



Upper Ovens River Water Supply Protection Area Water Management Plan

Annual Report

For year ending 30 June 2016

Document History and Distribution

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Foreword

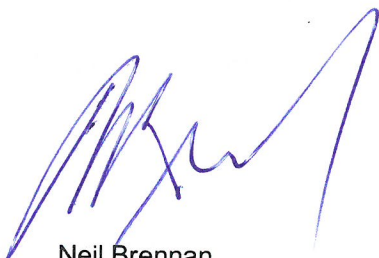
Goulburn-Murray Water (GMW) is pleased to present the annual report for the Upper Ovens River Water Supply Protection Area Water Management Plan (the Plan) for the 2015/16 water year.

GMW is responsible for implementation and administration of the Plan, which was approved by the Minister administering the *Water Act 1989* (the Minister) on 11 January 2012.

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

The report documents the Plan's performance during the 2015/16 water year, including a review of groundwater and surface water use, licence transfers, groundwater levels, surface water flow as well as compliance and metering activity.

A copy of this report is available for inspection at the Tatura offices of GMW, or can be downloaded from the GMW website.



Neil Brennan
INTERIM MANAGING DIRECTOR

Date:

Executive summary

Groundwater and surface water use in the 2015/16 water year was 26.2 % (3517.7 ML) of total licence entitlement in the Upper Ovens River Water Supply Protection Area (WSPA). This is an increase from the 2014/15 water year, which is consistent with below average rainfall experienced during the periods July to October 2015 and February to April 2016.

Groundwater and surface water Zone 1 water users were placed on a Stage 3 restriction in March 2016 in accordance with the water sharing regime prescribed by the Plan. Restrictions were observed to have worked as intended during the development of the plan to manage water level decline in the Ovens River.

As recommended in the Plan, a water balance research project is currently underway to improve the understanding of groundwater–surface water interaction and to improve knowledge of water use patterns. As part of this project, two groundwater observation bores and a surface water gauging station were installed in late–2013. Monitoring of these sites will cease during the 2016/17 water year. This research project is due to be completed by the end of 2016.

The Upper Ovens River WSPA Water Management Plan is continuing to achieve its stated objectives.

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1 Introduction

1.1 Purpose

This annual report provides an overview of water resource management activities and use in the Upper Ovens River WSPA throughout the 2015/16 irrigation water year.

1.2 Water Supply Protection Area

There are two management zones within the Upper Ovens River WSPA, as shown in Figure 1:

- **Management Zone 1** which includes licences that access the unconsolidated sedimentary aquifer (1085) and surface water (181).
- **Management Zone 2** which includes licences that access the underlying fractured bedrock aquifer (1086).

The Upper Ovens River WSPA covers an area of approximately 1,580 square kilometres of the Ovens River catchment, upstream of the Buffalo River confluence near Myrtleford in north east Victoria, as shown in Figure 2.

1.3 Water Management Plan

The Plan was approved on 11 January 2012 by the Minister in accordance with section 32A(6) of the Act. The Plan is scheduled for review every five years, with the first review due in 2016/17.

The overall objective of the Plan, as set out in section 32A of the Act, is to make sure that the water resources of the WSPA are managed in an equitable manner and to ensure the long-term sustainability of those resources. The Plan enables a water sharing regime within Management Zone 1 which requires the surface water and the unconsolidated sedimentary aquifer to be managed as a connected system.

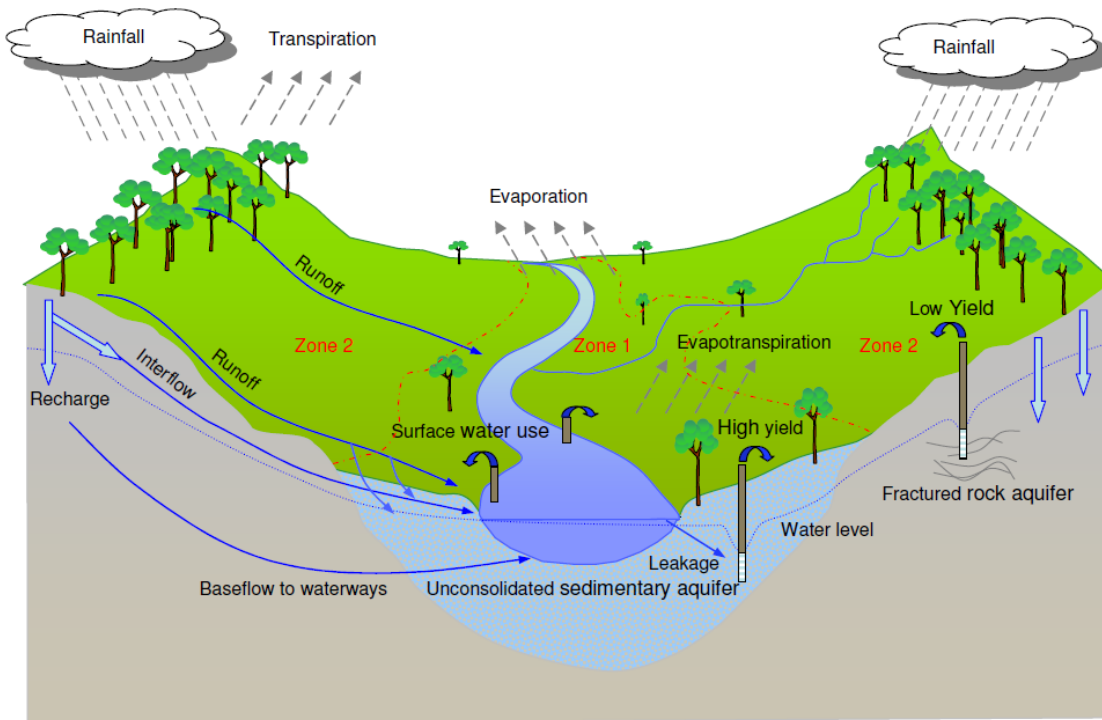


Figure 1 Upper Ovens River Water Supply Protection Area management zones

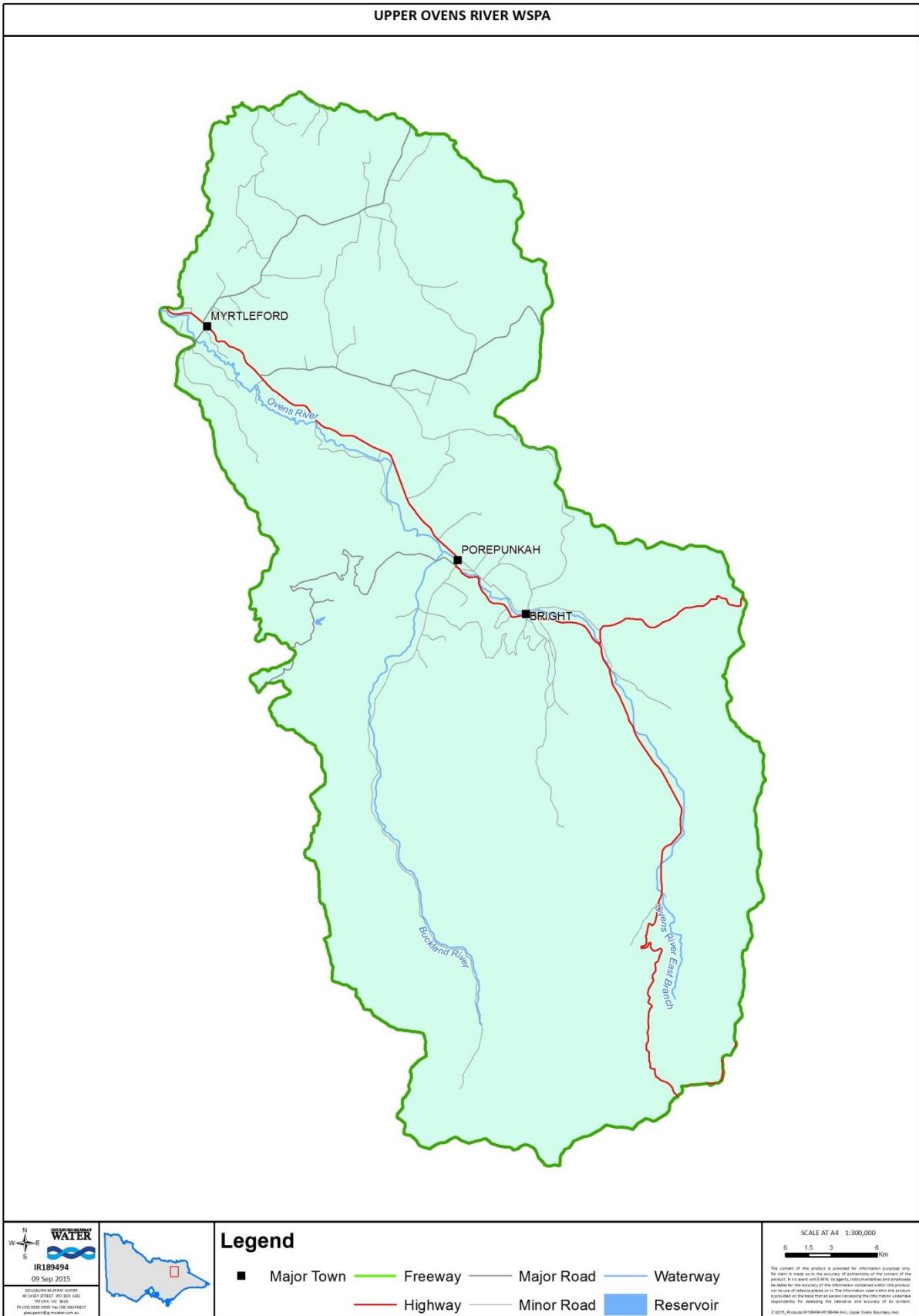


Figure 2 Upper Ovens River Water Supply Protection Area

2 Water management

2.1 Management zones and licence volume

The Plan established two management zones based on interaction between groundwater and surface water in the catchment. Each management zone was established having regard for the level of risk that groundwater extractions pose to flow in the Ovens River and its tributaries during low flow periods.

At 30 June 2016 the total licence entitlement volume in the Upper Ovens River WSPA was 13,413 megalitres per year (ML/yr).

Table 1 Licence entitlement in the Upper Ovens River WSPA (2015/16)

Management Zone	Licences	Licence volume (ML/yr)
Zone 1 Surface Water	517	9,648.1
Zone 1 Groundwater	72	2,683.2
Zone 2 Groundwater	35	1,081.2
Total	624	13,412.5

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

Appendix D further breaks down licence entitlement into the named areas set in Prescription 22 of the Plan. The volume of entitlement for the 2015/16 year was lower than that recorded within the Plan due to licence cancellations, data cleansing within the Water Register as part of an annual licence renewal project and as a result of 20 per cent reductions applied to licence volumes from downstream transfers.

2.2 Restrictions on taking water within Management Zone 1

The water sharing regime prescribed by the Plan commenced on 1 July 2012 and comprises five stages of restrictions in which a share of licence entitlement available for take and use is progressively reduced with each stage (Table 2). The water sharing regime applies to licence holders in Management Zone 1 who normally take water during summer months and is activated when flow in the Ovens River at the Myrtleford gauging station falls below specified trigger levels.

Table 2 Stages of restrictions that apply to licence holders in Management Zone 1

Restriction Stage	Trigger Flow at Myrtleford (ML/d)	Description of restriction stage	Share of entitlement available
Stage 1	100	Water usage rostered	100%
Stage 2	60	Volumetric limitations imposed	75%
Stage 3	30	Volumetric limitations imposed	50%
Stage 4	10	Volumetric limitations imposed	25%
Stage 5	1	No pumping permitted	0%

Stage 1 restrictions were put in place during the 2015/16 water year as flow in the Ovens River at Myrtleford fell below the Stage 1 trigger in late-January 2016 (Figure 3). Flow then fell below the Stage 2 trigger in late-February 2016 and Stage 3 restrictions were applied in early-March 2016 due to falling river levels and a continuing dry forecast.

Buffalo Creek, Roberts Creek, Barwidgee Creek, Snowy Creek and Happy Valley Creek were all subject to a Stage 5 suspension from 4 March 2016. Restrictions across the Upper Ovens River WSPA were removed on 13 May 2016 due to improved rainfall increasing flows in the Ovens River.

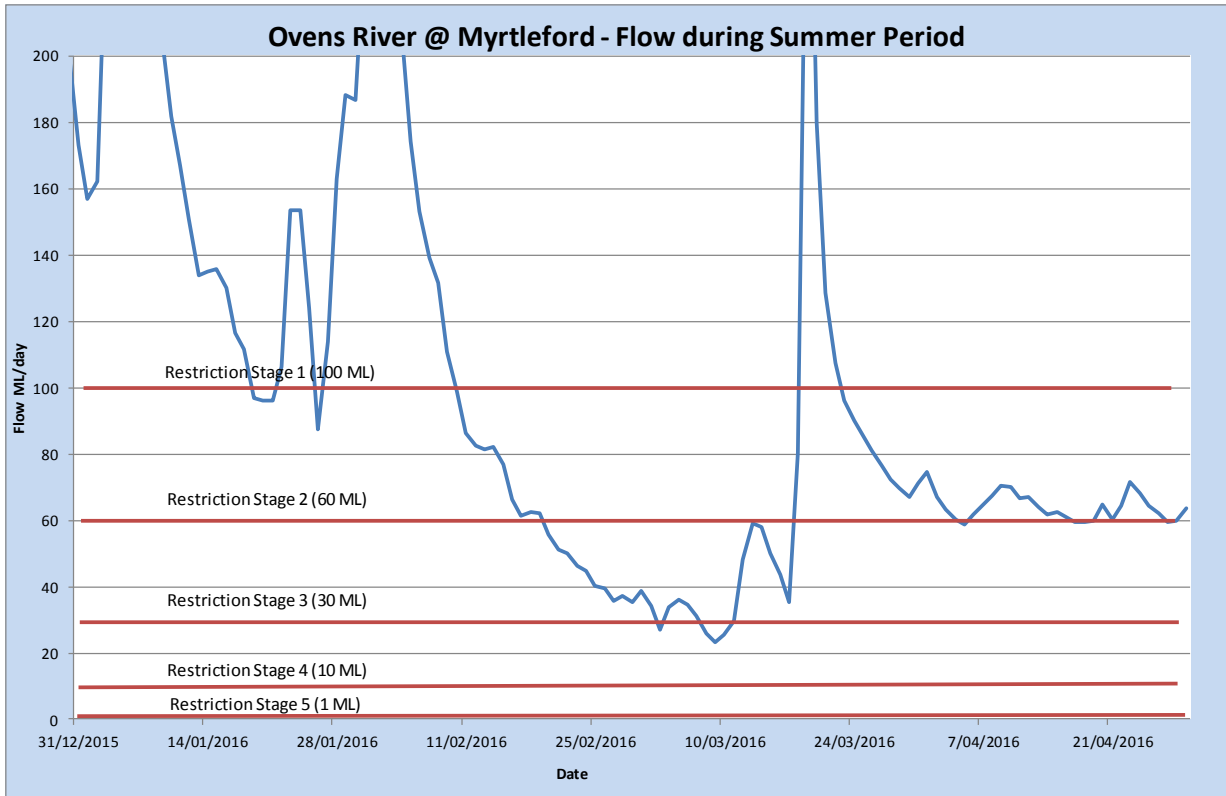


Figure 3 Ovens River flows at Myrtleford; flow during the 2015/16 summer period

2.3 Groundwater and surface water use

The majority of licensed groundwater bores in the WSPA are metered; only historic licences with entitlement of 19 ML/yr or less are not currently metered in accordance with Victoria’s Metering Policy. As part of the Plan’s implementation, all licensed operational groundwater bores with a licence greater than 10 ML are to be metered by January 2017, bringing metering of all licensed groundwater users in line with licensed surface water users. The majority of licensed surface water users in the WSPA are metered; only historic licences with entitlement of 9 ML/yr or less not being metered (consistent with Victoria’s Metering Policy).

The total metered surface water and groundwater usage in 2015/16 was 3,517.7 ML (Table 3). This is an increase from the 2014/15 when total metered usage of 1,556.4 ML was recorded. The increased usage can be attributed to below average rainfall experienced during the periods July to October 2015 and February to April 2016.

The pattern of groundwater and surface water use in the Upper Ovens River WSPA is heavily influenced by climate and rainfall within the catchment. Average rainfall at the Eurobin station in the upper Ovens River catchment is 1,147 millimetres per year (mm/yr). Rainfall was slightly below average in the 2015/16 water year with 1,127.3 mm/yr (Figure 4), with high rainfall occurring between April and June (Figure 5).

Table 3 Metered usage in the Upper Ovens River WSPA 2015/16

Management Zone	Metered usage (ML)	Total licence entitlement (ML/yr)	Percentage of licence entitlement
Zone 1 Surface Water	2,545.0	9,648.1	26.4%
Zone 1 Groundwater	669.8	2,683.2	25.0%
Zone 2 Groundwater	302.9	1,081.2	28.0%
Total	3,517.7	13,412.5	26.2%

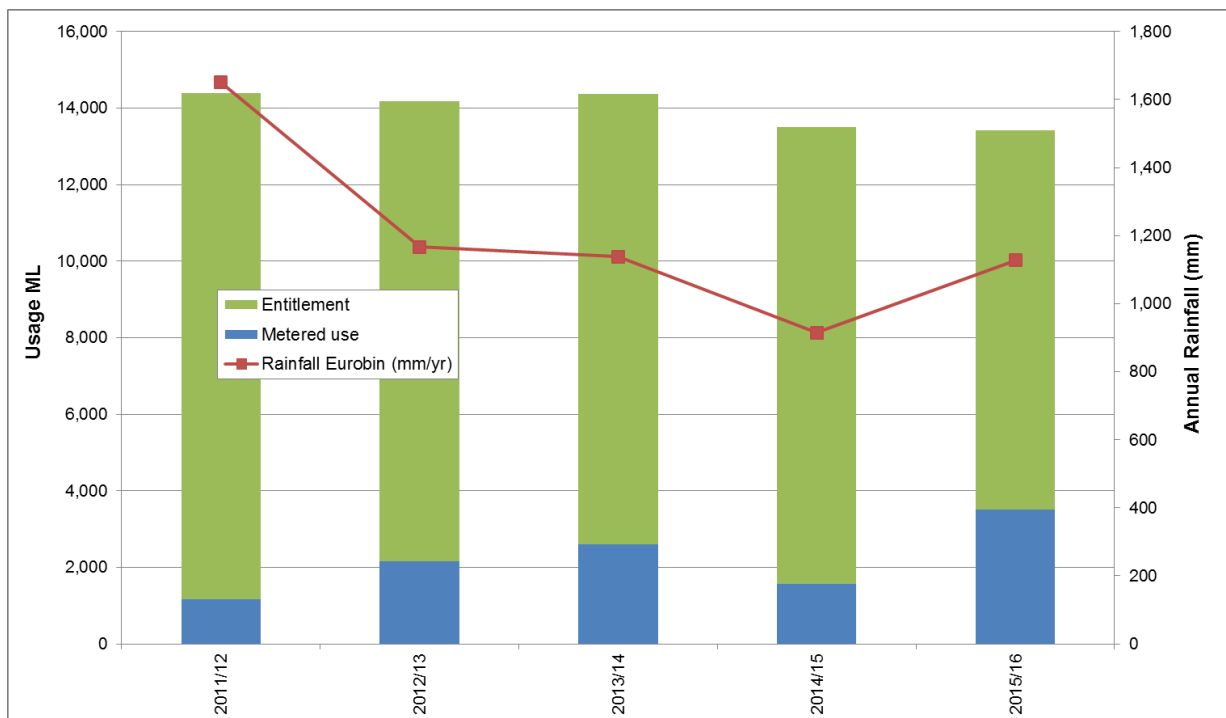


Figure 4 Annual entitlement and metered use in the Upper Ovens River WSPA and annual rainfall totals (1 July to 30 June) recorded at Bureau of Meteorology weather station at Eurobin (BoM site 83010)

2.4 Transfer of entitlement

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

Table 4 Licence transfers in the Upper Ovens River WSPA 2015/16

Zone	Transfer from				Transfer to			
	Total trades	Permanent (ML)	Total trades	Temporary (ML)	Total trades	Permanent (ML)	Total trades	Temporary (ML)
Zone 1 Surface Water (181)	5	192.0	10	570.0	4	53.6	10	1,044.2
Zone 1 Groundwater (1085)	3	125.0	5	631.0	1	32.0		
Zone 2 Groundwater (1086)					2	125.0	2	60.0
Total	8	317.0	15	1,201.0	7	210.6	12	1,104.2

Note: Data extracted from the Victorian Water Register on 19 July 2016.

Numbers of temporary and permanent licences transfer during the 2015/16 water year were higher than in the 2014/15 period. The demand for water during a relatively dry winter and spring period is likely to have contributed to this increase. In total, there were two permanent and two temporary licence transfers into Management Zone 2. All permanent licence transfers were within the capped volumes set for each sub-catchment within the Plan (Appendix C).

The variation in the volumes of 'Transfer from' and 'Transfer to' is due to a 20 % reduction applied to all downstream transfers as well as a permanent transfer of 90 ML of unregulated surface water entitlement from the Upper Ovens River WSPA (zone 181) into the Lower Ovens (zone 180).

2.5 Compliance

There were three cases of metered non-compliance with licence volume of groundwater in the Upper Ovens River WSPA during the 2015/16 water year which have been rectified by licence transfers prior to the end of the water year.

3 Monitoring program

3.1 Groundwater levels

Groundwater monitoring data demonstrates a strong seasonal response to variations in climate. Seasonal groundwater drawdown and recovery levels (Appendix B) have been relatively similar over the past four years. This trend was similar in both the unconsolidated sedimentary aquifer and fractured bedrock aquifer. The groundwater monitoring data also indicates that groundwater pumping in 2015/16 had little impact on aquifer-wide groundwater levels.

The location of monitoring bores and surface water gauges are shown in Figure 6.

3.2 Surface water

The surface water data taken from the Ovens River gauging station at Myrtleford (Figure 5) show that flows were generally consistent with a winter rainfall-dominated climate, characterised by low summer stream flows and high winter stream flow patterns. Flows were responsive to repeated rainfall events as seen in July 2015 and May 2016. There was below average rainfall during the late-winter to early-spring period which caused flows to steadily decline until large rainfall events occurred in April and May 2016. The rainfall data in Figure 5 are shown as cumulative for 2015/16 to show when low rainfall and high rainfall events occurred.

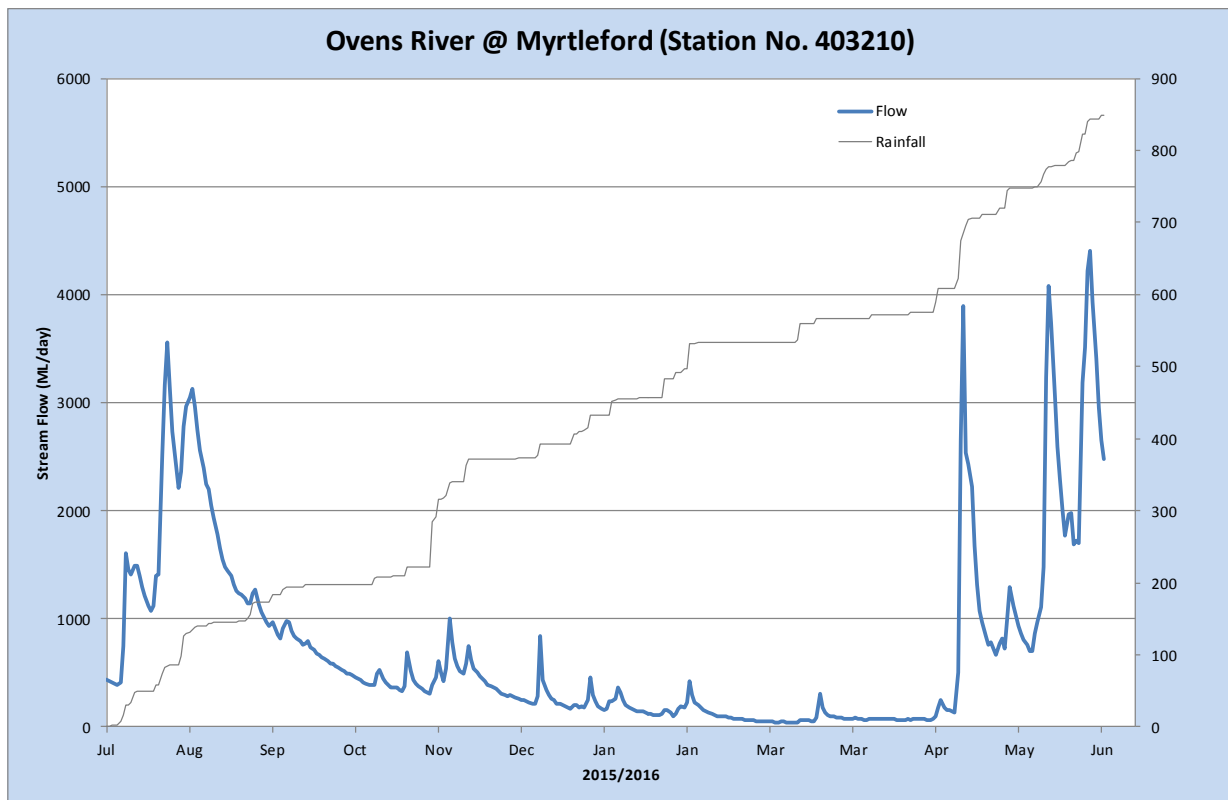


Figure 5 Daily stream flow of the Ovens River at Myrtleford compared to cumulative daily rainfall (1 July 2015 to 30 June 2016) recorded at Bureau of Meteorology station at Eurobin (BoM site 83010)

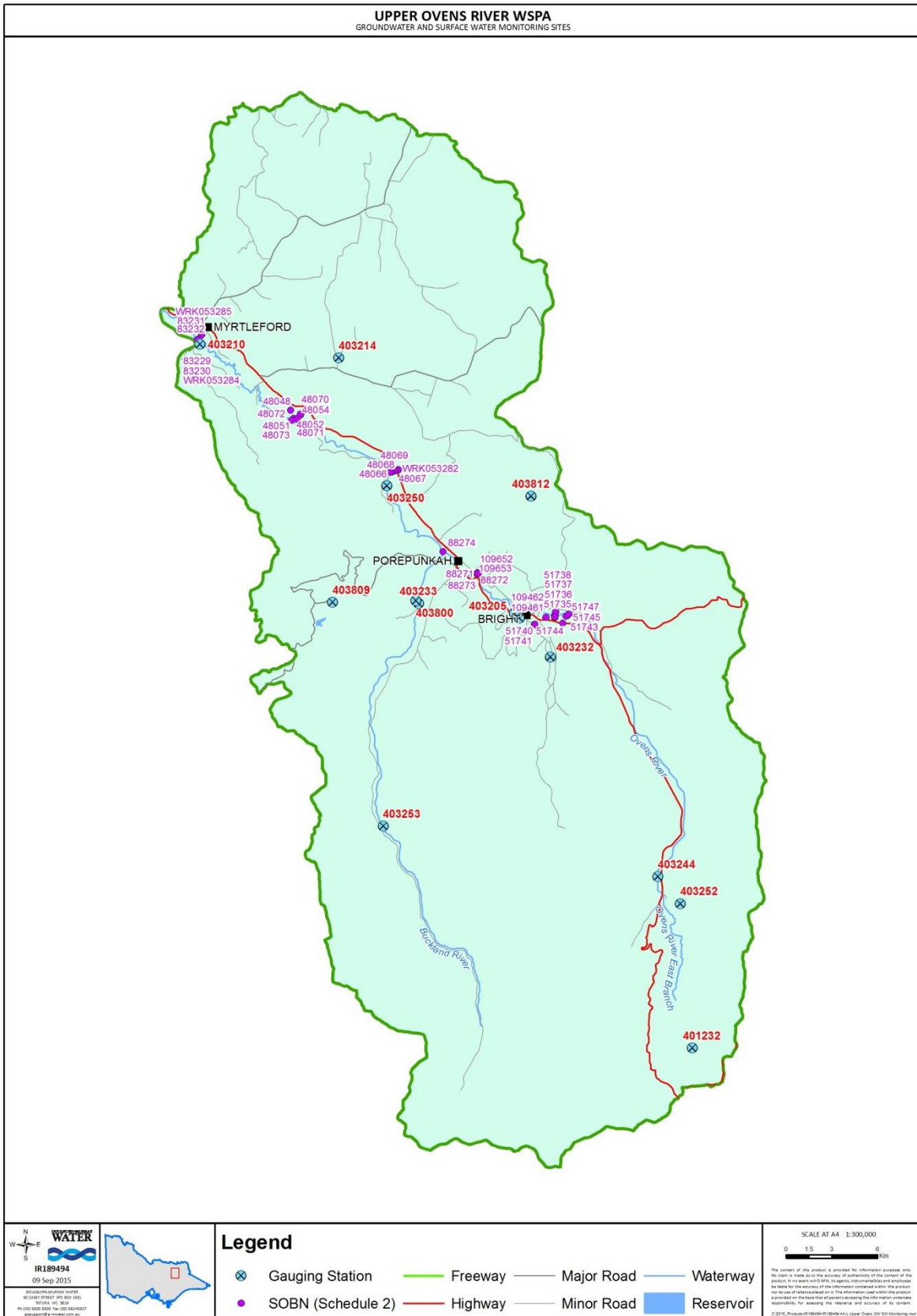


Figure 6 Location of groundwater monitoring bores and surface water gauging stations in the Upper Ovens River WSPA.

3.3 Metering

The condition of meters is noted when readings are taken in January and June of each year. During the 2015/16 water year 14 meters required maintenance (including minor repairs), five were replaced and 11 new meters were installed (Table 5).

Table 5 Annual metered-related activities; 2013/14 to 2015/16

Activity	2013/14	2014/15	2015/16
New meters installed	3	7	11
Meters replaced	13	14	5
Meters requiring maintenance	8	2	14

4 Future management considerations

4.1 Upper Ovens River WSPA Water Balance Research Project

In preparation for a future review of the Plan, recommendations were made within the Plan to:

- improve the understanding of groundwater–surface water interaction in main tributary streams; and
- increase understanding of water use patterns during low–flow periods in the Upper Ovens River WSPA, including the impact of groundwater use on stream flows and the lag–time between groundwater use and streamflow impacts.

In meeting these recommendations, the Upper Ovens River WSPA Water Balance research project was established which aims to bring about advances in resource management by:

- improving the accounting of water resources and water use;
- improving the understanding of groundwater–surface water interaction in main tributary streams; and
- reducing uncertainty about the current water balance understanding of the catchment, particularly during low flow periods.

The following research project activities occurred during 2015/16:

- GMW's Diversion Operations unit commenced installation of 16 water meters on licensed groundwater bores with licence entitlement between 10 and 19 ML; and
- quarterly monitoring was undertaken of water table and stream flow levels at the gauging and observation bore sites.

Appendix A – Compliance with Water Management Plan Prescriptions

Management Zones

Prescription	Activity	Compliant
1. Prescriptions that apply to the taking of groundwater in Management Zone 1 apply to the taking of groundwater from all bores in the Protection Area unless the bore is only capable of extracting groundwater from the fractured rock aquifer.	All groundwater licences have been identified as either being located in Management Zone 1 or 2.	Yes

Prescriptions on Taking water in Management Zone 1

Prescription	Activity	Compliant
2. Prescriptions 3, 4, 5, 6 and 7 apply to the taking of surface water or groundwater under an all-year licence in Management Zone 1 while a Restriction Stage is in effect unless – (a) the licence is for domestic and stock use; or (b) the licence is subject to a condition that a portion of the water taken and used is to be returned to the water system; or (c) the special transitional arrangements in Prescriptions 12 to 16 apply	Licence holders identified in Prescription 2 did not have restrictions applied to their licence.	Yes
3. On or after 1 July 2012, the Corporation subject to its discretion in Prescription 9 must declare the specified Restriction Stage if satisfied that the flow rate at stream gauge no.403210 at Myrtleford (the compliance point) will shortly be equal to or less than the corresponding specified flow rate. Refer to table within Plan.	Restriction Stages 1, 2 and 3 were implemented during the 2015/16 water year, in line with Plan requirements.	Yes

Prescription	Activity	Compliant
4. On or after 1 July 2012, the Corporation must declare Restriction Stage 5 in respect to each tributary if satisfied that the flow rate at the compliance point will shortly be equal to or less than 2 ML/d. Refer to table within Plan.	Restriction Stage 5 was declared for Buffalo Creek, Roberts Creek, Barwidgee Creek, Snowy Creek and Happy Valley Creek (March, 2016)	Yes
5. During a Restriction Stage, a licence holder is authorised to take water only at the times and at the rates specified by the Corporation.	Restrictions were implemented during the 2015/16 water year, in line with Plan requirements.	Yes
6. During Restriction Stage 2, 3, or 4 a licence holder is authorised to take only the corresponding percentage share of entitlement specified in Column 2 of Prescription 3.	Restrictions were implemented during the 2015/16 water year, in line with Plan requirements.	Yes
7. If a Restriction Stage 5 is declared – (a) under Prescription 3, a licence holder must not take any water during the Restriction Stage; or (b) under Prescription 4, in respect of a tributary, a licence holder must not take any water from that tributary during the Restriction Stage.	Restriction Stage 5 was implemented during the 2015/16 water year for Buffalo Creek, Roberts Creek, Barwidgee Creek, Snowy Creek and Happy Valley Creek, in line with Plan requirements. No compliance issues were recorded.	Yes
8. Subject to its discretion in Prescription 9, the Corporation must declare a Restriction Stage is lifted, if satisfied that the flow rate at the compliance point is above the corresponding flow rate and likely to remain so.	Restrictions were lifted in the 2015/16 water year, in line with Plan requirements.	Yes
9. The Corporation may decide not to declare a Restriction Stage 2, 3 or 4 or declare a Restriction Stage 2, 3, or 4 is lifted if of the opinion that the Restriction Stage or any lifting of the Restriction Stage is likely to be in place for less than 10 days.	Restrictions were implemented during the 2015/16 water year, in line with Plan requirements.	Yes

Prescription	Activity	Compliant
10. The Corporation must give notice to each affected licence holder of – (a) the declaration of a Restriction Stage and details of– (i) the times and rates at which water can be taken during the Restriction Stage; (ii) if relevant, the licence holder’s percentage share of entitlement for the Restriction Stage; (iii) the date on which the declaration takes effect; and (b) the declaration that a Restriction Stage has been lifted.	Restrictions were implemented during the 2015/16 water year, in line with Plan requirements.	Yes
11. The Corporation must display on the Corporation’s website an explanation of the methodology used to calculate the percentage share of entitlement for all affected licence holders.	Methodology used to calculate percentage share of entitlement is available on the Goulburn-Murray Water website.	Yes

Transitional Arrangements for Zone 1 Groundwater

Prescription	Activity	Compliant
12. As provided in Prescription 2(c), Prescriptions 13 to 16 apply to the percentage share of entitlement the holder of a groundwater licence in Management Zone 1 is authorised to take while Restriction Stage 4 or 5 declared by the Corporation under Prescription 3 is in effect.	Transitional arrangements were implemented as restrictions reached Stage 3.	Yes
13. The holder of a groundwater licence in Management Zone 1 is authorised to take only the percentage share of entitlement specified in Prescription 3 that corresponds to – (a) Restriction Stage 3, if Restriction Stage 4 or 5 is declared between 1 July 2012 and 30 June 2014, inclusive; or (b) Restriction Stage 4, if Restriction Stage 5 is declared between 1 July 2014 and 30 June 2015, inclusive,	Zone 1 licences were put onto Stage 3 restrictions when declared in the 2015/16 water year on the Ovens River.	Yes

Prescription	Activity	Compliant
<p>14. The holder of a groundwater licence in Management Zone 1 who uses water to irrigate an approved permanent planting is authorised to take only the percentage share of entitlement specified in Column 2 of the table in Prescription 3 that corresponds to –</p> <p>(a) Restriction Stage 3, if Restriction Stage 4 or 5 is declared between 1 July 2012 and 30 June 2019, inclusive; or</p> <p>(b) Restriction Stage 4, if Restriction Stage 5 is declared 1 July 2019 and 30 June 2020, inclusive.</p>	<p>Stage 3 restrictions were declared in the 2015/16 water year on the Ovens River.</p>	<p>Yes</p>
<p>15. If the holder of a groundwater licence in Management Zone 1 irrigates land used for an approved permanent planting and land that is not used for an approved permanent planting, Prescription 14 only applies in respect of water taken to irrigate the land that is used for the approved permanent planting.</p>	<p>A permanent planting and applicable land register has been produced by GMW in order to meet Prescriptions 14, 15, 16 and 17.</p>	<p>Yes</p>
<p>16. If a groundwater licence is transferred after the Plan is approved Prescriptions 13 and 14 do not apply in respect of water taken under a licence resulting from that transfer.</p>	<p>No licence transferred has maintained transitional arrangement.</p>	<p>Yes</p>
<p>17. For the purposes of Prescription 14 and 15 land used for an approved permanent planting is –</p> <p>(a) land used prior to 30 June 2010 –</p> <p>(i) for growing trees producing fruit or nuts, grape vines, tea, hops, kiwifruit vines and berries (other than those which can be planted and be productive within a year); or</p> <p>(ii) for growing plants that take three or more years to re-establish; or</p> <p>(iii) as a green or a tee of a golf course,</p> <p>provided the Corporation –</p> <p>(b) received written notice from the licence holder within 12 months from the date the Plan is approved advising that the licence holder has used the land since 30 June 2010 for the purposes specified in paragraph (a); and</p> <p>(c) is satisfied that the criteria in paragraph (a) are met.</p>	<p>A permanent planting and applicable land register has been produced by GMW in order to meet Prescriptions 14, 15, 16 and 17.</p>	<p>Yes</p>

Restrictions and prohibitions on issuing take and use licences

Prescription	Activity	Compliant
18. The Corporation must not issue a new licence unless the new licence relates to – (a) the surrender of a licence under section 61 of the Act for the purposes of transferring a licence either within or into the Protection Area; or (b) the cancellation of a water share under section 33ABA of the Act; or (c) the surrender of a registration licence under section 51A of the Act, or (d) the surrender of a licence under section 61 of the Act for the purposes of consolidating two or more licences, dividing a licence or changing the conditions of a licence; or (e) the use of groundwater or surface water in a dairy and the issue of the licence is in accordance with any State-wide policy approved by the Minister; or (f) an administrative oversight or error or other anomaly.	No new licences were issued in 2015/16.	Yes
19. The Corporation must not issue a licence in the circumstances specified in Prescription 18 (a), (b), (c) and (d) if the licence volume exceeds the licence volume of the licence being surrendered or the maximum volume of the water share being cancelled.	No new licences were issued in 2015/16.	Yes
20. The Corporation must not issue an all-year licence in any of the circumstances specified in Prescription 18 if to do would result in the volume of all-year licences in Management Zone 1 exceeding 14,546ML/yr.	No new entitlement has been issued; all new licence were issued following transfer.	Yes
21. The Corporation must not issue an licence in any of the circumstances specified in Prescription 18 if to do would result in the volume of all licences in Protection Area exceeding 69,995ML/yr.	The licensed volume does not exceed the specified limit.	Yes
22. The Corporation must not issue a licence in the circumstances specified in Prescription 18 (a) and (b) if to do would result in the volume of licences authorised to take water in Zone 1 between 1 July and 31 October or from Zone 2 in the area named in Plan exceeding the corresponding volume specified for that area or for any downstream area.	The licensed volume does not exceed the specified limits.	Yes

Prescription	Activity	Compliant
23. For the purposes of Prescription 22 each area named in the table is the area as described in the Plan (Pg. 42).	Each area is named according to the Plan.	Yes
24. For the purposes of Prescription 22 the current volume of licences authorised to take water in Zone 1 between 1 July and 31 October or Zone 2 shall be determined by summing the following proportion of the licence volumes – (a) 100% for a Winter-take licence; (b) 100% for a Zone 2 all-year groundwater licence; (c) 10% for an all-year licence to take water for Irrigation in Zone 1 (d) 25% for an all-year licence to take water for any other use in Zone 1 (e) 145% for a registration licence in Zone 1	Refer to Appendix C.	Yes
25. For each named area in the Protection Area the Corporation must publish in the annual report the total number and volume for the following licence types as at 30 June – (a) all licences; (b) licences in Zone 1; (c) all-year groundwater licences in Zone 1 (d) all-year surface water licences in Zone 1(exclusive of registration licences) (e) registration licences in Zone 1 (f) winter-take licences in Zone 1 (g) groundwater licences in Zone 2;	Refer to Appendix D.	Yes

Restrictions and Prohibitions on Issuing Works Licences

Prescription	Activity	Compliant
26. The Corporation must not approve an application for a licence under section 67 of the Act to construct a private dam on a waterway unless the applicant has adhered to all legislative requirements and carried out an environmental impacts study and the licence contains appropriate conditions, consistent with the Policies for Managing Take and Use Licences and Policies for Managing Works Licences, to ensure minimal environmental impacts.	All relevant applications complied with this prescription.	Yes

Transfers between Management Zone 1 and 2

Prescription	Activity	Compliant
27. Other than as provided in Prescriptions 28 and 31 of this Plan, the Corporation must refuse an application for the transfer of a licence within Management Zone 1 that would result in water being used on a different property that is – (a) downstream of the property on which it was previously authorised to be used unless the licence volume of the licence issued to the transferee is only 80 per cent of the licence volume of the licence to be transferred; or (b) upstream of the property on which it was previously authorised to be used, unless the licence issued to the transferee is a winter-take licence.	All licence transfers complied with the prescriptions.	Yes
28. The Corporation must refuse an application for the transfer of a licence within Management Zone 1 that would result in a winter-take licence becoming an all-year licence.	All transfers complied with the prescription.	Yes
29. The Corporation may approve an application for the transfer of a licence from Management Zone 1 to Management Zone 2 without any change to the licence volume of the licence being transferred.	All transfers complied with the prescription.	Yes
30. The Corporation must refuse an application for the transfer of a licence from Management Zone 2 to Management Zone 1 unless the transfer results in the issue of a winter-take licence.	No transfer of an annual licence occurred from Management Zone 2 to Management Zone 1.	Yes

Domestic and Stock Transfers

Prescription	Activity	Compliant
31. The Corporation may approve an application to transfer a surface water licence that results in the issue of an all-year licence, provided that the licence is for domestic and stock use only and the licence volume is no greater than 2 ML.	One domestic and stock licence transfer occurred within the 2015/16 water year.	Yes

Licence Transfers into the Protection Area

Prescription	Activity	Compliant
32. The Corporation may approve an application to transfer a licence or water share into Management Zone 2.	Two licence transfers occurred into Management Zone 2.	Yes

Prescription	Activity	Compliant
33. The Corporation must not approve an application to transfer a licence or water share into Management Zone 1 unless the transfer results in the issue of a winter-take licence.	Transfer rules in Prescription 33 were applied to all licence transfers.	Yes

On Property Licence Transfers

Prescription	Activity	Compliant
34. The Corporation may approve an application to transfer of a licence that would result in water being used on the same property on which it was previously authorised to be used without any change to the licence volume or the period during which the water can be taken.	All transfers complied with this prescription.	Yes

Off Property Licence Conversions

Prescription	Activity	Compliant
35. The Corporation must refuse an application to convert an all-year groundwater licence in Management Zone 1 to a surface water licence that would result in water being used on a different property that is – (a) downstream of the property on which it was previously authorised to be used, unless the licence volume of the surface water licence is only 80 per cent of the licence volume of the groundwater licence; or (b) upstream of the property on which it was previously authorised to be used, unless the surface water licence is a winter-take licence.	All transfers complied with the prescription.	Yes
36. The Corporation must refuse an application to convert an all-year surface water licence in Management Zone 1 to a groundwater licence in Management Zone 1 that would result in water being used on a different property on which it was previously authorised to be used unless the groundwater licence is a winter-take licence.	All transfers complied with the prescription.	Yes
37. The Corporation may approve an application to convert a surface water licence in Management Zone 1 to an all-year groundwater licence in Management Zone 2 without any reduction in licence volume.	All transfers complied with the prescription.	Yes

Prescription	Activity	Compliant
38. The Corporation must refuse an application to convert an all-year groundwater licence in Management Zone 2 to a surface water licence in Management Zone 1 that would result in water being used on a different property on which it was previously authorised to be used unless the surface water licence is a winter-take licence.	All transfers complied with the prescription.	Yes

On Property Licence Conversions

Prescription	Activity	Compliant
39. The Corporation must refuse an application to convert an all-year surface water licence to a groundwater licence in Management Zone 1 for use on the same property on which it was previously authorised to be used unless the groundwater licence is a winter-take licence.	All transfers complied with the prescription.	Yes
40. The Corporation may approve an application to convert a surface water licence in Management Zone 1 to an all-year groundwater licence in Management Zone 2 for use on the same property on which it was previously authorised to be used without any reduction in the licence volume of the groundwater licence.	All transfers complied with the prescription.	Yes
41. The Corporation must refuse an application to convert an all-year groundwater licence in Management Zone 2 to a surface water licence in Management Zone 1 for use on the same property on which it was previously authorised to be used unless the surface water licence is a winter-take licence.	All transfers complied with the prescription.	Yes
42. The Corporation may approve an application to convert an all-year groundwater licence in Management Zone 1 to an all-year surface water licence in Zone 1 for use on the same property on which it was previously authorised to be used without any reduction in licence volume.	All transfers complied with the prescription.	Yes

Meter Installation

Prescription	Activity	Compliant
43. Within five years from the time the Plan is approved, the Corporation must ensure that a meter is fitted to every operational works used to take water under a surface water or a groundwater licence, other than a registration licence, that	GMW is undertaking a metering program that will ensure all operational groundwater works authorised to extract 10 ML/yr or more will	Yes

Prescription	Activity	Compliant
authorises the extraction of 10 ML/yr or more.	have a meter fitted by January 2017.	

Meter Reading and Account for Use

Prescription	Activity	Compliant
44. The Corporation must – (a) read each meter at least twice every year; and (b) determine the volume of water taken each year under the relevant licence.	All meters for both groundwater and surface water were read twice during the 2015/16 water year. Meter reads were completed in January and June 2016.	Yes
45. If for any reason the Corporation is unable to determine the volume of water by means of a meter it must estimate the volume of water taken.	No estimation of water taken was required.	Yes
46. If water is taken under a licence for irrigation use and is not metered, the Corporation must – (a) prior to the commencement of each irrigation water year determine the area to be irrigated for that water year; (b) inspect each place at which water is taken as frequently as it inspects meters; and (c) estimate the volume of water taken each year.	No use was detected from unmetered licence holders.	Yes
47. The Corporation must, within 30 days after a meter is read or an estimate of the amount of water taken is made, record the amount of water taken in a database	All meter reads were entered into GMW's database, Irrigation Planning Module (IPM).	Yes
48. If the Corporation requests the Licensee to read a meter or to estimate the amount of water used, the Licensee must comply with the request.	No requests were made to licensees by GMW.	Yes

Monitoring

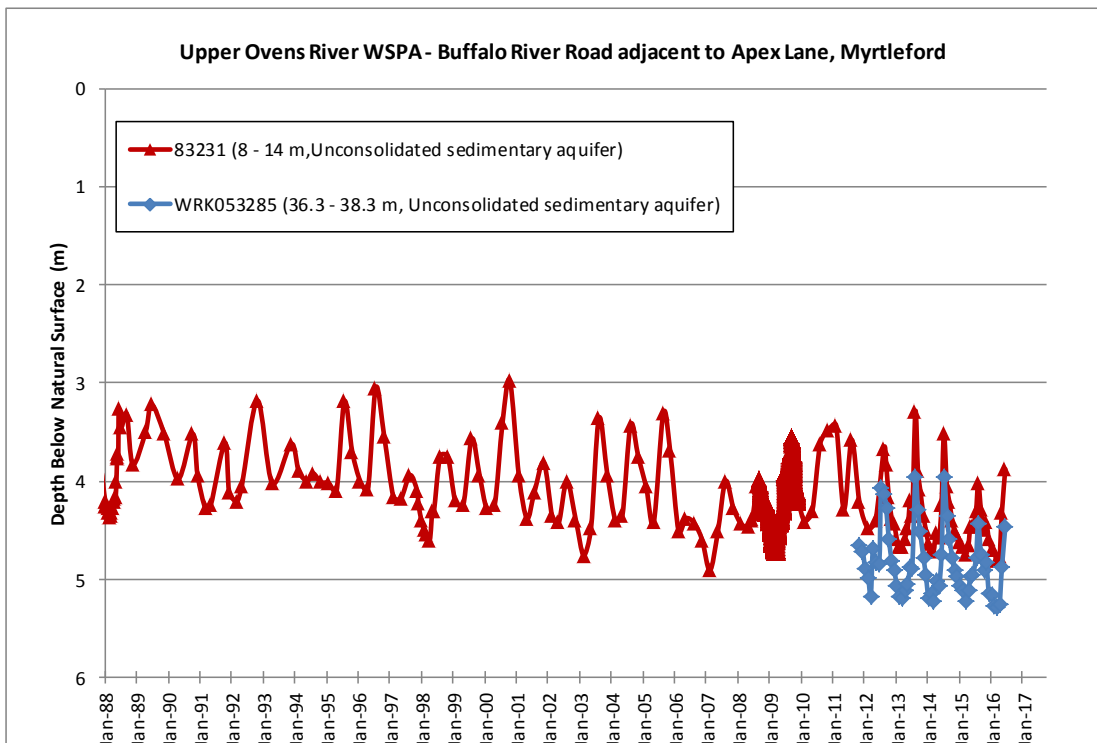
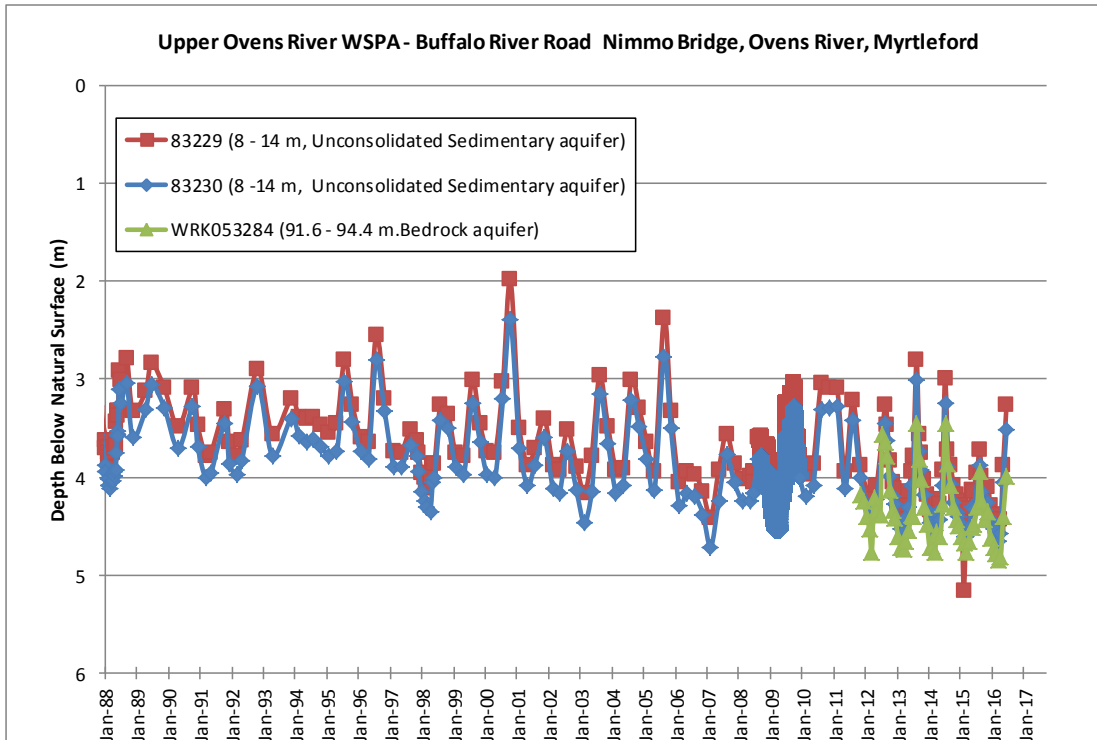
Prescription	Activity	Compliant
49. The Corporation must ensure that an appropriate monitoring program is undertaken to ensure that: (a) the flows in the Ovens River at Myrtleford are continuously recorded; (b) the flows in key tributaries are recorded or estimated in low flow periods; (c) the water levels in observation bores at Myrtleford are continuously recorded; (d) the water sharing regime is able to be implemented; and	Groundwater levels were monitored and recorded using the State Observation Bore Network. River flows were monitored and recorded under the Victorian Regional Monitoring	Yes

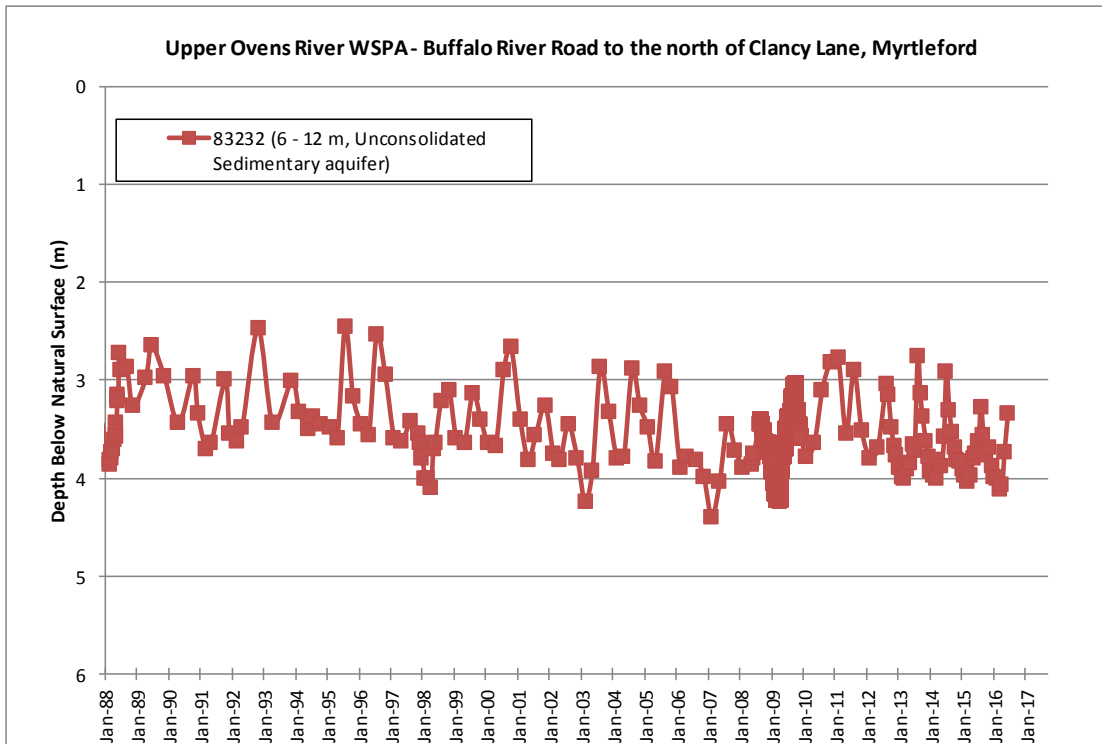
Prescription	Activity	Compliant
(e) the relationship between groundwater levels and stream levels can be observed.	<p>Partnership. Tributaries without real time monitoring were visually assessed during periods of low flow and recorded in GMW's database, System Planning Module.</p> <p>The water sharing regime is communicated to all affected licence holders and monitored throughout the period of restriction.</p> <p>The monitoring of stream and groundwater levels allows their relationship to be observed.</p>	

Revocation of the Permissible Consumptive Volume

Prescription	Activity	Compliant
50. Within three months of the approval of the Plan, the Corporation must request the Minister revoke the permissible consumptive volume of 4,010 ML in place for groundwater in the Protection Area.	The Minister approved the revocation of the PCV on 3 March 2013 and was published in the Victorian Government Gazette on 7 March 2013.	Yes

Appendix B – Hydrographs for key monitoring bores listed in the Plan





Appendix C – Licenced entitlement authorised to be taken in Winter-take period (Prescription 24)

Area Reference	Area Name	Cap Volume(ML)	Current Volume authorised to be taken between 1 July to 31 October
4030001	OvensRiver	11,330	17
4030002	OvensRiver	4,618	163
4030003	GermanCreek	2,342	139
4030004	OvensRiver	767	285
4030005	OvensRiver	1,947	1,017
4030006	EurobinCreek	2,134	194
4030007	OvensRiver	2,062	1,151
4030101	MorsesCreek	6,635	304
4030102	MorsesCreek	262	38
4030201	BucklandRiverEastBranch	9,142	0
4030202	BucklandRiver	9,500	0
4030203	BucklandRiver	3,225	121
4030204	DevilsCreek	3,288	45
4030205	BucklandRiver	504	286
4030206	BucklandRiver	752	27
4030301	BuffaloCreek	3,249	147
4030302	BuffaloCreek	271	135
4030401	BarwidgeeCreek	545	64
4030402	BarwidgeeCreek	536	32
4030403	SandyCreek	332	44
4030404	MyrtleCreek	264	260
4030405	BarwidgeeCreek	528	112
4030406	BarwidgeeCreek	482	104
4030407	HappyValleyCreek	2,365	64
4030408	HappyValleyCreek	2,344	1,064
4030409	HappyValleyCreek	236	91
4030410	BarwidgeeCreek	335	171
Total		69,995	6,074

Appendix D – Licence entitlement volume within named areas of the Upper Ovens River WSPA (Prescription 25)

Area Reference	Name of Area	Cap Volume(ML)	All Licences No.	All Licence Volume	No. Licences in Zone1	Licences in Zone 1 Volume	No. all-year GW Licences Zone 1	All-year GW licence Volume	No. all-year SW licences Zone 1 (exc Reg)	All-year SW licences Zone 1 Volume	No. Registration Licences	Registration Licence Volume	No. Winter-take Licence	Winter-take licence Volume	No. Zone 2 GW licences	Zone 2 GW Licence Volume
4030001	OvensRiver	11,330	8	37.0	8	27.0	0	0	8	27	0	0	1	10	0	0
4030002	OvensRiver	4,618	58	418.0	56	389.0	5	88	47	252	4	49	1	21	2	8
4030003	GermanCreek	2,342	11	225.1	10	207.6	3	66.6	4	69	3	72	1	10	1	7.5
4030004	OvensRiver	767	14	298.0	8	41.0	0	0	7	26	1	15	0	0	6	257
4030005	OvensRiver	1,947	63	1,931.7	54	1,579.0	11	677	32	536	11	366	1	21	9	331.7
4030006	EurobinCreek	2,134	9	149.0	9	149.0	0	0	6	18	3	131	0	0	0	0
4030007	OvensRiver	2,062	184	4,902.6	182	4,728.0	23	1098	155	3573	4	57	1	13.6	2	161
4030101	MorsesCreek	6,635	33	502.6	32	486.6	3	95	27	233.6	2	158	1	14	1	2
4030102	MorsesCreek	262	4	30.0	4	30.0	1	2	2	2	1	26	0	0	0	0
4030201	BucklandRiverEastBranch	9,142	0	0.0	0	0.0	0	0	0	0.0	0	0.0	0	0	0	0
4030202	BucklandRiver	9,500	0	0.0	0	0.0	0	0	0	0.0	0	0.0	0	0	0	0
4030203	BucklandRiver	3,225	20	232.0	19	196.0	2	40	13	118	4	38	0	0	1	36
4030204	DevilsCreek	3,288	1	31.0	1	31.0	0	0	0	0	1	31	0	0	0	0
4030205	BucklandRiver	504	15	568.0	14	423.0	2	69	11	310	1	44	2	133	1	12
4030206	BucklandRiver	752	11	120.0	11	120.0	1	12	10	108	0	0	0	0	0	0
4030301	BuffaloCreek	3,249	11	309.6	10	241.6	2	85.6	7	123	1	33	0	0	1	68
4030302	BuffaloCreek	271	15	438.0	13	425.0	2	20	10	388	1	17	0	0	2	13
4030401	BarwidgeeCreek	545	2	44.0	2	44.0	0	0	0	0	2	44	0	0	0	0
4030402	BarwidgeeCreek	536	4	22.0	4	22.0	0	0	0	0	4	22	0	0	0	0
4030403	SandyCreek	332	5	61.0	5	61.0	0	0	2	37	3	24	0	0	0	0
4030404	MyrtleCreek	264	18	370.0	13	207.0	2	40	8	121	3	46	0	0	5	163
4030405	BarwidgeeCreek	528	21	231.0	21	231.0	2	3	14	182	5	46	0	0	0	0
4030406	BarwidgeeCreek	482	20	185.0	20	185.0	1	14	15	120	4	51	0	0	0	0
4030407	HappyValleyCreek	2,365	7	139.0	7	139.0	0	0	4	115	3	24	0	0	0	0
4030408	HappyValleyCreek	2,344	33	1,020.9	33	882.0	1	17	17	274	15	591	2	138.9	0	0
4030409	HappyValleyCreek	236	15	172.0	15	172.0	0	0	12	132	3	40	0	0	0	0
4030410	BarwidgeeCreek	335	67	975.0	63	953.0	11	356	52	597	0	0	0	0	4	22
Total		69,995.0	649	13,412.5	614	12,331.3	72	2,683.2	463	7,361.6	79	1,925.0	10	361.5	35	1081.2

Note: All licence volumes were sourced from the Victorian Water Register 30 June 2016.

