



Upper Ovens River Water Supply Protection Area Water Management Plan

Annual Report

For year ending 30 June 2015

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 for the 2014/15 season.

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

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

The report documents the Plan's performance during the 2014/15 water season, including a review of groundwater and surface water use, licence transfers, groundwater levels, surface water flow as well as compliance and metering activity.

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



John Calleja
MANAGING DIRECTOR

Date:



Executive summary

Groundwater and surface water use in the 2014/15 irrigation season was 11.5% (1,556.4 ML) of total entitlement in the Upper Owens River Water Supply Protection Area (WSPA). This is a decrease from the 2013/14 season, which is consistent with above average rainfall experienced during the summer months of January and February 2015.

Groundwater and surface water Zone 1 water users were placed on a Stage 2 restriction in March 2015 in accordance with the Plan.

As recommended in the Plan, a water balance research project is currently underway to improve the understanding of groundwater and surface water interaction and to improve knowledge of water use patterns. As part this project, two groundwater observation bores and a surface water gauging station were installed in late 2013. Monitoring of these sites will continue during the 2015/16 season. This research project will be ongoing until the end of 2016.

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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) from the 2014/15 irrigation season.

1.2 Water Supply Protection Area

The Upper Ovens River WSPA covers an area of approximately 1,580 km² of the Upper Ovens River catchment upstream of its confluence with the Buffalo River near Myrtleford in north east Victoria, as shown in Figure 2.

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

Management Zone 1, which includes licences that access the unconsolidated sedimentary aquifer (1085) and surface water (181).

Management Zone 2, which includes licences that access the underlying fractured bedrock aquifer (1086).

1.3 Water Management Plan

The Upper Ovens River WSPA Water Management Plan (the Plan) was approved on 11 January 2012 by the Minister for Water in accordance with section 32A(6) of the *Water Act 1989*. The Plan is scheduled for review every five years, with the first review due in 2016/17.

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

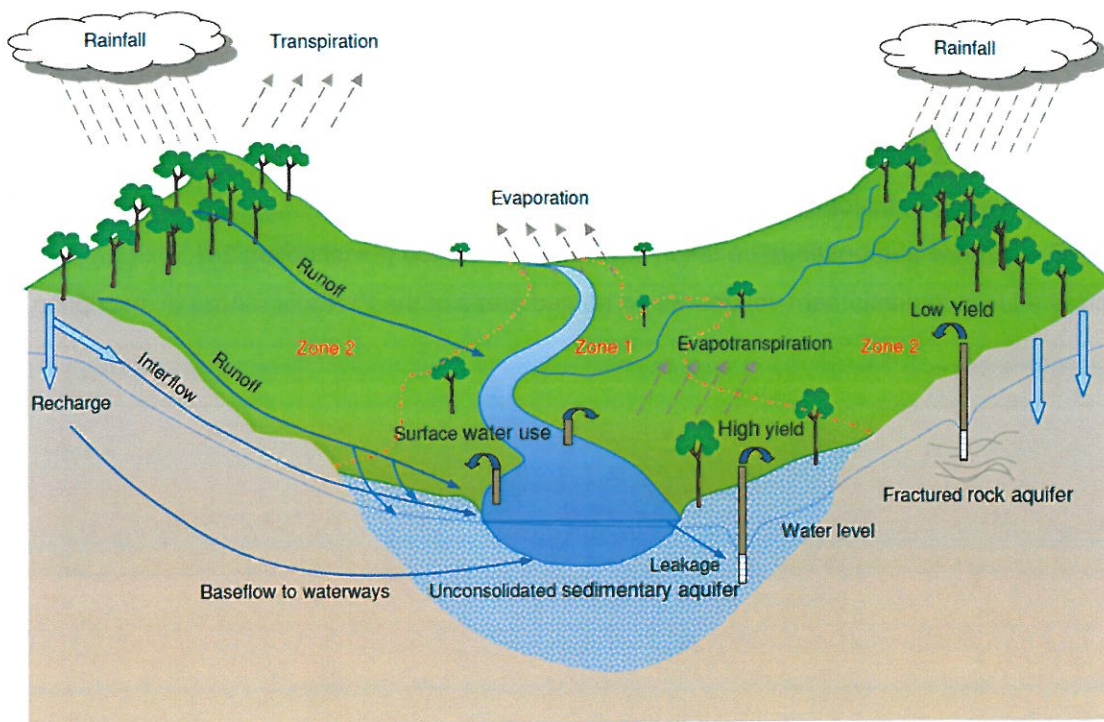


Figure 1 Upper Ovens River Water Supply Protection Area management zones

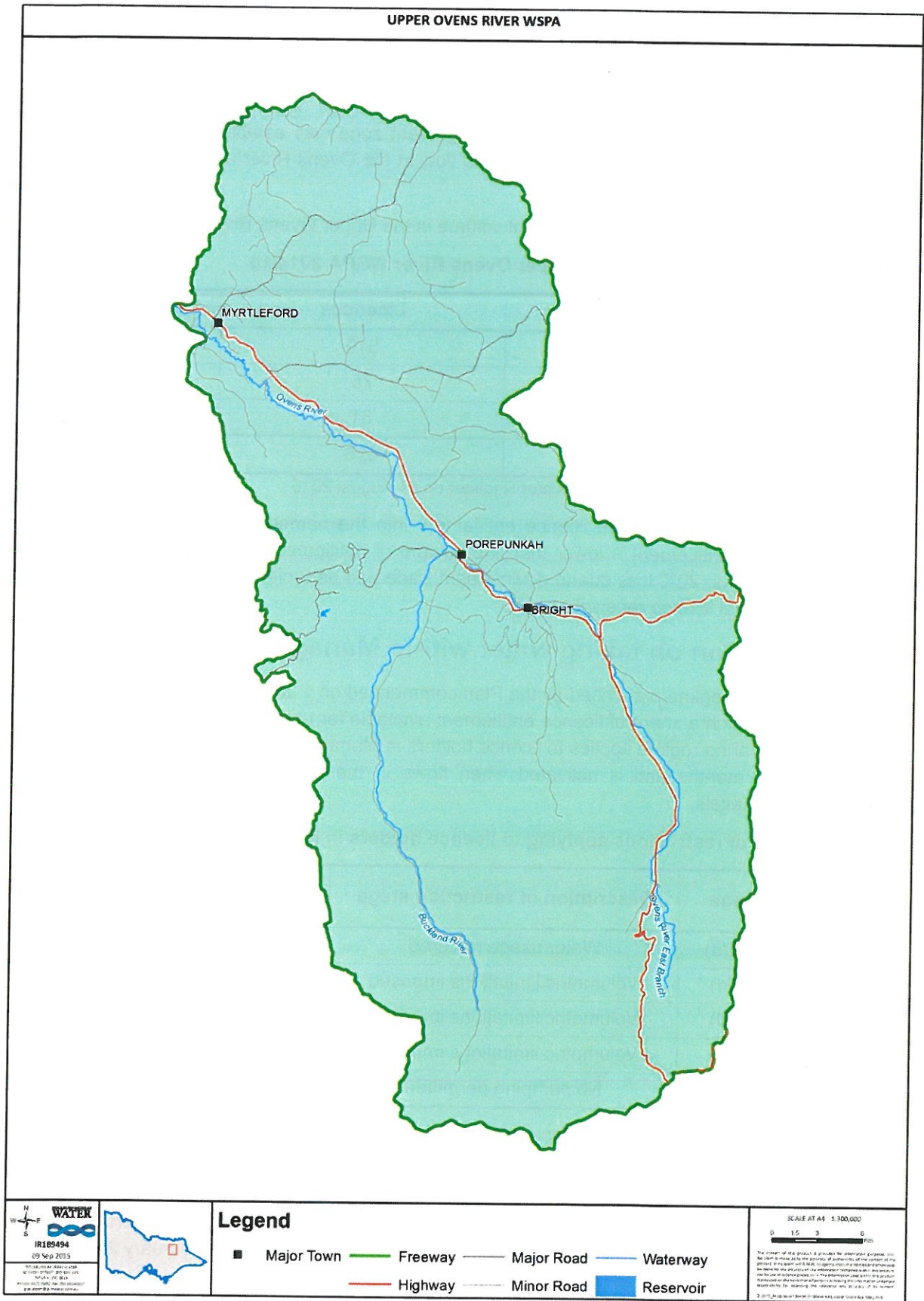


Figure 2 Upper Ovens River Water Supply Protection Area

2 Water management

2.1 Management zones and licence volume

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

At 30 June 2015 the total licence entitlement volume in the Upper Ovens River WSPA was 13,497 ML.

Table 1 Licence entitlement in the Upper Ovens River WSPA 2014/15

Management Zone	Licences	Licence volume (ML)
Zone 1 Surface Water	519	9,803.8
Zone 1 Groundwater	75	2,863.2
Zone 2 Groundwater	31	830.2
Total	625	13,497.2

NOTE: Data extracted from the Victorian Water Register on 17 August 2015

Appendix D further breaks down licence entitlement into the named areas set within the Plan. The current volume of entitlement is lower than the volume of entitlement recorded within the Plan due to licence cancellations, 20% loss due to downstream trade and data cleansing within the Water Register as part of an annual licence renewal project.

2.2 Restriction on taking water within Management Zone 1

The water sharing regime prescribed by the Plan commenced on 1 July 2012 and comprises five stages of restriction in which a share of licence entitlement available for use is 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 flows in the Ovens River at Myrtleford falls below specified trigger levels.

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

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

Stage 1 restrictions were put in place during the 2014/15 season as flow at the Ovens River at Myrtleford gauging station fell below restriction Stage 1 (Figure 3) in early February and fell below restriction Stage 2 in mid-March.

Once sufficient flows were recorded restrictions were removed on 24 April 2015. Roberts Creek was the only tributary to be subject to a Stage 5 suspension, which commenced on 2 February 2015.

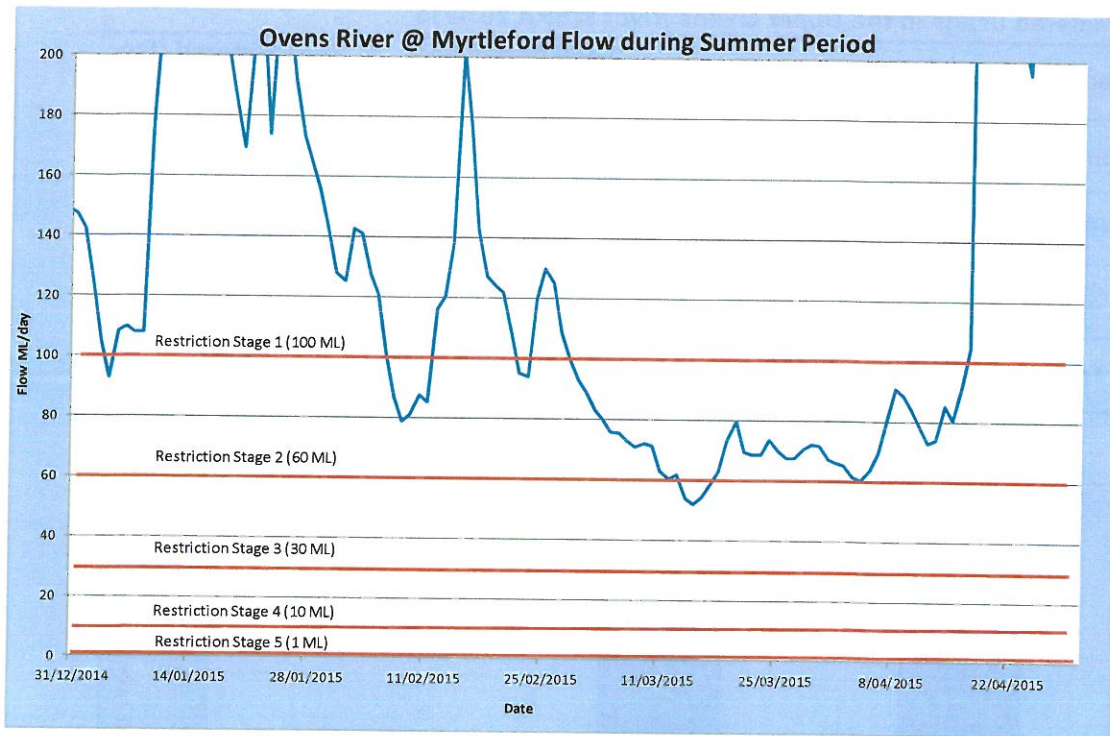


Figure 3 Ovens River at Myrtleford flows during the 2014/2015 summer period.

2.3 Groundwater and surface water use

The majority of licensed groundwater bores in the WSPA are metered, with only historic licences with entitlement of 19 ML/yr or less not currently metered as per Victoria's Metering Policy. As part of the Plan's implementation, all licensed groundwater users with a licence above 10 ML will be metered by January 2017, to bring all groundwater users in line with surface water users. The majority of licensed surface water users in the WSPA are metered, with only historic licences having entitlement of 9 ML/yr or less not being metered (consistent with State Metering Policy).

The total metered surface water and groundwater usage in 2014/15 was 1,556.4 ML. This is a decrease from the 2013/14 season which recorded a total metered usage of 2,605 ML. The decreased usage can be attributed to above average rainfall experienced during January and February 2015.

The pattern of groundwater and surface water use in the Upper Ovens WSPA is heavily influenced by climate and rainfall within the catchment. Average rainfall at the Eurobin station in the Upper Ovens catchment is 1,147 mm/yr. Rainfall was below average in the 2014/15 season (914.4 mm/yr, see Figure 4), particularly between August and October (Figure 5).

Table 3 Metered usage in the Upper Ovens River WSPA 2014/15

Management Zone	Metered use (ML)	Total Entitlement (ML)	% of Metered Use to Licence Volume
Zone 1 Surface Water	882.1	9,803.8	9.0
Zone 1 Groundwater	388.8	2,863.1	13.6
Zone 2 Groundwater	285.5	830.2	34.4
Total	1,556.4	13,497.2	11.5

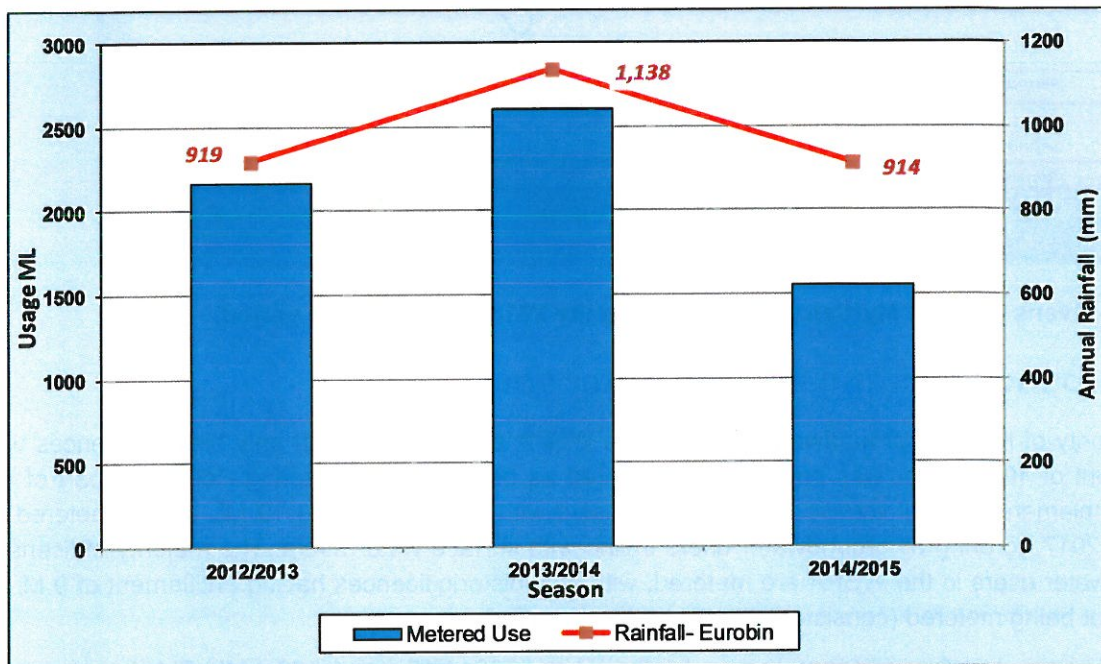


Figure 4 Metered season usage for the Upper Ovens WSPA compared with total annual rainfall (1 July to 30 June) recorded at Bureau of Meteorology station at Eurobin (BOM site 83010).

2.4 Transfer of entitlement

Groundwater and surface water licence transfer activity during 2014/15 is summarised in Table 4 below.

Table 4 Licence transfers in the Upper Ovens River WSPA 2014/15

Zone	Transfer from		Transfer to	
	Permanent (ML)	Temporary (ML)	Permanent (ML)	Temporary (ML)
Zone 1 Surface Water (181)	55	382	34.4	536.6
Zone 1 Groundwater (1085)	28	345	30	0
Zone 2 Groundwater (1086)	0	19	17	123
Lower Ovens GMA – Bedrock (1089)	0	0	0	20
Total	83	746	81.4	679.6

Note: Data extracted from the Victorian Water Register on 17 August 2015.

Numbers of temporary and permanent licences transfer in 2014/15 were higher than in the 2013/14 period. The need for water during a relatively dry winter and spring period is likely to have contributed to this increase. In total there were three temporary licence transfers into Management Zone 2 which indicates that the trading rules within the Plan are facilitating trading activity across the WSPA. All permanent licence transfers were within the capped volumes set for each sub-catchment within the Plan (Appendix C).

The variation in the volumes of 'Transfer from' and 'Transfer to' is due to 20% loss for downstream trade and a temporary transfer from the Upper Ovens River WSPA into the Lower Ovens GMA of 20 ML.

2.5 Compliance

There were no compliance cases in the Upper Ovens River WSPA for the 2014/15 season. Licence holders identified requirements in excess of licence entitlement prior to use and transferred licence entitlement accordingly.

3 Monitoring program

3.1 Groundwater levels

The groundwater monitoring data demonstrates a strong seasonal response to variations in climate. Groundwater levels (Appendix B) have been relatively stable over the past 4 years, this trend was similar in both the unconsolidated sedimentary aquifer and fractured bedrock aquifers. The groundwater monitoring data indicates that groundwater pumping in 2014/15 had little impact on aquifer wide groundwater levels.

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

3.2 Surface water

The surface water data taken from the Ovens River @ Myrtleford gauge (Figure 5) show that flows were generally consistent with a winter rainfall dominated climate, characterised by low summer stream flows and high winter stream flow patterns. Flows are responsive to repeated rainfall events as seen in July 2014 and May 2015. There was below average rainfall during the late winter / early spring period which caused flows to steadily decline until large rainfall events occurred in April and May 2015. The rainfall data has been shown as cumulative for 2014/15 to show periods of low rainfall and high rainfall events.

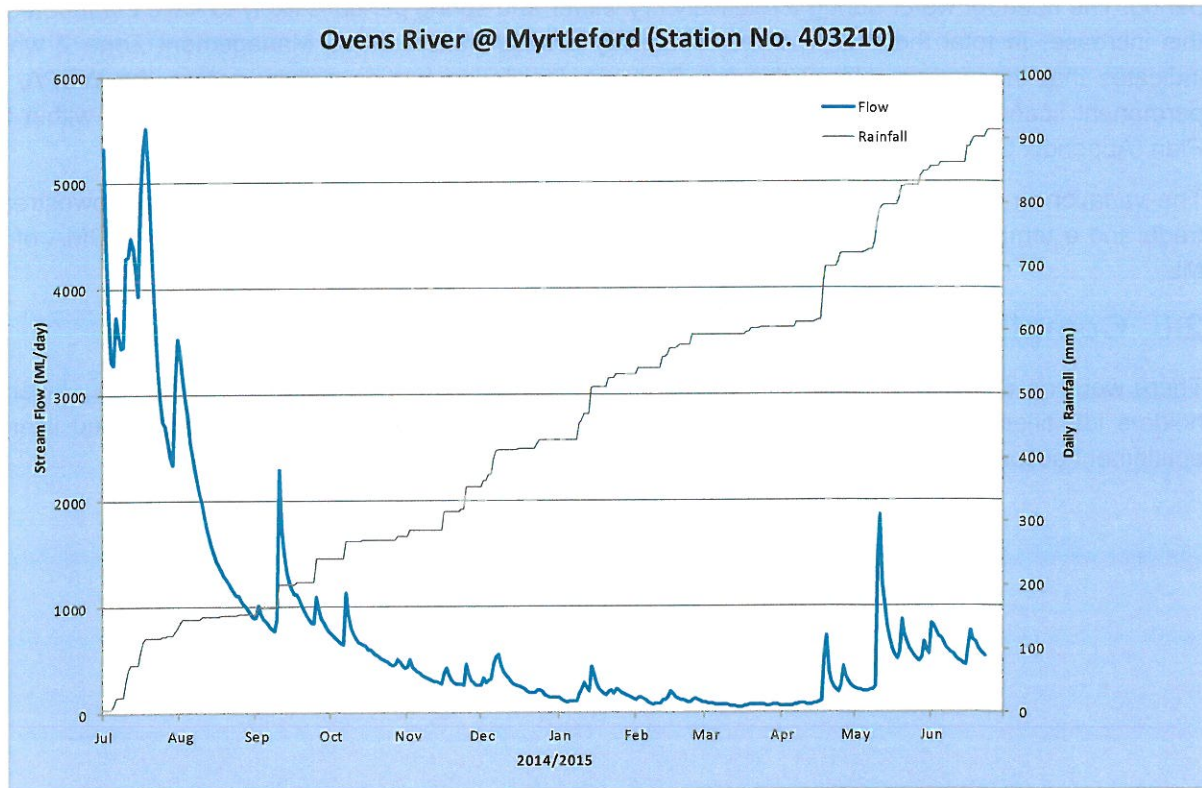


Figure 5 Daily stream flow of the Ovens River at Myrtleford compared to cumulative daily rainfall (1 July 2014 to 30 June 2015) recorded at Bureau of Meteorology station at Eurobin

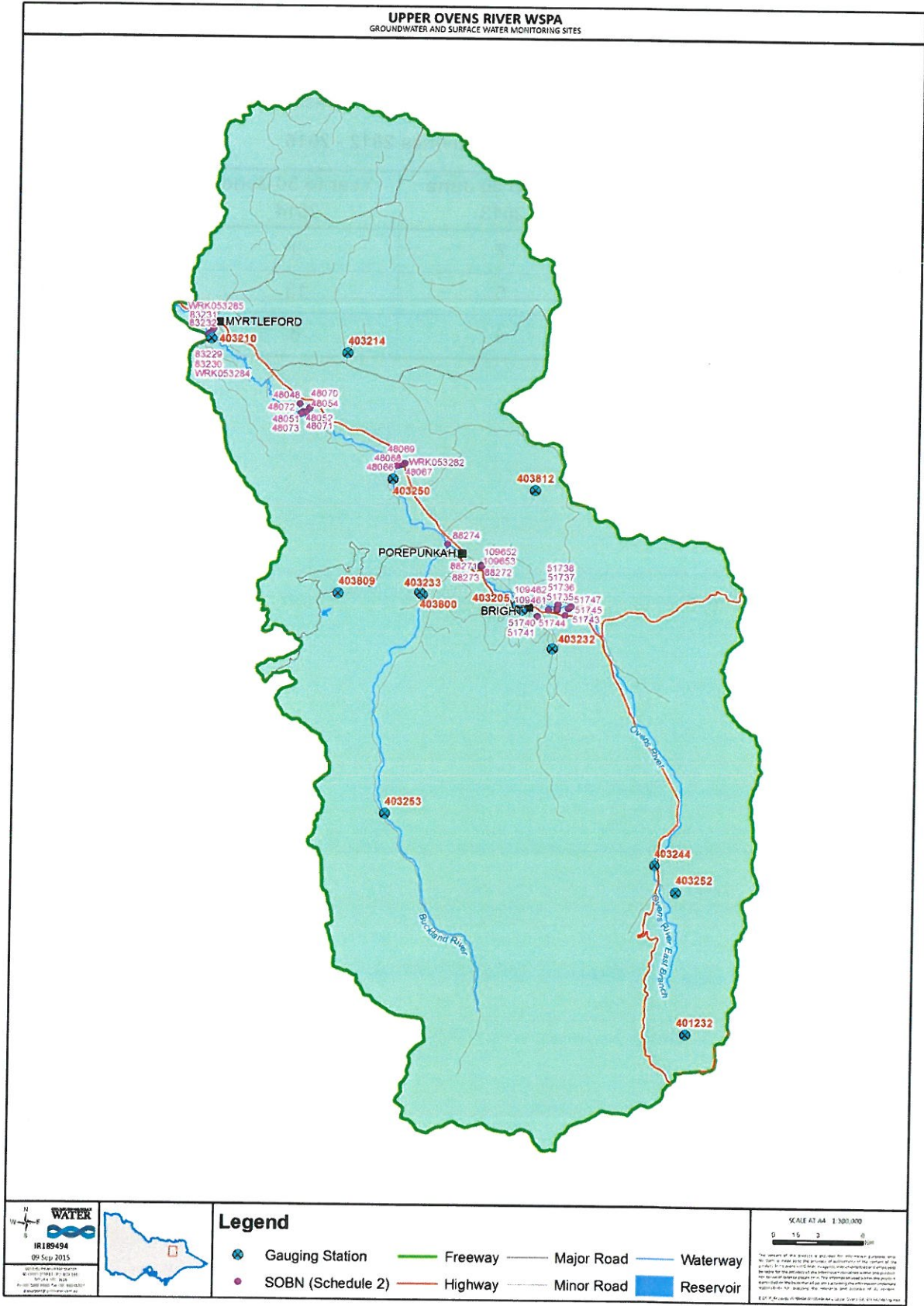


Figure 6 Location of groundwater monitoring bores and surface water gauging stations in the Upper Ovens River WSPA.

3.3 Metering

The condition of meters is noted when readings are taken in January and June of each year. Maintenance (including minor repairs) was required at two meters in 2014/15. Fourteen meters were replaced, and seven new meters were installed during 2014/15 season (Table 5).

Table 5 Meter installations and maintenance activities 2012 - 2015

Activity	Year to 30 June 2013	Year to 30 June 2014	Year to 30 June 2015
Number of new meters installed	7	3	7
Meters replaced	5	13	14
Meters requiring maintenance	4	8	2

4 Future management considerations

4.1 Upper Ovens River WSPA Water Balance Research Project

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

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

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

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

The following research project activity occurred during 2014/15:

- A review of contested bore zone determinations was completed (September, 2014)
- GMW's Diversion Operations unit commenced installation of 24 water meters on licensed groundwater users with licence entitlement between 10 to 19ML; and
- Quarterly monitoring was undertaken of water table and stream flow levels at the newly constructed gauging and observation bore sites.

4.2 SOBN review

The State Observation Bore Network (SOBN) is owned and managed by the Department of Environment, Land, Water and Planning (DELWP) who currently monitor around 2,300 bores across Victoria on a quarterly basis to provide valuable information on groundwater resources.

DELWP is undertaking a detailed review of the SOBN, which aims to identify opportunities to make the network more cost effective. GMW will seek its customer's views on future groundwater monitoring needs through its Regional Water Services Committees.

Appendix A – Compliance with Water Management Plan Prescriptions

Management Zones

Plan Requirement	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

Plan Prescription Number/ Requirement	Activity	Compliant
2. Prescriptions 3, 4, 5, 6 and 7 apply to the taking of surface water or groundwater under an all-year licence in Management Zone 1 while a Restriction Stage is in effect unless – (a) the licence is for domestic and stock use; or (b) the licence is subject to a condition that a portion of the water taken and used is to be returned to the water system; or (c) the special transitional arrangements in Prescriptions 12 to 16 apply	Licence holders identified in Prescription 2 did not have restrictions applied to their licence.	Yes

Plan Prescription Number/ Requirement	Activity	Compliant
<p>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.</p>	<p>Restriction Stages 1 and 2 were implemented during the 2014/15 season, in line with Plan requirements.</p>	<p>Yes</p>
<p>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.</p>	<p>Restriction Stage 5 was declared for Roberts Creek (February, 2015)</p>	<p>Yes</p>
<p>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.</p>	<p>Restrictions were implemented during the 2014/15 season, in line with Plan requirements.</p>	<p>Yes</p>
<p>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.</p>	<p>Restrictions were implemented during the 2014/15 season, in line with Plan requirements.</p>	<p>Yes</p>
<p>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.</p>	<p>Restriction Stage 5 was implemented during the 2014/15 for Roberts Creek season, in line with Plan requirements. No compliance issues were recorded.</p>	<p>Yes</p>
<p>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.</p>	<p>Restrictions were lifted in the 2014/15 season, in line with Plan requirements.</p>	<p>Yes</p>

Plan Prescription Number/ Requirement	Activity	Compliant
<p>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.</p>	<p>Restrictions were implemented during the 2014/15 season, in line with Plan requirements.</p>	<p>Yes</p>
<p>10. The Corporation must give notice to each affected licence holder of -</p> <p>(a) the declaration of a Restriction Stage and details of-</p> <p>(i) the times and rates at which water can be taken during the Restriction Stage;</p> <p>(ii) if relevant, the licence holder's percentage share of entitlement for the Restriction Stage;</p> <p>(iii) the date on which the declaration takes effect; and</p> <p>(b) the declaration that a Restriction Stage has been lifted.</p>	<p>Restrictions were implemented during the 2014/15 season, in line with Plan requirements.</p>	<p>Yes</p>
<p>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.</p>	<p>Methodology used to calculate percentage share of entitlement is available on the Goulburn-Murray Water website.</p>	<p>Yes</p>

Transitional Arrangements for Zone 1 Groundwater

Plan Prescription Number/ Requirement	Activity	Compliant
<p>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</p>	<p>Transitional arrangements were not implemented as restrictions only reached Stage 2.</p>	<p>Yes</p>
<p>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 -</p> <p>(a) Restriction Stage 3, if Restriction Stage 4 or 5 is declared between 1 July 2012 and 30 June 2014, inclusive; or</p> <p>(b) Restriction Stage 4, if Restriction Stage 5 is declared between 1 July 2014 and 30 June 2015, inclusive,</p>	<p>Only Stage 2 restrictions were declared in the 2014/15 season on the Ovens River.</p>	<p>Yes</p>
<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>Only Stage 2 restrictions were declared in the 2014/15 season on the Ovens River.</p>	<p>Yes</p>

Plan Prescription Number/ Requirement	Activity	Compliant
<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 G-MW 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 G-MW in order to meet Prescriptions 14, 15, 16 and 17.</p>	<p>Yes</p>

Restrictions and prohibitions on issuing take and use licences

Plan Prescription Number/ Requirement	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 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. 	<p>No new licences were issued in 2014/15.</p>	<p>Yes</p>
<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>	<p>No new licences were issued in 2014/15.</p>	<p>Yes</p>
<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 14,546ML/yr.</p>	<p>No new entitlement has been issued, all new licence were issued following transfer</p>	<p>Yes</p>

Plan Prescription Number/ Requirement	Activity	Compliant
<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 69,995ML/yr.</p>	<p>The licensed volume does not exceed the specified limit.</p>	<p>Yes</p>
<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>	<p>The licensed volume does not exceed the specified limits.</p>	<p>Yes</p>
<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>	<p>Each area is named according to the Plan</p>	<p>Yes</p>
<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>Yes</p>

Plan Prescription Number/ Requirement	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; 	Refer to Appendix D	Yes

Restrictions and Prohibitions on Issuing Works Licences

Plan Prescription Number/ Requirement	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>	All relevant applications complied with this prescription	Yes

Transfers between Management Zone 1 and 2

Plan Prescription Number/ Requirement	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>	<p>All licence transfers complied with the prescriptions</p>	<p>Yes</p>
<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>	<p>All transfers complied with the prescription</p>	<p>Yes</p>
<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>	<p>All transfers complied with the prescription</p>	<p>Yes</p>
<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>	<p>No transfer of an annual licence occurred from Management Zone 2 to Management Zone 1</p>	<p>Yes</p>

Domestic and Stock Transfers

Plan Prescription Number/ Requirement	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 2ML.	Four domestic and stock licence transfers occurred within the 2014/15 season.	Yes

Licence Transfers into the Protection Area

Plan Prescription Number/ Requirement	Activity	Compliant
32. The Corporation may approve an application to transfer a licence or water share into Management Zone 2.	Three 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

Plan Prescription Number/ Requirement	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

Plan Prescription Number/ Requirement	Activity	Compliant
<p>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</p> <p>(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</p> <p>(b) upstream of the property on which it was previously authorised to be used, unless the surface water licence is a winter-take licence.</p>	All transfers complied with the prescription	Yes
<p>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.</p>	All transfers complied with the prescription	Yes
<p>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.</p>	All transfers complied with the prescription	Yes
<p>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.</p>	All transfers complied with the prescription	Yes

On Property Licence Conversions

Plan Prescription Number/ Requirement	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

Plan Prescription Number/ Requirement	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 is undertaking a metering program that will ensure all operational groundwater works authorised to extract 10 ML/yr or more will have a meter fitted by January 2017.	Yes

Meter Reading and Account for Use

Plan Prescription Number/ Requirement	Activity	Compliant
<p>44. The Corporation must</p> <p>(a) read each meter at least twice every year; and</p> <p>(b) determine the volume of water taken each year under the relevant licence.</p>	<p>All meters for both groundwater and surface water were read twice during the 2014/15 season. Meter reads were completed in January and June 2015.</p>	<p>Yes</p>
<p>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.</p>	<p>No estimation of water taken was required</p>	<p>Yes</p>
<p>46. If water is taken under a licence for irrigation use and is not metered, the Corporation must</p> <p>(a) prior to the commencement of each irrigation season determine the area to be irrigated for that season;</p> <p>(b) inspect each place at which water is taken as frequently as it inspects meters; and</p> <p>(c) estimate the volume of water taken each year.</p>	<p>No usage was detected from unmetered licence holders.</p>	<p>Yes</p>
<p>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</p>	<p>All meter reads are entered into the GMW database (IPM)</p>	<p>Yes</p>
<p>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.</p>	<p>No requests were made to licensees by the Corporation</p>	<p>Yes</p>

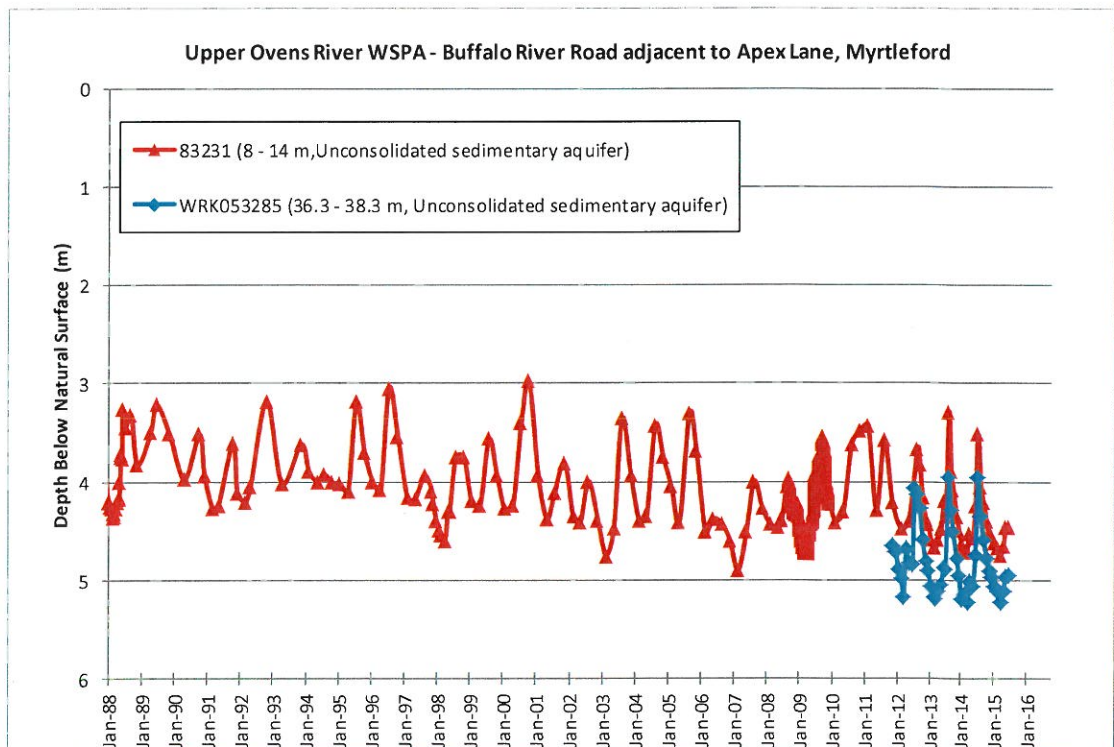
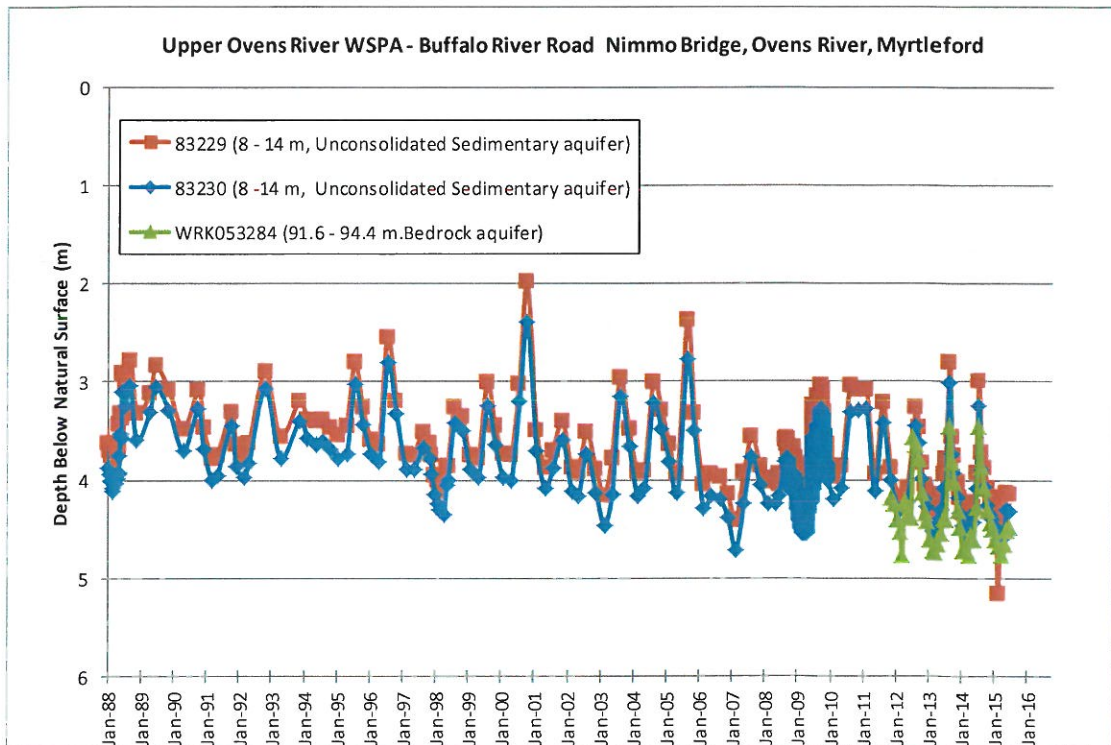
Monitoring

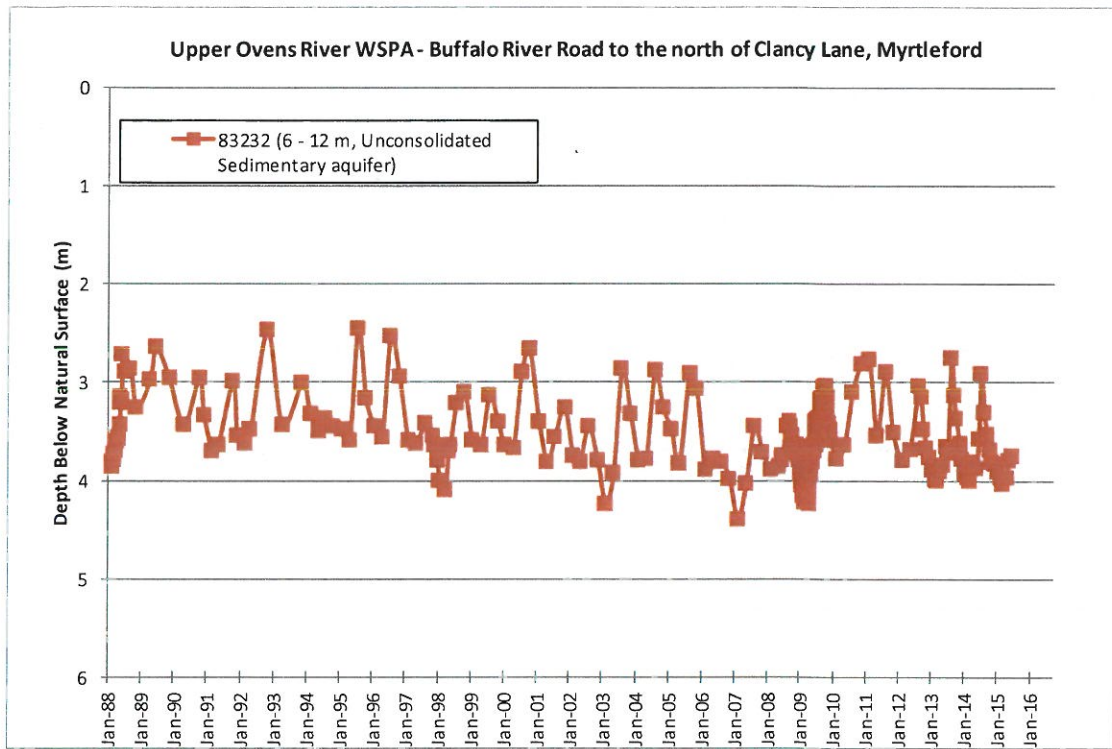
Plan Prescription Number/ Requirement	Activity	Compliant
<p>49. The Corporation must ensure that an appropriate monitoring program is undertaken to ensure that:</p> <ul style="list-style-type: none"> (a) the flows in the Ovens River at Myrtleford are continuously recorded; (b) the flows in key tributaries 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. 	<p>Groundwater levels are monitored and recorded using the State Observation Bore Network.</p> <p>River flows are monitored and recorded under the Victorian Regional Monitoring Partnership. Tributaries without real time monitoring are visually assessed during periods of low flow and recorded in GMW System Planning Module</p> <p>The water sharing regime is communicated to all effected licence holders and monitored throughout the period of restriction.</p> <p>The monitoring of stream and groundwater levels allows the relationship between the two to be observed.</p>	<p>Yes</p>

Revocation of the Permissible Consumptive Volume

Plan Prescription Number/ Requirement	Activity	Compliant
<p>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.</p>	<p>The Minister for Water approved the revocation of the PCV on 3 March 2013 and was published in the Victorian Government Gazette on 7 March 2013.</p>	<p>Yes</p>

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





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

Area Reference	Area Name	Cap Volume(ML)	Current Volume authorised to be taken between 1 July to 31 October
4030001	Ovens River	11,330	7
4030002	Ovens River	4,618	145
4030003	German Creek	2,342	127
4030004	Ovens River	767	35
4030005	Ovens River	1,947	1,015
4030006	Eurobin Creek	2,134	194
4030007	Ovens River	2,062	1,166
4030101	Morses Creek	6,635	304
4030102	Morses Creek	262	50
4030201	Buckland River East Branch	9,142	0
4030202	Buckland River	9,500	0
4030203	Buckland River	3,225	121
4030204	Devils Creek	3,288	45
4030205	Buckland River	504	180
4030206	Buckland River	752	27
4030301	Buffalo Creek	3,249	154
4030302	Buffalo Creek	271	135
4030401	Barwidgee Creek	545	64
4030402	Barwidgee Creek	536	32
4030403	Sandy Creek	332	44
4030404	Myrtle Creek	264	262
4030405	Barwidgee Creek	528	115
4030406	Barwidgee Creek	482	106
4030407	Happy Valley Creek	2,365	64
4030408	Happy Valley Creek	2,344	1,015
4030409	Happy Valley Creek	236	91
4030410	Barwidgee Creek	335	184
Total		69,995	5,680

Appendix D – Licence entitlement volume within named areas of the Protection Area (Prescription 25)

Area Reference	Name of Area	Cap Volume (ML)	All Licences No.	All Licence Volume	No. Licences in Zone 1	Licences in Zone 1 Volume	No. all-year GW Licences Zone 1	All-year GW Licence Volume	No. all-year SW Licences Zone 1 (exc Reg)	All-year SW Licences Zone 1 Volume	No. Registration Licences	Registration Licence Volume	No. Winter-take Licence	Winter-take Licence Volume	No. Zone 2 GW Licences	Zone 2 GW Licence Volume
4030001	OvensRiver	11,330	8	27.0	8	27.0	0	0	8	27	0	0	0	0	0	0.0
4030002	OvensRiver	4,618	53	405.6	51	397.6	5	86	42	262.6	4	49	0	0	2	8
4030003	GermanCreek	2,342	10	205.1	9	197.6	3	66.5	3	59	3	72	0	0	1	7.5
4030004	OvensRiver	767	10	48.0	8	41.0	0	0	7	26	1	15	0	0	2	7
4030005	OvensRiver	1,947	64	1,938.3	55	1,591.6	11	677	33	548.6	11	366	1	21	9	325.7
4030006	EurobinCreek	2,134	9	149.0	9	149.0	0	0	6	18	3	131	0	0	0	0.0
4030007	OvensRiver	2,062	170	5,082.1	168	4,887.1	26	1,275	138	3,555.1	4	57	2	34	2	161
4030101	MorsesCreek	6,635	33	502.6	32	486.6	3	95	27	233.6	2	158	1	14	1	2
4030102	MorsesCreek	262	5	42.0	4	30.0	1	2	2	2	1	26	0	0	1	12.0
4030201	BucklandRiverEastBranch	9,142	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0	0.0
4030202	BucklandRiver	9,500	0	0.0	0	0.0	0	0	0	0.0	0	0.0	0	0	0	0.0
4030203	BucklandRiver	3,225	20	232.0	19	196.0	2	40	13	118	4	38	0	0	0	0.0
4030204	DevilsCreek	3,288	1	31.0	1	31.0	0	0	0	0	1	31	0	0	1	36
4030205	BucklandRiver	504	16	540.0	15	528.0	2	69	12	415	1	44	0	0	0	0.0
4030206	BucklandRiver	752	11	120.0	11	120.0	1	12	10	108	0	0	0	0	1	12
4030301	BuffaloCreek	3,249	12	342.6	11	274.5	2	90.6	8	151	1	33	0	0	0	0.0
4030302	BuffaloCreek	271	14	461.0	13	455.0	2	20	10	418	1	17	0	0	1	68
4030401	BarwidgeeCreek	545	2	44.0	2	44.0	0	0.0	0	0.0	2	44	0	0	1	6
4030402	BarwidgeeCreek	536	4	22.0	4	22.0	0	0.0	0	0.0	4	22	0	0	0	0.0
4030403	SandyCreek	332	5	61.0	5	61.0	0	0	2	37	3	24	0	0	0	0.0
4030404	MyrtleCreek	264	18	380.0	13	217.0	2	40	8	131	3	46	0	0	0	0.0
4030405	BarwidgeeCreek	528	21	241.0	21	241.0	2	3	14	192	5	46	0	0	5	163
4030406	BarwidgeeCreek	482	20	195.0	20	195.0	1	14	15	130	4	51	0	0	0	0.0
4030407	HappyValleyCreek	2,365	7	139.0	7	139.0	0	0	4	115	3	24	0	0	0	0.0
4030408	HappyValleyCreek	2,344	32	1,090.9	32	1,041.0	1	17	16	433	15	591	1	49.9	0	0.0
4030409	HappyValleyCreek	236	15	172.0	15	172.0	0	0	12	132	3	40	0	0	0	0.0
4030410	BarwidgeeCreek	335	60	1,026.0	56	1,004.0	11	356	45	648	0	0	0	0	4	22
Total		69,995.0	620	13,497.2	589	12,667.0	75	2,863.2	435	7,759.9	79	1,925.0	5	118.9	31	830.2

Note: All licence volumes were sourced from the Victorian Water Register August 2015.

