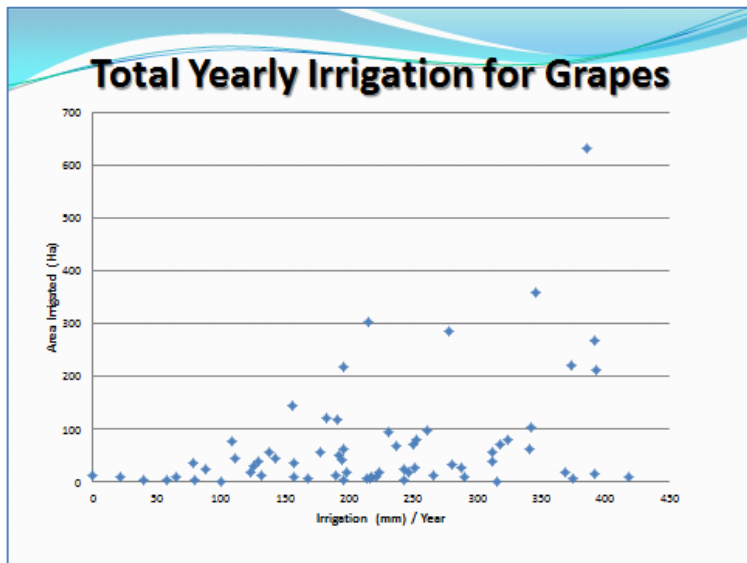
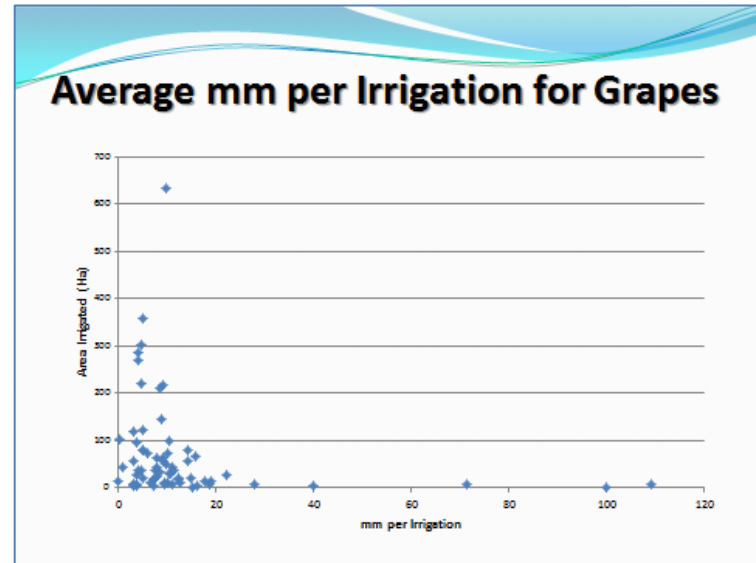
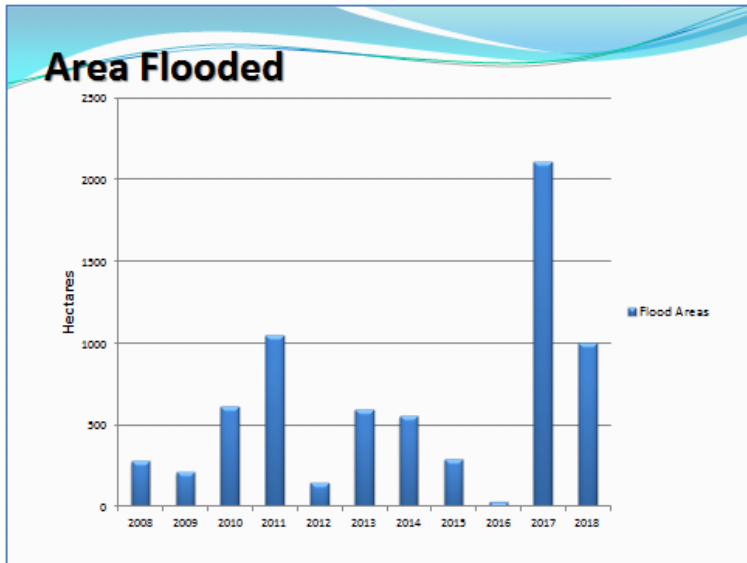


On Line Reporting

- Thank you again to everyone who submitted their reports online
- 81 reports submitted online (63%)
- 93 out of 128 reports received by accreditation date







Interim Annual Report

- All final graphs and further explanation in Annual Report due late December.
- Thank you to those who submitted their reports on time and on line.
- I will be chasing all outstanding reports to include in the Annual Report.



Conclusion

- Thank you to all the Angas Bremer Water Management Committee members.
- Thank you to Natural Resources SA Murray Darling Basin staff & Board for funding the annual reporting and technical support.



Financial Report

ANGAS BREMER WATER MANAGEMENT COMMITTEE INC.

STATEMENT OF FINANCIAL PERFORMANCE
FOR THE YEAR ENDED JUNE 30, 2018

	2018		2017	
	\$	\$	\$	\$
INCOME				
Grants				
Grants (C'wealth) Op-Non Rec	15,000.00		0.00	
Grants (State) Op-Non Rec			11,000.00	
Total Grants		15,000.00		11,000.00
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CSS Threat Abatement		1,000.00		0.00
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Printing & Stationery				165.45
Total Expenses		18,636.68		28,315.37
Net Surplus / (Deficit)		(3,634.73)		(17,312.55)

ANGAS BREMER WATER MANAGEMENT COMMITTEE INC.

STATEMENT OF FINANCIAL POSITION
FOR THE YEAR ENDED JUNE 30, 2018

	2018		2017	
	\$	\$	\$	\$
CURRENT ASSETS				
Cash at Bank (Unrestricted)		13,419.95		16,284.30
TOTAL CURRENT ASSETS		13,419.95		16,284.30
TOTAL ASSETS		13,419.95		16,284.30
CURRENT LIABILITIES				
GST Payable				100.00
Less GST Receivable		(300.00)		(1,170.38)
TOTAL CURRENT LIABILITIES		(300.00)		(1,070.38)
Less TOTAL LIABILITIES		(300.00)		(1,070.38)
NET ASSETS		13,719.95		17,354.68
EQUITY				
Unexpended Funds as at July 1, 2017		17,354.68		34,667.23
Current Year Surplus (Deficit)		(3,634.73)		(17,312.55)
Unexpended Funds as at June 30, 2018		13,719.95		17,354.68

