



# Victoria Government Gazette

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## Water Act 1989

### BULK ENTITLEMENT (GOULBURN SYSTEM – SNOWY ENVIRONMENTAL RESERVE) AMENDMENT ORDER 2004

I, John Thwaites, Minister for Water, as Minister administering the **Water Act 1989**, make the following Order –

**1. Title**

This Order is called the Bulk Entitlement (Goulburn System – Snowy Environmental Reserve) Amendment Order 2004.

**2. Purpose**

The purpose of this Order is to amend Schedule 1 of the Bulk Entitlement (Goulburn System – Snowy Environmental Reserve) Order 2004, dated 26 June 2004 and published in the Government Gazette S150 on 29 June 2004, to include an additional environmental entitlement of 10762 megalitres per year resulting from water savings through the implementation of the Improved Measurement of Small Volumes Supplies to Irrigation Districts in the Goulburn sub-system.

**3. Authorising provisions**

This Order is made pursuant to section 44 of the **Water Act 1989**.

**4. Commencement**

This Order comes into operation on the day it is published in the Government Gazette.

**5. Amendment of Schedule 1**

In the Bulk Entitlement (Goulburn System – Snowy Environmental Reserve) Order 2004, for Schedule 1 **substitute** –

#### “Schedule 1

#### ENVIRONMENTAL ENTITLEMENT

**Table 1: Goulburn sub-system**

Item No	Source of Water Saving	Annual Volume (ML)	Type of Supply	Transmission Loss	Flow Monitoring Points
1	Normanville Waterworks District	3600	Water right supplied from the Goulburn River	No	Goulburn River at McCoy Bridge; Stream Gauging Station Index No.405232
2	Goulburn system	10762	Water right supplied from the Goulburn River	No	Goulburn River at McCoy Bridge; Stream Gauging Station Index No.405232

Dated 23 December 2004

JOHN THWAITES MP  
Minister for Water

**SPECIAL**

**Water Act 1989**

**BULK ENTITLEMENT (RIVER MURRAY – SNOWY ENVIRONMENTAL RESERVE)  
ORDER 2004**

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I, John Thwaites, Minister for Water, as Minister administering the **Water Act 1989**, make the following Order:

### PART 1 – INTRODUCTORY

#### 1. CITATION

This Order may be cited as the Bulk Entitlement (River Murray – Snowy Environmental Reserve) Order 2004.

#### 2. EMPOWERING PROVISIONS

This Order is made under section 42 of the **Water Act 1989**.

#### 3. COMMENCEMENT

This Order comes into operation on the day it is published in the Government Gazette.

#### 4. DEFINITIONS

In this Order –

“**Act**” means the **Water Act 1989**;

“**Agreement**” means the Murray-Darling Basin Agreement;

“**allocation to Victoria**” means the maximum Victorian allocation of water for the year July to June, determined by MDBC in accordance with the Agreement as follows:

- (a) MDBC calculates “the minimum amount of water estimated to be under the control of the Commission”. This is water in MDBC storages, estimated run-off from the catchment above Doctors Point, and estimated transfers from the Snowy;
- (b) MDBC subtracts allowances for losses from MDBC storages and along the River, and allowances for South Australia’s dilution entitlements, to work out water available for distribution or for holding in reserve;
- (c) South Australia gets one-third of the water calculated under (b) plus any imbalance from “special accounts”, up to its non-dilution entitlement of 1154 GL, and (if there is enough water) up to a further 835 GL as “minimum reserve”. Half of each of these amounts is subtracted from Victoria’s share;
- (d) Victoria’s share is then adjusted for water spilt into NSW’s share of storages, ceded or traded, and is adjusted up for estimated “useful State tributary inflows”. These are inflows from the Ovens and other tributaries below Doctors Point, which can be used to meet entitlements, including South Australia’s;
- (e) Diversion by Victoria since July is then added, to give the maximum Victorian allocation for the year July to June. (Inflows and commitments are only estimated to the end of May.)

“**Deed**” means the “Snowy Water Inquiry Outcomes Implementation Deed, June 2002”;

“**distribution system**” means a set of channels, pipes and other works, and the natural or modified waterways or wetlands, which are used to transport water from the River Murray to primary entitlement holders and bulk entitlement holders;

“**distributor**” means a person who operates and maintains a distribution system;

“**Doctors Point**” means the location of the Doctors Point stream gauging station on the River Murray near Albury;

“**FMIT**” means First Mildura Irrigation Trust;

“**GL**” means gigalitre(s); 1 GL equals 1000 megalitres;

“**Goulburn-Murray Water**” means the Goulburn-Murray Rural Water Authority;

“**high-security entitlements**” are the entitlements set out in Table 1 of Schedule 1;

“**irrigation period**” has the meaning given to it in section 3 of the Act;

“**licence**” means a licence granted under Part 4 of the Act;

“**LMURW**” means the Lower Murray Urban and Rural Water Authority;

“**lower-security entitlements**” are the entitlements set out in Table 2 of Schedule 1;

“**MDBC**” means the Murray-Darling Basin Commission, or any business division of that Commission or that Commission’s assignee or delegate exercising any relevant function;

“**Minister**”, in relation to a provision, includes any person authorised by the Minister to act on the Minister’s behalf in relation to that provision, or to whom the Minister has delegated the relevant power, discretion, function, authority or duty under section 306 of the Act;

“**Minister for Environment**” means the Minister administering the **Conservation, Forests and Lands Act 1987** and includes, in relation to any provision, any person authorised by the Minister for Environment to act on behalf of the Minister for Environment in relation to that provision;

“**ML**” means megalitre(s);

“**Murray-Darling Basin Agreement**” means the Agreement contained in the Schedules to the **Murray Darling Basin Act 1993**;

“**Murray-Kiewa-Ovens Cap**” means the water that would have been diverted from the Victorian portion of the Murray, Kiewa and Ovens River basins under the 1993/1994 levels of development;

“**Murray Valley**” means the Murray Valley irrigation area;

“**Nyah pumps**” means the pumps supplying the Nyah irrigation district;

“**off-quota**” means water that a State decides can be taken in addition to seasonally allocated water, during periods when there are more flows in the River Murray than are needed to meet entitlements or than will be harvested in Lake Victoria;

“**primary entitlement**” means a water right, licence or other water entitlement which a rural water authority is obliged to meet from its bulk entitlement;

“**resource manager**” means any person appointed by the Minister under section 43A of the Act to do all or any of the tasks set out in sub-clause 23.1;

“**resources Victoria could divert in the current year**” means the water that Victoria would plan on diverting from the River Murray in the current year if there was no cap; it consists of the allocation to Victoria, net of water for environmental flows in the River Murray and net of resource kept in reserve, as calculated under clause 8;

“**River Murray**” means the River Murray to which Victoria has access and which carries regulated water under the Agreement, consisting of:

- (a) the main course of the River Murray from Hume Dam to the South Australian border;
- (b) the main course of the Mitta Mitta River below Dartmouth Dam;
- (c) all effluents and anabranches of, or lakes or lagoons (including King’s Billabong) connected to, these main courses, other than those excepted by the MDBC;
- (d) the storages formed by Hume Dam and Dartmouth Dam and by weirs upstream of the South Australian border;

“**River Murray entitlement holder**” means a person holding a bulk entitlement under the Act to take water from the River Murray;

“**security of supply**” means the probability of being able to supply a given volume of water in a year;

“**Snowy-Murray Development**” has the same meaning as in clause 1.1(55)(b) of the Deed;

“**Sunraysia Rural Water**” means Sunraysia Rural Water Authority;

“**Torrumbarry**” means the Torrumbarry irrigation area, including Woorinen and the Tresco irrigation district;

“**upper tributaries**” means the Murray above Lake Hume, the Mitta Mitta above Lake Dartmouth, the Kiewa and the Ovens, including the unregulated waterways running into these rivers or direct into the River Murray;

“**Victoria’s River Murray water accounts**” means an annual report, required by the Minister, on compliance by bulk entitlement holders and licensees taking water from the River Murray with the terms of their bulk entitlements or licences;

“**water allowed to Victoria under the cap**” means the water that Victoria would have diverted under 1993/94 levels of development from the River Murray and its upper tributaries, as determined each year by MDBC and applied in clause 11;

“**water right**” has the same meaning as in section 230(2)(c) of the Act;

“**year**” means the 12 months from 1 July to 30 June.

## PART 2 – ENTITLEMENT

### 5. PURPOSE

The purpose of this Order is to grant a bulk entitlement, to be called an environmental entitlement, to the Minister for Environment that will be used so that water can be retained in other parts of the River Murray system to provide increased environmental flows to the Snowy River.

### 6. BULK ENTITLEMENT

6.1 The Minister for Environment will be allocated in any year, for the purpose of providing increased environmental flows to the Snowy River as referred to in sub-clause 20.2:

- (a) the Minister for Environment’s share shown in the tables in Schedule 1 of the water available to meet the entitlements in Schedule 1 and more fully described in Schedule 4;
- (b) the volume of carryover from the previous year as allowed for in sub-clauses 12(h) and 15.2.

6.2 The water available to meet the entitlements in Schedule 1 is the lower of:

- (a) the resources Victoria could divert in the current year, and
- (b) the water allowed to Victoria under the cap, adjusted down for water diverted from the upper tributaries;

less any water required to meet entitlements not covered in Schedule 1 –

as determined by the resource manager in accordance with the provisions set out in Part 3.

## PART 3 – WATER AVAILABLE

### 7. ADJUSTING THE ALLOCATION TO VICTORIA

7.1 The resource manager must ensure that, from the allocation to Victoria have been subtracted allowances for any diversions which need to be met from it, but which are not covered by the River Murray bulk entitlements, as follows:

- (a) If the estimates of run-off above Doctors Point or inflows from the Ovens River:
  - (i) have not already been reduced to allow for diversions, the resource manager must subtract the allowances shown in Schedule 2; or
  - (ii) are net of diversions, the resource manager must adjust the allocation to Victoria so the diversions assumed are equal to the allowances shown in Schedule 2.
- (b) If the diversions allowed for in Schedule 2 change or are more accurately estimated, the Minister may, after consultation with the River Murray entitlement holders, revise Schedule 2 accordingly.

7.2 The resource manager must add to the allocation to Victoria any water that comes from other sources, such as Lake Mokoan, if that water has not already been included in the allocation to Victoria as “useful State tributary inflows”.

**8. THE RESOURCES VICTORIA COULD DIVERT IN THE CURRENT YEAR**

8.1 The resource manager must, in determining seasonal allocations, make an initial assessment of whether the allocation to Victoria is sufficient to meet high-security entitlements in full, using the following steps. The resource manager must:

- (a) subtract from the allocation to Victoria, adjusted in accordance with clause 7, any entitlements under clauses 9 and 10 for providing environmental flows in the River Murray;
- (b) subtract from the result obtained under paragraph (a) the following entitlements not covered in Schedule 1:
  - (i) water for additional distribution losses incurred by relevant River Murray entitlement holders, as allowed for in clause 13;
  - (ii) water for any temporary entitlements and off quota;
  - (iii) up to 40 GL to cover the shortfall in supply from the Goulburn system to the Broken Creek part of Murray Valley when Goulburn seasonal allocations are lower than River Murray ones;
  - (iv) any water carried over from the previous year as allowed in the Bulk Entitlement orders of relevant River Murray entitlement holders;
- (c) check if the remaining volume of water is equal to or more than the total off-take commitment for a high-security allocation of 100%, as given in the bottom right-hand cell of Table 1 in Schedule 1.

8.2 In making the assessment in sub-clause 8.1, the resource manager must adjust the allocation to Victoria down in accordance with estimates of run-off and inflow which are lower than the minimum ones used by MDBC, if the River Murray entitlement holders jointly propose a more conservative basis for making estimates and the Minister agrees to the proposal in writing.

8.3 If the allocation to Victoria is assessed under sub-clause 8.1 to be insufficient to meet high-security entitlements fully, the resource manager must, in order to determine the resources Victoria could divert in the current year:

- (a) use the allocation to Victoria which has been adjusted down in accordance with lower estimates of run-off and inflow than those used by MDBC, if the Minister has agreed to a more conservative basis for making estimates under sub-clause 8.2; and
- (b) draw on water that can be borrowed from environmental flow entitlements, in accordance with clauses 9 and 10.

8.4 If the allocation to Victoria is assessed under sub-clause 8.1 to be sufficient to meet high-security entitlements in full, the resource manager must, in order to determine the resources Victoria could divert in the current year:

- (a) consider the allocations to Victoria that MDBC would make in the current year and in the following year, if MDBC used estimates of run-off and inflows that:
  - (i) in the first year, are estimates for a two-year period with a 99% probability of being exceeded, less the estimates in sub-paragraph (ii), and
  - (ii) in the second year, are estimates for a one-year period with a 99% probability of being exceeded; and
- (b) adjust the volume of water Victoria diverts in the current year, and consequently the volume of water Victoria carries over into the second year, so the allocation to Victoria in the second year (with run-off and inflows at 99% probability levels) is just sufficient to meet high-security entitlements in full;

as described more fully in Schedule 3.

**9. LINDSAY RIVER DILUTION WATER**

- 9.1 If MDBC has subtracted from the allocation to Victoria an amount, not exceeding 91.3 GL, for dilution flows in the Lindsay River, and if this amount includes an allowance for diversion by private diverters which is covered in Schedule 1, the resource manager must add that allowance to the allocation to Victoria.
- 9.2 If MDBC does not subtract the amount referred to in sub-clause 9.1 for dilution flows because alternative measures have been undertaken to handle saline inflows into the Lindsay River, the resource manager must:
- (a) subject to paragraph (c), subtract from the allocation to Victoria an amount equivalent to the volume of dilution flows saved by the alternative measures;
  - (b) make sure that any amount subtracted under paragraph (a) is not used in a way which counts as diversion for the purpose of determining whether Victoria has exceeded the water allowed to Victoria under the cap, or which otherwise adversely affects the security of River Murray bulk entitlements;
  - (c) subject to consultation with the Minister for Environment, not subtract the full amount under paragraph (a), to the extent the allocation to Victoria would otherwise be insufficient to meet high-security entitlements in full.

**10. BARMAH-MILLEWA FOREST WATER**

- 10.1 In determining seasonal allocations, the resource manager must take account of the entitlement to water for Barmah-Millewa forest prescribed in sub-clause 10.2, which is supplied out of the allocation to Victoria.
- 10.2 The entitlement referred to in sub-clause 10.1 is to:
- (a) 50 GL a year which, subject to sub-clause 10.4, must be restricted by the resource manager in the same way as the high-security entitlements; plus
  - (b) 25 GL a year which, subject to sub-clause 10.4, must be made available by the resource manager only when the lower-security entitlements set out in Table 2 of Schedule 1 have an allocation of 30% or more, in which case it is to be fully available.
- 10.3 Unused amounts of the annual allocations referred to in sub-clause 10.2 must be carried over by the resource manager from one year to another if there is sufficient space in storages, subject to the following:
- (a) detailed spill, overdraw and other rules are to be as determined by the Minister in consultation with the Minister for Environment and the Minister's NSW counterpart, provided the security of other entitlements is not changed significantly;
  - (b) the 25 GL component referred to in paragraph (b) of sub-clause 10.2 must not be carried over until NSW makes a similar allocation and agrees to carry it over, unless the Minister decides otherwise.
- 10.4 The Minister, in consultation with the Minister for Environment and River Murray entitlement holders, may:
- (a) vary the level of allocation to lower-security entitlements specified in paragraph (b) of sub-clause 10.2, so that the 25 GL component of the entitlement remains available between 75 and 80 years out of 100; or
  - (b) determine criteria unrelated to the seasonal allocations in Schedule 1 for restricting the 50 GL or 25 GL components of the entitlement referred to in sub-clause 10.2, subject to the security of each component and of other water entitlements not being changed significantly; or
  - (c) authorise MDBC to implement restrictions, apply spill and other rules, keep accounts, and supervise borrowing of the entitlement, instead of the resource manager.

- 10.5 Apart from an amount of up to 10 GL each year that may be required by the Minister for Environment for low-level watering, all Victoria's water held for Barmah-Millewa forest will be available to be borrowed to support high-security entitlements in accordance with sub-clauses 10.6 and 10.7.
- 10.6 If the allocation to Victoria includes Victoria's accumulated water for Barmah-Millewa forest, the resource manager must:
- (a) deduct any allowance required by the Minister for Environment for low-level watering of the forest in the current year, up to 10 GL;
  - (b) retain in the allocation to Victoria the remaining amount of Victoria's accumulated water for Barmah-Millewa forest to the extent the allocation to Victoria would otherwise be insufficient to meet high-security entitlements in full;
  - (c) when there is sufficient water for fully meeting the high-security entitlements without having to borrow water held for Barmah-Millewa forest, subtract all the water for Barmah-Millewa forest, including any volume that had earlier been borrowed, before setting aside any additional water to meet high-security rights in the following year or providing any allocation for lower-security entitlements in the current year.
- 10.7 If Victoria's accumulated water for Barmah-Millewa has already been subtracted from the allocation to Victoria and put into a separate account administered by MDBC, then the resource manager may, in times of serious shortage as determined by MDBC, apply to MDBC to borrow water in Victoria's share of the account.

## 11. APPLYING THE CAP

- 11.1 If the volumes of water diverted each year in Victoria from the River Murray and from the upper tributaries increase, in comparison to the annual volumes that would have been diverted under 1993/94 levels of development as estimated by MDBC modelling after making any adjustments agreed by the MDBC, and the volume of accumulated overruns, less underruns, approaches –
- (a) the limit established in the Agreement;
- or, in the absence of any limit in the Agreement,
- (b) a limit of 20% of the long-term average annual Victorian diversions under 1993/94 levels of development, as estimated by MDBC's model –
- then action must be taken in accordance with this clause.
- 11.2 The River Murray entitlement holders must jointly recommend to the Minister such appropriate action to avoid the limit being reached as they see fit, and the Minister may approve such action, with any modifications the Minister considers necessary.
- 11.3 If no appropriate action is approved by the Minister under sub-clause 11.2:
- (a) If the volume of accumulated overruns less underruns reaches 15% of long-term average annual Victorian diversions, in the following year the water allowed to Victoria under the cap is deemed to be:
    - (i) subject to sub-paragraphs (ii) and (iii), the resources Victoria could divert in that year, plus an allowance for upper tributaries diversion, less a volume equal to 7% of long-term average annual Victorian diversions;
    - (ii) the maximum to be the water required for an allocation of 80% for lower-security entitlements; and
    - (iii) the minimum to be the water required for an allocation of 30% for lower-security entitlements.
  - (b) If the volume of accumulated overruns less underruns reaches 20% of long-term average annual Victorian diversions, in the following year the water allowed to Victoria under the cap is deemed to be the same as in paragraph (a), except that the minimum in sub-paragraph (iii) is deemed to be the water required for an allocation of 100% for high-security entitlements.



- (c) The Minister may vary the levels of allocation to lower-security entitlements specified in sub-paragraphs (ii) and (iii) of paragraph (a), as long as the level in sub-paragraph (ii) is available between 40 and 60 years out of 100, and the level in sub-paragraph (iii) is available between 75 and 80 years out of 100, as estimated by modelling.
- 11.4 For the purposes of making the comparison in sub-clause 11.1 between water diverted, and annual volumes that would have been diverted under 1993/94 levels of development as estimated by MDBC modelling, River Murray entitlement holders are entitled to such a component of the cap associated with Lake Mokoan as may be jointly determined by Goulburn-Murray Water (as the holder of the right to harvest water at Lake Mokoan) and the Minister.
- 11.5 Any water diverted from the River Murray into Lake Boga for water quality or recreational purposes, must be counted as part of Victorian diversion when determining whether Victoria has exceeded the water allowed to Victoria under the cap under this clause.
- 11.6 If there are no estimates from MDBC modelling of the annual volumes that would have been diverted under 1993/94 levels of development, or for some other reason none of the capping arrangements in sub-clauses 11.1, 11.2 and 11.3 are able to be applied, the water allowed to Victoria under the cap in any year is deemed to be no greater than:
- (a) 1,780 GL multiplied by 10, minus the sum of the actual diversions (net of credits) from the River Murray by River Murray entitlement holders in each of the previous nine years – with the resulting volume adjusted up for water diverted from the upper tributaries and for any component of the cap associated with Lake Mokoan which is allowed to River Murray entitlement holders under sub-clause 11.4;

or, if the volume established under paragraph (a) is less than the volume required for an allocation of 100% for high-security entitlements,

(b) the volume required for an allocation of 100% for high-security entitlements.

## 12. MAKING SEASONAL ALLOCATIONS EACH MONTH

In August and in each subsequent month until the maximum allocation possible for River Murray bulk entitlements in Schedule 1 is reached, or at such other times as the resource manager believes it to be required, the resource manager must determine the water available to meet the entitlements in Schedule 1, and the Minister for Environment's share of that water, in accordance with the following steps. While taking account of any matter not referred to here that is relevant at the time, the resource manager:

- (a) must first adjust the most recent allocation to Victoria in accordance with clause 7;
- (b) must ascertain the resources that Victoria could divert in the current year, in accordance with clause 8;
- (c) must take the lower of:
- (i) the resources Victoria could divert in the current year, as determined under paragraph (b), and
- (ii) the amount of water allowed to Victoria under the cap, adjusted down for water diverted from the upper tributaries, as described in clause 11,
- to establish the total water available;
- (d) must subtract water for entitlements not covered in Schedule 1:
- (i) water for additional distribution losses incurred by relevant River Murray entitlement holders, as allowed for in clause 13;
- (ii) water for any temporary entitlements and off-quota;
- (iii) up to 40 GL to cover the shortfall in supply from the Goulburn system to the Broken Creek part of Murray Valley when Goulburn seasonal allocations are lower than River Murray ones;

- (iv) any water carried over from the previous year as allowed in the Bulk Entitlement orders of relevant River Murray entitlement holders.
- to ascertain the water available to meet the entitlements in Schedule 1.
- (e) subject to sub-paragraphs (i), (ii) and (iii), must determine from the bottom lines of Tables 1 and 2 in Schedule 1 the volume next lower than the water available ascertained in paragraph (d), and the corresponding seasonal allocation -
    - (i) allocations may be made in 5% or smaller steps, not just in the 10% steps shown in Schedule 1, by interpolation; and
    - (ii) an allocation may be made below 50% for high-security rights, by extrapolation;
    - (iii) an allocation must not be lower than an allocation made previously in the same year, unless the resource manager believes that it has to be lower to avoid Victoria running out of water before the end of the year;
  - (f) must inform the Minister for Environment and other River Murray entitlement holders of the seasonal allocation determined under paragraph (e), and at the same time make available all the calculations used to determine the seasonal allocation;
  - (g) given the seasonal allocation determined in paragraph (f), must add up the off-take commitments corresponding to the entitlements for which the Minister for Environment is responsible as set out in Tables 1 and 2;
  - (h) must find the total volume allocated to the Minister for Environment, by adding on to the volume determined in paragraph (g) any additional water that may be allowed to the Minister for Environment as carryover under sub-clause 15.2.

### 13. ALLOWANCES FOR DISTRIBUTION LOSSES

- 13.1 If the months August to November are dry Goulburn-Murray Water may take additional water to cover distribution losses for Torrumbarry, as determined under this sub-clause, provided the losses which are incurred over a number of years on average keep to the allowances set out in Schedule 1, as required under sub-clause 13.2. The resource manager must:
- (a) in determining the water available in August, and subject to paragraph (b) in subsequent months through the year, set aside an allowance of 100 GL for additional Torrumbarry distribution losses;
  - (b) if the streamflow recorded in the Loddon River at Appin South exceeds 1,000 ML in any month from August to November, reduce the allowance specified in paragraph (a) in the following month:
    - (i) to 50 GL after the first month it happens; and
    - (ii) to 0 GL if it happens in a second month;
 unless the River Murray entitlement holders jointly propose and the Minister agrees in writing to some other arrangement for reducing the allowance.
- 13.2 River Murray entitlement holders may incur losses which vary from year to year from the allowances for losses in Schedule 1, provided that on average over time actual losses stay within those allowances, in accordance with this sub-clause:
- (a) The maximum additional loss permitted in any one year is as follows:
    - (i) for Murray Valley, 10% of the allowance in Schedule 1 corresponding to the final seasonal allocation for that year;
    - (ii) for Torrumbarry, 25% of the allowance in Schedule 1 corresponding to the final seasonal allocation for that year, plus the amount allowed under sub-clause 13.1;
    - (iii) for Nyah irrigation district, 0.5 GL;
    - (iv) for Sunraysia Rural Water's irrigation districts, 5 GL;

- (v) for Sunraysia Rural Water's water districts (Millewa, Carwarp and Yelta), 2.4 GL;
  - (vi) for FMIT's district, 6 GL.
  - (b) The resource manager must keep a running account of the losses incurred additional to the allowances in Schedule 1, and the allowances in Schedule 1 not used, each year, and in doing so:
    - (i) for Murray Valley and Torrumbarry where the allowances in Schedule 1 vary with seasonal allocations, must use the allowances corresponding to the total volumes of water actually supplied to primary entitlement holders in the year in question;
    - (ii) must calculate actual losses by subtracting water supplied to primary entitlement holders from water taken from the River Murray.
  - (c) The accumulated additional loss, net of unused allowance, is not permitted to rise above the following headrooms:
    - (i) for Murray Valley, 40 GL;
    - (ii) for Torrumbarry, 350 GL;
    - (iii) for Nyah irrigation district, 0.9 GL;
    - (iv) for Sunraysia Rural Water's irrigation districts, 9 GL;
    - (v) for Sunraysia Rural Water's water districts (Millewa, Carwarp and Yelta), 4.8 GL;
    - (vi) for FMIT's district, 12 GL.
  - (d) The maximum amounts of accumulated unused allowance, net of additional loss, that are allowed to be recognised by the resource manager are the same as the headrooms in paragraph (c).
  - (e) In any year, the loss permitted to be incurred by a River Murray entitlement holder additional to the allowance in Schedule 1 corresponding to the final seasonal allocation for that year, is the lower of:
    - (i) the maximum additional loss in any one year in paragraph (a), and
    - (ii) what is left from previous years of the headroom in paragraph (c).
  - (f) Following completion of the Woorinen pipeline project, Torrumbarry losses includes an annual average volume of 600 ML, with a maximum of 1200 ML in any year, to be supplied to the North Lake Drainage Basin for environmental purposes.
- 13.3 The Minister for Environment in conjunction with other River Murray entitlement holders must review the provisions of this clause when a review is instigated jointly by other River Murray entitlement holders.
- 13.4 After receiving a detailed submission from a review under sub-clause 13.3, the Minister may modify any of the provisions of this clause.

#### **14. TRANSITIONAL ARRANGEMENTS**

There are no transitional arrangements.

### **PART 4 – GENERAL CONDITIONS AND PROVISIONS**

#### **15. WATER ACCOUNTING AND CARRYOVER ARRANGEMENTS**

- 15.1 For the purposes of Schedules F and G of the Murray-Darling Basin Agreement the Murray-Kiewa-Ovens Cap will be reduced by the annual allocation to the Snowy-Murray Development determined under sub-clause 20.2.
- 15.2 At 30 June each year, the difference between the final allocation volume determined under sub-clause 12(g) and the annual allocation to the Snowy-Murray Development determined under sub-clause 20.2 must be carried over into the following year.

**16. AMENDMENTS**

- 16.1 Schedules 1 and 4 may, in accordance with section 64G of the Act, be amended periodically by the Minister to take account of any permanent transfers or any conversions of primary entitlements or bulk entitlements, including transfers or conversions resulting from savings made in distribution losses.
- 16.2 The River Murray entitlement holders may jointly propose an amendment to –
- (a) any clauses in Part 3 if practical operations indicate a need for variation;
  - (b) Schedule 1 to take into account changed assumptions about the extent to which primary entitlements are likely to be used;
  - (c) Schedule 1 to take into account any changed estimates of distribution losses, in accordance with sub-clause 16.4;
  - (d) Schedule 3 to revise the method for calculating the Victorian reserve to take account of updated hydrological information or techniques or to keep the security of supply for high-security entitlements close to the target security of supply set out in paragraph 3 of the Schedule, but not to alter that target security of supply;
  - (e) Schedule 1 to take into account any new allocation of water rights under section 229 of the Act or any other change to the rights listed in any relevant authority's register kept under section 230 of the Act –
- and in doing so must explain the reasons for the proposed amendment and the likely implications for affected entitlement holders.
- 16.3 The Minister may –
- (a) subject to sub-clause 16.4, approve an amendment proposed under sub-clause 16.2; or
  - (b) require the River Murray entitlement holders jointly to amend the proposal; or
  - (c) at any time require the River Murray entitlement holders to make a joint proposal under sub-clause 16.2, if in the Minister's opinion it is necessary to make an amendment of the kind referred to in sub-clause 16.2.
- 16.4 The allowances made for distribution losses in Schedule 1 may, in accordance with sub-clause 16.2, be modified, but only in the following circumstances:
- (a) when a new bulk supply meter or new retail meters have been installed;
  - (b) when information has been gained from experience of a year with less than 100% allocation for high-security entitlements.

**17. CHANGES MADE TO LONG-TERM WATER AVAILABILITY**

- 17.1 When a proposal which would have a significant adverse effect on the quantity or security of supply of the allocation to Victoria, including any proposal relating to environmental flows, comes before the Minister, MDBC, the Murray-Darling Basin Ministerial Council, or any other decision-making forum of which the Victorian Government is a member or upon which it is represented, the Minister will:
- (a) if practicable, advise the Minister for Environment and other River Murray entitlement holders in writing at least two months before any decision is taken by the Minister, MDBC, the Ministerial Council or other forum; and
  - (b) after giving advice under paragraph (a), consult and attempt to reach agreement with River Murray entitlement holders about alternative action to that which is proposed, which would not have a significant adverse effect; and
  - (c) if it is not possible to agree on alternative action under paragraph (b), consult with and attempt to reach agreement with River Murray entitlement holders about ameliorative action, together with appropriate cost-sharing arrangements.

- 17.2 For the purpose of this clause a “significant adverse effect” includes:
- (a) an average annual net reduction of 10 GL or more in the allocation to Victoria; and
  - (b) an average annual net reduction of between 2 GL and 10 GL in the allocation to Victoria, if the proposal having this effect is likely to be the forerunner of proposals together having an effect of 10 GL or more.
- 17.3 “Ameliorative action” may include efficiency measures or other action to maintain existing resource availability and security of supply for entitlement holders.
- 17.4 Decisions by the Minister, MDBC, the Ministerial Council or other forum which have some adverse effect on resource availability but individually not a significant adverse effect will be reviewed by the Minister every two years from the date this Order commences, and whenever the accumulated reductions equal or exceed 10 GL, the Minister will:
- (a) advise the Minister for Environment and other authorities holding River Murray entitlements in writing;
  - (b) consult with and attempt to reach agreement with the holders of River Murray bulk entitlements about ameliorative action, including appropriate cost-sharing arrangements.

## **18. DISPUTE RESOLUTION**

- 18.1 If any difference or dispute arises between the Minister for Environment, the Minister and, with their consent, any other River Murray entitlement holder, the resource manager, the Victorian storage operator, or any of them (the “parties”) concerning the interpretation or application of this Order, which is not resolved within 14 days of it arising, any party may give written notice to the others requiring the matter to be determined by an independent expert, if it is not otherwise resolved, within 14 days of that notice.
- 18.2 The independent expert will be either –
- (a) a person agreed to by the parties to the difference or dispute; or
  - (b) if the parties cannot agree, a person nominated by the President of the Institute of Arbitrators, Australia.
- 18.3 The independent expert must reach a conclusion on the matter within 30 days of it being referred, but has power to extend the period for reaching a conclusion on the matter by a further 30 days.
- 18.4 The independent expert must send a copy of the conclusion and its supporting reasons to each party to the difference or dispute.
- 18.5 In any difference or dispute to which the Minister is a party:
- (a) the independent expert must express the conclusion as a recommendation;
  - (b) the Minister must consider any recommendation made under paragraph (a) before deciding to give a direction under section 307 or to take any other action under the Act in relation to the difference or dispute.
- 18.6 In any difference or dispute to which the Minister is not a party, any conclusion by an independent expert is final and binding on the parties.
- 18.7 The apportionment of the costs of and incidental to every reference, including the costs of the independent expert, shall be at the discretion of the independent expert.

## **PART 5 – REPORTING**

### **19. METERING PROGRAM**

There are no metering requirements.

### **20. REPORTING REQUIREMENTS**

- 20.1 The Minister for Environment may be required to report on all or any of the following matters, as provided in this clause:

- (a) the volume allocated to the Snowy-Murray Development (River Murray) Environmental Entitlement as provided for in the Deed;
  - (b) the volume carried over to the following year;
  - (c) any alteration to the Schedules arising from new transfers or adjustments to existing entitlements;
  - (d) any temporary or permanent transfer of all or part of this bulk entitlement;
  - (e) any bulk entitlement, licence or water right, temporarily or permanently transferred to the Minister for Environment;
  - (f) any amendment to this bulk entitlement;
  - (g) any new bulk entitlement granted to the Minister for Environment with respect to the River Murray, including any supplied via the distribution system;
  - (h) any failure by the Minister for Environment to comply with any provision of this bulk entitlement;
    - (i) any difficulties experienced or anticipated by the Minister for Environment in complying with this bulk entitlement and any remedial action taken or proposed.
- 20.2 By 31 January each year the Victorian storage operator must advise:
- (a) the Water Administration Ministerial Corporation constituted under section 371 of the **Water Management Act 2000 (NSW)** as the authority administering the Snowy Water Licence granted under Part 5 of the **Snowy Hydro Corporatisation Act 1997 (NSW)**; and
  - (b) the Minister:  
of the annual allocation to the Snowy-Murray Development calculated as follows:
    - (i) the allocated volume, according to Schedule 1, as available on the latest announced allocation date up to 31 January in the current year; plus
    - (ii) the volume of carryover from the previous year.
- 20.3 The Minister may require the Minister for Environment to report on all or any of the matters set out in sub-clause 20.1 –
- (a) in writing or in such electronic form as may be agreed between the Minister for Environment and the Minister; and
  - (b) within 14 days of receiving the Minister’s written request.
- 20.4 The Minister for Environment must, for the period of the preceding year, ensure that his/her Department reports in its Annual Report on each of the matters set out in sub-clause 20.1, except paragraph (a), and, with the approval of the Minister, any particular failure referred to in paragraph (h).
- 20.5 The Minister for Environment may be required to report to the resource manager from time to time, on all or any of the matters set out in sub-clause 20.1.
- 20.6 Any report under sub-clause 20.5 must be made –
- (a) in such form as may be agreed between the Minister for Environment and the resource manager; and
  - (b) unless the Minister for Environment and the resource manager agree otherwise –
    - (i) within 24 hours of the Minister for Environment receiving a request for a report on the matters set out in paragraphs (a) to (d) of sub-clause 20.1; or
    - (ii) within 14 days of the Minister for Environment receiving a request for a report on any matter set out in paragraphs (e) to (i) of sub-clause 20.1.

**21. SHARING OF DATA**

- 21.1 The Minister will use the Minister's best endeavours to ensure that all hydrological and other data required by the Minister for Environment to comply with this bulk entitlement are made available to the Minister for Environment.

**PART 6 – FINANCIAL OBLIGATIONS****22. WATER STORAGE AND SUPPLY COSTS**

- 22.1 Subject to sub-clauses 22.2 and 22.3, the Minister for Environment does not have to make any payment for water storage and supply costs relating to this bulk entitlement.
- 22.2 The Minister may, after reviewing the arrangements in sub-clauses 22.1 in consultation with the Minister for Environment and other River Murray entitlement holders, approve alternative arrangements, under which the Minister for Environment makes a direct contribution towards water supply and storage costs relating to this bulk entitlement, in whatever circumstances or with whatever limits that the Minister may decide.
- 22.3 The Minister for Environment must pay any contribution towards water storage and supply costs arising from alternative arrangements approved by the Minister under sub-clause 22.2, to the Victorian storage operator or to such other person as is determined by the Minister.
- 22.4 In this clause, "Victorian storage operator" means any person who is (by virtue of existing arrangements under the Act) appointed by the Minister under section 43A of the Act to be storage operator in respect of the River Murray bulk entitlements.

**23. RESOURCE MANAGER'S COSTS**

- 23.1 Depending on the outcome of a review under sub-clause 23.3, the Minister for Environment may be required to pay to the Victorian storage operator for passing on to the resource manager, or if the resource manager so decides to the resource manager directly, a fair and reasonable proportion of the costs incurred by the resource manager to -
- (a) determine the water available, and the allocations of water to holders of River Murray bulk entitlements and primary entitlements, in accordance with the provisions and process set out in Part 3; and
  - (b) call meetings of the River Murray entitlement holders, where necessary; and
  - (c) as required, liaise and work with MDBC about resource assessment and other water supply matters, on behalf of Victoria, and participate in MDBC water accounting processes; and
  - (d) keep account of distribution loss overruns and underruns allowed under clause 13; and
  - (e) call on the 30 GL supplement from the Goulburn referred to in sub-clause 12.3(c) of the Bulk Entitlement (Eildon-Goulburn Weir) Conversion Order 1995, or any equivalent allowance; and
  - (f) prepare Victoria's River Murray water accounts; and
  - (g) keep account of any permanent transfers or conversions of primary entitlements or bulk entitlements, and periodically advise the Minister of consequential amendments required to Schedule 1 under sub-clause 16.1; and
  - (h) monitor whether River Murray bulk entitlement holders comply with the conditions of their bulk entitlements; and
  - (i) investigate and mediate disputes between entitlement holders on the River Murray; and
  - (j) assist River Murray entitlement holders as necessary to investigate and deal with significant unauthorised uses of water on the River Murray; and
  - (k) supervise the qualification of any rights to water made by the Minister during periods of declared water shortage under section 13 of the Act.

- 23.2 The proportion of the costs referred to in sub-clause 23.1 is to be:
- (a) equal to the proportion that the Minister for Environment's bulk entitlement is of the total volume of entitlements; or
  - (b) derived from such alternative basis as may be agreed in writing by the Minister, after consultation with the resource manager and River Murray entitlement holders.
- 23.3 The Minister may, after reviewing, in consultation with the Minister for Environment and other River Murray entitlement holders, the desirability of a contribution being made by the Minister for Environment towards the costs of the resource manager, approve an arrangement under which the Minister for Environment must make such a contribution in accordance with sub-clause 23.1.
- 24. DUTY TO KEEP ACCOUNTS AND PROVIDE ESTIMATES**
- 24.1 The Minister for Environment is not obliged to make any payment to the resource manager, or the Victorian storage operator for passing on to the resource manager, under sub-clause 23.1 unless the person to whom payment is to be made or, if payment is to be passed on, passed on to chooses to comply with the provisions of this clause relevant to those payments.
- 24.2 Separate accounts of all costs and payments must be kept by the resource manager, in respect to sub-clause 23.1.
- 24.3 Accounts required to be kept under this clause must be made available for inspection by the Minister for Environment upon request.
- 24.4 The resource manager must, by 1 February in any year, provide the Minister for Environment with estimates of the amounts payable by the Minister for Environment under sub-clause 23.1 respectively, for the following year and, if requested, for up to four years following that.
- 25. BILLING ARRANGEMENTS**
- 25.1 In this clause, a distributor and the resource manager are each a "creditor", and the Victorian storage operator is the "creditor" where it is collecting payments for passing on to the resource manager.
- 25.2 Subject to sub-clause 25.3, a creditor must invoice the Minister for Environment for annual amounts payable under sub-clause 23.1 at least once a year, and, if more often than once a year, in instalments.
- 25.3 Where the actual cost of any component of an amount payable is not known to the creditor at the time an invoice is prepared, the creditor:
- (a) may prepare an invoice based on the relevant estimate given to the Minister for Environment under sub-clause 24.4, broken down to the relevant period;
  - (b) if an invoice is prepared in accordance with paragraph (a), must make a corresponding adjustment to an invoice or invoices prepared within a reasonable time after the component becomes known.
- 25.4 Unless the relevant creditor and the Minister for Environment agree otherwise –
- (a) subject to paragraph (c), invoices under sub-clause 23.1 must be given to the Minister for Environment quarterly in arrears;
  - (b) any invoices given to the Minister for Environment by the Victorian storage operator under this clause may be given in accordance with the usual business practices of the Victorian storage operator;
  - (c) the Minister for Environment must pay the full amount of each invoice, within 28 days of receiving it.

Dated 23 December 2004

JOHN THWAITES MP  
Minister for Water

Note: An explanatory note that accompanies this Order is available from the Department of Sustainability and Environment.



**SCHEDULE 1: TABLES ALLOCATING SHARES OF WATER AVAILABLE  
(CLAUSES 6, 12)**

**Table 1: High-security rights and off-take commitments (GL), at 1 July 1998,**  
with amendments detailed in the notes below this table.

User group		High-security rights	Off-take commitments, for high-security allocation of:						
			50%	60%	70%	80%	90%	100%	
<b>Goulburn-Murray Water:</b>	<b>Murray Valley</b>	254.565	At farm: Losses:	127.3 88.4	152.7 90.1	178.2 91.8	203.7 93.4	229.1 95.1	254.6 96.8
				<b>215.7</b>	<b>242.8</b>	<b>270.0</b>	<b>297.1</b>	<b>324.2</b>	<b>351.4</b>
	<b>Torrumbarry</b>	403.052	At farm: Losses:	201.5 138.9	241.8 141.6	282.1 144.3	322.4 147.0	362.7 149.7	403.1 152.4
	Pental Is	6.377		3.2 <b>343.6</b>	3.8 <b>387.2</b>	4.5 <b>430.9</b>	5.1 <b>474.5</b>	5.7 <b>518.1</b>	6.4 <b>561.9</b>
	<b>Nyah</b>	12.113	At farm: Losses:	6.1 0.5	7.3 0.5	8.5 0.5	9.7 0.5	10.9 0.5	12.1 0.5
				<b>6.6</b>	<b>7.8</b>	<b>9.0</b>	<b>10.2</b>	<b>11.4</b>	<b>12.6</b>
	<b>Diverter, Dartmouth-Nyah</b>	83.099		<b>41.5</b>	<b>49.9</b>	<b>58.2</b>	<b>66.5</b>	<b>74.8</b>	<b>83.1</b>
<b>LMURW - Irrigation:</b>	<b>Irrigation districts</b>	105.700	At farm: Losses:	52.9 7.7	63.4 7.7	74.0 7.7	84.6 7.7	95.1 7.7	105.7 7.7
				<b>60.6</b>	<b>71.1</b>	<b>81.7</b>	<b>92.3</b>	<b>102.8</b>	<b>113.4</b>
	<b>Millewa, Carwarp, &amp; Yelta</b>	0.820	At farm: Losses:	0.4 5.4	0.5 5.4	0.6 5.4	0.7 5.4	0.7 5.4	0.8 5.4
	<b>Diverter, Nyah-S.A.</b>	181.645		<b>5.8</b>	<b>5.9</b>	<b>6.0</b>	<b>6.1</b>	<b>6.1</b>	<b>6.2</b>
				<b>90.8</b>	<b>109.0</b>	<b>127.2</b>	<b>145.3</b>	<b>163.5</b>	<b>181.6</b>
<b>FMIT</b>		73.027	At farm: Losses:	36.5 12.0	43.8 12.0	51.1 12.0	58.4 12.0	65.7 12.0	73.0 12.0
				<b>48.5</b>	<b>55.8</b>	<b>63.1</b>	<b>70.4</b>	<b>77.7</b>	<b>85.0</b>
<b>Grampians Wimmera Mallee Water</b>		3.592		<b>1.8</b>	<b>2.2</b>	<b>2.5</b>	<b>2.9</b>	<b>3.2</b>	<b>3.6</b>
<b>LMURW - Urban</b>		19.913	River Channel	<b>10.0</b>	<b>11.9</b>	<b>13.9</b>	<b>15.9</b>	<b>17.9</b>	<b>19.9</b>
		2.033		<b>1.0</b>	<b>1.2</b>	<b>1.4</b>	<b>1.6</b>	<b>1.8</b>	<b>2.0</b>
<b>Coliban Water</b>		5.055	River Channel	<b>2.5</b>	<b>3.0</b>	<b>3.5</b>	<b>4.0</b>	<b>4.5</b>	<b>5.1</b>
		1.230		<b>0.6</b>	<b>0.7</b>	<b>0.9</b>	<b>1.0</b>	<b>1.1</b>	<b>1.2</b>
<b>Goulburn Valley Water</b>		2.383	River Channel	<b>1.2</b>	<b>1.4</b>	<b>1.7</b>	<b>1.9</b>	<b>2.1</b>	<b>2.4</b>
		0.128		<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>
<b>North East Water</b>		11.692		<b>5.8</b>	<b>7.0</b>	<b>8.2</b>	<b>9.4</b>	<b>10.5</b>	<b>11.7</b>
<b>Flora &amp; Fauna</b>		27.600		<b>13.8</b>	<b>16.6</b>	<b>19.3</b>	<b>22.1</b>	<b>24.8</b>	<b>27.6</b>
<b>Snowy Environmental Reserve</b>		6.988		<b>3.5</b>	<b>4.2</b>	<b>4.9</b>	<b>5.6</b>	<b>6.3</b>	<b>7.0</b>
<b>Total</b>		1201.012		<b>853.4</b>	<b>977.8</b>	<b>1102.5</b>	<b>1226.9</b>	<b>1350.9</b>	<b>1475.8</b>

## Notes:

1. Allocations in both Table 1 and Table 2 may be made in intervals of say 5%, not just in the 10% intervals shown, by interpolation.
2. An allocation can be below 50%, by extrapolation (losses formula on next page).
3. D&S in irrigation districts restricted. Legislation which came into effect on 18 May 1999 allows D&S water in irrigation districts to be restricted in the same way as water right, so this water is not now shown separately, under clause 14.1.
4. Torrumbarry losses reduced for Woorinen pipeline savings. Snowy Environmental Reserve user group added and savings transferred to this group. Murray Valley & Torrumbarry losses reduced for IMSVID savings. Snowy Environmental Reserve entitlement increased to reflect transfer.
5. Grampians Wimmera Mallee Water entitlement increased by 1,092 ML to reflect purchase from Goulburn system.

Table 2: Lower-security rights and off-take commitments (GL), at 1 July 1998

User group	Lower-security rights	Off-take commitments for lower-security water, for lower-security announcement of:											
		10%	20%	30%	40%	50%	60%	70%	80%	90%	100%		
<b>Goulburn-Murray Water:</b>	<b>Murray Valley</b>	240.956	<i>Utilisat.</i>	1	1	1	0.97	0.94	0.92	0.87	0.80	0.73	0.68
			At farm:	24.1	48.2	72.3	93.5	113.2	133.0	146.7	154.2	158.3	163.9
			Losses:	9.4	18.7	28.1	36.4	44.0	51.7	57.1	60.0	61.6	63.7
				<b>33.5</b>	<b>66.9</b>	<b>100.4</b>	<b>129.9</b>	<b>157.2</b>	<b>184.7</b>	<b>203.8</b>	<b>214.2</b>	<b>219.9</b>	<b>227.6</b>
	<b>Torrumbarry</b>	373.907	<i>Utilisat.</i>	1	1	1	0.97	0.94	0.92	0.87	0.80	0.73	0.68
			At farm:	37.4	74.8	112.2	145.1	175.7	206.4	227.7	239.3	245.7	254.3
			Losses:	14.5	29.1	43.6	56.4	68.3	80.3	88.6	93.1	95.6	98.9
				<b>52.2</b>	<b>104.3</b>	<b>156.2</b>	<b>201.9</b>	<b>244.4</b>	<b>287.2</b>	<b>316.9</b>	<b>333.1</b>	<b>342.1</b>	<b>354.1</b>
	Pental Is	6.363	<i>Utilisat.</i>	0.5	0.3	0.2	0.17	0.14	0.14	0.14	0.14	0.14	0.14
				0.3	0.4	0.4	0.4	0.4	0.5	0.6	0.7	0.8	0.9
	<b>Murray diverters</b>	63.455	<i>Utilisat.</i>	0	0	0	0.17	0.14	0.14	0.14	0.14	0.14	0.14
				0.0	0.0	0.0	1.1	1.8	2.7	3.6	4.4	5.3	6.2
15.000		<i>Utilisat.</i>	0.5	0.3	0.2	0.17	0.14	0.14	0.14	0.14	0.14	0.14	
			0.8	0.9	0.9	1.0	1.1	1.3	1.5	1.7	1.9	2.1	
		<b>0.8</b>	<b>0.9</b>	<b>0.9</b>	<b>2.1</b>	<b>2.9</b>	<b>4.0</b>	<b>5.1</b>	<b>6.1</b>	<b>7.2</b>	<b>8.3</b>		
<b>LMURW-Irrigation:</b>	<b>Irrigation districts</b>	0.35	<i>Utilisat.</i>	1	1	1	1	1	1	1	1	1	
			At farm:	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4
			Losses:	0	0	0	0	0	0	0	0	0	0
			<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.3</b>	<b>0.3</b>	<b>0.4</b>	
<b>Diverters</b>	0.7	<i>Utilisat.</i>	0	0	0	1	1	1	1	1	1		
		<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.4</b>	<b>0.5</b>		
<b>Total</b>				<b>86.5</b>	<b>172.2</b>	<b>257.6</b>	<b>334.1</b>	<b>404.8</b>	<b>476.3</b>	<b>526.3</b>	<b>554.1</b>	<b>569.9</b>	<b>590.9</b>
<b>Off-take commitments for 100% high security</b>		(1475.8 from Table 1)		<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>
<b>Total off-take commitments</b>				<b>1562</b>	<b>1648</b>	<b>1733</b>	<b>1810</b>	<b>1881</b>	<b>1952</b>	<b>2002</b>	<b>2030</b>	<b>2046</b>	<b>2067</b>

## Notes:

- The at-farm commitments for lower-security water are calculated by starting with the rights, then multiplying by the announcement level (subtracting 30% where the rights do not qualify for the first 30% of "sales"), then multiplying by assumed utilisation factors.
- Murray Valley and Torrumbarry have fixed losses of 80.000 GL and 125.352 GL (including 0.352 GL for Tresco) respectively, plus two variable loss components:
  - for high-security rights, zero at zero allocation, increasing linearly to 18.998 GL for Murray Valley and to 31.879 GL for Torrumbarry at an allocation of 100%;
  - for lower-security rights, the extra loss is calculated by starting with the at-farm commitments and multiplying by 0.28/0.72 (72% efficiencies has been assumed).
- Most diversion licences do not qualify for the first 30% of "sales" water, so their utilisation is assumed at that stage to be zero. When high allocations are made, some water users will not use all their rights, even in a dry year, so again utilisation is assumed to be less than 1. Utilisation factors need to be reviewed regularly as practices change.

**SCHEDULE 2: ALLOWANCES FOR OTHER DIVERSIONS (CLAUSE 7.1)****Table 1: Volumes assumed for diversion from potential River Murray resources other than under the River Murray bulk entitlements (GL), as at 1 July 1998**

Stream or area	Licences	Proposed urban BEs	Assumed diversion
Murray above Lake Hume	4.6	0.8	3.0
Unregulated streams in Mitta valley	5.3	0.2	2.0
Kiewa	14.4	0.8	6.0
Unregulated streams in Ovens basin	15.3	4.0	8.0
Regulated Ovens system	26.7	7.8	16.0

**SCHEDULE 3: METHOD FOR DETERMINING THE VICTORIAN RESERVE (CLAUSE 8.4)****Principles**

1. The allocation policy applying to Victoria's River Murray entitlements is to meet all the high-security entitlements in the current year, then to have sufficient reserves at the end of the current year which, together with drought inflows, should meet these high-security entitlements in the following year.
2. Any additional resource will be allocated to meet lower-security entitlements in the current year up to a maximum allocation of 100% of these entitlements. When sufficient resources have been allocated to meet these entitlements any additional resource will be carried over for use in the following year.
3. The volume of reserve should be such that high-security entitlements are fully available by February in at least 96% of years on average, with a minimum February allocation of 60%. The security should be verified by simulation modelling using the hydrological record for 1891/92 to 1991/92.
4. The method described in this Schedule applies when Victoria has sufficient resources to meet at least all the high-security entitlements in the current year. The amount of resources Victoria could divert in the current year, and still meet high-security entitlements in the following year, is calculated:
  - a) using the allocations to Victoria that the MDBC would make over a planning period to the end of May in the following year if the MDBC used estimates of inflows that have a 99% probability of being exceeded, both over the two-year period and in the second year by itself, and
  - b) applying the Victorian allocation principles in paragraphs 1 and 2 above.

**Method**

The resources Victoria could divert in the current year (item L plus item M) are derived from a water balance over two years, involving items A to Z, such that there is just enough water to meet high security entitlements fully in the second year.

**FIRST YEAR ASSESSMENT – FROM CURRENT MONTH TO END OF MAY**

- A. Victoria's share of current volume in store in Dartmouth, Hume, L Victoria and Menindee Lakes, less dead storage.
- B. plus Victoria's share of useful MDBC inflows to May this year, including transfers from the Snowy.

*These inflows are the 99% probability of exceedance inflows for the two years to May of the second year, minus the 99% probability of exceedance inflows for the second year, to May. For Menindee, just water in transit. Add the minimum Snowy transfers for the first year. Spills from storages which cannot be used are not counted.*

- C. plus the change in water in transit.
- D. minus Victoria's share of MDBC losses to May in the first year – evaporation from storages and transmission losses.
- E. minus Victoria's contribution to South Australian dilution flow in the first year.
- F. minus water spilt into NSW's share of storages, ceded, or traded.
- G. minus any water taken out for Lindsay or Barmah.
- H. plus the useful Victorian tributary inflow.  
*This is the portion of estimated drought inflows to the Murray from the Ovens R, Goulburn R Broken Ck, Loddon R, Campaspe R and Barr Ck that can be harvested to the end of May in the first year.*
- I. minus Victoria's share of South Australian non-dilution entitlement in the first year.
- J. plus Victoria's diversion since July.
- K. to get **Victorian resources in the first year.**  
*This is the allocation that MDBC would make to Victoria if it assumed the inflows under B, except that the minimum reserve has not been subtracted.*
- L. minus the water required to meet Murray entitlements in the first year other than those in Schedule 1, including:
  - Barmah/Millewa forest water and any saved Lindsay water
  - additional distribution loss in particular years, c.13
  - temporary entitlements and off-quota, c.14.2, 14.3 & 14.4
  - supplement to the Broken Creek part of Murray Valley, c.8.1(b)(iii)
- M. minus **the resources Victoria could divert to meet all Schedule 1 entitlements in the first year.**  
*This is determined by trial and error so that second year carryover (item Z) is not negative.*  
*The minimum volume equates to 100% of high-security entitlements (currently about 1475 GL) and the maximum equates to 100% of high security plus 100% of lower-security entitlements (2065 GL at current utilisations). It may be limited by availability of water in Lakes Hume and Dartmouth as opposed to Menindee Lakes and Lake Victoria, or by maximum possible usage for the rest of the year.*
- N. to get the **Victorian reserve at the end of the first year.**  
*It is also the starting resource for the second year.*

#### **SECOND YEAR ASSESSMENT – FROM JUNE IN SECOND YEAR TO END OF MAY**

- O. plus Victoria's share of MDBC inflows for next year, including transfers from the Snowy.  
*These inflows are the 99% probability of exceedance inflows for the 12 months from June to May in the second year. For Menindee, zero. Add the minimum Snowy transfers in the second year.*
- P. plus the change in water in transit.
- Q. minus Victoria's share of MDBC losses for the second year – evaporation from storages and transmission losses.
- R. minus Victoria's contribution to South Australian dilution flow in the second year.
- S. minus water spilt into NSW's share of storages, ceded, or traded.

- T. minus any water taken out for Lindsay or Barmah.
- U. plus the useful Victorian tributary inflow.  
*This is the portion of estimated drought inflows to the Murray from the Ovens R, Goulburn R Broken Ck, Loddon R, Campaspe R and Barr Ck that can be harvested in the second year.*
- V. minus Victoria's share of South Australian non-dilution entitlement, second year.
- W. to get **Victorian resources in the second year.**  
*This is the allocation that MDBC would make to Victoria if it assumed the inflows under O, except that the minimum reserve has not been subtracted.*
- X. minus the water required to meet Murray entitlements in the second year other than those in Schedule 1, including:
  - Barmah/Millewa forest water and any saved Lindsay water
  - temporary entitlements, c.14.2 & 14.3
- Y. minus **the water required to meet high-security entitlements (those in Table 1 of Schedule 1) in the second year.**  
*This is defined by the value in the bottom right hand cell of Table 1 (approx. 1475 GL).*
- Z. to get the **Victorian carryover at the end of May in the second year.**  
*There should be no carryover until all Schedule 1 entitlements in the first year are fully met (item M). If the carryover is negative, then the value in item M should be reduced – or if it is at its minimum value, the two year assessment is not applicable and a one year assessment in accordance with sub-clause 8.2 should be used.*

#### SCHEDULE 4: ENVIRONMENTAL ENTITLEMENT (CLAUSE 6.1)

**Table 1: High-Security Entitlements**

Item No	Origin of Entitlement	Annual Volume (ML)	Comment
1	Woorinen District	1,500	Woorinen pipeline savings of 2100 ML less 600 ML needed to meet local environmental requirements
2	Murray system	5,488	Component of savings from Improved Measurement of Small Volume supplies to Irrigation Districts on the Murray system
TOTAL		6,988	

**Water Act 1989****BULK ENTITLEMENT (RIVER MURRAY – GOULBURN VALLEY WATER)  
CONVERSION AMENDMENT ORDER 2004**

I, John Thwaites, Minister for Water, as Minister administering the **Water Act 1989**, make the following Order –

**1. Citation**

This Order is called the Bulk Entitlement (River Murray – Goulburn Valley Water) Conversion Amendment Order 2004.

**2. Purpose**

The purpose of this Order is to amend the Bulk Entitlement (River Murray – Goulburn Valley Water) Conversion Order 1999 (the Bulk Entitlement Order) to reflect the merger of Sunraysia Rural Water Authority and Lower Murray Water Authority; to reflect the merger of Wimmera Mallee Rural Water Authority and Grampians Region Water Authority; to reflect water savings which have been realised from the recent commissioning of a pipeline to supply to the Woorinen Irrigation District from the River Murray and from the Improved Measurement of Small Volume Supplies in Irrigation Districts (IMSVID) Water Savings Project; and to enable the appropriate accounting of these savings to provide increased environmental flows.

**3. Authorising provisions**

This Order is made in accordance with section 44 of the **Water Act 1989**.

**4. Commencement**

This Order comes into operation on the day it is published in the Government Gazette.

**5. Amendment of clause 4 (definitions)**

In clause 4 of the Bulk Entitlement Order –

i) after the definition of “licence” **insert** –

“**LMURW**” means the Lower Murray Urban and Rural Water Authority;”.

ii) in the definition of “River Murray”, for “Commission” **substitute** “MDBC”.

iii) for the definition of “Sunraysia Rural Water” **substitute** –

“**Lower Murray Urban and Rural Water**” means the Lower Murray Urban and Rural Water Authority;”.

**6. Change of reference to Sunraysia Rural Water**

For “Sunraysia Rural Water” wherever appearing in the Bulk Entitlement Order **substitute** “Lower Murray Urban and Rural Water”.

**7. Amendment of clause 8**

In clause 8 of the Bulk Entitlement Order, after sub-clause 8.1(b)(iii) **insert** –

“(iv) any water carried over from the previous year as allowed in the Bulk Entitlement Orders of relevant River Murray entitlement holders.”.

**8. Amendment of clause 11**

In sub-clause 11.1(b) of the Bulk Entitlement Order, after “as estimated by MDBC’s model” **insert** “after making any adjustments agreed by the MDBC”.

**9. Amendment of clause 12**

In clause 12 of the Bulk Entitlement Order, after sub-clause 12(d)(iii) **insert** –

“(iv) any water carried over from the previous year as allowed in the Bulk Entitlement Orders of relevant River Murray entitlement holders.”.

**10. Amendment of clause 13**

In clause 13 of the Bulk Entitlement Order, after sub-clause 13.2(e)(ii) **insert** –

“(f) Following completion of the Woorinen pipeline project, Torrumbarry losses includes an annual average volume of 600 ML, with a maximum of 1200 ML in any year, to be supplied to the North Lake Drainage Basin for environmental purposes.”.

**11. Amendment of Schedule 1**For Schedule 1 of the Bulk Entitlement Order, **substitute –****“SCHEDULE 1: TABLES ALLOCATING SHARES OF WATER AVAILABLE  
(CLAUSES 6, 12)****Table 1: High-security rights and off-take commitments (GL), at 1 July 1998,**  
with amendments detailed in the notes below this table.

User group		High-security rights	Off-take commitments, for high-security allocation of:						
			50%	60%	70%	80%	90%	100%	
<b>Goulburn-Murray Water:</b>	<b>Murray Valley</b>	254.565	At farm: 127.3 Losses: 88.4 <b>215.7</b>	152.7 90.1 <b>242.8</b>	178.2 91.8 <b>270.0</b>	203.7 93.4 <b>297.1</b>	229.1 95.1 <b>324.2</b>	254.6 96.8 <b>351.4</b>	
	<b>Torrumbarry</b>	403.052	At farm: 201.5 Losses: 138.9 3.2 <b>343.6</b>	241.8 141.6 3.8 <b>387.2</b>	282.1 144.3 4.5 <b>430.9</b>	322.4 147.0 5.1 <b>474.5</b>	362.7 149.7 5.7 <b>518.1</b>	403.1 152.4 6.4 <b>561.9</b>	
	<b>Pental Is</b>	6.377							
	<b>Nyah</b>	12.113	At farm: 6.1 Losses: 0.5 <b>6.6</b>	7.3 0.5 <b>7.8</b>	8.5 0.5 <b>9.0</b>	9.7 0.5 <b>10.2</b>	10.9 0.5 <b>11.4</b>	12.1 0.5 <b>12.6</b>	
	<b>Diverters, Dartmouth-Nyah</b>	83.099		<b>41.5</b>	<b>49.9</b>	<b>58.2</b>	<b>66.5</b>	<b>74.8</b>	<b>83.1</b>
<b>LMURW - Irrigation:</b>	<b>Irrigation districts</b>	105.700	At farm: 52.9 Losses: 7.7 <b>60.6</b>	63.4 7.7 <b>71.1</b>	74.0 7.7 <b>81.7</b>	84.6 7.7 <b>92.3</b>	95.1 7.7 <b>102.8</b>	105.7 7.7 <b>113.4</b>	
	<b>Millewa, Carwarp, &amp; Yelta</b>	0.820	At farm: 0.4 Losses: 5.4 <b>5.8</b>	0.5 5.4 <b>5.9</b>	0.6 5.4 <b>6.0</b>	0.7 5.4 <b>6.1</b>	0.7 5.4 <b>6.1</b>	0.8 5.4 <b>6.2</b>	
	<b>Diverters, Nyah-S.A.</b>	181.645		<b>90.8</b>	<b>109.0</b>	<b>127.2</b>	<b>145.3</b>	<b>163.5</b>	<b>181.6</b>
<b>FMIT</b>	73.027	At farm: 36.5 Losses: 12.0 <b>48.5</b>	43.8 12.0 <b>55.8</b>	51.1 12.0 <b>63.1</b>	58.4 12.0 <b>70.4</b>	65.7 12.0 <b>77.7</b>	73.0 12.0 <b>85.0</b>		
<b>Grampians Wimmera Mallee Water</b>	3.592		<b>1.8</b>	<b>2.2</b>	<b>2.5</b>	<b>2.9</b>	<b>3.2</b>	<b>3.6</b>	
<b>LMURW - Urban</b>	19.913 2.033	River Channel	<b>10.0</b> <b>1.0</b>	<b>11.9</b> <b>1.2</b>	<b>13.9</b> <b>1.4</b>	<b>15.9</b> <b>1.6</b>	<b>17.9</b> <b>1.8</b>	<b>19.9</b> <b>2.0</b>	
<b>Coliban Water</b>	5.055 1.230	River Channel	<b>2.5</b> <b>0.6</b>	<b>3.0</b> <b>0.7</b>	<b>3.5</b> <b>0.9</b>	<b>4.0</b> <b>1.0</b>	<b>4.5</b> <b>1.1</b>	<b>5.1</b> <b>1.2</b>	
<b>Goulburn Valley Water</b>	2.383 0.128	River Channel	<b>1.2</b> <b>0.1</b>	<b>1.4</b> <b>0.1</b>	<b>1.7</b> <b>0.1</b>	<b>1.9</b> <b>0.1</b>	<b>2.1</b> <b>0.1</b>	<b>2.4</b> <b>0.1</b>	
<b>North East Water</b>	11.692		<b>5.8</b>	<b>7.0</b>	<b>8.2</b>	<b>9.4</b>	<b>10.5</b>	<b>11.7</b>	
<b>Flora &amp; Fauna</b>	27.600		<b>13.8</b>	<b>16.6</b>	<b>19.3</b>	<b>22.1</b>	<b>24.8</b>	<b>27.6</b>	
<b>Snowy Environmental Reserve</b>	6.988		<b>3.5</b>	<b>4.2</b>	<b>4.9</b>	<b>5.6</b>	<b>6.3</b>	<b>7.0</b>	
<b>Total</b>	1201.012		<b>853.4</b>	<b>977.8</b>	<b>1102.5</b>	<b>1226.9</b>	<b>1350.9</b>	<b>1475.8</b>	

## Notes:

1. Allocations in both Table 1 and Table 2 may be made in intervals of say 5%, not just in the 10% intervals shown, by interpolation.
2. An allocation can be below 50%, by extrapolation (losses formula on next page).
3. D&S in irrigation districts restricted. Legislation which came into effect on 18 May 1999 allows D&S water in irrigation districts to be restricted in the same way as water right, so this water is not now shown separately, under clause 14.1.
4. Torrumbarry losses reduced for Woorinen pipeline savings. Snowy Environmental Reserve user group added and savings transferred to this group. Murray Valley & Torrumbarry losses reduced for IMSVID savings. Snowy Environmental Reserve entitlement increased to reflect transfer.
5. Grampians Wimmera Mallee Water entitlement increased by 1,092 ML to reflect purchase from Goulburn system.

Table 2: Lower-security rights and off-take commitments (GL), at 1 July 1998

User group		Lower-security rights	Off-take commitments for lower-security water, for lower-security announcement of:										
			10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
Goulburn-Murray Water:	Murray Valley	240.956	Utilisat.	1	1	1	0.97	0.94	0.92	0.87	0.80	0.73	0.68
			At farm:	24.1	48.2	72.3	93.5	113.2	133.0	146.7	154.2	158.3	163.9
			Losses:	9.4	18.7	28.1	36.4	44.0	51.7	57.1	60.0	61.6	63.7
				<b>33.5</b>	<b>66.9</b>	<b>100.4</b>	<b>129.9</b>	<b>157.2</b>	<b>184.7</b>	<b>203.8</b>	<b>214.2</b>	<b>219.9</b>	<b>227.6</b>
	Torrumbarry	373.907	Utilisat.	1	1	1	0.97	0.94	0.92	0.87	0.80	0.73	0.68
			At farm:	37.4	74.8	112.2	145.1	175.7	206.4	227.7	239.3	245.7	254.3
			Losses:	14.5	29.1	43.6	56.4	68.3	80.3	88.6	93.1	95.6	98.9
				<b>52.2</b>	<b>104.3</b>	<b>156.2</b>	<b>201.9</b>	<b>244.4</b>	<b>287.2</b>	<b>316.9</b>	<b>333.1</b>	<b>342.1</b>	<b>354.1</b>
	Pental Is	6.363	Utilisat.	0.5	0.3	0.2	0.17	0.14	0.14	0.14	0.14	0.14	0.14
				0.3	0.4	0.4	0.4	0.4	0.5	0.6	0.7	0.8	0.9
			<b>52.2</b>	<b>104.3</b>	<b>156.2</b>	<b>201.9</b>	<b>244.4</b>	<b>287.2</b>	<b>316.9</b>	<b>333.1</b>	<b>342.1</b>	<b>354.1</b>	
Murray diverters	63.455	Utilisat.	0	0	0	0.17	0.14	0.14	0.14	0.14	0.14	0.14	
			0.0	0.0	0.0	1.1	1.8	2.7	3.6	4.4	5.3	6.2	
Mitta diverters	15.000	Utilisat.	0.5	0.3	0.2	0.17	0.14	0.14	0.14	0.14	0.14	0.14	
			0.8	0.9	0.9	1.0	1.1	1.3	1.5	1.7	1.9	2.1	
			<b>0.8</b>	<b>0.9</b>	<b>0.9</b>	<b>2.1</b>	<b>2.9</b>	<b>4.0</b>	<b>5.1</b>	<b>6.1</b>	<b>7.2</b>	<b>8.3</b>	
LMURW-Irrigation:	Irrigation districts	0.35	Utilisat.	1	1	1	1	1	1	1	1	1	
			At farm:	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4
			Losses:	0	0	0	0	0	0	0	0	0	0
			<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.3</b>	<b>0.3</b>	<b>0.4</b>	
Diverters	0.7	Utilisat.	0	0	0	1	1	1	1	1	1	1	
			<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.4</b>	<b>0.5</b>	
<b>Total</b>			<b>86.5</b>	<b>172.2</b>	<b>257.6</b>	<b>334.1</b>	<b>404.8</b>	<b>476.3</b>	<b>526.3</b>	<b>554.1</b>	<b>569.9</b>	<b>590.9</b>	
<b>Off-take commitments for 100% high security</b>		(1475.8 from Table 1)	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	
<b>Total off-take commitments</b>			<b>1562</b>	<b>1648</b>	<b>1733</b>	<b>1810</b>	<b>1881</b>	<b>1952</b>	<b>2002</b>	<b>2030</b>	<b>2046</b>	<b>2067</b>	

## Notes:

- The at-farm commitments for lower-security water are calculated by starting with the rights, then multiplying by the announcement level (subtracting 30% where the rights do not qualify for the first 30% of "sales"), then multiplying by assumed utilisation factors.
- Murray Valley and Torrumbarry have fixed losses of 80.000 GL and 125.352 GL (including 0.352 GL for Tresco) respectively, plus two variable loss components:
  - for high-security rights, zero at zero allocation, increasing linearly to 18.998 GL for Murray Valley and to 31.879 GL for Torrumbarry at an allocation of 100%;
  - for lower-security rights, the extra loss is calculated by starting with the at-farm commitments and multiplying by 0.28/0.72 (72% efficiencies has been assumed).
- Most diversion licences do not qualify for the first 30% of "sales" water, so their utilisation is assumed at that stage to be zero. When high allocations are made, some water users will not use all their rights, even in a dry year, so again utilisation is assumed to be less than 1. Utilisation factors need to be reviewed regularly as practices change.

Dated 23 December 2004

JOHN THWAITES MP  
Minister for Water



**Water Act 1989****BULK ENTITLEMENT (RIVER MURRAY – LOWER MURRAY WATER)  
CONVERSION AMENDMENT ORDER 2004**

I, John Thwaites, Minister for Water, as Minister administering the **Water Act 1989**, make the following Order –

**1. Citation**

This Order is called the Bulk Entitlement (River Murray – Lower Murray Water) Conversion Amendment Order 2004.

**2. Purpose**

The purpose of this Order is to amend the Bulk Entitlement (River Murray – Lower Murray Water) Conversion Order 1999 (the Bulk Entitlement Order) to reflect the merger of Sunraysia Rural Water Authority and Lower Murray Water Authority; to reflect the merger of Wimmera Mallee Rural Water Authority and Grampians Region Water Authority; to reflect water savings which have been realised from the recent commissioning of a pipeline to supply to the Woorinen Irrigation District from the River Murray and from the Improved Measurement of Small Volume Supplies in Irrigation Districts (IMSVID) Water Savings Project; and to enable the appropriate accounting of these savings to provide increased environmental flows.

**3. Authorising provisions**

This Order is made in accordance with section 44 of the **Water Act 1989**.

**4. Commencement**

This Order comes into operation on the day it is published in the Government Gazette.

**5. Change of title of the Order**

In the title of the Bulk Entitlement Order, for “LOWER MURRAY WATER” **substitute** “LOWER MURRAY URBAN AND RURAL WATER – URBAN”.

**6. Amendment of clause 4 (definitions)**

In clause 4 of the Bulk Entitlement Order –

- i) **delete** the definition of “Lower Murray Water”.
- ii) after the definition of “licence” **insert** –  
“**LMURW**” means the Lower Murray Urban and Rural Water Authority;”.
- iii) in the definition of “River Murray”, for “Commission” **substitute** “MDBC”.
- iv) for the definition of “Sunraysia Rural Water” **substitute** –  
“**Lower Murray Urban and Rural Water**” means the Lower Murray Urban and Rural Water Authority;”.

**7. Change of reference to Lower Murray Water**

For “Lower Murray Water” wherever appearing in the Bulk Entitlement Order **substitute** “Lower Murray Urban and Rural Water”.

**8. Change of reference to Sunraysia Rural Water**

For “Sunraysia Rural Water” wherever appearing in the Bulk Entitlement Order **substitute** “Lower Murray Urban and Rural Water”.

**9. Amendment of clause 8**

In clause 8 of the Bulk Entitlement Order, after sub-clause 8.1(b)(iii) **insert** –  
“(iv) any water carried over from the previous year as allowed in the Bulk Entitlement Orders of relevant River Murray entitlement holders.”.

**10. Amendment of clause 11**

In sub-clause 11.1(b) of the Bulk Entitlement Order, after “as estimated by MDBC’s model” **insert** “after making any adjustments agreed by the MDBC”.

**11. Amendment of clause 12**

In clause 12 of the Bulk Entitlement Order, after sub-clause 12(d)(iii) **insert** –

“(iv) any water carried over from the previous year as allowed in the Bulk Entitlement Orders of relevant River Murray entitlement holders.”.

**12. Amendment of clause 13**

In clause 13 of the Bulk Entitlement Order, after sub-clause 13.2(e)(ii) **insert** –

“(f) Following completion of the Woorinen pipeline project, Torrumbarry losses includes an annual average volume of 600 ML, with a maximum of 1200 ML in any year, to be supplied to the North Lake Drainage Basin for environmental purposes.”.

**13. Amendment of Schedule 1**

For Schedule 1 of the Bulk Entitlement Order, **substitute** –

**“SCHEDULE 1: TABLES ALLOCATING SHARES OF WATER AVAILABLE  
(CLAUSES 6, 12)**

**Table 1: High-security rights and off-take commitments (GL), at 1 July 1998,**  
with amendments detailed in the notes below this table.

User group		High-security rights	Off-take commitments, for high-security allocation of:						
			50%	60%	70%	80%	90%	100%	
<b>Goulburn-Murray Water:</b>	<b>Murray Valley</b>	254.565	At farm: 127.3 Losses: 88.4 <b>215.7</b>	152.7 90.1 <b>242.8</b>	178.2 91.8 <b>270.0</b>	203.7 93.4 <b>297.1</b>	229.1 95.1 <b>324.2</b>	254.6 96.8 <b>351.4</b>	
	<b>Torrumbarry</b>	403.052	At farm: 201.5 Losses: 138.9 <b>343.6</b>	241.8 141.6 <b>387.2</b>	282.1 144.3 <b>430.9</b>	322.4 147.0 <b>474.5</b>	362.7 149.7 <b>518.1</b>	403.1 152.4 <b>561.9</b>	
	Pental Is	6.377	3.2 3.8 <b>343.6</b>	4.5 5.1 <b>387.2</b>	5.1 5.7 <b>430.9</b>	5.7 6.4 <b>474.5</b>	6.4 6.4 <b>518.1</b>	6.4 6.4 <b>561.9</b>	
	<b>Nyah</b>	12.113	At farm: 6.1 Losses: 0.5 <b>6.6</b>	7.3 0.5 <b>7.8</b>	8.5 0.5 <b>9.0</b>	9.7 0.5 <b>10.2</b>	10.9 0.5 <b>11.4</b>	12.1 0.5 <b>12.6</b>	
	<b>Diverters, Dartmouth-Nyah</b>	83.099		<b>41.5</b>	<b>49.9</b>	<b>58.2</b>	<b>66.5</b>	<b>74.8</b>	<b>83.1</b>
<b>LMURW - Irrigation:</b>	<b>Irrigation districts</b>	105.700	At farm: 52.9 Losses: 7.7 <b>60.6</b>	63.4 7.7 <b>71.1</b>	74.0 7.7 <b>81.7</b>	84.6 7.7 <b>92.3</b>	95.1 7.7 <b>102.8</b>	105.7 7.7 <b>113.4</b>	
	<b>Millewa, Carwarp, &amp; Yelta</b>	0.820	At farm: 0.4 Losses: 5.4 <b>5.8</b>	0.5 5.4 <b>5.9</b>	0.6 5.4 <b>6.0</b>	0.7 5.4 <b>6.1</b>	0.7 5.4 <b>6.1</b>	0.8 5.4 <b>6.2</b>	
	<b>Diverters, Nyah-S.A.</b>	181.645		<b>90.8</b>	<b>109.0</b>	<b>127.2</b>	<b>145.3</b>	<b>163.5</b>	<b>181.6</b>
<b>FMIT</b>	73.027	At farm: 36.5 Losses: 12.0 <b>48.5</b>	43.8 12.0 <b>55.8</b>	51.1 12.0 <b>63.1</b>	58.4 12.0 <b>70.4</b>	65.7 12.0 <b>77.7</b>	73.0 12.0 <b>85.0</b>		
<b>Grampians Wimmera Mallee Water</b>	3.592		<b>1.8</b>	<b>2.2</b>	<b>2.5</b>	<b>2.9</b>	<b>3.2</b>	<b>3.6</b>	
<b>LMURW - Urban</b>	19.913 2.033	River Channel	<b>10.0</b> <b>1.0</b>	<b>11.9</b> <b>1.2</b>	<b>13.9</b> <b>1.4</b>	<b>15.9</b> <b>1.6</b>	<b>17.9</b> <b>1.8</b>	<b>19.9</b> <b>2.0</b>	
<b>Coliban Water</b>	5.055 1.230	River Channel	<b>2.5</b> <b>0.6</b>	<b>3.0</b> <b>0.7</b>	<b>3.5</b> <b>0.9</b>	<b>4.0</b> <b>1.0</b>	<b>4.5</b> <b>1.1</b>	<b>5.1</b> <b>1.2</b>	
<b>Goulburn Valley Water</b>	2.383 0.128	River Channel	<b>1.2</b> <b>0.1</b>	<b>1.4</b> <b>0.1</b>	<b>1.7</b> <b>0.1</b>	<b>1.9</b> <b>0.1</b>	<b>2.1</b> <b>0.1</b>	<b>2.4</b> <b>0.1</b>	
<b>North East Water</b>	11.692		<b>5.8</b>	<b>7.0</b>	<b>8.2</b>	<b>9.4</b>	<b>10.5</b>	<b>11.7</b>	
<b>Flora &amp; Fauna</b>	27.600		<b>13.8</b>	<b>16.6</b>	<b>19.3</b>	<b>22.1</b>	<b>24.8</b>	<b>27.6</b>	
<b>Snowy Environmental Reserve</b>	6.988		<b>3.5</b>	<b>4.2</b>	<b>4.9</b>	<b>5.6</b>	<b>6.3</b>	<b>7.0</b>	
<b>Total</b>	1201.012		<b>853.4</b>	<b>977.8</b>	<b>1102.5</b>	<b>1226.9</b>	<b>1350.9</b>	<b>1475.8</b>	

## Notes:

1. Allocations in both Table 1 and Table 2 may be made in intervals of say 5%, not just in the 10% intervals shown, by interpolation.
2. An allocation can be below 50%, by extrapolation (losses formula on next page).
3. D&S in irrigation districts restricted. Legislation which came into effect on 18 May 1999 allows D&S water in irrigation districts to be restricted in the same way as water right, so this water is not now shown separately, under clause 14.1.
4. Torrumbarry losses reduced for Woorinen pipeline savings. Snowy Environmental Reserve user group added and savings transferred to this group. Murray Valley & Torrumbarry losses reduced for IMSVID savings. Snowy Environmental Reserve entitlement increased to reflect transfer.
5. Grampians Wimmera Mallee Water entitlement increased by 1,092 ML to reflect purchase from Goulburn system.

**Table 2: Lower-security rights and off-take commitments (GL), at 1 July 1998**

User group	Lower-security rights	Off-take commitments for lower-security water, for lower-security announcement of:											
		10%	20%	30%	40%	50%	60%	70%	80%	90%	100%		
<b>Goulburn-Murray Water:</b>	<b>Murray Valley</b>	240.956	Utilisat.	1	1	1	0.97	0.94	0.92	0.87	0.80	0.73	0.68
			At farm:	24.1	48.2	72.3	93.5	113.2	133.0	146.7	154.2	158.3	163.9
			Losses:	9.4	18.7	28.1	36.4	44.0	51.7	57.1	60.0	61.6	63.7
				<b>33.5</b>	<b>66.9</b>	<b>100.4</b>	<b>129.9</b>	<b>157.2</b>	<b>184.7</b>	<b>203.8</b>	<b>214.2</b>	<b>219.9</b>	<b>227.6</b>
	<b>Torrumbarry</b>	373.907	Utilisat.	1	1	1	0.97	0.94	0.92	0.87	0.80	0.73	0.68
			At farm:	37.4	74.8	112.2	145.1	175.7	206.4	227.7	239.3	245.7	254.3
			Losses:	14.5	29.1	43.6	56.4	68.3	80.3	88.6	93.1	95.6	98.9
				<b>52.2</b>	<b>104.3</b>	<b>156.2</b>	<b>201.9</b>	<b>244.4</b>	<b>287.2</b>	<b>316.9</b>	<b>333.1</b>	<b>342.1</b>	<b>354.1</b>
	Pental Is	6.363	Utilisat.	0.5	0.3	0.2	0.17	0.14	0.14	0.14	0.14	0.14	0.14
				0.3	0.4	0.4	0.4	0.4	0.5	0.6	0.7	0.8	0.9
	<b>Murray diverters</b>	63.455	Utilisat.	0	0	0	0.17	0.14	0.14	0.14	0.14	0.14	0.14
				0.0	0.0	0.0	1.1	1.8	2.7	3.6	4.4	5.3	6.2
Utilisat.			0.5	0.3	0.2	0.17	0.14	0.14	0.14	0.14	0.14	0.14	
			0.8	0.9	0.9	1.0	1.1	1.3	1.5	1.7	1.9	2.1	
<b>Mitta diverters</b>	15.000		<b>0.8</b>	<b>0.9</b>	<b>0.9</b>	<b>2.1</b>	<b>2.9</b>	<b>4.0</b>	<b>5.1</b>	<b>6.1</b>	<b>7.2</b>	<b>8.3</b>	
<b>LMURW-Irrigation:</b>	<b>Irrigation districts</b>	0.35	Utilisat.	1	1	1	1	1	1	1	1	1	
			At farm:	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4
			Losses:	0	0	0	0	0	0	0	0	0	0
				<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.3</b>	<b>0.3</b>	<b>0.4</b>
<b>Diverters</b>	0.7	Utilisat.	0	0	0	1	1	1	1	1	1	1	
			<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.4</b>	<b>0.5</b>	
<b>Total</b>			<b>86.5</b>	<b>172.2</b>	<b>257.6</b>	<b>334.1</b>	<b>404.8</b>	<b>476.3</b>	<b>526.3</b>	<b>554.1</b>	<b>569.9</b>	<b>590.9</b>	
<b>Off-take commitments for 100% high security</b>		(1475.8 from Table 1)	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	
<b>Total off-take commitments</b>			<b>1562</b>	<b>1648</b>	<b>1733</b>	<b>1810</b>	<b>1881</b>	<b>1952</b>	<b>2002</b>	<b>2030</b>	<b>2046</b>	<b>2067</b>	

## Notes:

1. The at-farm commitments for lower-security water are calculated by starting with the rights, then multiplying by the announcement level (subtracting 30% where the rights do not qualify for the first 30% of "sales"), then multiplying by assumed utilisation factors.

2. Murray Valley and Torrumbarry have fixed losses of 80.000 GL and 125.352 GL (including 0.352 GL for Tresco) respectively, plus two variable loss components:
  - a) for high-security rights, zero at zero allocation, increasing linearly to 18.998 GL for Murray Valley and to 31.879 GL for Torrumbarry at an allocation of 100%;
  - b) for lower-security rights, the extra loss is calculated by starting with the at-farm commitments and multiplying by 0.28/0.72 (72% efficiencies has been assumed).
3. Most diversion licences do not qualify for the first 30% of “sales” water, so their utilisation is assumed at that stage to be zero. When high allocations are made, some water users will not use all their rights, even in a dry year, so again utilisation is assumed to be less than 1. Utilisation factors need to be reviewed regularly as practices change.

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Dated 23 December 2004

JOHN THWAITES MP  
Minister for Water

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**Water Act 1989****BULK ENTITLEMENT (RIVER MURRAY – WIMMERA MALLEE WATER)  
CONVERSION AMENDMENT ORDER 2004**

I, John Thwaites, Minister for Water, as Minister administering the **Water Act 1989**, make the following Order –

**1. Citation**

This Order is called the Bulk Entitlement (River Murray – Wimmera Mallee Water) Conversion Amendment Order 2004.

**2. Purpose**

The purpose of this Order is to amend the Bulk Entitlement (River Murray – Wimmera Mallee Water) Conversion Order 1999 (the Bulk Entitlement Order) to reflect the merger of Sunraysia Rural Water Authority and Lower Murray Water Authority; to reflect the merger of Wimmera Mallee Rural Water Authority and Grampians Region Water Authority; to reflect water savings which have been realised from the recent commissioning of a pipeline to supply to the Woorinen Irrigation District from the River Murray and from the Improved Measurement of Small Volume Supplies in Irrigation Districts (IMSVID) Water Savings Project; and to enable the appropriate accounting of these savings to provide increased environmental flows.

**3. Authorising provisions**

This Order is made in accordance with section 44 of the **Water Act 1989**.

**4. Commencement**

This Order comes into operation on the day it is published in the Government Gazette.

**5. Change of title of the Order**

In the title of the Bulk Entitlement Order, for “WIMMERA MALLEE WATER” **substitute** “GRAMPIANS WIMMERA MALLEE WATER”.

**6. Amendment of clause 4 (definitions)**

In clause 4 of the Bulk Entitlement Order –

- i) for the definition of “Wimmera Mallee Water” **substitute** –  
“**Grampians Wimmera Mallee Water**” means the Grampians Wimmera Mallee Water Authority;’.
- ii) after the definition of “licence” **insert** –  
“**LMURW**” means the Lower Murray Urban and Rural Water Authority;’.
- iii) in the definition of “River Murray”, for “Commission” **substitute** “MDBC”.
- iv) for the definition of “Sunraysia Rural Water” **substitute** –  
“**Lower Murray Urban and Rural Water**” means the Lower Murray Urban and Rural Water Authority;’.

**7. Change of reference to Sunraysia Rural Water**

For “Sunraysia Rural Water” wherever appearing in the Bulk Entitlement Order **substitute** “Lower Murray Urban and Rural Water”.

**8. Change of reference to Wimmera Mallee Water**

For “Wimmera Mallee Water” wherever appearing in the Bulk Entitlement Order **substitute** “Grampians Wimmera Mallee Water”.

**9. Amendment of clause 8**

In clause 8 of the Bulk Entitlement Order, after sub-clause 8.1(b)(iii) **insert** –

“(iv) any water carried over from the previous year as allowed in the Bulk Entitlement Orders of relevant River Murray entitlement holders.”.

**10. Amendment of clause 11**

In sub-clause 11.1(b) of the Bulk Entitlement Order, after “as estimated by MDBC’s model” **insert** “after making any adjustments agreed by the MDBC”.

**11. Amendment of clause 12**

In clause 12 of the Bulk Entitlement Order, after sub-clause 12(d)(iii) **insert** –  
“(iv) any water carried over from the previous year as allowed in the Bulk Entitlement Orders of relevant River Murray entitlement holders.”.

**12. Amendment of clause 13**

In clause 13 of the Bulk Entitlement Order, after sub-clause 13.2(e)(ii) **insert** –  
“(f) Following completion of the Woorinen pipeline project, Torrumbarry losses includes an annual average volume of 600 ML, with a maximum of 1200 ML in any year, to be supplied to the North Lake Drainage Basin for environmental purposes.”.

**13. Amendment of Schedule 1**

For Schedule 1 of the Bulk Entitlement Order, **substitute** –

**“SCHEDULE 1: TABLES ALLOCATING SHARES OF WATER AVAILABLE  
(CLAUSES 6, 12)**

**Table 1: High-security rights and off-take commitments (GL), at 1 July 1998,**  
with amendments detailed in the notes below this table.

User group	High-security rights	Off-take commitments, for high-security allocation of:						
		50%	60%	70%	80%	90%	100%	
<b>Goulburn-Murray Water:</b>	<b>Murray Valley</b>	254.565	At farm: 127.3 Losses: 88.4 <b>215.7</b>	152.7 90.1 <b>242.8</b>	178.2 91.8 <b>270.0</b>	203.7 93.4 <b>297.1</b>	229.1 95.1 <b>324.2</b>	254.6 96.8 <b>351.4</b>
	<b>Torrumbarry</b>	403.052	At farm: 201.5 Losses: 138.9 <b>343.6</b>	241.8 141.6 <b>387.2</b>	282.1 144.3 <b>430.9</b>	322.4 147.0 <b>474.5</b>	362.7 149.7 <b>518.1</b>	403.1 152.4 <b>561.9</b>
	<b>Pental Is</b>	6.377	3.2 <b>3.2</b>	3.8 <b>3.8</b>	4.5 <b>4.5</b>	5.1 <b>5.1</b>	5.7 <b>5.7</b>	6.4 <b>6.4</b>
	<b>Nyah</b>	12.113	At farm: 6.1 Losses: 0.5 <b>6.6</b>	7.3 0.5 <b>7.8</b>	8.5 0.5 <b>9.0</b>	9.7 0.5 <b>10.2</b>	10.9 0.5 <b>11.4</b>	12.1 0.5 <b>12.6</b>
<b>Diverters, Dartmouth-Nyah</b>	83.099		<b>41.5</b>	<b>49.9</b>	<b>58.2</b>	<b>66.5</b>	<b>74.8</b>	<b>83.1</b>
<b>LMURW - Irrigation:</b>	<b>Irrigation districts</b>	105.700	At farm: 52.9 Losses: 7.7 <b>60.6</b>	63.4 7.7 <b>71.1</b>	74.0 7.7 <b>81.7</b>	84.6 7.7 <b>92.3</b>	95.1 7.7 <b>102.8</b>	105.7 7.7 <b>113.4</b>
	<b>Millewa, Carwarp, &amp; Yelta</b>	0.820	At farm: 0.4 Losses: 5.4 <b>5.8</b>	0.5 5.4 <b>5.9</b>	0.6 5.4 <b>6.0</b>	0.7 5.4 <b>6.1</b>	0.7 5.4 <b>6.1</b>	0.8 5.4 <b>6.2</b>
	<b>Diverters, Nyah-S.A.</b>	181.645		<b>90.8</b>	<b>109.0</b>	<b>127.2</b>	<b>145.3</b>	<b>163.5</b>
<b>FMIT</b>	73.027	At farm: 36.5 Losses: 12.0 <b>48.5</b>	43.8 12.0 <b>55.8</b>	51.1 12.0 <b>63.1</b>	58.4 12.0 <b>70.4</b>	65.7 12.0 <b>77.7</b>	73.0 12.0 <b>85.0</b>	
<b>Grampians Wimmera Mallee Water</b>	3.592		<b>1.8</b>	<b>2.2</b>	<b>2.5</b>	<b>2.9</b>	<b>3.2</b>	<b>3.6</b>
<b>LMURW - Urban</b>	19.913	River Channel	<b>10.0</b>	<b>11.9</b>	<b>13.9</b>	<b>15.9</b>	<b>17.9</b>	<b>19.9</b>
	2.033		<b>1.0</b>	<b>1.2</b>	<b>1.4</b>	<b>1.6</b>	<b>1.8</b>	<b>2.0</b>
<b>Coliban Water</b>	5.055	River Channel	<b>2.5</b>	<b>3.0</b>	<b>3.5</b>	<b>4.0</b>	<b>4.5</b>	<b>5.1</b>
	1.230		<b>0.6</b>	<b>0.7</b>	<b>0.9</b>	<b>1.0</b>	<b>1.1</b>	<b>1.2</b>
<b>Goulburn Valley Water</b>	2.383	River Channel	<b>1.2</b>	<b>1.4</b>	<b>1.7</b>	<b>1.9</b>	<b>2.1</b>	<b>2.4</b>
	0.128		<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>
<b>North East Water</b>	11.692		<b>5.8</b>	<b>7.0</b>	<b>8.2</b>	<b>9.4</b>	<b>10.5</b>	<b>11.7</b>
<b>Flora &amp; Fauna</b>	27.600		<b>13.8</b>	<b>16.6</b>	<b>19.3</b>	<b>22.1</b>	<b>24.8</b>	<b>27.6</b>
<b>Snowy Environmental Reserve</b>	6.988		<b>3.5</b>	<b>4.2</b>	<b>4.9</b>	<b>5.6</b>	<b>6.3</b>	<b>7.0</b>
<b>Total</b>	1201.012		<b>853.4</b>	<b>977.8</b>	<b>1102.5</b>	<b>1226.9</b>	<b>1350.9</b>	<b>1475.8</b>

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			At farm:	24.1	48.2	72.3	93.5	113.2	133.0	146.7	154.2	158.3	163.9
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	<b>Torrumbarry</b>	373.907	<i>Utilisat.</i>	1	1	1	0.97	0.94	0.92	0.87	0.80	0.73	0.68
			At farm:	37.4	74.8	112.2	145.1	175.7	206.4	227.7	239.3	245.7	254.3
			Losses:	14.5	29.1	43.6	56.4	68.3	80.3	88.6	93.1	95.6	98.9
	Pental Is	6.363	<i>Utilisat.</i>	0.5	0.3	0.2	0.17	0.14	0.14	0.14	0.14	0.14	0.14
				0.3	0.4	0.4	0.4	0.4	0.5	0.6	0.7	0.8	0.9
	<b>Murray diverters</b>	63.455	<i>Utilisat.</i>	0	0	0	0.17	0.14	0.14	0.14	0.14	0.14	0.14
				0.0	0.0	0.0	1.1	1.8	2.7	3.6	4.4	5.3	6.2
	<b>Mitta diverters</b>	15.000	<i>Utilisat.</i>	0.5	0.3	0.2	0.17	0.14	0.14	0.14	0.14	0.14	0.14
			0.8	0.9	0.9	1.0	1.1	1.3	1.5	1.7	1.9	2.1	
			<b>0.8</b>	<b>0.9</b>	<b>0.9</b>	<b>2.1</b>	<b>2.9</b>	<b>4.0</b>	<b>5.1</b>	<b>6.1</b>	<b>7.2</b>	<b>8.3</b>	
<b>LMURW-Irrigation:</b>	<b>Irrigation districts</b>	0.35	<i>Utilisat.</i>	1	1	1	1	1	1	1	1	1	
			At farm:	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4
			Losses:	0	0	0	0	0	0	0	0	0	0
				<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.3</b>	<b>0.3</b>	<b>0.4</b>
<b>Diverters</b>	0.7	<i>Utilisat.</i>	0	0	0	1	1	1	1	1	1		
			<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.4</b>	<b>0.5</b>	
<b>Total</b>			<b>86.5</b>	<b>172.2</b>	<b>257.6</b>	<b>334.1</b>	<b>404.8</b>	<b>476.3</b>	<b>526.3</b>	<b>554.1</b>	<b>569.9</b>	<b>590.9</b>	
<b>Off-take commitments for 100% high security</b>			(1475.8 from Table 1)	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	<b>1476</b>	
<b>Total off-take commitments</b>				<b>1562</b>	<b>1648</b>	<b>1733</b>	<b>1810</b>	<b>1881</b>	<b>1952</b>	<b>2002</b>	<b>2030</b>	<b>2046</b>	<b>2067</b>

## Notes:

1. The at-farm commitments for lower-security water are calculated by starting with the rights, then multiplying by the announcement level (subtracting 30% where the rights do not qualify for the first 30% of "sales"), then multiplying by assumed utilisation factors.

2. Murray Valley and Torrumbarry have fixed losses of 80.000 GL and 125.352 GL (including 0.352 GL for Tresco) respectively, plus two variable loss components:
- for high-security rights, zero at zero allocation, increasing linearly to 18.998 GL for Murray Valley and to 31.879 GL for Torrumbarry at an allocation of 100%;
  - for lower-security rights, the extra loss is calculated by starting with the at-farm commitments and multiplying by 0.28/0.72 (72% efficiencies has been assumed).
3. Most diversion licences do not qualify for the first 30% of “sales” water, so their utilisation is assumed at that stage to be zero. When high allocations are made, some water users will not use all their rights, even in a dry year, so again utilisation is assumed to be less than 1. Utilisation factors need to be reviewed regularly as practices change.”.

#### 14. Amendment of Schedule 4

In Schedule 4 of the Bulk Entitlement Order, after –

“

Swan Hill pumps	45	Swan Hill/Sea Lake system
-----------------	----	---------------------------

”

**insert –**

“

Liparoo pumps	110	Ouyen system
---------------	-----	--------------

”

#### 15. Amendment of Schedule 5

In Schedule 5 of the Bulk Entitlement Order –

- in paragraph (i), for “covering 340,000 ha of the eastern part of the northern Mallee area” **substitute** “covering 815,000 ha of the northern Mallee area”.
- for paragraph (ii) substitute –  
**substitute –**  
“ii) The towns of Manangatang, Chillingollah, Chinkapook, Sea Lake, Ultima, Waitchie, Ouyen, Walpeup, Underbool, Tempy, Nandaly, Speed, Patchewollock and Lalbert operated by Grampians Wimmera Mallee Water. The current indicative supply volume to these towns is 1950 ML.”.

Dated 23 December 2004

JOHN THWAITES MP  
Minister for Water



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