



Upper Ovens River Water Supply Protection Area Water Management Plan

Annual Report

For year ending 30 June 2017

Document History and Distribution

Versions

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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 2016/17 water year.

GMW is responsible for implementation, administration and enforcement 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).

This report provides an overview of the groundwater and surface water management activities administered under the Plan during the 2016/17 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 office of GMW, or can be downloaded from the GMW website.



Pat Lennon

MANAGING DIRECTOR

27.9.2017

Date:

Executive summary

Groundwater and surface water use in the 2016/17 water year was 22% (2,971.8 ML) of total licensed volume (13,393.1 ML/yr) in the Upper Owens River Water Supply Protection Area (WSPA). This is a decrease of 545.9 ML from the 2015/16 water year. This observation is consistent with above-average rainfall experienced during the period July to October 2016, compared to the drier conditions of 2015/16.

Suspension of irrigation was applied to Management Zone 1 licences on one tributary (Roberts Creek).

This year saw completion of the metering program for groundwater licences between 10 and 19 ML/yr and the undertaking of technical investigations to inform an upcoming review of the operation of the Plan by GMW in 2017/18.

The volume of transferred licences has continued to be low, reflecting low volume of use.

All prescriptions of the Plan have been enforced by GMW.

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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 2016/17 water year.

1.2 Water Supply Protection Area

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 eastern Victoria, as shown in Figure 2.

There are two management zones within the Upper Ovens River WSPA (illustrated in Figure 1):

- **Management Zone 1 (Zone 1)** includes licences where water is taken from waterways, or bores that interact strongly with waterways from what is known as unconsolidated sedimentary aquifers. Zone 1 encompasses two trading zones: Groundwater (1085) and Surface Water (181).
- **Management Zone 2 (Zone 2)** includes licences where water is taken as groundwater from the underlying bedrock aquifer – known as a fractured rock aquifer system. Zone 2 encompasses groundwater trading zone 1086.

1.3 Groundwater Management Plan

The Plan was signed 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 2017.

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 Zone 1 which requires the surface water and the unconsolidated sedimentary aquifer to be managed as a connected system. Bores classed as Zone 2 are treated as a separate groundwater resource.

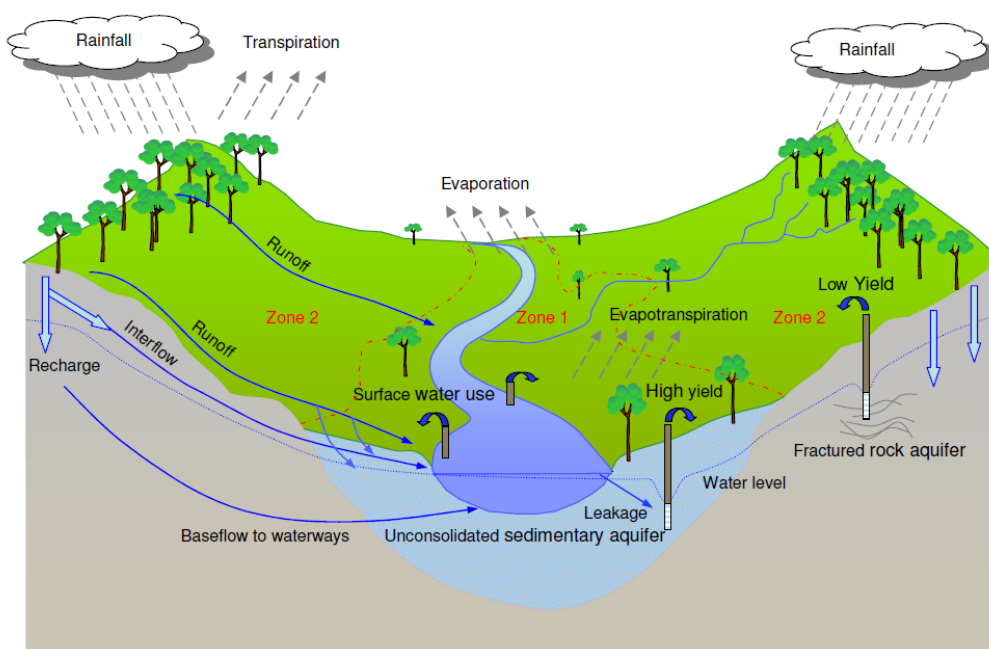


Figure 1 Upper Ovens River WSPA management zones

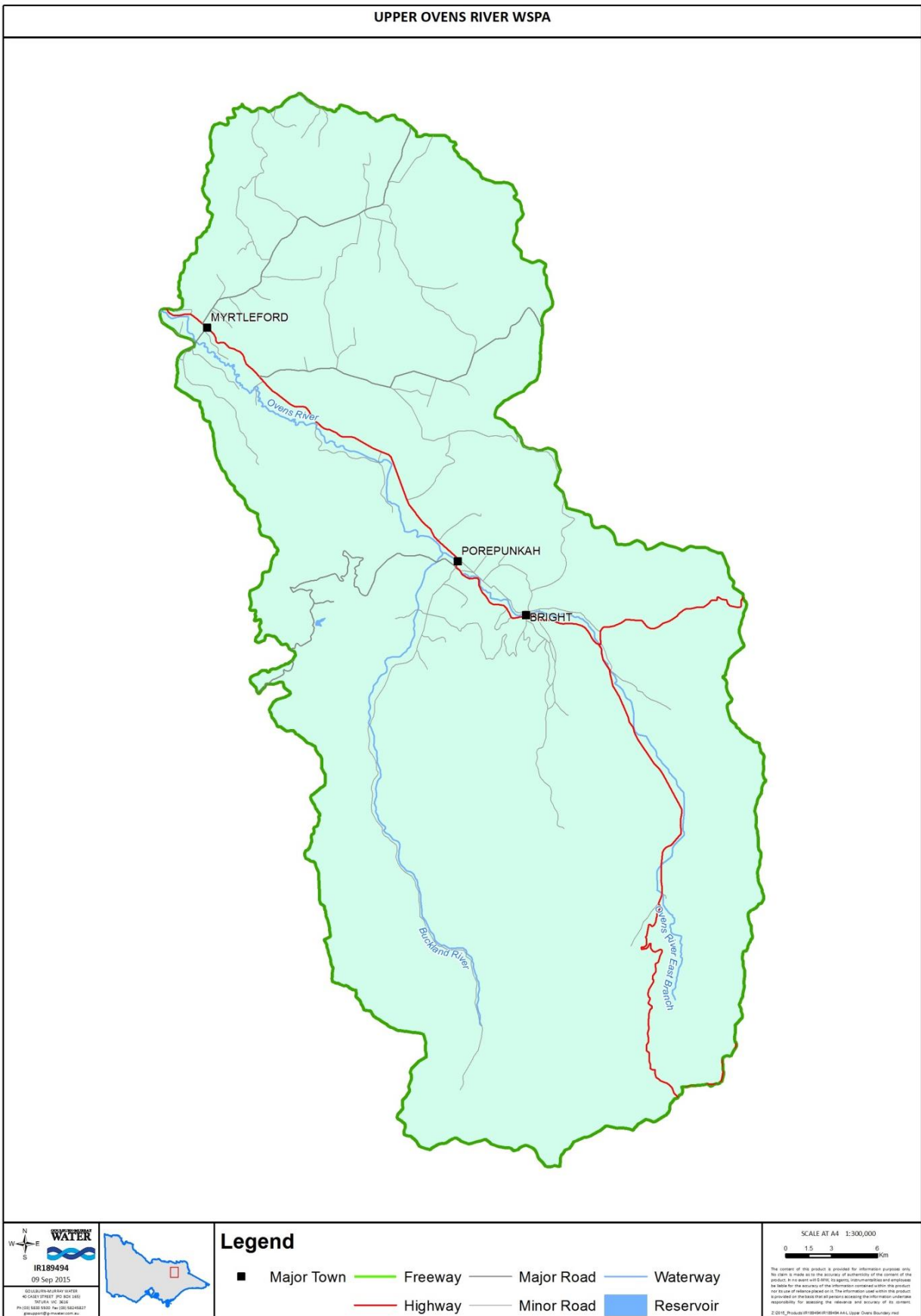


Figure 2 Upper Ovens River Water Supply Protection Area

2 Water Management

2.1 Management zones and licence volume

The management zones (Zone 1 and Zone 2) are defined on a technical basis of their interaction between groundwater and surface water, having regard for the level of risk that groundwater extractions pose to flow in the Ovens River and its tributaries during low-flow periods.

The total licensed volume in the Upper Ovens River WSPA was 13,393.1 megalitres per year (ML/yr) at 30 June 2017. The number of licences in each management zone is summarised in Table 1, along with a breakdown of the total licensed volume. Licensed volume is broken down further into named areas set in prescription 22 (Appendix D).

Table 1 Licensed volume in the Upper Ovens River WSPA (2016/17)

Management zone	Licences	Licensed volume (ML/yr)
Zone 1 Surface Water	509	9,742.7
Zone 1 Groundwater	69	2,646.2
Zone 2 Groundwater	33	1,004.2
Total	611	13,393.1

Note: Data extracted from the Victorian Water Register on 30 June 2017.

The total licensed volume for the 2016/17 water year was lower than that recorded within the Plan due to licence cancellations and as a result of 20 per cent reductions applied to licence volumes from downstream transfers. The reported licensed volume for Zone 1 Surface Water increased by 94.6 ML/yr since 2015/16. This was due, partially to licence transfers from Zone 1 Groundwater, and partially (59.6 ML/yr) to the assignment of licences to Upper Ovens River WSPA that were previously unassigned in the Victorian Water Register.

2.2 Restrictions on taking water within Zone 1

The water sharing regime prescribed by the Plan commenced on 1 July 2012 and comprises five stages of restrictions in which the share of licensed volume 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 Restriction stages that apply to licence in Zone 1

Restriction stage	Trigger flow: Ovens River at Myrtleford (ML/d)	Description	Share of licensed volume 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 5 restrictions (suspension) were put in place during the 2016/17 water year on Roberts Creek as flow fell below the Stage 5 trigger levels in early to mid March 2017.

The Ovens River at Myrtleford remained above the restriction trigger levels throughout the 2016/17 water year. Flows recorded at the Myrtleford gauging station during the driest period of the 2016/17 water year (January to April 2017) are shown in Figure 3.

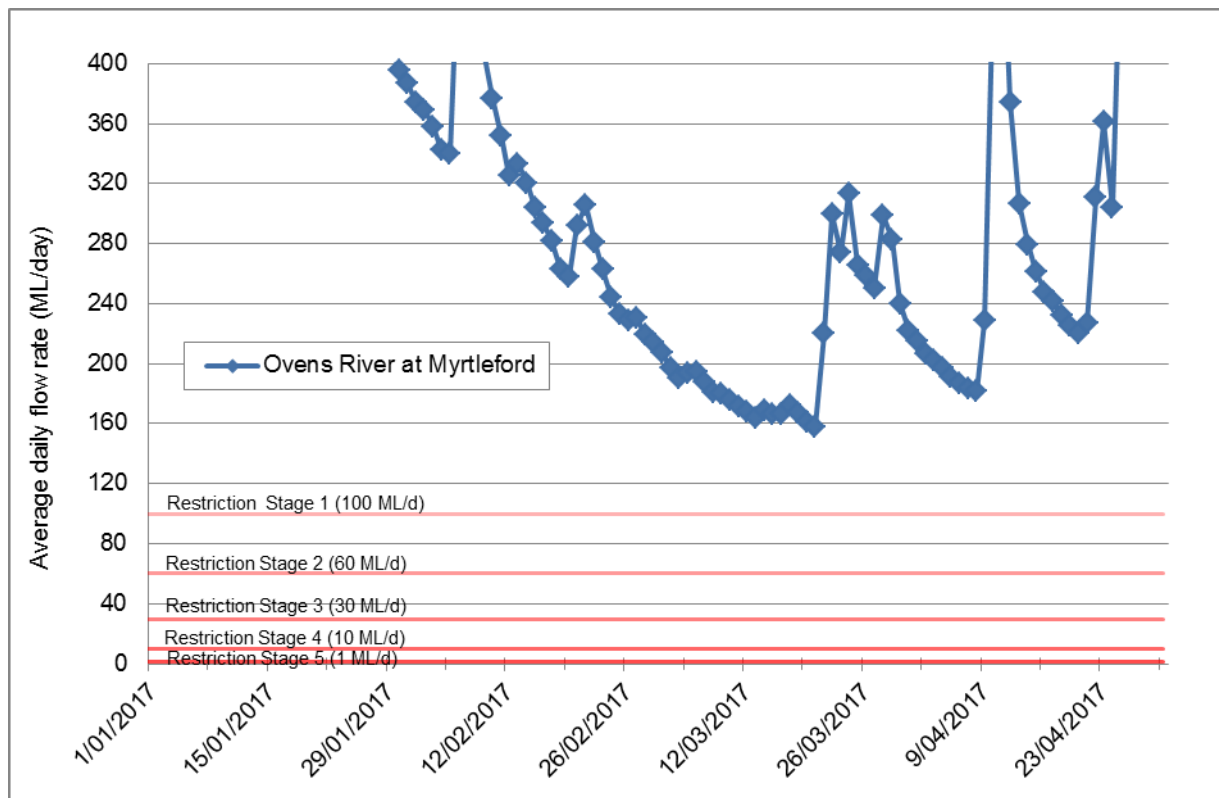


Figure 3 Average daily flows in the Ovens River at Myrtleford – January to April 2017

2.3 Groundwater and surface water use

As part of the Plan implementation, all licensed operational groundwater bores with a licensed volume greater than 10 ML/yr were required to be metered by January 2017. This target has been met and now brings metering of all licensed groundwater users in line with licensed surface water users. A majority of licensed surface water users in the WSPA are metered; only historic licences with licensed volume of 9 ML/yr or less have not being metered (consistent with Victoria’s Metering Policy).

The total metered surface water and groundwater use in 2016/17 was 2,971.8 ML (Table 3) representing 22% of licensed volume. This is a decrease from the 2015/16 when total metered use of 3,517.7 ML was recorded at 26.2% of licensed volume. The decrease in use can be attributed to above average rainfall experienced during July to October 2016; in particular, the first week of October 2016 resulted in significant wetting of the catchment, delaying the irrigation season.

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 above average in the 2016/17 water year with 1,288.2 mm/yr recorded (Figure 4), following consistent rainfall occurring from July through until September, and above-average rainfall in the last week of September and first week of October 2016.

Consistent with a wetter year, total combined use in 2016/17 was slightly lower than 2015/16. Of interest is a minor decline in Zone 1 use and minor increase in Zone 2 use which is in line with the objectives of the Plan (Figure 5).

Table 3 Metered use by management zone in 2016/17

Management zone	Metered use (ML)	Total licensed volume (ML/yr)	Proportion of total licensed volume used
Zone 1 Surface Water	2,001.5	9,742.7	21%
Zone 1 Groundwater	603.2	2,646.2	23%
Zone 2 Groundwater	367.1	1,004.2	37%
Total	2,971.8	13,393.1	22%

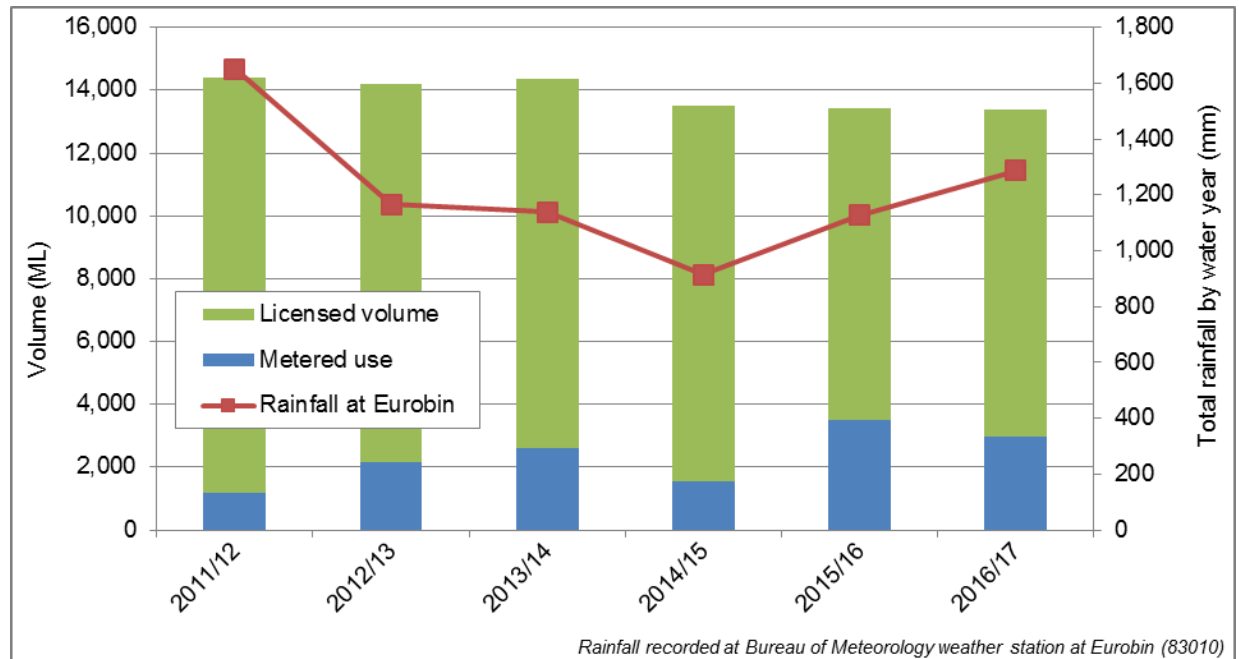


Figure 4 Metered use as a proportion of total licensed volume in the Upper Ovens River WSPA; and annual rainfall totals at Eurobin

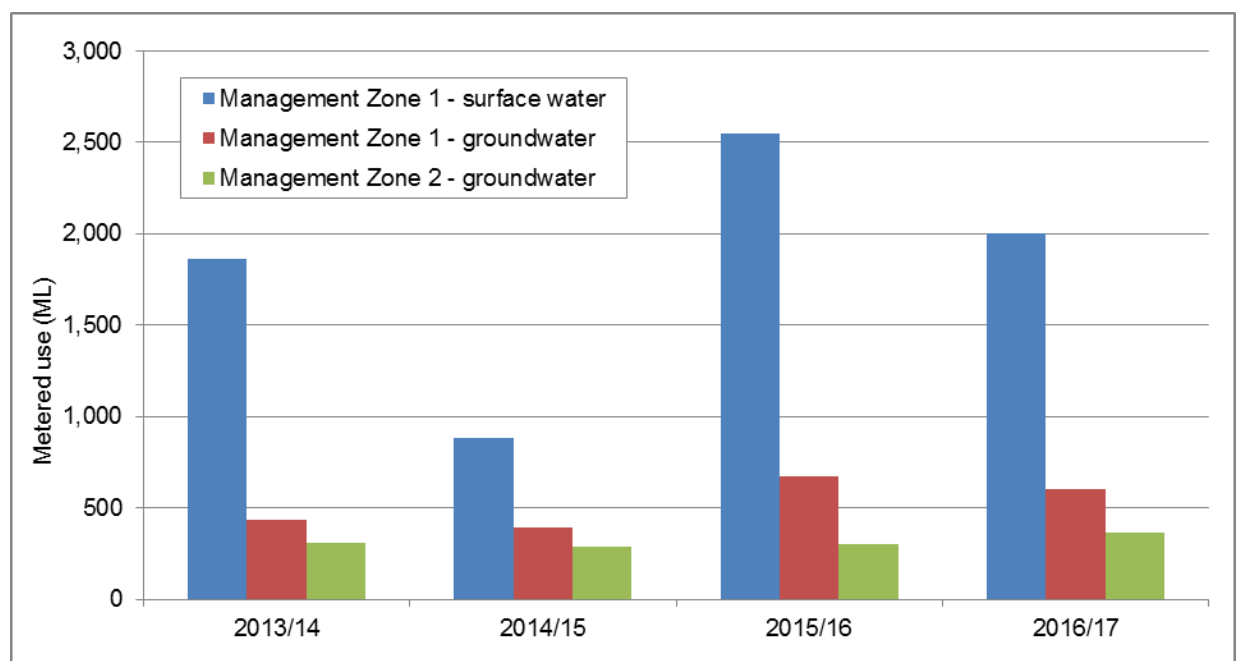


Figure 5 Metered use by management zone

2.4 Licence transfers

Groundwater and surface water licence transfer activity during 2016/17 is summarised in Table 4 below.

Table 4 Licence transfers by management zone in 2016/17

Management zone	Transfer from		Transfer to	
	Permanent (ML)	Temporary (ML)	Permanent (ML)	Temporary (ML)
Zone 1 Surface Water (181)	2.0	338.0	56.0	597.0
Zone 1 Groundwater (1085)	116.0	333.0	0.0	0.0
Zone 2 Groundwater (1086)	6.0	2.5	66.0	51.5
Total	124.0	673.5	122.0	648.5

Note: Data extracted from the Victorian Water Register on 1 July 2017.

Temporary and permanent licence transfers during the 2016/17 water year were lower than in 2015/16. The demand for water was down due to higher than average rainfall over the winter and spring months. In total, there were two permanent and three temporary licence transfers into Zone 2. All permanent licence transfers were within the capped volumes set for each zone within the Plan (Appendix C).

The variation in total volumes between 'Transfer from' and 'Transfer to' columns in Table 4 is due to a permanent transfer of 2.0 ML of unregulated surface water entitlement from the Upper Ovens River WSPA (trading zone 181) into the King and Lower Ovens Unregulated catchment (trading zone 180) and a temporary transfer of 25 ML from Zone 1 (1085) to the Lower Ovens Groundwater Management Area (bedrock zone).

2.5 Metering

The condition of meters is noted when readings are taken in January and June of each year. A summary of the meter related activities is shown below in Table 5.

Table 5 Meter-related activities by water year; 2013/14 to 2016/17

Metering activity	2013/14	2014/15	2015/16	2016/17
New meters installed	3	7	11	2
Meters replaced	13	14	5	2
Meters requiring maintenance	8	2	14	12

In addition to the meters listed above, two were removed due to no longer being required as a result of a licence cancellation and a service point cancellation. Two meters were also replaced to consolidate recording of use through a single meter.

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 Water Measurement Information System at <http://data.water.vic.gov.au/monitoring.htm>.

During the 2016/17 water year in the Upper Ovens River WSPA two domestic and stock bore construction licences were issued by GMW and the Victorian Water Register (combined); no domestic and stock BCRs were received by GMW.

2.7 Licence compliance

There were no cases of metered non-compliance with licence volume of groundwater and surface water in the Upper Ovens River WSPA during the 2016/17 water year. This is an improvement on the 2015/16 period when there were three cases which had to be rectified with licence transfers.

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 five years. This trend was similar in both the unconsolidated sedimentary aquifer and fractured bedrock aquifer. The groundwater monitoring data indicates that groundwater pumping in 2016/17 had no observable impact on aquifer-wide groundwater levels. Groundwater levels however have continued to decline within the period of the Plan. Further analysis will be undertaken as part of the process to review the operation of the Plan in 2017.

3.2 Surface water

The surface water data taken from the Ovens River gauging station at Myrtleford (Figure 6) 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 significant rainfall events in late-September and early-October 2016. The rainfall data in Figure 6 are shown as cumulative for 2016/17 to show when low rainfall and high rainfall events occurred. Major flooding occurred in October 2017 which caused damage to the gauging station, resulting in loss of flow data until mid-November 2017.

The location of monitoring bores and surface water gauges are shown in Figure 7.

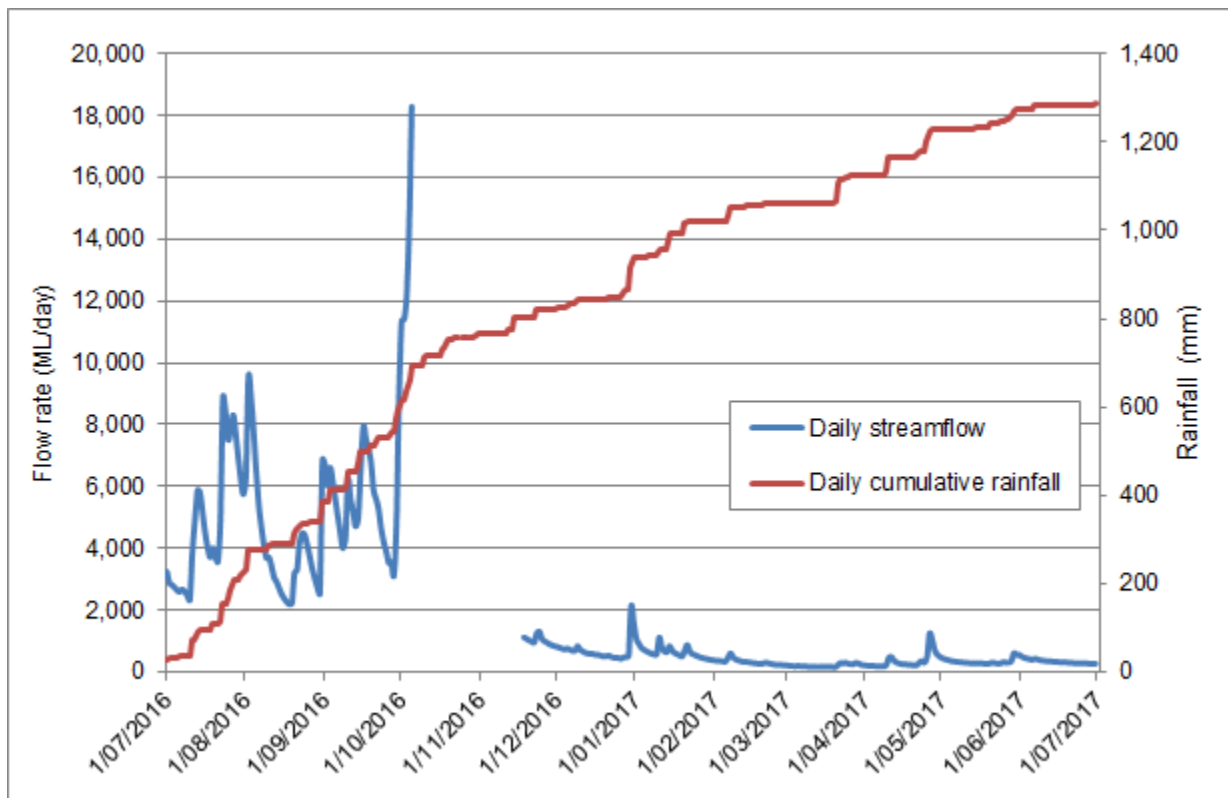


Figure 6 Daily cumulative rainfall (BoM weather station at Eurobin 83010) and daily streamflows in Ovens River at Myrtleford (gauging station 403210)

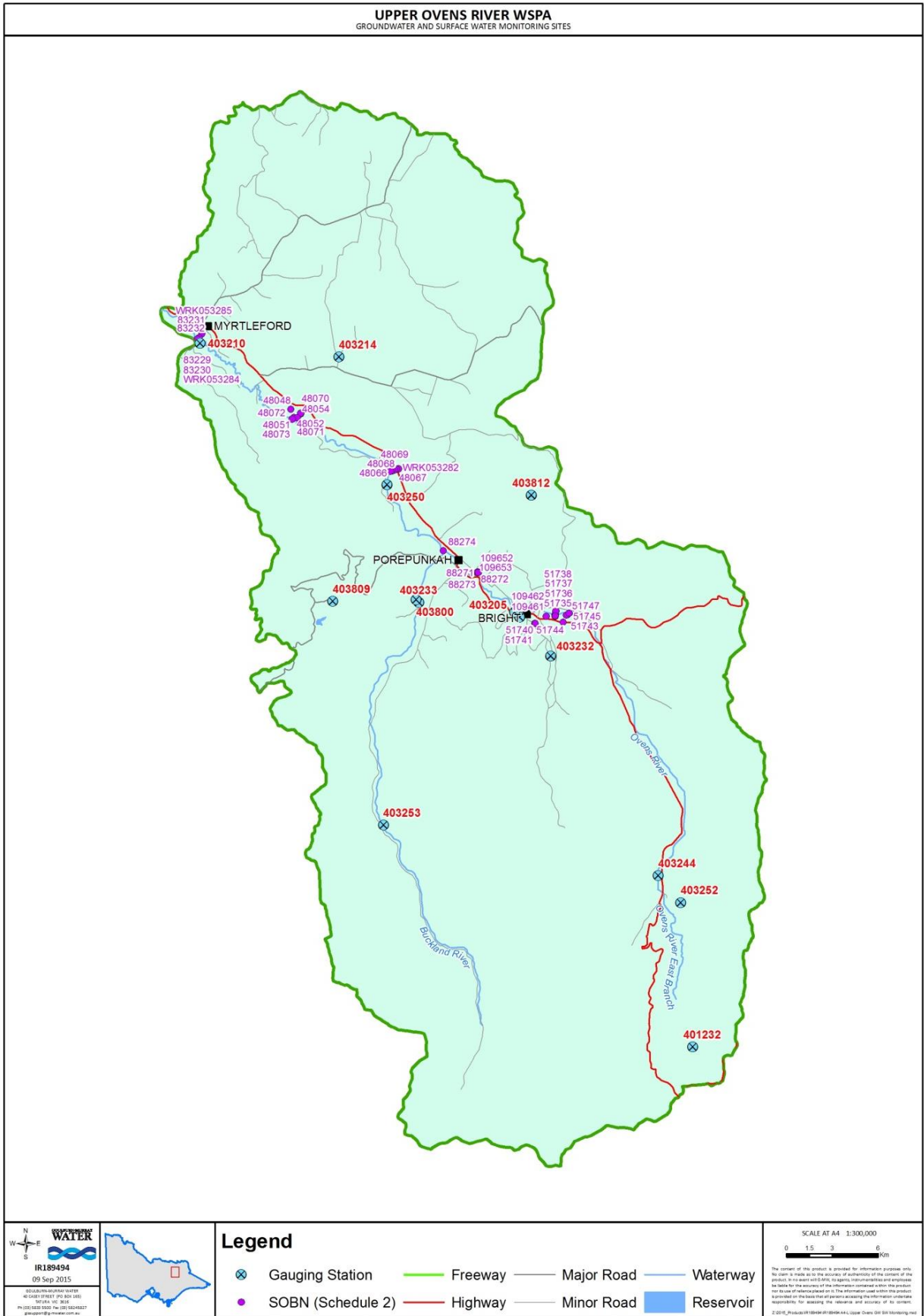


Figure 7 Groundwater monitoring bores and surface water gauging stations in the Upper Ovens River WSPA

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 undertaken 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.

At the time of this report, a report for the water balance research project was in draft form. It will be available on the GMW website in the near future.

The following research project activities occurred during 2016/17:

- Quarterly monitoring was undertaken of water table and stream flow levels at the gauging and observation bore sites.
- The Upper Ovens River Water Balance was commissioned by the North East Catchment Management Authority (NECMA) and published in July 2017.
- The NECMA also commissioned the Upper Ovens River Water Use Social Research paper which was undertaken by the consultancy RMCG. All stakeholders engaged in this process were provided with a summary report.

Appendix A – Assessment of activities against 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 were not subject to restrictions during the 2016/17 water year.	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.	No Restrictions on the Ovens River occurred during 2016/17 water year.	Yes
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 Roberts Creek (March 2016) in line with Plan requirements. No other Stage 5 stream restrictions were imposed during 2016/17.	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.	Licence holders were not subject to restrictions during the 2016/17 water year.	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.	Stage 2, 3 or 4 Restrictions were not implemented during the 2016/17 water year.	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 2016/17 water year for Roberts Creek in line with Plan requirements. No compliance issues were recorded.	Yes

Prescription	Activity	Compliant
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.	The Stage 5 Restrictions on Roberts Creek was lifted in the 2016/2017 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.	Stage 2, 3 or 4 Restrictions were not implemented during the 2016/17 water year.	Yes
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.	The Stage 5 Restrictions on Roberts Creek was implemented during the 2016/7 water year, in line with the 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 licensed volume is available on the GMW 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.	Stage 4 and 5 Restrictions were not imposed and transitional arrangements were not implemented	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,	Stage 3 Restrictions were not declared in the 2016/17 water year.	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 not declared in the 2016/17 water year.</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 2016/17.	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 2016/17.	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 licensed volumes were issued; all new take and use licences were issued following transfer of licensed volume.	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
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

Prescription	Activity	Compliant
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 this Prescription.	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 this 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 this 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.	No licence transfers occurred within the 2016/17 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.	One licence transfer occurred into Management Zone 2	Yes
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 this 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 this 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 this Prescription.	Yes
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 this 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 authorises the extraction of 10 ML/yr or more.	GMW has completed a metering program where all operational groundwater works authorised to extract 10 ML/yr or more have been fitted with a meter.	Yes

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 2016/17 water year. Meter reads were completed in January and June 2017.	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

Prescription	Activity	Compliant
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

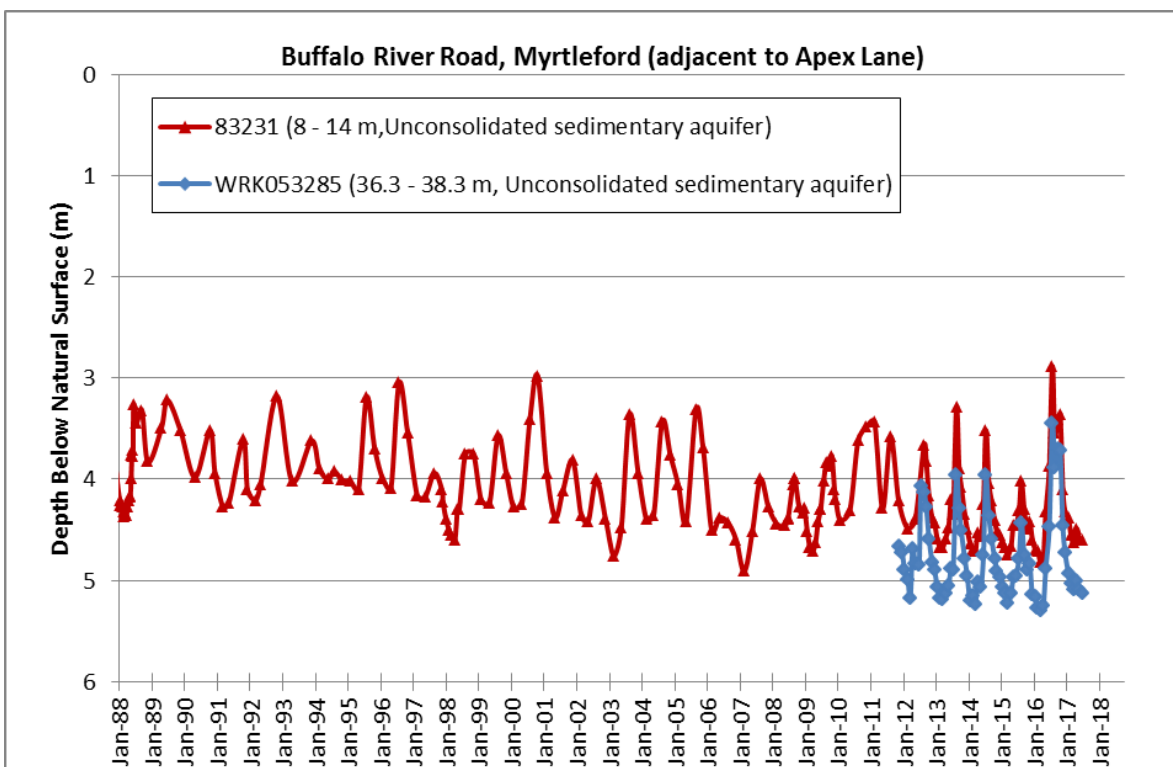
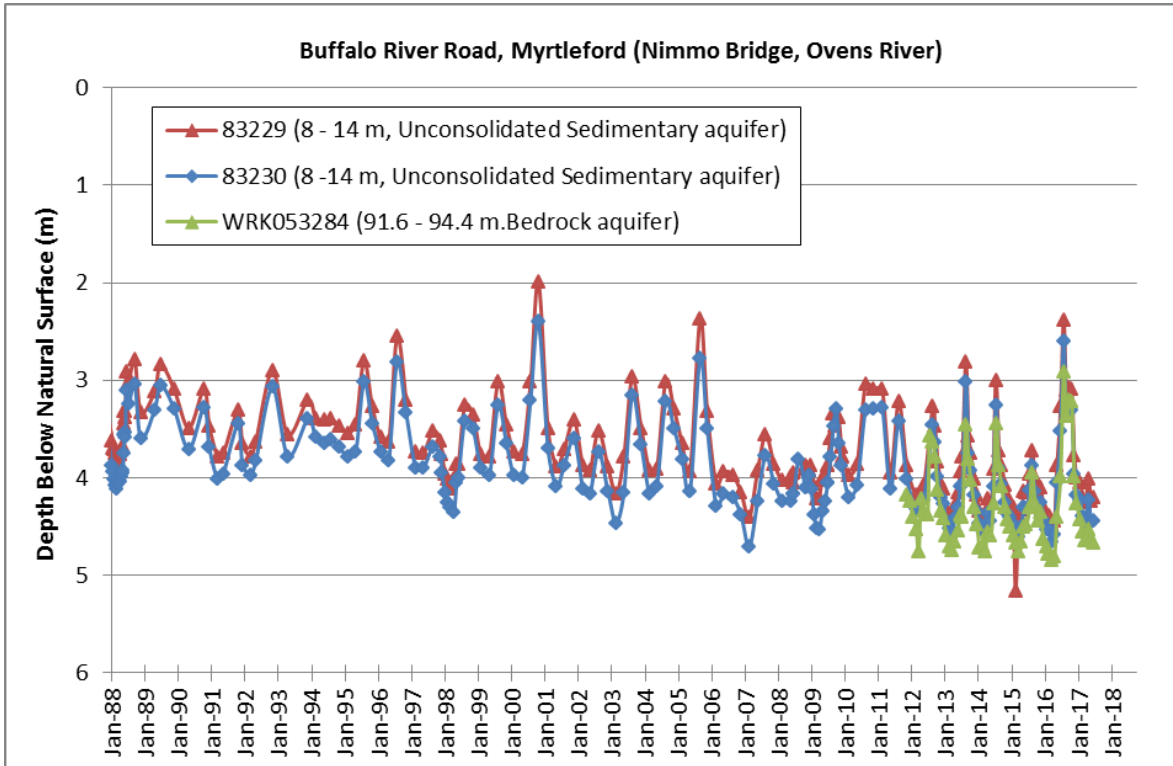
Prescription	Activity	Compliant
49. The Corporation must ensure that an appropriate monitoring program is undertaken to ensure that: (a) the flows in the Ovens River at Myrtleford are continuously recorded; (b) the flows in key tributaries are recorded or estimated in low flow periods; (c) the water levels in observation bores at Myrtleford are continuously recorded; (d) the water sharing regime is able to be implemented; and (e) the relationship between groundwater levels and stream levels can be observed.	Groundwater levels were monitored and recorded using the State Observation Bore Network. River flows were monitored and recorded under the Victorian Regional Monitoring Partnership. Tributaries without real time monitoring were visually assessed during periods of low flow and recorded in GMW's database, System Planning Module. The water sharing regime is communicated to all affected licence holders and monitored throughout the period of restriction. The monitoring of stream and groundwater levels allows their relationship to be observed.	Yes

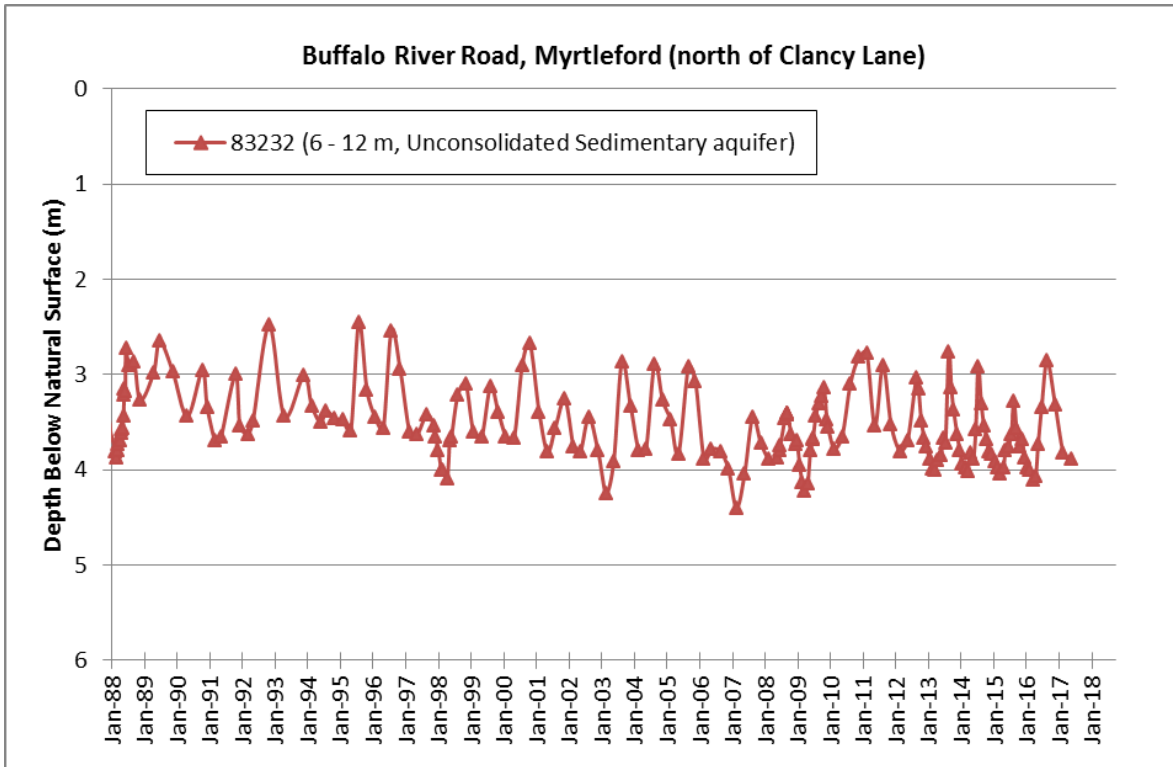
Revocation of the Permissible Consumptive Volume

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

Further groundwater level information from other State observation bores is available on the Water Measurement Information System website at <http://data.water.vic.gov.au/monitoring.htm>





Appendix C – Licensed volumes authorised to be taken during Winter-take period (Prescription 24)

Area Reference	Area Name	Cap Volume (ML)	Current Volume (ML) authorised to be taken between 1 July to 31 October
4030001	OvensRiver	11,330	16.5
4030002	OvensRiver	4,618	166.6
4030003	GermanCreek	2,342	137.4
4030004	OvensRiver	767	156.3
4030005	OvensRiver	1,947	1,022.3
4030006	EurobinCreek	2,134	228.0
4030007	OvensRiver	2,062	1,174.9
4030101	MorsesCreek	6,635	375.6
4030102	MorsesCreek	262	39.2
4030201	BucklandRiverEastBranch	9,142	0.0
4030202	BucklandRiver	9,500	0.5
4030203	BucklandRiver	3,225	205.4
4030204	DevilsCreek	3,288	50.0
4030205	BucklandRiver	504	170.3
4030206	BucklandRiver	752	23.3
4030301	BuffaloCreek	3,249	210.7
4030302	BuffaloCreek	271	87.2
4030401	BarwidgeeCreek	545	63.8
4030402	BarwidgeeCreek	536	37.9
4030403	SandyCreek	332	34.8
4030404	MyrtleCreek	264	281.0
4030405	BarwidgeeCreek	528	108.6
4030406	BarwidgeeCreek	482	121.1
4030407	HappyValleyCreek	2,365	63.6
4030408	HappyValleyCreek	2,344	1,012.7
4030409	HappyValleyCreek	236	91.1
4030410	BarwidgeeCreek	335	171.9
Total		69,995	6,050

Appendix D – Licensed volumes 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 Zone 1	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	11329.9	8	36	8	26	0	0	8	26	0	0	1	10	0	0
4030002	OvensRiver	4617.5	67	420.3	65	391.3	4	76	57	266.3	4	49	1	21	2	8
4030003	GermanCreek	2341.6	14	218.1	13	200.6	3	66.6	7	62	3	72	1	10	1	7.5
4030004	OvensRiver	766.5	10	157	6	25	0	0	5	10	1	15	0	0	4	132
4030005	OvensRiver	1946.5	70	1898.3	61	1537.6	10	648	40	523.6	11	366	1	29	9	331.7
4030006	EurobinCreek	2134.1	15	283	15	283	0	0	12	152	3	131	0	0	0	0
4030007	OvensRiver	2062.3	112	4868.2	110	4618.6	25	1191	81	3370.6	4	57	2	34.6	2	215
4030101	MorsesCreek	6635.4	70	635.1	68	567.2	3	95	63	314.2	2	158	2	59.9	2	8
4030102	MorsesCreek	262.1	5	34	5	34	1	2	3	6	1	26	0	0	0	0
4030201	BucklandRiverEastBranch	9141.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4030202	BucklandRiver	9499.9	1	2	1	2	0	0	1	2	0	0	0	0	0	0
4030203	BucklandRiver	3225.2	16	274	15	139	2	40	9	61	4	38	1	99	1	36
4030204	DevilsCreek	3287.6	11	51	11	51	0	0	10	20	1	31	0	0	0	0
4030205	BucklandRiver	504.2	12	377.1	12	343.1	1	9	10	290.1	1	44	1	34	0	0
4030206	BucklandRiver	752.1	8	105	8	105	1	12	7	93	0	0	0	0	0	0
4030301	BuffaloCreek	3249.2	13	566.1	12	498.1	2	85.6	9	379.5	1	33	0	0	1	68
4030302	BuffaloCreek	270.8	11	248	9	235	2	20	6	198	1	17	0	0	2	13
4030401	BarwidgeeCreek	545	2	44	2	44	0	0	0	0	2	44	0	0	0	0
4030402	BarwidgeeCreek	535.6	8	46	8	46	0	0	4	24	4	22	0	0	0	0
4030403	SandyCreek	331.6	3	24	3	24	0	0	0	0	3	24	0	0	0	0
4030404	MyrtleCreek	263.5	15	412	10	235	2	40	5	149	3	46	1	14	5	163
4030405	BarwidgeeCreek	528.4	17	214.4	17	214.4	1	1	11	167.4	5	46	0	0	0	0
4030406	BarwidgeeCreek	482	22	253.5	22	253.5	1	14	17	188.5	4	51	0	0	0	0
4030407	HappyValleyCreek	2364.7	8	139.3	8	139.3	0	0	5	115.3	3	24	0	0	0	0
4030408	HappyValleyCreek	2343.8	34	963.8	34	874.8	1	17	18	266.8	15	591	1	89	0	0
4030409	HappyValleyCreek	235.6	11	172.3	11	172.3	0	0	8	132.3	3	40	0	0	0	0
4030410	BarwidgeeCreek	334.8	36	950.6	32	928.6	10	329	22	599.6	0	0	0	0	4	22
Total		69995	599	13393.1	566	11988.4	69	2646.2	418	7417.2	79	1925	12	400.5	33	1004.2

Note: All licence volumes were sourced from the Victorian Water Register 30 June 2017