



Upper Ovens River Water Supply Protection Area Water Management Plan

Annual Report

For year ending 30 June 2018

Document History and Distribution

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Foreword

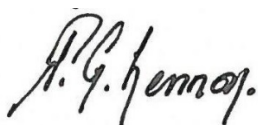
Goulburn-Murray Water (GMW) is pleased to present the annual report for the Upper Ovens River Water Supply Protection Area Water Management Plan (the Plan) for the 2017/18 water year.

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 in the Upper Ovens Water River Supply Protection Area under the Plan during the 2017/18.

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

Date 18/09/2018

Executive summary

The Upper Ovens River Water Supply Protection Area (WSPA) Water Management Plan (the Plan) was approved by the Minister for Water in January 2012.

The 2017/18 water year saw completion of the Upper Ovens Water Balance Program and review of the operation of the Plan by Goulburn-Murray Water (GMW).

Groundwater and surface water use in the 2017/18 water year was 23 per cent (3,126.6ML) of total licensed volume (13,387.1 ML/year) in the Upper Ovens River WSPA. Despite lower than average rainfall for the water year, the total combined use in 2017/18 was only slightly higher than 2016/17.

The Ovens River at Myrtleford remained above the restriction trigger levels throughout the 2017/18 water year. However, licence holders in Management Zone 1 on Roberts Creek were subject to Stage 5 restriction (suspension) from March 2018. Groundwater monitoring data indicates that groundwater pumping in 2017/18 did not result in observable impact on aquifer-wide groundwater levels.

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

GMW conducted a review of the operation of the Plan throughout 2017/18 as required under Prescription 51 which included consultation with stakeholders. The recommendations of the report for consequential amendments will be considered by the Minister for Water during 2018/19.

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 Water Supply Protection Area (WSPA) throughout the 2017/18 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. It comprises two management zones (illustrated conceptually in Figure 1):

- **Management 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. These resources are managed as a connected system and comprises two trading zones: Groundwater (1085) and Surface Water (181).
- **Management Zone 2** includes licences where water is taken as groundwater from the underlying bedrock aquifer – known as a fractured rock aquifer system. Zone 2 comprises one groundwater trading zone (1086). This resource is treated as a separate system to Zone 1.

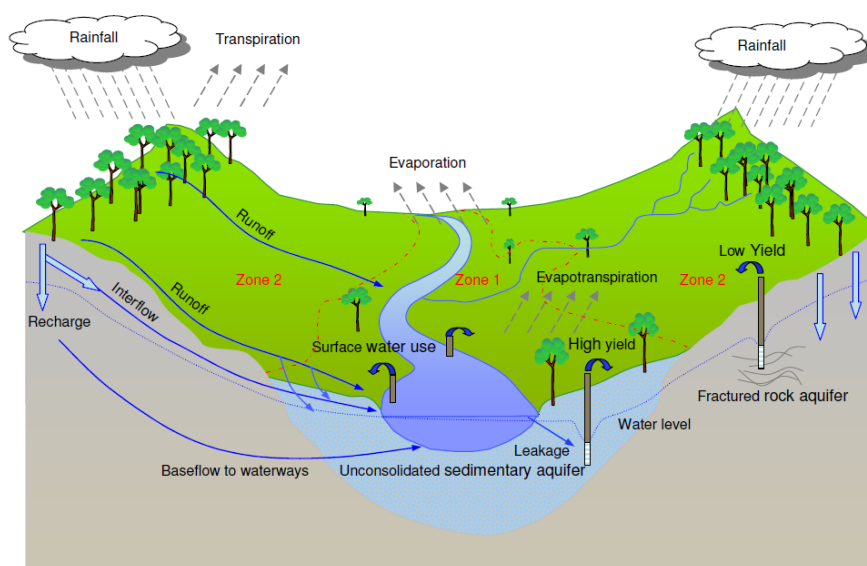


Figure 1 Upper Ovens River Water Supply Protection Area management zones

The physical location of the Upper Ovens River WSPA is shown in Figure 2.

1.3 Water Management Plan

The Upper Ovens River WSPA Water Management Plan (the Plan) was signed on 11 January 2012 by the Minister in accordance with section 32A(6) of the *Water Act 1989* (the Act). The Plan is scheduled for review every five years.

The objective of the Plan 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.

Goulburn-Murray Water (GMW) is responsible for the implementation, administration and enforcement of the Plan. An assessment summary of GMW's activities in accordance with Plan prescriptions is presented in Appendix A.

A copy of the Plan can be downloaded from the GMW website: www.gmwater.com.au.

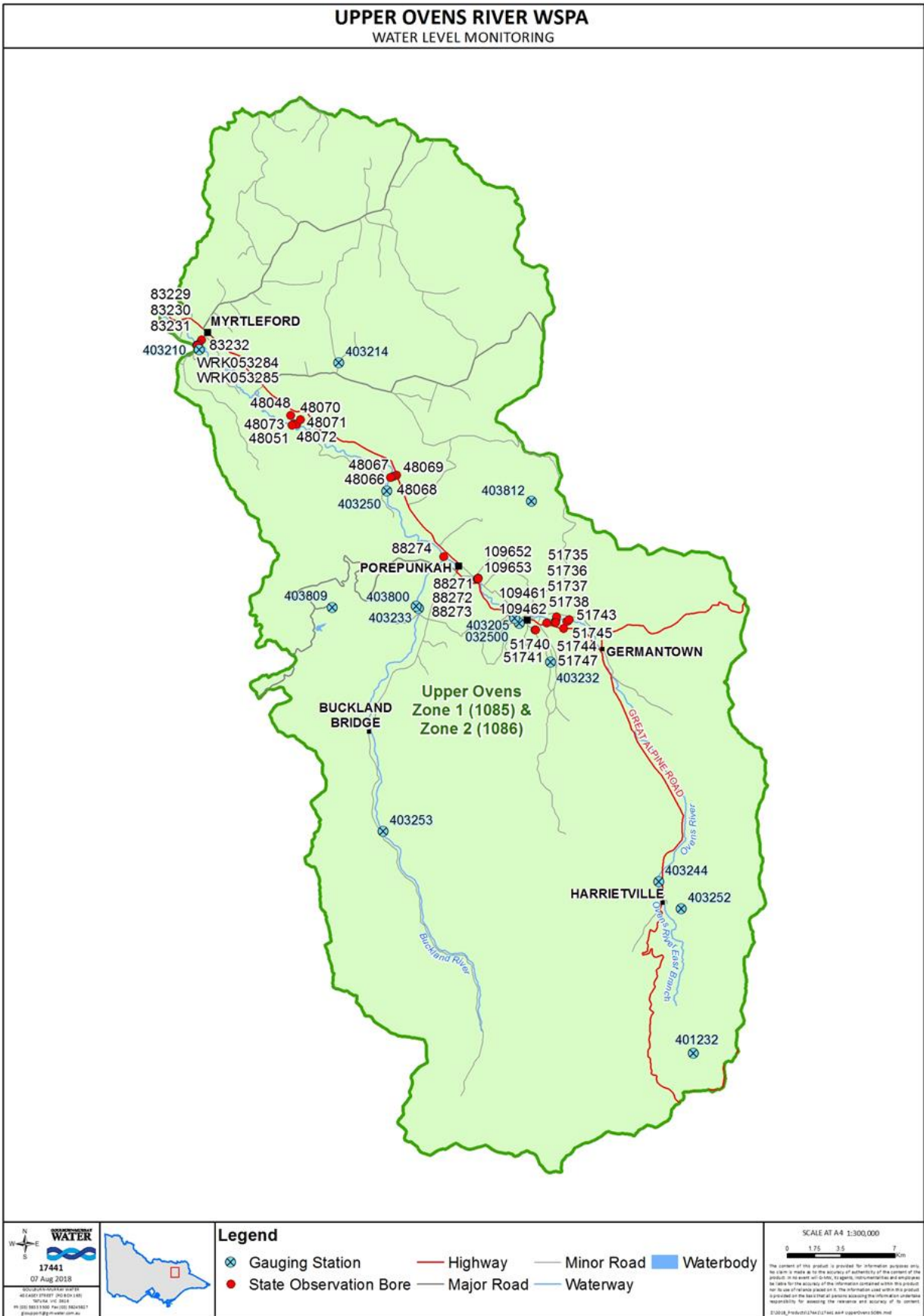


Figure 2 Upper Ovens River Water Supply Protection Area

2 Water Management

2.1 Licensed volume

The total licensed volume in the Upper Ovens River WSPA was 13,387.1 megalitres per year (ML/year) at 30 June 2018. 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 in 2017/18

Management zone	Licences	Licensed bores	Licensed volume (ML/year)
Zone 1 Surface Water - 181	509	Not applicable	9,736.7
Zone 1 Groundwater – 1085	68	88	2,646.2
Zone 2 Groundwater – 1086	33	31	1,004.2
Total	610	119	13,387.1

Note: Data extracted from the Victorian Water Register 2 July 2018.

There has been a 6 ML/year reduction in licensed volume compared to 2016/17 (13,393.1 ML/year) as a result of the following:

- reduction of 16 ML/year resulting from two licences being surrendered (14 and 2 ML/year);
- reduction of 2 ML/year from downstream permanent transfer of a surface water licence (20 per cent reduction); and
- addition of 12 ML/year licence for groundwater reassigned to the WSPA - previously identified as being within the Kiewa River Catchment.

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 use 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 2017/18 on Roberts Creek as flow fell below 2 ML/d in late March 2018. The Stage 5 restriction remained in place as at 30 June.

The Ovens River at Myrtleford remained above the restriction trigger levels throughout 2017/18. Flows recorded at the Myrtleford gauging station during the driest period of the 2017/18 water year (January to April 2018) are shown in Figure 3.

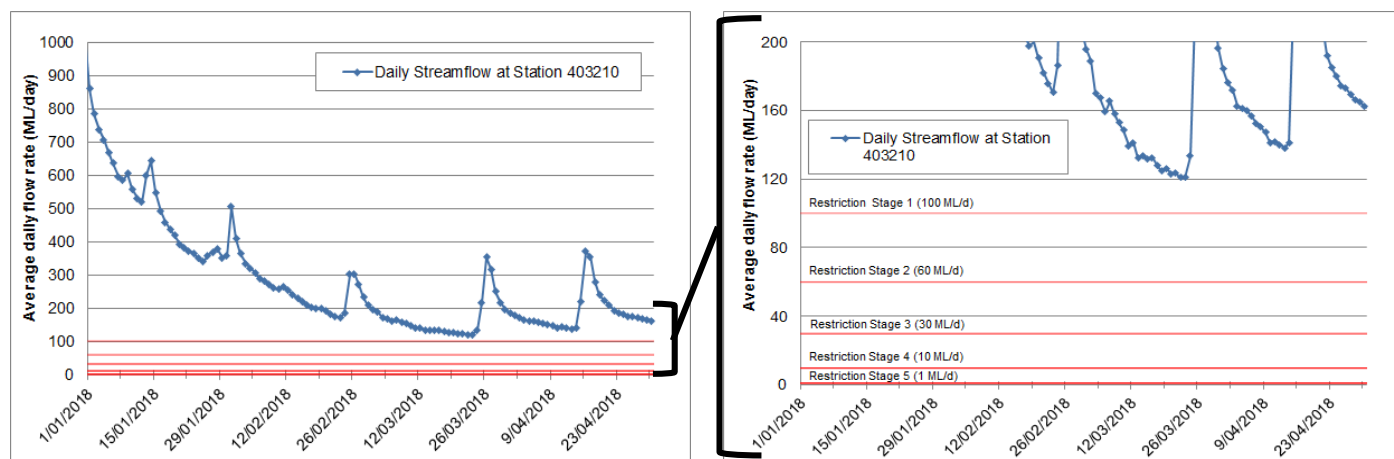


Figure 3 Average daily flows in the Ovens River at Myrtleford between January and April 2018

2.3 Water use

As part of Plan implementation, all licensed operational groundwater bores with a licensed volume greater than 10 ML/year 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/year or less have not been metered (consistent with Victoria’s Metering Policy).

The total recorded surface water and groundwater use in 2017/18 was 3,126.6 ML (Table 3) representing 23 per cent of licensed volume. This is an increase from 2016/17, when total recorded use of 2,971.8 ML was 22 per cent of licensed volume. Note that recorded use includes metered and deemed use. Deeming occurs on operational bores with a licensed volume of 9ML/year or less.

Table 3 Recorded use by Upper Ovens River WSPA management zone in 2017/18

Management zone	Licensed volume (ML/year)	Recorded use (ML)	Proportion of total licensed volume used
Zone 1 Surface Water - 181	9,736.7	2,149.9	22%
Zone 1 Groundwater – 1085	2,646.2	633.2	24%
Zone 2 Groundwater – 1086	1,004.2	343.5	34%
Total	13,387.1	3,126.6	23%

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/year). Rainfall was below average in 2017/18 with 1,053 mm/year recorded (Figure 4), resulting from low rainfall in spring and late summer.

Despite the lower than average rainfall for the water year, the total combined use in 2017/18 was only slightly higher than 2016/17. There was an increase in use in Zone 1 surface water which is consistent with below-average rainfall water years (Figure 5). A large rainfall event in early December 2017 (Figure 6) appears to have moderated summer demand.

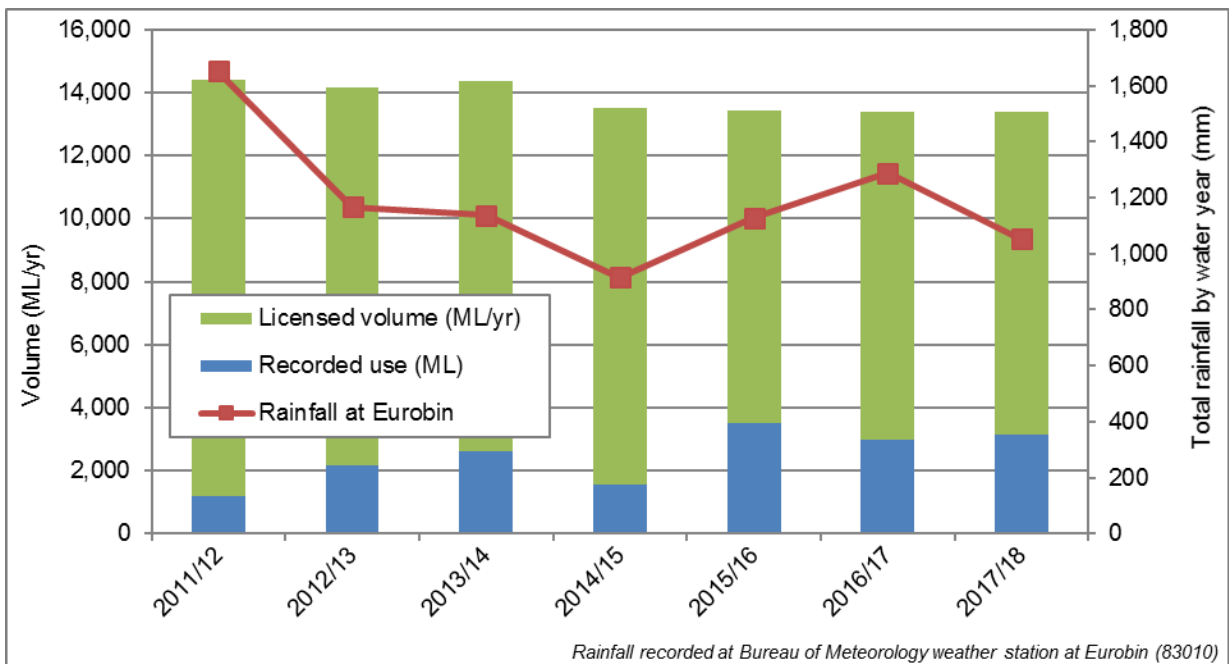


Figure 4 Total licensed volume, allocation, recorded use and annual rainfall in the Upper Ovens River WSPA

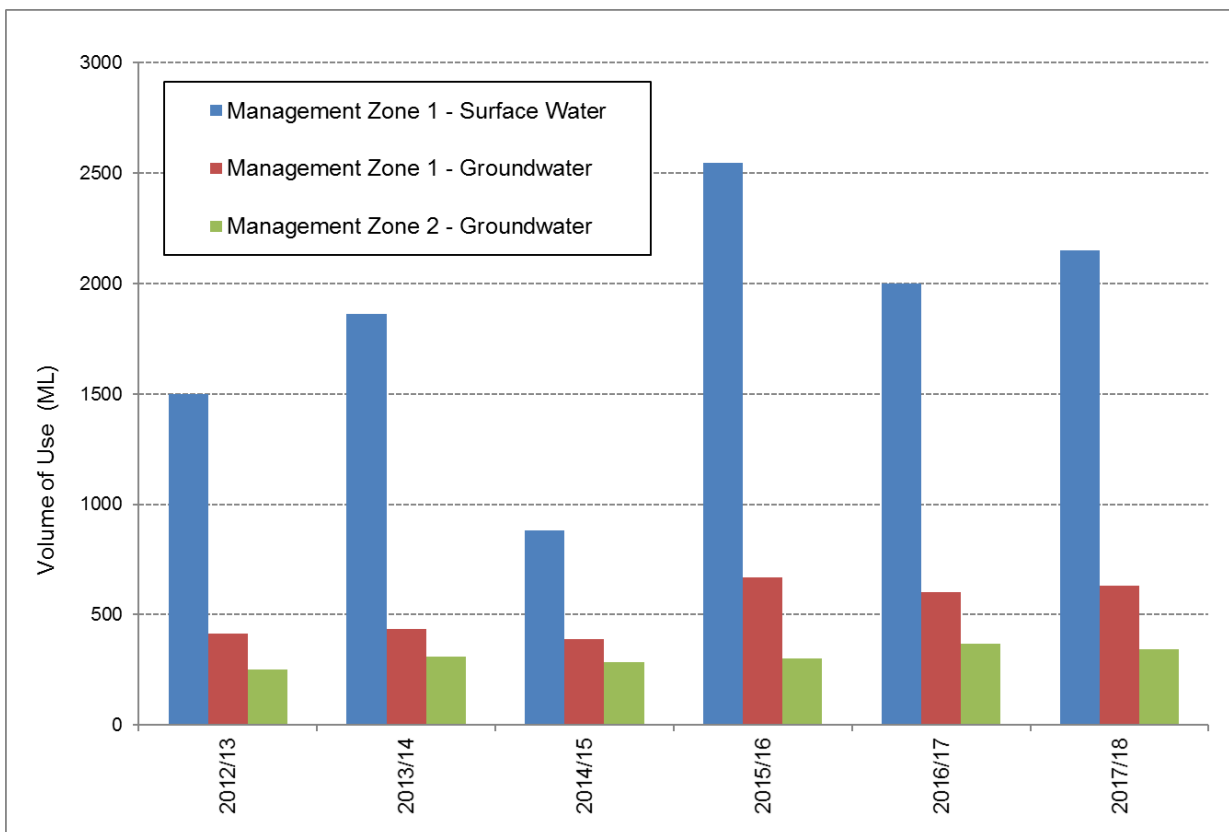


Figure 5 Recorded use by Upper Ovens WSPA management zone

2.4 Licence transfers

Groundwater and surface water licence transfer activity during 2017/18 is summarised in Table 4.

Table 4 Licence transfers in the Upper Ovens WSPA in 2017/18

Management zone	Temporary transfers				Permanent transfers			
	Transfer from		Transfer to		Transfer from		Transfer to	
	No. of transfers	Volume (ML)	No. of transfers	Volume (ML)	No. of transfers	Volume (ML)	No. of transfers	Volume (ML)
Zone 1 Surface Water – 181	4	295	4	285.6 ²	1	10	1	8 ²
Zone 1 Groundwater - 1085	1	19.0 ¹	0	0.0	0	0.0	0	0.0
Zone 2 Groundwater - 1086	0	0.0	0	0.0	0	0.0	0	0.0
Total	4	295	5	29	1	10.0	1	8.0

Note: Data extracted from the Victorian Water Register on 2 July 2018.

¹19 ML transferred out of WSPA into the Lower Ovens Groundwater Management Area

²Reduction of 20 per cent entitlement (9.4 ML) occurs on downstream trades

Temporary and permanent licence transfers during the 2017/18 water year were lower than in 2016/17. In total, there was one permanent and four temporary licence transfers within Zone 1 Surface Water (181). There were no transfers from Zone 1 to Zone 2 Groundwater during 2017/18. All permanent licence transfers were within the winter take period cap listed under Prescription 24 of the Plan (Appendix C). A 2 ML/year reduction occurred as a result of the 10 ML/year downstream permanent transfer within Zone 1 Surface Water (181).

The variation in total volumes between 'Transfer from' and 'Transfer to' columns in Table 4 is due to a temporary transfer of 19 ML from Zone 1 (1085) to the Lower Ovens Groundwater Management Area (bedrock zone). A 9.4 ML/year loss occurred as a result of a 47 ML/year downstream temporary transfer within Zone 1 Surface Water (181).

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 Figure 5.

Table 5 Metering activity in the Upper Ovens River WSPA

Metering activity	2013/14	2014/15	2015/16	2016/17	2017/18
New meters installed	3	7	11	2	0
Meters relaced	13	14	5	2	0
Meters requiring maintenance	8	2	14	12	2

No meters were installed or replaced during the 2017/18 water year. The two maintenance events were for battery replacements.

2.6 Licence compliance

There were no prosecutions or convictions relating to groundwater matters in the Upper Ovens River WSPA during the 2017/18 water year.

There were no identified instances of non-compliance with licence volume of groundwater and surface water in the Upper Ovens River WSPA during the 2017/18 water year.

2.7 Domestic and stock bore licences

Domestic and stock groundwater use is not required to be licensed, as it is a statutory right under section 8 of the Act and it not subject to volumetric constraint or accounting.

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 2017/18 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).

3 Monitoring Program

3.1 Groundwater levels

Groundwater monitoring data for the Upper Owens River WSPA 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 2017/18 did not result in observable impact on aquifer-wide groundwater levels. However, groundwater levels have continued to decline within the period of the Plan. Further analysis has been undertaken as part of the process to review the operation of the Plan in 2017/18.

3.2 Surface water

The surface water data from the Owens 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 early August 2017. The rainfall data in Figure 6 are shown as cumulative for 2017/18 to show when low rainfall and high rainfall events occurred. A large rainfall event occurred in December 2017, which increased flows to over 9,000 ML/d at Myrtleford.

The location of monitoring bores and surface water gauges are shown in Figure 1.

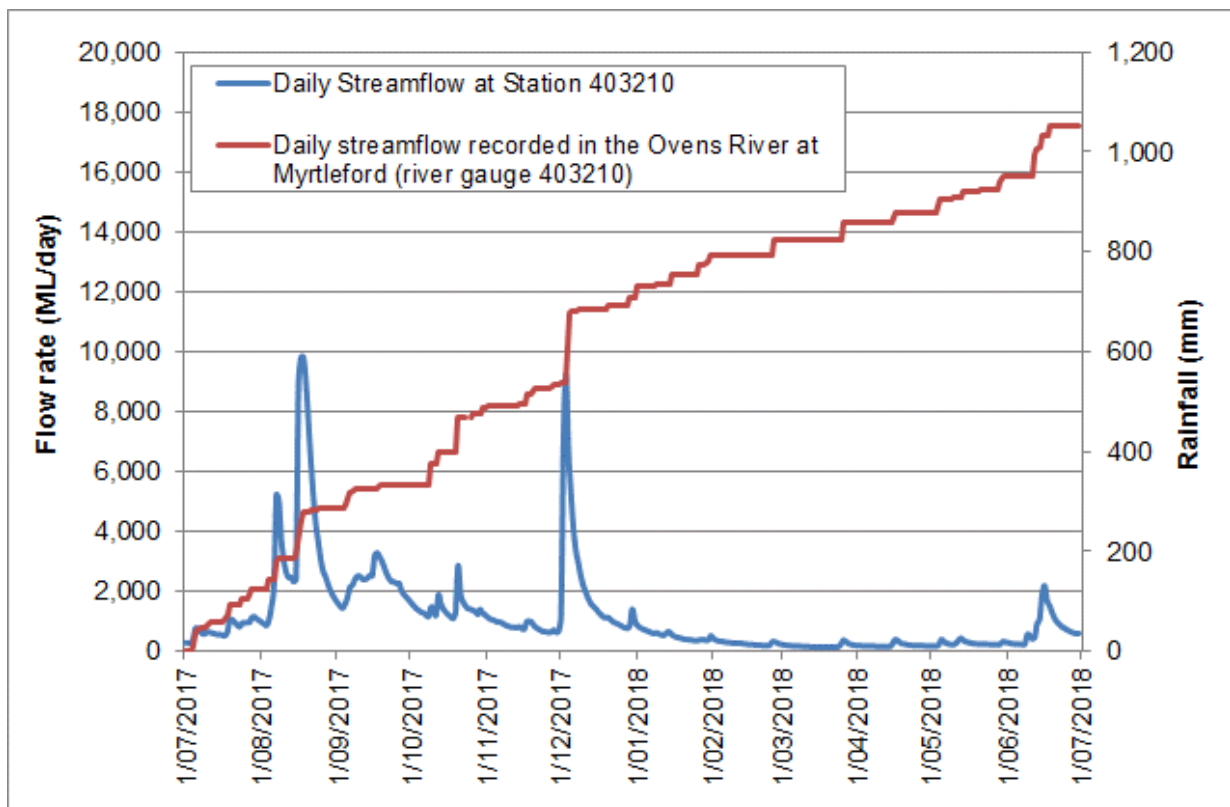


Figure 6 Rainfall and streamflow monitoring in the Upper Owens River WSPA

4 Future Management Considerations

4.1 Upper Ovens River WSPA Water Balance research project

The report brought together technical and sociological information which was commissioned through a collaborative interagency Project Control Group involving GMW, the North East Catchment Management Authority and the Department of Environment, Land, Water and Planning. Inputs included;

- a Water Balance Study
- update of the REALM model for the Upper Ovens River
- investigation of the environmental outcomes from Plan implementation
- social research with licence holders
- feedback from agency and GMW staff involved in the Plan implementation.

The report found that the Plan has worked well in achieving its objectives to provide a suitable framework for the conjunctive management of surface and groundwater resources however room exists for improvement, particularly in the areas of licence entitlement trading opportunities for water users and accountability for flows provided for the environment in tributary streams.

The report also found that the Plan could be significantly simplified by removing prescriptions that restate, or are similar to, existing government policy for the management of licences.

All relevant reports will be available on GMW's website in 2018/19.

4.2 Management Plan review

Prescription 51 of the Plan requires the Corporation (GMW) to undertake a review of the operation of the Plan five years after it commences. The prescription also requires that any recommendations for consequential amendments to the Plan are submitted to the Minister. GMW conducted this process throughout 2017/18 as required in consultation with key stakeholders. The recommendations of the report for consequential amendments will be considered by the Minister for Water during 2018/19.

5 References

Department of Sustainability and Environment, 2012. *Upper Ovens River Water Supply Protection Area*.
Department of Sustainability and Environment, Melbourne.

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 2017/18 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 2017/18 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 2017) in line with Plan requirements. No other Stage 5 stream restrictions were imposed during 2017/18.	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 2017/18 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 2017/18 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 2017/18 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 not lifted in the 2017/2018 water year. Flows in the creek were not sustained above trigger levels to the satisfaction of the Corporation to remove the suspension in this period.	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 2017/18 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 2017/18 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.	The 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 2017/18 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 2017/18 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 2017/18.	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 2017/18.	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
<p>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 –</p> <ul style="list-style-type: none"> (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 	<p>Refer to Appendix C.</p> <p>The 2017/18 volume of licences authorised to take water in Zone 1 between 1 July and 31 October or Zone 2 is lower than what was recorded for the 2016/17 season.</p> <p>This is due to a 25 per cent proportion being previously applied to determine the all-year Zone 1 volume instead of the 10 per cent for irrigation and 25 per cent for other all-year use licences.</p> <p>The current volume authorised to be taken between 1 July to 31 October is below the cap for each area reference. This has also been the case since the implementation of the Plan in 2012.</p>	<p>Yes</p>

Prescription	Activity	Compliant
<p>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 –</p> <ul style="list-style-type: none"> (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; 	<p>Refer to Appendix D.</p> <p>It is recognised that more dams could be found under future compliance investigations.</p> <p>Unregulated data in Victorian Water Register will need to be reviewed to ensure each licence has accurate location information along with a SDL code, stream code and the correct trading zone. This has been identified by GMW through the 2017/18 review as an issue and possible limitation to accurate ongoing reporting of licensed volume within the WSPA, in particular to each named area as required under the Plan.</p> <p>Currently groundwater licences are not assigned a SDL code which is required to sum the total number and volume of licences per named area in the Plan. To this point the assigned of bores to named areas has been completed manually.</p>	<p>Yes</p>

Restrictions and Prohibitions on Issuing Works Licences

Prescription	Activity	Compliant
<p>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.</p>	<p>All relevant applications complied with this Prescription.</p>	<p>Yes</p>

Transfers between Management Zone 1 and 2

Prescription	Activity	Compliant
<p>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 –</p> <p>(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</p> <p>(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.</p>	All licence transfers complied with this Prescription.	Yes
<p>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.</p>	All transfers complied with this Prescription.	Yes
<p>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.</p>	All transfers complied with this Prescription.	Yes
<p>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.</p>	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 2017/18 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.	No licence transfers 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

Prescription	Activity	Compliant
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/year 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 2017/18 water year. Meter reads were completed in January and June 2018.	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 Water Monitoring Partnership. Tributaries without real time monitoring were visually assessed during periods of low flow and recorded in	Yes

Prescription	Activity	Compliant
(e) the relationship between groundwater levels and stream levels can be observed.	GMW's database, System Planning Module (SPM). 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.	

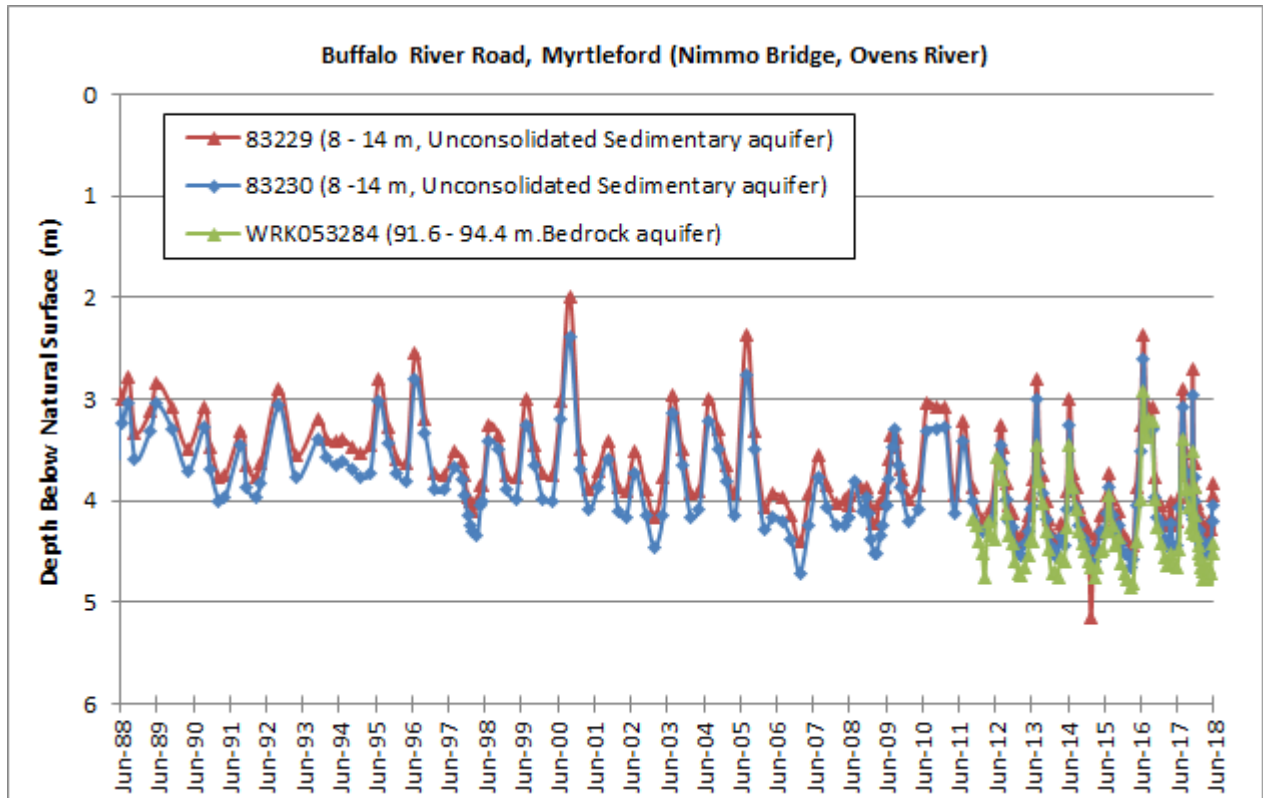
Revocation of the Permissible Consumptive Volume

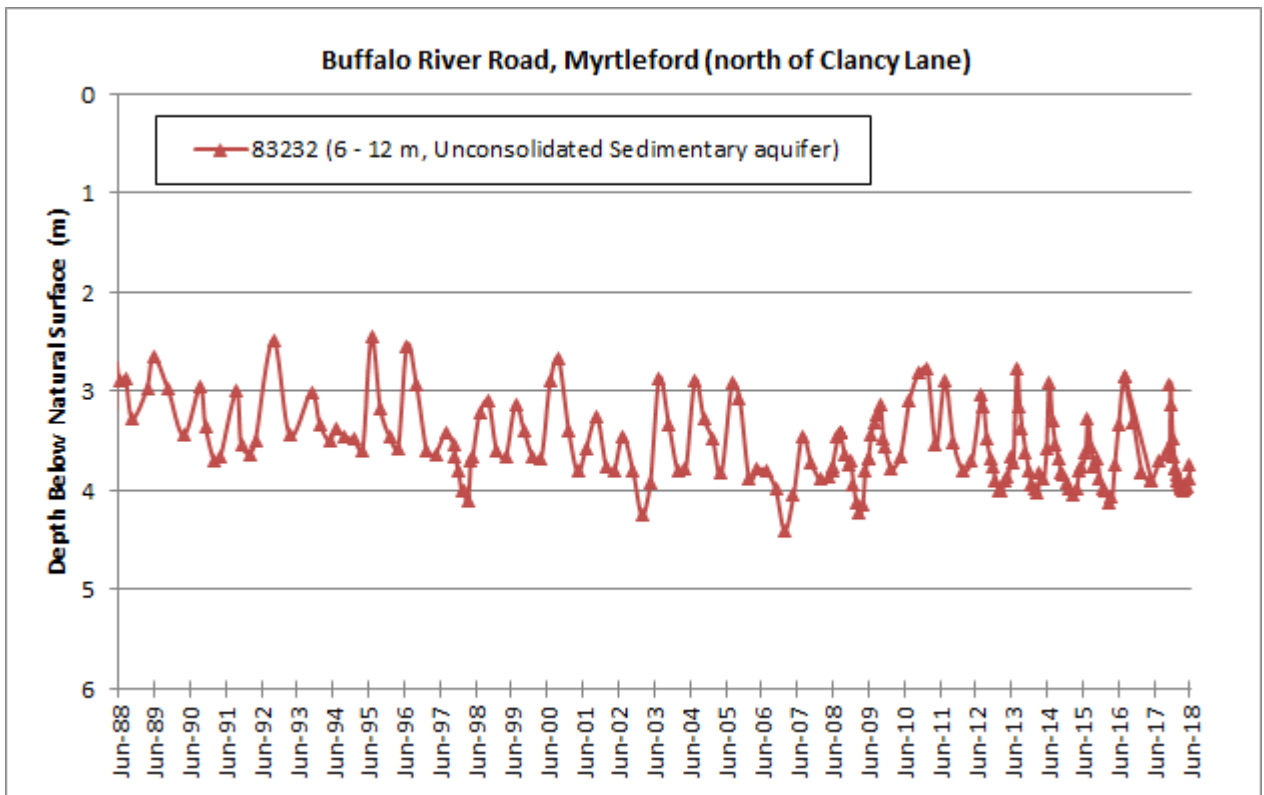
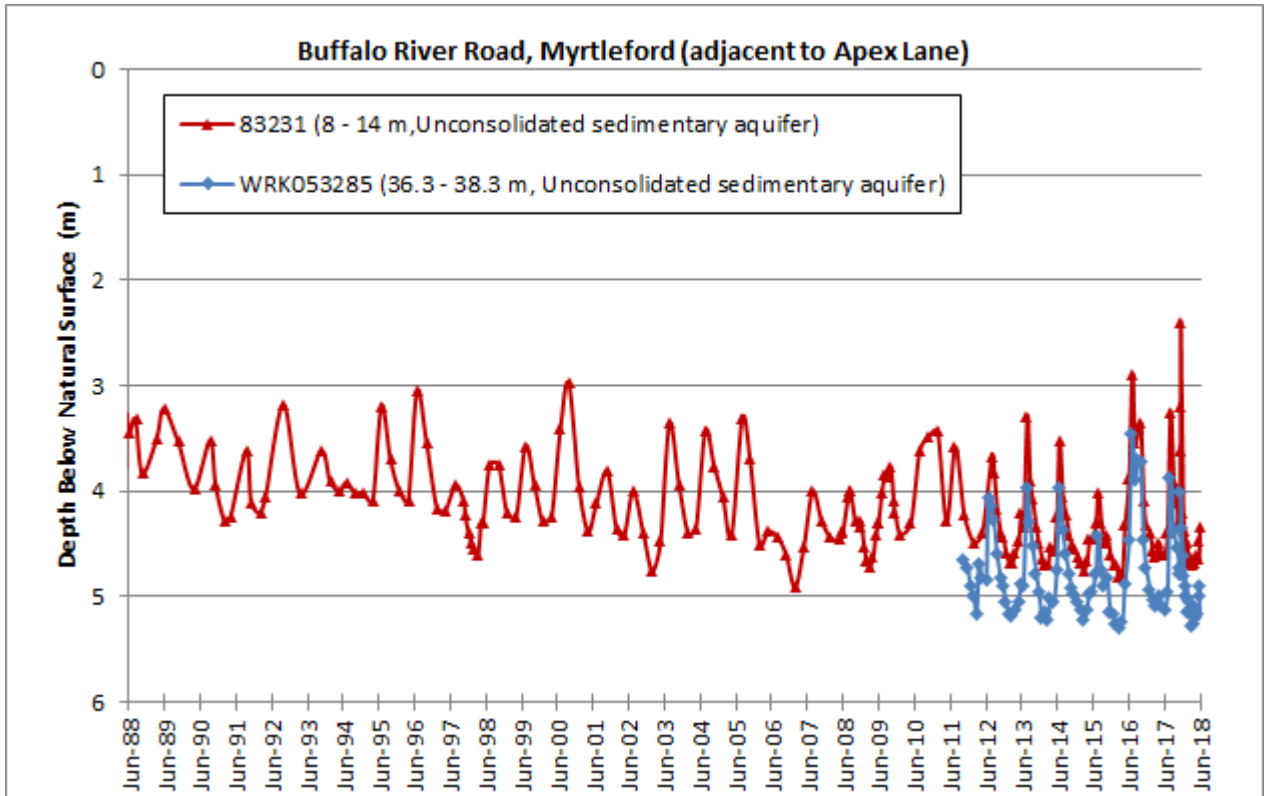
50. Within three months of the approval of the Plan, the Corporation must request the Minister revoke the permissible consumptive volume of 4,010 ML in place for groundwater in the Protection Area.	The Minister approved the revocation of the PCV on 3 March 2013 and was published in the Victorian Government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

Hydrographs are provided 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 authorised to be taken between 1 July to 31 October
4030001	OvensRiver	11,330	15
4030002	OvensRiver	4,618	153
4030003	GermanCreek	2,342	137
4030004	OvensRiver	767	156
4030005	OvensRiver	1,947	1,024
4030006	EurobinCreek	2,134	208
4030007	OvensRiver	2,062	787
4030101	MorsesCreek	6,635	354
4030102	MorsesCreek	262	40
4030201	BucklandRiverEastBranch	9,142	0
4030202	BucklandRiver	9,500	1
4030203	BucklandRiver	3,225	203
4030204	DevilsCreek	3,288	50
4030205	BucklandRiver	504	129
4030206	BucklandRiver	752	16
4030301	BuffaloCreek	3,249	163
4030302	BuffaloCreek	271	60
4030401	BarwidgeeCreek	545	64
4030402	BarwidgeeCreek	536	35
4030403	SandyCreek	332	35
4030404	MyrtleCreek	264	264
4030405	BarwidgeeCreek	528	87
4030406	BarwidgeeCreek	482	96
4030407	HappyValleyCreek	2,365	47
4030408	HappyValleyCreek	2,344	979
4030409	HappyValleyCreek	236	71
4030410	BarwidgeeCreek	335	118
Total		69,995	5,287

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	36.0	8	26.0	0	0.0	8	26.0	0	0.0	1	10.0	0	0.0
4030002	OvensRiver	4617.5	67	428.3	65	399.3	5	88.0	56	262.3	4	49.0	1	21.0	2	8.0
4030003	GermanCreek	2341.6	14	218.1	13	200.6	3	66.6	7	62.0	3	72.0	1	10.0	1	7.5
4030004	OvensRiver	766.5	10	157.0	6	25.0	0	0.0	5	10.0	1	15.0	0	0.0	4	132.0
4030005	OvensRiver	1946.5	70	1898.3	61	1537.6	10	648.0	40	523.6	11	366.0	1	29.0	9	331.7
4030006	EurobinCreek	2134.1	15	283.0	15	283.0	0	0.0	12	152.0	3	131.0	0	0.0	0	0.0
4030007	OvensRiver	2062.3	111	4852.2	109	4602.6	23	1177.0	82	3368.6	4	57.0	2	34.6	2	215.0
4030101	MorsesCreek	6635.4	70	635.1	68	567.2	3	95.0	63	314.2	2	158.0	2	59.9	2	8.0
4030102	MorsesCreek	262.1	5	34.0	5	34.0	1	2.0	3	6.0	1	26.0	0	0.0	0	0.0
4030201	BucklandRiverEastBranch	9141.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
4030202	BucklandRiver	9499.9	1	2.0	1	2.0	0	0.0	1	2.0	0	0.0	0	0.0	0	0.0
4030203	BucklandRiver	3225.2	16	274.0	15	139.0	2	40.0	9	61.0	4	38.0	1	99.0	1	36.0
4030204	DevilsCreek	3287.6	11	51.0	11	51.0	0	0.0	10	20.0	1	31.0	0	0.0	0	0.0
4030205	BucklandRiver	504.2	12	377.1	12	343.1	1	9.0	10	290.1	1	44.0	1	34.0	0	0.0
4030206	BucklandRiver	752.1	8	106.0	8	106.0	1	13.0	7	93.0	0	0.0	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	0.0	1	68.0
4030302	BuffaloCreek	270.8	11	248.0	9	235.0	2	20.0	6	198.0	1	17.0	0	0.0	2	13.0
4030401	BarwidgeeCreek	545.0	2	44.0	2	44.0	0	0.0	0	0.0	2	44.0	0	0.0	0	0.0
4030402	BarwidgeeCreek	535.6	8	46.0	8	46.0	0	0.0	4	24.0	4	22.0	0	0.0	0	0.0
4030403	SandyCreek	331.6	3	24.0	3	24.0	0	0.0	0	0.0	3	24.0	0	0.0	0	0.0
4030404	MyrtleCreek	263.5	15	412.0	10	235.0	2	40.0	5	149.0	3	46.0	1	14.0	5	163.0
4030405	BarwidgeeCreek	528.4	17	215.4	17	215.4	1	2.0	11	167.4	5	46.0	0	0.0	0	0.0
4030406	BarwidgeeCreek	482.0	22	253.5	22	253.5	1	14.0	17	188.5	4	51.0	0	0.0	0	0.0
4030407	HappyValleyCreek	2364.7	8	139.3	8	139.3	0	0.0	5	115.3	3	24.0	0	0.0	0	0.0
4030408	HappyValleyCreek	2343.8	34	963.8	34	874.8	1	17.0	18	266.8	15	591.0	1	89.0	0	0.0
4030409	HappyValleyCreek	235.6	11	172.3	11	172.3	0	0.0	8	132.3	3	40.0	0	0.0	0	0.0
4030410	BarwidgeeCreek	334.8	36	950.6	32	928.6	10	329.0	22	599.6	0	0.0	0	0.0	4	22.0
Total		69995.0	598	13387.1	565	11982.4	68	2646.2	418	7411.2	79	1925	12	400.5	33	1004.2

Note: All licence volumes were sourced from the Victorian Water Register 2 July 2018