

Upper Ovens River Water Supply Protection Area Water Management Plan

Annual Report

For year ending 30 June 2021

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Excellence



Honesty



Accountability



Courage



Caring

Document History and Distribution

Versions

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Final	The Hon. Lisa Neville MP Minister for Water	27 September 2021	
Final	Ms Katie Warner Chief Executive Officer, North East Catchment Management Authority	27 September 2021	

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 2020/21 water year.

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

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

This report provides an overview of the groundwater and surface water management activities administered under the Plan during the 2020/21 water year.

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



Charmaine Quick
MANAGING DIRECTOR

Date: 23/09/2021

Executive summary

The *Upper Ovens River Water Supply Protection Area Water Management Plan* (the Plan) was approved on 11 January 2012 by the Minister for Water. The 2020/21 water year marks the ninth year of operation of the Plan.

The total of groundwater and surface water use in the Upper Ovens River Water Supply Protection Area (the WSPA) during 2020/21 was 3,712.1 ML, or 28 per cent of the total licence entitlement volume.

High rainfall meant the flow rates in the Ovens River at Myrtleford did not fall below the restriction trigger level and therefore no restrictions on the take of water were implemented in the WSPA.

Groundwater monitoring data indicate that groundwater pumping in 2020/21 did not result in observable impact on aquifer-wide groundwater levels.

The total volume of licence transfers has continued to be low, reflecting the limited demand for transfer associated with low volume of use.

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1 Introduction

1.1 Purpose

This report has been prepared to meet the requirements of the *Upper Ovens River Water Supply Protection Area Water Management Plan* (DSE, 2012) (the Plan) and section 32C of the *Water Act 1989* (the Act).

The report provides an overview of water resource management activities undertaken in accordance with the Plan during the 2020/21 water year (1 July 2020 to 30 June 2021).

1.2 Water Supply Protection Area

The Upper Ovens River Water Supply Protection Area (the WSPA), declared in October 2008, covers an area of approximately 1,580 square kilometres of the Ovens River catchment, upstream of its confluence with the Buffalo River, near Myrtleford in north-east Victoria.

The WSPA comprises two management zones:

- **Zone 1** covers licences to take water directly from waterways, or indirectly via bores screened in unconsolidated sedimentary aquifers that have a strong connection with waterways. These resources are managed as a connected system and comprise two trading zones: Groundwater (1085) and Surface Water (181).
- **Zone 2** covers licences to take groundwater from the underlying fractured bedrock aquifer system. This management zone comprises one trading zone: Groundwater (1086). This resource is treated as a separate system to the resources managed under Zone 1.

The management zones are illustrated conceptually in Figure 1. The physical location of the WSPA is shown in Figure 2.

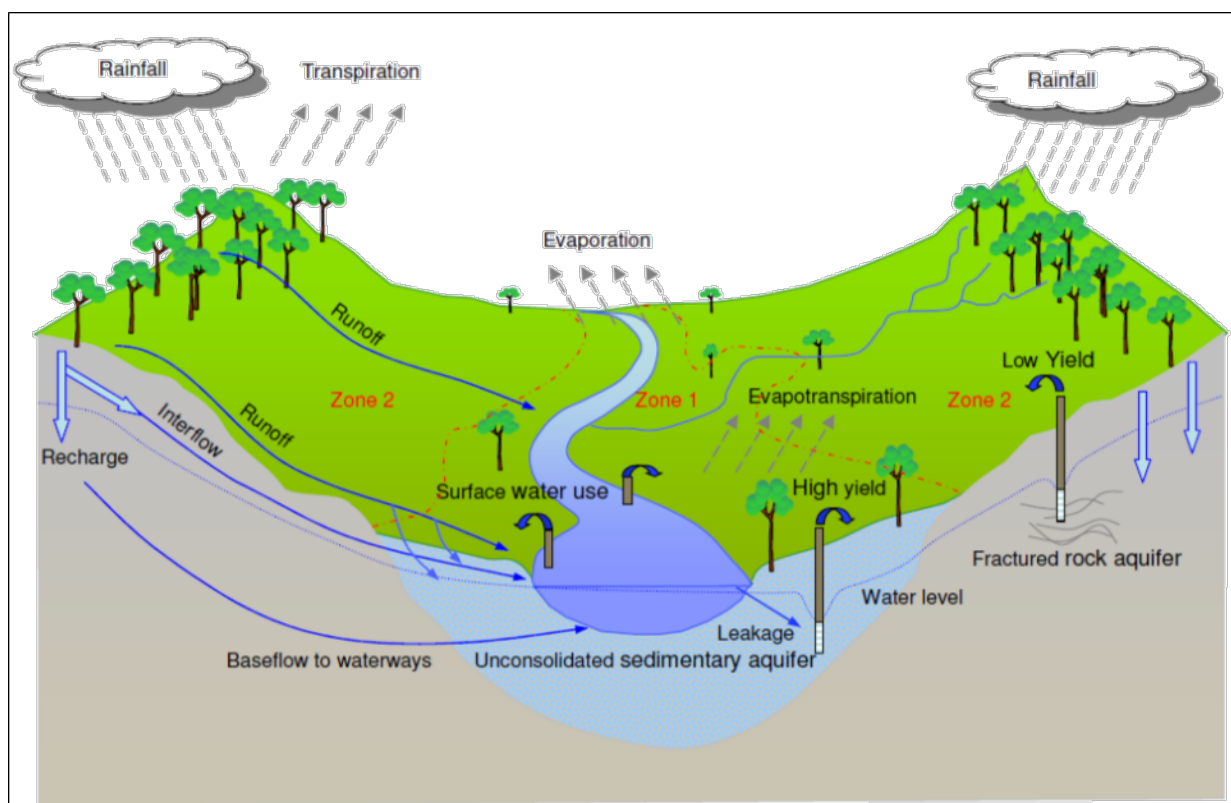


Figure 1 Conceptual model of management zones in the Upper Ovens River WSPA



Figure 2 Upper Ovens River Water Supply Protection Area

1.3 Water Management Plan

The Plan, which applies to the management of water resources within the area of the WSPA, was approved on 11 January 2012 by the Minister for Water (the Minister), in accordance with section 32A(6) of the Act.

The objective of the Plan is to make sure that water resources within 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. A summary of GMW's activities in accordance with Plan prescriptions is presented in Appendix A.

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

2 Water Management

2.1 Licence entitlement volume

The total licence entitlement volume in the WSPA was 13,293.4 megalitres per year (ML/yr) at 30 June 2021. The number of licences in each management zone is summarised in Table 1, along with a breakdown of the total licence entitlement volume.

Licence entitlement volume is further broken down into named areas and the number and volume of entitlements by licence types as required by Prescriptions 22 and 25 of the Plan. This information is shown in Appendices C and D, respectively.

Table 1 Water licence in the Upper Ovens River WSPA in 2020/21

Management zone	Licences	Licensed bores	Licence entitlement volume (ML/yr)
Zone 1 Surface Water (181)	499	<i>Not applicable</i>	9,678.0
Zone 1 Groundwater (1085)	68	81	2,543.2
Zone 2 Groundwater (1086)	33	33	1,072.2
Total	600	114	13,293.4

Note: Data extracted from the Victorian Water Register 30 June 2021.

There has been a 132 ML/yr decrease in licence entitlement volume compared to 2019/20 (13,425.4 ML/yr) as a result of the following occurring for Zone 1 Surface Water:

- a reduction of 123 ML/yr resulting from five permanent licence transfers out of the WSPA to trading zone 180 (King and Lower Ovens Unregulated);
- an increase of 2 ML/yr due to a domestic and stock licence which, upon licence renewal, was found to be incorrectly excluded from the WSPA; and
- a reduction of 11 ML/yr resulting from six domestic and stock licences being surrendered during 2020/21 (i.e. five 2 ML/yr licences and one 1 ML/yr licence).

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 licence entitlement 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 licences in Zone 1

Restriction stage	Trigger flow; Ovens River at Myrtleford (ML/d)	Description	Share of licence entitlement 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%

The average daily rate of flow in the Ovens River, recorded at the Myrtleford gauging station between January and May 2021, are shown Figure 3. The flow rates recorded at this site did not fall below the Stage 1 trigger levels during this period.

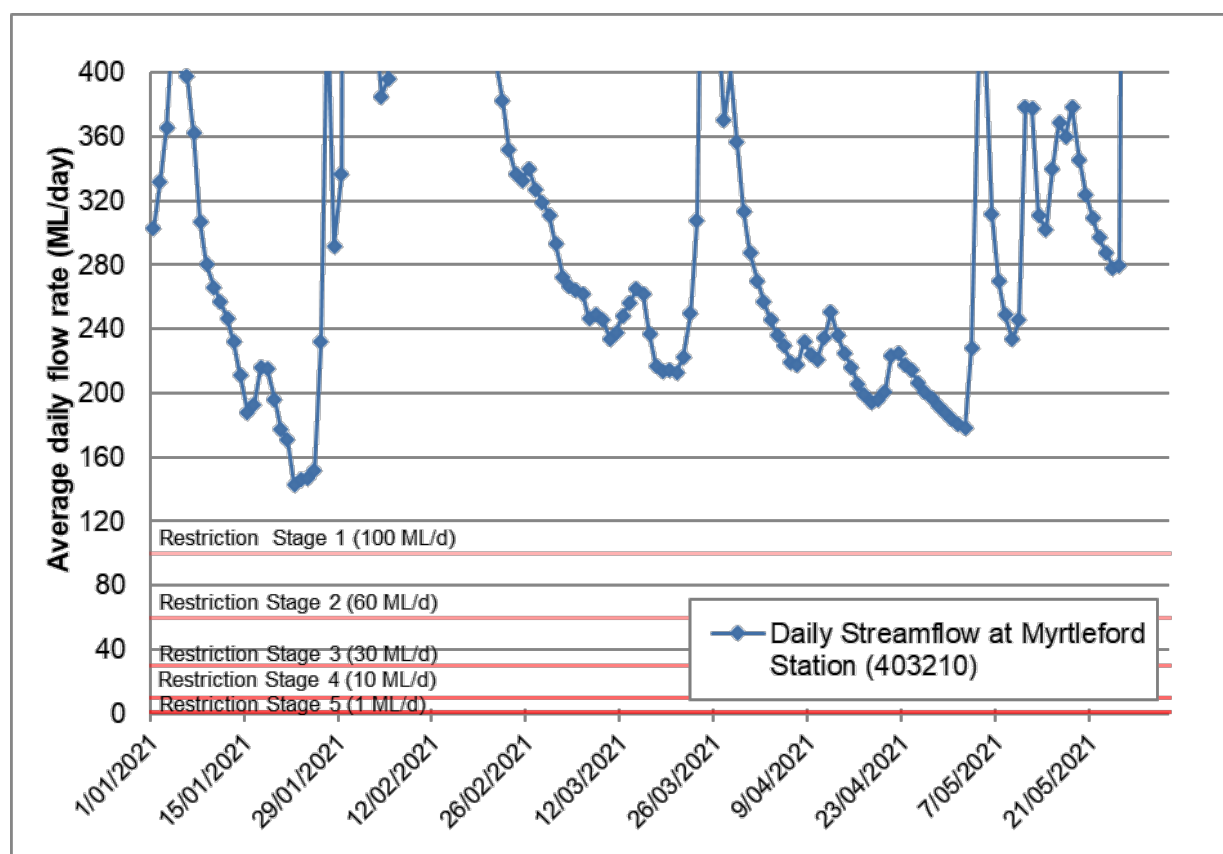


Figure 3 Average daily flows in the Ovens River at Myrtleford, January 2021 to May 2021

Rostered restrictions were not implemented in any streams during 2020/21 water year due to trigger levels not being met as a result of wetter conditions within the catchment.

2.3 Water use

As part of the implementation of the Plan, all licensed operational groundwater bores with a licence entitlement 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. The majority of licensed surface water users (excluding domestic and stock) in the WSPA are metered; only historical licences, with licence entitlement volume of 9 ML/yr or less, have not been metered. This is consistent with the *Victorian Non-Urban Water Metering Policy* (DELWP, 2020).

The total recorded surface water and groundwater use in 2020/21 was 3,712.1 ML (Table 3) representing 28 per cent of licence entitlement volume. This is a marginal increase from 2019/21, when total recorded use of 3,566.4 ML was 27 per cent of licence entitlement volume. Note that recorded use includes metered and deemed use. Deeming occurs on operational bores with a licence entitlement volume of 9 ML/yr or less. As the data provided in Figure 3 does not include registered farm dam use, it is also likely that the recorded use for surface water is lower than is actually occurring.

Table 3 Recorded use in the Upper Ovens River WSPA in 2020/21

Management zone	Licence entitlement volume (ML/yr)	Recorded use (ML)	Proportion of total licence entitlement volume used
Zone 1 Surface Water (181)	9,678.0	2,805.0	29%
Zone 1 Groundwater (1085)	2,543.2	472.6	19%
Zone 2 Groundwater (1086)	1,072.2	434.5	41%
Total	13,293.4	3,712.1	28%

Water use in the WSPA is influenced by climate drivers (particularly rainfall) within the Ovens River catchment. According to the Bureau of Meteorology, the long-term average (mean) of annual rainfall recorded at the Eurobin weather station is currently 1,082 mm (BOM, 2021). Annual rainfall totals from 2011/12 to 2020/21 are presented on Figure 4. A total of 1,065.6 mm was recorded at Eurobin in 2020/21 (slightly below the long-term average); large proportions of this were recorded in February, late March to early April and early May.

Total annual use has continuously increased in Zone 1 Surface Water since 2016/17; however, it has slightly decreased in Zone 1 Groundwater since 2018/19 (Figure 5).

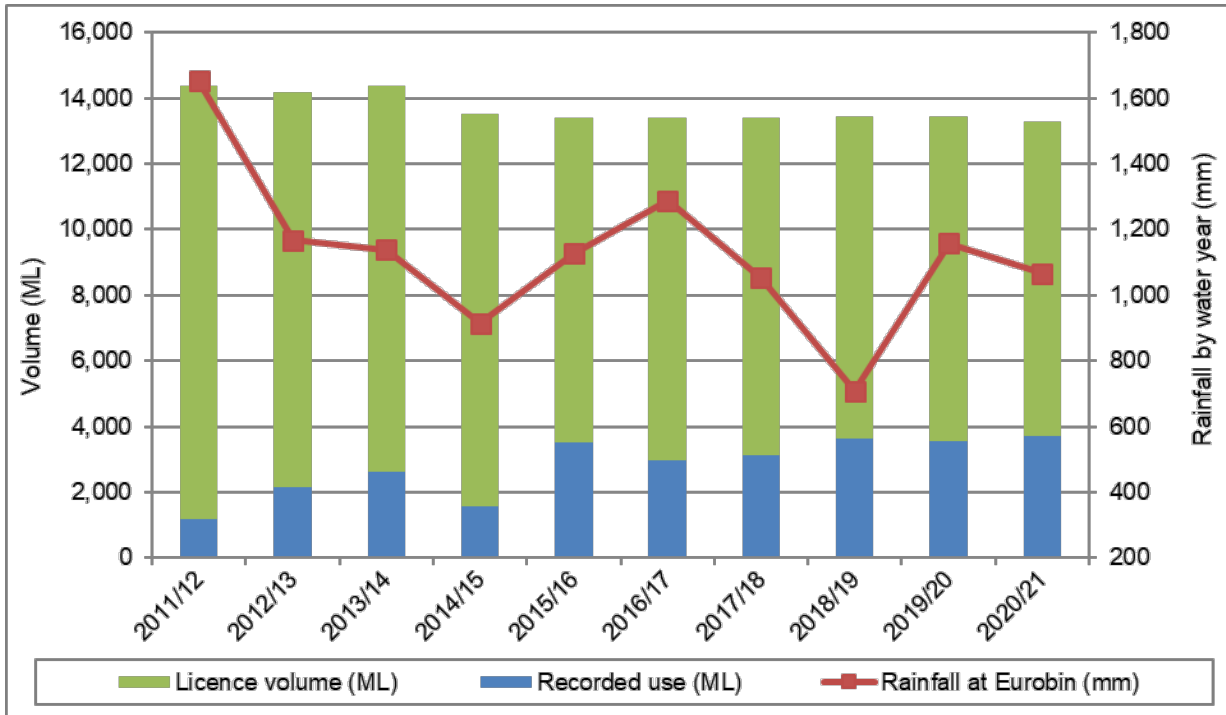


Figure 4 Entitlement, allocation and use in the Upper Ovens River WSPA; and annual rainfall recorded at Eurobin

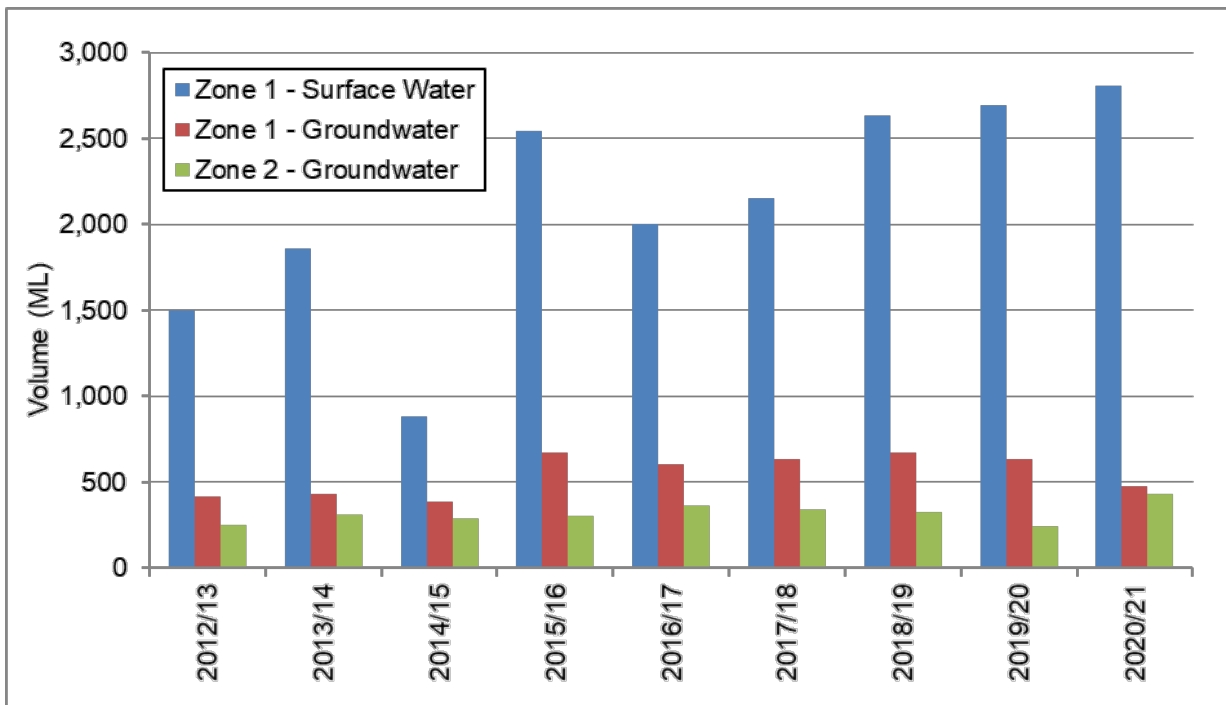


Figure 5 Recorded use by management zone in the Upper Ovens WSPA

2.4 Licence transfers

A detailed breakdown of 2020/21 licence transfer activity by management zone is provided in Table 4. Licence transfer activity, both temporary and permanent, was higher in 2020/21 compared to 2019/20.

Note, the volume 'transferred to' (i.e. at the buyer's end of a transaction) may be less than the volume 'transferred from' (at the seller's end) due to the 20 per cent volume reduction applied to downstream transfers.

Table 4 Licence transfers in the Upper Ovens WSPA in 2020/21

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/yr)	No. of transfers	Volume (ML/yr)
Zone 1 Surface Water (181)	10	567.0	13	904.4	6	125.0	1	2.0
Zone 1 Groundwater (1085)	2	330.0	0	0.0	0	0.0	0	0.0
Zone 2 Groundwater (1086)	3	162.5	2	34.5	0	0.0	0	0.0
Total*	15	1,059.5	15	938.9	6	125.0	1	2.0

2.5 Metering

There were 79 metered service points in the WSPA as at 30 June 2021. All meters were read twice during the 2020/21 water year; and three meter-related activities carried out, including inspections, maintenance and battery replacements (Table 5).

Table 5 Metering activities in the Upper Ovens River WSPA in 2020/21

Metering activity	Year ending 30 June 2021
Total number of meters	79
Total number of meter reads	158
Meters installed or replaced	0
Meter inspection events	1
Meter maintenance events	2

2.6 Licence compliance

There was one identified instance of alleged non-compliance with licence volume of groundwater and surface water in the WSPA during the 2020/21 water year. This instance was identified by GMW as a result of meter reading and is being investigated.

The Victorian Government and GMW have a zero-tolerance approach to unauthorised take of non-urban water. GMW is responsible for ensuring water users in northern Victoria comply with their licence conditions. Relevant actions, if required, are taken in accordance with GMW's Risk-Based Compliance and Enforcement Framework. Please visit www.gmwater.com.au/water-resources/water-use-compliance for more information.

2.7 Domestic and stock bore construction

The take and use of groundwater for Domestic and Stock purposes 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 and is not regulated by the Plan.

The installation of a bore for domestic and stock use requires a bore construction licence under section 67 of the *Water Act 1989*. Upon completion of a bore, a bore completion report is required to be submitted

to GMW; details from this report are recorded in the State groundwater database, the Water Measurement Information System (WMIS).

During the 2020/21 water year in the WSPA, 17 licences for domestic and stock bore construction licences were issued by GMW and the Victorian Water Register combined. Six bore completion reports were submitted to GMW by licensed drillers.

3 Monitoring Program

3.1 Groundwater levels

Groundwater monitoring data for the WSPA demonstrates a strong seasonal response to variations in climate. Seasonal groundwater drawdown and recovery levels (Appendix B) has been similar over the past eight years in both the unconsolidated sedimentary aquifer and fractured bedrock aquifer. The groundwater monitoring data indicates that groundwater pumping in 2020/21 did not result in observable impact on aquifer-wide groundwater levels. The lowest recorded drawdown levels were seen in the bedrock aquifer at Myrtleford; however, groundwater levels in that observation bore did not reach the levels of the prior two years.

3.2 Surface water flows

The surface water data from the Ovens River gauging station at Myrtleford (Figure 6) show that flows were generally higher during the winter-spring period, consistent with a winter rainfall-dominated climate characterised by low summer stream flows and high winter stream flow patterns. Flows were responsive to good rainfall events in October 2020. The cumulative rainfall data for 2020/21 is shown in Figure 6 where rainfall events can be seen in comparison to streamflow.

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

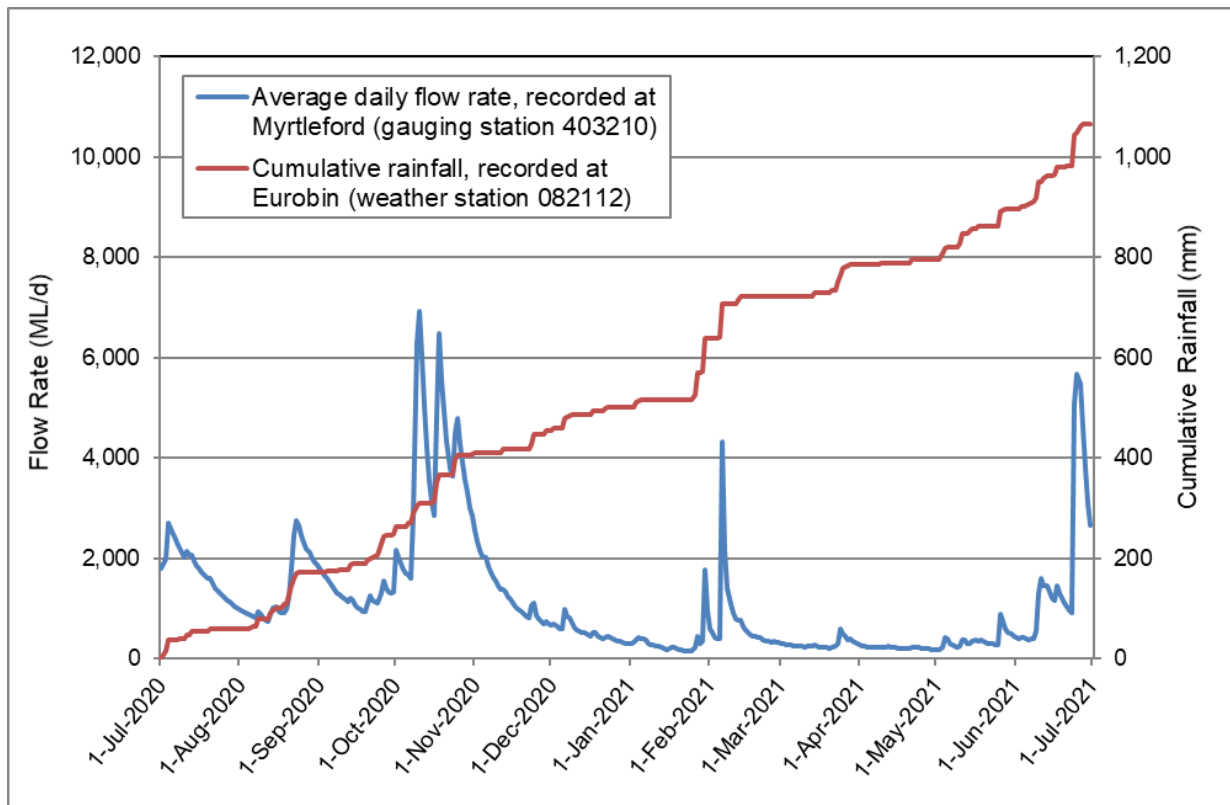


Figure 6 Rainfall and streamflow monitoring in the Upper Ovens River WSPA (DELWP, 2021)

4 Administration and Engagement

GMW has worked diligently in monitoring and administering the requirements of the Plan and engaging with the general community and relevant stakeholders when required.

The Plan has greater complexity, compared with other statutory management plans in Victoria, and requires a higher level of engagement with water users and the broader community with respect to licensing issues that periodically arise.

Over the reporting period GMW has committed significant resources to resolving administrative issues that have caused angst to water users and the broader community.

GMW has worked closely with licence holders in regard to the renewal period for licences under the Plan. A community working group was established and consultative sessions were held throughout 2020. A 15-year licence renewal process was agreed to following water resource assessment on the impact to water resources since the development of the Plan; this is the maximum period allowed under the Act.

5 References

Bureau of Meteorology (BOM), 2021. *Climate Data Online – Eurobin station number 083010*. Retrieved in August 2021 from:

http://www.bom.gov.au/jsp/ncc/cdio/weatherData/av?p_nccObsCode=136&p_display_type=dailyDataFile&p_startYear=2018&p_c=-1378248122&p_stn_num=083010

Victorian Department of Environment, Land, Water and Planning (DELWP), 2021. *Water Measurement Information System*. Data retrieved in August 2021 from: <https://data.water.vic.gov.au>

Victorian Department of Environment, Land, Water and Planning (DELWP), 2020. *Victorian Non-Urban Water Metering Policy*. Department of Environment, Land, Water and Planning, Melbourne.

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

Water Act 1989 (Vic), viewed 30 June 2021,

http://classic.austlii.edu.au/au/legis/vic/consol_act/wa198983/

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 2019/20 water year. Refer to Appendix E for commencement and end dates for water sharing regimes.	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.	The Ovens River and tributaries were not subject to restrictions during the 2020/21 water year. Refer to Appendix E for end dates for water sharing regimes from the previous 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 the Plan.	No streams were subject to restrictions during the 2020/21 water year.	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.	No streams were subject to restrictions during the 2020/21 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.	No streams were subject to restrictions during the 2020/21 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.	No streams were subject to restrictions during the 2020/21 water year.	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.	No streams were subject to restrictions during the 2020/21 water year.	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.	No streams were subject to restrictions during the 2020/21 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.	No streams were subject to restrictions during the 2020/21 water year.	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 licence entitlement 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.	Transitional arrangements for Zone 1 Groundwater ended in 2019/20, which means all Zone 1 licences within the WSPA are now subject to restriction stages 1 to 5.	Not applicable
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,	Transitional arrangements for Zone 1 Groundwater ended in 2019/20, which means all Zone 1 licences within the WSPA are now subject to restriction stages 1 to 5.	Not applicable

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>Transitional arrangements for Zone 1 Groundwater ended in 2019/20, which means all Zone 1 licences within the WSPA are now subject to restriction stages 1 to 5.</p>	<p>Not applicable</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>Transitional arrangements for Zone 1 Groundwater ended in 2019/20, which means all Zone 1 licences within the WSPA are now subject to restriction stages 1 to 5.</p>	<p>Not applicable</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>Transitional arrangements for Zone 1 Groundwater ended in 2019/20, which means all Zone 1 licences within the WSPA are now subject to restriction stages 1 to 5.</p>	<p>Not applicable</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 3 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>Transitional arrangements for Zone 1 Groundwater ended in 2019/20, which means all Zone 1 licences within the WSPA are now subject to restriction stages 1 to 5.</p>	<p>Not applicable</p>

Restrictions and prohibitions on issuing take and use licences

Prescription	Activity	Compliant
<p>18. The Corporation must not issue a new licence unless the new licence relates to –</p> <ul style="list-style-type: none"> (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 2 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 2020/21.	Yes
<p>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.</p>	No new licences were issued in 2020/21.	Yes
<p>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 14,546 ML/yr.</p>	No new licence entitlement volumes were issued; all new take and use licences were issued following transfer of licence entitlement volume.	Yes
<p>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 69,995 ML/yr.</p>	The licence entitlement volume does not exceed the specified limit.	Yes
<p>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.</p>	The licence entitlement volume does not exceed the specified limits.	Yes
<p>23. For the purposes of Prescription 22 each area named in the table is the area as described in the Plan (Pg. 42).</p>	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 current volume authorised to be taken between 1 July and 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>	Yes
<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 for totals against each named area.</p> <p>GMW has undertaken a review of any service points within the WSPA which required their location information to be verified. This includes works locations for registration licences. Based on this review, the known locations of all service points against location fields will be updated in the Victorian Water Register. This will allow for Prescription 25 to be calculated using Victorian Water Register data for the 2021/22 annual report.</p> <p><i>Currently groundwater licences are not assigned an SDL code which is required to sum the total number and volume of licences per named area in the Plan. To this point the assignment of bores to named areas has been completed manually.</i></p>	Yes

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>	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 relevant 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 relevant 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 relevant 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.	All relevant transfers complied with this Prescription.	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.	All relevant transfers complied with this Prescription.	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 relevant 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 relevant 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 relevant 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 relevant 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 relevant 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 relevant 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 relevant transfers complied with this 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 relevant transfers complied with this 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 relevant transfers complied with this 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 relevant transfers complied with this Prescription.	Yes

Meter Installation

Prescription	Activity	Compliant
43. Within 5 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.	Meter reads were completed in January and June 2021.	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 from a meter was required where a meter is installed.	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.	GMW conducts risk based management of (a) to (b) of this prescription. Use is managed in compliance with GMW's Meter Action Plan (2020).	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 Water Monitoring Partnership. Tributaries without real time monitoring were visually assessed during periods of low flow and recorded in 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.	Yes

Revocation of the Permissible Consumptive Volume

Prescription	Activity	Compliant
50. Within 3 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

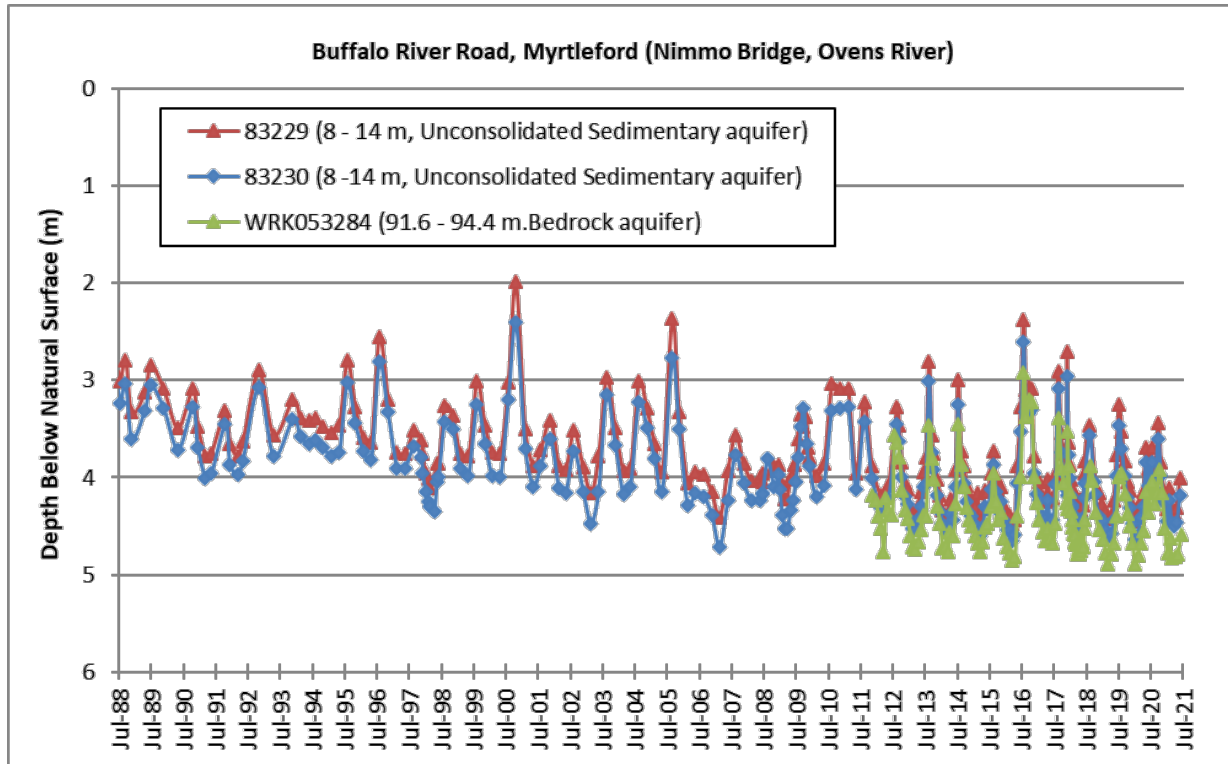
Review of the Plan

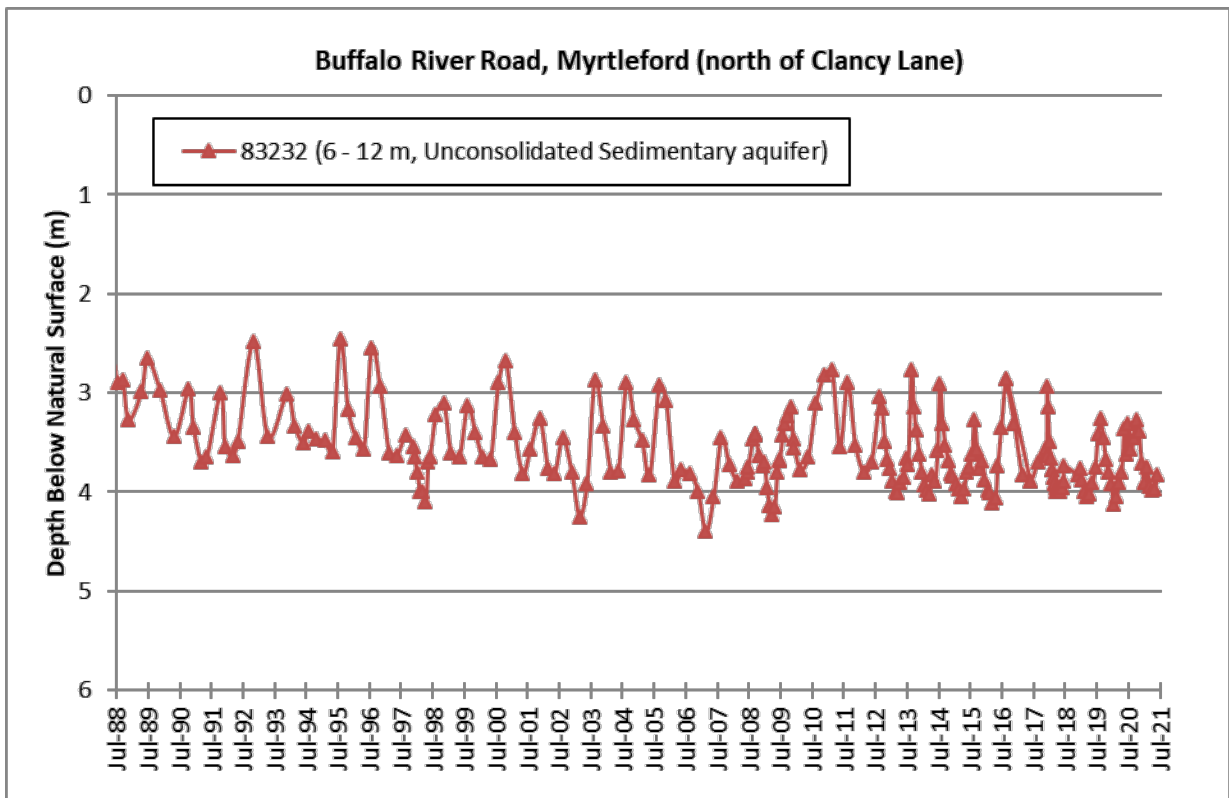
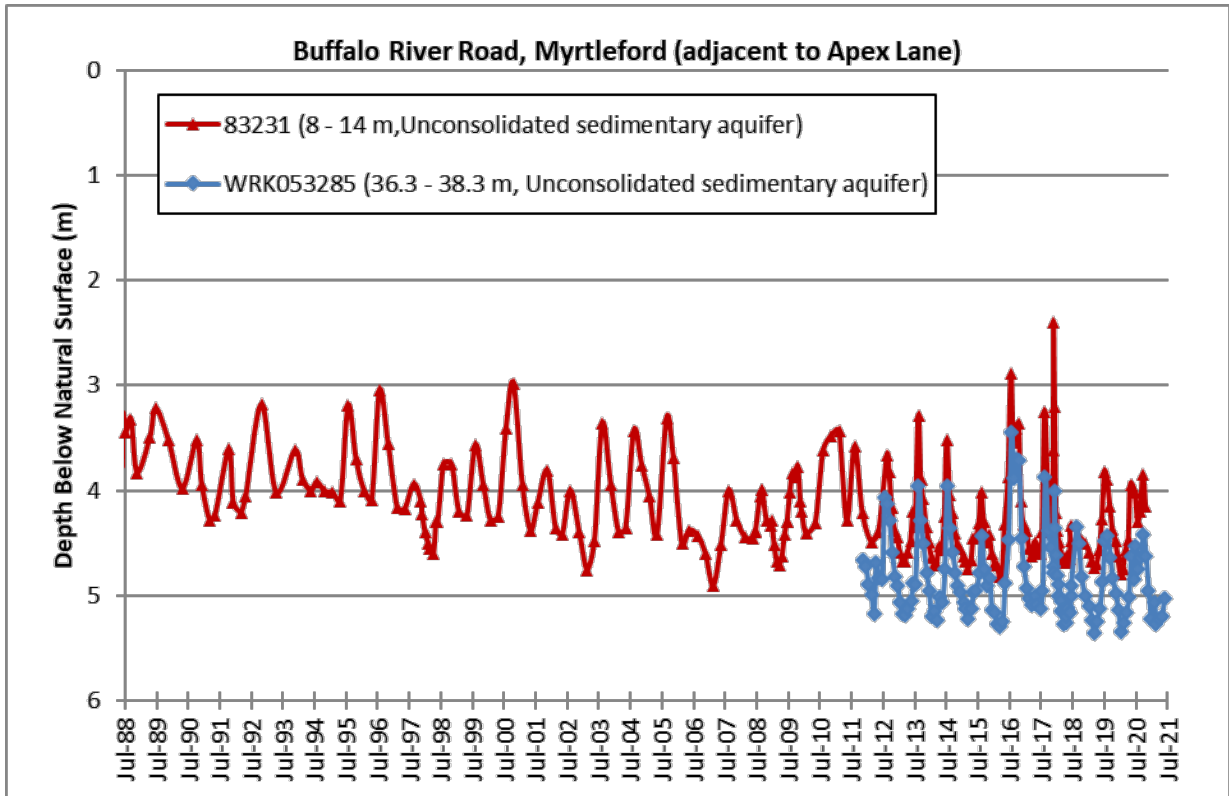
Prescription	Activity	Compliant
51. The Corporation must: (a) review the operation of the Plan: i) 5 years after it commences; and ii) thereafter, at intervals of no more than 5 years; and (b) propose any consequential amendments (if any) to the Minister.	Review was undertaken in 2017. Review included licence holder survey, meeting with TAFCO members, workshopped with Ovens/King/Mid Murray Regional Water Service Committee, DELWP, NEW and NECMA. Next review to commence 2021/22.	Yes

Appendix B – Groundwater level data

Hydrographs are provided for key monitoring bores listed in the Plan. All data is sourced from the Water Measurement Information System (DELWP, 2021).

Further groundwater level information is available on the Water Measurement Information System at <https://data.water.vic.gov.au>





Appendix C – Prescription 24 calculations

Licence entitlement volumes authorised to be taken during Winter-take period (1 July to 31 October) in the WSPA are listed in the table below.

Name of Area (Reference)	Cap volume (ML)	Current volume authorised to be taken during Winter-take period (ML)	Space under cap (ML)
Ovens River (4030001)	11,330.0	14.7	11,315.3
Ovens River (4030002)	4,618.0	171.6	4,446.4
German Creek (4030003)	2,342.0	135.6	2,206.4
Ovens River (4030004)	767.0	144.0	623.1
Ovens River (4030005)	1,947.0	1,107.7	839.3
Eurobin Creek (4030006)	2,134.0	207.7	1,926.4
Ovens River (4030007)	2,062.0	799.7	1,262.4
Morses Creek (4030101)	6,635.0	351.6	6,283.4
Morses Creek (4030102)	262.0	53.2	208.8
Buckland River E. Branch (4030201)	9,142.0	0.0	9,142.0
Buckland River (4030202)	9,500.0	0.5	9,499.5
Buckland River (4030203)	3,225.0	202.6	3,022.4
Devils Creek (4030204)	3,288.0	49.7	3,238.4
Buckland River (4030205)	504.0	129.5	374.6
Buckland River (4030206)	752.0	25.8	726.3
Buffalo Creek (4030301)	3,249.0	162.8	3,086.3
Buffalo Creek (4030302)	271.0	72.0	199.1
Barwidgee Creek (4030401)	545.0	63.8	481.2
Barwidgee Creek (4030402)	536.0	35.2	500.8
Sandy Creek (4030403)	332.0	34.8	297.2
Myrtle Creek (4030404)	264.0	263.5	0.5
Barwidgee Creek (4030405)	528.0	86.4	441.6
Barwidgee Creek (4030406)	482.0	95.7	386.3
Happy Valley Creek (4030407)	2,365.0	46.9	2,318.1
Happy Valley Creek (4030408)	2,344.0	979.0	1,365.0
Happy Valley Creek (4030409)	236.0	71.5	164.5
Barwidgee Creek (4030410)	335.0	118.8	216.2
Total	69,995.0	5,423.9	64,571.1

Appendix D – Licence entitlement volumes

Licence entitlement volumes within named areas of the WSPA are presented in the tables below. This relates to Prescription 25 of the Plan.

A breakdown of licences by type and associated licence volumes is provided on the next page.

Sum of all licences

Name of area (Reference)	Number of licences	Total licence entitlement volume (ML)
Ovens River (4030001)	9	36.0
Ovens River (4030002)	69	521.6
German Creek (4030003)	14	208.1
Ovens River (4030004)	9	145.0
Ovens River (4030005)	69	1,891.3
Eurobin Creek (4030006)	14	284.0
Ovens River (4030007)	110	4,713.6
Morses Creek (4030101)	66	624.1
Morses Creek (4030102)	6	46.0
Buckland River E. Branch (4030201)	-	-
Buckland River (4030202)	1	2.0
Buckland River (4030203)	17	274.0
Devils Creek (4030204)	11	51.0
Buckland River (4030205)	13	377.1
Buckland River (4030206)	8	106.0
Buffalo Creek (4030301)	13	566.1
Buffalo Creek (4030302)	12	259.6
Barwidgee Creek (4030401)	2	44.0
Barwidgee Creek (4030402)	8	46.0
Sandy Creek (4030403)	3	24.0
Myrtle Creek (4030404)	16	412.0
Barwidgee Creek (4030405)	16	213.4
Barwidgee Creek (4030406)	22	253.5
Happy Valley Creek (4030407)	8	139.3
Happy Valley Creek (4030408)	36	965.8
Happy Valley Creek (4030409)	11	172.3
Barwidgee Creek (4030410)	37	917.6
Total	600	13,293.4

Breakdown of licences – Zone 1 and Zone 2

Name of Area (Reference)	Total licences (Zone 1)		Groundwater licences (Zone 1)		All-year surface water licences (Zone 1)*		Registration licences (Zone 1)		Winter-take licences (Zone 1)		Groundwater licences (Zone 2)	
	No. of licences	Volume (ML)	No. of licences	Volume (ML)	No. of licences	Volume (ML)	No. of licences	No. of licences	Volume (ML)	Volume (ML)	No. of licences	Volume (ML)
Ovens River (4030001)	8	26.0	-	-	8	26.0	-	-	1	10.0	-	-
Ovens River (4030002)	66	492.6	6	98.0	56	345.6	4	49.0	1	21.0	2	8.0
German Creek (4030003)	12	190.6	2	56.6	7	62.0	3	72.0	1	10.0	1	7.5
Ovens River (4030004)	6	25.0	-	-	5	10.0	1	15.0	-	-	3	120.0
Ovens River (4030005)	58	1,460.6	8	573.0	39	521.6	11	366.0	1	29.0	10	401.7
Eurobin Creek (4030006)	14	284.0	1	5.0	10	148.0	3	131.0	-	-	-	-
Ovens River (4030007)	107	4,466.0	23	1,177.0	80	3,232.0	4	57.0	2	34.6	1	213.0
Morses Creek (4030101)	62	556.2	3	95.0	57	303.2	2	158.0	2	59.9	2	8.0
Morses Creek (4030102)	5	34.0	1	2.0	3	6.0	1	26.0	-	-	1	12.0
Buckland River E. Branch (4030201)	-	-	-	-	-	-	-	-	-	-	-	-
Buckland River (4030202)	1	2.0	-	-	1	2.0	-	-	-	-	-	-
Buckland River (4030203)	15	139.0	2	40.0	9	61.0	4	38.0	1	99.0	1	36.0
Devils Creek (4030204)	11	51.0	-	-	10	20.0	1	31.0	-	-	-	-
Buckland River (4030205)	12	343.1	1	9.0	10	290.1	1	44.0	1	34.0	-	-
Buckland River (4030206)	8	106.0	1	13.0	7	93.0	-	-	-	-	-	-
Buffalo Creek (4030301)	12	498.1	2	85.6	9	379.5	1	33.0	-	-	1	68.0
Buffalo Creek (4030302)	9	235.0	2	20.0	6	198.0	1	17.0	1	11.6	2	13.0
Barwidgee Creek (4030401)	2	44.0	-	-	-	-	2	44.0	-	-	-	-
Barwidgee Creek (4030402)	8	46.0	-	-	4	24.0	4	22.0	-	-	-	-
Sandy Creek (4030403)	3	24.0	-	-	-	-	3	24.0	-	-	-	-
Myrtle Creek (4030404)	10	235.0	2	40.0	5	149.0	3	46.0	1	14.0	5	163.0
Barwidgee Creek (4030405)	16	213.4	1	2.0	10	165.4	5	46.0	-	-	-	-
Barwidgee Creek (4030406)	22	253.5	1	14.0	17	188.5	4	51.0	-	-	-	-
Happy Valley Creek (4030407)	8	139.3	-	-	5	115.3	3	24.0	-	-	-	-
Happy Valley Creek (4030408)	35	876.8	1	17.0	19	268.8	15	591.0	1	89.0	-	-
Happy Valley Creek (4030409)	11	172.3	-	-	8	132.3	3	40.0	-	-	-	-
Barwidgee Creek (4030410)	33	895.6	11	296.0	22	599.6	-	-	-	-	4	22.0
Total	554	11,809.1	68	2,543.2	407	7,340.9	79	1,925.0	13	412.1	33	1,072.2

*Excludes registration licences

Note: All licence entitlement volumes sourced from the Victorian Water Register on 30 June 2021.

Appendix E – Rosters and restrictions

A summary of restrictions on taking water in management zone 1 of the WSPA during the 2020/21 water year is provided below. This relates Prescriptions 3, 4, 5, 6 and 7 of the Plan.

Waterway	Roster type	Commencement date
Buffalo Creek	No restriction	7/05/2020
Roberts Creek	No restriction	7/05/2020
Barwidgee Creek	No restriction	7/05/2020
Myrtle Creek	No restriction	7/05/2020
Buckland River	No restriction	15/04/2020
Two Mile Creek	No restriction	15/04/2020
Ovens River Upper	No restriction	15/04/2020
Snowy Creek	No restriction	7/05/2020
Happy Valley Creek	No restriction	7/05/2020
Havilah Creek	No restriction	7/05/2020
Jackson Creek	No restriction	7/05/2020
Morses Creek	No restriction	3/05/2019
Eurobin Creek	No restriction	3/05/2019
Upper Ovens River Tributaries	No restriction	3/05/2019