Katunga Water Supply Protection Area Groundwater Management Plan

Annual Report

For year ending 30 June 2016

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Foreword

Goulburn-Murray Water (GMW) is pleased to present the annual report for the Katunga Water Supply Protection Area Groundwater Management Plan (the Plan) for the 2015/16 water year.

GMW is responsible for implementation and administration of the Plan which was approved by the Minister administering the *Water Act 1989* (the Minister) on 24 July 2006.

This report has been prepared in accordance with section 32C of the *Water Act 1989* (the Act).

The report provides an overview of the groundwater management activities administered under the Plan during the 2015/16 water year.

A copy of this report is available for inspection at the Tatura office of GMW, or for download from the GMW website.

Neil Brennan

INTERIM MANAGING DIRECTOR

Date

Executive summary

The Katunga Water Supply Protection Area (WSPA) Groundwater Management Plan (the Plan) was approved on 24 July 2006 by the Minister.

The 2015/16 water year marks the tenth year of operation of the Plan.

Groundwater monitoring and metering programmes continue to support the implementation of the Plan.

Groundwater use in the 2015/16 water year was 57% (34,565.9 ML) of the total licence entitlement volume in the Katunga WSPA. This is a 14% increase on the 2014/15 water year and is the highest metered use since the Plan was approved.

Groundwater monitoring shows that aquifer recovery levels are several metres higher than levels recorded at the end of the extended dry period in 2009.

The annual allocation for the 2015/16 water year was 70% of licensed entitlement, the maximum allowable under the Plan.

In line with the requirements of the Plan for review, on 25 November 2015, the Minister for Environment, Climate Change and Water, Lisa Neville, appointed a Consultative Committee (the Committee) to provide advice on amendments to the Plan. The Committee has met to identify and discuss key topics including allocation methods, groundwater trading rules and salinity monitoring.

Once the Committee has developed draft proposed amendments, it will undertake consultation with groundwater users, key stakeholders and the broader community.

Until the amendment process is finalised and an amended Plan is approved by the Minister, the current Plan remains in place.

Contents

1 Introduction

1.1 Purpose

This annual report provides an overview of groundwater resource status and use in the Katunga WSPA throughout the 2015/16 water year.

1.2 Water Supply Protection Area

The Katunga WSPA is located in the Murray and Goulburn valleys, extending from Yarrawonga in the east to Barmah in the west and from the River Murray in the north down to Wungnhu in the south. The Katunga WSPA includes the townships of Numurkah, Cobram, Nathalia, Katunga and Katamatite.

The Katunga WSPA boundary has been set to manage groundwater resources at a depth of greater than 25 metres (m) below the ground surface. The overlying groundwater resources are managed in accordance with the Shepparton Irrigation Region Groundwater Management Area Local Management Plan.

There are three management zones within the Katunga WSPA: The North Western Dryland Zone – 1061, the Numurkah-Nathalia Zone – 1062 and the Cobram Zone – 1063, shown in Figure 1.

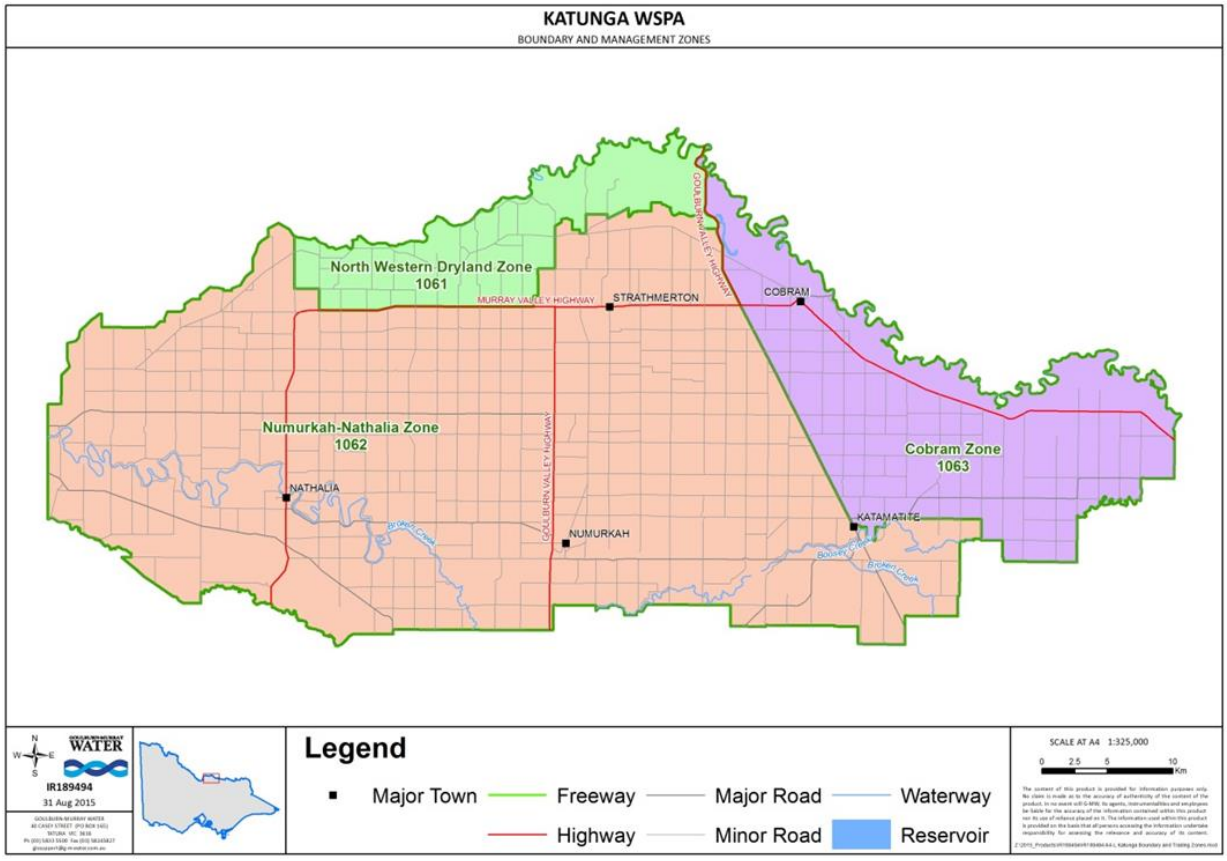


Figure 1 Katunga Water Supply Protection Area

1.3 Groundwater Management Plan

The Plan was approved on 24 July 2006 by the Minister in accordance with section 32A(6) of the Act.

The objective of the Plan is to make sure that the groundwater resources within the WSPA are managed in an equitable and sustainable manner.

The Plan enables annual allocations to be set which manage groundwater extraction. The intent of the annual allocation process is to attempt to maintain groundwater access for groundwater users. GMW has not received any reports of loss of access to groundwater from licensed groundwater users in the WSPA.

2 Groundwater Management

2.1 Licence volume

A limit on groundwater licence entitlement (a Permissible Consumptive Volume) for the Katunga WSPA has been set by the Minister at 60,577.0 megalitres per year (ML/yr).

The total groundwater licence entitlement volume in the Katunga WSPA was 60,404.9 ML/yr at 30 June 2016. The number of licences in each management zone is summarised in Table 1 along with the total number of licensed bores and total licence entitlement volume. Licensed bores are shown spatially in Figure 2.

The total licence entitlement volume decreased by 53.6 ML/yr over the 2015/16 water year. This decline is partially accounted for by a 148 ML/yr permanent transfer which was subject to a 20% reduction (29.6 ML/yr) in line with Prescription 10 of the Plan; and partially due to the surrender, expiry and cancellation of groundwater licences during the 2015/16 water year.

Table 1 Licence entitlement in the Katunga WSPA (2015/16)

Management Zone	Licences	Licensed bores	Licence volume (ML/yr)
Northwest Dryland Zone – 1061	20	22	4,924.2
Numurkah-Nathalia Zone – 1062	167	191	34,472.7
Cobram Zone – 1063	62	78	21,008.0
Total	**249**	**291**	**60,404.9**

Note: Data extracted from the Victorian Water Register 30 June 2016.

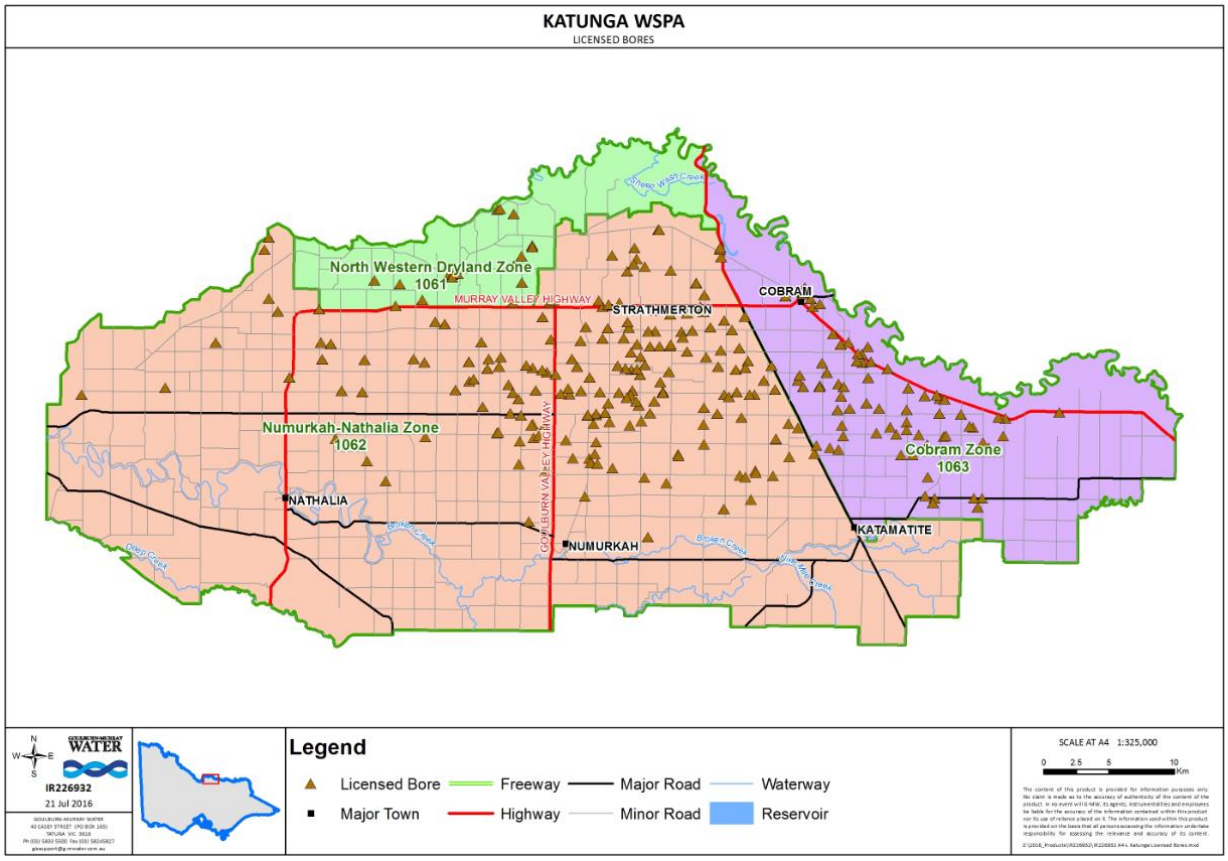


Figure 2 Licensed bores in the Katunga WSPA

2.2 Groundwater allocations

The process for setting annual allocations in the Katunga WSPA is specified in Prescription 3 of the Plan and is based on average groundwater use. If the five-year rolling average usage is greater than 30,000 ML/yr then an annual allocation of 50% of entitlement is announced in the following year. If the five-year rolling average usage is below 30,000 ML/yr, the following year's allocation is set at 70% of entitlement (the maximum allowable in the Plan).

The five-year average usage for the period 1 July 2010 to 30 June 2015 was 20,894 ML/yr (Figure 3) and resulted in an allocation of 70% being announced for all management zones during 2015/16.

The 2015/16 allocation was announced in a notice circulated in the Shepparton News on 17 July 2015 and in the Cobram Courier, Yarrawonga Chronicle and Numurkah Leader on 22 July 2015. A media release was also distributed to media outlets in the region on 27 July 2015 and all licensees were notified by mail on 20 July 2015. Allocation information was also published on the GMW website.

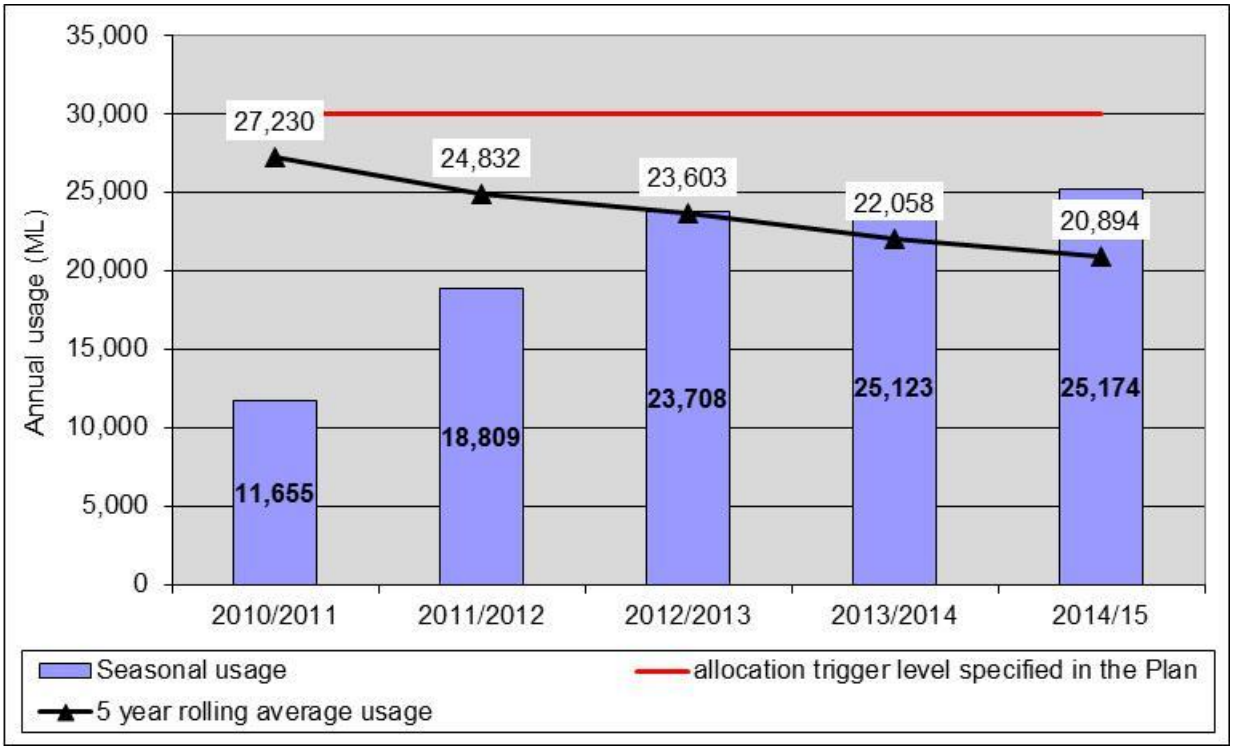


Figure 3 Annual use in the past 5 years and corresponding 5-year rolling average use

The total licence entitlement volumes allocated in each management zone in 2015/16 are provided in Table 2.

Table 2 Total allocated entitlement volumes in 2015/16 by management zone

Management Zone	Allocation (ML/yr)*
Northwest Dryland Zone - 1061	3,443.4
Numurkah-Nathalia Zone - 1062	24,155.1
Cobram Zone - 1063	14,705.6
Total	**42,304.2**

*Allocation at the start of the 2015/16 water year

2.3 Groundwater use

Total metered use in 2015/16 was 34,565.9 ML which is 57% of total licence entitlement. This is a 14% increase on the 2014/15 water year and is the highest metered use since the Plan was implemented in 2006. This high use is likely due to the dry conditions experienced in 2014/15.

Metered use by management zone is shown in Table 3. Metered use as a percentage of total entitlement volume was similar in both the Cobram and Numurkah-Nathalia Zones. Metered use in the Northwest Dryland Zone comprised a smaller proportion of total entitlement volume.

Table 3 Metered use by management zone in 2015/16

Management Zone	Total use (ML)	Percentage of total entitlement used
Northwest Dryland Zone - 1061	2,361.3	48%
Numurkah-Nathalia Zone - 1062	20,249.0	59%
Cobram Zone - 1063	11,955.6	57%
Total	**34,565.9**	**57%**

Annual metered use as a proportion of entitlement and allocation, from 2006/07 to 2015/16, is shown in Figure 4.

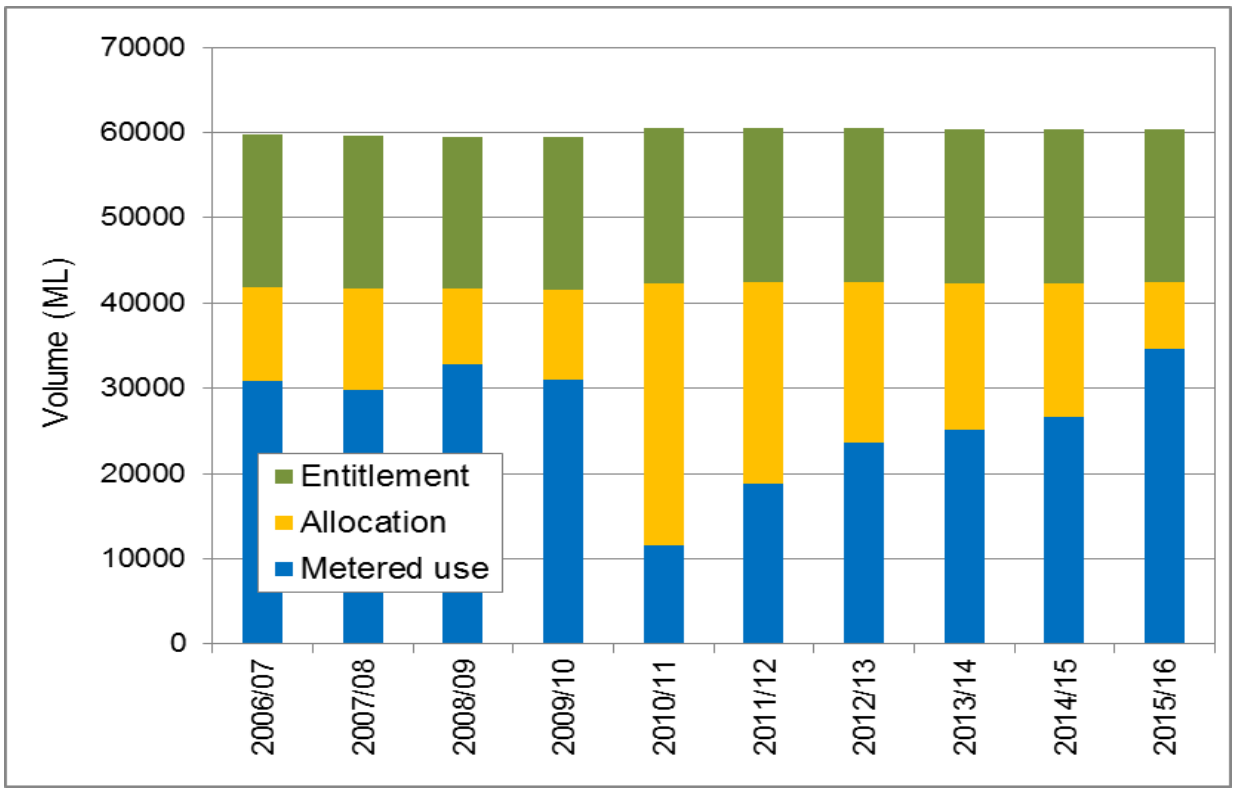


Figure 4 Annual entitlement, allocation and metered use in the Katunga WSPA

Groundwater use in the Katunga WSPA is heavily influenced by climate and the availability of surface water for irrigation. Groundwater use increases during extended periods of dry weather and when surface water allocations are reduced.

Historical rainfall data sourced from the Bureau of Meteorology (BoM) weather station at Cobram (No. 80109) is charted in Figure 5.

At the height of the millennium drought, below average rainfall between 2006/07 and 2009/10 resulted in consistently high metered use across the same period, ranging between 29,851 and 32,849 ML/yr. This was followed by a dramatic decline in usage in 2010/11 in response to significantly above average rainfalls.

Metered use has steadily increased since 2011/12. This increase corresponds with low rainfall recorded in the region.

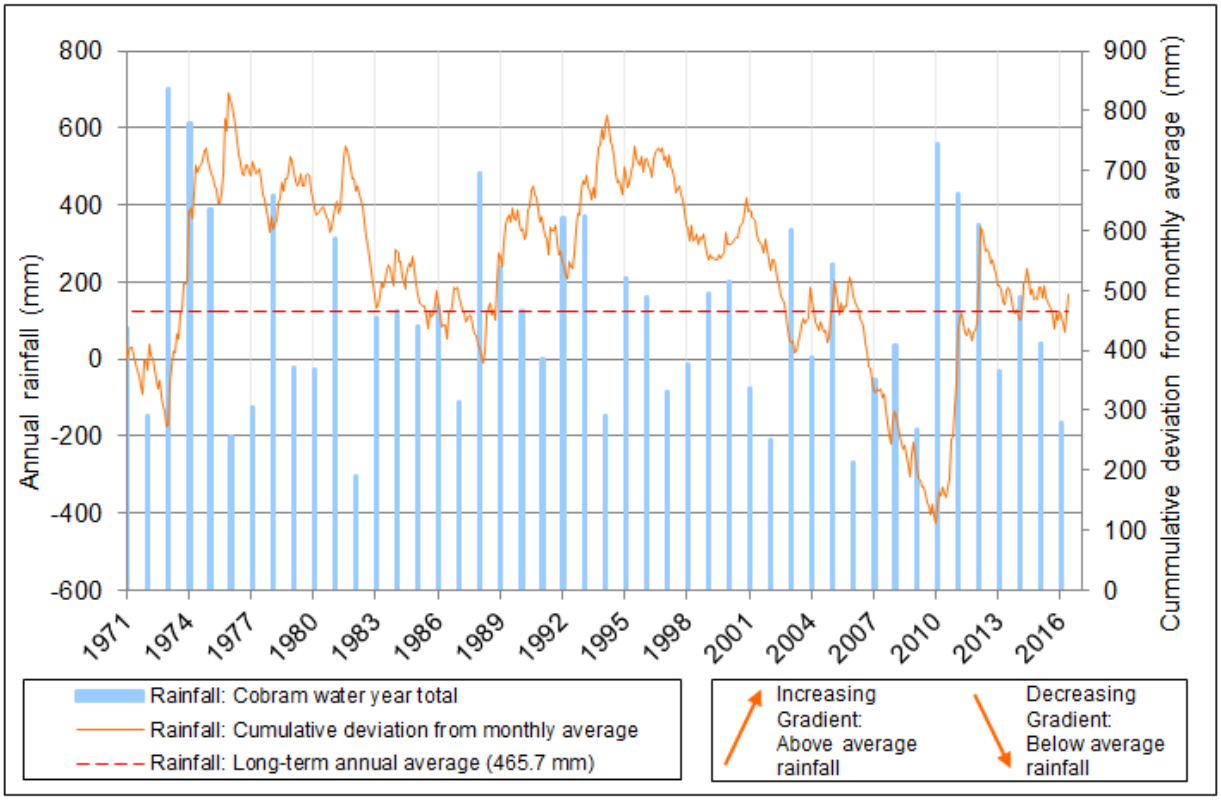


Figure 5 Rainfall in Cobram (BoM station 80109)

2.4 Transfer of entitlement

Groundwater licence transfer activity during 2015/16 is summarised in Table 4 below.

Table 4 Transfers in the Katunga WSPA 2014/15

Management Zone	Transfer from		Transfer to	
	Permanent (ML)	Temporary (ML)	Permanent (ML)	Temporary (ML)
Northwest Dryland Zone - 1061	0.0	60.0	5.0	60.0
Numurkah-Nathalia Zone - 1062	153.0	2,325.3	118.4*	3,197.3
Cobram Zone - 1063	0.0	1,348.0	0.0	476.0
Total	**153**	**3,733.3**	**123.4**	**3,733.3**

*Permanent transfers are subject to a 20% reduction in line with Prescription 10 of the Plan.

During the 2015/16 water year, there was one less transfer than in the 2014/15 water year (25; down from 26); although the volume of entitlement transferred increased by 53% (3,886.3 ML; up from 2,538 ML). During 2015/16, there were two permanent transfers totalling 153 ML and 23 temporary transfers totalling 3,733.3 ML. All transfers occurred within the Katunga WSPA; i.e., no entitlement was transferred into or out of the Katunga WSPA.

While there was less volume of entitlement permanently transferred during the 2015/16 water year (153 ML/yr; down from 436 ML/yr in 2014/15), the volume temporarily transferred increased by 75% compared to 2014/15 (3,733.3 ML/yr; up from 2,102 ML/yr).

2.5 Meter installation, maintenance and replacement

There were 70 meter-related activities undertaken in 2015/16. These included inspections, maintenance, battery replacements, new meter installations and meter replacements.

2.6 Domestic and stock bores installed

Domestic and stock use is not required to be licensed as it is a private right under section 8 of the Act.

The installation of a bore for domestic and stock use requires a bore construction licence. Upon completion of a bore, a bore completion report (BCR) is required to be submitted to GMW; details from this report are documented in the State groundwater database.

During the 2015/16 water year in the Katunga WSPA 33 domestic and stock bore construction licences were issued by GMW and the Victorian Water Register (combined) and eight domestic and stock BCRs were received and processed by GMW.

2.7 Licence compliance

There were no prosecutions or convictions relating to groundwater matters in the Katunga WSPA in 2015/16.

There were seven instances of unauthorised take and use of groundwater. In three of these cases, GMW determined the meters to be inaccurate or defective. These meters have been added to GMW's meter maintenance schedule for the 2016/17 water year.

Three of these instances have resulted in licence holders being formally cautioned by GMW.

The final instance is currently being assessed and a course of action is yet to be determined by GMW.

3 Monitoring Program

3.1 Groundwater levels

The Plan requires that groundwater levels are monitored in 52 State Observation Bores Network (SOBN) bores (specified in Schedule 2 and 3 of the Plan), as shown in Figure 6.

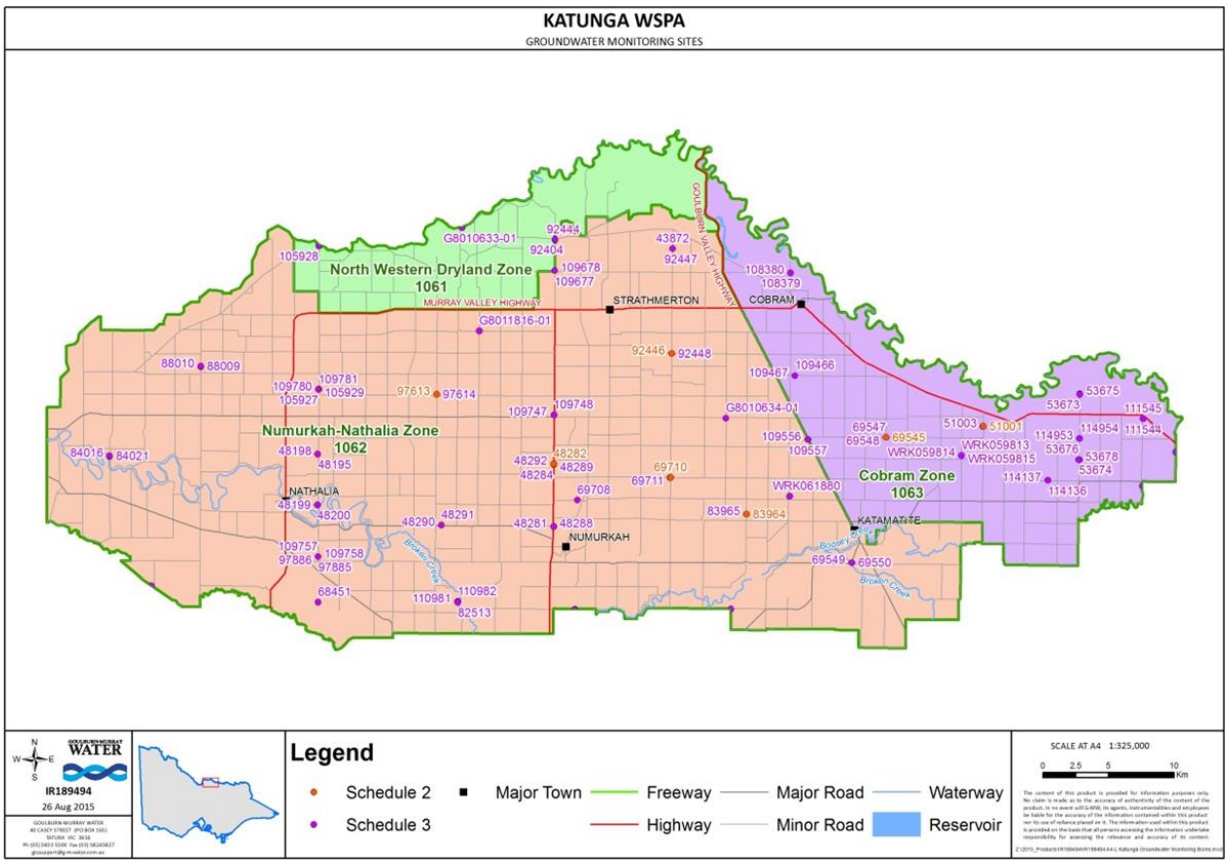


Figure 6 Map of State Observation Bores to be monitored in the Katunga WSPA

Hydrographs for all Schedule 2 bores are provided in Appendix B.

Groundwater level monitoring indicates that Deep Lead (comprising Calivil Formation and lower Shepparton Formation) groundwater levels steadily declined as groundwater development increased from 1990 onwards, as represented by historical water levels in three nested bores on Langan Road in Katamatite (Figure 7). This hydrograph also shows strong seasonal variation in response to pumping, and that following wetter than average conditions in 2010/11 and 2011/12, groundwater levels increased by approximately 10 m.

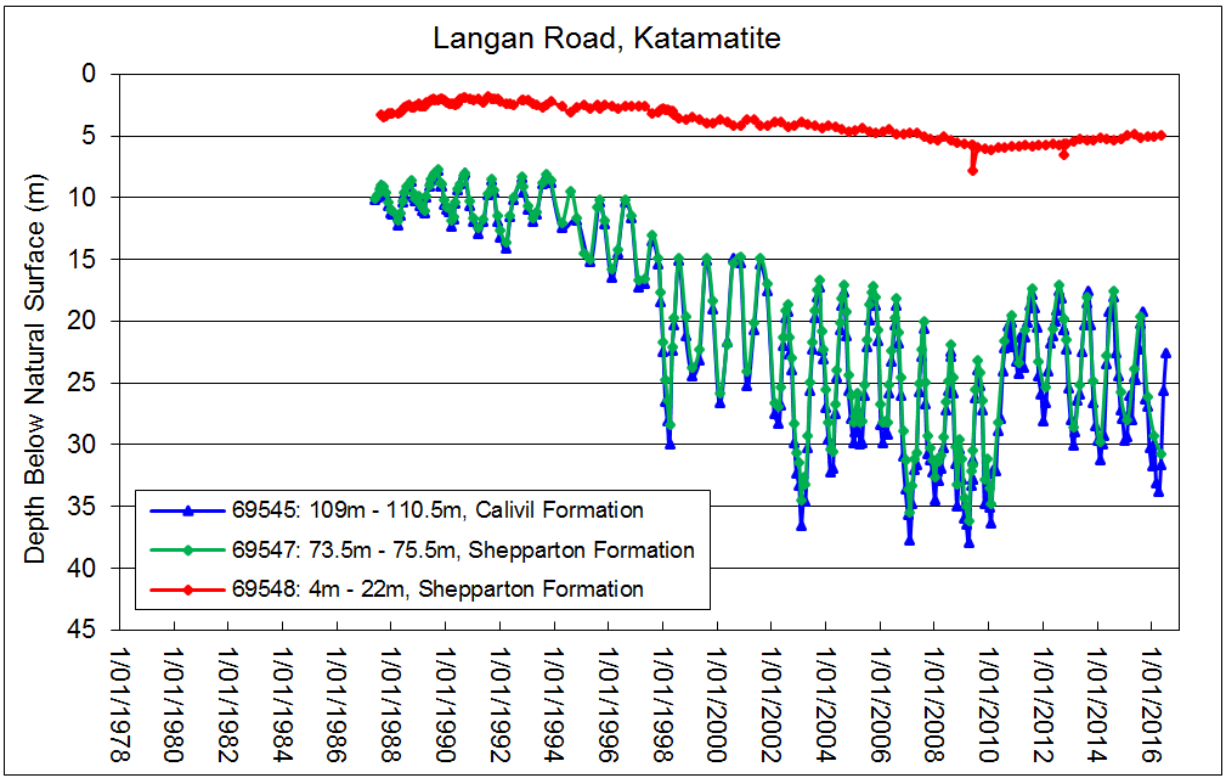


Figure 7 Groundwater monitoring at Katamatite

4 Groundwater Quality

Prescription 29 of the Plan requires that GMW conducts a salinity sample mail-out to customers once a year. GMW conducted the salinity mail-out on 23 November 2015. Sample bottles for each licensed bore were sent to licence holders, along with a reply paid envelope and a letter requesting that a groundwater sample be collected during operation of the bore and returned to GMW for testing.

Domestic and stock groundwater users are also encouraged to submit a salinity sample from their groundwater bore however, in accordance with the Plan, they must contact GMW to register their interest to be supplied with a sample bottle.

Sample bottles and letters were sent to the owners of 315 licensed bores; a total of 56 samples (18%) were returned. This is a similar return rate to the 2014/15 water year which was 19%.

The results of the groundwater salinity sampling program are shown in Figure 8. Generally, groundwater salinity values recorded have not varied significantly since 2014/15. However, due to the nature of the sampling program trends in salinity are difficult to observe.

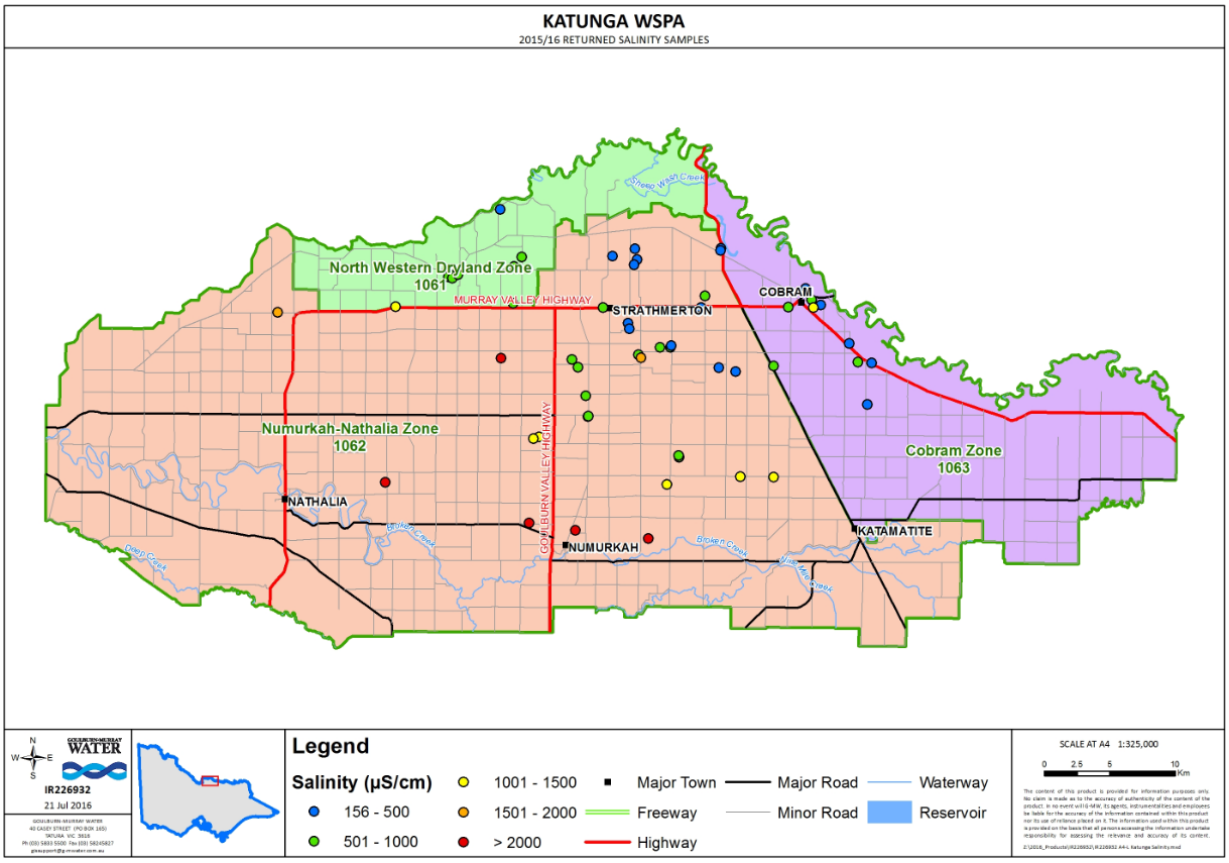


Figure 8 Groundwater salinity data from licensed bores in the Katunga WSPA

5 Future Management Considerations

5.1 Changes to the Plan

In accordance with the requirements of the Plan, GMW undertook a review of the Plan in 2011. The review recommended a number of changes to improve the Plan. Recommended changes included revising the annual allocation method, making changes to trading rules and taking a different approach to how groundwater salinity is monitored. The review also suggested the introduction of carryover be considered and that additional work be undertaken to better understand the interaction between groundwater and the River Murray.

GMW, in collaboration with the Department of Environment, Land, Water and Planning (DELWP), has initiated a process to amend the Plan. The Act requires that a Consultative Committee is appointed to provide advice on any amendments to a statutory management plan.

A Consultative Committee (the Committee) was appointed by Minister for Environment, Climate Change and Water, Lisa Neville, on 25 November 2015. The Committee is made up mostly of landholders and groundwater users from within the Katunga WSPA, as well as representatives from key agencies including DELWP, Goulburn Valley Water, the Goulburn-Broken Catchment Management Authority and GMW.

Once the Committee have developed draft proposed amendments, they will undertake consultation with groundwater users, key stakeholders and the broader community.

Until this process is finalised and amendments are approved by the Minister, the current Plan remains in place.

Appendix A – Compliance with Groundwater Management Plan

RESTRICTIONS ON TAKING GROUNDWATER

Prescription	Activity	Compliant
1. By 1 August or earlier each year the Authority must determine and announce the annual allocation in accordance with Prescriptions 2 and 3 which aims to prevent the average groundwater recovery level falling below 20 metres below ground level.	Announced on 17 July 2015.	Yes
2. An announcement under Prescription 1 must be made, by publishing a notice in a newspaper circulating generally in the Protection Area.	Public Notice advertised in Shepparton News newspaper 17 July 2015; Cobram Courier, Yarrawonga Chronicle and Numurkah Leader newspapers on 22 July 2015.	Yes
3. In any year where the 5-year average annual groundwater use is: a) less than 30,000 ML/year, the annual allocation must be announced at 70%; or b) 30,000 ML/year or greater, the annual allocation must be announced at 50%.	A 70% annual allocation was announced based on an assessment of five-year rolling average usage.	Yes
4. The 30,000 ML/year specified in Prescription 3(a) and (b) may be recalculated by the Authority, to account for use from bores that were operational but not metered prior to the commencement of this management plan.		Yes
5. For the purpose of Prescription 1, the average groundwater recovery level means the groundwater recovery level determined by summing the highest winter/spring water level elevation (measured as depth below ground level) available for the preceding five years for each observation bore listed in schedule 2 (or any replacement bore as provided in Prescription 28) divided by the total number of readings used in the calculation.		Yes
6. For the purpose of Prescription 3, the average annual groundwater use means the volume determined by summing the total volume of groundwater use for the Protection Area for the preceding five years and dividing this cumulative volume by five.		Yes

LICENCE TRANSFERS

Prescription	Activity	Compliant
7. The Authority may approve an application for the temporary transfer of a licence for the current year under section 62 of the Act only to the extent that it will permit a licence holder to take and use up to a volume of groundwater that would have been authorised if restrictions under Prescription 1 did not apply.	No temporary licence transfers allowing licence holders to take more than 100% of their entitlement were undertaken.	Yes
8. The Authority must not approve an application for the permanent transfer of a licence under section 62 of the Act if: a) the groundwater subject to the transfer is to be taken from a location within 2 kilometres of the	All permanent transfers undertaken were assessed for compliance with Prescription 8.	Yes

River Murray; or b) the total groundwater licence entitlement from all licences authorised to be taken within a 2-kilometre radius of the proposed extraction site exceeds 3700 ML/year or the approval of the application would lead to this volume being exceeded; c) the transfer would result in: i) the total groundwater licence entitlement from all licences in Management Zone 1061 exceeding 6,500 ML/year; or ii) the total groundwater licence entitlement from all licences in Management Zone 1063 exceeding 25,000 ML/year.		
9. Despite Prescription 8(a) the Authority may approve an application if: a) the groundwater licence to be transferred is used in conjunction with an existing groundwater licence; and b) the groundwater licence entitlement of the transferred licence does not exceed 43% of the groundwater licence entitlement of the existing licence.	All permanent transfers undertaken were assessed for compliance with Prescription 9.	Yes
10. If the Authority approves an application for the permanent transfer of a licence which is not associated with the transfer or conveyance of land, the groundwater licence entitlement must be reduced by 20%.	One permanent transfer of 5 ML/yr was undertaken this season without the 20% reduction being applied. Since this occurred, GMW have reassessed the licence assessment process to ensure management plan rules are captured in each assessment. All other permanent transfers undertaken were reduced by 20% in accordance with Prescription 10.	No

CHANGING THE GROUNDWATER EXTRACTION SITE

Prescription	Activity	Compliant
11. The Authority must not approve an application for a groundwater licence under section 51 of the Act or a bore construction licence under section 67 of the Act if: a) the application is to enable groundwater to be taken for uses other than domestic and stock from a location within 2 kilometres of the River Murray; or b) the total groundwater licence entitlement from all licences authorised to be taken within a 2-kilometre radius of the proposed extraction site exceeds 3700 ML/year or the approval of the application would lead to this volume being exceeded; or c) the approval of the application would result in: i) the total groundwater licence entitlement associated with all licensed bores in Management Zone 1061 exceeding 6,500 ML/year; or ii) the total groundwater licence entitlement associated with all licensed bores in Management Zone 1063 exceeding 25,000 ML/year.	No applications were approved that contravened Prescription 11.	Yes

12. Prescription 11(a) and 11 (b) do not apply where: a) an application is for a bore construction licence to replace an existing bore and the new bore site is within 20 metres of the existing bore; or b) an application is related to an existing groundwater licence and the approval of the application would not result in an increase in the amount of groundwater authorised to be taken from that location.	Applications were assessed with consideration of Prescription 12.	Yes

RESTRICTIONS AND PROHIBITIONS ON THE ISSUE OF LICENCES

Prescription	Activity	Compliant
13. The Authority may issue a new groundwater licence provided that in doing so the total groundwater licence entitlement from all licences in the Protection Area does not exceed 59,780 ML/year or any volume adjusted in accordance with Prescriptions 14 to 17.	One new take and use licence was issued through a permanent transfer (i.e. new entitlement was not issued).	Yes
14. If a groundwater licence is surrendered, revoked or not renewed the total groundwater licence entitlement in Prescription 13 will be adjusted by the amount of the groundwater licence entitlement that applied to the groundwater licence that was surrendered, revoked or not renewed.	30 licences were surrendered, revoked or not renewed; entitlement from these licences was not made available for reissue.	Yes
15. If the Authority approves an off-property transfer in accordance with Prescription 10 the total groundwater licence entitlement in Prescription 13 will be adjusted by the corresponding adjusted volume under Prescription 10.	No new entitlement has been made available	Yes
16. If the Authority renews a groundwater licence that authorises the use of groundwater in a dairy in accordance with any State-wide policy approved by the Minister for Water, the total groundwater licence entitlement in Prescription 13 is deemed to be adjusted by any additional volume of groundwater authorised under the renewed licence.	No further dairy shed water licences issued now that the Dairy Shed Water Licence Transition Program is complete.	N/A
17. The Authority may issue a licence which may lead to the total groundwater licence entitlement specified in Prescription 13 being exceeded to overcome an administrative oversight or error or other anomaly.	No licences were issued for the purposes described in Prescription 17.	Yes
18. The Authority must report the details of any licence referred to in Prescriptions 14 to 17 in the annual report on the administration and enforcement of the management plan required under section 32 of the Act.	See comments above	Yes

METERING PROGRAM

Installation of meters

Prescription	Activity	Compliant
19. Within 12 months from the time that the management plan commences, the Authority must ensure that a meter is fitted to every operational bore listed on a groundwater licence that authorises the extraction of 20 ML/year or more.	Meters were fitted to all operational bores that were licensed to extract 20 ML/year or greater in 2006.	Yes

20. The Authority must ensure that a meter is fitted to any new operational bore that is constructed in the Protection Area that is used for other than domestic and stock purposes.	Meters are fitted to all new operational bores that are used for purposes other than stock and domestic.	Yes

Maintenance of meters

Prescription	Activity	Compliant
21. The Authority must: a) inspect the condition of the meter whenever it is read by the Authority; b) maintain the meter in good condition; c) recalibrate the meter at any time when the Authority has reason to believe that a reading from the meter may be inaccurate; d) replace any damaged meter; and e) keep a record of all work done under paragraphs (b), (c) and (d).	Meters have been maintained and replaced consistent with GMW's *Measurement of Water Use policy* and the Victorian Non-Urban Water Metering Policy 2014.	Yes
22. The licensee must: a) ensure reasonable care is taken of any meter fitted to the bore; and b) ensure the Authority is promptly advised whenever that meter appears to be defective, registering incorrectly or is damaged.	GMW received reports from 5 licence holders regarding damaged or defective meters. Usage on these meters for the 2015/16 water year was deemed and meters placed on maintenance schedule for 2016/17 water year.	Yes

Meter Readings

Prescription	Activity	Compliant
23. The Authority must: a) read each meter at least once in every year; b) determine the volume of water extracted from each metered bore each year; and c) within 30 days after a meter is read, record the amount of water determined in paragraph b) in a database.	Meters have been read and readings recorded in GMW's Irrigation Planning Module.	Yes
24. If for any reason the Authority is unable to determine the amount of water by means of a meter it must estimate the volume of water extracted and record the estimate in a database.	Five estimations of water use were required due to defective or damaged meters (see also comment for Prescription 22).	Yes
25. If the Authority requests the Licensee to read a meter and to provide the Authority with the meter reading, the Licensee must comply with the request.	No requests were made according to Prescription 25 in the reporting period.	Yes

BORE MONITORING PROGRAM

Groundwater Level Monitoring

Prescription	Activity	Compliant
26. The Department of Sustainability and Environment (sic DELWP) and the Authority must ensure that the bores specified in Schedule 2 are monitored at the frequencies listed in the schedule.	Schedule 2 bores have been monitored at the frequencies required.	Yes

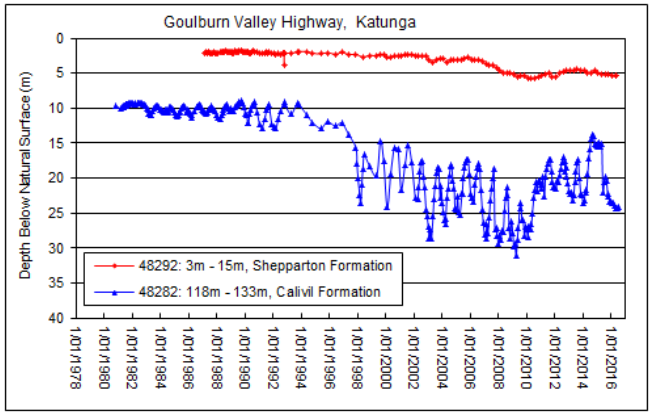
27. In addition to the monitoring in Prescription 26 the Department of Sustainability and Environment (sic DELWP) and the Authority must ensure that water level monitoring is carried out at appropriate locations throughout the Protection Area to: a) assess annual and long term impact on water levels from groundwater pumping; b) monitor regional and local seasonal drawdown; c) examine interrelationships with the River Murray, overlying aquifers, aquifers in New South Wales and saline groundwater in the west and south west; d) provide information for future resource assessments; and e) monitor the impacts of groundwater pumping generally across the Protection Area and in areas of high intensity groundwater pumping.	Groundwater levels have been monitored in active State observation bores across the Katunga WSPA.	Yes
28. The Department of Sustainability and Environment (sic DELWP) and the Authority must ensure that: a) monitoring bores are properly maintained and replaced if necessary; and b) data collected from the bores is entered into the groundwater management system, within 30 days after it has been collected.	Monitoring bores have been maintained and monitoring data collected has been uploaded into the Water Management Information System (replaced the groundwater management system)	Yes

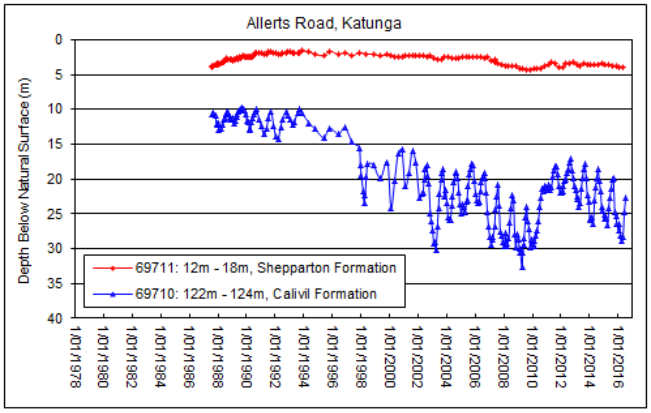
Groundwater Salinity

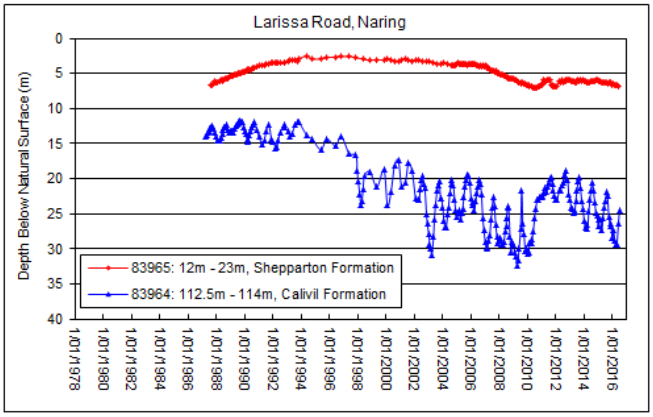
Prescription	Activity	Compliant
29. The Authority must: a) at least once a year provide a sample bottle to every groundwater licence holder; b) provide a sample bottle to any domestic and stock user who requests one; c) on receipt of a returned sample analyse the water within 30 days; d) enter the analysis results into the groundwater management system within 30 days of the analysis; and e) send a copy of the results of the analysis to the licence holder who supplied the water sample.	A salinity sampling program was undertaken in December 2015; analysis results were entered into the Water Management Information System (replaced the groundwater management system) within 30 days, and provided to those licence holders who supplied a groundwater sample. Samples were not analysed within 30 days of receipt as this was not feasible.	Yes

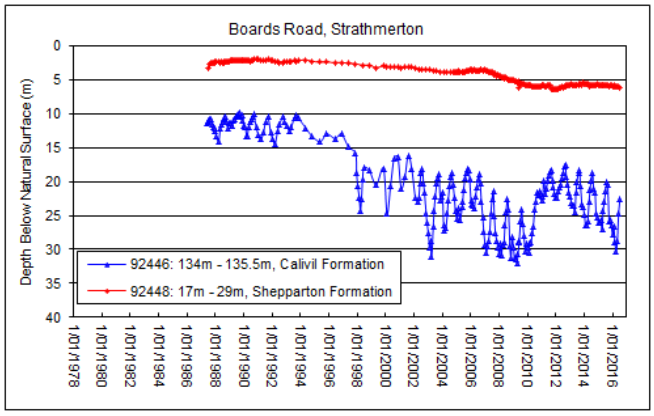
Appendix B – Hydrographs for key monitoring bores listed in the Plan (Schedule 2)

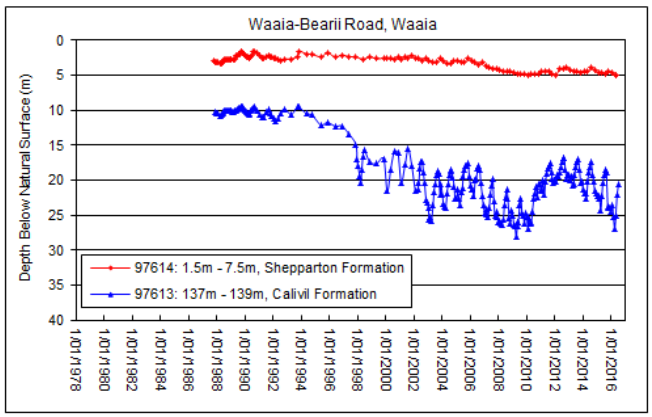
ZONE 1062



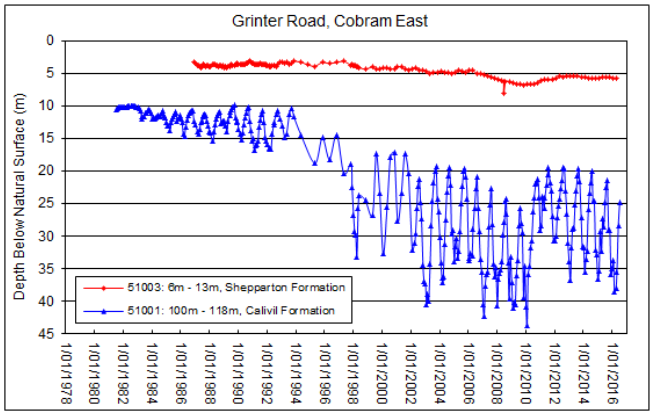


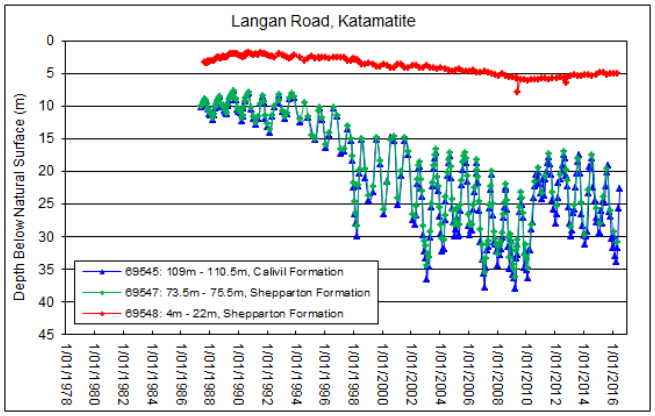






ZONE 1063


Grinter Road, Cobram East
Depth Below Natural Surface (m)
0
5
10
15
20
25
30
35
40
45
51003: 6m - 13m, Shepparton Formation
51001: 100m - 118m, Calivil Formation
1/01/1978
1/01/1980
1/01/1982
1/01/1984
1/01/1986
1/01/1988
1/01/1990
1/01/1992
1/01/1994
1/01/1996
1/01/1998
1/01/2000
1/01/2002
1/01/2004
1/01/2006
1/01/2008
1/01/2010
1/01/2012
1/01/2014
1/01/2016


Langan Road, Katamatite
Depth Below Natural Surface (m)
0
5
10
15
20
25
30
35
40
45
69545: 109m - 110.5m, Calivil Formation
69547: 73.5m - 75.5m, Shepparton Formation
69548: 4m - 22m, Shepparton Formation
1/01/1978
1/01/1980
1/01/1982
1/01/1984
1/01/1986
1/01/1988
1/01/1990
1/01/1992
1/01/1994
1/01/1996
1/01/1998
1/01/2000
1/01/2002
1/01/2004
1/01/2006
1/01/2008
1/01/2010
1/01/2012
1/01/2014
1/01/2016