

# *Angas Bremer Irrigation Management Zone 2019 – 2020 Annual Report*

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**Project Coordinator: Leah Hunter**  
Angas Bremer Water Management Committee Inc

*Supported by*



# **2019-20 Annual Irrigation Report**

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# **Angas Bremer Water Management Committee**

## **Members 2019-2020**

***Presiding Member*** – Barry Potts

***Treasurer*** – Justin Cleggett

### ***Committee Members***

George Borrett, Michael Clements,  
Ken Follett, Trevor McLean, Michael Cutting,  
Dave Hemmings / Tom Mowbray

### ***Non-elected members of the Committee***

***Secretary*** – Keren Stagg  
***Project Coordinator*** – Leah Hunter

## **Report of the Activities of the Committee 2019-2020**

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 have continued to raise concern 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 raised these concerns with the Rangers to River NRM Group back in September 2018. The Rangers to River Group agreed to help pursue the groups concern and facilitate a meeting between all involved parties.

In October 2019 the Rangers to River NRM Group held a Local Government Forum on Urban Growth and Catchment Health in the Eastern Mount Lofty Ranges with invited guests only. Three committee members along with the out-going Presiding Member, David Kohl, attended the forum on behalf of the Angas Bremer Water Management Committee. Invited guests included representatives from Alexandrina Council, Mount Barker Council, NRM Board Members and Staff, Department for Environment and Water,

Department for Planning, Transport and Infrastructure, Water Sensitive SA, Langhorne Creek Grape and Wine and Goolwa to Wellington Local Action Planning Association staff.

The purpose of the meeting was to foster a shared understanding and promote collaborative discussions across councils, NRM and key community stakeholders about:

- the nature and extent of urban development and associated controls in the Eastern Mount Lofty Ranges (EMLR) as they relate to catchment health;

- the state of knowledge re catchment health and the nature of current and future downstream impacts (including identification of knowledge gaps).
- possible options (and constraints) for monitoring and improving stormwater management and catchment health in the EMLR.

David Kohl provided a short presentation on concerns that had been raised by irrigators and residents of the Langhorne Creek region. The Angas Bremer Water management Committee are waiting for the minutes and next steps to be passed on from the Forum. Unfortunately the Rangers to River Group no longer exist and the committee is still chasing the minutes from this forum.

The committee are still focussed on this issue and will continue to pursue the regions concerns and what steps can be taken to improve knowledge of possible causes and to help push solutions.

In September 2020 the committee was invited to participate in a Wastewater and Treated Wastewater Strategy Workshop organised by Regional Development Australia for the Mount Barker District Council.

We were informed by Regional Development Australia that Mount Barker District Council was acutely aware of both the challenges and opportunities the forecast growth in wastewater volumes would have for the wider Mount Barker Region. On instruction from Council Regional Development Australia – Adelaide Hills, Fleurieu and Kangaroo Island Inc. ('RDA AHFKI') had recently undertaken preliminary research, assessment and investigations into potential users of treated wastewater and options for the best re-use of wastewater.

During the workshop participants' discussed opportunities for use of wastewater, potential barriers or risks, other considerations, who needs to be involved and how could further work be funded. The workshop explored a proposal to construct a pipeline to transport treated wastewater from Mount Barker to the Langhorne Creek area for irrigation use. Regional Development Australia is now working with Mount Barker District Council to develop a full business case to deliver water to Langhorne Creek. They will also be exploring some of the grant funding options that may be available to support such a project. Regional Development Australia will keep the Angas Bremer Water Management Committee updated as they progress.

During 2020 the new *Landscape South Australia Act* (2019) came into effect and saw the replacement of the Natural Resource Management Boards with Landscape Boards. With this change came a realignment of the Boards' boundaries. The boundary changes have seen the Angas Bremer Irrigation Management Zone included in Hills and Fleurieu Landscape Board region. The committee are working closely with the staff and Board from the Hills and Fleurieu Landscape region and are very thankful for the support received so far.

The other main focus for the committee this year was the annual irrigation reporting for the Angas Bremer Irrigation Management Zone. This year has seen a rise in returned reports which allows us to capture the true picture for the region.

# **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. The 128 irrigators who returned their completed forms to the Angas Bremer Water Management Committee on time have achieved "Accredited Irrigator" status. Online submissions were back up this year with 98 irrigators reporting online, 6 irrigators did not respond/ provide data and did not achieve accreditation. The data from 128 irrigators (95 %) has been collated and that data is presented in the following graphs and tables.

**Flooding:** Flooding by diversion or pumping was reported by 2 irrigators. Flooding was recorded in August 2019. 9 hectares was recorded as being flooded this year, much lower than last year.

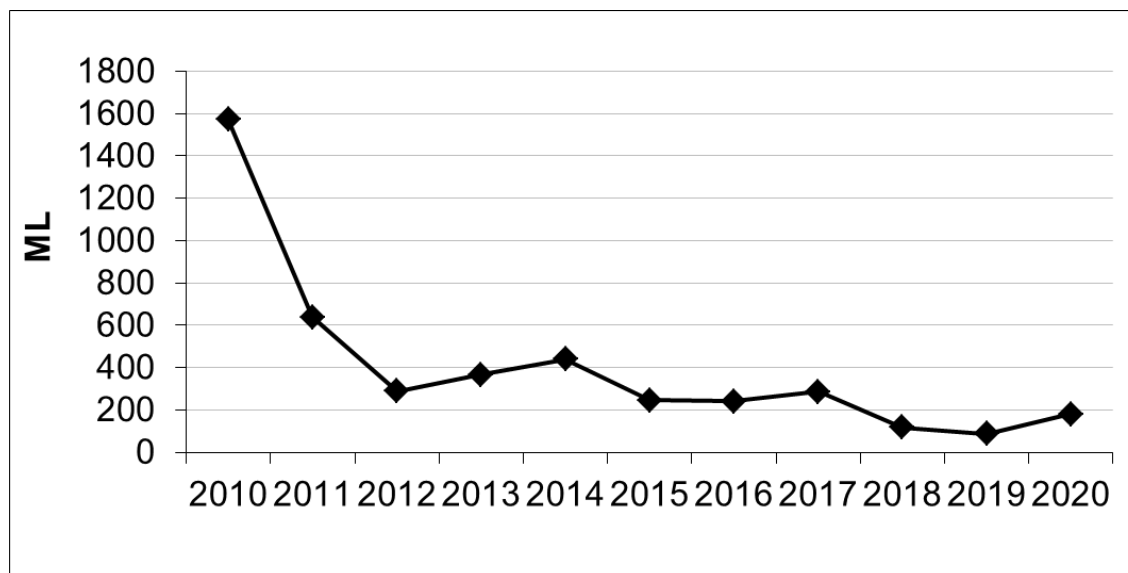
**Revegetation:** The total area of revegetation reported in the Irrigation Annual Reports is around 1,890 ha. This includes 40 hectares revegetated during the Biodiversity Landcare Projects.

**Red Gum Health:** 113 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. This year there has been a drop in the number of irrigators reporting that their Red Gums were healthy with only 22 irrigators reporting 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, 7 irrigators listed their red gums as getting worse due to the dry conditions over the past two years and lack of flooding.

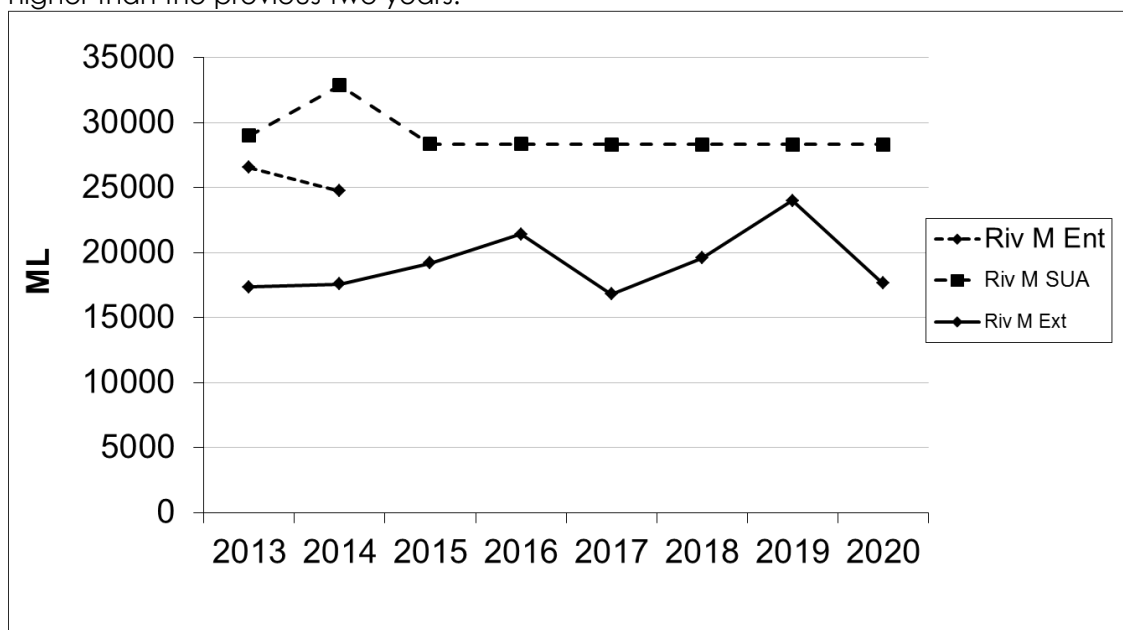
**Water Leasing:** Table 1 below shows the amount of water leased in 2019-20 compared with water leased in previous years. Overall, more water was leased out by irrigators this year than last. The amount of River Murray water leased out to Outside Irrigators increased by 2587.7ML and the amount leased in from irrigators outside of the Angas Bremer Irrigation Management Zone decreased dramatically by 3216.04ML. The volume of River Murray water leased to other irrigators within the Angas Bremer Irrigation Management Zone is lower than last year with nine leases reported. For the last five years no reports of leased groundwater within the zone were received.

**Table 1: Water Leasing**

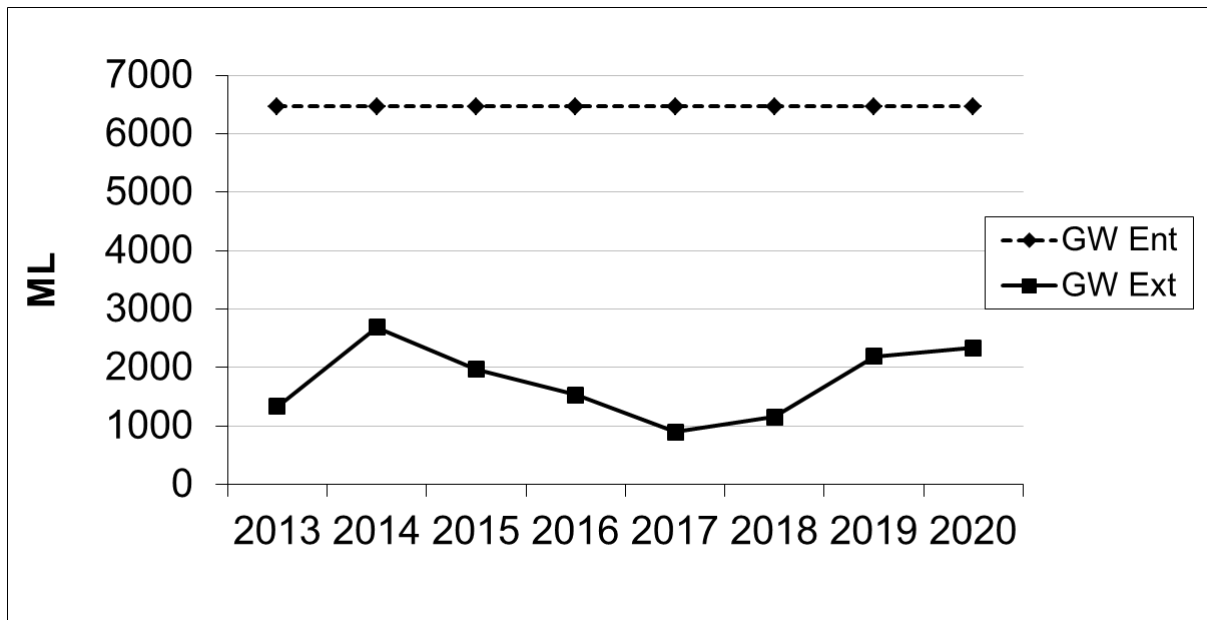
Type of Lease	Megalitres 2017-2018	Megalitres 2018-2019	Megalitres 2019-2020
RM water leased from ABIMZ to outside ABIMZ	1963.60	1954.00	4541.70
RM water leased from outside ABIMZ to inside ABIMZ	1943.00	6502.68	3286.64
RM water leased from inside ABIMZ to inside ABIMZ	418	289	260



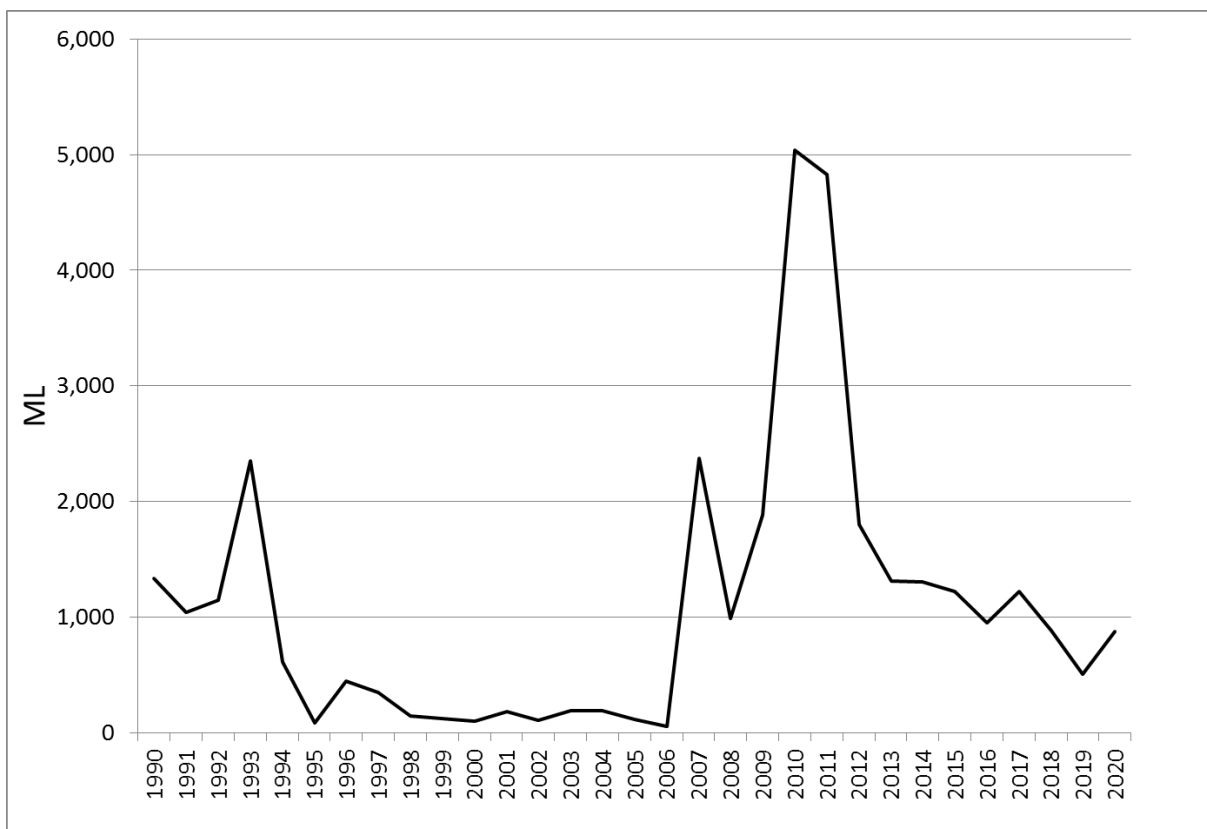
**Figure 1: Angas and Bremer Rivers Water Extractions 2010-2020:** Not all of the water taken from these rivers, such as the water diverted through weirs and sluices, is accounted for in this chart. The volumes on this graph are metered volumes from irrigators with meters installed, as well as the amount 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 higher than the previous two years.



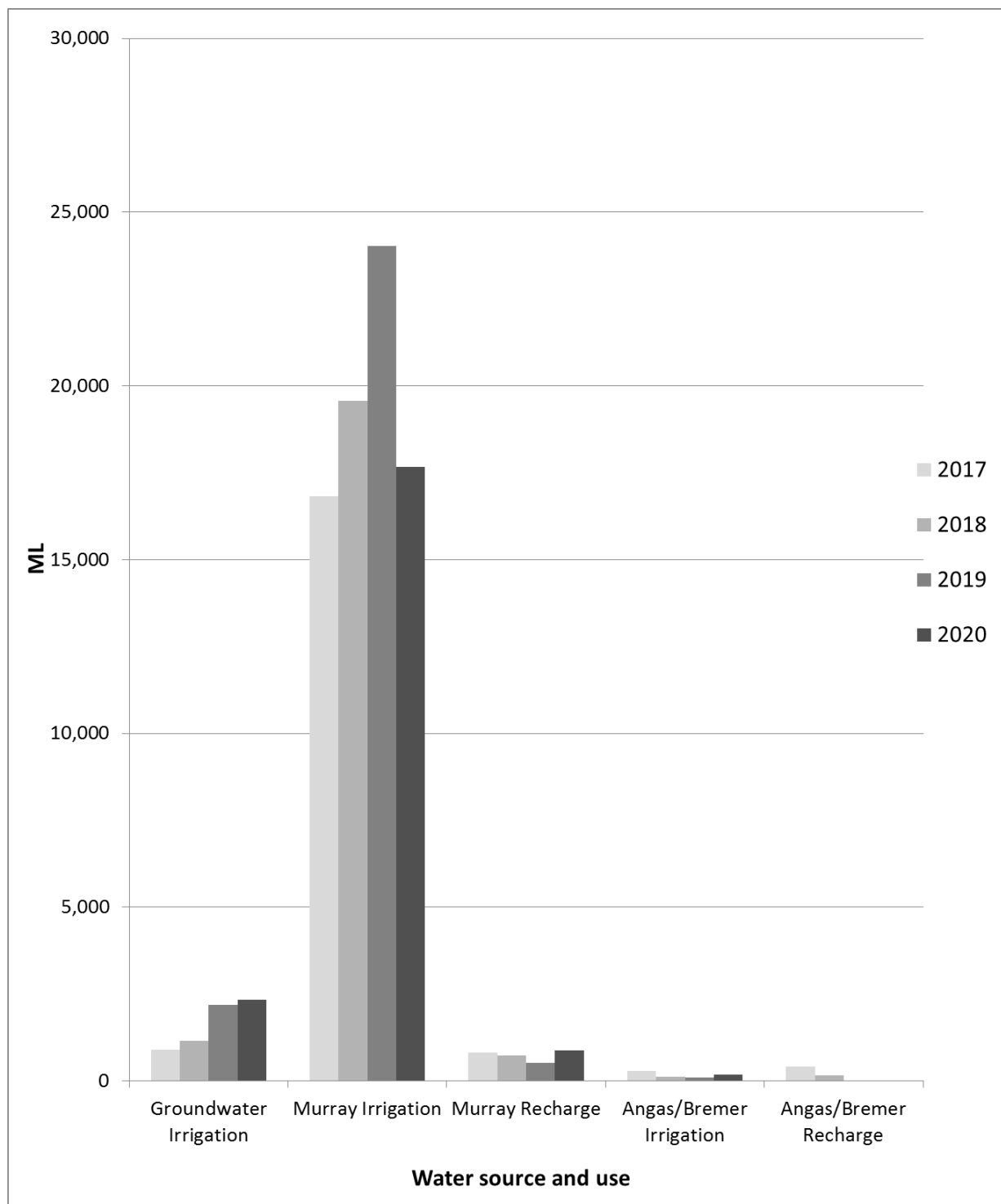
**Figure 2: River Murray Water Entitlement, Site Use Approval and Extraction 2013-2020:** Entitlement (RivM Ent) is the volume of water endorsed on licenses and does not include any credits for rollover, recharge etc. The River Murray Site Use Approval (RivM SUA) is the maximum quantity of River Murray water that can be used for irrigation on land identified as being in the Angas Bremer Irrigation Management Zone in 2019-2020. 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 2019-20 remained at 28,382 ML, and the recorded use was 17,664 ML, less than the 24,019 ML last year.



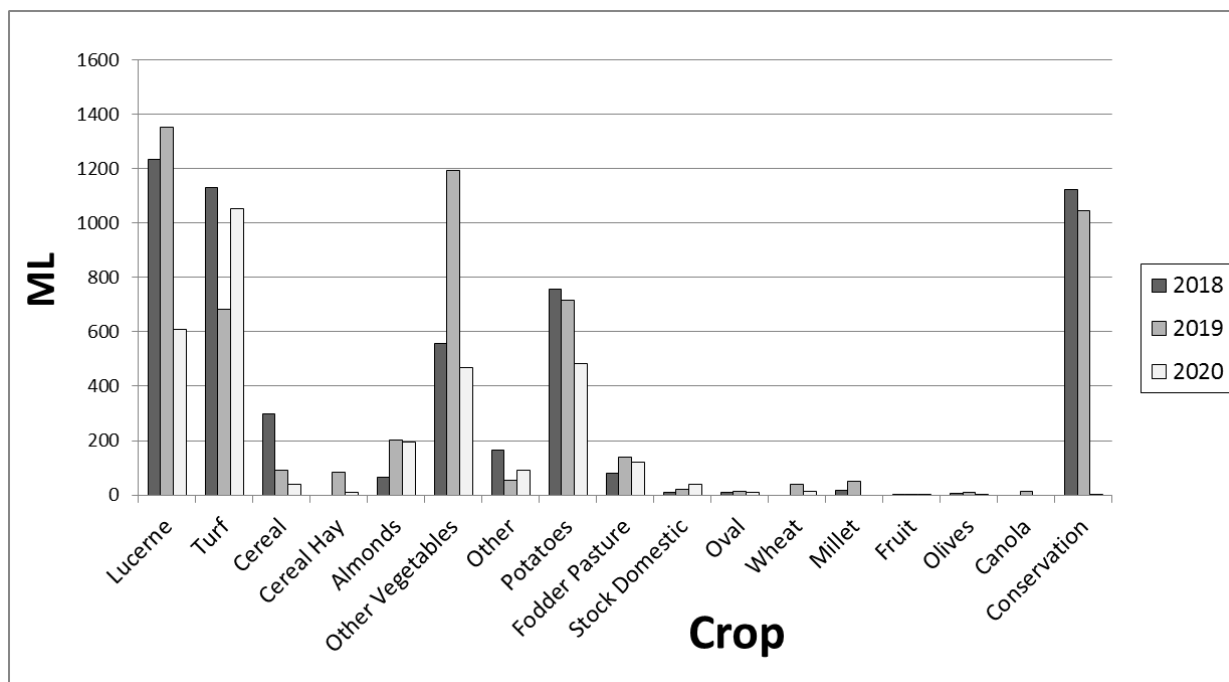
**Figure 3: Groundwater Entitlement and Extraction 2013-2020:** The maximum entitlement for 2019-20 was 6,500ML and the recorded use was 2,338 ML more than the volume of 2,192 ML used in the previous year. This is much lower than the 7,700 ML used during the “Millennium Drought”.



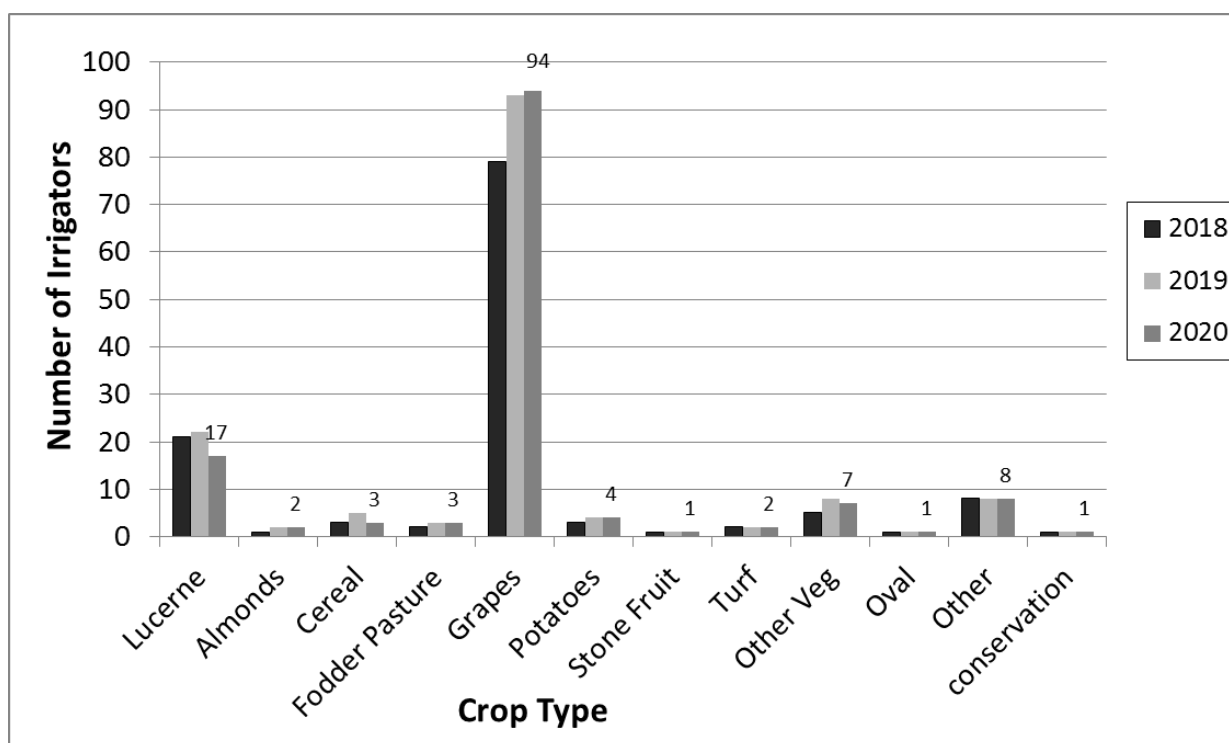
**Figure 4: Managed Aquifer Recharge (formerly termed Aquifer Storage and Recovery (ASR)) :** This chart shows the total volume of water artificially recharged to the aquifer from 1990 to 2020. The **877 ML** recharged from the Angas, Bremer and Murray rivers in 2019-2020 was higher than last year's volume but still substantially lower than the record levels achieved in 2010.



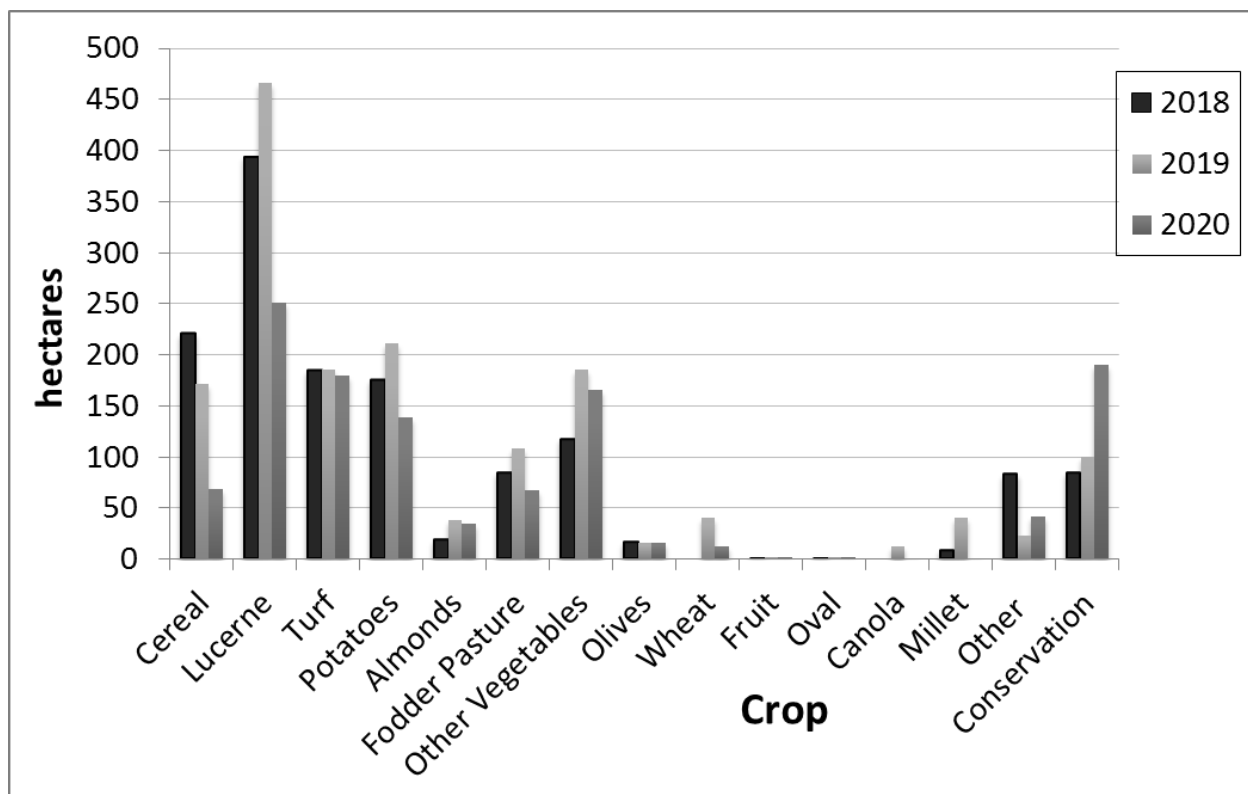
**Figure 5: Total volume of water used 2019-2020:** The total volume of water extracted from all sources within the region over the 2019-20 year was **21,060 ML**, which is less than the previous year, 2018-2019 = 26,809ML and similar to 2017-2018 = 21,736ML.



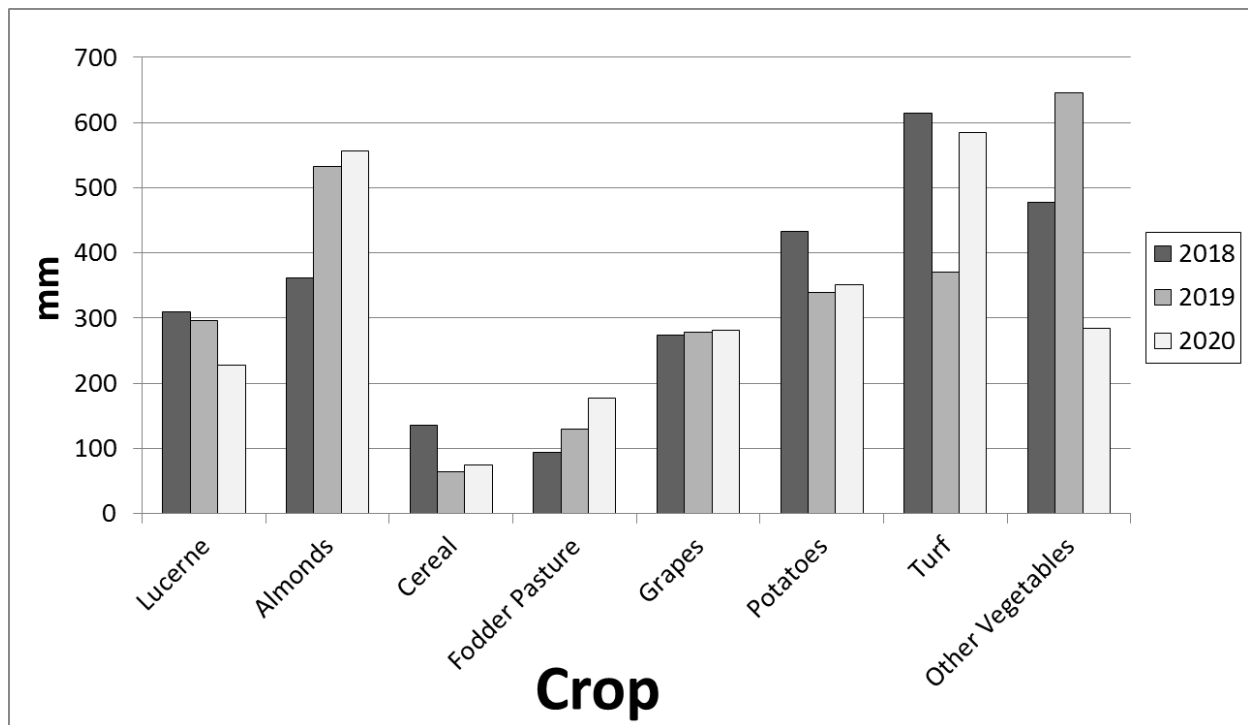
**Figure 6: Total volume of water used for each crop type:** This volume is the total used from all sources; groundwater, Angas/Bremer water and River Murray water that was applied to each crop type (grapes excluded). **The total volume of water applied to grapes was 16,702ML in 2019-2020, increasing slightly from last year's 16,418 ML.**



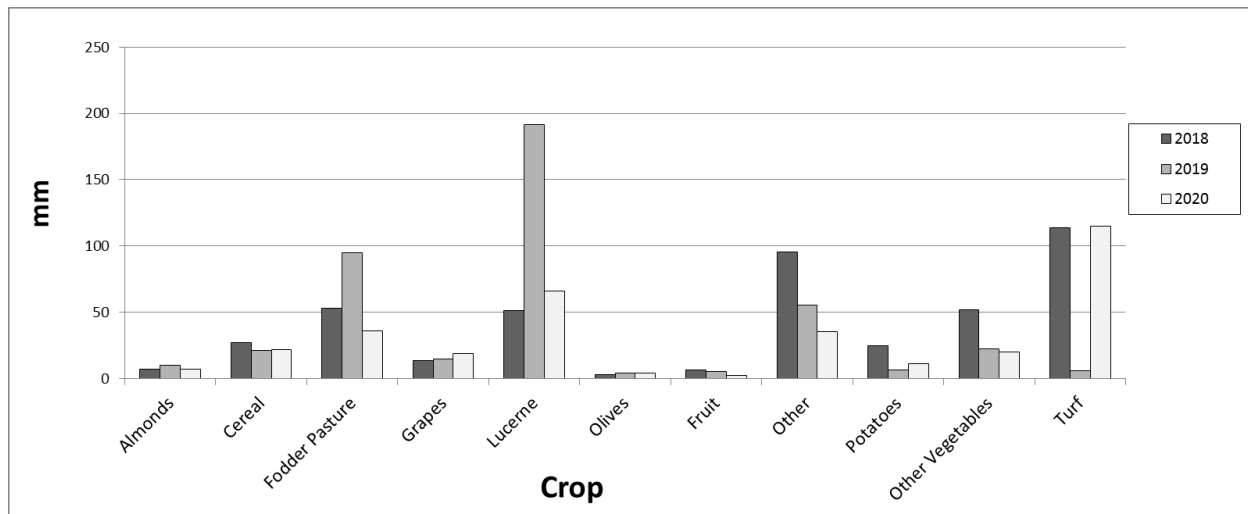
**Figure 7: Number of Irrigators for Each Crop Type:** The number of irrigators growing each crop type in the region appears to have remained relatively stable except for Lucerne which has decreased by five irrigators.



**Figure 8: Area Irrigated by Crop Type:** The area of each crop irrigated is shown in hectares. **The area of grapes irrigated in 2019-20 was 5,920 ha, higher than the 5,892 ha recorded last year.** The total area under irrigation in 2019-20 was 7,085 ha, which is lower than the 7,489 ha recorded last year.

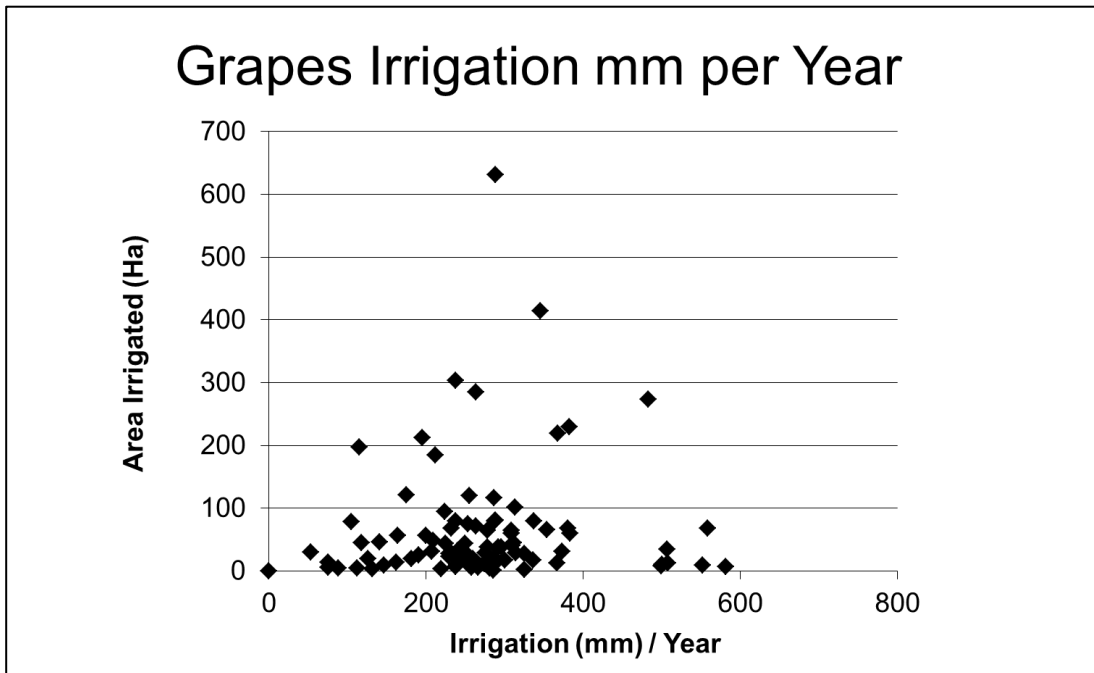


**Figure 9: Average total irrigation rate for the year by crop type:** Irrigation is shown in mm for 2017-18, 2018-19 and 2019-20.

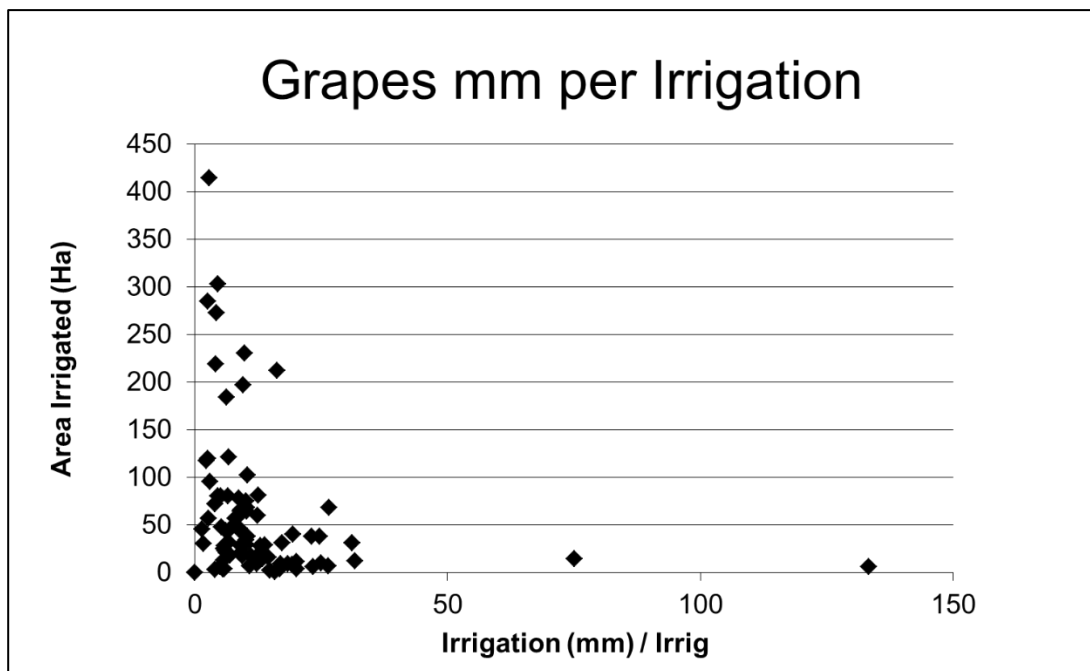


**Figure 10: Average mm of water applied per irrigation for each crop type for the last three years.**

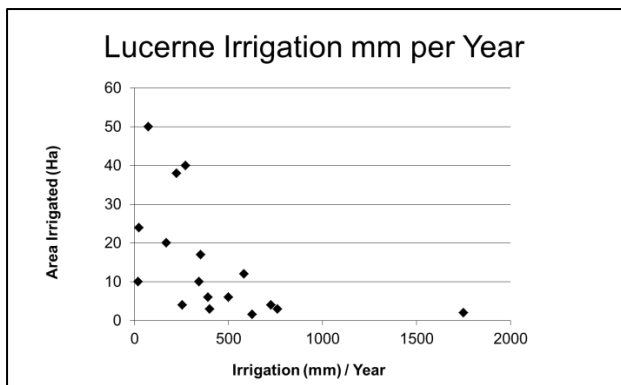
**Figures 11-14:** These charts show the irrigation rate per property for the more common crops. **For each crop one chart shows (a) the mm per year and (b) the mm per irrigation.**



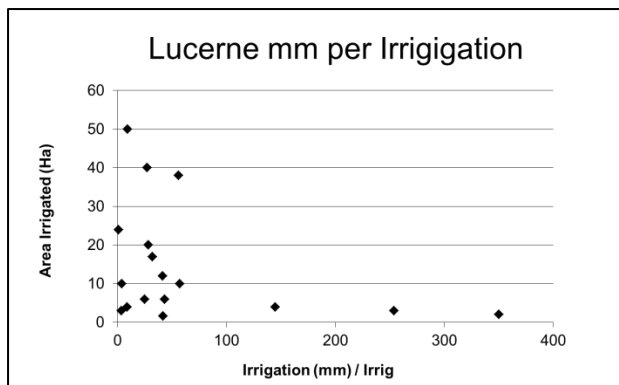
11a)



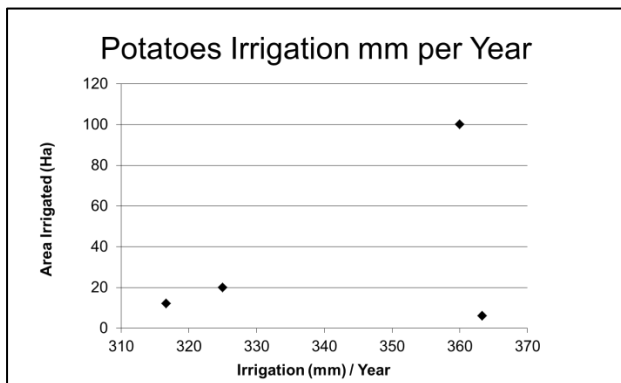
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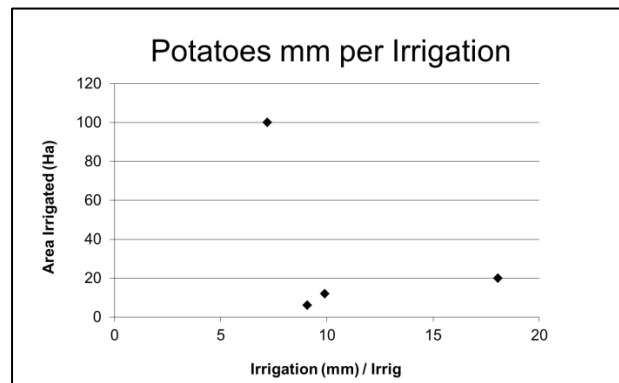
12(a)



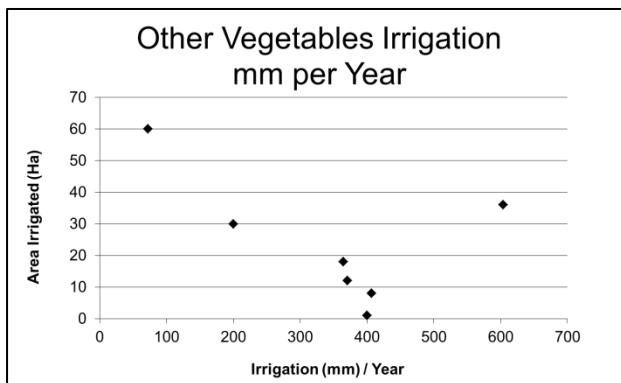
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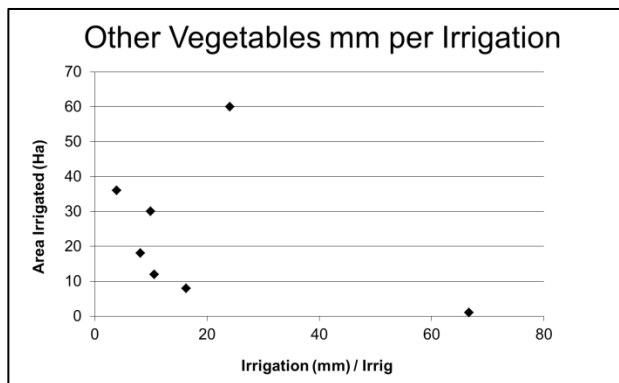
13(a)



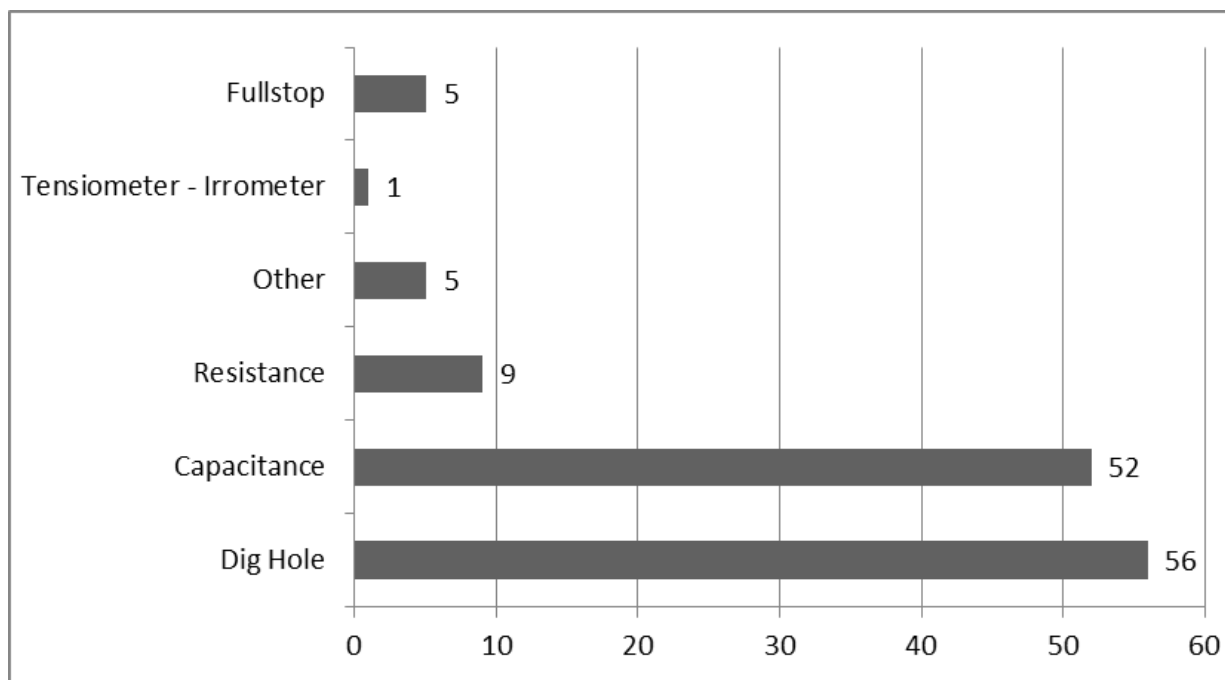
13(b)



14(a)



14(b)



**Figure 15: Number of growers using Soil Moisture Monitoring devices in 2019-2020:** “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 2020 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
2019-2020	2.82	2.43	2.84	3.51	1.8	5.56	2.8
2018-2019	2.79	2.9	6.46	3.4	1.3	5.33	2.95
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

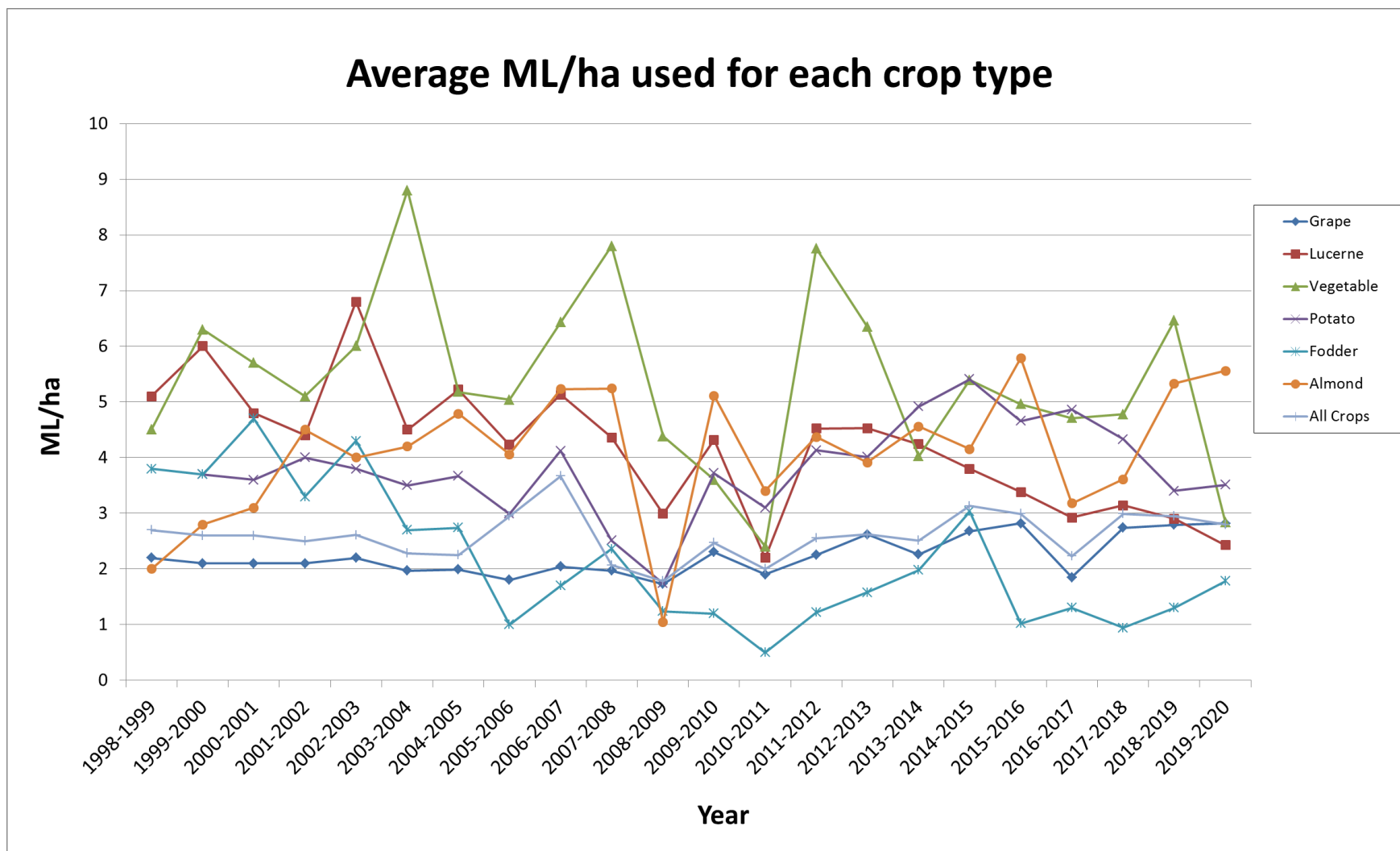


Figure 16: Average ML / ha used for each crop type

**Table 3: ML used and ha irrigated comparison chart:**

	2019-2020	2018-2019	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
<b>Total ML</b>	<b>19,839</b>	<b>22,125</b>	<b>20,279</b>	<b>14,772</b>	<b>20,932</b>	<b>20,408</b>	<b>18,605</b>	<b>18,617</b>	<b>17,056</b>	<b>13,346</b>	<b>16,241</b>	<b>12,001</b>	<b>14,743</b>	<b>20,911</b>	<b>15,811</b>	<b>17,719</b>	<b>17,154</b>	<b>20,715</b>	<b>17,428</b>	<b>17,467</b>	<b>16,961</b>
<b>Total ha</b>	<b>7,085</b>	<b>7,489</b>	<b>6,792</b>	<b>6,637</b>	<b>7,011</b>	<b>7,380</b>	<b>7,406</b>	<b>7,107</b>	<b>6,687</b>	<b>6,687</b>	<b>6,578</b>	<b>6,748</b>	<b>7,049</b>	<b>8,370</b>	<b>7,739</b>	<b>7,869</b>	<b>7,509</b>	<b>7,934</b>	<b>7,089</b>	<b>6,788</b>	<b>6,625</b>
Grape ML	16,702	16,418	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	5,920	5,892	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	608	1,352	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	251	466	393	348	384	439	341	402	327	170	152	109	155	280	325	343	354	376	471	429	418
Veg ML	468	1,194	559	856	963	964	580	610	877	193	36	57	179	373	363	638	605	647	651	769	761
Veg ha	165	185	117	182	194	179	144	96	113	81	10	13	23	58	72	123	69	108	103	134	121
Potato ML	485	717	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	138	211	175	238	203	229	218	307	311	179	86	75	54	291	392	348	360	394	425	490	485
Fodder ML	120	141	79	21	76	109	107	90	78	22	47	32	53	222	144	505	399	752	316	742	358
Fodder ha	67	108	84	16	74	36	54	57	64	43	39	26	23	130	144	184	146	173	97	157	96
Almond ML	195	202	65	57	104	166	187	180	188	148	225	193	231	251	195	230	203	188	246	172	164
Almond ha	35	38	18	18	18	40	41	46	43	43	44	44	44	48	48	48	48	47	55	55	58
Other crops ML	1,261	2,100	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	509	589	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**

**Prepared by Saeed Ghaderi, Hydrogeologist, Water Science Unit, Department for Environment and Water**

## **Figure 17: Murray Group Limestone aquifer water levels 2016-2020**

The main aquifer used in the Angas Bremer PWA is the confined Murray Group Limestone (MGL) aquifer which is up to 100 m thick. For the period 2016–2020, 18 of 33 monitoring wells show rising or stable groundwater pressure levels and 15 wells show a declining five-year trend. The rate at which pressure levels in the 15 wells decreased over the five-year period ranged between 0.03 and 0.35 m/y with a median of 0.08 m/y. These declining trends are not concerning as pressure levels are currently (December 2020) considerably above average levels when compared to historic levels.

## **Figure 18: Long-term water levels for selected monitoring wells in MGL aquifer**

Graphs of long-term water levels for selected monitoring wells show a rising trend across the region and are at the highest levels recorded since monitoring began in the 1970s. The long-term increases in pressure levels are mainly attributed to managed aquifer recharge operations in the area. Additionally, since 1992, groundwater extractions have decreased significantly due to the increased use of alternative surface water sources.

## **Figure 19: Quaternary aquifer water levels (current)**

The shallow Quaternary aquifer consists of a 10–20 m thick sequence of clays, silts and sands. This aquifer is generally highly saline with low yields and the groundwater resource has limited use. The water level monitoring in March 2020 shows the watertable is more than 3 m below ground surface across the area with the exception of areas adjacent to Lake Alexandrina where the watertable is naturally shallower than 3 metres.

## **Figure 20: MGL aquifer salinity distribution (2020)**

The salinity distribution in the MGL aquifer shows low-salinity groundwater is limited to relatively narrow zones parallel to the Angas and Bremer Rivers. In 2020, from 40 water samples collected from irrigators across the area, 55% of salinity monitoring wells recorded salinities in the range of 1500 to 3000 mg/L which is typical of the MGL aquifer, but considered to be above the salinity tolerance level for grapevines. Of the remaining salinity samples, 25% recorded salinities of less than 1500 mg/L.

## **Figure 21: MGL aquifer salinity 2016-2020**

Salinity monitoring for the period 2016–2020 shows stable or decreasing salinity levels in 9 of the 14 wells with available data. Wells that currently have five years of salinity data are generally located adjacent to the Angas and Bremer Rivers where most of the groundwater extraction occurs. Short-term fluctuations in groundwater salinity are mainly due to managed aquifer recharge operations. Irrigators from across the area are encouraged to participate in the annual groundwater sampling program, so the long-term status of the resource as a whole can be investigated.

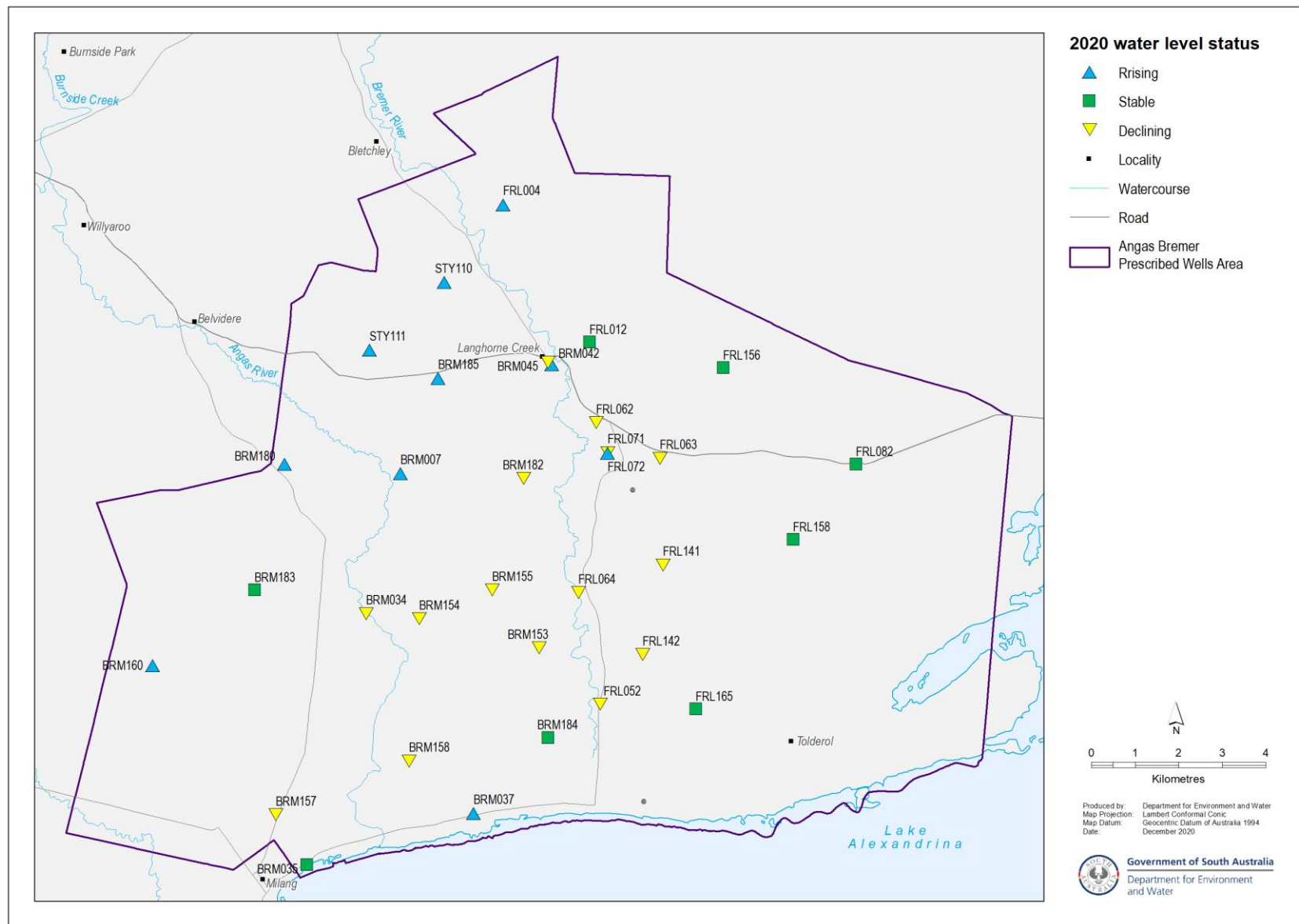


Figure 17: Murray Group Limestone aquifer water levels 2016-2020

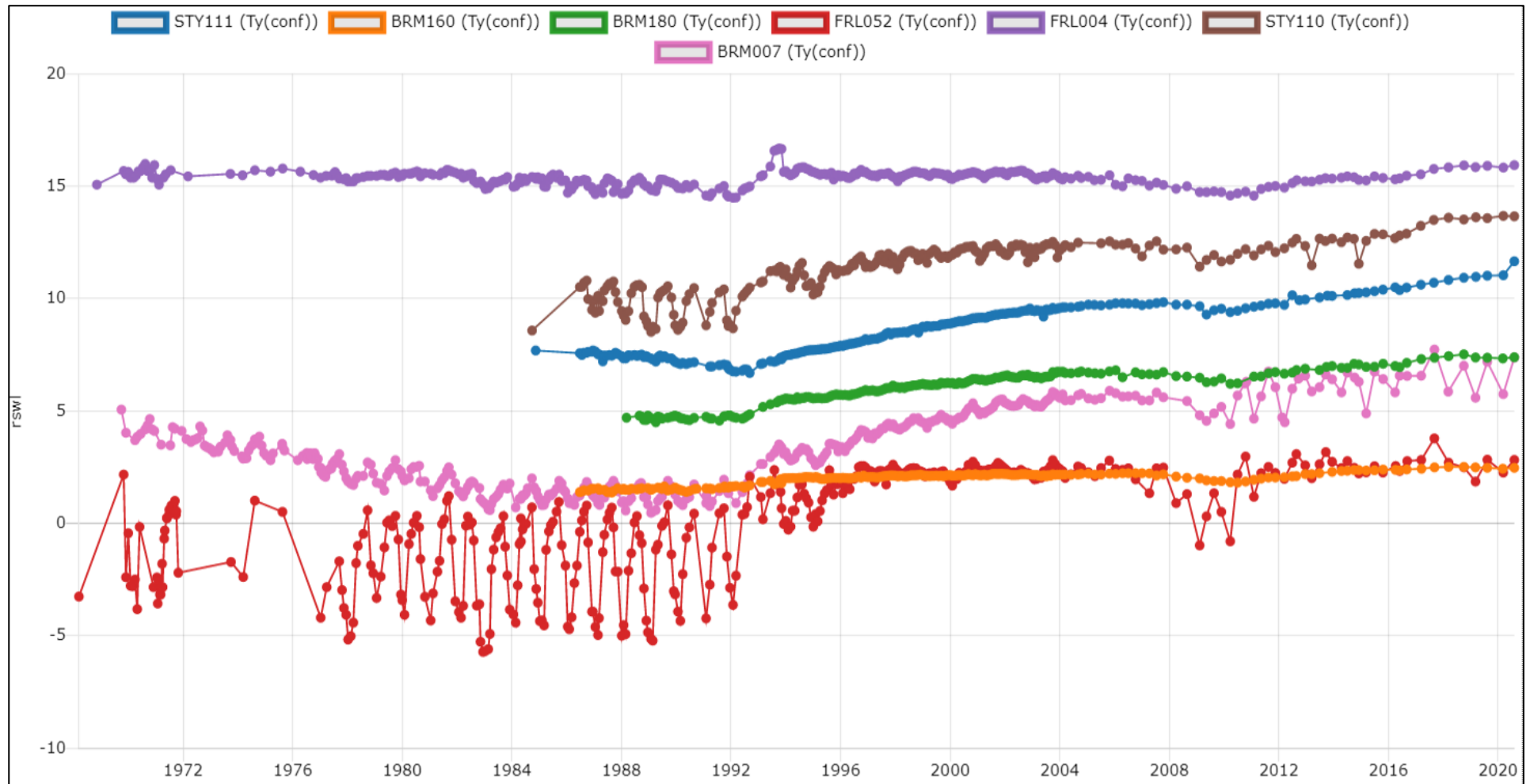
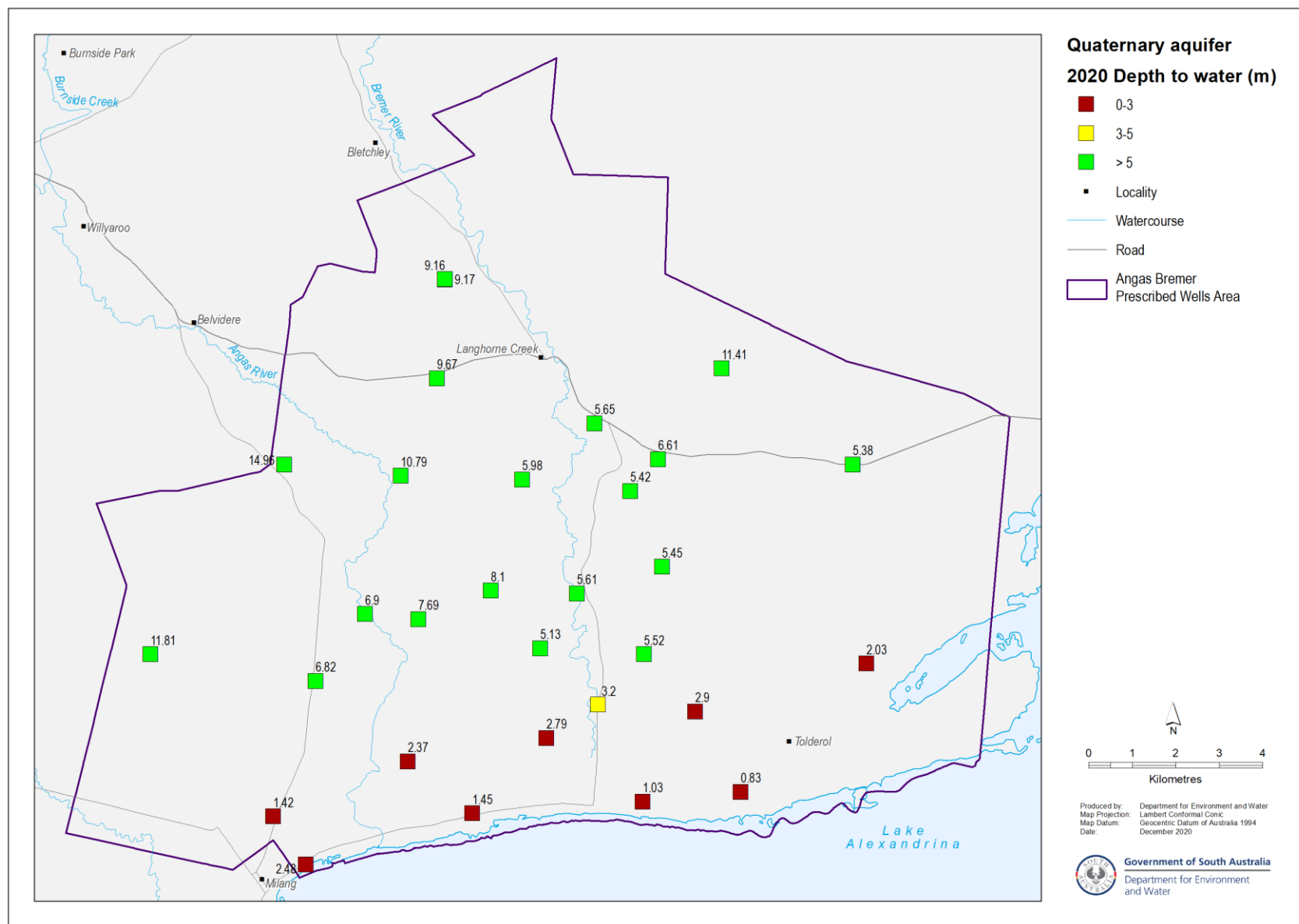


Figure 18: Long-term water levels for selected monitoring wells in the Murray Group Limestone aquifer



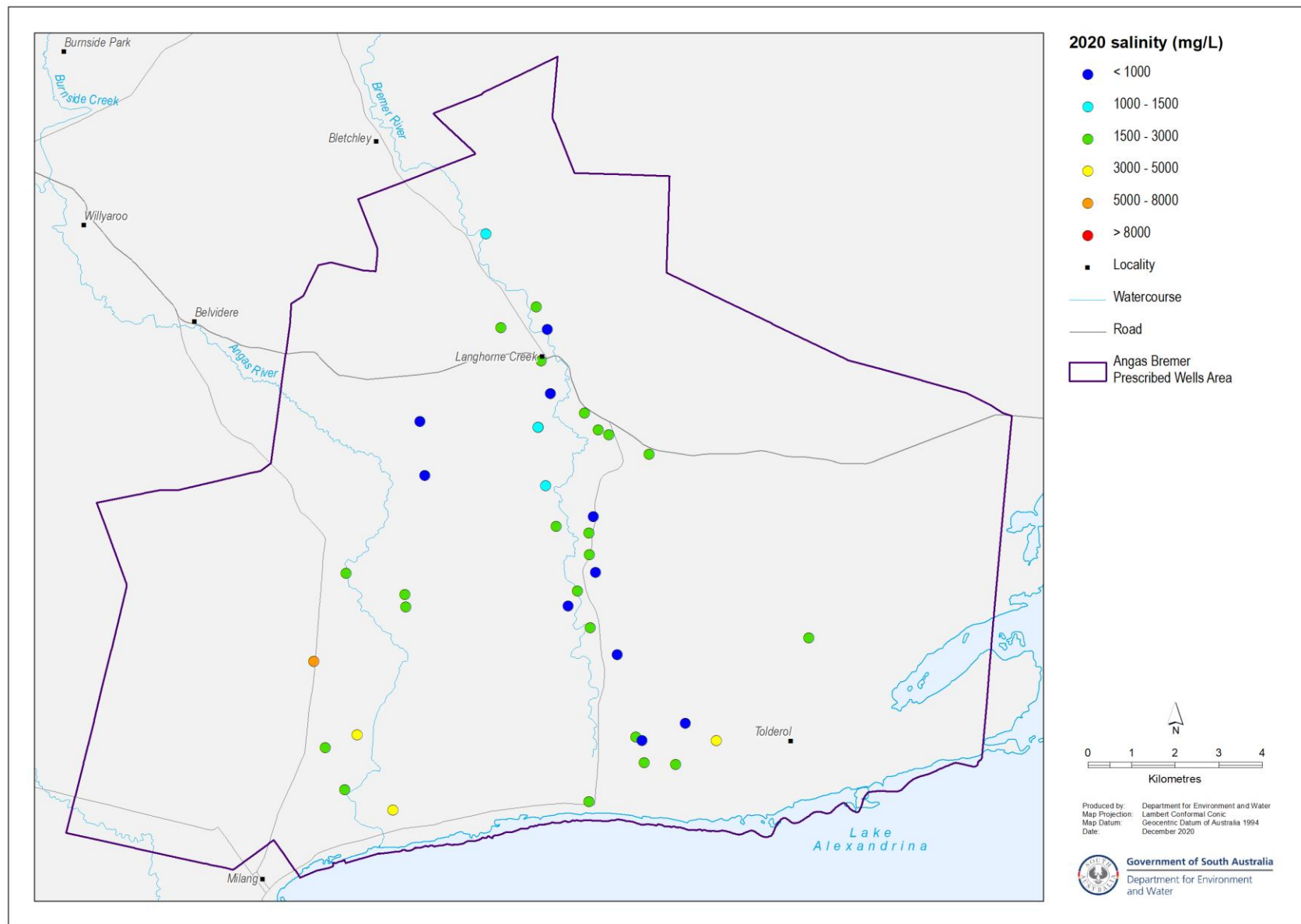


Figure 20: 2020 Murray Group Limestone aquifer salinity distributions (mg/L)

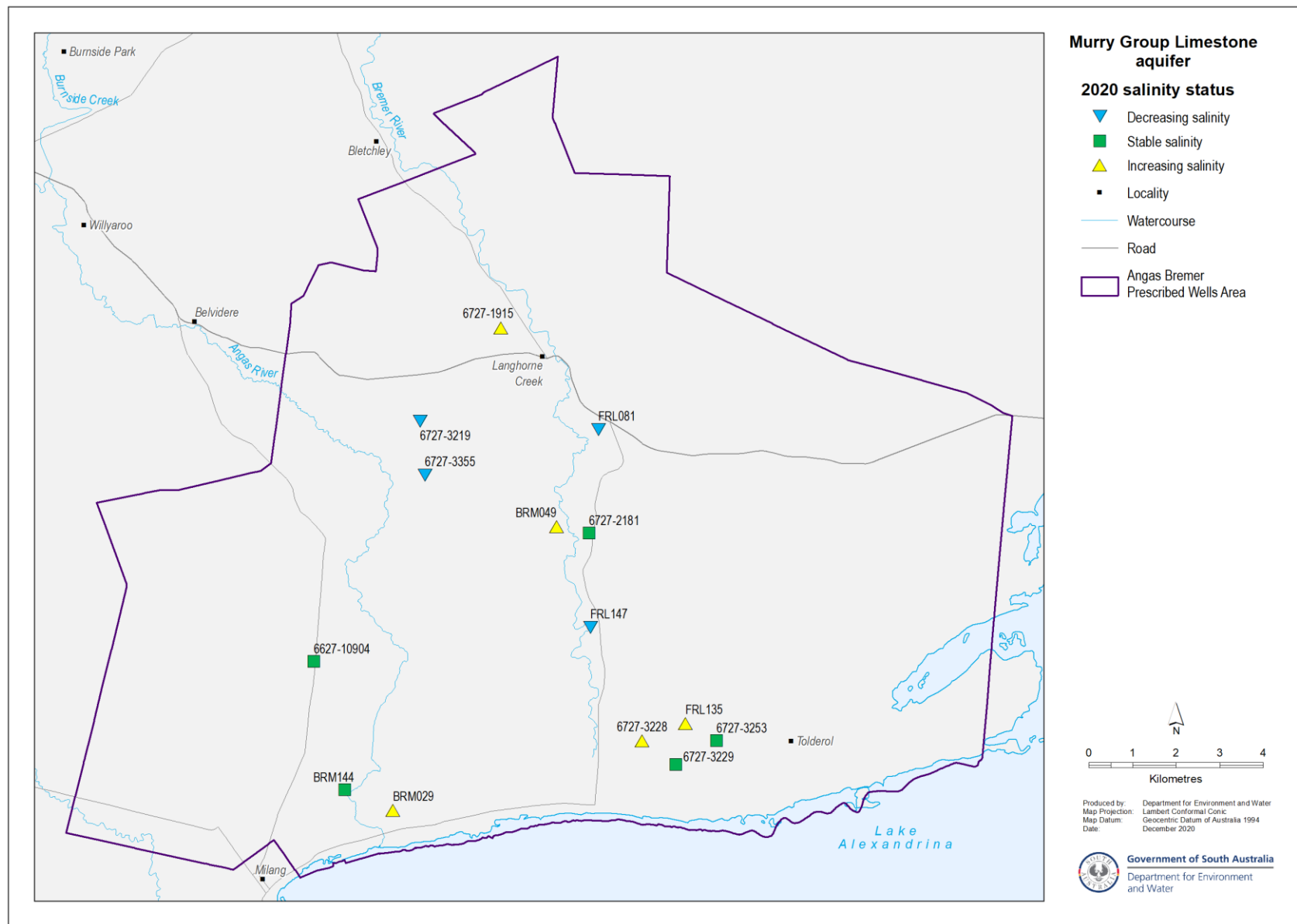


Figure 21: Murray Group Limestone aquifer salinity 2016-2020

# Langhorne Creek Weather Station Statistics

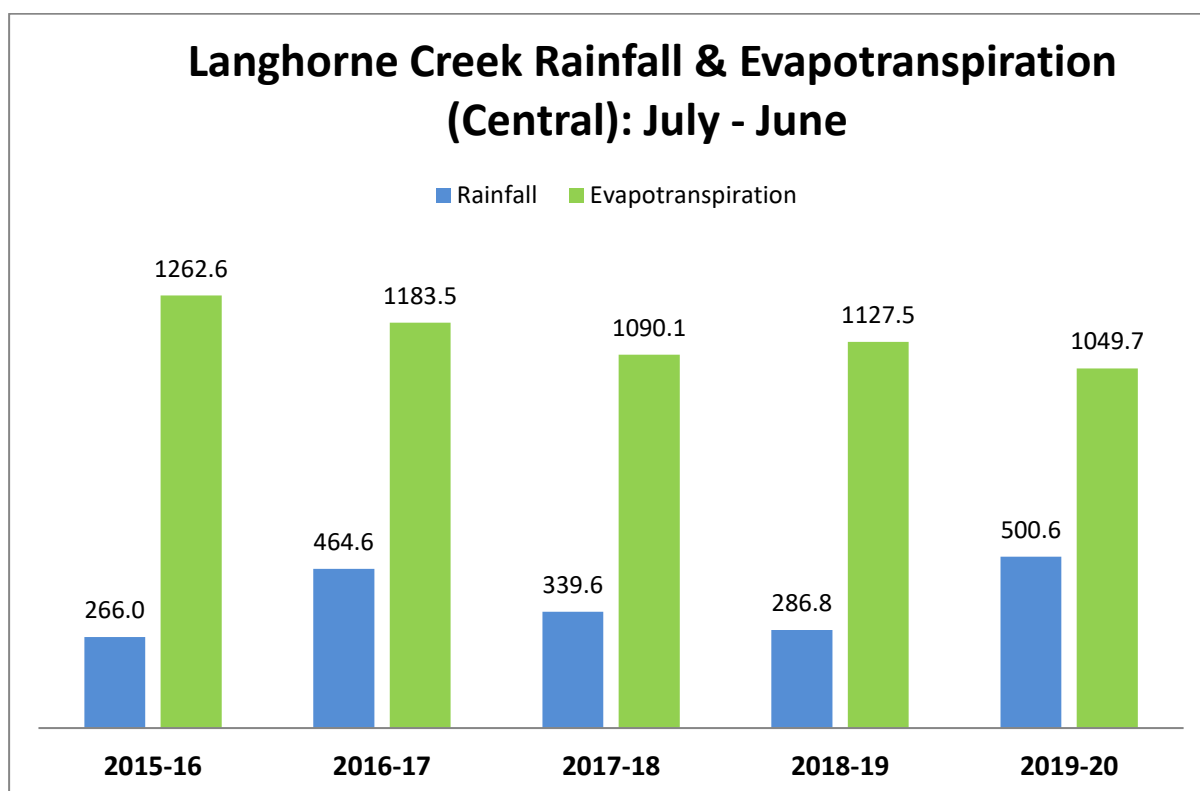
*Michael Cutting, Natural Resources SA Murray Darling Basin*

## 2019/20 Seasonal Summary:

As shown in Figure 22 500.6mm of **rainfall** was recorded during the 2019/20 water use year (July – June) at the Langhorne Creek Central (Lake Breeze) weather station site which was significantly greater than the 286.8mm recorded in 2018/19.

The 2019/20 **evapotranspiration (ET)** figure of 1,049.7mm was slightly less than the 2018/19 total of 1,127.5mm.

Rainfall & ET figures produced an **evaporative deficit (ET - rainfall)** of 549.1mm for the 2019/20 season which was a big reduction from the 2018/19 figure of 840.7mm, which is the equivalent of just under 3.0ML/ha.



**Figure 22: Rainfall and Evapotranspiration – Langhorne Creek Central**

The highest **daily maximum temperature** for 2019/20 of 44.6C was observed on the 21<sup>st</sup> December 2019 which was a day on which many new maximum temperature records were recorded across SA. The **minimum daily temperature** of -3.5C was recorded on the 10<sup>th</sup> June 2020.

The highest **daily evapotranspiration** figure occurred on the 21<sup>st</sup> December 2019 when 10.6mm was recorded which not surprisingly coincided with the maximum daily temperature observation.

The **highest daily rainfall** total observed in 2019/20 was 58.4mm which was recorded on the 1<sup>st</sup> February 2020. This is one of the highest daily totals recorded at the site since it was installed in 2004. The Langhorne Creek Post Office BoM site recorded 83.2mm on the same day which highlights the variation in rainfall totals over a relatively short distance.

Monthly rainfall distribution for the 2019/20 season is shown in Figure 23 below.

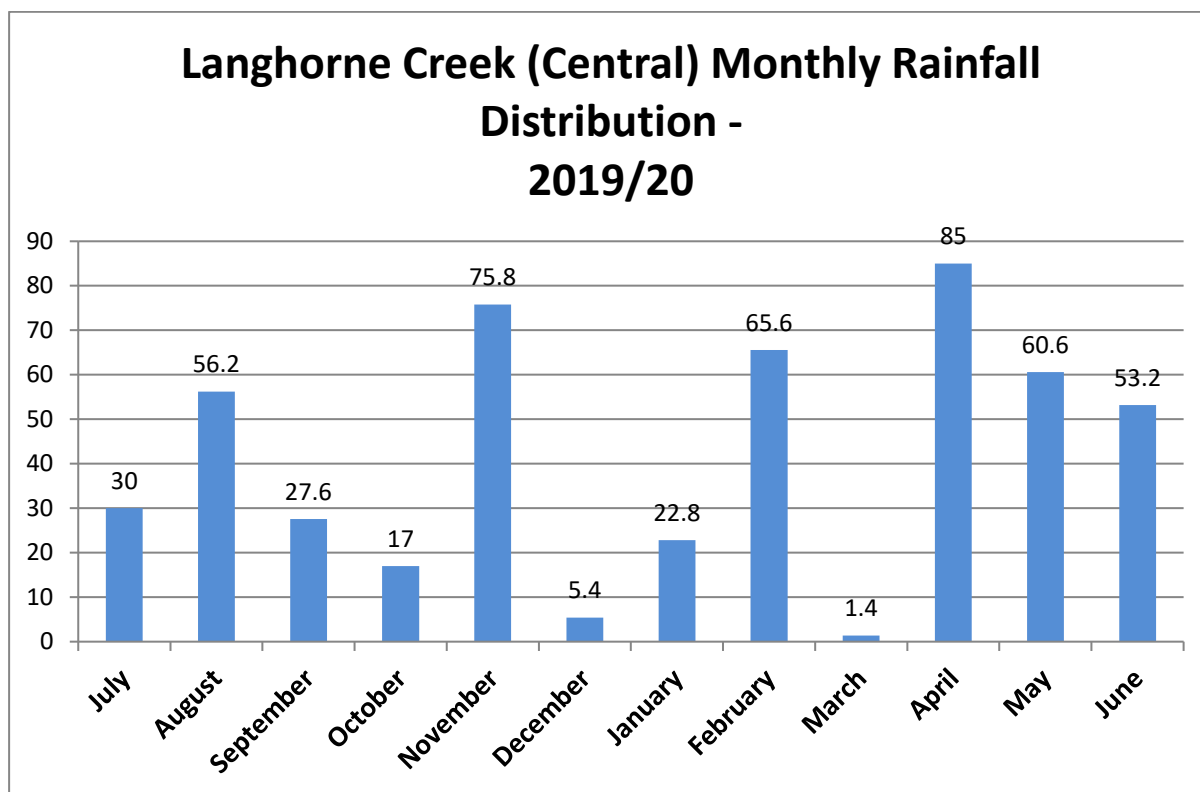


Figure 23: Monthly Rainfall Totals - Langhorne Creek Central Site

# **The Twenty Second Annual Public Meeting of the Angas Bremer Water Management Committee Incorporated**

Wednesday 26<sup>th</sup> August, 2020 at 7:00pm.

The Langhorne Creek Bowling Club, Langhorne Creek.

**Attendees:** Mayor Keith Parks, David Greenhough, Kym McHugh, Barry Potts, Leah Hunter, Keren Stagg, Alyssa Lovelock, Kim Krebs, Tom Mowbray, Paul Wainwright, Wendy Telfer, Cr Mike Farrier, Peter Bray, Ben Helyar, Tim Follett, Justin Cleggett, Ray McDonald, David Hender, Trevor McLean, Andrew Cooper, Greg Follett, Randall Follett, George Borrett, John Borrett, Loen Furler, James Stacey, Brett Cleggett, David Eckert, Dale Wenzel, V. Serelin.

**Apologies:** Ken Follett, Michael Clements and Michael Cutting.

## **1. Opening Address**

The meeting was opened at 7:10 pm by Barry Potts, Presiding Member. Barry welcomed all attendees, guest speakers and thanked the committee for their ongoing contribution.

Attendees were then reminded of Covid19 social distancing and hygiene protocols.

## **2. Minutes of the last Annual Public Meeting**

A motion was raised that the minutes from last year's APM be accepted.

Moved: George Borrett      Seconded: Justin Cleggett

## **3. Annual Report**

The Annual Report was presented by Barry Potts.

During the past 12 months the Committee continued to focus on its core roles of the IAR and working with multiple Government agencies invested in water use for the region.

ABWMC received funding from SAMDB NRM Board during 2019-20 and are now receiving 2020-21 funding from the new Hills & Fleurieu (H&F) Landscape Board. The committee look forward to working with the new H&F Landscape Board in the future.

The ABWMC also continued to address the potential issues that increased storm water run-off from new urban developments within the Mount Barker area could have on both the quality and volume of water entering the Angas Bremer catchment. During October 2019 ABWMC members were invited to present and discuss these concerns with representatives from DEW, Mount Barker and Alexandrina councils at the Ranges to River Forum held in Mount Barker. Thanks to David Kohl for presenting at the Ranges to River Forum on behalf of the committee.

Barry welcomed all attendees to attend future Committee meetings and to engage with ABWMC.

**4. Hills & Fleurieu (H&F) Landscape Board overview, David Greenhough (Hills and Fleurieu Landscape Board Chair), Kim Krebs (General Manager, Hills & Fleurieu), Wendy Telfer (Manager Planning, Engagements & Partnerships), Paul Wainwright (Team Leader Water Resources) and Tom Mowbray (Senior Water Planner, EMLR)**

Barry introduced David Greenhough, H&F Landscape Board Chair who thanked ABWMC for the opportunity to present at the 2020 APM.

David provided an overview on the new H&F Landscape Board which included the following priorities:

- Focus on partnering with community groups, Local Government and industry
- Water management
- Sustainable agriculture
- Pest animal and plant control
- Initial 5 year Strategic Plan. Community consultation until 31.12.20. Plan due 30.6.21.

David then introduced Kim Krebs, Wendy Telfer, Paul Wainwright and Tom Mowbray, giving a brief explanation of their roles.

Tom Mowbray did a presentation on the H&F Landscape Board's relationship with ABWMC which covered the EMLR WAP, Flows for the Future and ongoing water management planning. H&F Landscape Board/DEW Science Dept. are currently modelling the effect of urban developments on storm water run-off for the Bremer and Angas Catchments. The report findings will be made public once available.

Barry thanked David and his team and asked for any questions to be directed to ABWMC.

## **5. Alexandrina Council update, Keith Parkes, Mayor, Alexandrina Council**

Barry introduced Keith Parkes, Mayor, Alexandrina Council who spoke about Mount Barker storm water run-off from an Alexandrina Council perspective as well as highlighted developments and infrastructure that Alexandrina Council are currently working on within the region.

Keith's presentation included the following points:

- Mount Barker Council is the highest producer of storm water. Alexandrina Council is the 3<sup>rd</sup> highest producer of Class B water which it uses to irrigate turf, reserves, Strathalbyn racecourse and sporting facilities within the region.
- Mount Barker Council used to discharge excess water in to Hillgrove Mine however this is no longer possible.
- Alexandrina Council are working with Regional Development Australia to provide Class A water to the Langhorne Creek region. A combination of Federal Government, Alexandrina and Mount Barker Council funding will be required. Project to be given priority due to the Mount Barker storm water issue.
- Alexandrina Council has completed its 2020-2040 public consultation. Main concerns were environmental and climate change related. Alexandrina Council are now working on a 10 year plan to address these concerns.
- Other regional works currently in progress or in the planning stages include the 'Reds' walking trails, upgrade of facilities and infrastructure within the Langhorne Creek wine region, Strathalbyn Streetscape works and upgrade of the Goolwa Wharf precinct, the Goolwa Primary School and the Strathalbyn Hospital.

A question was asked regarding the definition of Class A and Class B water and what it could be used for. Keith will investigate and respond through the ABWMC.

Barry thanked Keith for his presentation and gave all guest speakers a small gift.

## **6. Summary of 2019/2020 Irrigation Annual Report – Leah Hunter, Project Officer, ABWMC.**

Leah presented the following summary of the interim Irrigation Annual reporting for the 2019/20 irrigation year:

- 97 IAR submissions (73%) submitted on line and approximately 121 reports in total received prior to accreditation date.

- Outstanding reports are currently being followed up and the final IAR will be completed in December 2020.
- So far overall water use is down on last year, due in the main to a decrease in River Murray Water. Groundwater extraction is also down and there has been a slight increase in aquifer recharge.

Leah thanked SA MDB NRM Board for funding the 2019-20 IAR and also the H&F Landscape Board for funding the 2020-21 IAR. She also thanked the committee members for their continued support.

Barry thanked Leah for her hard work throughout the year.

## **7. Financial Report – Barry Potts, Presiding Member**

The Annual Financial Report of the Angas Bremer Water Management Board 2019-20 was presented by Barry Potts.

## **8. 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. Two positions have been carried over from the previous committee, and nominations were called for up to eight positions.

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

Members electing to renominate were: Justin Cleggett, Tom Mowbray, Ken Follett, Trevor McLean, Michael Clements and Michael Cutting.

There were no new written nominations received prior to the APM, however James Stacey was nominated to join the committee during the APM which he accepted.

## **9. General Business**

Delays in the processing of applications associated with the Murray-Darling Basin Authority's Water Efficiency program are holding up the commencement of planned projects. Applications appear to be held up either in Victoria or between both State Government Ministers. There is an issue as to whether the EMLR is eligible for the program as the EMLR region's water resources operate differently to those in most other parts of the Basin. Michael Cutting is following this up and will advise through the ABWMC once the outcome is known.

**10. The meeting was closed at 8.40pm. Due to Covid19 constraints, no supper was provided this year.**

# **Financial Accounts 2019-20**

**ANGAS BREMER WATER MANAGEMENT COMMITTEE INC.**

**FINANCIAL STATEMENTS**

**FOR THE YEAR ENDED JUNE 30, 2020**

**"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, 2020**

	2020	2019
	\$	\$
<b>INCOME</b>		
<b>Grants</b>		
Grants (State) Op-Non Rec	<u>0.00</u>	<u>1,000.00</u>
<i>Total Grants</i>	0.00	1,000.00
<b>Fee for Service</b>		
Fees and Charges - Unrestricted	<u>16,845.00</u>	<u>15,010.00</u>
<i>Total Fee for Service</i>	16,845.00	15,010.00
Interest-Unrestricted	<u>1.43</u>	<u>1.74</u>
<b>Total Income</b>	<b><u>16,846.43</u></b>	<b><u>16,011.74</u></b>
<b>EXPENSES</b>		
Advertising & Promotion	212.00	208.40
Bank Fees	2.50	1.11
<b>Client Support Services</b>		
CSS Community Engagement	0.00	164.33
CSS Project Co-ord/Manag	16,362.50	16,030.00
<i>Total Client Support Services</i>	16,362.50	16,194.33
Computer Expenses	1,000.00	1,029.05
Insurance	433.89	386.46
Legal Fees	800.00	0.00
Meetings Expense	319.63	150.00
Membership fees paid	45.45	45.45
Postage, Freight & Courier	207.27	149.09
Sundry Expenses	109.88	0.00
Telephone, Fax & Internet Exp	<u>176.76</u>	<u>154.13</u>
<b>Total Expenses</b>	<b><u>19,669.88</u></b>	<b><u>18,318.02</u></b>
<b>Net Surplus / (Deficit)</b>	<b><u>(2,823.45)</u></b>	<b><u>(2,306.28)</u></b>

**ANGAS BREMER WATER MANAGEMENT COMMITTEE INC.**

**STATEMENT OF FINANCIAL POSITION**

**FOR THE YEAR ENDED JUNE 30, 2020**

	<b>2020</b>	<b>2019</b>
<b>CURRENT ASSETS</b>	<b>\$</b>	<b>\$</b>
Cash at Bank (Unrestricted)	12,426.98	13,413.16
Accounts Receivable	2,029.50	1,111.00
<b>TOTAL CURRENT ASSETS</b>	<u>14,456.48</u>	<u>14,524.16</u>
<b>TOTAL ASSETS</b>	<u><b>14,456.48</b></u>	<u><b>14,524.16</b></u>
<b>CURRENT LIABILITIES</b>		
Accounts Payable	6,365.75	3,348.54
Accrued Expenses	175.00	0.00
GST Payable	184.50	101.00
Less GST Receivable	(569.99)	(304.42)
GST Clearing	(289.00)	(34.63)
<b>TOTAL CURRENT LIABILITES</b>	<u><b>5,866.26</b></u>	<u><b>3,110.49</b></u>
<b>NET ASSETS</b>	<u><b>8,590.22</b></u>	<u><b>11,413.67</b></u>
<b>EQUITY</b>		
Unexpended Funds as at July 1, 2019	11,413.67	15,048.40
Current Year Surplus (Deficit)	(2,823.45)	(2,823.45)
<b>Unexpended Funds as at June 30, 2020</b>	<u><b>8,590.22</b></u>	<u><b>12,224.95</b></u>

**ANGAS BREMER WATER MANAGEMENT COMMITTEE INC.**

**NOTES TO THE FINANCIAL STATEMENTS**

**FOR THE YEAR ENDED JUNE 30, 2020**

**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 108 - Accounting Policies, changes in accounting estimates and errors

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 30/6/20;
- (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 30/6/20;
- (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: BC Potts

Barry Potts, Chairperson

Date: 3/8/20

Signed: J R Cleggett

Justin Cleggett, Treasurer

Date: 3/8/20

**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, 2020:

- (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: Barry Potts

Barry Potts, Chairperson

Date: 24/8/20





Signed: Justin Cleggett

Justin Cleggett, Treasurer

Date: 25/8/20

<b>ANGAS BREMER WATER MANAGEMENT COMMITTEE INC.</b>				
<b>PROJECT INCOME, EXPENDITURE AND BALANCES</b>				
<b>FOR THE YEAR ENDED JUNE 30, 2020</b>				
<b>Project Name</b>	<b>Balance at June 30, 2019</b>	<b>Total Income</b>	<b>Total Expenses</b>	<b>Balance at June 30, 2020</b>
ABIRA funds	8,370.30	0.00	800.00	7,570.30
Angas Bremer Water Management Committee Funds	1,530.11	1.43	511.62	1,019.92
Cover Crops Grant	1,513.26	0.00	1,513.26	0.00
Irrigation Annual Reporting Project	0.00	16,845.00	16,845.00	0.00
Volunteer Small Grant 2019	0.00	1,000.00	1,000.00	0.00
<b>Totals</b>	<b>11,413.67</b>	<b>17,846.43</b>	<b>20,669.88</b>	<b>8,590.22</b>

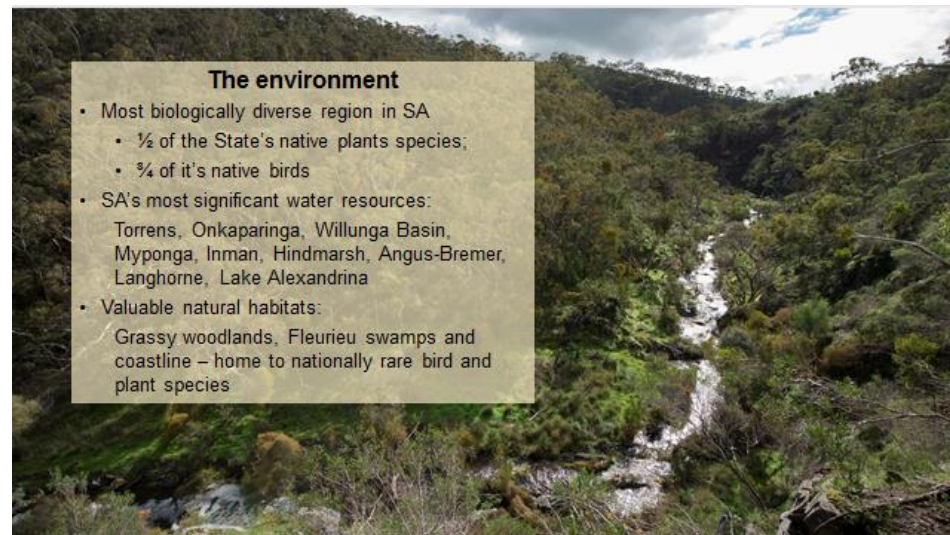
**Appendix A** — **Hills & Fleurieu Landscape Board overview**, David Greenhough, Kim Krebs, Wendy Telfer, Paul Wainwright and Tom Mowbray.

<div data-bbox="150 446 362 981"></div> <div data-bbox="385 485 855 606"><h2>Hills and Fleurieu Landscape Board</h2></div> <div data-bbox="358 627 896 831"><p>David Greenhough, Chair Kim Krebs, General Manager Wendy Telfer, Manager Planning Engt &amp; Partnerships Paul Wainwright, Team Leader Water Resources Tom Mowbray, Senior Water Planner (EMLR)</p></div> <div data-bbox="488 893 761 960"></div> <div data-bbox="896 446 1108 981"></div>	<div data-bbox="1153 502 1601 798"><h3>The Hills &amp; Fleurieu Landscape Board</h3><ul style="list-style-type: none"><li>• <i>Landscape South Australia Act 2019</i></li><li>• Landscape boards replace NRM boards</li><li>• Includes EMLR from former SAMDB NRM and WMLR from former AMLR NRM Board</li><li>• Community at the heart of landscape management</li><li>• Focus on partnering with community groups, local government and industry</li><li>• Five-year plan in 2020-21</li></ul></div> <div data-bbox="1131 446 2083 981"></div>
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### The Hills & Fleurieu landscape region

- 439,000 ha of land
- 219,000 ha of sea and lakes
- 17,000 ha of conservation reserves
- 160 km of coastline
- 130,000 people – high growth predicted
- Regional centres: Mt Barker, Victor Harbor, Strathalbyn, McLaren Vale
- Aboriginal nations: Kurna, Ngarrindjeri and Peramangk



### The environment

- Most biologically diverse region in SA
  - ½ of the State's native plants species;
  - ¾ of it's native birds
- SA's most significant water resources:
  - Torrens, Onkaparinga, Willunga Basin, Myponga, Inman, Hindmarsh, Angus-Bremer, Langhorne, Lake Alexandrina
- Valuable natural habitats:
  - Grassy woodlands, Fleurieu swamps and coastline – home to nationally rare bird and plant species



### Landscape Board priorities

- **Back to Basics**
  - *Sustainable Agriculture* - soil and pasture management sustains agricultural productivity and environment
  - *Water management* - finite resources to be shared between users and the environment
  - *Pest plants and animals* - effective control requires coordination across private and public land
- Community engagement - promotes awareness of issues and informs community decision making
- Engage with State and Local Government, industry and the community across the footprint



### Opportunities

- Significant opportunities for community involvement:
  - protecting landscapes, environment and primary production
  - restoring habitat to increase environmental and primary production values
  - identifying the local landscape priorities
- The Board will help grow and steer economic development
- New partnerships with local service providers, councils and Aboriginal organisations to deliver regional landscape outcomes
- Regional leadership
- Accessing new funding sources
- Joint planning for the future



### Angus Bremer Water Management Committee

EMLR WAP  
Flows for the Future  
Alexandrina Council  
Mt Barker Council



### Partnership with the Angus Bremer Water Management Committee (ABWMC)

- ABWMC recognised for sustainable approach to long-term management of water
- Local leadership, involvement in water planning, capacity building, sharing knowledge
- HF Landscape Board has provided funding in 2020-21 to support ABWMC including undertaking the annual water-use survey
- Look forward to a productive working relationship



### Water Planning - Eastern Mount Lofty Ranges Water Allocation Plan ( EMLR WAP)

- Plan sets out the rules for managing the take and use of prescribed water resources to ensure resource sustainability
- Current WAP was adopted in 2013
- *Landscape South Australia Act 2019* requires landscape boards to prepare and implement water allocation plans
- WAP must be reviewed within 10 years (2023)
- In the next 12 months the landscape board will be begin a process to review the WAP
- Community and industry engagement will be central to the review



### Other Initiatives

#### Flows for the Future project (Dpt for Environment and Water)

- Funded until 2023 to work with landholders to deliver environmental flows across EMLR catchments
- Important part of the delivery of the EMLR WAP
- Downstream landholders (and the environment) are expected to be beneficiaries of this work
- Staff from Goolwa-Wellington Local Action Planning Association and Livestock SA have co-delivered this work in a successful partnership model

#### Water management planning with Alexandrina & Mount Barker Councils

- Urban expansion is challenging the management of urban runoff/storm water and waste-water disposal
- Water quality and quantity impacts for downstream users is a known concern
- HF Landscape Board staff are engaging with Mt. Barker Council on a range of water related matters





Prof. Andy Lowe      Dr Chris West      David Greenhough      Janet Klein  
Drew Smith      Amy Williams      Carol Schofield AM

## Hills & Fleurieu Landscape Board



## Hills & Fleurieu Business Plan 20-21

Guides the Board's operations

- Priorities
- Income
- Expenditure
- Levies

