

GOULBURN-MURRAY  
**WATER**



Upper Ovens River  
Water Supply Protection Area  
Water Management Plan  
**Annual Report**  
June 2014

## 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 (WSPA) Water Management Plan for the 2013/14 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 2013/14 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.

This report will be submitted to the Minister for Water and a notice of its availability will also be published in the Myrtleford Times newspaper.

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



Gavin Hanlon  
MANAGING DIRECTOR

Date:

## **Executive summary**

Groundwater and surface water use in the 2013/14 irrigation season was 18 percent (2,606 ML) of total entitlement in the Upper Owens River Water Supply Protection Area (WSPA). This is a slight increase from the 2012/13 season. The total volume of groundwater and surface water transferred during the season was 646 ML. The increased usage is consistent with the relatively dry summer.

Groundwater and surface water Zone 1 water users were put on Stage 1 restrictions during summer in accordance with the Plan.

As recommended in the Plan, a water balance research project has been initiated 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 2014/15 season. This research will be ongoing for 2015/16.



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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 2013/14 irrigation season.

## 1.2 Water Supply Protection Area

The Upper Ovens River WSPA covers an area of approximately 1,580 km<sup>2</sup> of the catchment of the Upper Ovens River upstream of its confluence with the Buffalo River near Myrtleford in north east Victoria, as shown in Figure 1. The Upper Ovens River WSPA was declared on 2 October 2008 under section 27(1) of the *Water Act 1989* (the Act).

There are two management zones within the Upper Ovens River WSPA: 1085 and 1086, as shown in Figure 1. Management Zone 1 (1085) includes the unconsolidated sedimentary aquifer and surface water. Management Zone 2 (1086) includes licences that access the underlying fractured bedrock aquifer.

## 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 managing the surface water and the unconsolidated sedimentary aquifer as a connected system.

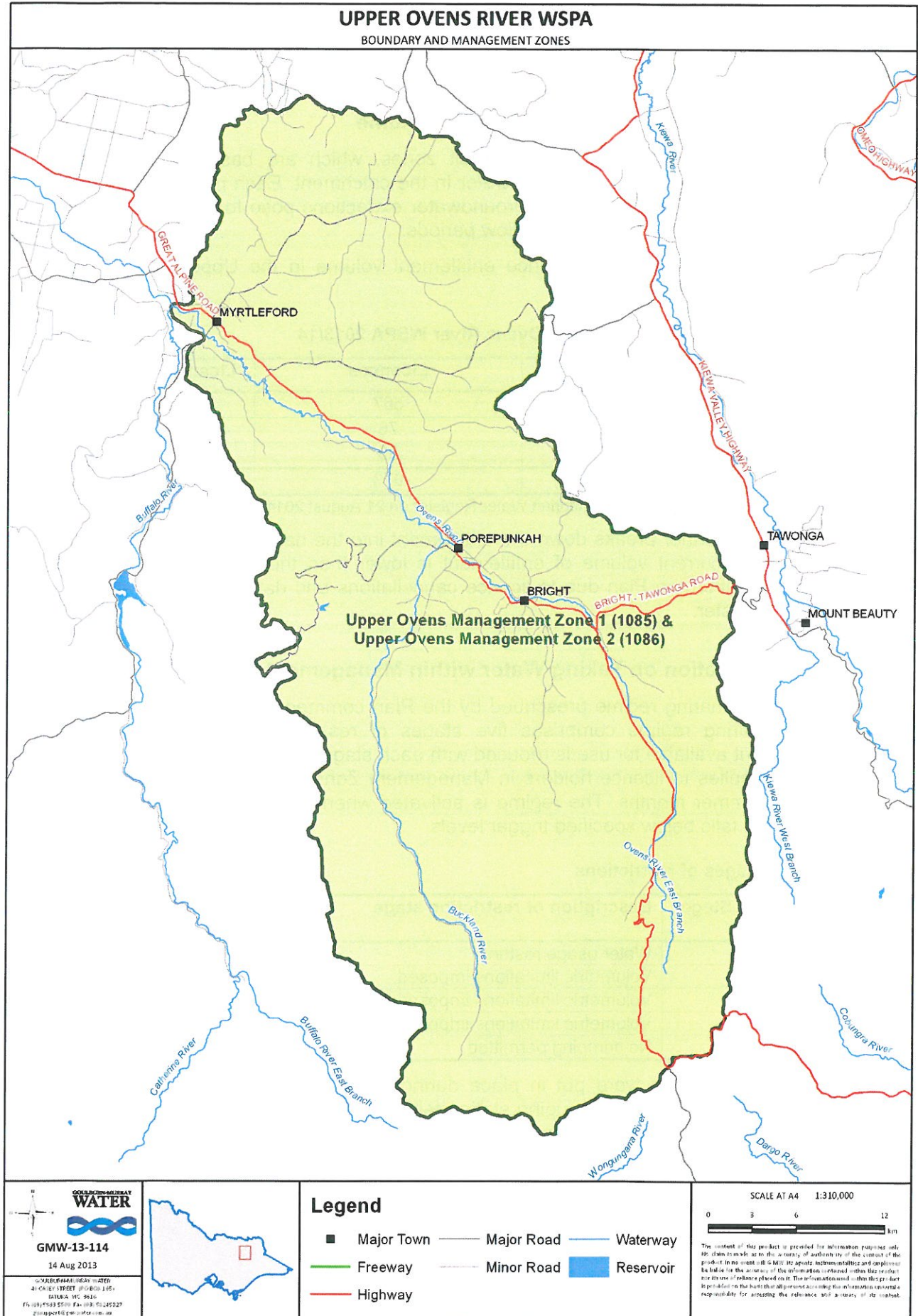


Figure 1 Upper Ovens River Water Supply Protection Area



## 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 is based on the level of risk that groundwater extractions pose to flow in the Ovens River and its tributaries during low flow periods.

At 30 June 2013 the total licence entitlement volume in the Upper Ovens River WSPA was 14,371 ML.

**Table 1 Entitlement in the Upper Ovens River WSPA 2013/14**

Management Zone	Licences	Licence volume (ML)
Zone 1 Surface Water	567	10,624
Zone 1 Groundwater	76	2,923
Zone 2 Groundwater	30	824
<b>Total</b>	<b>673</b>	<b>14,371</b>

NOTE: Data extracted from the Victorian Water Register on 21 August 2014

Appendix 4 further breaks down the 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 and data cleansing within the Water Register.

### 2.2 Restriction on Taking Water within Management Zone 1

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

**Table 2 Stages of restrictions**

Restriction Stage	Description of restriction stage	Share of entitlement available %
Stage 1	Water usage rostered	100
Stage 2	Volumetric limitations imposed	75
Stage 3	Volumetric limitations imposed	50
Stage 4	Volumetric limitations imposed	25
Stage 5	No pumping permitted	0

Stage 1 restrictions were put in place during the 2013/14 season as flow at the Ovens River at Myrtleford gauging station fell below restriction Stage 1 (Figure 2) in early February and throughout most of March.

Once sufficient flows were recorded the restrictions were removed on 8 April 2014. Roberts Creek was the only stream to commence restrictions earlier, 17 January 2014, and remained on restrictions until 20 June 2014.

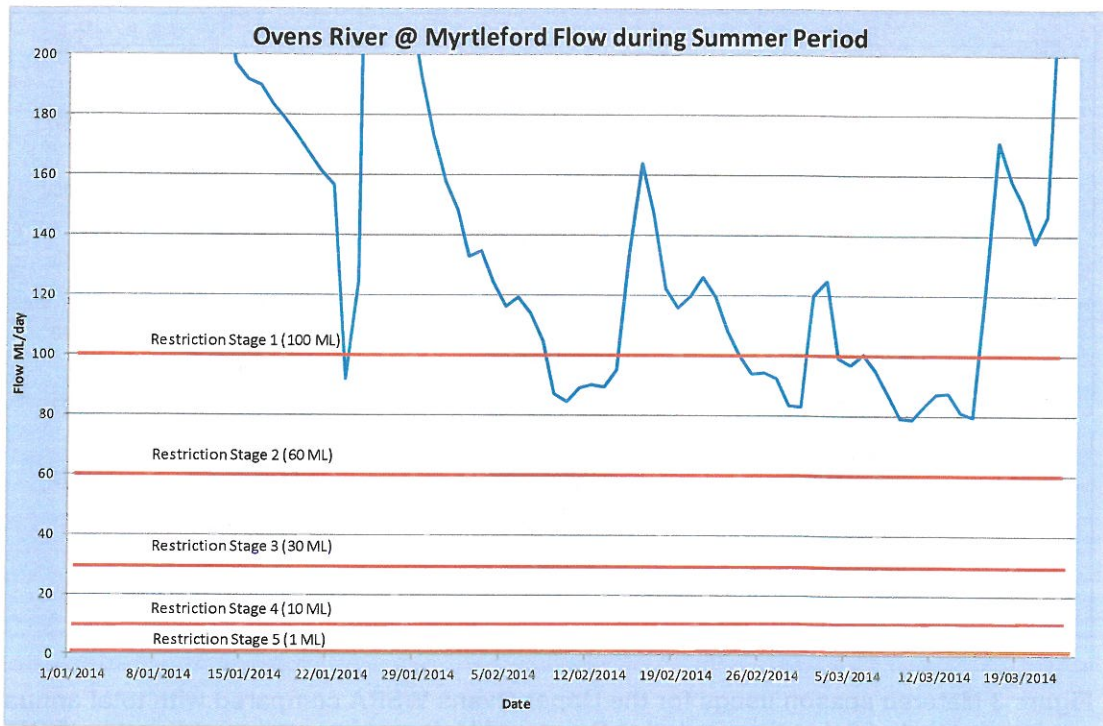


Figure 2 Ovens River at Myrtleford flows during the 2013/2014 summer period.

### 2.3 Groundwater and surface water use

The majority of licensed groundwater bores in the WSPA are metered, with only historic licences having entitlement of 19 ML/yr or less not currently metered as per State policy. As part of the Plan’s implementation, all licensed groundwater users with a licence above 10 ML will be metered, 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 policy).

The total metered surface water and groundwater usage for the 2013/14 season was 2,605.7 ML.

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. While rainfall was close to the average in the 2013/14 season (1,137.6 mm/yr, see Figure 3), the summer months (January and February) were well below average and this is likely to account for the higher water use compared to last year.

Table 3 Metered usage in the Upper Ovens WSPA 2013/14

Management Zone	Metered use (ML)	Total Entitlement (ML)	% of Metered Use to Licence Volume
Zone 1 Surface Water	1,862.7	10,624	17.9
Zone 1 Groundwater	433.5	2,923	14.8
Zone 2 Groundwater	309.5	824	37.5
<b>Total</b>	<b>2,605.7</b>	<b>14,371</b>	<b>18.1</b>



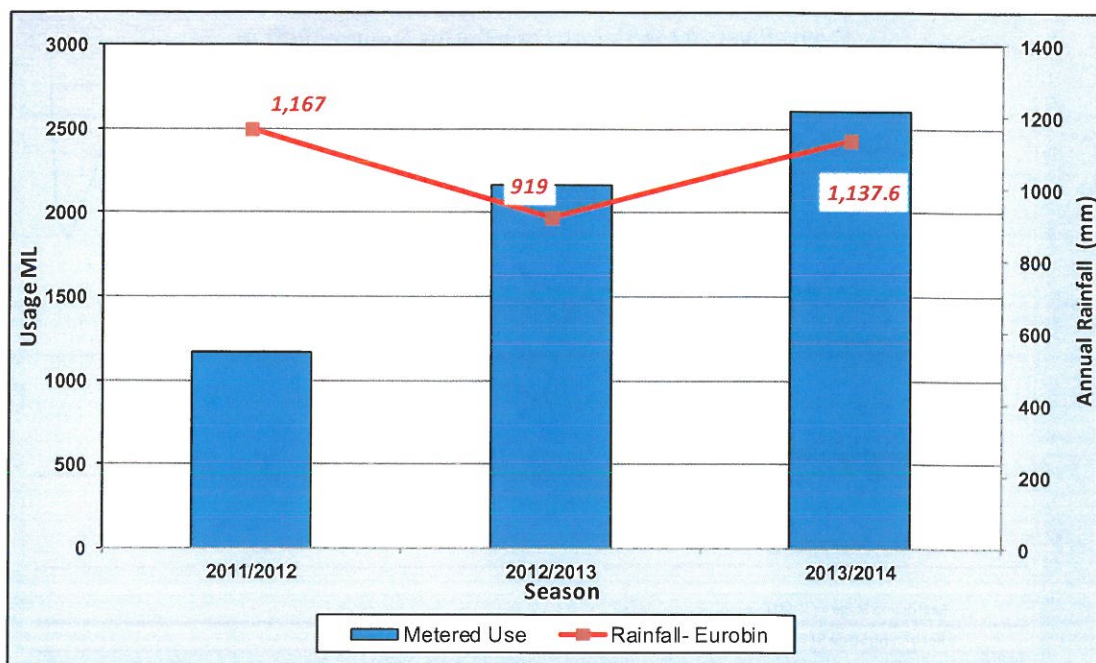


Figure 3 Metered season usage for the Upper Ovens WSPA compared with total annual rainfall (1 July to 30 June) recorded at Bureau of Meteorology station at Eurobin (BOM site 83010).

## 2.4 Transfer of entitlement

Groundwater and surface water licence transfer activity during 2013/14 is summarised in Table 4 below.

Table 4 Transfers in the Upper Ovens River WSPA 2013/14

Zone	Transfer from		Transfer to	
	Permanent (ML)	Temporary (ML)	Permanent (ML)	Temporary (ML)
Zone 1 Surface Water (181)	59	282	35.6	470.4
Zone 1 Groundwater (1085)	19	341	0	0
Zone 2 Groundwater (1086)	0	0	36	104
<b>Total</b>	<b>78</b>	<b>623</b>	<b>71.6</b>	<b>574.4</b>

Levels of temporary transfer in 2013/14 were similar to 2012/13. This was due to increased need for water during the relatively dry summer period. In total there were two licence transfers (temporary and permanent) into Management Zone 2 which indicates that the trading rules within the Plan are facilitating trading activity across the WSPA. All permanent transfers into new areas were within the capped volume set within the Plan (Appendix 3).

## 2.5 Compliance

There were no compliance cases in the Upper Ovens WSPA for the 2013/14 season. All licence holders identified prior to use that they may exceed licence entitlement, therefore undertaking a transfer of entitlement to cover any future shortfall.

### 3 Monitoring program

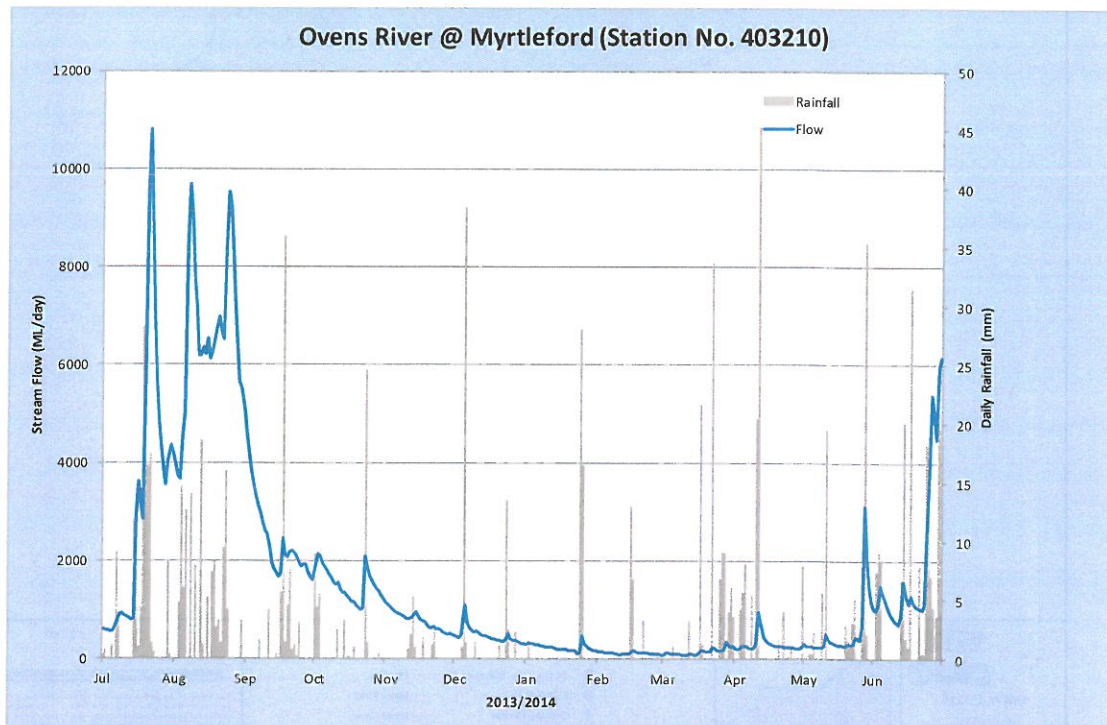
#### 3.1 Groundwater levels

The groundwater monitoring data shows that groundwater levels (groundwater pressure heads) demonstrate a strong seasonal response to variations in climate. Groundwater levels (Appendix 5.1) were at their highest between August and September 2011 and their lowest around March 2013 due to below average rainfall. This trend was similar in both the unconsolidated sedimentary aquifer and fractured bedrock aquifers. The data suggest that groundwater pumping in 2013/14 had little impact on aquifer wide groundwater levels.

The locations of the monitoring bores and surface water gauges are shown in Figure 5.

#### 3.2 Surface Water

The surface water data taken from the Ovens River @ Myrtleford gauge (Figure 4) show that flows were generally consistent with a winter rainfall dominated climate, characterised by low summer flow and high winter flow patterns. Flows are particularly responsive to large rainfall events as seen in July and August 2013 and June 2014. There was below average rainfall during the summer period which caused flows to steadily decline until above average rainfall occurred in March-April 2013.



**Figure 4 Daily stream flow of the Ovens River at Myrtleford compared with daily rainfall (1 July 2013 to 30 June 2014) recorded at Bureau of Meteorology station at Eurobin**



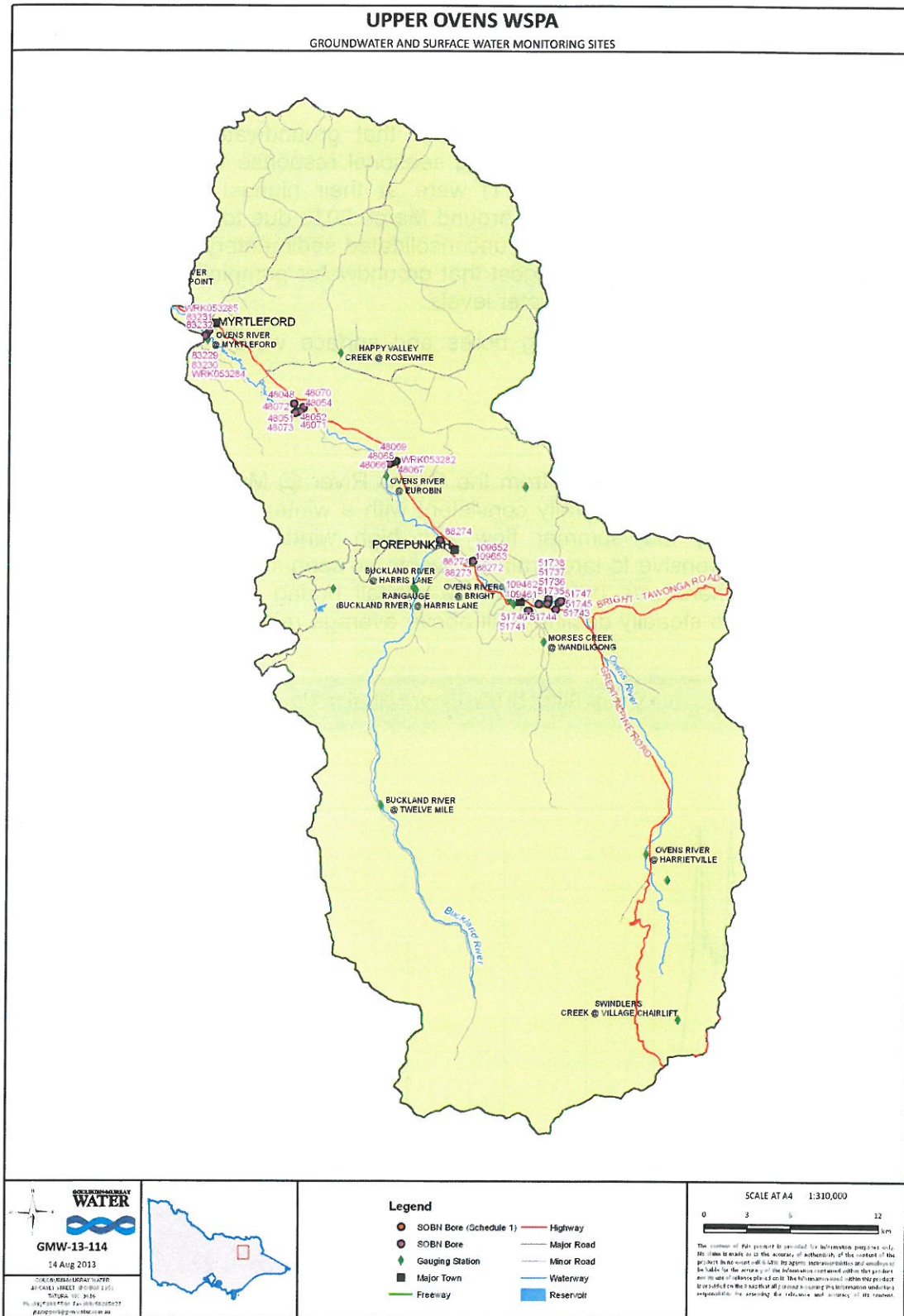


Figure 5 Location of groundwater monitoring bores and surface water gauging stations.



### 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 eight meters in 2013/14. Thirteen meters were replaced, and three new meters were installed during 2013/14 season (Table 5).

**Table 5 Meter installations and maintenance activities 2011/12 – 2013/14**

<b>Activity</b>	<b>Year to 30 June 2012</b>	<b>Year to 30 June 2013</b>	<b>Year to 30 June 2014</b>
Number of new meters installed	17	7	3
Meters replaced	4	5	13
Meters requiring maintenance	22	4	8

## **4 Future management considerations**

### **4.1 Upper Ovens WSPA Water Balance Research Project**

In preparation for a future review of the Plan, recommendations were made 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).

This research project 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.

Project activity that occurred throughout the 2013/14 season includes:

- Two new observation bores were installed beside Buffalo Creek in order to monitor the unconsolidated sedimentary aquifer and the fractured bedrock aquifer of the Buffalo Creek catchment;
- The addition of data loggers in key observation bores to monitor groundwater levels and its reaction to climate and usage within the catchment;
- A stream flow monitoring site was installed on Buffalo Creek (funded by the Monash University Super Science Initiative);
- 24 water meters were planned for installation on licenced groundwater users with entitlement between 10 to 19ML; and
- Quarterly monitoring was undertaken of water table and stream flow levels at the newly constructed sites.

### **4.2 SOBN review**

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

GMW use the SOBN to collect additional monitoring data from selected bores across its region to inform resource management decisions.

DEPI has recently undertaken a detailed review of the SOBN. The aim of the review was to identify opportunities to make the network more cost effective, and to reassess management arrangements.

Following DEPI's review of the network, GMW has been asked to review its own monitoring priorities and future monitoring needs.

GMW will seek its customer's views on future groundwater monitoring needs through the Water Services Committee.

## 5 Appendix 1

### 5.1 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		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 steam 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.	Restrictions were implemented during the 2013/14 season, in line with Plan requirements. Stage 1 restrictions were declared in the 2013/14 season.	Yes

Plan Prescription Number/ Requirement	Activity	Compliant
4. On or after 1 July 2012, the Corporation must declare Restriction Stage 5 in respect to each tributary if satisfied that the flow rate at the compliance point will shortly be equal to or less than 2 ML/d. Refer to table within Plan.	Restrictions were implemented during the 2012/13 season, in line with Plan requirements. Stage 5 restrictions were declared for Roberts Creek.	Yes
5. During a Restriction Stage, a licence holder is authorised to take water only at the times and at the rates specified by the Corporation.	Restrictions were implemented during the 2012/13 season, in line with Plan requirements.	Yes
6. During Restriction Stage 2, 3, or 4 a licence holder is authorised to take only the corresponding percentage share of entitlement specified in Column 2 of Prescription 3.	Restrictions were implemented during the 2012/13 season, in line with Plan requirements.	Yes
7. If a Restriction Stage 5 is declared - (a) under Prescription 3, a licence holder must not take any water during the Restriction Stage; or (b) under Prescription 4, in respect of a tributary, a licence holder must not take any water from that tributary during the Restriction Stage.	Restrictions were implemented during the 2013/14 season, in line with Plan requirements.	Yes
8. Subject to its discretion in Prescription 9, the Corporation must declare a Restriction Stage is lifted, if satisfied that the flow rate at the compliance point is above the corresponding flow rate and likely to remain so.	Restrictions were implemented during the 2012/13 season, in line with Plan requirements. Stage 1 restrictions were lifted in the 2013/14 season.	Yes
9. The Corporation may decide not to declare a Restriction Stage 2, 3 or 4 or declare a Restriction Stage 2, 3, or 4 is lifted if of the opinion that the Restriction Stage or any lifting of the Restriction Stage is likely to be in place for less than 10 days.	Restrictions were implemented during the 2012/13 season, in line with Plan requirements.	Yes



Plan Prescription Number/ Requirement	Activity	Compliant
<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 2013/14 season, in line with Plan requirements.</p>	<p>Yes</p>
<p>11. The Corporation must display on the Corporation's web site 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 kept on 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>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>Restrictions were implemented during the 2012/13 season, in line with Plan requirements.</p> <p>Only Stage 1 restrictions were declared in the 2013/14 season on the Ovens River.</p>	<p>Yes</p>

Plan Prescription Number/ Requirement	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>Restrictions were implemented during the 2013/14 season, in line with Plan requirements.</p> <p>Only Stage 1 restrictions were declared in the 2013/14 season on the Owens River.</p>	<p>Yes</p>
<p>15. If the holder of a groundwater licence in Management Zone 1 irrigates land used for an approved permanent planting and land that is not used for an approved permanent planting, Prescription 14 only applies in respect of water taken to irrigate the land that is used for the approved permanent planting.</p>	<p>A permanent planting and applicable land register has been produced by 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>Yes</p>

Plan Prescription Number/ Requirement	Activity	Compliant
<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, 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 (c) is satisfied that the criteria in paragraph (a) are met.</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"> <li>(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</li> <li>(b) the cancellation of a water share under section 33ABA of the Act; or</li> <li>(c) the surrender of a registration licence under section 51A of the Act, or</li> <li>(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</li> <li>(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</li> <li>(f) an administrative oversight or error or other anomaly.</li> </ul>	<p>Four new licence was created due to a permanent transfer from Zone 1 to Zone 2 in accordance with the Plan.</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>All licences were issued following transfer</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>All licences were issued following transfer</p>	<p>Yes</p>
<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 licenced volume does not exceed the limit.</p>	<p>Yes</p>

Plan Prescription Number/ Requirement	Activity	Compliant
<p>22. The Corporation must not issue a licence in the circumstances specified in Prescription 18 (a) and (b) if it 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 licenced volume does not exceed the 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>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"> <li>(a) 100% for a Winter-take licence;</li> <li>(b) 100% for a Zone 2 all-year groundwater licence;</li> <li>(c) 10% for a all-year licence to take water for Irrigation in Zone 1</li> <li>(d) 25% for an all-year licence to take water for any other use in Zone 1</li> <li>(e) 145% for a registration licence in Zone 1</li> </ul>	<p>Refer to Appendix 3</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"> <li>(a) all licences;</li> <li>(b) Licences in Zone 1;</li> <li>(c) all-year groundwater licences in Zone 1</li> <li>(d) all-year surface water licences in Zone 1 (exclusive of registration licences)</li> <li>(e) registration licences in Zone 1</li> <li>(f) winter-take licences in Zone 1</li> <li>(g) groundwater licences in Zone 2;</li> </ul>	<p>Refer to Appendix 4</p>	<p>Yes</p>

**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>	<p>All applications complied with the prescription</p>	<p>Yes</p>



**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 prescription</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**

<b>Plan Prescription Number/ Requirement</b>	<b>Activity</b>	<b>Compliant</b>
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.		Yes

**Licence Transfers into the Protection Area**

<b>Plan Prescription Number/ Requirement</b>	<b>Activity</b>	<b>Compliant</b>
32. The Corporation may approve an application to transfer a licence or water share into Management Zone 2.	Four transfers occurred from Management Zone 1 to 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.		Yes

**On Property Licence Transfers**

<b>Plan Prescription Number/ Requirement</b>	<b>Activity</b>	<b>Compliant</b>
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 the 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>	<p>All transfers complied with the prescription</p>	<p>Yes</p>
<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>	<p>All transfers complied with the prescription</p>	<p>Yes</p>
<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>	<p>All transfers complied with the prescription</p>	<p>Yes</p>
<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>	<p>All transfers complied with the prescription</p>	<p>Yes</p>



### 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 rolling out an installation program that will ensure all operational works authorised to extract 10 ML/yr will have a meter fitted by 2017.	Yes

**Meter Reading and Account for Use**

Plan Prescription Number/ Requirement	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 2013/14 season. Meter reads were completed in January and June 2014.	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.		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 season determine the area to be irrigated for that season; (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.	There are unmetered bores within the Upper Ovens WSPA.  GMW was not notified and did not observe any water use from unmetered bores.	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		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 the Corporation	Yes

**Monitoring**

Plan Prescription Number/ Requirement	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;	Groundwater levels are monitored and recorded using the State Observation Bore Network.	Yes



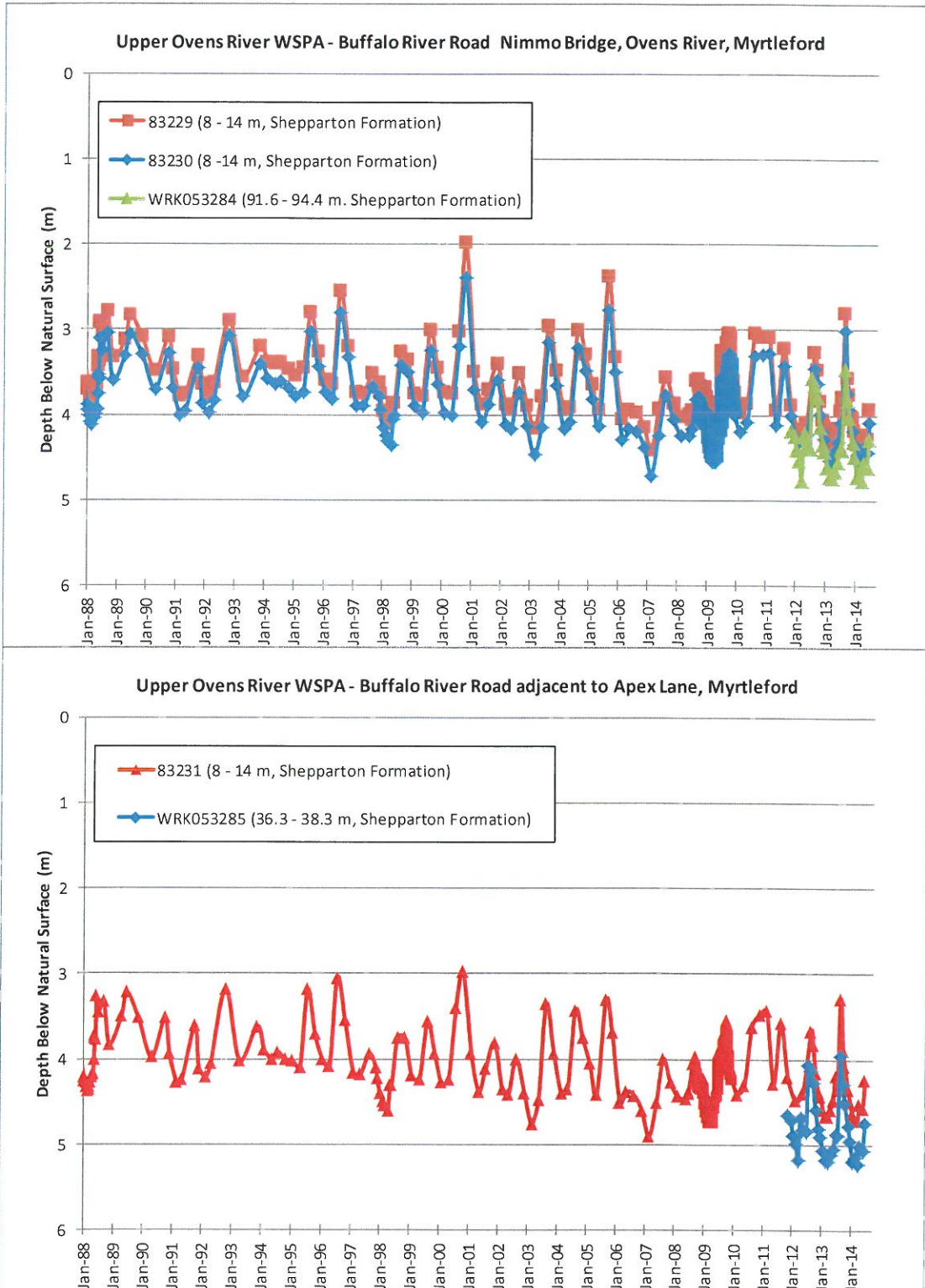
<p>(b) the flows in key tributaries are recorded or estimated in low flow periods;                  (c) the water levels in observation bores at Myrtleford are continuously recorded;                  (d) the water sharing regime is able to be implemented; and                  (e) the relationship between groundwater levels and stream levels can be observed.</p>	<p>River flows are monitored and recorded under the Victorian Regional Monitoring Partnership.</p>
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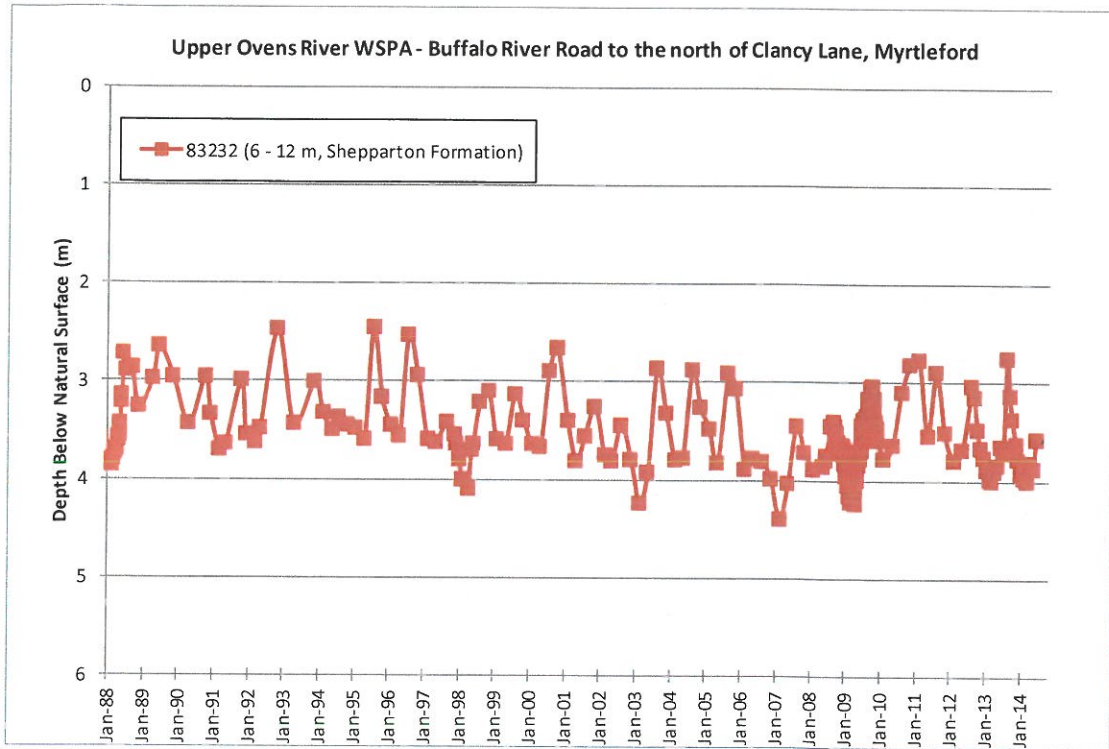
**Revocation of the Permissible Consumptive Volume**

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 removal of the PCV on 3 March 2013 and was published in the Victorian Government Gazette on 7 March 2013.</p>	<p>Yes</p>

## 6 Appendix 2

### 6.1 Hydrographs for key monitoring bores listed in the Plan





## 7 Appendix 3

### 7.1 Authorised Licences to take in Winter-take period (Prescription 24)

Area Reference	Area Name	Cap Volume(ML)	Current Volume authorised to be taken between 1 July to 31 October
4030001	OvensRiver	11,330	8
4030002	OvensRiver	4,618	251
4030003	GermanCreek	2,342	161
4030004	OvensRiver	767	37
4030005	OvensRiver	1,947	1,283
4030006	EurobinCreek	2,134	222
4030007	OvensRiver	2,062	1,668
4030101	MorsesCreek	6,635	485
4030102	MorsesCreek	262	44
4030201	BucklandRiverEastBranch	9,142	0
4030202	BucklandRiver	9,500	0
4030203	BucklandRiver	3,225	134
4030204	DevilsCreek	3,288	51
4030205	BucklandRiver	504	221
4030206	BucklandRiver	752	33
4030301	BuffaloCreek	3,249	176
4030302	BuffaloCreek	271	154
4030401	BarwidgeeCreek	545	107
4030402	BarwidgeeCreek	536	36
4030403	SandyCreek	332	50
4030404	MyrtleCreek	264	133
4030405	BarwidgeeCreek	528	158
4030406	BarwidgeeCreek	482	125
4030407	HappyValleyCreek	2,365	72
4030408	HappyValleyCreek	2,344	1,734
4030409	HappyValleyCreek	236	189
4030410	BarwidgeeCreek	335	309
<b>Total</b>		<b>69,995</b>	<b>7,839</b>



## 8 Appendix 4

### 8.1 Licence Volume within named areas within the Protection Area (Prescription 25)

Area Reference	Name of Area	Cap Volume(ML)	All Licences No.	All Licenc Volume	No. Licences in Zone1	Licences in Zone 1 Volume	No. all-year 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. Registrat ion Licences	Registrat ion Licence Volume	No. Winter-take Licence	Winter-take licence Volume	No. Zone 2 GW Licences	Zone 2 GW Licence Volume
4030001	OvensRiver	11,330	7	30.0	7	30.0	0	0	8	27	0	0	0	0	0	0.0
4030002	OvensRiver	4,618	58	456.0	56	448.0	5	88	48	273	5	90	0	0	2	8
4030003	GermanCreek	2,342	12	202.0	11	194.5	3	66.5	3	59	3	72	0	0	1	7.5
4030004	OvensRiver	767	8	41.0	6	34.0	0	0	7	26	1	15	0	0	2	7
4030005	OvensRiver	1,947	63	1,726.0	54	1,394.3	11	677	33	557	12	401	1	21	9	331.7
4030006	EurobinCreek	2,134	8	128.0	8	128.0	0	0	6	18	3	131	0	0	0	0.0
4030007	OvensRiver	2,062	197	5,722.0	195	5,561.0	27	1338	158	3717	4	57	2	34	2	161
4030101	MorsesCreek	6,635	32	557.0	31	555.0	3	95	27	233.6	3	228	1	14	1	2
4030102	MorsesCreek	262	5	26.0	5	26.0	1	2	2	2	1	26	0	0	0	0.0
4030201	BucklandRiverEastBranch	9,142	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0	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	208.0	19	172.0	2	40	13	118	4	38	0	0	1	36
4030204	DevilsCreek	3,288	2	25.0	2	25.0	0	0	0	0	1	31	0	0	0	0.0
4030205	BucklandRiver	504	15	591.0	14	579.0	2	69	12	429	1	44	0	0	1	12
4030206	BucklandRiver	752	10	133.0	10	133.0	1	12	10	108	0	0	0	0	0	0.0
4030301	BuffaloCreek	3,249	12	308.0	11	240.0	2	85.6	8	163	1	33	0	0	1	68
4030302	BuffaloCreek	271	14	498.0	13	492.0	2	20	10	418	1	17	0	0	1	6
4030401	BarwidgeeCreek	545	5	76.0	5	76.0	0	0.0	0	0.0	3	61	0	0	0	0.0
4030402	BarwidgeeCreek	536	5	18.0	5	18.0	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	15	287.0	10	124.0	2	40	8	131	3	46	0	0	5	163
4030405	BarwidgeeCreek	528	24	267.0	24	267.0	2	3	14	192	6	63	0	0	0	0.0
4030406	BarwidgeeCreek	482	20	203.0	20	203.0	1	14	15	130	4	51	0	0	0	0.0
4030407	HappyValleyCreek	2,365	7	147.0	7	147.0	0	0	4	115	3	24	0	0	0	0.0
4030408	HappyValleyCreek	2,344	44	1,272.0	44	1,272.0	1	17	19	433	20	942	1	49.9	0	0.0
4030409	HappyValleyCreek	236	17	220.9	17	220.9	0	0	12	132	5	92	0	0	0	0.0
4030410	BarwidgeeCreek	335	68	1,168.0	64	1,146.0	11	356	52	678	0	0	0	0	4	22
<b>Total</b>		<b>69995</b>	<b>673</b>	<b>14371</b>	<b>643</b>	<b>13547</b>	<b>76</b>	<b>2923</b>	<b>471</b>	<b>7997</b>	<b>91</b>	<b>2508</b>	<b>5</b>	<b>119</b>	<b>30</b>	<b>824</b>

Note: All licence volume's were sourced from the Victorian Water Register August 2014.

