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SPECIAL SUPPLEMENT

WATER MANAGEMENT ACT 2000

Regulated River Order No 6

Pursuant to the definition of '*regulated river*' in the Dictionary to the Water Management Act 2000, I, JOHN AQUILINA, MP, Minister for Land and Water Conservation, declare by this Order that the *rivers* listed in the Schedule below are *regulated rivers*.

Dated this 26th day of February 2003.

JOHN AQUILINA, MP
Minister for Land and Water Conservation

Explanatory note

The dictionary definition of a regulated river in the Water Management Act, 2000 provides that the Minister can declare, by order published in the Gazette, a river to be a regulated river.

SCHEDULE

Barbers Creek from upstream (eastern) boundary in Lot 13, Parish of Moorangatta, County Wakool, to its confluence with the Wakool River in Lot 15, Parish Nunnagoyt, County Wakool.

Black Swan Lagoon.

Bookit Creek from its effluence from Merribit Creek between Lots 23 and 39, Parish of Mia Mia, County of Wakool downstream to a dam and regulator located between Lots 4 and 10, Parish of Mia Mia, County of Wakool authorised by Licence L15918.

Bullanginya Lagoon.

Collendina Lagoon.

Colligen Creek, from its offtake from the Edward River, Lot 2, DP 857161 Parish of Tumudgery, County of Townsend, downstream to its confluence with the Niemur River within Werai State Forest No. 384, Parish of Werai, County of Townsend.

Coobool Creek, from the southern boundary (bridge on disused rail line), of Lot 32, Parish Toolmah, County Wakool, to its confluence with the Wakool River, boundaries of Lots 2 and 3, Parish of Coobool, County Wakool.

Dairy Lagoon, offtaking from the Murray River at the southern end of Lot 7014, DP 1021139, in the Reserve 78631, Parish of Corowa, County of Hume.

Darling River - Wentworth Weir Pool, from the north east corner of Lot 11 DP 756952, Parish of Merche, County of Wentworth downstream to the confluence with the Murray.

Deep Creek, from its confluence with the Murray River between part Lot 19 and Lot 76, Parish of Benarca, County of Cadell to its upper limits within Lot 76, Parish of Benarca, County of Cadell.

Dights Creek.

Dry Lake, Parish of Taila, County of Taila.

Edward River; from its offtake from the Murray River downstream to its junction with the Wakool River.

Frenchmans Creek.

Gol Gol Channel, the unnamed watercourse known locally as Gol Gol Channel, commencing at a point where Gol Gol Creek enters Gol Gol Swamp downstream to its point of termination with the southern section of Lot 16, Parish Gol Gol, County of Wentworth.

Gol Gol Creek, Parish of Gol Gol, County of Wentworth.

Gol Gol North Creek, Parish of Gol Gol, County of Wentworth.

Great Anabranche of the Darling River, from its confluence with the Murray River on Lot 672 DP 761719 to the location of the earthen block bank under Licence 60SL8686, Lot 12 DP 756168.

Gulpa Creek.

Gum Creek, from earthen block bank and regulator in Lot 45, Parish Toolmah, County Wakool, to its confluence with the Wakool River, Lot 74, Parish Coobool, County Wakool.

Jingera Jingera Lagoon, from its junction with unnamed watercourse offtaking from the Murray River within Lot 162, Parish of Albury, County of Goulburn, downstream to its confluence with the Murray River.

Lake Benanee.

Lake Mulwala.

Lake Victoria.

Larrys Creek, from its junction with Mulligans Creek in Lot 26, Parish Toolmah, County Wakool, to an earthen block bank and regulator in Lot 45, Parish of Toolmah, County Wakool.

Lesters Lagoon.

Little Barbers Creek, offtaking from Merran Creek in Lot 25, Parish Nunnagoyt, County Wakool, to its confluence with Barbers Creek in Lot 25, Parish Nunnagoyt, County Wakool.

Little Murray River; offtaking from the Murray River within Campbells Island State Forest, (in the vicinity of easting 236685, northing 6057818, zone 55) to its confluence with the Murray River at the northern end of Lot 13, DP 756541, Parish of Gonn, County of Wakool.

Merran Creek Cutting, offtaking from the Little Murray River in Campbells Island State Forest, Parish Nunnagoyt, County Wakool, to its confluence with Merran Creek, Lot 14, Parish Nunnagoyt, County Wakool.

Merran Creek, from block dam and regulator in Lot 21, Parish Nunnagoyt, County Wakool, to its confluence with the Wakool River in Lot 36, Parish Poon Boon, County Wakool.

Merribit Creek, from its effluence from the Wakool River between Lot 143, Parish of Bookit, County of Wakool and Lot 47, Parish of Mia Mia, County of Wakool to its confluence with the Wakool River between Lot 125, Parish of Toolon, County of Wakool and Lot 46, Parish of Mia Mia and County of Wakool.

Moira Creek.

Mulligans Creek, offtaking from St Helena Creek in Lot 12, Parish Moorangatta, County Wakool, to its confluence with Larrys Creek in Lot 26, Parish Toolmah, County Wakool.

Murray River, from the upper limit of the storage of Hume Dam downstream to the South Australian border.

Neimur River, from its confluence with Colligen Creek within Werai State Forest No. 384 to its confluence with the Wakool River in Lots 21, Parish of Wetuppa and 48, Parish of Coobool both in the County of Wakool.

Nowranie Creek.

Paddock Lagoon.

Porthole Creek, from its confluence with the Wakool River between Lots 3 and 77, Parish of Porthole, County of Cadell upstream to the Boundary between Lots 3 and 72, Parish of Porthole, County of Cadell.

Ruel Lagoon.

Rufus River.

Salt Creek, from its offtake from the Murray River within WL 165, Parish of Cal Lal, County of Tara to its intersection with the South Australian Border.

Sheepwash Lagoon, offtaking from the Murray River in Lot 1 DP751155, Parish of Perricoota, County of Cadell and bounded by Lot 1 DP751155, Lot 2 DP521201 and Lot 1 DP131403, Parish of Perricoota, County of Cadell.

St Helena Creek, from a concrete regulator in Lot 3, Parish Moorangatta, County Wakool, to its confluence with the Wakool River in Lot 42, Parish of Toolmah, County Wakool.

Taila Creek, offtaking from the Murray River in Lot 4441, DP 76426 in the Parish of Taila, County of Taila to Lake Benanee.

Tallys Lake, from the confluence of the Unnamed Watercourse (Box Creek) in Lot 55, Parish Merran, County Wakool, to the offtake of the Unnamed Watercourse (Box Creek) in Lot 54, Parish Merran, County Wakool.

Tuckers Creek.

unnamed lagoon, (known locally as Cemetery Creek), offtaking in part Temporary Common, Parish of Euston, County of Taila.

unnamed lagoon, (known locally as Doctors Point Lagoon) offtaking from Murray River between Lots 317 and 26, Parish of Albury, County of Goulburn.

unnamed lagoon and watercourse, (known locally as Parlour or Howlong Creek), offtaking from the Murray River within Lot 63, Parish of Bungowannah, County of Hume, to its junction with Lesters Lagoon.

unnamed lagoon, offtaking from Colligen Creek in Lot 6, Parish of Tumudgery, County of Townsend.

unnamed lagoon, offtaking from Murray River in Lot 2, Parish of Boomanoomana, County of Denison.

unnamed lagoon, offtaking from the Murray River between Lots 16 and 18, Parish of Woperana, County of Denison.

unnamed lagoon, offtaking from the Murray River between Lots 29 and 65, Parish of Quat Quatta, County of Hume, and also between Lots 20 and 68.

unnamed lagoon, offtaking from the Murray River in Lot 10, Parish of Wangumma, County of Tara.

unnamed lagoon, offtaking from the Murray River in Lot 4, Parish of Collendina, County of Hume.

unnamed lagoon, offtaking from the Murray River in W.L. 673, Parish of Moorna, County of Tara.

unnamed lagoon, offtaking from the Murray River within Lot 298 Parish of Corowa, County of Hume.

unnamed lagoons, connected to the Murray River and situated within Lots 298, 297 and 299, Parish of Corowa, County of Hume.

unnamed lagoons, connected to the Murray River and situated within Lots 298, 297 and 299, Parish of Corowa, County of Hume.

unnamed watercourse, anabranh of the Murray River offtaking between Lots 80 and 83, forming the northern boundary of Lot 79, traversing Lot 92 and rejoining the Murray River within Lot 29, Parish of Quat Quatta, County of Hume.

unnamed watercourse and effluents, (known locally as Breakaway Creek) offtaking from the Murray River in Lot 14, Parish of Bungowannah, County of Hume.

unnamed watercourse and effluents, (known locally as Yellowbelly Creek) offtaking from the Murray River in Lot 3, Parish of Bungowannah, County of Hume.

unnamed watercourse and lagoon, connecting Lesters Lagoon with Black Swan Lagoon, Parish of Howlong, County of Hume.

unnamed watercourse, (Box Creek), offtaking from Coobool Creek in Lot 48, Parish Toolmah, County Wakool, to Tallys Lake in Lot 55, Parish Merran, County Wakool.

unnamed watercourse, (Box Creek), Offtaking from Tallys Lake in Lot 54, Parish Merran County Wakool, to earthen block dam and pipe regulator in Lot 12, Parish Merran, County Wakool.

unnamed watercourse, (known as Hemp Creek) offtaking from the Bookit Creek in Lot 4 DP756559, Parish of Mia Mia, County of Wakool to the eastern boundary of Lot 4 DP756559, Parish of Mia Mia, County of Wakool.

unnamed watercourse, (known locally as Boilingdown Creek), offtaking from the Murray River within Lot 524, Parish of Corowa, County of Hume, and rejoining the Murray River within Collendina State Forest No. 98, block 1.

unnamed watercourse, (known locally as Hans Creek), offtaking from the Murray River, within Lot 199, Parish of Corowa, County of Hume.

unnamed watercourse, (known locally as Horseshoe Lagoon), offtaking from the Murray River between Lots 12 and 46, Parish of Tocumwal, County of Denison.

unnamed watercourse, connected to the Edward River within section 60, Town of South Deniliquin, Parish of South Deniliquin, County of Townsend, for a distance of 200 metres south easterly from the point of connection.

unnamed watercourse, connecting Washpen Creek with Lake Caringay.

unnamed watercourse, from its offtake from the Edward River in Lot 78 (T S & C R 35646) Parish of Tumudgery, County of Townsend to its confluence with Colligen Creek in Lot 47 Parish of Tumudgery, County of Townsend.

unnamed watercourse, offtaking from an unnamed lagoon within that part of Collendina State Forest No. 98 east of Lot 9, Parish of Collendina, County of Hume.

unnamed watercourse, offtaking from another unnamed watercourse within Lot 64, Parish of Bungowannah, County of Hume, and traversing downstream successively, in a north westerly direction, Lots 275, 257, 241, 240, 248, 249, 250, 251, 172 and 171 Parish of Howlong, County of Hume to its confluence with Lesters Lagoon.

unnamed watercourse, offtaking from Gum Creek in Lot 49, Parish Toolmah, County Wakool, to its confluence with Coobool Creek in Lot 49, Parish Toolmah, County Wakool.

unnamed watercourse, offtaking from the Murray River within Lot 162, Parish of Albury, County of Goulburn, downstream to its confluence with Jingera Jingera Lagoon.

unnamed watercourse, offtaking from the Murray River within Lot 23, Parish of Albury, County of Goulburn.

unnamed watercourse, offtaking from the Murray River within Lot 34, Parish of Albury, County of Goulburn.

unnamed watercourse, offtaking from the Murray River within Lot 5, Parish of Wangumma, County of Tara.

unnamed watercourse, offtaking from the Murray River within Lot 56, Parish of Bungowannah, County of Hume.

unnamed watercourse, offtaking from the Murray River within that part of Mulwala State Forest No 100 west of Lot 209, Parish of Mulwala, County of Denilson.

Wakool River, from its offtake on the Edward River downstream to its confluence with the Murray River.

Washpen Creek, to a point 805 metres upstream of the junction of the Unnamed Watercourse connecting Washpen Creek with Lake Caringay.

Yallakool Creek, from its effluence from the Edward River between TS & CR 25840, Parish of Brassi, County of Townsend and Lot 78, Parish of Tumudgery, County of Townsend and its confluence with the Wakool River between Lot 54, Parish of Gobran, County of Townsend and Lot 3, Parish of Corry, County of Wakool.

WATER MANAGEMENT ACT 2000**Regulated River Order No 7**

Pursuant to the definition of '*regulated river*' in the Dictionary to the Water Management Act 2000, I, JOHN AQUILINA, MP, Minister for Land and Water Conservation, declare by this Order that the *rivers* listed in the Schedule below are *regulated rivers*.

Dated this 26th day of February 2003.

JOHN AQUILINA, MP
Minister for Land and Water Conservation

Explanatory note

The dictionary definition of a regulated river in the Water Management Act, 2000 provides that the Minister can declare, by order published in the Gazette, a river to be a regulated river.

SCHEDULE

Balaka Lake.

Bijijie Lake.

Cawndilla Creek.

Copi Hollow.

Darling River; from adjacent to "Billilla Homestead" on Lot 3671, DP 766053, County of Livingstone (grid ref. YKD35760 Wilcannia 1:100 000), downstream to the north east corner of Lot 11 DP 756952, Parish of Merche, County of Wentworth.

Lake Cawndilla.

Lake Menindee.

Lake Pamamaroo.

Lake Spectacle.

Lake Speculation.

Lake Wetherell.

Malta Lake.

Menindee Creek.

Pamamaroo Creek.

Redbank Creek; from Lake Tandou, downstream to the crossing situated within Lot W.L. 3345, Parish of Mitta, County of Menindee, known locally as Packers Crossing.

Tandou Creek; where it off takes from the southern most end of Cawndilla Channel (DP 767272, at easting 614946, northing 6391413, Zone 54) traversing Lot 2123 DP 764065 Parish of Bintullia, County of Menindee, Lot 2125 DP 764067 Parish of Bintullia, County of Menindee, and DP 767026

Parish of Mitta, County of Menindee, to where it joins Tandou Lake (Lot 3345 DP 765601 Parish of Mitta, County of Menindee, at easting 602179, northing 6380223, Zone 54).

Tandure Lake.

unnamed lagoon; offtaking from the Darling River within Lot 89 Parish of Avoca County of Wentworth.

Water Sharing Plan for the Kangaroo River Water Source 2003 Order

under the

Water Management Act 2000

Pursuant to section 50 of the *Water Management Act 2000*, I, the Minister for Land and Water Conservation, make the following Minister's plan.

JOHN AQUILINA, M.P.,
Minister for Land and Water Conservation

Water Sharing Plan for the Kangaroo River Water Source 2003

Contents

| | Page | |
|---------|---|----|
| Part 1 | Introduction | 1 |
| Part 2 | Vision, objectives, strategies and performance indicators | 3 |
| Part 3 | Basis for water sharing | 5 |
| Part 4 | Environmental water provisions | 7 |
| Part 5 | Basic landholder rights | 10 |
| Part 6 | Bulk access regime | 11 |
| Part 7 | Requirements for water under access licences | 12 |
| Part 8 | Rules for granting access licences | 13 |
| Part 9 | Limits to the availability of water | 15 |
| | Division 1 Long-term average extraction limit | 15 |
| | Division 2 Available water determinations | 15 |
| Part 10 | Rules for managing access licences | 17 |
| | Division 1 General | 17 |
| | Division 2 Water allocation account management | 17 |
| | Division 3 Sharing flows on a daily basis | 19 |
| Part 11 | Access licence dealing rules | 24 |
| Part 12 | Mandatory conditions | 27 |
| Part 13 | Granting and amending water supply works approvals | 31 |
| Part 14 | Monitoring and reporting | 32 |
| Part 15 | Amendment of this Plan | 33 |
| | Schedule 1 Dictionary | 35 |
| | Schedule 2 Kangaroo River Water Source and Extraction Management Unit | 37 |
| | Schedule 3 Rivers in the Kangaroo River Water Source | 38 |
| | Schedule 4 Contribution to relevant targets in the December 2002 State Water Management Outcomes Plan | 39 |
| | Schedule 5 Water Act 1912 licences with access to very low flows | 43 |
| | Appendix 1 Southern Water Management Area | 44 |
| | Appendix 2 Location of maps | 45 |
| | Appendix 3 Performance indicators | 46 |
| | Appendix 4 Minister's access licence dealing principles | 49 |

Water Sharing Plan for the Kangaroo River Water Source 2003

Water Sharing Plan for the Kangaroo River Water Source 2003

Part 1 Introduction

1 Name of Plan

This Plan is the *Water Sharing Plan for the Kangaroo River Water Source 2003* (hereafter **this Plan**).

2 Nature and status of this Plan

- (1) This Plan is made under section 50 of the *Water Management Act 2000* as amended (hereafter **the Act**).
- (2) This Plan covers the core provisions of section 20 of the Act for water sharing, and additional provisions of section 21 of the Act, and other relevant matters.

3 Date of commencement

This Plan takes effect on 1 July 2003 and ceases 10 years after that date.

4 Area to which this Plan applies

- (1) The area in respect of which this Plan is made is that area of land within the Southern Water Management Area known as the Kangaroo River Water Source (hereafter **this water source**) as shown on the map in Schedule 2.

Note. The Southern Water Management Area is shown on the map in Appendix 1.

Note. Maps referred to in this Plan may be inspected at offices of the Department of Land and Water Conservation listed in Appendix 2.

5 Waters to which this plan applies

- (1) The waters of this water source include all water occurring on the land surface shown on the map in Schedule 2 including, but not limited to:
 - (a) all rivers in this water source including, but not limited to, those nominated in Schedule 3, and
 - (b) all lakes and wetlands in this water source.
- (2) The waters of this water source exclude all water contained within aquifers underlying this water source.

6 Interpretation

- (1) Terms that are defined in the Act have the same meaning in this Plan and the effect of these terms may be explained in Notes.
- (2) Additional terms to those identified in subclause (1) are defined in Schedule 1.
- (3) Notes in the text of this Plan do not form part of this Plan.
- (4) Schedules to this Plan form part of this Plan.
- (5) Appendices to this Plan do not form part of this Plan.

Water Sharing Plan for the Kangaroo River Water Source 2003

7 Effect on licences, authorities and permits under the Water Act 1912

- (1) This Plan applies from commencement to those matters that are administered under the Act at that time.
- (2) This Plan applies to other matters from the date the relevant provisions of the Act are commenced.

Note. To the extent possible, the rules embodied in this Plan will apply to matters administered under the *Water Act 1912* in the interim.

8 State Water Management Outcomes Plan

- (1) In accordance with section 16 (1) (a) of the Act, this Plan is consistent with the State Water Management Outcomes Plan published in the NSW Government Gazette on 20 December 2002 (hereafter *the SWMOP*).
- (2) Schedule 4 identifies the SWMOP targets applicable to this Plan and how this Plan contributes to those targets.

Water Sharing Plan for the Kangaroo River Water Source 2003

Part 2 Vision, objectives, strategies and performance indicators

9 Vision, objectives, strategies and performance indicators

This Part is made in accordance with section 35 (1) of the Act.

10 Vision

The vision for this Plan is that water sharing arrangements contribute to the protection and rehabilitation of the Kangaroo River Water Source and its dependent ecosystems, whilst the social, cultural and economic future of the community of the Kangaroo River is recognised, maintained and fostered.

11 Objectives

The objectives of this Plan are to:

- (a) keep the pools of this water source full during periods of low flows and very low flows, with natural drying processes maintained during periods of no flow,
- (b) protect indicator riffles during periods of low flows and very low flows,
Note. Indicator riffles will be identified by the Minister as part of the implementation of this Plan.
- (c) provide for the passage of low flows and very low flows through new and existing in-river works and activities in this water source,
- (d) maintain the natural flow variability of a proportion of freshes as they pass through this water source,
- (e) ensure equitable access to water for household consumption, stock watering and gardening (in this order of priority) at all times, except during periods of very low flows and no flow,
- (f) foster economic benefits related to the use of water through the implementation of this Plan,
- (g) provide for access to available water of this water source by all access licence holders in accordance with the water sharing arrangements stated in this Plan,
- (h) provide rules for water trading in this water source,
- (i) support recreational opportunities, river health and the aesthetic appeal of this water source through the maintenance of pools, riffles and flow variability,
- (j) protect and enhance the cultural presence of the community of Aboriginal and non-Aboriginal peoples that may be affected by river flow, including places of heritage, and spiritual significance, scientific and educational opportunities and rural industries,
- (k) contribute to the requirements of water users and other water sources and their dependent ecosystems downstream of this water source through agreed water sharing arrangements for this water source, and

Water Sharing Plan for the Kangaroo River Water Source 2003

- (l) contribute to the achievement of water quality to support the environmental values of this water source.

Note. This objective refers to maintaining water quality. Although there are no specific strategies directly related to this objective in this Plan, the environmental water provisions in this Plan make a positive contribution to maintaining water quality.

12 Strategies

The strategies of this Plan are to:

- (a) establish cease (and commence) to pump levels and flow classes,
- (b) limit the amount of water that can be extracted on a daily basis from different flow classes,
- (c) limit the long-term average extraction of water,
- (d) clearly define access conditions for water extraction and rules for extracting water from this water source,
- (e) establish rules for determining the water available from time to time under access licences,
- (f) establish water allocation accounting rules, and
- (g) specify access licence dealing rules that maximise flexibility for water users without adversely impacting on this water source.

13 Performance indicators

The following indicators are to be used to determine the performance of this Plan against its objectives:

- (a) change in low flows,
- (b) change in moderate to high flows,
- (c) change in local water utilities access,
- (d) change in ecological condition of this water source and dependent ecosystems,
- (e) extent to which basic landholder rights requirements have been met,
- (f) change in economic benefits derived from water extraction and use,
- (g) extent to which native title rights requirements have been met,
- (h) extent of recognition of spiritual, social and customary values of water to Aboriginal peoples, and
- (i) contribution to the achievement of water quality to support the environmental values of this water source.

Note. Appendix 3 details the objectives to which these performance indicators relate and the methods for assessing these indicators.

Water Sharing Plan for the Kangaroo River Water Source 2003

Part 3 Basis for water sharing

14 Basis for water sharing

This Part is made in order to give effect to section 5 (3) of the Act, and in accordance with sections 20 (2) (c) and 21 (e) of the Act.

15 Climatic variability

- (1) This Plan recognises climatic variability and therefore river flow variability in this water source.
- (2) To give effect to subclause (1), this Plan has provisions that manage:
 - (a) the sharing of water within the limits of water availability in this water source on a long-term average basis, and
 - (b) sharing of the flows that occur in this water source on a daily basis.

16 Extraction management unit

- (1) The availability of water for extraction from this water source on a long-term average basis will be determined at the level of an extraction management unit, which for the purpose of this Plan is the boundaries of the water source.
- (2) The extraction management unit of which this water source is part is known as the Kangaroo River Extraction Management Unit, and is shown on the map in Schedule 2.

17 Flow classes

This Plan establishes the following flow classes as the basis for sharing of daily flows:

- (a) very low flow class:
 - (i) at or less than 2.96 megalitres per day (hereafter *ML/day*) on a falling river and at or less than 4 ML/day on a rising river in the first year of this Plan,
 - (ii) at or less than 4 ML/day on a falling river and at or less than 5.4 ML/day on a rising river, in year 2 of this Plan, and
 - (iii) at or less than 5.4 ML/day on a falling river and at or less than 7 ML/day on a rising river in years 3 to 10 of this Plan.

Note. 2.96, 4 and 5.4 ML/day are referred to as the cease to pump on a falling river, and 4, 5.4, and 7 ML/day are referred to as the commence to pump on a rising river. The 7 ML/day corresponds to the estimated 95th percentile flows in the critical month.

Note. Provisions are established for access to the very low flows under clause 62.
- (b) A class:
 - (i) flows greater than 2.96 ML/day and at or less than 30 ML/day on a falling river, and flows greater than 4 ML/day and at or less than 30 ML/day on a rising river in the first year of this Plan,
 - (ii) flows greater than 4 ML/day and at or less than 30 ML/day on a falling river, and flows greater than 5.4 ML/day and at or less than 30 ML/day on a rising river in year 2 of this Plan, and

Water Sharing Plan for the Kangaroo River Water Source 2003

- (iii) flows greater than 5.4 ML/day and at or less than 30 ML/day on a falling river, and flows greater than 7 ML/day and at or less than 30 ML/day on a rising river in years 3 to 10 of this Plan.
- (c) B class flows greater than 30 ML/day and at or less than 118 ML/day, and
- (d) C class flows greater than 118 ML/day.

Note. The flow classes have been determined based on flow information that inherently includes seasonal effects as well as evaporation and seepage losses.

18 Flow reference point

For the purpose of this Plan, all flows referred to relate to the recorded flows at the flow reference point at the downstream end of this water source, as shown on the map in Schedule 2.

19 Determination of flow class

Announcement of daily flow classes will be made from time to time by the Minister based on the flow at the flow gauging station, at the flow reference point established in clause 18.

Water Sharing Plan for the Kangaroo River Water Source 2003

Part 4 Environmental water provisions

20 Environmental water provisions

This Part is made in accordance with sections 5 (3) and 8 (1), 8 (2) and 20 (1) (a) of the Act.

21 Environmental health water

- (1) Environmental health water is identified and established as follows:
 - (a) In very low flows:
 - (i) during years 1, 9 and 10 of this Plan, the flow occurring in this water source, minus 1.12 ML/day,
Note. 1.12 ML/day is the amount of water estimated at the commencement of this Plan for basic landholder rights extraction.
 - (ii) during year 2 of this Plan, the flow occurring in this water source, minus 3.12 ML/day,
Note. 3.12 ML/day is the amount of water estimated at the commencement of this Plan for basic landholder rights extraction and the very low flow total daily extraction limit.
 - (iii) during years 3 to 5 of this Plan, the flow occurring in this water source, minus 4.52 ML/day, and
Note. 4.52 ML/day is the amount of water estimated at the commencement of this Plan for basic landholder rights extraction and the very low flow total daily extraction limit.
 - (iv) during years 6 to 8 of this Plan, the flow occurring in this water source, minus 3.56 ML/day.
Note. 3.56 ML/day is the amount of water estimated at the commencement of this Plan for basic landholder rights extraction and the very low flow total daily extraction limit.
 - (b) In A class flows, the flow occurring in this water source minus 19.12 ML/day.
Note. 19.12 ML/day is the amount of water estimated at the commencement of this Plan for A class total daily extraction limit and basic landholder rights.
 - (c) In B class flows, the flow occurring in this water source minus 41.12 ML/day.
Note. 41.12 ML/day is the amount of water estimated at the commencement of this Plan for B class total daily extraction limit and basic landholder rights.
 - (d) In C class flows, the flow occurring in this water source minus 49.12 ML/day.
Note. 49.12 ML/day is the amount of water estimated at the commencement of this Plan for C class total daily extraction limit and basic landholder rights.
- (2) Environmental health water is maintained as follows:
 - (a) In very low flows:
 - (i) the holders of access licences are not permitted any access in years 1, 9 and 10 of this Plan,

 Water Sharing Plan for the Kangaroo River Water Source 2003

- (ii) during years 2 to 8 of this Plan, access licence holders listed on Schedule 5 may have limited access to very low flows in accordance with clause 62, and
 - (iii) persons exercising domestic and stock and native title basic landholder rights may take a combined total of up to 1.12 ML/day.
- Note.** The Minister may issue an order under section 328 of the Act to restrict the exercise of domestic and stock rights from this water source to protect the environment for reasons of public health, or to preserve basic landholder rights.
- (b) In A class, B class and C class flows:
 - (i) the holders of access licences have restricted access to water as specified in clause 46,
 - (ii) persons exercising domestic and stock and native title rights may take water, and
 - (iii) if the water taken under domestic and stock and native title rights is assessed to be exceeding 1.12 ML/day in this flow class the access to water for access licences shall be reduced in accordance with clause 50 to maintain the environmental water in this flow class.
 - (c) In all flow classes, limits are imposed on the availability of water in accordance with clauses 35 and 37, that protect a proportion of natural river flows for fundamental ecological needs from increases in long-term water extraction.

Note. These rules protect the water for the environment by limiting both the water extracted over the long term, and the rate of extraction of water in different flow ranges, thereby achieving the objectives of this Plan.

Note. This Plan recognises that the environmental health water provisions provide non-extractive benefits, for traditional Aboriginal, spiritual, social, customary and cultural use, and contributes to improved water quality.

22 Extraction by water supply works

Notwithstanding all other rights and conditions, extraction of water from a river by an approved water supply work is permitted only if there is visible flow in the river in the vicinity of the work.

23 Supplementary environmental water

At the commencement of this Plan, there is no water committed for specified environmental purposes in accordance with section 8 (1) (b) of the Act.

24 Adaptive environmental water

- (1) At any time an access licence holder may, by a process determined by the Minister, commit all or part of their licence as adaptive environmental water.
- (2) The conditions of the commitment specified in subclause (1):
 - (a) are to be established by the Minister,
 - (b) are to be specified on the licence, and
 - (c) shall be such as to ensure that there is a contribution to the objectives of this Plan.

Water Sharing Plan for the Kangaroo River Water Source 2003

- (3) At the commencement of this Plan there are no access licences committed to an environmental purpose in accordance with section 8 (1) (c) of the Act.

Water Sharing Plan for the Kangaroo River Water Source 2003

Part 5 Basic landholder rights

25 Basic landholder rights

This Part is made in accordance with sections 5 (3) and 20 (1) (b) of the Act.

Note. The Minister may issue an Order under section 328 of the Act to restrict the exercise of domestic and stock and native title rights from this water source to protect the environment, for reasons of public health, or to preserve basic landholder rights.

26 Domestic and stock rights

- (1) At the commencement of this Plan the water requirements of holders of domestic and stock rights are estimated to be a total of 1.047 ML/day.
- (2) This Plan recognises that the exercise of domestic and stock rights may increase during the term of this Plan.

Note. Increase in use of domestic and stock rights may occur as a result of an increase in the number of landholdings fronting rivers and lakes in this water source and/ or as a result of an increase of the exercise of basic landholder rights by existing landholders.

27 Native title rights

- (1) At the commencement of this Plan the water requirements of holders of native title rights is estimated to be a total of 0.073 ML/day.
- (2) This Plan recognises that the exercise of native title rights may increase during the term of this Plan.

Note. Increase in the use of native title rights may occur as a result of the granting of native title rights under the Commonwealth's *Native Title Act 1993*.

28 Harvestable rights

The requirement for water under harvestable rights is the amount of water owners of land are entitled to capture pursuant to the harvestable rights Order published in the NSW Government Gazette on 23 March 2001 under section 54 of the Act.

Water Sharing Plan for the Kangaroo River Water Source 2003

Part 6 Bulk access regime

29 Bulk access regime

- (1) This Part is made in accordance with section 20 (1) (e) of the Act.
- (2) This Plan establishes a bulk access regime for the extraction of water under access licences in this water source having regard to:
 - (a) the environmental water provisions established under Part 4 of this Plan,
 - (b) the requirements for basic landholder rights identified under Part 5 of this Plan, and
 - (c) the requirements for water for extraction under access licences identified under Part 7 of this Plan.
- (3) The bulk access regime established in subclause (2):
 - (a) recognises the effect of climatic variability on the availability of water as provided for under Part 3 of this Plan,
 - (b) establishes rules according to which access licences are granted as provided for in Part 8 of this Plan,
 - (c) recognises and is consistent with limits to the availability of water as provided for in Part 9, Division 1 of this Plan,
 - (d) establishes rules according to which available water determinations are to be made as provided for in Part 9 Division 2 of this Plan,
 - (e) establishes rules according to which access licences are managed as provided for in Part 10 of this Plan, and
 - (f) establishes rules with respect to the priorities according to which access licences are to be adjusted as a consequence of any reduction in the availability of water as provided for in Parts 9 and 10 of this Plan.

Water Sharing Plan for the Kangaroo River Water Source 2003

Part 7 Requirements for water under access licences

30 Requirements for water under access licences

This Part is made in accordance with section 20 (1) (c) of the Act.

Note. The amount of water specified in this Part represents the total volumes specified on access licences in this water source. It is not a commitment to supply that water.

31 Estimate of water requirements

- (1) It is estimated that at the time of commencement of Part 2 of Chapter 3 of the Act in the area in respect of which this Plan is made, the requirements identified for water for extraction under access licences within this water source will total approximately 4,313 megalitres per year (hereafter *ML/yr*).
- (2) It is estimated that at the time of commencement of Part 2 of Chapter 3 of the Act in the area in respect of which this Plan is made, there will be several runoff harvesting access licences in this water source, that will have their access licence share component expressed as the water that can be extracted from time to time from the approved works.
- (3) This Plan recognises that the total requirements for water for extraction within this water source may change during the term of this Plan as a result of:
 - (a) the granting, surrender, cancellation or non-renewal of access licences, or
 - (b) variations to local water utility licences arising from sections 66 (3) or 66 (4) of the Act.

Water Sharing Plan for the Kangaroo River Water Source 2003

Part 8 Rules for granting access licences

32 Rules for granting access licences

- (1) This Part is made in accordance with sections 20 (2) (b) and 63 of the Act, having regard to the limits to water availability in this water source and the need to protect the ecological health of the river.
- (2) Access licences may be granted in this water source subject to any embargo on the making of applications for access licences made under Chapter 3 Part 2 Division 7 of the Act.
- (3) The Minister should declare an embargo on the making of applications for access licences in this water source, other than access licences of the following kinds:

Note. Pursuant to sections 66 (3) and 66 (4) of the Act, the Minister may also vary a local water utility's share component at 5 year intervals, or on application of the local water utility where there is rapid growth in population.

- (a) an access licence resulting from an application of a type listed in section 82 (1) of the Act,
- (b) unregulated river (Aboriginal cultural) access licences where:
 - (i) the share component does not exceed 10 ML/yr per application, and
 - (ii) the individual daily extraction limit is assigned in proportion to the share component and the cumulative daily extraction limit assigned to this category of licence does not exceed 0 ML/day in very low flows during years 1, 9 and 10 of this Plan, 0.006 ML/day in very low flows during year 2 of this Plan, 0.009 ML/day in very low flows during years 3 to 8 of this Plan, 0.050 ML/day in A class flows, 0.112 ML/day in B class flows, and 0.134 ML/day in C class flows, or
- (c) unregulated river (research) access licences where:
 - (i) the share component does not exceed 10 ML/yr per application, and
 - (ii) the individual daily extraction limit is assigned in proportion to the share component and the cumulative daily extraction limit assigned to this category of licence does not exceed 0 ML/day in very low flows during years 1, 9 and 10 of this Plan, 0.006 ML/day in very low flows during year 2 of this Plan, 0.009 ML/day in very low flows during years 3 to 8 of this Plan, 0.050 ML/day in A class flows, 0.112 ML/day in B class flows, and 0.134 ML/day in C class flows.
- (4) In applying for a new access licence, the applicant must establish the purpose and circumstances relating to that access licence, and that the share and extraction components sought will be the minimum required to meet that purpose and circumstance.
- (5) Subclause (4) does not apply to a new access licence arising from an application of a type listed in section 82 (1) of the Act.
- (6) Any individual daily extraction limit (hereafter *IDEL*) granted in accordance with this clause cannot exceed the IDEL initially assigned to an equivalent share component for that category of access licence, as varied by clause 50.

Water Sharing Plan for the Kangaroo River Water Source 2003

- (7) In accordance with section 56 of the Act, all access licences in this water source shall have a share component expressed as a volume in ML/yr.
- (8) Notwithstanding subclause (7), runoff harvesting access licences may have the share component expressed either as a volume in ML/yr or in terms of the amount of water that can be extracted from time to time from the specified works.

Water Sharing Plan for the Kangaroo River Water Source 2003

Part 9 Limits to the availability of water

Division 1 Long-term average extraction limit

33 Limits to the availability of water

This Division is made in accordance with section 20 (2) (a) of the Act.

34 Extraction management unit

Management of the long-term extraction of water from this water source will be undertaken in the context of the Kangaroo River Extraction Management Unit (hereafter *this Unit*) referred to in clause 16 (2).

35 Long-term average extraction limit

The long-term average extraction limit for this water source will be the total of:

- (a) the quantity of water specified in conditions attached to or included in entitlements issued under Part 2 of the *Water Act 1912* in this water source, immediately prior to the commencement of Part 2 of Chapter 3 of the Act for this water source, and
- (b) an estimate of annual extraction of water under domestic and stock rights, and native title rights, in this water source at the commencement of this Plan.

36 Variation of the long-term average extraction limit

The long-term average extraction limit of this Unit may be varied by the Minister if dealings under Part 11 of this Plan result in the issuing, surrender or cancellation of access licences in this Unit.

Division 2 Available water determinations

37 Available water determinations

- (1) This Division is made in accordance with section 20 (2) (b) of the Act.
- (2) In making an available water determination under section 59 of the Act, the Minister should consider the following rules:
 - (a) water extraction in this Unit will be monitored in each water accounting year to determine if there is any growth in volumes extracted above the extraction limit specified in clause 35, based on comparison of the extraction limit against the average extraction within this Unit over that year and the preceding 2 years,
Note. A water accounting year is defined in clause 42 (3).
 - (b) if water that, pursuant to an access licence, is committed as adaptive environmental water to be left in a river for environmental purposes, then for the purpose of subclause (a), the extraction shall be assumed to be 100% of the available water determination,
 - (c) if water that, pursuant to an access licence, is committed as adaptive environmental water to be extracted for environmental purposes, then for the

Water Sharing Plan for the Kangaroo River Water Source 2003

- purpose of subclause (a), the extraction will be that measured through the approved water supply work,
- (d) for all access licences, an initial available water determination, of such volume of water as is equivalent to two times the access licence share component, should be made on 1 July 2003, and such determination should apply for one water accounting year,
 - (e) from 1 July 2004, available water determinations for local water utility and domestic and stock access licences should be of such volume of water as is equivalent to the access licence share component, with priority given to making this water available above the making of water available to all other categories of access licence, and such determinations should be made annually,
 - (f) from 1 July 2004, available water determinations for unregulated river access licences, including all subcategories, should be such volume of water as is equivalent to the access licence share component, except as provided in subclauses (g) and (h), and such determinations should be made annually,
 - (g) if the 3 year average of extraction in this Unit exceeds the long-term average extraction limit established in clause 35 by 5% or greater, then the available water determination for the following water accounting year for unregulated river access licences in this water source should be reduced by an amount that is necessary by the Minister to return subsequent total water extraction to the long-term average extraction management limit,
 - (h) if the 3 year average of extraction in this Unit is less than 95% of the long-term average extraction limit established in clause 35, the available water determination for unregulated river access licences in this water source should be increased to such an extent as to allow extraction to that extraction limit,
 - (i) notwithstanding subclause (h), the available water determination shall not exceed 100% of total access licence share components,
 - (j) a new available water determination for unregulated river access licences determined under subclause (g) or (h) should be repeated for each of the subsequent two water accounting years unchanged in quantity, and
 - (k) available water determinations for runoff harvesting access licences should be made annually and should be either the access licence share component or the water that can be extracted from time to time from the approved works, depending on the manner in which the share component is expressed on the licence.

Water Sharing Plan for the Kangaroo River Water Source 2003

Part 10 Rules for managing access licences

Division 1 General

38 Rules for managing access licences

This Part is made in accordance with sections 20 (2) (b), 21 (a) and 21 (c) of the Act, having regard to:

- (a) the environmental water rules established in Part 4 of this Plan,
- (b) requirements for water to satisfy basic landholder rights identified in Part 5 of this Plan, and
- (c) requirements for water for extraction under access licences in Part 7 of this Plan.

Division 2 Water allocation account management

39 Water allocation account management

This Division is made in accordance with sections 20 (2) (b) and 21 (c) of the Act.

40 Water allocation accounts

In accordance with section 85 of the Act, a water allocation account shall be established for each access licence in this water source.

Note. Water allocations may be assigned to, or from, these accounts by a water allocation assignment made under section 71G of the Act, where these are allowed under rules specified in Part 11 of this Plan.

Note. Water allocations may also be recredited to these accounts in accordance with section 76 of the Act, subject to the operation of a return flows scheme established under section 75 of the Act.

41 Accrual of water allocations

Water allocations will be accrued into water allocation accounts in accordance with the Minister's available water determinations as specified in clause 37.

42 Annual accounting for water extraction

- (1) Water taken from this water source shall be accounted for at least annually.
- (2) Water extracted by a water supply work nominated by an access licence is taken to be extracted and shall be periodically debited against the access licence water allocation account.
- (3) A water accounting year shall be the 12 month period commencing 1 July.
- (4) The maximum water allocation that can be carried over from one water accounting year to the next is as follows:
 - (a) 100% of the access licence share component from 2003/4 to 2004/5,
 - (b) 200% of the access licence share component from 2004/5 to 2005/6, and
 - (c) thereafter, the sum of the previous two available water determinations.

Water Sharing Plan for the Kangaroo River Water Source 2003

- (5) Notwithstanding subclause (4) total water in any water allocation account cannot exceed 3 times the share component of the access licence:
 - (a) plus any water allocations assigned from another licence by a water allocation assignment under section 71G of the Act in that year,
 - (b) plus any water allocations recredited in accordance with section 76 of the Act in that year, and
 - (c) minus any water allocations assigned to another licence by a water allocation assignment under section 71G of the Act in that year.
- (6) In any one water accounting year, water taken from this water source under an access licence may not exceed a volume consisting of:
 - (a) twice the water allocation accrued under the licence that year,
 - (b) plus any water allocations assigned from another licence by a water allocation assignment under section 71G of the Act in that year,
 - (c) plus any water allocations recredited in accordance with section 76 of the Act in that year, and
 - (d) minus any water allocations assigned to another licence, by a water allocation assignment under section 71G of the Act in that year.
- (7) A water allocation account shall remain at or above zero at all times.

43 Three year accounting for water extraction

- (1) Water taken from this water source in any 3 consecutive water accounting years under an access licence may not exceed a volume consisting of:
 - (a) the water allocations accrued under the licence in those years,
 - (b) plus any water allocations assigned from another licence by a water allocation assignment under section 71G of the Act in those years,
 - (c) plus any water allocations recredited in accordance with section 76 of the Act in those years, and
 - (d) minus any water allocations assigned to another licence, by a water allocation assignment under section 71G of the Act in those years.
- (2) Notwithstanding subclause (1), water taken under an access licence from this water source in the first 3 water accounting years of this Plan may not exceed a volume consisting of:
 - (a) 3 times the share component of the access licence,
 - (b) plus any water allocations assigned from another licence by a water allocation assignment under section 71G of the Act in those three years,
 - (c) plus any water allocations recredited in accordance with section 76 of the Act in those years, and
 - (d) minus any water allocations assigned to another licence, by a water allocation assignment under section 71G of the Act in those years.

Water Sharing Plan for the Kangaroo River Water Source 2003

Division 3 Sharing flows on a daily basis

44 Sharing flows on a daily basis

This Division is made in accordance with sections 20 (2) (b) and 21 (a) of the Act.

45 Total daily extraction limits

- (1) This Plan establishes a total daily extraction limit (hereafter **TDEL**) for each flow class as follows:
 - (a) 0 ML/day during years 1, 9 and 10 of this Plan, 2 ML/day during year 2 of this Plan, 3.4 ML/day during years 3 to 5 of this Plan and 2.44 ML/day during years 6 to 8 of this Plan for the very low flow class,
Note. Limited access to very low flows by water users is provided under clause 62 for the first 8 years of this Plan.
 - (b) 18 ML/day for A class,
 - (c) 40 ML/day for B class, and
 - (d) 48 ML/day for C class.

Note. These flows represents 50% of very low flows during year 2 of this Plan, 63% of very low flows during years 3 to 5 of this Plan, 45% of very low flows during years 6 to 8 of this Plan, 60% of the top of A class flows, 34% of the top of B class flows and in C class flows 23% of the 30th percentile flows in December.
- (2) The TDEL for each flow class specified in subclause (1) applies to all rivers within this water source apart from those rivers identified as minor streams in a harvestable right order made under section 54 of the Act.

Note. The harvestable rights order applying to this area at the commencement of this Plan is that gazetted on 23 March 2001 under section 54 of the Act. It identifies minor streams as non-permanent 1st and 2nd order streams as shown on topographic maps.

46 Initial assignment of the TDEL to categories of access licence

The TDEL for each flow class will initially be assigned to categories of access licences according to the following:

- (a) Domestic and stock access licences:
 - (i) 0 ML/day of the very low flow class during year 1, 9 and 10 of this Plan,
 - (ii) 0.030 ML/day of the very low flow class during year 2 of this Plan,
 - (iii) 0.051 ML/day of the very low flow class during years 3 to 5 of this Plan,
 - (iv) 0.038 ML/day of the very low flow class during years 6 to 8 of this Plan,
 - (v) 0.272 ML/day of A class,
 - (vi) 0.605 ML/day of B class, and
 - (vii) 0.726 ML/day of C class.
- (b) Local water utility access licences:

Water Sharing Plan for the Kangaroo River Water Source 2003

- (i) 0 ML/day of the very low flow class during years 1, 9 and 10 of this Plan,
 - (ii) 0.040 ML/day of the very low flow class during year 2 of this Plan,
 - (iii) 0.067 ML/day of the very low flow class during years 3 to 5 of this Plan,
 - (iv) 0.048 ML/day of the very low flow class during years 6 to 8 of this Plan,
 - (v) 0.356 ML/day of A class,
 - (vi) 0.791 ML/day of B class, and
 - (vii) 0.949 ML/day of C class.
- (c) Unregulated river access licences:
- (i) 0 ML/day of the very low flow class during year 1, 9 and 10 of this Plan,
 - (ii) 1.919 ML/day of the very low flow class during year 2 of this Plan,
 - (iii) 3.262 ML/day of the very low flow class during years 3 to 5 of this Plan,
 - (iv) 2.34 ML/day of the very low flow class during years 6 to 8 of this Plan,
 - (v) 17.272 ML/day of A class,
 - (vi) 38.381 ML/day of B class, and
 - (vii) 46.058 ML/day of C class.
- (d) Unregulated river (Aboriginal cultural) access licences:
- (i) 0 ML/day of the very low flow class during year 1, 9 and 10 of this Plan,
 - (ii) 0.006 ML/ day in very low flows during year 2 of this Plan,
 - (iii) 0.009 ML/day in very low flows during years 3 to 5 of this Plan,
 - (iv) 0.007 ML/day in very low flow during years 6 to 8 of this Plan,
 - (v) 0.05 ML/ day in A class flows,
 - (vi) 0.112 ML/ day in B class flows, and
 - (vii) 0.134 ML/ day in C class flows.
- Note.** Where this category of licence is granted, and IDELs are issued in A, B or C class flows, pursuant to section 42 (2) of the Act and the provisions of clause 50, the TDEL for the licences in clause 46 (c) (iii), (iv) and (v) may be reduced.
- (e) Unregulated river (research) access licence:
- (i) 0 ML/day of the very low flow class during year 1, 9 and 10 of this Plan,
 - (ii) 0.006 ML/ day in very low flows during year 2 of this Plan,
 - (iii) 0.009 ML/day in very low flows during years 3 to 5 of this Plan,

Water Sharing Plan for the Kangaroo River Water Source 2003

- (iv) 0.007 ML/day in very low flow during years 6 to 8 of this Plan,
- (v) 0.05 ML/ day in A class flows,
- (vi) 0.112 ML/ day in B class flows, and
- (vii) 0.134 ML/ day in C class flows.

Note. Where this category of licence is granted, and IDELs are issued in A, B or C class flows, pursuant to section 42 (2) of the Act and the provisions of clause 50, the TDEL for the licences in clause 46 (c) (iii), (iv) and (v) may be reduced.

47 Unassigned TDEL

At the commencement of this Plan, there is no unassigned TDEL.

Note. Unassigned TDEL may increase as a result of the surrender, cancellation or non-renewal of an access licence's IDELs, or the operation of Part 8 of this Plan.

48 Daily extraction limits for individual access licence holders

- (1) Each access licence requiring an IDEL, as specified in Part 12 of this Plan, is assigned the same proportion of the TDEL specified in clause 46 as its share component bears to all the share components of access licences of that category.
- (2) Notwithstanding subclause (1), in relation to those access licences that are currently excluded from a flow class or part of a flow class by existing conditions on the access licence or the water supply work approval nominated by the access licence, the IDEL resulting from subclause (1) will be adjusted to reflect as far as possible such an exclusion.

49 Granting of unassigned TDEL

- (1) Any unassigned TDEL may be assigned to access licences in the following circumstances:
 - (a) where they are applied for as part of a new access licence application, or
 - (b) to a local water utility access licence where the Minister varies the access licence in accordance with sections 66 (3) or 66 (4) of the Act.
- (2) Where additional IDELS are assigned to an access licence in accordance with this clause, the amount of IDEL so assigned shall be determined by the Minister consistent with the ratios of share component to IDEL for the specific category of access licence as initially assigned under clause 48, as amended by clause 50.

50 Adjustment to TDELS and IDELS

- (1) Where IDELS are assigned under clause 49 any unassigned TDEL is reduced accordingly, and the TDEL assigned to the appropriate licence category in clause 46 is increased accordingly.
- (2) Pursuant to section 42 (2) of the Act, if total extraction of water under domestic and stock or native title rights exceeds the level specified in Part 5 of this Plan:
 - (a) first, any unassigned TDEL then, if necessary, the TDEL for unregulated river access licences in clause 46 (c) shall be diminished to allow these additional basic landholder rights to be met, and
 - (b) the IDELS of each unregulated river access licence will then be reduced to comply with this diminished TDEL.

 Water Sharing Plan for the Kangaroo River Water Source 2003

- (3) Pursuant to section 42 (2) of the Act, if any unassigned TDEL cannot meet either:
- (a) the IDEL requirements of applicants for new access licences for domestic and stock access, unregulated river (Aboriginal cultural) access or unregulated river (research) access, or
 - (b) a local water utility's IDEL requirements,
- then the TDEL for unregulated river access licences in clause 46 (c) will be diminished to such an extent as to allow those requirements to be met.
- (4) Following an adjustment to the TDEL for unregulated river access licences in subclause (3) the IDELs of each unregulated river access licence will then be reduced to comply with this diminished TDEL.
- (5) Any adjustment to unregulated river access licence IDELs arising from this clause will be done at intervals of no greater than 5 years.
- (6) If water that, pursuant to an access licence:
- (a) is committed to adaptive environmental water, then the TDEL for classes specified on the committed access licence in the specified category, will be increased by the IDEL on the access licence so committed and clauses 45 and 46 adjusted accordingly, or
 - (b) is uncommitted to adaptive environmental water, then the TDEL for classes specified on the committed access licence in the specified category will be increased by the IDEL on the access licence so uncommitted and clauses 45 and 46 adjusted accordingly.

51 Administrative arrangements for managing access to daily flows

Notwithstanding the forgoing provisions of this Division, this Plan provides that access licences may be managed as a group with respect to the IDELs, subject to the following rules:

- (a) all access licences (excepting local water utility licences) with IDELs shall be made part of a group established and maintained by the Minister at the time when IDELs are first assigned under clause 48,
- (b) access licence holders have the right to have their access licence removed from the group, in which case they shall be permitted to extract under that access licence a maximum of the licensed IDEL,
- (c) where an access licence is removed or added to a group, the group combined IDEL shall be adjusted by the amount of IDEL on the subject access licence,
- (d) access licence holders may make a request to form a group for their access licences,
- (e) daily extraction under all access licences within a group will be assessed as a whole against the combined IDELs,
- (f) daily extraction by a group cannot exceed the combined IDELs of all access licences in the group,
- (g) where it been assessed that a holder of a licence within a group is repeatedly causing the combined IDEL to be exceeded then the Minister may remove that licence from the group,

Water Sharing Plan for the Kangaroo River Water Source 2003

- (h) where daily extraction by a group exceeds the combined IDELs of all access licences in the group, then the Minister may dissolve the group and require each access licence holder to comply with the licensed IDELs,
- (i) should a holder of an access licence which is part of a group commit the IDELs of that access licence to the environment consistent with section 8 (1) (c) of the Act, then those IDELs shall be removed from the group,
- (j) an access licence may not be in more than one group, and
- (k) the Minister may refuse to allow an access licence to be included in a group, and may refuse a request to form a group.

52 Infrastructure failure

In the event of infrastructure failure, the Minister can elect to:

- (a) continue to announce the current flow class,
- (b) announce another flow class based on climatic conditions and any other flow gauging information, or
- (c) restrict access to water to the lowest flow class.

Note. Infrastructure is defined in the dictionary.

Note. If satisfied that it is necessary to do so in the public interest, the Minister may direct the holders of an access licence to cease using a water supply work in accordance with section 323 of the Act.

Water Sharing Plan for the Kangaroo River Water Source 2003

Part 11 Access licence dealing rules

53 Access licence dealing rules

- (1) This Part is made in accordance with section 20 (1) (d) of the Act and with the Minister's access licence dealing principles gazetted on 27 December 2002 under section 71L of the Act.

Note. The Minister's access licence dealing principles are contained in Appendix 4.

- (2) Applications for access licence dealings may be granted subject to the Minister's access licence dealing principles gazetted from time to time under section 71L of the Act and the rules in this Part.

Note. There are a number of mechanisms within the Act, called access licence dealings, to change either the ownership of all or part of an access licence, or the location within a water source at which all or part of the share and extraction components of access licences can be exercised. These dealings are governed by the principles in section 5 of the Act, the Minister's access licence dealing principles, and the rules in this Part.

Note. Where there is an inconsistency between access licence dealing rules established in this Plan and Minister's access licence dealing principles gazetted subsequent to the commencement of this Plan, section 71L of the Act provides for the access licence dealing rules in this Plan to prevail.

54 Rules relating to constraints within this water source

- (1) This clause applies to any relevant dealings under sections 71D, 71F and 71J of the Act, and section 71G of the Act with respect to water allocation assignments within this water source.
- (2) Dealings are prohibited under this clause if:
 - (a) any of the access licences or water allocations involved are not within this water source,

Note. Clause 56 relates to any dealings that involve an access licence moving from one water source to another.

- (b) the dealing would result in an increase in the total access licence share components nominating works in the escarpment zone above the 500 metre contour on 1:25 000 topographic maps Kangaroo Valley 9028-4-S, Robertson 9028-4-N and Bundanoon 8928-1-S to more than a total of 1,257 ML in any one year, or
- (c) the dealing would result in an increase in the total access licence extraction components nominating works in the escarpment zone above the 500 metre contour on 1:25 000 topographic maps Kangaroo Valley 9028-4-S, Robertson 9028-4-N and Bundanoon 8928-1-S to more than the following:
 - (i) 0 ML/day of very low flows during years 1, 9 and 10 of this Plan,
 - (ii) 0.58 ML/day of very low flows during year 2 of this Plan,
 - (iii) 0.986 ML/day of very low flows during years 3 to 8 of this Plan,
 - (iv) 5.22 ML/day of A class flows,

Water Sharing Plan for the Kangaroo River Water Source 2003

- (v) 11.6 ML/day of B class flows, or
- (vi) 13.92 ML/day of C class flows.

55 Rules for access licence dealings which alter the times, rates or circumstances specified in access licence extraction components

Notwithstanding clause 54, applications under section 71F of the Act to vary the times, rates or circumstances specified in an access licence with respect to the taking of water under the licence are prohibited.

56 Rules for change of water source

- (1) This clause relates to dealings under section 71E of the Act.

Note. Section 71E dealings are the mechanism by which access licences can move from one water source to another. Once the change in water source has been affected, if permitted, the new licence will have to nominate specified works (by a dealing under section 71J of the Act) in the receiving water source before extraction can commence.

- (2) Dealing under section 71E of the Act are prohibited in this water source.
- (3) An access licence with a share component specifying this water source may be cancelled and a new access licence issued only if the access licence dealing rules in the other water source permit such a dealing, and the access licence cancelled is in Bugong Creek, Bomaderry Creek, Shoalhaven Estuary, Jaspers Brush or Broughton Creek.
- (4) The volume of share component on an access licence issued under this clause is to be the volume of the cancelled share component multiplied by a conversion factor established by the Minister, and published in an Order made under section 71L of the Act, that protects environmental water, basic landholder rights, and the reliability of supply to all other access licences subject to this Plan.
- (5) The extraction component of the cancelled access licence is not to be carried over to the new access licence.

57 Rules for conversion of access licence category

- (1) This clause relates to dealings under section 71B of the Act.
- (2) Conversion of an access licence of one category to an access licence of another category may be permitted only if:
 - (a) the conversion is from an unregulated river access licence to a runoff harvesting access licence, or
 - (b) the conversion is from domestic and stock access licence to an unregulated river access licence.

Note. Any access to very low flows previously possible under the domestic and stock access licence will not be carried over to the new unregulated river access licence.

- (3) The volume of share component on an access licence issued under this clause is to be the volume of the cancelled share component multiplied by a conversion factor established by the Minister, and published in an Order made under section 71L of the Act, that protects environmental water, basic landholder rights, and the reliability of supply to all other access licences subject to this Plan.

Water Sharing Plan for the Kangaroo River Water Source 2003

58 Rules for interstate access licence transfer

- (1) This clause relates to dealings under section 71H of the Act.
- (2) Dealings that result in the interstate transfer of an access licence into or out of this water source are prohibited.

59 Rules for water allocation assignments between water sources

- (1) This clause relates to dealings under section 71G of the Act, in relation to water allocation assignments between water sources.
- (2) Dealings under section 71G of the Act that result in water allocation assignments to or from access licences in this water source to an access licence in another water source are prohibited unless provided for in this clause.

60 Rules for interstate assignment of water allocations

- (1) This clause relates to dealings under section 71I of the Act.
- (2) Dealings that result in interstate assignment of water allocations to or from this water source are prohibited.

Water Sharing Plan for the Kangaroo River Water Source 2003

Part 12 Mandatory conditions

61 Mandatory conditions on access licences

- (1) This Part is made in accordance with section 17 (c) and 20 (2) (e) of the Act.
- (2) All access licences shall have mandatory conditions to give effect to the following:
 - (a) the specification of the share component of the access licence,
 - (b) the specification of the extraction component of the access licence, including IDELs arising from the operation of Part 10 Division 3 of this Plan where applicable, and the variation thereof,
 - (c) the requirement that extraction under the access licence will be subject to the available water determination,
 - (d) the requirement that extraction under the access licence will be subject to the water allocation account management rules established in Part 10 Division 32 of this Plan,
 - (e) the requirement that the taking of water in accordance with the access licence will only be permitted if the resulting debit from the access licence water allocation account will not exceed the volume of water allocation remaining in the account,
 - (f) the requirement that water may only be taken under the access licence by the water supply work nominated by the access licence, and
 - (g) any other conditions required to implement the provisions of this Plan.

62 Access to very low flows

Access licence holders on Schedule 5 may extract water during very low flows in accordance with clause 46 to 48 in the following circumstances:

- (a) access to very low flows shall only be available during years 2 to 8 of this Plan in accordance with subclauses (b) to (f),
- (b) extraction in the very low flow class can commence on the next day following 7 consecutive days of cease to pump flow conditions referred to in clause 17 (a),
- (c) the volume of water that may be extracted in the very low flow class is limited to a proportion of the TDEL identified at clause 46 available as an IDEL to that access licence, or to the combined very low flow class IDEL of all access licences within an approved group,
- (d) extraction from the very low flow class shall cease when:
 - (i) flow is at or below 2 ML/day (for years 2 to 5 of this Plan) and 2.96 ML/day (for years 6 to 8 of this Plan) at the flow reference point, or
 - (ii) after 10 days of consecutive access to very low flows, orwhich ever circumstance occurs first,
- (e) the count for the 7 consecutive days of very low flow access referred to in clause (b) can only recommence once flows recorded at the flow reference point reach:

Water Sharing Plan for the Kangaroo River Water Source 2003

- (i) 5.4 ML/day in year 2 of this Plan, or
- (ii) 7 ML/day in years 3 to 8 of this Plan, and
- (f) if an access licence on Schedule 5 is cancelled, not renewed, or is assigned elsewhere, then it shall be removed from the Schedule.

63 Unregulated river access licences

All unregulated river access licences shall have mandatory conditions to give effect to the following:

- (a) water may only be taken in accordance with a flow class determined by the Minister, at a rate not exceeding that specified for the flow class on the access licence extraction component, unless otherwise authorised by an approved group, and
- (b) notwithstanding subclause (a), water may be taken without any restrictions in rate from an in-river dam while the dam is passing all inflows.

64 Local water utility access licences

All local water utility access licences shall have mandatory conditions to give effect to the following:

- (a) water may only be taken for the purposes of supplying water for the exercise of a water supply function of the local water utility or for other such purpose provided for under the Act,
- (b) water may only be taken in accordance with a flow class determined by the Minister, at a rate not exceeding that specified for the flow class on the access licence extraction component, and
- (c) notwithstanding subclause (b), water may be taken without any restrictions in rate from an in-river dam while the dam is passing all inflows.

65 Domestic and stock access licences

All domestic and stock access licences shall have mandatory conditions to give effect to the following:

- (a) water may only be taken for the purposes of domestic consumption or stock watering as defined in section 52 of the Act,
- (b) water may only be taken in accordance with a flow class determined by the Minister, at a rate not exceeding that specified for the flow class on the access licence extraction component, unless otherwise authorised by an approved group,
- (c) notwithstanding subclause (b), water may be taken without any restrictions in rate from an in-river dam while the dam is passing all inflows, and
- (d) the conditions in subclauses (b) and (c) are not to be imposed if the extraction component of the access licence specifies that water may only be taken from a runoff harvesting dam.

Water Sharing Plan for the Kangaroo River Water Source 2003

66 Runoff harvesting access licences

All runoff harvesting access licences shall have a mandatory condition imposed on them stating that water may be taken without restriction in rate, but only from the specified work.

67 Unregulated river (Aboriginal cultural) access licences

All unregulated river (Aboriginal cultural) access licences shall have mandatory conditions to give effect to the following:

- (a) water shall only be taken for Aboriginal personal, domestic and communal purposes including the purposes of drinking, food preparation, washing, manufacturing traditional artefacts, watering domestic gardens, hunting, fishing, and gathering, and for recreational, cultural and ceremonial purposes,
- (b) water may only be taken in accordance with a flow class determined by the Minister, at a rate not exceeding that specified for the flow class on the access licence extraction component, unless otherwise authorised by an approved group,
- (c) notwithstanding subclause (b), water may be taken without any restrictions in rate from an in-river dam while the dam is passing all inflows, and
- (d) the conditions in subclauses (b) and (c) are not to be imposed if the extraction component of the access licence specifies that water may only be taken from a runoff harvesting dam.

68 Unregulated river (research) access licences

All unregulated river (research) access licences shall have mandatory conditions to give effect to the following:

- (a) water shall only be taken for the purpose of scientific research, experimentation or teaching by accredited tertiary institutions, government bodies or other approved organisations, where any primary production resulting from the research program is not sold for profit,
- (b) water may only be taken in accordance with a flow class determined by the Minister, at a rate not exceeding that specified for the flow class on the access licence extraction component, unless otherwise authorised by an approved group,
- (c) notwithstanding subclause (b), water may be taken without any restrictions in rate from an in-river dam while the dam is passing all inflows, and
- (d) the conditions in subclauses (b) and (c) are not to be imposed if the extraction component of the licence specifies that water may only be taken from a runoff harvesting dam.

69 Mandatory conditions on water supply works approvals

All approvals for water supply works in this water source shall have mandatory conditions to give effect to the provisions of this Plan in relation to the following:

- (a) flow measurement devices:

Water Sharing Plan for the Kangaroo River Water Source 2003

- (i) shall be installed and maintained on all works used for extraction of water under an access licence, and
- (ii) shall be of a type and shall be maintained in a manner which is acceptable to the Minister,
- (b) water extraction and property water management infrastructure details shall be provided to the Minister on request,
- (c) it is the responsibility of the work approval holder to ascertain from the Minister the flow class at any time before commencing to take water under an access licence with an IDEL,
- (d) notwithstanding all other rights and conditions, extraction of water from a river by an approved water supply work is not permitted if there is no visible flow in the river in the vicinity of the work,
- (e) extraction under an access licence through an approved work is only authorised with respect to the access licences specified on the work approval,
- (f) approvals for in-river dams must include a condition requiring the passing of such flows as the Minister determines to be appropriate to achieve the objectives of this Plan,
- (g) in accordance with clause 72, where the Minister finds that the water supply work modifies or will modify flow adversely and recommends that the work is retained, mandatory conditions shall be placed on the water supply work approval to ensure that the operation of the water supply work reflects the objectives of this Plan, and
- (h) all applications for an approval to modify or to renew a water supply work on a river that may inhibit fish passage shall require a fishway.

Water Sharing Plan for the Kangaroo River Water Source 2003

Part 13 Granting and amending water supply works approvals

70 Granting and amending water supply works approvals

This Part is made in accordance with section 21 (b) of the Act.

71 Runoff harvesting dams

- (1) New or expanded runoff harvesting dams shall, in addition to other considerations, be subject to the dam capacity not exceeding that which is consistent with the access licence share component specifying the runoff harvesting dam as the nominated work.
- (2) When the water allocations that may be taken from a runoff harvesting dam are reduced either by the Minister, or on application of the approval holder, or by an assignment in accordance with Part 11 of this Plan, the Minister may impose an additional condition requiring the dam to be modified so as to reduce its capacity, or requiring the water taken and evaporated from the dam to be reduced, consistent with the reduction in water allocations available.

Note. Extraction of water from a runoff harvesting dam requires a runoff harvesting access licence, unless the runoff harvesting dam is within the maximum harvestable right dam capacity for the property on which it is located, in which case no licences or approvals are required. Runoff harvesting is a category of access licence to be established by regulation under section 57 (k) of the Act.

72 Rules for granting other water supply works approvals

- (1) No new in-river dams shall be approved within this water source.

Note. Taking of water from an in-river dam requires an access licence unless it is taken in accordance with section 52 of the Act (domestic and stock rights). In either case, however, the dam requires a water management works approval unless exempted by regulation under the Act.
- (2) The Minister, when considering any application for the renewal of a water supply works approval under section 104 (2) of the Act, that obstructs the flow in a river, should consider whether:
 - (a) the originally authorised purpose of the water supply work continues to apply, and
 - (b) the water supply work fulfils an economic or social purpose, or has geomorphological integrity, ecological health or heritage values.
- (3) If the Minister considers that the water supply work no longer meets its original authorised purpose or does not fulfil the purposes or values outlined in subclause (2) (b), the Minister may refuse to renew the approval and cause the work to be removed or modified unless the retention of the work can be justified on the basis of geomorphological integrity, ecological health and heritage values.
- (4) If the Minister considers that the approval should be renewed, the Minister may place mandatory conditions on the approval where necessary, for the water supply work to be modified or other such directions, to ensure that the work meets the objectives of this Plan.

Water Sharing Plan for the Kangaroo River Water Source 2003

Part 14 Monitoring and reporting

73 Monitoring and reporting of performance indicators

The monitoring and reporting of the performance indicators specified in clause 13 shall be undertaken by the Minister.

Note. Review and Audit of this Plan

In accordance with section 43 (2) of the Act, this Plan is to be reviewed, within the fifth year of its term, for the purpose of ascertaining whether its provisions remain adequate and appropriate for ensuring the effective implementation of the water management principles of the Act.

In accordance with section 44 of the Act, this Plan will be audited at intervals of no more than five years, for the purpose of ascertaining whether its provisions are being given effect to. This audit is to be carried out by an audit panel appointed by the Minister in consultation with a water management committee, where one exists.

Note. Implementation Program

In accordance with section 51 of the Act, the Minister may establish an Implementation Program that sets out the means by which the provisions of this Plan are to be achieved.

It is proposed that the Minister establish an Implementation Program for this Plan. Pursuant to section 52 (5) of the Act, the implementation program is to be reviewed annually by the Minister to determine whether it is effective in implementing this Plan.

The results of the review of the Implementation Program will be included in the annual report for the Department of Land and Water Conservation.

Water Sharing Plan for the Kangaroo River Water Source 2003

Part 15 Amendment of this Plan

74 Amendment of this Plan

This Part is made in accordance with section 42 (2) of the Act.

75 Amendment of very low flow provisions

- (1) The Minister may, under section 42 (2) of the Act and by notice published in the NSW Government Gazette, vary the very low flow levels established in clause 17 and consequently the bottom of A class established in clause 17, following field verification.
- (2) Any variation made under subclause (1) should not result in the very low flow level being less than 4 ML/day or being greater than 7 ML/day.
- (3) The Minister should cause the field verification in subclause (1) to be undertaken as soon as practical, but before the review of this Plan under section 43 (2) of the Act.
- (4) The field verification should assess the degree to which the following objectives of the *Water Quality and River Flow Interim Environmental Objectives* (NSW Government 1999) are met:
 - (a) Objective 1 - to protect water levels in natural river pools and wetlands during periods of no flow, and
 - (b) Objective 2 - to protect natural low flows.
- (5) In undertaking the field verification the Minister should:
 - (a) consult with the NSW Environment Protection Authority, NSW Fisheries, NSW Agriculture and the NSW National Parks and Wildlife Service, and
 - (b) prepare a report documenting:
 - (i) the methodology adopted,
 - (ii) the hypotheses tested,
 - (iii) the field results and conclusions in terms of the degree to which the objectives in subclause (4) are met,
 - (iv) the flow level recommended to meet the objectives in subclause (4), and
 - (v) the socio-economic impacts of recommended changes to the flow level.

76 Review of field verification

- (1) The Minister should seek advice from a review body on the field verification report specified in clause 75 (5) (b) before varying this Plan in accordance with clause 75 (2), if the field verification recommends a variation in the very low flow levels established in clause 17.
- (2) This review body may be:
 - (a) a water management committee with water sharing responsibilities for this water source if one exists,

Water Sharing Plan for the Kangaroo River Water Source 2003

- (b) an expert advisory panel or advisory committee established for this purpose by the Minister on the recommendation of a water management committee referenced at subclause (2) (a), or
 - (c) if there is no water management committee with water sharing responsibilities for this water source, then by a catchment management board with responsibilities for this water source or an expert advisory panel or advisory committee established for this purpose by the Minister on the recommendation of a catchment management board.
- (3) The review body should provide advice to the Minister on the field verification report, and advise on any changes to the recommendations contained in the report in relation to any variation of the very low flow levels.
- (4) The review body should respond to the Minister as soon as practical after receiving the report, or within 3 months of that date at the latest.

77 Other amendments of this Plan

This Plan can be amended in accordance with clause 50 in respect to adjustments to TDELs and IDELs.

Water Sharing Plan for the Kangaroo River Water Source 2003

Schedule 1 Dictionary

The following definitions apply to this Plan in addition to the definitions set out in the Act:

account water is the balance in an access licence water allocation account at a particular time.

Note. An access licence water allocation account records water allocations accrued under the licence as well as water allocations taken, assigned or re-credited. The operation of the account is also governed by rules for the carrying over of credits from one accounting period to the next and rules for the maximum credit that may be allowed to accumulate in the account as established in a water sharing plan. Water allocations are the shares of available water accrued under an access licence from time to time as a result of available water determinations.

conversion factor refers to the adjustment factor that is to be applied to share components when they are cancelled or reissued in a different water source and visa versa, or when the licence category is changed. It is designed to provide for the fact that the value of a unit of share component in terms of the average water allocations that result from it may vary from one water source to another, or from one category of licence to another.

endangered ecological communities means ecological communities listed in Schedule 1 of the *Threatened Species Conservation Act 1995* or Schedule 4 of the *Fisheries Management Act 1994*.

extraction limit is a limit on the amount of water that may be extracted from this water source.

farm dam is a privately owned dam typically of earthen construction designed to collect and/or store water for use on one or a few properties. It does not include publicly owned dams or weirs. See also **in-river dam** and **runoff harvesting dam**.

flow classes are categorised by the size and duration of flow levels in unregulated rivers, for example:

- (a) very low flows may be a class on their own,
- (b) low flows may be categorised as 'A' class,
- (c) moderate flows may be categorised as 'B' class,
- (d) high flows may be categorised as 'C' class,
- (e) very high flows may be categorised as 'D' class, and
- (f) extremely high flows may be categorised as 'E' class.

flow gauging station is a device that is used to measure the height of a river, from which the flow in the river can be calculated.

individual daily extraction limit (IDEL) is the volume of water that may be extracted by an individual access licence from an unregulated river on a daily basis from a particular flow class.

Water Sharing Plan for the Kangaroo River Water Source 2003

infrastructure includes, but is not limited to, a:

- (a) flow gauging device or any other appliance that is used to measure the height of a river relative to a known datum point, from which the flow in the river can be calculated, or
- (b) flow announcement system which is the mechanism by which the Minister communicates daily flow classes to the holders of an access licence within this water source.

in-river dam is a dam on a 3rd, 4th or higher order river. 3rd, 4th or higher order rivers are as defined in the order made under section 5 of the *Water Act 1912* in relation to the definition of a “river” gazetted 23rd March 2001. See also *farm dam* and *runoff harvesting dam*.

management zone is an area within the water source in which total daily extraction limits may be defined or where dealing restrictions are approved. Management zones may be designated where the water source to which the plan applies is divided into areas and total daily extraction limits are defined for each area. They may also be designated where local dealing restrictions are in place.

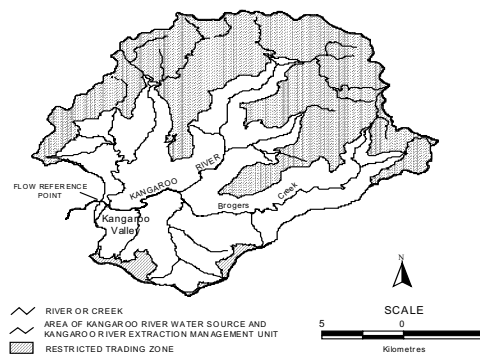
runoff harvesting dam is a farm dam on a hillside or 1st or 2nd order stream which collects and stores rainfall runoff. 1st and 2nd order streams are as defined in the order made under section 5 of the *Water Act 1912* in relation to the definition of a river gazetted 23rd March 2001. See also *farm dam* and *in-river dam*.

Note. This order refers to watercourses shown as blue lines on topographic maps. The lines which are uppermost in a catchment are 1st order streams, when two 1st order streams are joined they make a 2nd order stream, etc. For more information see the Farm Dams Assessment Guide available from the Department of Land and Water Conservation.

total daily extraction limit (TDEL) is the volume of water that may be extracted under access licences from an unregulated river on a daily basis from a particular flow class.

Water Sharing Plan for the Kangaroo River Water Source 2003

Schedule 2 Kangaroo River Water Source and Extraction Management Unit



Water Sharing Plan for the Kangaroo River Water Source 2003

Schedule 3 Rivers in the Kangaroo River Water Source

This water source includes, but is not limited to:

| | |
|-----------------------|--------------------------|
| Kangaroo River | Brogers Creek |
| Dtharowal Creek | Lamonds Creek |
| Douglas Creek | Rydes Creek |
| Pheasants Brush Creek | Devils Glen Creek |
| Yarrawa Creek | Sawyers Creek |
| Kangaroo Creek | Barrengarry Creek |
| Gerringong Creek | Johnstons Gully |
| Kings Creek | Burrawang Creek |
| Coopers Gully | McNights Gully |
| Cabbage Tree Gully | Mannings Gully |
| Nugents Creek | Trimbles Creek |
| Myrtle Creek | Millers Creek |

Note. Rivers/Creeks highlighted in bold are the main tributaries

Water Sharing Plan for the Kangaroo River Water Source 2003

Schedule 4 Contribution to relevant targets in the December 2002 State Water Management Outcomes Plan

Levels of assessed contribution:

FULL – contributes to the target in full

HIGH - while not fully contributing to the target there is considered a good level of contribution

PARTIAL - goes some way to contributing to the target

LOW - only a small degree of contribution to the target

| Relevant Target | Level of Contribution | Comments |
|---|-----------------------|---|
| Target 1c Long term average annual extraction limits which are ecologically sustainable, and which minimise downstream impacts, established in all coastal water sources | FULL | <ul style="list-style-type: none"> • This Plan sets out the basis for the extraction limit for the Kangaroo River Water Source. • Rules set out in Part 9 of this Plan. |
| Target 1f Rules for adjustments to future available water determinations in the event that the extraction limits are exceeded, clearly prescribed in consultation with the relevant management committee, and acted upon | FULL | <ul style="list-style-type: none"> • Rules set out in Part 9 of this Plan. |
| Target 2 All management plans incorporating mechanisms to protect and restore aquatic habitats, and the diversity and abundance of native animals and plants, with particular reference to threatened species, populations and communities and key threatening processes | PARTIAL | <ul style="list-style-type: none"> • This Plan has put in place daily extraction limits to protect/restore environmental flows. • Significantly improves low to moderate flows. • Is unlikely to protect very low flows to the level necessary to ensure continuity or maintenance of riffle and pool habitats. It is also questionable whether it would meet the requirements of Macquarie Perch (a listed threatened species). |
| Target 4a Wherever the frequency of “end of system” daily flows would be less than 60 percent of the predevelopment level without environmental water rules or extraction limits, the flows increased to 60 percent of predevelopment levels or | FULL | <ul style="list-style-type: none"> • As compared with the period prior to Plan commencement, this Plan provides approximately an 18% improvement in A class flows. • Daily extraction limit protects 40% of A class, 66% of B class and 77% of C class flows. • Rules set out in Part 10 of this Plan. |

Water Sharing Plan for the Kangaroo River Water Source 2003

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| increased by at least 10 percent of the predevelopment frequency | | |
| Target 4b Frequency of “end of system” daily very low flows (as defined by local field investigation) protected or restored to predevelopment levels to maintain or restore their critical ecological functions, drought refuges and habitat connectivity. In the absence of such local assessments, protection extended up to at least the predevelopment 95th percentile | PARTIAL | <ul style="list-style-type: none"> • Cease-to-pump (CTP) level increases from 2.96 in year 1 to 5.4 in year 3 to 10. • Commence to pump level of 4 ML/day in year 1 to 7 ML/day in year 3 to 10. • This is improvement on current CTP of 1 ML/day for commercial irrigation. • Whilst 7 ML/day is equivalent to the 98th percentile for all days, 7 ML/day is the 95th percentile for the minimum month, which is consistent with NSW Government policy. |
| Target 5 Access rights for water access licensees clearly and legally specified in terms of share and extraction components | FULL | <ul style="list-style-type: none"> • This Plan recognises the access licence share components, and also establishes daily extraction limits for distribution to individual access licences. |
| Target 6b For surface water sources, a pathway for reducing the share components to 200 percent of the long term average annual extraction limit to be established not later than the end of the term of the SWMOP | FULL | <ul style="list-style-type: none"> • Total Kangaroo River entitlements should not exceed 200% of extraction limit for Kangaroo River Water Source. |
| Target 7 Mechanisms in place to enable Aboriginal communities to gain an increased share of the benefits of the water economy | HIGH | <ul style="list-style-type: none"> • The Government has established other mechanisms to address this target. • This Plan provides reasonable market opportunities within this water source. |
| Target 8 Daily extraction components specified and tradeable, subject to metering, reporting and compliance, for at least 50 percent of unregulated river access licences and for 80 percent of stressed unregulated rivers | FULL | <ul style="list-style-type: none"> • This Plan establishes daily extraction limits across this water source. |
| Target 12 Measures in place in all water sources subject to a gazetted water sharing plan to | PARTIAL | <ul style="list-style-type: none"> • This Plan protects flows for domestic and stock basic rights only for the first 7 days of CTP conditions. |

Water Sharing Plan for the Kangaroo River Water Source 2003

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| protect domestic and stock rights from the impact of other water access and use | | <ul style="list-style-type: none"> This Plan does not protect domestic and stock basic rights after 7 consecutive days of CTP. A, B and C class flows provide for domestic and stock basic rights requirements. Very low flow access ceases at the end of year 8 of this Plan. |
| Target 13 The knowledge sharing, training and resources necessary to ensure that Aboriginal people have the capacity to be effectively involved in water management identified and addressed | PARTIAL | <ul style="list-style-type: none"> 4 Aboriginal community representatives have been involved in development of this Plan. |
| Target 14 Water sources, ecosystems and sites of cultural or traditional importance to Aboriginal people identified, plans of management prepared, and measures put in place to protect and improve them | LOW | <ul style="list-style-type: none"> This Plan does not recognise specific cultural or traditional values or sites. This Plan prevents further reduction in low to moderate flows but the relatively low level of protection in very low flows may fail to improve Aboriginal values. This Plan exempts from any embargo a category of licence, being the unregulated river (Aboriginal cultural) access licence to provide for traditional cultural, spiritual and customary uses. |
| Target 16a All share components of access licences tradeable | FULL | <ul style="list-style-type: none"> Part 11 of this Plan sets out the rules for access licence dealings. |
| Target 16c Conversion factors and protocols established to facilitate trading and dealings between water sources, whilst also protecting existing access and environmental water | HIGH | <ul style="list-style-type: none"> This Plan allows for the assignment of share components to selected water sources within the Shoalhaven catchment. This Plan provides a cap on the assignment of access licence share and extraction components into the escarpment zone. This Plan leaves the exchange rates to the discretion of the Minister. |
| Target 16e Any unassigned access rights identified and clear mechanisms established for their future assignment | FULL | <ul style="list-style-type: none"> No unassigned water identified in this Plan at commencement. Rules established in Part 10 of this Plan. |
| Target 16f Zones established where necessary for environmental protection and limits/constraints on water dealings in them made explicit | FULL | <ul style="list-style-type: none"> This Plan establishes 2 zones with no trading of water rights permitted into the upper zone. |

Water Sharing Plan for the Kangaroo River Water Source 2003

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| Target 35 All management plans incorporating water quality objectives that have considered Government approved Interim Environmental Objectives, the current Australian and New Zealand Environment and Conservation Council Guidelines and the recommendations of relevant Healthy Rivers Commission Inquiries | PARTIAL | <ul style="list-style-type: none">• This Plan includes a specific water quality objective to improve or maintain water quality through flow management. |
|--|---------|---|

Water Sharing Plan for the Kangaroo River Water Source 2003

Schedule 5 Water Act 1912 licences with access to very low flows

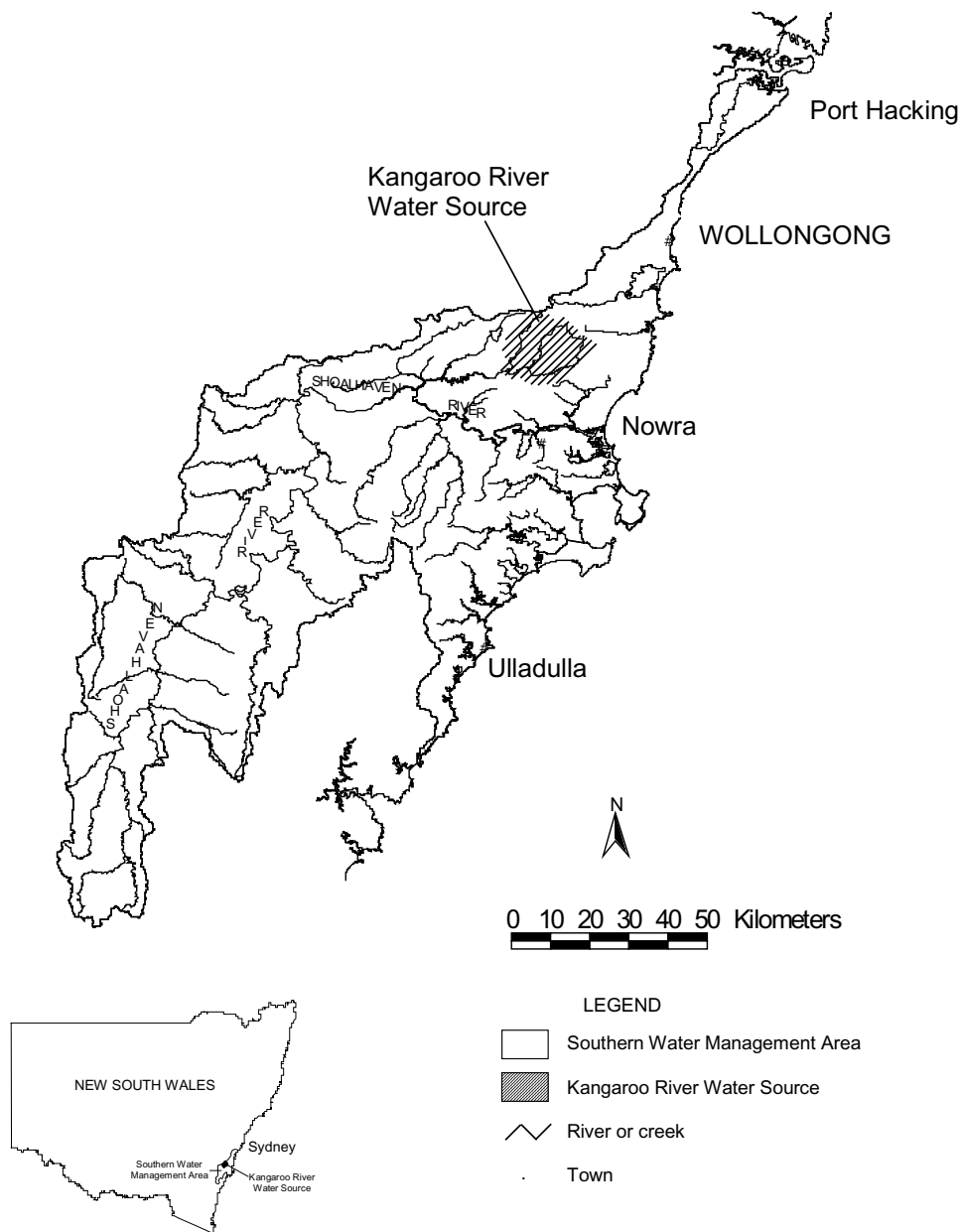
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| 10SL024801 | 10SL032160 | 10SL031389 |
| 10SL030068 | 10SL033762 | 10SL034653 |
| 10SL031038 | 10SL043794 | 10SL038332 |
| 10SL031375 | 10SL044601 | 10SL040348 |
| 10SL033121 | 10SL044687 | 10SL041856 |
| 10SL039489 | 10SL045997 | 10SL046159 |
| 10SL040496 | 10SL047696 | 10SL049053 |
| 10SL040822 | 10SL039191 | 10SL051881 |
| 10SL044520 | 10SL055104 | 10SL055164 |
| 10SL050081 | 10SL055148 | 10SL055362 |
| 10SL055020 | 10SL041880 | 10SL055752 |
| 10SL055123 | 10SL045854 | 10SL050440 |
| 10SL055135 | 10SL015909 | 10SL041114 |
| 10SL055150 | 10SL026816 | 10SL055015 |
| 10SL055153 | 10SL040473 | 10SL014902 |
| 10SL055282 | 10SL045189 | 10SL050022 |
| 10SL055289 | 10SL055693 | 10SL051617 |
| 10SL055353 | 10SL025261 | 10SL056448 |
| 10SL041000 | 10SL039732 | 10SL055813 |
| 10SL049244 | 10SL042268 | |
| 10SL055500 | 10SL045881 | |
| 10SL055602 | 10SL041660 | |
| 10SL055721 | 10SL055478 | |
| 10SL017793 | 10SL055190 | |
| 10SL021519 | 10SL028044 | |
| 10SL025311 | 10SL036630 | |
| 10SL026680 | 10SL044913 | |
| 10SL029987 | 10SL045361 | |
| 10SL030803 | 10SL015021 | |

Note. The licence details in this Schedule may change during the period of this Plan. The Offices of the Department of Land and Water Conservation, shown in Appendix 2, should be contacted for a current list.

Water Sharing Plan for the Kangaroo River Water Source 2003

Appendix 1 Southern Water Management Area



Water Sharing Plan for the Kangaroo River Water Source 2003

Appendix 2 Location of maps

The maps in relation to this Plan may be inspected at:

District Office
Department of Land and Water Conservation
50 O'Keefe Avenue
NOWRA NSW 2541

District Office
Department of Land and Water Conservation
Level 3
84 Crown Street
WOLLONGONG NSW 2500

District Office
Department of Land and Water Conservation
Shop 4, Calaroga Centre
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MOSS VALE NSW 2577

 Water Sharing Plan for the Kangaroo River Water Source 2003

Appendix 3 Performance indicators

| Performance indicators for the Kangaroo River Water Sharing Plan | | | |
|---|--------------------------------------|---|---|
| Performance indicator | Related objective | As measured by | Commentary |
| (a) Change in low flows. | 11 (a) 11 (b) 11 (c) 11 (d) | <ul style="list-style-type: none"> Assessment of change in flow duration characteristics at identified reference points. | <ul style="list-style-type: none"> River Flow Objectives (RFOs) 1, 2 and 6. RFOs are the objectives agreed to by the NSW Government aimed at safeguarding river flows for environmental health. Note. Not every objective is relevant to every river in NSW. Plan will contribute to a decrease in the frequency and duration of low flows. This assessment will focus on is the Plan's end of system reference point, and will be based on a qualitative assessment of compliance with the water sharing rules, due to the current modelling limitations in most unregulated rivers. |
| (b) Change in moderate to high flows. | 11 (d) | <ul style="list-style-type: none"> Assessment of change in flow duration characteristics at identified reference points. | <ul style="list-style-type: none"> RFO 3. Plan will maintain or increase the frequency and duration of moderate to high flows. This assessment will focus on is the Plan's end of system reference point, and will be based on a qualitative assessment of compliance with the water sharing rules, due to the current modelling limitations in most unregulated rivers. |
| (c) Change in local water utilities and major water utilities access (where those utilities are involved in urban water provision). | 11 (g) 11 (h) 11 (k) | <ul style="list-style-type: none"> Change in safe yield (<i>safe yield</i> is the annual demand that can be supplied from the water supply headworks and is based on the period of records used and an acceptable level of restriction). | <ul style="list-style-type: none"> Water sharing plans for unregulated water sources have the potential to impact on urban water supplies. |
| (d) Change in ecological | 11 (a) 11 (b) | <ul style="list-style-type: none"> Periodic assessment of identified indicators | <ul style="list-style-type: none"> Water sharing plans are limited to providing for changes in flow |

Water Sharing Plan for the Kangaroo River Water Source 2003

| Performance indicators for the Kangaroo River Water Sharing Plan | | | |
|---|--------------------------------------|---|--|
| Performance indicator | Related objective | As measured by | Commentary |
| condition of this water source and dependent ecosystems. | 11 (c) 11 (d) 11 (i) 11 (k) | for ecological condition. | regime aimed at improving the conditions for the ecological condition of the river. <ul style="list-style-type: none"> • There are many other factors that contribute to ecological objectives. • The focus of this performance indicator will be the effect of flow strategies. Therefore assessment of ecological condition should be based largely on hydrologic parameters (such as wetted area, depth in pools and velocity). This attempts to exclude external, non - water sharing plan related factors (such as climate and catchment landuse changes). |
| (e)Extent to which basic landholder rights requirements have been met. | 11 (e) 11 (k) | <ul style="list-style-type: none"> • Assessment of cease to pump levels in relation to basic rights requirements. | <ul style="list-style-type: none"> • Basic landholder rights usage figures in this Plan are estimated (not actual use). |
| (f) Change in economic benefits derived from water extraction and use. | 11 (f) 11 (g) 11 (h) 11 (i) | <ul style="list-style-type: none"> • Number of days access provided. • Percentage change in number and volume of farm dams. • Change in unit price of water transferred. | <ul style="list-style-type: none"> • There are many factors affecting economic status of a region, for example commodity prices. • Measurement of the number of farm dams will attempt to identify the impact of the plan provisions. • Assessment undertaken as part of plan performance monitoring will make assumptions to attempt to identify the impact of the plan provisions. |
| (g) Extent to which native title rights requirements have been met. | 11 (j) 11 (k) | <ul style="list-style-type: none"> • Assessment of cease to pump levels in relation to basic rights requirements. | <ul style="list-style-type: none"> • The collection of information on the values associated with water is considered the first step in addressing the objects of the Act. It would be expected that at the end of 5 years there should be relevant information collected for each water source, as a minimum requirement. |

 Water Sharing Plan for the Kangaroo River Water Source 2003

| Performance indicators for the Kangaroo River Water Sharing Plan | | | |
|--|--------------------------|---|--|
| Performance indicator | Related objective | As measured by | Commentary |
| (h) Extent of recognition of spiritual, social and customary values of water to Aboriginal people. | 11 (j) 11 (k) | <ul style="list-style-type: none"> Assessment of amount and type of information collected to identify the range of values of water to Aboriginal people. | <ul style="list-style-type: none"> The collection of information on the values associated with water is considered the first step in addressing the objects of the Act. It would be expected that at the end of 5 years there should be relevant information collected for each water source, as a minimum requirement. |
| (i) Contribution to the achievement of water quality to support the environmental values of this water source. | 11 (l) | <ul style="list-style-type: none"> Change in the baseline figures of identified water quality variables. | <ul style="list-style-type: none"> Many factors may affect water quality that are not related directly to flow management. |

Water Sharing Plan for the Kangaroo River Water Source 2003

Appendix 4 Minister's access licence dealing principles

Access Licence Dealing Principles Order 2002

Part 1 Introduction

1. Name of Order

This Order is the *Access Licence Dealing Principles Order 2002*.

2. Commencement

This Order commences on 20 December 2002.

3. Establishment of access licence dealing principles

The access licence dealing principles set out in this order are established.

4. Interpretation

- (1) References in this order to licences of category 'runoff harvesting' or 'regulated river (conveyance)' are subject to those categories being prescribed by regulation made under section 57 (k) of the Act.
- (2) Notes in this order do not form part of the order.

5. Effect

- (1) Consistent with section 71K (1) of the Act, all applications for access licence dealings under Division 4 of Part 2 of Chapter 3 of the Act are to be dealt with in accordance with:
 - (a) the water management principles, and
 - (b) the principles in this order, and
 - (c) access licence dealing rules established by any relevant management plan.
- (2) Consistent with section 71L of the Act, any access licence dealing rules established by management plans must be consistent with the principles in this order.

6. Definitions

In this order the following definitions apply:

dealing means a dealing under Chapter 3, Part 2 Division 4 of the *Water Management Act 2000*.

farm dam is a privately owned dam typically of earthen construction designed to collect and/or store water for use on one or a few properties. It does not include publicly owned dams or weirs.

groundwater source means a water source specified in a groundwater management plan.

hydrologically connected water sources are water sources where water from one flows into the other, or, in the case of river systems, where flow from both goes into a common river downstream.

Water Sharing Plan for the Kangaroo River Water Source 2003

management plan means a plan made under section 41 or 50 of the *Water Management Act 2000*.

regulated river water source means a water source specified in a regulated river management plan.

runoff harvesting dam is a farm dam on a hillside or minor stream which collects and stores rainfall runoff. Minor streams are as defined in an order made under section 53 of the *Water Management Act 2000*.

unregulated river water source means a water source specified in an unregulated river management plan.

Part 2 General principles

7. Impacts on water sources

- (1) Dealings should not adversely affect environmental water and water dependent ecosystems as identified in any relevant management plan.
- (2) Dealings should be consistent with any strategies to maintain or enhance water quality identified in any relevant management plan.
- (3) In unregulated river water sources, dealings should not increase commitments to take water from water sources or parts of water sources identified in any relevant management plan as being of high conservation value.
- (4) In unregulated river water sources or a groundwater sources, dealings should not increase commitments to take water from water sources or parts of water sources above sustainable levels identified in any relevant management plan.
- (5) In regulated river water sources, dealings should not increase daily demand for water delivery at those locations and times where it is identified in any relevant management plan that demand exceeds delivery capacity.
- (6) In regulated river water sources, dealings should not increase commitments to take water in lower river or effluent systems where this will result in flow at greater than 80% of channel capacity for more than 10% of days used for water delivery.
- (7) In this clause, **commitments to take water** refers, in relation to all access licences with nominated works in that water source or part of a water source, to:
 - (a) the total volume of share components, or
 - (b) the total volume of water allocations in water allocation accounts, or
 - (c) where relevant, the sum of limits on rates of extraction in extraction components.

8. Impacts on indigenous, cultural, heritage or spiritual matters

- (1) Dealings should not adversely affect geographical and other features of indigenous significance.
- (2) Dealings should not adversely affect geographical and other features of major cultural, heritage or spiritual significance.

9. Impacts on water users

Water Sharing Plan for the Kangaroo River Water Source 2003

- (1) Dealings should not adversely affect the ability of a person to exercise their basic landholder rights.
- (2) Dealings should have no more than minimal effect on the ability of a person to take water using an existing approved water supply work and any associated access licences. This should be addressed by constraints on dealings established in access licence dealing rules in relevant management plans.

10. Maximising social and economic benefits

- (1) The objective of access licence dealings is to help to facilitate maximising social and economic benefits to the community of access licences as required under the objects of the Act. Dealings do this by:
 - (a) allowing water to move from lower to higher value uses, and
 - (b) allowing the establishment of water markets that value the access licences, thereby encouraging investment in water efficient infrastructure, and
 - (c) allowing greater flexibility to access licence holders.
- (2) Subject to other principles in this order, access licence dealing rules should allow maximum flexibility in dealings to promote the objectives set out in subclause (1).

Part 3 Principles for specific types of access licence dealings

11. Transfer of access licences

- (1) This clause applies to dealings under section 71A of the Act.
- (2) Dealings under section 71A are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or
 - (b) if the licence is suspended under section 78 of the Act.
- (3) Access licence dealing rules established by a management plan shall not regulate or prohibit dealings under section 71A of the Act.

Note. as indicated in section 71A (3), consent to the transfer of a local water utility access licence may only be granted if the transferee is a local water utility, and consent to the transfer of a major water utility access licence may only be granted if the transferee is a major water utility.

12. Conversion of access licence to new category

- (1) This clause applies to access licence dealings under section 71B of the Act.
- (2) Dealings under section 71B are prohibited:
 - (a) if the licence is proposed to be converted to category regulated river (conveyance) or category estuarine or category coastal, or
 - (b) if there is an outstanding debt under the Act in respect of the licence, or
 - (c) if the licence is suspended under section 78 of the Act, or
 - (d) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, or
 - (e) if the licence share component is not numerically quantified.

Water Sharing Plan for the Kangaroo River Water Source 2003

- (3) Dealings under section 71B are prohibited unless provisions of the relevant management plan:
 - (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (4) The share and extraction components of a new licence issued under a dealing under section 71B must comply with any requirements that are specified in the relevant management plan for a licence granted under section 63 of the Act for the new category.
- (5) Except for where it is otherwise specified in access licence dealing rules in the relevant management plan or where this dealing is accompanied by a dealing under section 71E, water allocations remaining in the water allocation account of the cancelled licence are to be credited to the new licence, up to a maximum of the share component volume of the new licence.
- (6) The share component on a new access licence issued under a dealing under section 71B is to be of a volume equal to the volume on the cancelled licence multiplied by a conversion factor determined by the Minister in accordance with any rules set out in relevant management plans.
- (7) Conversion factor rules in management plans:
 - (a) must be based on protecting environmental water and basic landholder rights as specified in the management plans, and maintaining available water to other access licences, and
 - (b) are not to be set for the purpose of achieving a reduction in overall water extraction from water sources.
- (8) Subject to the granting of an application under section 71J, any nominated water supply works on the cancelled licence may be carried forward to the new licence.
- (9) For conversion of category from regulated river (high security), unregulated river or aquifer to major utility and vice versa:
 - (a) a major utility licence may only be converted to another category if it has components relating to only one water source, and
 - (b) subject to imposing such mandatory conditions as are required by the relevant management plan for the new category, the extraction component on the cancelled licence is to be carried over to the new licence.
- (10) For conversion of category from regulated river (general security) to regulated river (high security) and vice versa, and for conversion of category from domestic and stock to regulated river (high security) and vice versa, the extraction component on the cancelled licence is to be carried over to the new licence, subject to imposing such mandatory conditions as are required by the relevant management plan for the new category.
- (11) For conversion of category from regulated river (conveyance) to regulated river (high security) or regulated river (general security), the extraction component on the cancelled licence is to be carried over to the new licence, subject to imposing

Water Sharing Plan for the Kangaroo River Water Source 2003

such mandatory conditions as are required by the relevant management plan for the new category.

- (12) For conversion of category from regulated river (general security) to unregulated river:
- (a) no parts of the extraction component on the cancelled licence are to be carried over to the new licence, and
 - (b) the extraction component of the new licence is to specify a location or area which is on an unregulated river (apart from a minor stream as defined in an order made under section 53 of the Act), and
 - (c) the application for conversion of category from regulated river (general security) to unregulated river must be accompanied by an application under section 71E to change the share component to an unregulated river water source, and is conditional on granting of that application, and
 - (d) water allocations remaining in the water allocation account on the cancelled licence may not be credited to the new licence.
- (13) For conversion of category from unregulated river to runoff harvesting:
- (a) no parts of the extraction component on the cancelled licence are to be carried over to the new licence, and
 - (b) the extraction component of the new licence is to specify a location or area which is not on a river (apart from a minor stream as defined in an order made under section 53 of the Act), and
 - (c) the application for conversion of category from unregulated river to runoff harvesting access licence must be accompanied by an application under section 71J to nominate the water supply work to a runoff harvesting dam, and is conditional on granting of that application.
- (14) For conversion of category from runoff harvesting to unregulated river:
- (a) no parts of the extraction component on the cancelled licence are to be carried over to the new licence, and
 - (b) the extraction component of the new licence is to specify a location or area which is on an unregulated river (apart from a minor stream as defined in an order made under section 53 of the Act).
- (15) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. Under section 71B applications to convert local water utility access licences and supplementary access licences are prohibited, and licences granted are subject to the mandatory conditions applicable to the category or subcategory of licence to which it belongs. Also licences may only be granted in relation to the same water source or water management area as the cancelled licence.

13. Subdivision of access licences

- (1) This clause applies to subdivision dealings under section 71C of the Act.
- (2) Dealings under section 71C are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or

Water Sharing Plan for the Kangaroo River Water Source 2003

- (b) if the licence is suspended under section 78 of the Act.
- (3) Subject to the granting of an application under section 71J, any nominated water supply works on the cancelled licence may be carried forward to the new licences.
- (4) The category of the new licences is to be the same as the category of the cancelled licence.
- (5) The areas or locations specified in the cancelled licence are to be carried over to all the new licences.
- (6) Any indivisible parts of the times, rates or circumstances specified in the extraction component of the cancelled licence are to be carried forward to all the new licences.
- (7) Water allocations remaining in the water allocation account of the cancelled licence are to be credited to the new licences so that the combined water allocations in the accounts of the new licences are no greater than the water allocations which remained in the account of the cancelled licence.
- (8) Access licence dealing rules established by a management plan shall not regulate or prohibit subdivision dealings under section 71C of the Act.

Note. As indicated in section 71C (3), the combined share components and combined extraction components of the new licences are to be no greater than the share and extraction components of the cancelled licence, and conditions on the cancelled licence are to be carried over to the new licences.

14. Consolidation of access licences

- (1) This clause applies to consolidation dealings under section 71C of the Act.
- (2) Consolidation dealings under section 71C are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of any of the licences, or
 - (b) if any of the licences are suspended under section 78 of the Act, or
 - (c) if the licences to be consolidated do not have share components in the same water source, or
 - (d) if the location or area specified in the extraction component of the licences is not the same.
- (3) Subject to the granting of an application under section 71J, any nominated water supply works on the cancelled licences may be carried forward to the new licence.
- (4) Water allocations remaining in the water allocation accounts on the cancelled licences are to be credited to the new licence so that the water allocations in the account of the new licence is no greater than the sum of the water allocations remaining in the accounts of the cancelled licences.
- (5) Access licence dealing rules established by a management plan shall not regulate or prohibit consolidation dealings under section 71C of the Act.

Note. as indicated in section 71C, the licences to be consolidated must be of the same category or subcategory, the combined share components and combined extraction components of the new licences are to be no greater than the share and extraction components of the cancelled licence, and conditions on the cancelled licences are to be carried over to the new licences.

Water Sharing Plan for the Kangaroo River Water Source 2003

15. Assignment of rights under access licences

- (1) This clause applies to assignment of rights dealings under section 71D of the Act.
- (2) Dealings under section 71D are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of any of the licences, or
 - (b) if any of the licences are suspended under section 78 of the Act, or
 - (c) if any of the licences are of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act.
- (3) Only share or extraction components, or parts thereof, that are numerically quantified may be assigned from one licence to another.
- (4) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. As indicated in section 71D, the licences which are involved in a dealing under section 71D must be of the same category and have share components in the same water source or water management area. This dealing does not apply to local water utility access licences.

16. Change of water source

- (1) This clause applies to amendment of share component dealings under section 71E of the Act.
- (2) Dealings under section 71E are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or
 - (b) if the licence is suspended under section 78 of the Act, or
 - (c) if the licence does not have the share component expressed as a volume, or
 - (d) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, or
 - (e) from an unregulated river water source to a regulated river water source, or
 - (f) from a groundwater source to a regulated river or unregulated river water source, or vice versa, or
 - (g) if the licence is of category major water utility or supplementary.
- (3) A dealing under section 71E is prohibited unless there is a hydrologic connection between the water sources of the cancelled and issued licences.
- (4) A dealing under section 71E is prohibited unless provisions of the relevant management plans:
 - (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (5) The share and extraction components of a new licence issued under this dealing must comply with any requirements that are specified in the relevant management plan for a licence granted under section 63 of the Act.

Water Sharing Plan for the Kangaroo River Water Source 2003

- (6) The share component on the new access licence is to be of a volume equal to the volume on the cancelled licence multiplied by a conversion factor determined by the Minister in accordance with any rules set out in relevant management plans.
- (7) Conversion factors rules in management plans:
 - (a) must be based on protecting environmental water and basic landholder rights as specified in the management plans, and maintaining the available water to other access licences, and
 - (b) are not to be set for the purpose of achieving a reduction in overall water extraction from water sources.
- (8) Nominated water supply works on the cancelled licence are not to be carried over to the new licence.
- (9) No water allocations remaining in the water allocation account of the cancelled licence may be credited to the new licence.
- (10) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. As indicated in section 71E, the new licence arising from a dealing under section 71E is subject to the mandatory conditions relevant to its category or subcategory and water source. This dealing does not apply to local water utility access licences.

17. Amendment of extraction component of access licence

- (1) This clause applies to amendment of extraction component dealings under section 71F of the Act.
- (2) Dealings under section 71F are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence,
 - (b) if the licence is suspended under section 78 of the Act, or
 - (c) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences.
- (3) Amendment of the times, rates and circumstances part of the extraction component may only occur where:
 - (a) access licence dealing rules in the relevant plan make provision for it consistent with the principles in Part 2 of this order, and
 - (b) those rules specifically indicate the nature of those amendments which are allowed.
- (4) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. As indicated in section 71F, the area or location arising from a variation of an access licence under this dealing must relate to the same water management area or water source as that to which the original area or location related.

18. Assignment of water allocations between access licences

Water Sharing Plan for the Kangaroo River Water Source 2003

- (1) This clause applies to assignment of water allocation dealings under section 71G of the Act.
- (2) Dealings under section 71G are prohibited:
 - (a) if either of the access licences is suspended under section 78 of the Act, or
 - (b) if either of the access licences are of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences, or
 - (c) if a method of measurement of water extraction which is satisfactory to the Minister is not established for all nominated water supply works on both access licences, or
 - (d) if any of the access licences is of category runoff harvesting, or
 - (e) if any of the access licences is of category major utility, unless specific provision is made in access licence dealing rules to allow this, or
 - (f) from a supplementary water access licence to a licence of any other category.
- (3) Assignment of water allocations between access licences relating to different water sources is prohibited if:
 - (a) either licence is of category supplementary, or
 - (b) there is no hydrologic connection between the water sources, or
 - (c) one water source is a regulated river and the other is an unregulated river, or
 - (d) one water source is a groundwater source and the other is a regulated river or unregulated river water source.
- (4) Assignment of water allocations between access licences relating to different water sources is prohibited unless provisions of the relevant management plans:
 - (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (5) Assignment of water allocations from a local water utility access licence is prohibited unless:
 - (a) the Minister has approved a demand management plan for all NSW towns supplied under the local water utility access licence, and
 - (b) the Minister has approved a drought management plan for all NSW towns supplied under the local water utility access licence, and
 - (c) the Minister is satisfied the assignment will not put the water supply for NSW towns supplied by the local water utility at risk.
- (6) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

19. Interstate transfer dealings

Water Sharing Plan for the Kangaroo River Water Source 2003

- (1) This clause applies to dealings under section 71H of the Act.
- (2) Any dealings under section 71H must be consistent with the relevant inter-state agreement.
- (3) Dealings under section 71H are prohibited unless the waters for which the interstate access licence equivalent has or will have rights to are hydrologically connected to the water source in which to which the access licence to be issued or revoked relates.
- (4) Dealings under section 71H which revoke an access licence are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or
 - (b) if the licence is suspended under section 78 of the Act, or
 - (c) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, or
 - (d) if the licence is of category local water utility or major water utility.
- (5) The share and extraction components of a new licence issued under this dealing must comply with any requirements that are specified in the relevant management plan for a licence granted under section 63 of the Act.
- (6) Dealings under section 71H are prohibited unless arrangements are in place which:
 - (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (7) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

20. Interstate assignment of water allocations

- (1) This clause applies to interstate assignment of water allocation dealings under section 71I of the Act.
- (2) Any dealings under section 71I must be consistent with the relevant inter-state agreement.
- (3) Dealings under section 71I are prohibited:
 - (a) if the access licence is suspended under section 78 of the Act, or
 - (b) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences, or
 - (c) if a method of measurement of water extraction which is satisfactory to the Minister is not established for all nominated water supply works on the access licence, or
 - (d) if the access licence is of category runoff harvesting or supplementary water, or

Water Sharing Plan for the Kangaroo River Water Source 2003

- (e) if the access licence is of category major utility, unless specific provision is made in access licence dealing rules in the relevant management plan to allow this.
- (4) This dealing is prohibited unless arrangements are in place which:
 - (a) protect environmental water from being affected by the dealing, and
 - (b) protect basic landholder rights from being affected by the dealing, and
 - (c) protect the available water under other access licences from being affected by the dealing.
- (5) Interstate assignment of water allocations from a local water utility access licence is prohibited unless:
 - (a) the Minister has approved a demand management plan for all NSW towns supplied under the local water utility access licence, and
 - (b) the Minister has approved a drought management plan for all NSW towns supplied under the local water utility access licence, and
 - (c) the Minister is satisfied the assignment will not put the water supply for NSW towns supplied by the local water utility at risk.
- (6) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

21. Nomination of water supply works

- (1) This clause applies to nomination of water supply works dealings under section 71J of the Act.
- (2) Dealings under section 71J are prohibited if the access licence is suspended under section 78 of the Act.
- (3) Dealings under section 71J are prohibited if the access licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences, with the following exceptions:
 - (a) if new or additional works are to be nominated, where those works supply the same property as the current nominated works, or a contiguous property to the property supplied by the current nominated works which is occupied by the same landholder, or
 - (b) if a nominated work is withdrawn, that there remains at least one nominated work.
- (4) Dealings under section 71J are prohibited if the access licence is of category local water utility, with the following exceptions:
 - (a) if new or additional works are to be nominated, that those works supply the same town water supply scheme as the current nominated works, or
 - (b) if a nominated work is withdrawn, that there remains at least one nominated work.

Water Sharing Plan for the Kangaroo River Water Source 2003

- (5) Nomination of a water supply work is prohibited if the access licence does not have an extraction component allowing taking of water at the location of the nominated work.
- (6) With regard to runoff harvesting access licences:
 - (a) the nominated work must be a runoff harvesting dam of capacity consistent with the share component of the access licence, and
 - (b) withdrawal of nominated work may only be granted where arrangements are in place to ensure that the nominated work does not conserve any more water than is permitted pursuant to the exercise of basic landholder rights.
- (7) Withdrawal of nomination may not be prohibited by access licence dealing rules, except for as otherwise specified in this clause.
- (8) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Water Sharing Plan for the Murray and Lower Darling Regulated Rivers Water Sources 2003 Order

under the

Water Management Act 2000

Pursuant to section 50 of the *Water Management Act 2000*, I, the Minister for Land and Water Conservation, make the following Minister's plan.

JOHN AQUILINA, M.P.,
Minister for Land and Water Conservation

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

Contents

| | | |
|------------|---|----|
| Part 1 | Introduction | 1 |
| Part 2 | Vision, objectives, strategies and performance indicators | 3 |
| Part 3 | Environmental water | 5 |
| Part 4 | Basic landholder rights..... | 10 |
| Part 5 | Bulk access regime..... | 11 |
| Part 6 | Requirements for water under access licences..... | 12 |
| Part 7 | Rules for granting access licences..... | 14 |
| Part 8 | Limits to the availability of water | 15 |
| Division 1 | Long-term extraction limit..... | 15 |
| Division 2 | Available water determinations | 17 |
| Part 9 | Rules for managing access licences | 23 |
| Division 1 | General | 23 |
| Division 2 | Water allocation account management..... | 23 |
| Division 3 | Extraction conditions..... | 25 |
| Part 10 | Dealings with access licences | 28 |
| Part 11 | Mandatory conditions..... | 33 |
| Part 12 | System operation rules | 35 |
| Part 13 | Monitoring and reporting | 37 |
| Part 14 | Amendment of this Plan..... | 38 |
| Schedule 1 | Dictionary | 39 |
| Schedule 2 | Contribution to relevant targets in the December 2002 State Water Management Outcomes Plan | 41 |
| Appendix 1 | Rivers and lakes within the Murray and Lower Darling Regulated River Water Sources..... | 44 |
| Appendix 2 | NSW Murray and Lower Darling Region | 50 |
| Appendix 3 | State floodplain harvesting principles | 51 |
| Appendix 4 | Performance indicators..... | 54 |
| Appendix 5 | Minister's access licence dealing principles..... | 57 |
| Appendix 6 | Operational guidelines for delivering flows prescribed by the Murray Darling Basin Agreement | 68 |

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

Water Sharing Plan for the New South Wales Murray and Lower Darling Regulated Rivers Water Sources 2003

Part 1 Introduction

1 Name of plan

This Plan is the Water Sharing Plan for the Murray and Lower Darling Regulated Rivers Water Sources 2003 (hereafter *this Plan*).

2 Nature and status of this Plan

- (1) This Plan is made under section 50 of the Water Management Act 2000, as amended (hereafter *the Act*).
- (2) This Plan covers the core provisions of section 20 of the Act for water sharing, and additional provisions of section 21 of the Act, and other relevant matters.

3 Date of commencement

This Plan takes effect on 1 July 2003 and ceases 10 years after that date.

4 Water sources and waters to which this Plan applies

- (1) The water sources in respect of which this Plan is made shall be known as the New South Wales Murray Regulated River Water Source and the Lower-Darling Regulated River Water Source (hereafter *these water sources*)
 - (2) The New South Wales Murray Regulated River Water Source (hereafter *the Murray Water Source*) is that between the banks of all rivers, from the upper limit of Hume Dam water storage, and from the Darling River at the north east corner of Lot 11 DP 756952, Parish of Merche, County of Wentworth, downstream to the South Australian border which, at the date of commencement of this Plan, have been declared by the Minister to be regulated rivers.
 - (3) The Lower-Darling Regulated River Water Source (hereafter *the Lower Darling Water Source*) is that between the banks of all rivers, from the upper limit of the Lake Wetherell water storage downstream to the upstream limit of the Wentworth Weir Pool water storage which, at the date of commencement of this Plan, have been declared by the Minister to be regulated rivers.
- Note.** A regulated river is a river that has been declared by the Minister, by order published in the New South Wales Government Gazette, to be a regulated river.
- Note.** The regulated rivers referred to in subclauses (2) and (3) are listed in Appendix 1.
- (4) The rivers included in these water sources may be varied under section 42 (2) of the Act as set out in Part 14.
 - (5) These water sources are within the Murray Water Management Area as constituted by the Ministerial order published in the NSW Government Gazette (hereafter *the Gazette*) on 23 November 2001.

Note. A diagram of the NSW Murray and Lower Darling region is contained in Appendix 2.

- (6) This Plan applies to the water distributed to New South Wales under Part X of the Murray Darling Basin Agreement.
- (7) This Plan does not apply to water contained within aquifer water sources underlying these water sources or to water on land adjacent to these water sources.

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

Note. The New South Wales share of the waters of the Murray Regulated River Water Source is subject to the water accounting and other arrangements that arise from the Murray Darling Basin Agreement.

Note. Management of floodplain harvesting will not be a component of individual water sharing plans being produced for the regulated and unregulated rivers. Management of floodplain harvesting will occur according to a number of state-wide management principles, attached in Appendix 3.

5 Interpretation

- (1) Terms that are defined in the Act have the same meaning in this Plan, unless redefined in Schedule 1, and the effect of these terms may be explained in Notes.
- (2) Additional terms are defined in Schedule 1.
- (3) Notes in this Plan do not form part of this Plan.
- (4) Schedules to this Plan form part of this Plan.
- (5) Appendices to this Plan do not form part of this Plan.

6 Effect on licences, authorities and permits under the Water Act 1912

- (1) This Plan applies from the date of commencement to those matters that are being administered under the Act, at that time.
- (2) This Plan applies to other matters from the date the relevant provisions of the Act are commenced.

Note. To the extent possible the rules embodied in this Plan will apply to matters administered under the *Water Act 1912* in the interim.

7 State Water Management Outcomes Plan

- (1) In accordance with section 16 (1) (a) of the Act, this Plan is consistent with the State Water Management Outcomes Plan published in the Gazette on 20 December 2002 (hereafter *the SWMOP*).
- (2) Schedule 2 identifies the SWMOP targets applicable to this Plan and how this Plan contributes to meeting these targets.

Part 2 Vision, objectives, strategies and performance indicators

8 Vision, objectives, strategies and performance indicators

This Part is made in accordance with section 35 (1) of the Act.

9 Vision

The vision for this Plan is to achieve a healthy River Murray and Lower Darling system, sustaining communities and preserving unique values.

10 Objectives

The objectives of this Plan are to:

- (a) improve opportunities for natural regeneration and breeding cycles and ecological processes reliant on seasonal patterns, in particular by reinstating more natural wetting and drying cycles,
- (b) increase the connectivity between the river and floodplain during spring and early summer,
- (c) contribute to the maintenance or enhancement of the physical habitats of the river system,
- (d) improve the opportunities for breeding of native fish and other native organisms by encouraging the migration of native fish and allowing access to spawning sites, food sources and improved water quality, including correct thermal conditions,
- (e) promote the recovery of threatened species, populations and ecological communities,
- (f) contribute to expansion and diversification of river bank habitat,
- (g) contribute to maintenance of bank stability,
- (h) assist in maintenance of the ecological health of anabranches and billabongs, particularly for habitat that may not be provided in the main river channel,
- (i) contribute to the maintenance or improvement of water quality to downstream water environments,
- (j) protect basic landholder rights to access water, and
- (k) enhance the viability, sustainability and security of primary and secondary, recreational and tourist industries, and the communities of the Murray-Lower Darling region.

11 Strategies

The strategies for reaching the objectives established in clause 10 are to:

- (a) establish environmental water provisions (Part 3 of this Plan),
- (b) identify water requirements for basic landholder rights (Part 4 of this Plan),
- (c) identify water requirements for access licences (Part 6 of this Plan),
- (d) establish rules for granting of access licences (Part 7 of this Plan),
- (e) establish provisions that place limits on the availability of water (Part 8 of this Plan),

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (f) establish rules for making available water determinations (Part 8 of this Plan),
- (g) establish rules for the operation of water accounts (Part 9 of this Plan),
- (h) establish provisions specifying circumstances under which water may be extracted (Part 9 of this Plan), and
- (i) establish access licence dealing rules (Part 10 of this Plan).

12 Performance indicators

The following indicators are to be used to determine the performance of this Plan against its objectives:

- (a) change in ecological condition of the water source and dependent ecosystems,
- (b) change in low flow regime,
- (c) change in moderate to high flow,
- (d) change in water quality in the water source,
- (e) extent to which domestic and stock rights requirements have been met,
- (f) extent to which local water utility and major utility requirements (where major utilities are involved in urban water provision) have been met,
- (g) change in economic benefits derived from water extraction and use,
- (h) extent of recognition of spiritual, social and customary values of water to Aboriginal people and
- (i) extent to which native title rights have been met.

Note. Appendix 4 details the objectives to which these performance indicators relate and the methods for informing indicators.

Part 3 Environmental water

Note. New South Wales is committed to ongoing negotiations with Victoria, South Australia and the Commonwealth over the development of environmental water provisions for the Murray River.

13 Environmental water provisions

This Part is made in accordance with sections 5 (3), 8 (1), 8 (2) and 20 (1) (a) of the Act.

14 Environmental health water

This Plan establishes the following environmental health water rules:

- (a) water volume in excess of the long-term extraction limits established in clause 31 of this Plan may not be taken from this water source and used for any purpose, and
- (b) water availability is to be managed as specified in clause 33 of this Plan to ensure water volume in excess of the long-term extraction limits is not being taken.

Note. Clauses 14 (a) and 14 (b) contribute to protection of fundamental ecosystem health by ensuring the long-term average volume of water that the environment receives is not eroded by increases in extraction by NSW water users.

15 Supplementary environmental water

- (1) Subclauses (2) to (16) establish supplementary environmental water rules relating to the management of the New South Wales' Barmah-Millewa Environmental Water Allowance (hereafter *the Barmah-Millewa Allowance*) in the Murray Water Source.
- (2) A volume of up to 50,000 megalitres per water year shall also be available for release as specified under subclause (7) (hereafter *the Barmah-Millewa Overdraw*).
- (3) An account is to be kept setting out the volumes:
 - (a) credited to, debited from or taken from the Barmah-Millewa Allowance, and
 - (b) the volumes of Barmah-Millewa Overdraw released.
- (4) The maximum credit that may be held in the Barmah-Millewa Allowance at any time is 350,000 megalitres (hereafter *ML*).
- (5) Subject to subclause (4), the following volumes of water shall be credited to the Barmah-Millewa Allowance:
 - (a) 50,000 ML multiplied by the available water determination made for regulated river (high security) access licences in the Murray Water Source, minus the volume of the Barmah-Millewa Overdraw released in the preceding water year under subclause (7), whenever the available water determination made for regulated river (high security) access licences at the commencement of each water year is less than 97% of share components,
 - (b) 50,000 ML, minus the volume of the Barmah-Millewa Overdraw released in the preceding water year under subclause (7), whenever the available water determination made for regulated river (high security) access licences at the commencement of each water year is equal to or greater than 97% of share components,

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (c) a further volume of 25,000 ML in any water year when the seasonal allocations to Victorian water licence holders reaches 100% of 'water right' and 30% of 'sales', and
- Note.** Water right is the high security component of Victorian water licences, sales is a lower security component.
- (d) in accordance with subclauses (14) and (15), such volume as is necessary to return to the Barmah-Millewa Allowance any volume that has been taken from it under subclause (12).
- (6) Whenever Hume Dam spills, and the volume of water in the Barmah-Millewa Allowance at the time of spill exceeds 100,000 ML, the Barmah-Millewa Allowance shall be debited by a volume equal to the lesser of:
- (a) the New South Wales share of the volume of water spilled, and
- (b) the volume held in the account at the commencement of the spill minus 100,000 ML.
- (7) Releases of Barmah-Millewa Allowance and Barmah-Millewa Overdraw from Hume Dam shall be made according to the rules in subclauses (8) to (11).
- (8) If the flow in the Murray River at Yarrowonga has exceeded 500,000 ML in any four week period between 1 September and 31 October during the water year, and the volume in the Barmah-Millewa Allowance equals or exceeds 150,000 ML, then a release shall be made which is the lesser of:
- (a) the volume in the Barmah-Millewa Allowance plus the Barmah-Millewa Overdraw, and
- (b) the volume necessary to provide a flow in the Murray River at Yarrowonga of 500,000 ML each month until the end of November and 400,000 ML in December, if the flow in the Murray River at Yarrowonga has exceeded 660,000 ML in any four week period between 1 August and 30 November during the preceding 3 water years, and
- (c) the volume necessary to provide a flow in the Murray River at Yarrowonga of 660,000 ML each month until the end of December, if the flow in the Murray River at Yarrowonga has not exceeded 660,000 ML in any four week period between 1 August and 30 November during the preceding 3 water years.
- (9) If releases have not been triggered under subclause (8), and the flow in the Murray River at Yarrowonga has exceeded 500,000 ML in any four week period between 1 September and 30 November, then a release shall be made which is the lesser of:
- (a) the volume in the Barmah-Millewa Allowance plus the Barmah-Millewa Overdraw, and
- (b) the volume necessary to provide a flow in the Murray River at Yarrowonga of 400,000 ML in December.
- (10) If 4 water years have passed in which, in no water year did the flow in the Murray River at Yarrowonga exceed 500,000 ML in any four week period between 1 September and 30 November and 400,000 ML in December, and in which there has been no release from the Barmah-Millewa Allowance, then releases shall be commenced in October of the current water year and shall be the lesser of:
- (a) the volume in the Barmah-Millewa Allowance plus the Barmah-Millewa Overdraw, and

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (b) the volume necessary to provide a flow in the Murray River at Yarrawonga of 500,000 ML per month in October and November and 400,000 ML in December.
- (11) Releases of the Barmah-Millewa Overdraw shall only occur once the volume remaining in the Barmah-Millewa Allowance has reduced to zero.
- (12) Water is to be taken from the Barmah-Millewa Allowance and made available to Murray Water Source regulated river (general security) access licences whenever:
- (a) the total volume of water allocation provided by available water determinations made for Murray Water Source regulated river (general security) access licences during the current water year, plus
- (b) the total volume of water allocation carried over in the water allocation accounts of Murray Water Source regulated river (general security) access licences from the previous water year,
- is less than 30% of the total volume of the share components of all Murray Water Source regulated river (general security) access licences.
- (13) The volume of water taken from the Barmah-Millewa Allowance under subclause (12) shall be the lesser of:
- (a) the volume necessary to permit further available water determinations to Murray Water Source regulated river (general security) access licence accounts such that the total referred to in subclause (12) is 30% of the volume of the share component of all Murray Water Source regulated river (general security) access licences, and
- (b) the volume in the Barmah-Millewa Allowance.
- (14) Once the total referred to in subclause (12) has reached 30%, no further available water determinations are to be made for Murray Water Source regulated river (general security) access licences during the water year until the Barmah-Millewa Allowance has been credited with a volume equivalent to that taken from it under subclause (12).
- (15) If sufficient water has not become available to allow credits to the Barmah-Millewa Allowance under subclause (14) that are equivalent to the volume taken from it under subclause (12), then the Barmah-Millewa Allowance is to be credited the difference between the volumes taken and the volumes credited prior to making an available water determination in any succeeding year that would bring:
- (a) the total volume of water allocation provided by available water determinations made for Murray Water Source regulated river (general security) access licences during the current water year, plus
- (b) the total volume of water allocation carried over in the water allocation accounts of Murray Water Source regulated river (general security) access licences from the previous water year,
- to more than 30% of the total volume of the share components of all Murray Water Source regulated river (general security) access licences
- (16) The rules relating to the Barmah-Millewa Allowance and Barmah Millewa Overdraw in subclauses (8) to (15) may be varied under section 42 (2) of the Act as set out in Part 14 of this Plan.
- (17) Subclauses (18) to (20) establish supplementary environmental water rules relating to the management of the Lower Darling Environmental Contingency Allowance (hereafter *the Lower Darling ECA*) in the Lower Darling Water Source.

 Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (18) The volume of water credited to the Lower Darling ECA at any time shall be:
- (a) zero if the volume stored in Menindee Lakes is below 480,000 ML, or
 - (b) zero if the volume stored in Menindee Lakes has not risen above 640,000 ML since the volume stored last fell below 480,000 ML, or
 - (c) 30,000 ML minus any release from the Lower Darling ECA during the current water that has resulted in a loss of total water volume available to New South Wales under the accounting rules applying to inter-state water sharing in the Murray and Lower Darling River.

Note. Water released from the New South Wales Lower Darling ECA may be subsequently re-regulated in the Murray below the Darling junction and again become available to New South Wales.

- (19) Releases from the Lower Darling ECA may occur whenever a high blue green algal alert level, as set out in the Sunraysia Regional Algal Contingency Strategy, is announced by the Minister in the Lower Darling Water Source.
- (20) The release rate shall be the lesser of:
- (a) 2,000 megalitres per day (*hereafter ML/day*) in the months of May to October and 5,000 ML/day in the months November to April, and
 - (b) such lower rate as shall be determined by the Minister to be adequate to control blue green algal levels taking into account other river flows.
- (21) Subclauses (22) to (25) establish supplementary environmental water rules relating to the management of the New South Wales' Murray Regulated River Water Source Additional Environmental Allowance (*hereafter the Murray AEA*).
- (22) The maximum credit that may be held in the Murray AEA at any time shall be 15% of the total volume of the share components of regulated river (high security) access licences.
- (23) Subject to clause (22), the Murray AEA shall be credited with a volume equivalent to 3% of the total volume of the share components of Murray Water Source regulated river (high security) access licences at the end of any water year when the sum of allocations to Murray Water Source regulated river (high security) access licences for the water year has not exceeded 97%.
- (24) Releases from the Murray AEA may be made for any purpose consistent with objectives (a) to (i) in clause 10 of this Plan.
- (25) The volume debited to the Murray AEA shall only be the volume of release in excess of that being made for all other purposes.

16 Adaptive environmental water

- (1) At any time an access licence holder may, by a process determined by the Minister, commit all or part of their licence as adaptive environmental water.
- (2) The conditions of the commitment:
 - (a) are to be established by the Minister,
 - (b) are to be specified on the licence, and
 - (c) shall be such as to ensure that there will be a contribution to the objectives of this Plan.
- (3) The following licences shall be granted to and held by the Ministerial Corporation, committed as adaptive environmental water and made subject to the relevant mandatory condition set out in Part 11 of this Plan :

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (a) a regulated river (conveyance) access licence with a share component of 30,000 ML, and.
- (b) a regulated river (high security) access licence with a share component of 2,027 ML.

Note. The licence referred to in subclause (3) (a) is a consequence of the Murray Irrigation Limited privatisation arrangements and the licence in (3) (b) is the result of water savings resulting from works installed to regulate inflows to Moira Lake.

- (4) The management of water allocations accruing to the access licences in subclause (3) should be in accordance with a protocol established by the Minister in consultation with the Minister for the Environment.

Part 4 Basic landholder rights

17 Basic landholder rights

This Part is made in accordance with section 20 (1) (b) of the Act.

18 Domestic and stock rights

Note. Water from these water sources should not be consumed without prior treatment which is adequate to ensure its safety.

- (1) At the commencement of this Plan the water requirements of holders of domestic and stock rights in the Murray Water Source is estimated to be 2,118 megalitres per year (hereafter *ML/yr*).
- (2) At the commencement of this Plan the water requirements of holders of domestic and stock rights in the Lower Darling Water Source is estimated to be 3,727 ML/yr.
- (3) This Plan recognises that the exercise of domestic and stock rights may increase during the term of this Plan.

Note. Increase in use of domestic and stock rights in these water sources may occur as a result of an increase in the number of landholdings fronting these water sources or by an increase in the exercise of domestic and stock rights on landholdings.

- (4) The water supply system in each water source shall be managed so that it would be capable of maintaining supply to those exercising domestic and stock rights through a repeat of the worst period of low inflows to each water source for which flow information is held by the Department.
- (5) To achieve subclause (4), sufficient volumes of water must be set aside from the New South Wales share of assured inflows into each water source and in reserves held by New South Wales in water storages in each water source.

Note. The Minister may issue an order under section 328 of the Act to restrict the exercise of domestic and stock basic rights from the water source to protect the environment, for reasons of public health, or to preserve basic landholder rights.

19 Native title rights

Note. Water from these water sources should not be consumed without prior treatment which is adequate to ensure its safety.

- (1) At the commencement of this Plan there are no holders of native title rights in the Murray Water Source water source and therefore native title rights are 0 ML/yr.
- (2) At the commencement of this Plan there are no holders of native title rights in the Lower Darling Water Source and therefore native title rights are 0 ML/yr.
- (3) This Plan recognises that the exercise of native title rights may increase during the term of this Plan.

Note. Increase in native title rights may occur as a result of the granting of native title rights under the Commonwealth's *Native Title Act 1993*.

- (4) The water supply system in each water source shall be managed so that it would be capable of maintaining supply to those exercising native title rights through a repeat of the worst period of low inflows to each water source for which flow information is held by the Department.
- (5) To achieve subclause (4), sufficient volumes of water must be set aside from the New South Wales share of assured inflows into each water source and in reserves held by New South Wales in water storages in each water source.

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

Part 5 Bulk access regime

20 Bulk access regime

- (1) This Part is made in accordance with section 20 (1) (e) of the Act.
- (2) This Plan establishes bulk access regimes for the extraction of water under access licences in each of these water sources having regard to:
 - (a) the environmental water provisions established under Part 3 of this Plan,
 - (b) the requirements for basic landholder rights identified under Part 4 of this Plan, and
 - (c) the requirements for water for extraction under access licences identified under Part 6 of this Plan.
- (3) The bulk access regime established under subclause (2):
 - (a) establishes rules according to which access licences are granted as provided for in Part 7 of this Plan,
 - (b) recognises and is consistent with the limits to the availability of water as provided for in Part 8 of this Plan,
 - (c) establishes rules according to which available water determinations are to be made as provided for in Part 8 of this Plan,
 - (d) recognises the effect of climatic variability on the availability of water as provided for in Part 8 of this Plan,
 - (e) establishes rules with respect to the priorities according to which access licences are to be adjusted as a consequence of any reduction of the availability of water as provided for in Part 8 of this Plan, and
 - (f) establishes rules according to which access licences are managed as provide for in Part 9 of this Plan.

Part 6 Requirements for water under access licences

21 Requirements for water under access licences

This Part is made in accordance with section 20 (1) (c) of the Act.

Note. The following clauses in this Part represent the total volumes specified in the share components of access licences in these water sources. There is no commitment to make these volumes available. The actual volumes available at any time will depend on climate, licence priority and the rules in this Plan.

22 Share component of domestic and stock access licences

- (1) It is estimated that, at the time of commencement of Part 2 of Chapter 3 of the Act, the share components of domestic and stock licences authorised to extract water from the Murray Regulated River Water Source will total 14,518 ML.
- (2) It is estimated that, at the time of commencement of Part 2 of Chapter 3 of the Act, the share components of domestic and stock licences authorised to extract water from the Lower Darling Regulated River Water Source will total 601 ML.

23 Share component of local water utility licences

- (1) It is estimated that, at the time of commencement of Part 2 of Chapter 3 of the Act, the share components of local water utility licences authorised to extract water from the Murray Regulated River Water Source will total 33,336 ML.
Note. Subclause (1) does not include local water utility access licence entitlements for the towns of Berrigan, Finley, Wakool and Bunaloo which total 3,828 ML. These licensed requirements are met from water supplies delivered to Murray Irrigation Limited.
- (2) It is estimated that at the time of commencement of Part 2 of Chapter 3 of the Act, the share components of local water utility licences authorised to extract water from the Lower Darling Regulated River Water Source will total 10,160 ML.

24 Share component of regulated river (high security) access licences

- (1) It is estimated that, at the time of commencement of Part 2 of Chapter 3 of the Act, the share components of regulated river (high security) access licences authorised to extract water from the Murray Regulated River Water Source will total 198,011 ML.
- (2) It is estimated that, at the time of commencement of Part 2 of Chapter 3 of the Act, the share components of regulated river (high security) access licences authorised to extract water from the Lower Darling Regulated River Water Source will total 7,999 ML.

25 Share component of regulated river (conveyance) access licences

It is estimated that, at the time of commencement of Part 2 of Chapter 3 of the Act, the share components of regulated river (conveyance) access licences authorised to extract water from the Murray Regulated River Water Source will total 330,000 ML.

Note. The 330,000 ML is a consequence of the Murray Irrigation Limited losses provisions. Murray Irrigation Limited will receive 300,000 ML of share component and 30,000 ML will become share component of the adaptive environmental regulated river (conveyance) access licence referred to in subclause 16 (3).

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

26 Share component of regulated river (general security) access licences

- (1) It is estimated that, at the time of commencement of Part 2 of Chapter 3 of the Act, the share components of regulated river (general security) access licences authorised to extract water from the Murray Regulated River Water Source will total 1,953,508 ML.
- (2) It is estimated that at the time of commencement of Part 2 of Chapter 3 of the Act, the share components of regulated river (general security) access licences authorised to extract water from the Lower Darling Regulated River Water Source will total 30,288 ML.

27 Share component of supplementary water access licences

- (1) It is estimated that at the time of commencement of Part 2 of Chapter 3 of the Act, the volume of supplementary water access licences authorised to access water from the Murray Regulated River Water Source will total 250,000 ML.
- (2) It is estimated that, at the time of commencement of Part 2 of Chapter 3 of the Act, the volume of supplementary water access licences authorised to access water from the Lower Darling Regulated River Water Source will total 250,000 ML.

28 Changes to total share component

This Plan recognises that total requirements for extraction under access licences in each access licence category may change during the term of this Plan as a result of:

- (a) the granting, surrender, cancellation or non renewal of access licences, or
- (b) variations to local water utility access licences arising from section 66 of the Act.

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

Part 7 Rules for granting access licences

29 Rules for granting access licences

- (1) This Part is made in accordance with sections 20 (2) (b) and 63 of the Act.
- (2) Access licences may be granted in these water sources subject to any embargo on the making of applications for access licences made under Chapter 3 Part 2 Division 7 of the Act.
- (3) The Minister should declare an embargo on the making of applications for access licences in this water source, other than for access licences of the following kinds:
 - (a) local water utility access licences,
Note. Pursuant to sections 66 (3) and 66 (4) of the Act, the Minister may also vary a local water utility's entitlement to water at five yearly intervals, or on application of the local water utility where there is a rapid growth in population.
 - (b) domestic and stock (domestic only) access licences,
 - (c) an access licence issued as part of alternative arrangements which replace the replenishment flow provisions relating to the Great Anabranh, in clause 60 of this Plan,
 - (d) an access licence required to satisfy subclause 16 (3) of this Plan, and
 - (e) an access licence resulting from an application of a type listed in section 82 (1) of the Act.
- (4) In applying for a new access licence, the applicant must establish the purpose and circumstances relating to that access licence, and that the share component sought will be the minimum required to meet that purpose and circumstances.
- (5) Subclause (4) does not apply to a new access licence arising from an application of a type listed in section 82 (1) of the Act or subclauses (3) (c) or (3) (d).

Part 8 Limits to the availability of water

Division 1 Long-term extraction limit

30 Long-term extraction limit

This Division is made in accordance with sections 20 (2) (a) of the Act.

31 Volume of the long-term extraction limit

- (1) This Plan establishes a long-term extraction limit for each of these water sources which is the lesser of:
 - (a) the long-term average annual extraction from the water source that would occur with the water storages, share components and water use development that existed in the water source in 2000/2001, and the water management rules defined in this Plan, and
 - (b) the long-term average annual extraction from the water source that would occur under the development and management conditions used to define Cap in Schedule F of the Murray Darling Basin Agreement.
- (2) The values referred to in subclauses (1) (a) and (1) (b) shall be adjusted for any access licence dealing under section 71E or 71H of the Act.
- (3) The values referred to in subclause (1) (a) and 1 (b), for the Murray Water Source, shall be adjusted as a result of system efficiency savings made as a consequence of the releasing of water to the Snowy River under the Snowy Water Inquiry Outcomes Implementation Deed.
- (4) For the purposes of establishing the long-term extraction limit for each of these water sources and auditing compliance with it, the following shall be included:
 - (a) all water extractions by all categories of access licences in accordance with the rules used for accounting of Cap diversions for Schedule F of the Murray Darling Basin Agreement,
 - (b) domestic and stock rights and native title rights extractions,
 - (c) volumes of water delivered as adaptive environmental water,
 - (d) floodplain harvesting diversions determined to be taken for use in conjunction with extractions authorised from the water source, and
 - (e) water allocations assigned from access licence water allocation accounts in the water source to access licence water allocation accounts in another water source.
- (5) For the purposes of establishing the long-term extraction limit for each of these water sources and auditing compliance with it, the following shall not be included:
 - (a) replenishment flows made in accordance with this Plan, or
 - (b) diversion of water pursuant to the environmental health water rules and the supplementary environmental water rules in Part 3 of this Plan.
- (6) For the purpose of establishing the long-term extraction limit for each of these water sources and auditing compliance with it, the assessed volume of extractions shall be reduced by the volume of water allocations being assigned from the water allocation accounts of access licences in any other water source to the water allocation accounts of access licences in the water source.

32 Assessment of the long-term extraction limit and current long-term average annual extraction

- (1) Assessment of the long-term extraction limit and the current long-term average annual extraction for each water source shall be carried out, after the end of each water year, using the hydrologic computer model that, at the time, is approved by the Department for assessing long-term water extraction from the water source.
- (2) To assess the long-term extraction limit in each water source, the model referred to in subclause (1) shall be set to represent as closely as possible the conditions referred to in clauses 31 (1) (a) and 31 (1) (b)
- (3) To assess the current long-term average annual extraction from each water source, the model referred to in subclause (1) shall be set to represent as closely as possible all water use development, supply system management and other factors affecting the long-term average annual extraction from the water sources at the time of assessment.

33 Compliance with the long-term extraction limit

- (1) The long-term average annual extraction from each of these water sources may not exceed the long-term extraction limit for the water source, specified in clause 31.
- (2) Pursuant to subclause (1):
 - (a) if it has been assessed that the current long-term average annual extraction from either of these water sources, exceeds:
 - (i) the volume specified in clause 31 (1) (a) by 3% or more, or
 - (ii) the volume specified in clause 31 (1) (a) by more than half the difference between the volume specified in clause 31 (1) (a) and the volume specified in clause 31 (1) (b), or
 - (iii) the volume specified in clause 30 (1) (b), or
 - (b) if the assessments for 3 consecutive water years indicate that the current long-term average annual extraction from the water source exceeds its long-term extraction limit, then
 - (c) the maximum available water determination made for supplementary water access licences in the relevant water source, under clause 40, shall be reduced, and
 - (d) once the maximum available water determination for supplementary water access licences in the water source has reduced to zero, the maximum available water determination for a regulated river (general security) access licences in the relevant water source, under clause 39, shall be reduced.
- (3) The degree of reduction required under subclause (2) shall be that assessed necessary to return the long-term average annual extraction from the water source to the long-term extraction limit for the water source.
- (4) If action has been taken under subclause (2) in either of these water sources, and a subsequent assessment under clause 32 indicates that the current long-term average annual extraction from the water source is below the long-term extraction limit for the water source by more than 3%, then previous reductions in the water source made under subclause (2) may be reversed to the degree that it is assessed necessary to return long-term average annual water extractions to the long-term extraction limit for the water source.
- (5) Any reversal of previous reductions under subclause (4) shall:

- (a) not exceed previous reductions made under subclause (2), and
 - (b) shall first reverse previous reductions made under subclause (2) relating to regulated river (general security) access licence available water determinations.
- (6) The assessment of the degree of reduction required under subclause (2) or degree of reversal under subclause (5) shall be made using the same computer model used to carry out assessments under clause 32.

Division 2 Available water determinations

34 Available water determinations

- (1) This Division is made in accordance with section 20 (2) (b) of the Act.
- (2) All available water determinations in these water sources shall be expressed as a percentage of the share component of each access licence in a licence category.

35 Available water determinations for domestic and stock access licences

- (1) The water supply system in each water source shall be managed so that available water determinations for domestic and stock access licences of 100% of share components can be maintained through a repeat of the worst period of low inflows to each water source represented in flow information held by the Department.
- (2) Sufficient volumes of water must be set aside from the New South Wales share of assured inflows into each water source and in reserves held by New South Wales in water storages in each water source to provide for subclause (1).
- (3) The available water determination for domestic and stock access licences made for the commencement of each water year in each water shall be 100% of share components, whenever possible.
- (4) The sum of available water determinations made for domestic and stock access licences in each water source in any year shall not exceed 100% of share components.
- (5) This Plan recognises that the water requirement of domestic and stock access licences in each water source may increase during the term of this Plan as a result of clause 29.
- (6) The volumes of water set aside from the New South Wales share of assured inflows into each water source and in reserves held by New South Wales in water storages in each water source shall be adjusted as required over the course of this Plan, if necessary to do so to ensure subclause (1) is satisfied.

36 Available water determinations for local water utility access licences

- (1) The water supply system in each water source shall be managed so that available water determinations for local water utility access licences of 100% of share components can be maintained through a repeat of the worst period of low inflows to each water source represented in flow information held by the Department.
- (2) Sufficient volumes of water must be set aside from the New South Wales share of assured inflows into each water source and in reserves held by New South Wales in water storages in each water source to provide for subclause (1).
- (3) The available water determination for local water utility access licences made for the commencement of each water year in each water shall be 100% of share components, whenever possible.

- (4) The sum of available water determinations made for local water utility access licences in each water source in any year shall not exceed 100% of share components.
- (5) This Plan recognises that the water requirement of local water utility access licences in each water source may increase during the term of this Plan in accordance with clause 29 and section 66 of the Act.
- (6) The volumes of water set aside from the New South Wales share of assured inflows into each water source and in reserves held by New South Wales in water storages in each water source shall be adjusted as required over the course of this Plan if necessary to ensure subclause (1) is satisfied.

37 Available water determinations for regulated river (high security) access licences

- (1) The water supply system of the Murray Water Source shall be managed so that available water determinations for regulated river (high security) access licences of 97% of share components can be maintained through a repeat of the worst period of low inflows to each water source represented in flow information held by the Department.
- (2) Sufficient volumes of water must be set aside from the New South Wales share of assured inflows into the Murray Regulated River water source and in reserves held by New South Wales in water storages to provide for subclause (1).
- (3) The sum of available water determinations for regulated river (high security) access licences in the Murray Water Source for each water year shall be:
 - (a) 97%, whenever the sum of available water determinations for regulated river (general security) access licences in the Murray Water Source for the water year is less than 97%, or
 - (b) 100%, whenever the available water determinations for regulated river (general security) access licences in the Murray Water Source for the water year is 97% or greater.
- (4) The water supply system of the Lower Darling Water Source shall be managed so that available water determinations for regulated river (high security) access licences of 100% of share components can be maintained through a repeat of the worst period of low inflows to water source represented in flow information held by the Department.
- (5) Sufficient volumes of water must be set aside from the New South Wales share of assured inflows into the Lower Darling Water Source and in reserves held by New South Wales in water storages to provide for subclause (4).
- (6) The available water determinations for regulated river (high security) access licences in the Lower Darling Regulated River water source made for the commencement of each water year shall be 100% of share components, whenever possible.
- (7) If the available water determination made under subclause (6) is less than 100% of share components then further assessments of available water shall be carried out at least monthly and available water determinations made until the sum of available water determinations for the water year is 100% of share components.
- (8) The sum of available water determinations made for regulated river (high security) licences in each water source in any water year shall not exceed 100%.
- (9) Available water determinations under subclause (3), subclause (6) and subclause (7) must take into account:

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (a) the environmental water provisions for the water source established by this Plan,
- (b) requirements for domestic and stock rights in the water source,
- (c) requirements for native title rights in the water source,
- (d) requirements for domestic and stock access licences in the water source,
- (e) requirements for local water utility access licences in the water source,
- (f) volumes remaining in water accounts from previous available water determinations in the water source,
- (g) where applicable, water losses associated with holding and delivery of water to meet the requirements specified in subclauses (a) to (f),
- (h) where applicable, an appropriate volume to meet water losses associated with the holding and delivery of water resulting from an available water determination, and
- (i) any other relevant matters.

38 Available water determinations for regulated river (conveyance) access licences

- (1) An available water determination is not to be made for regulated river (conveyance) access licences in the Murray Water Source in any water year until the sum of available water determinations for regulated river (high security) licences in the water source, for the water year, is at least 97% of share components.
- (2) Available water determinations for regulated river (conveyance) access licences in the Murray Water Source shall be made for the commencement of each water if water can be provided to them.
- (3) Available water determinations for regulated river (conveyance) access licences and regulated river (general security) access licences in the Murray Water Source shall be made so that the sum of available water determinations for regulated river (conveyance) access during the water year is:
 - (a) 50% of share components, when the sum of available water determinations for regulated river (high security) licences for the water year is 97% of share components and the sum of available water determinations for regulated river (general security) access licences for the water year is 0%, or
 - (b) 50% plus 0.3883% for each 1% by which the sum of available water determinations for regulated river (general security) licences for the water year exceeds 0% of share components, when the sum of available water determinations for regulated river (general security) licences for the water year is equal to or greater than 0% but less than 60%, or
 - (c) 73.3% plus 0.6675% for each 1% by which the sum of available water determinations for regulated river (general security) licences for the water year exceeds 60% of share components when the sum of available water determinations for regulated river (general security) licences for the water year is equal to or greater than 60% but less than 100%, or
 - (d) 100% when the sum of available water determinations for regulated river (general security) licences for the water year is equivalent to or greater than 100% of share components.

- (4) Subclauses (3) (a) and (3) (b) may be varied under section 42 (2) of the Act as set out in Part 14.
- (5) Available water determinations made for regulated river (conveyance) access licences must take into account:
 - (a) the environmental water provisions for the water source established by this Plan,
 - (b) requirements for domestic and stock rights in the water source,
 - (c) requirements for native title rights in the water source,
 - (d) requirements for domestic and stock access licences in the water source,
 - (e) requirements for local water utility access licences in the water source,
 - (f) requirements of regulated river (high security) access licences in the water source,
 - (g) volumes remaining in water accounts from previous available water determinations in the water source,
 - (h) where applicable, water losses associated with holding and delivery of water to meet the requirements specified in subclauses (a) to (g),
 - (i) where applicable, an appropriate volume to meet water losses associated with the holding and delivery of water resulting from an available water determination, and
 - (j) any other relevant matters.

39 Available water determinations for regulated river (general security) access licences

- (1) An available water determination is not to be made for regulated river (general security) access licences in the Murray Water Source in any water year until the sum of available water determinations for regulated river (high security) licences in the water source, for the water year, is at least 97% of share components.
- (2) An available water determination is not to be made for regulated river (general security) access licences in the Lower Darling Water Source in any water year until the sum of available water determinations for regulated river (high security) licences in the water source, for the water year, is 100% of share components.
- (3) An available water determinations for regulated river (general security) access licences in each water source shall be made for the commencement of each water if water can be provided to them.
- (4) If the available water determination for regulated river (general security) access licences in the Murray Water Source resulting from subclause (2) is less than the percentage specified in subclause (6), then further assessments of available water shall be carried out at least monthly and available water determinations made if water allocation can be provided.
- (5) If the allocation to regulated river (general security) access licences in the Lower Darling Regulated River Water Source resulting from subclause (2) is less than the water allocation percentage specified in subclause (7), then further assessments of available water shall be carried out at least monthly and available water determinations made if water allocation can be provided.
- (6) The sum of available water determinations made for regulated river (general security) access licences in the Murray Water Source in any water year shall not

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- exceed 110% of share components or such lower percentage as results from the operation of clause 33.
- (7) The sum of allocations to regulated river (general security) access licences in the Lower Darling Regulated River Water Source in any water year shall not exceed 100% or such lower percentage as results from the operation of clause 33.
- (8) Before water available to New South Wales from water storages in the Lower Darling Water Source may be considered in assessments of available water in the Murray Water Source, the sum of allocations made for regulated river (general security) access licences in the Lower Darling Regulated River Water Source in that water year must be that specified in subclause (7).
- (9) Available water determinations made under this clause in each water source must take into account any relevant operational requirements identified in this Plan and:
- (a) the environmental water provisions for the water source established by this Plan,
 - (b) requirements for domestic and stock rights in the water source,
 - (c) requirements for native title rights in the water source,
 - (d) requirements for domestic and stock access licences in the water source,
 - (e) requirements for local water utility access licences in the water source,
 - (f) requirements for regulated river (high security) access licences in the water source,
 - (g) requirements of regulated river (conveyance) access licences in the water source,
 - (h) allocations remaining in water accounts of access licences in the water source from previous available water determinations;
 - (i) where applicable, water losses associated with holding and delivery of water to meet the requirements specified in subclauses (a) to (h),
 - (j) where applicable, an appropriate volume to meet water losses associated with the holding and delivery of water resulting from an available water determination, and
 - (k) any other relevant matters.
- (10) Whenever the sum of available water determinations for regulated river (general security) access licences in either of these water sources in a water year is less than or equal to 60% of share components, available water determinations for regulated river (general security) access licences in that water source shall also indicate that:
- (a) water may be taken without debit to regulated river (general security) access licence water allocation accounts whenever the taking of water under supplementary water access licences is permitted, and
 - (b) the total volume of water that shall be assessed as taken without debit to the access licence water allocation account under subclause (10) (a) during the water year is limited to the share component volume minus the volume of water allocation that was carried over in the access licence water allocation account from the previous water year and the volume of water allocations resulting from available water determinations during the current year.

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

40 Available water determinations for supplementary water access licences

- (1) For each water source, an available water determination shall be made for supplementary water access licences at the commencement of each water year and shall define the maximum percentage of supplementary water access licence share component that can be taken in that year.
- (2) The available water determination for Murray Water Source supplementary water access licences made under subclause (1) shall not exceed 100% of the share component, or such lower percentage as results from the operation of clause 33.
- (3) The available water determination for Lower-Darling Water Source supplementary water access licences made under subclause (1) shall not exceed 100% of the share component, or such lower percentage as results from the operation of clause 33.

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

Part 9 Rules for managing access licences

Division 1 General

41 Rules for managing access licences

This Part is made in accordance with sections 20 (2) (b), 20 (2) (e), 21 (a) and 21 (c) of the Act having regard to:

- (a) the environmental water rules established in Part 3 of this Plan,
- (b) requirements for water to satisfy basic landholder rights identified in Part 4 of this Plan, and
- (c) requirements for water for extraction under access licences in Part 6 of this Plan.

Division 2 Water allocation account management

42 Water allocation accounts

In accordance with section 85 of the Act, a water allocation account shall be established for each access licence in each of these water sources.

43 Accrual of water allocations

- (1) Water allocations shall be accrued into each access licence water allocation account in accordance with the available water determinations made for the category of access licence in the water source.
- (2) The maximum volume of water allocation that may be credited to a regulated river (general security) licence in the NSW Murray Regulated River Water Source from available water determinations during a water year shall be 110% of the access licence share component minus the volume of water allocations carried over from the previous water year.

Note. Subclause (2) means that if a volume equivalent to say 30% of the share component is carried over in a licence account and the allocations for the water year totalled say 90%, then the licence account would only be credited with a further 80% of the share component. The balance of 10% would not be credited to that licence account.

- (3) The maximum volume of water allocation that may be credited to a regulated river (general security) licence in the Lower Darling Regulated River Water Source from available water determinations during a water year shall be the greater of:
 - (a) 50% of the licence share component, or
 - (b) the volume of the licence share component minus the volume of water allocations carried over from the previous water year.

Note. Subclause (3) ensures that those regulated river (general security) access licence holders with on-farm storages who have carried over additional water as a result of the operation of clause 46 (3) can receive up to 50% of the current year's water allocations.

44 Volume taken under access licences

- (1) The water allocation taken under local water utility access licences, domestic and stock access licences, regulated river (high security) access licences, regulated river (conveyance) access licences and supplementary water access licences shall be assessed as:

 Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (a) the volume of water extracted by the approved water supply works nominated by the access licence, or
- (b) the greater of:
 - (i) the volume of water extracted by the approved water supply works nominated by the access licence, or
 - (ii) the volume of water ordered for extraction by the approved water supply works nominated by the access licence,
 where the Minister has applied such a discretionary condition to the access licence.
- (2) The water allocation taken under regulated river (general security) access licences shall be assessed as:
 - (a) the volume of water extracted by the approved water supply works nominated by the access licence, subject to the provisions of subclause 39 (9) and resulting available water determinations, or
 - (b) the greater of:
 - (i) the volume of water extracted by the approved water supply works nominated by the access licence, subject to the provisions of subclause 39 (9) and resulting available water determinations, or
 - (ii) the volume of water ordered for extraction by the approved water supply works nominated by the access licence,
 where the Minister has applied such a discretionary condition to the access licence.
- (3) The Minister should only apply a discretionary condition in relation to subclauses (1) (b) or (2) (b) where this has been provided for in a compliance management strategy, approved by the Minister.

Note. It is intended that the discretionary condition referred to above should only be applied where water orders have been exceeding the volume of water being taken under an access licence and this cannot be explained by rainfall or other unavoidable factors.
- (4) Water allocation losses attributed to evaporation and dam spills associated with water allocations carried over from the previous water year in the water allocation accounts of each Lower Darling Water Source regulated river (general security) access licences are to be calculated as set out in subclauses (5) and (6) and withdrawn from each access licence water allocation account.
- (5) The water allocation loss attributed to evaporation shall be the lesser of:
 - (a) the volume of water allocation in the access licence account at the commencement of the assessment period in excess of:
 - (i) the licence share component volume multiplied by the total of the available water determination percentage for that water year,
 - (ii) plus the water allocations assigned from any other access licence during the current water year,
 - (iii) minus the water allocations assigned to any other access licence during the current water year, and
 - (b) the volume calculated under subclause 5 (a), divided by the total of the volumes calculated under subclause 5 (a) for all regulated river (general security) access licences in the water source, multiplied by the depth of evaporation from the Menindee Lakes over the period of assessment multiplied by the additional surface area of water in the Menindee Lakes

resulting from total excess volume calculated under subclause 5 (a) for all regulated river (general security) access licences in the water source.

- (6) The water allocation loss attributed to dam spills shall be the lesser of :
- (a) the volume calculated under subclause 5 (a), and
 - (b) the volume calculated under subclause 5 (a), divided by the total of the volumes calculated under subclause 5 (a) for all regulated river (general security) access licences in the water source, multiplied by the total volume of water spilled from Menindee Lakes during the assessment period.

45 Accounting of assigned allocations and return flows

- (1) Water allocations assigned from a water allocation account under Chapter 3 Part 2 Division 4 of the Act shall be debited from that water allocation account and water allocations assigned to a water allocation account under Chapter 3 Part 2 Division 4 of the Act shall be credited to that water allocation account.
- (2) Water allocations may also be re-credited to access licence water allocation accounts under section 76 of the Act, in accordance with water return flow rules established under section 75 of the Act.

46 Carrying over of water allocation credits

- (1) Water allocation remaining in the water allocation accounts of domestic and stock access licences, local water utility access licences, regulated river (high security) access licences, regulated river (conveyance) access licences and supplementary water access licences cannot be carried over from one water year to the next.
- (2) The maximum volume of water allocation that may be carried over in the water allocation accounts of a regulated river (general security) access licences in the Murray Water Source from one water year to the next shall be 50% of the access licence share component
- (3) The maximum volume of water allocation that may be carried over in the water allocation accounts of a regulated river (general security) access licences in the Lower Darling Water Source from one water year to the next shall be 50% of the access licence share component plus the storage volume of on-farm storages supplied by works nominated on the access licence less the volume of water contained in the on-farm storages at the end of the water year.

Division 3 Extraction conditions

47 General priority of extractions

Where extraction components of access licences do not specify the rate as a share of supply capability or a volume per unit time, the following priority of extractions shall apply whenever supply capability is insufficient to satisfy all orders for water in any section of these water sources:

- (a) water shall be supplied to domestic and stock access licences, local water utility access licences and regulated river (high security) access licences that have placed an order for water for that time, and
- (b) then any remaining supply capability shall be shared between regulated river (conveyance) access licences and regulated river (general security) access licences that have placed an order for water in proportion to the share components specified on the access licence volumes and the available water determination relationship in clause (38) (3).

48 Numerical specification of extraction entitlements

- (1) At any time during the term of this Plan, the Minister may, in accordance with the mandatory conditions on access licences, amend the extraction components of access licences in either of these water sources, or in any section of either of either of these water sources.
- (2) Action under subclause (1) should be undertaken as follows:
 - (a) the specified rate in the extraction component of each access licence should be a volume per unit of time or a share of supply capability,
 - (b) the specified rate in the extraction component of each domestic and stock local water utility, regulated river (high security) access licence should be sufficient to satisfy the maximum daily water needs, and
 - (c) after satisfying subclause (2) (b), the remaining supply capability should be distributed among regulated river (conveyance) access licences and regulated river (general security) access licences in proportion to the share component of each access licence and the available water determination relationship in clause (38) (3).
- (3) When action under subclause (1) is undertaken, the Minister may also, in accordance with mandatory conditions on access licences, amend the extraction components of access licences in other sections of the water source to exclude extractions in sections of the water source affected by the action under subclause (1).

49 Extraction under supplementary water access licences

- (1) The taking of water under supplementary water access licences in these water sources shall only be permitted in accordance with announcements made by the Minister for each water source.
- (2) The maximum volume that may be taken under supplementary water access licences during each period of time to which an announcement applies may be expressed as a percentage of each supplementary water access licence share component.
- (3) Taking of water under supplementary water access licences in each of these water sources shall be managed, as far as possible, to evenly share access opportunity amongst all supplementary water access licences.
- (4) Taking of water under supplementary water access licences in these water sources shall only be permitted once flows are in excess of those required :
 - (a) under the environmental water provisions for the water source specified in Part 3 of this Plan,
 - (b) to supply stock and domestic and native title rights requirements in the water source,
 - (c) to supply higher priority access licence requirements in the water source, and
 - (d) to provide replenishment flows requirements in the Lower Darling Water Source.
- (5) Taking of water under supplementary water access licences in the Murray Water Source shall only be permitted:
 - (a) from flows that cannot be stored in Lake Victoria water storage,
 - (b) when supply requirements to South Australia have been satisfied in accordance with the Murray Darling Basin Agreement,

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (c) when the surface water salinity measurement in the Murray River at Morgan is not in excess of 800 Electrical Conductivity units,
 - (d) if in the opinion of the Minister, the water that will be taken would not assist in the reduction of existing medium or high blue-green algae alerts,
 - (e) if in the opinion of the Minister, the taking of water will not prevent the commencement of a waterbird breeding event or will not threaten the success of an existing waterbird breeding event, and
 - (f) between 1 April and 30 October each year, if, in the opinion of the Minister, the taking of water will not prevent significant flow variations in those sections of the water source where flow heights are unaffected by weirs, or reduce beneficial flooding of the Barmah-Millewa forests or other riverine ecosystems.
- (6) Taking of water under supplementary water access licences in the Lower Darling Water Source shall also only be permitted:
- (a) if the the Menindee Lakes water storages are full or flows upstream of the Water Source are sufficient to fill them,
 - (b) if the water that will be taken cannot be stored in Lake Victoria,
 - (c) when supply requirements to South Australia have been satisfied in accordance with the Murray Darling Basin Agreement,
 - (d) if in the opinion of the Minister, the water that will be taken cannot be used to supply regulated river (general security) allocations in the Murray Valley,
 - (e) when the surface water salinity measurement in the Murray River at Morgan is not in excess of 800 Electrical Conductivity units,
 - (f) if in the opinion of the Minister, the water that will be taken will not contribute to the reduction of existing medium or high blue-green algae alerts,
 - (g) if the taking of water will not prevent flows in the Darling River from reaching 7,000 ML/day at Weir 32 for a period of time which, in the opinion of the Minister, is sufficient to permit adequate passage of fish over Weir 32,
 - (h) if, in the opinion of the Minister, the taking of water will not prevent the commencement of a waterbird breeding event or will not threaten the success of an existing event, and
 - (i) between 1 April and 30 October each year, if, in the opinion of the Minister, the taking of water will not prevent significant flow variations occurring in those sections of the water source where flow heights are unaffected by weirs.

Part 10 Dealings with access licences

50 Access licence dealing rules

- (1) This Part is made in accordance with section 20 (1) (d) of the Act and with the Minister's access licence dealing principles gazetted on 27 December 2002 under section 71L of the Act.

Note. The access licence dealing principles referred to in subclause (1) are contained in Appendix 5.

- (2) Applications for access licence dealings may be granted subject to the Minister's access licence dealing principles gazetted from time to time under section 71L of the Act and the rules in this Part.

Note. Access licence dealings include changes of licence ownership, conversions of licence category, movement of share component from one access licence to another access licence, movement of water allocation from one access licence allocation account to another access licence allocation account and changes in the location of water supply that can take water available under the licence. These dealings must comply with the provisions of the Act, the Minister's access licence dealing principles, and the rules in this Part.

Note. Where there is an inconsistency between access licence dealing rules established in this Plan and Minister's access licence dealing principles gazetted subsequent to the commencement of this Plan, section 71L of the Act provides for the access licence dealing rules in this Plan to prevail.

51 Rules relating to constraints within this water source

- (1) This clause relates to dealings under sections 71B, 71D, 71G, and 71J of the Act.
- (2) Any dealing that would result in the assignment of all or part of the share component of an access licence, whose extraction component only permits the taking of water upstream of the Barmah Choke, to an access licence, whose extraction component permits the taking of water downstream of the Barmah Choke shall be prohibited.
- (3) Any dealing that would result in the assignment of water allocation from the water allocation account of an access licence, whose extraction component only permits the taking of water upstream of the Barmah Choke, to an access licence, whose extraction component permits the taking of water downstream of the Barmah Choke may only occur if the Minister is satisfied that the assignment will not diminish the ability to fully supply all water orders that may result from water allocations already in the water allocation accounts of access licences whose extraction components permit extraction of water downstream of the Barmah Choke.
- (4) Assignment of water allocations from a supplementary water access licence water allocation account to an access licence of any other access licence category shall be prohibited.
- (5) Assignment of water allocations to a supplementary water access licence water allocation account from an access licence of any other access licence category shall be prohibited.

52 Rules for change of water source

- (1) This clause relates to dealings under section 71E of the Act.

Note. Section 71E dealings are the mechanism by which access licences can move from one water source to another. Once the change in water source has been effected, if permitted, the new licence will have to nominate specified works (by a dealing under section 71J of the Act) in the receiving water source before extraction can commence.

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (2) Access licences in other water sources outside of one of these water sources may only be issued following cancellation of access licences in one of these water sources if:
 - (a) the access licence dealing rules in the receiving water source permit such a dealing,
 - (b) a conversion factor, established by the Minister and published in an order made under section 71L of the Act that protects environmental water, domestic and stock rights, native title rights and the reliability of supply to all other access licences in this water source, has been applied, and
 - (c) the water source in which the access licence is issued is one of the following:
 - (i) a water source within the Murray Unregulated River Extraction Management Unit,
 - (ii) the Murrumbidgee Regulated River Water Source, or
 - (iii) the other of these water sources.
- (3) An access licence in either of these water sources may only be issued following cancellation of access licences in another water source if:
 - (a) the access licence dealing rules in the other water source permit such a dealing,
 - (b) a conversion factor, established by the Minister and published in an Order made under section 71L of the Act that protects environmental water, domestic and stock rights, native title rights and the reliability of supply to all other access licences in the Lower Darling Water Source, has been applied, and
 - (c) the water source in which the access licence is cancelled is one of the following:
 - (i) the Murrumbidgee Regulated River Water Source, or
 - (ii) the other of these water sources.
- (4) An access licence in the Murray Water Source may only be issued following cancellation of access licences in another water source if the Minister is satisfied that the issue of the licence will not result in the requirement to supply more water allocation to water access licences downstream of the Barmah Choke.

53 Rules for conversion of access licence category

- (1) This clause relates to dealings under section 71B of the Act.
- (2) Conversion of an access licence of one category to an access licence of another category is prohibited except as provided for under this clause.
- (3) On application of the access licence holder, the Minister may cancel a regulated river (general security) access licence in one of these water sources, and issue a regulated river (high security) access licence in the water source, subject to:
 - (a) the application of a conversion factor established by the Minister and published in an Order made under section 71L of the Act that protects environmental water, domestic and stock rights, native title rights and the reliability of supply to all other access licences in these water sources, and
 - (b) the volume of water in the regulated river (general security) access licence water allocation account being equal to or greater than its share component volume.

Note. The volume of water in the regulated river (general security) access licence water allocation account which is in excess of the share component volume of the new regulated river (high security) access licence will not be credited to the new regulated river (high security) access licence account.

- (4) On application of the access licence holder, the Minister may cancel a regulated river (high security) access licence in one of these water sources, and issue a regulated river (general security) access licence in the water source, subject to:
- (a) the application of a conversion factor equal to one divided by the conversion factor established in subclause (3) for the water source, and
 - (b) the total volume of regulated river (general security) access licence share components in the water source not increasing above the total volume of regulated river (general security) access licence share components in the water source at the time of commencement of Part 2 of Chapter 3 of the Act.

Note. This would allow conversion of a regulated river (high security) access licence to a regulated river (general security) access licence only if there had been a corresponding or larger volume of regulated river (general security) access licence share component converted to regulated river (high security) access licence in the water source.

- (5) On application of the licence holder, the Minister may cancel a regulated river (conveyance) access licence in the Murray Water Source and issue a regulated river (general security) access licence in the Murray Water Source subject to:
- (a) the application of a conversion factor established by the Minister that protects the reliability of supply to existing regulated river (general security) access licences, and
 - (b) the total volume of regulated river (general security) access licence share components in the water source not increasing above the total volume of regulated river (general security) access licence share components in the water source at the time of commencement of Part 2 of Chapter 3 of the Act.
- (6) On application of the licence holder, the Minister may cancel a regulated river (conveyance) access licence in the Murray Water Source and issue a regulated river (high security) access licence in the Murray Water Source subject to:
- (a) the application of a conversion factor established by the Minister that protects the reliability of supply to regulated river (general security) access licences, and
 - (b) the volume of water in the regulated river (conveyance) access licence water allocation account being equal to or greater than its share component volume.

54 Rules for interstate access licence transfer

- (1) This clause relates to consent given under section 71H of the Act.
- (2) Interstate transfer of access licences is prohibited except as provided for under this clause.
- (3) Access licence equivalents in other States may be transferred into these water sources, subject to the following restrictions:
 - (a) the terms of any relevant interstate agreement, and
 - (b) the application of a conversion factor and any other measures necessary to protect the reliability of supply to remaining regulated river (general security) access licence holders in this water source.
- (4) Access licences in these water sources may be transferred into another State, subject to the following restrictions:

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (a) the terms of any relevant interstate agreement, and
- (b) the application of a conversion factor and any other measures necessary to protect the reliability of supply to remaining regulated river (general security) access licence holders in this water source.

55 Rules for water allocation assignment between water sources

- (1) This clause relates to dealings under section 71G of the Act in relation to water allocation assignments between water sources.
- (2) A dealing under this clause is prohibited if it results in a water allocation assignment from an access licence in one of these water sources to an access licence in another water source unless the other water source is:
 - (a) the Murrumbidgee Regulated River Water Source, or
 - (b) the other one of these water sources.
- (3) A dealing under this clause is prohibited if it results in a water allocation assignment to an access licence in one of these water sources from an access licence in another water source unless the other water source is:
 - (a) the Murrumbidgee Regulated River Water Source, or
 - (b) the other one of these water sources.
- (4) A dealing under subclause (2) or (3) is prohibited if, in the opinion of the Minister:
 - (a) the supply of the volume of water allocation to the receiving access licence is not physically possible, or
 - (b) there is more than a minimal likelihood that the dealing will affect environmental water, domestic and stock rights, native title rights and reliability of supply to all access licences in either of these water sources.

56 Rules for interstate assignment of water allocations

- (1) This clause relates to dealings under section 71I of the Act.
- (2) Water allocation equivalents from other States may only be assigned to the water allocation accounts of access licences in these water sources, subject to:
 - (a) the terms of any relevant interstate agreement, and
 - (b) the application of a conversion factor, established by the Minister and published in an order made under 71L of the Act and any other measures necessary to protect environmental water, domestic and stock rights, native title rights and reliability of supply to all access licences in these water sources.
- (3) Water allocations from access licence water allocation accounts in these water sources may only be assigned to water allocation equivalents from other States, subject to:
 - (a) the terms of any relevant interstate agreement, and
 - (b) the application of a conversion factor, established by the Minister and published in an order made under 71L of the Act and any other measures necessary to protect environmental water, domestic and stock rights, native title rights and reliability of supply to all access licences in these water sources.
- (4) A dealing under subclauses (2) or (3) is prohibited if, in the opinion of the Minister:

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (a) the supply of the water allocation arising from the assignment is not physically possible, or
- (b) there is more than a minimal likelihood that the dealing will affect environmental water, domestic and stock rights, native title rights and reliability of supply to all access licences in either of these water sources.

Part 11 Mandatory conditions

57 Mandatory conditions on access licences

- (1) This Part is made in accordance with sections 17 (c) and 20 (2) (e) of the Act.
Note. The Minister may impose discretionary conditions at any time on an access licence in accordance with section 66 (1) (b) of the Act.
- (2) All access licences in these water sources shall have mandatory conditions to give effect to the following:
 - (a) the specification of the share component of the access licence,
 - (b) the specification of the extraction component of the access licence,
 - (c) the requirement that extraction under the access licence shall be subject to the available water determinations,
 - (d) the requirement that extraction under the access licence shall be subject to the water allocation account management rules established in Part 9 of this Plan,
 - (e) the requirement that the taking of water in accordance with the access licence may only occur if the resulting debit to the access licence account will not exceed the volume of water allocation remaining in the licence account,
 - (f) the requirement that water may only be taken by water supply works nominated on the access licence, and
 - (g) any other conditions required to implement the provisions of this Plan.
- (3) The mandatory condition under subclause (2), in relation to all access licences in the Murray Water Source, other than supplementary water access licences, whose nominated works at the commencement of application of Chapter 3 Part 2 of the Act in relation to this water source are upstream of the Barmah Choke, shall specify that extraction is only permitted upstream of the Barmah Choke.
- (4) All access licences shall have a mandatory condition that facilitates the provisions of clause 48 of this Plan.
- (5) All domestic and stock access licences, local water utility access licences, regulated river (high security) access licences and regulated river (conveyance) access licences shall have mandatory conditions that only allow the taking of water if it has been ordered in accordance with procedures established by the Minister.
- (6) All regulated river (general security) access licences shall have mandatory conditions that only allow the taking of water if it has been ordered in accordance with procedures established by the Minister, except in relation to water extracted under the provisions of clause 39 (10).
- (7) All supplementary water access licences shall have mandatory conditions that only allow the taking of water in accordance with announcements, as specified in clause 49, and after satisfying any procedures established by the Minister.
- (8) All domestic and stock access licences, other than domestic and stock (domestic only) access licences shall have mandatory conditions that only allow the taking of water for the purpose of domestic consumption or stock watering as defined in section 52 of the Act.

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (9) All domestic and stock (domestic only) access licences shall have mandatory conditions that only allow the taking of water for the purpose of domestic consumption as defined in section 52 of the Act.
- (10) All local water utility access licences shall have mandatory conditions that only allow the taking of water for the exercise of a water supply function of the local water utility or for other such purpose provided for under the Act.
- (11) The access licences referred to in clause 16 (3) shall have mandatory conditions that:
 - (a) only permit the taking of water allocations for the purpose of providing water to Murray River wetlands consistent with the environmental objectives of this Plan, and
 - (b) prohibit dealings under 71A, 71B, 71C, 71D, 71E and 71H of the Act.

58 Mandatory conditions on water supply works approvals

All approvals for water supply works in these water sources shall have mandatory conditions to give effect to the following:

- (a) flow measurement devices shall be installed and maintained on all works used for extraction of water under an access licence and shall be of a type and shall be maintained in a manner which is acceptable to the Minister,
- (b) water extraction, property water management infrastructure and cropping details shall be provided on request, in the form and in accordance with procedures established by the Minister, and
- (c) the taking of water may only occur in accordance with the conditions applying to the access licence from whose water allocation account the taking of water will be debited.

Part 12 System operation rules

59 System operation rules

This Part is made in accordance with section 21 (e) of the Act.

Note. Appendix 6 outlines general operational arrangements which apply to these water sources at the time of Plan gazettal.

60 Replenishment flow

- (1) Replenishment flows may be provided to the Great Anabranh, if required and, subject to subclauses (2) and (3), a volume of 50,000 ML each water year will be reserved for this purpose.
- (2) Replenishments under subclause (1) are subject to water being available from Lake Cawndilla after making provision for the volume of water required to supply those requirements listed in subclause (3) (a) and water allocations in subclause (3) (b) that must be supplied from Lake Cawndilla.
- (3) The volume of water set aside from water available to New South Wales from Menindee Lakes water storages to provide for subclause (1) shall be the lesser of:
 - (a) the volume required to provide the replenishment in subclause (1), and
 - (b) the volume available in the Lower Darling Water Source after making provision for:
 - (i) the requirements of domestic and stock access licences, local water utility access licences and regulated river (high security) access licences for the water year, and
 - (ii) any water allocations carried over in the water allocation accounts of regulated river (general security) access licences.
- (4) The Minister, under section 42 (2) of the Act and by notice published in the Gazette, may replace this clause with alternative provisions, provided that these do not require that more water be provided to the Great Anabranh than would be provided under subclauses (1) to (3).

Note. One option is to replace the current water supply arrangements with a piped water system supplied from the Darling.

61 Water delivery and channel capacity constraints

Where necessary for determining extraction rights, managing water releases or providing water under access licences, the maximum water delivery or operating channel capacity shall be determined and specified in accordance with procedures established by the Minister, taking into account:

- (a) inundation of private land or interference with access,
- (b) the effects of inundation on the floodplain and associated wetlands,
- (c) the transmission losses expected to occur,
- (d) capacities of water management structures controlled by the Minister, and
- (e) the SWOMP targets.

Note. The following capacities have been assessed:

- € Hume Dam and Lake Mulwala of 25,000 ML/day,
- € Tocumwal Choke of 10,600 ML/day,

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- € Barmah Choke of 8,500 ML/day,
- € Edward River offtake of 1,600 ML/day,
- € Gulpa Creek of 350 ML/day, and
- € Pooncarie of 20,000 ML/day.

62 Flood operation rules

The operation of all storages during times of flood is to be undertaken in accordance with the Murray Darling Basin Agreement referred to in the *Murray Darling Basin Act 1992*.

63 Airspace

Airspace operation of all storages shall be in accordance with the Murray Darling Basin Agreement as referred to in the *Murray Darling Basin Act 1992*.

Note. The rate of pre-releases from Hume Dam could be increased to 38,500 ML/day subject to the required easements being established. Increasing pre-release rates could benefit wetlands between Hume Dam and Lake Mulwala.

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

Part 13 Monitoring and reporting

64 Monitoring

The monitoring of the performance indicators identified in clause 12 of this Plan shall be undertaken by the Minister.

Note. Review and Audit of this Plan

In accordance with section 43 (2) of the Act, this Plan is to be reviewed, within the fifth year of its term, for the purpose of ascertaining whether its provisions remain adequate and appropriate for ensuring the effective implementation of the water management principles of the Act. Any improvements to environmental outcomes and water supply delivery resulting from the completion of remedial works to Keepit Dam may be relevant to this review.

In accordance with section 44 of the Act, this Plan will be audited at intervals of no more than five years, for the purpose of ascertaining whether its provisions are being given effect to. This audit is to be carried out by an audit panel appointed by the Minister in consultation with the water management committee, where one exists.

Note. Implementation Program

In accordance with section 51 of the Act, the Minister may establish an Implementation Program that sets out the means by which the provisions of this Plan are to be achieved.

It is proposed that the Minister establish an Implementation Program for this Plan. Pursuant to section 51 (5) of the Act, the Implementation Program is to be reviewed annually by the Minister to determine whether it is effective in implementing this Plan.

The results of the review of the Implementation Program are included in the annual report for the Department of Land and Water Conservation.

Part 14 Amendment of this Plan

65 Changes to these water source

The Minister, under section 42 (2) of the Act and by notice published in the Gazette, may add a river or section of river to one of these water sources or remove a river or section of river from one of these water sources providing that:

- (a) any river or section of river that is added has been declared to be a regulated river by an order published in the Gazette, and
- (b) the Minister is satisfied that there will be no impact on environmental water, domestic and stock rights, native title rights or on the water available to any access licences in these water sources.

66 Barmah–Millewa Allowance and Barmah–Millewa Overdraw

The Minister, under section 42 (2) of the Act and by notice published in the Gazette, may vary the rules for the release or taking of water from the Barmah–Millewa Allowance and Barmah–Millewa Overdraw specified in subclauses 15 (8) to 15 (15) at any time providing:

- (a) it has been assessed that there will be no more than a 1% reduction in the long-term volume of water supply available to access licence holders, in the Murray Water Source,
- (b) the only change to subclauses 15 (12) to 15 (15) may be the replacement of 30% with some other percentage,
- (c) the Minister has consulted with the Minister for the Environment, and
- (d) the Minister is of the opinion that the change is not contrary to the environmental objectives of this Plan.

67 Revision of regulated river (conveyance) access licence available water determination rules

The Minister, under section 42 (2) of the Act and by notice published in the Gazette may replace subclauses 38 (3) (a) and 38 (3) (b) with new provisions that provide water allocation volumes that more closely match the loss of water that occurs between the points of offtake of water from this water source and the points of delivery to water users within the Murray Irrigation Limited.

68 Replacement of replenishment flow rules

The Minister, under section 42 (2) of the Act and by notice published in the Gazette, may replace the provisions of clause 60 at any time with alternative arrangements as indicated under clause 60.

Schedule 1 Dictionary

The following definitions apply to this Plan in addition to the definitions set out in the Act:

airspace is a volume in a **water storage** which is kept empty for the purpose of mitigating potential floods.

assured inflows are the volumes of water which historic hydrologic information indicates are the minimum which can be expected to flow into the water source.

available water in relation to a water management area or water source, is the water that is available in that area or water source in accordance with an **available water determination** that is in force in respect of that area or water source.

available water determination a written order by the Minister as to the availability of water for the various categories of access licence in relation to a specified water management area or water source.

Barmah Choke for the purposes of this Plan means the Murray River at Picnic Point.

Department is the Department of Land and Water Conservation or its successor.

the **Cap** is as defined in Schedule F of the Murray Darling Basin Agreement.

Cap baseline conditions are those used for assessment of Cap in Schedule F of the Murray Darling Basin Agreement and relate to the level of water resource development at June 1994.

downstream of the Barmah Choke means the Murray River downstream of Picnic Point or any river which receives water needed to supply access licence requirements from the Murray River downstream of Picnic Point.

conversion factor refers to the adjustment factor that may be applied to the size of share components when they are part of a dealing under 71B or 71E of the Act.

extraction component is the extraction component of an access licence as defined in 56 (1) of the Act.

floodplain harvesting is the collection or capture of water flowing across floodplains.

long-term average annual extraction is the average of annual water extractions from the water source over the period for which an assessment is carried out.

Minister is the Minister for Land and Water Conservation. The Minister may delegate functions under section 389 of the Act.

Murray Darling Basin Agreement is the agreement between the Commonwealth of Australia and the states of New South Wales, Victoria and South Australia as referred to in the *Murray Darling Basin Act, 1992*, for the purpose of promoting and co-ordinating effective planning and management for the equitable, efficient and sustainable use of the water, land and other environmental resources of the Murray-Darling Basin.

on-farm storage is a privately owned water holding structure in which water taken from one of these water sources is often held for later use.

replenishment flows are flows provided to refill pools and water holes in effluent river systems downstream of the water source and provide water for household and town use and stock.

reserves are volumes of water put aside in a **water storage** to allow the supply of future water requirements.

share component is the share component of an access licence as defined in 56 (1) of the Act and, for the purposes of this Plan, any right to take water under the Water Act 1912

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

that gives rise to share component of an access licence under the Water Management Act 2000 (as amended).

upstream of the Barmah Choke means the Murray River upstream of Picnic Point or any river which receives water needed to supply access licence requirements from the Murray River upstream of Picnic Point.

water storage means a state owned dam, weir or other structure, which is used to regulate and manage river flows in this water source and the water body impounded by this structure.

water supply system includes the water storages and all other factors influencing water supply that are under the control of the Minister.

water use development includes all privately owned water management structures, and all aspects of farm, industry, town or private household development which affect the volumes of water taken from these water sources, and the management practices that are applied in relation to them.

water year is a 12 month period 1 July to 30 June

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

Schedule 2 Contribution to relevant targets in the December 2002 State Water Management Outcomes Plan

Levels of assessed contribution:

| | |
|---------|---|
| FULL | contributes to target in full |
| HIGH | while not fully contributing to target, there is a good level of contribution |
| PARTIAL | goes some way to contributing to the target |
| N/A | target is not applicable to this Plan |

| Relevant Target | Level of Contribution | Comment |
|--|-----------------------|---|
| Target 1a Extractions in Murray Darling Basin's regulated rivers limited to the level of the long-term average annual extraction below the Murray Darling Basin Ministerial Council (MDBMC) Cap which results from the long-term impact of the environmental water rules. | FULL | Plan clearly sets out the basis for the long-term extraction limit in Part 8 |
| Target 1f Rules for adjustments to future available water determinations in the event that the extraction limits are exceeded, clearly prescribed in consultation with the relevant management committee, and acted upon. | FULL | Rules set out in Part 8 |
| Target 2 All water management plans incorporating mechanisms to protect and restore aquatic habitats, and the diversity and abundance of native animals and plants, with particular reference to threatened species, populations and communities and key threatening processes. | PARTIAL | The environmental water provisions make some improvement on flows compared to Cap The water sources involved in this Plan are however under joint government control. A New South Wales only plan therefore cannot address the majority of environmental issues in this valley. Joint government processes are under way to do this. |
| Target 4a Where the frequency of "end of system" daily flows would be less than 60 percent of the predevelopment level without environmental water rules or extraction limits, the flows increased to 60 percent of predevelopment levels or increased by at least 10 percent of the predevelopment frequency. | N/A | These water sources are under joint government control. The NSW plan does not therefore manage the total flow regime. |
| Target 4b Frequency of "end of system" daily very low flows (as defined by local field investigation) protected or restored to predevelopment levels to maintain or restore their critical ecological functions, drought refuges and habitat connectivity. In the absence of such local assessments, protection extended up to at least the predevelopment 95 th percentile. | N/A | These water sources are under joint government control. The NSW plan does not therefore manage the total flow regime. |

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

| Relevant Target | Level of Contribution | Comment |
|---|-----------------------|--|
| Target 4c The channel capacity of all lower river and effluent creek systems used for the delivery of regulated water determined. Subject to reasonable socio-economic impacts, limits on daily supply volumes established for effluent systems such that they do not exceed 80 percent of the channel capacity for more than 10 percent of days in each month of each year. Where daily supply volumes are currently substantially less than channel capacity, alternative limits established to reduce the impact of unseasonal flows arising from future access licence dealings. | PARTIAL | This Plan provides for the determination of maximum operating channel capacities, in accordance with this SWMOP targets. This Plan also provides for the distribution of numerical extraction rights that could be used to facilitate management to desired capacity targets. |
| Target 5 Access rights for water access licensees clearly and legally specified in terms of share and extraction components. | FULL | Access for existing regulated supply licences and supplementary water access licences are specified and tradeable. |
| Target 9a Flow thresholds for declaration of supplementary water access, which take into account environmental needs, clearly specified. | HIGH | A variety of flow rules and environmental factors which must be assessed before supplementary water access can be permitted are detailed in this Plan. |
| Target 9b Annual limits on supplementary water extractions, consistent with the long-term average annual extraction limits, established in all regulated river water sources. | FULL | This Plan sets the maximum annual extraction for supplementary access licences at the full entitlement of 250GL in each water source and allows for a reduction in the maximum in response to any extraction limit exceedance. |
| Target 9c Rules for sharing between supplementary water licence holders made explicit. | PARTIAL | This Plan does not clearly specify any sharing rules however it does provide for "evenly sharing" access between supplementary water access licences. |
| Target 9d Supplementary access licence dealings made possible in regulated river water sources, subject to extraction limits and environmental assessment and Aboriginal spiritual and cultural constraints. | FULL | |
| Target 12 Supplementary access licence dealings made possible in regulated river water sources, subject to extraction limits and environmental assessment and Aboriginal spiritual and cultural constraints. | FULL | Obligations are set out in Part 5 |
| Target 14 Water sources, ecosystems and sites of cultural or traditional importance to Aboriginal people identified, plans of management prepared, and measures put in place to protect and improve them. | PARTIAL | Environmental flow rules would be expected to provide benefits to some billabongs and wetlands. |
| Target 16a All share components of access licences tradeable. | FULL | |
| Target 16c Conversion factors and protocols established to facilitate trading and dealings between water sources, whilst also protecting existing access and environmental water. | FULL | Transfers between water sources are in line with government policy |
| Target 16d Reduced conversion factors only applied when necessary to offset increased losses associated with water supply delivery | FULL | This Plan does not impose reduction factors |

 Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

| Relevant Target | Level of Contribution | Comment |
|---|-----------------------|---|
| Target 16f Zones established where necessary for environmental protection and limits/constraints on water dealings in them made explicit. | PARTIAL | There is no delineation of transfer zones, except for above and below the Barmah Choke. |
| Target 35 All water management plans incorporating water quality objectives that have considered Government approved Interim Environmental Objectives, the current ANZEC Guidelines and the recommendations of relevant Healthy Rivers Commission Inquiries. | PARTIAL | Plan includes a general water quality objectives. Some water sharing provisions, particularly the supplementary environmental water provisions would be expected to produce benefits in line with the Interim Environmental Objectives.. |

Appendix 1 Rivers and lakes within the Murray and Lower Darling Regulated River Water Sources

The **New South Wales Murray Regulated River Water Source** includes but is not limited to the following rivers and lakes:

- (i) Barbers Creek from upstream (eastern) boundary in Lot 13, Parish of Moorangatta, County Wakool, to its confluence with the Wakool River in Lot 15, Parish Nunnagoyt, County Wakool,
- (ii) Black Swan Lagoon,
- (iii) Bookit Creek from its effluence from Merribit Creek between Lots 23 and 39, Parish of Mia Mia, County of Wakool downstream to a dam and regulator located between Lots 4 and 10, Parish of Mia Mia, County of Wakool authorised by Licence L15918,
- (iv) Bullanginya Lagoon,
- (v) Collendina Lagoon,
- (vi) Colligen Creek, from its offtake from the Edward River, Lot 2, DP 857161 Parish of Tumudgery, County of Townsend, downstream to its confluence with the Niemur River within Werai State Forest No. 384, Parish of Werai, County of Townsend,
- (vii) Coobool Creek, from the southern boundary (bridge on disused rail line), of Lot 32, Parish Toolmah, County Wakool, to its confluence with the Wakool River, boundaries of Lots 2 and 3, Parish of Coobool, County Wakool,
- (viii) Dairy Lagoon, offtaking from the Murray River at the southern end of Lot 7014, DP 1021139, in the Reserve 78631, Parish of Corowa, County of Hume,
- (ix) Darling River - Wentworth Weir Pool, from the north east corner of Lot 11 DP 756952, Parish of Merche, County of Wentworth downstream to the confluence with the Murray,

Note. The north east corner of Lot 11 DP 756952 has been used to delineate the boundary between the Murray Water Source and the Lower Darling Water as it is a point immediately downstream of the most downstream *Water Act 1912* licence whose allowable water extraction volume was dependent on allocation announcements for the Lower Darling Volumetric Allocation Scheme.
- (x) Deep Creek, from its confluence with the Murray River between part Lot 19 and Lot 76, Parish of Benarca, County of Cadell to its upper limits within Lot 76, Parish of Benarca, County of Cadell,
- (xi) Dights Creek,
- (xii) Dry Lake, Parish of Taila, County of Taila,
- (xiii) Edward River; from its offtake from the Murray River downstream to its junction with the Wakool River,
- (xiv) Frenchmans Creek,
- (xv) Gol Gol Channel, the unnamed watercourse known locally as Gol Gol Channel, commencing at a point where Gol Gol Creek enters Gol Gol Swamp downstream to its point of termination with the southern section of Lot 16, Parish Gol Gol, County of Wentworth,
- (xvi) Gol Gol Creek, Parish of Gol Gol, County of Wentworth,
- (xvii) Gol Gol North Creek, Parish of Gol Gol, County of Wentworth,

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (xviii) Great Anabranche of the Darling River, from its confluence with the Murray River on Lot 672 DP 761719 to the location of the earthen block bank under Licence 60SL8686, Lot 12 DP 756168,
- (xix) Gulpa Creek,
- (xx) Gum Creek, from earthen block bank and regulator in Lot 45, Parish Toolmah, County Wakool, to its confluence with the Wakool River, Lot 74, Parish Coobool, County Wakool,
- (xxi) Jingera Jingera Lagoon, from its junction with unnamed watercourse off-taking from the Murray River within Lot 162, Parish of Albury, County of Goulburn, downstream to its confluence with the Murray River,
- (xxii) Lake Benanee,
- (xxiii) Lake Mulwala,
- (xxiv) Lake Victoria,
- (xxv) Larrys Creek, from its junction with Mulligans Creek in Lot 26, Parish Toolmah, County Wakool, to an earthen block bank and regulator in Lot 45, Parish of Toolmah, County Wakool,
- (xxvi) Lesters Lagoon,
- (xxvii) Little Barbers Creek, off-taking from Merran Creek in Lot 25, Parish Nunnagoyt, County Wakool, to its confluence with Barbers Creek in Lot 25, Parish Nunnagoyt, County Wakool,
- (xxviii) Little Murray River; off-taking from the Murray River within Campbells Island State Forest, (in the vicinity of easting 236685, northing 6057818, zone 55) to its confluence with the Murray River at the northern end of Lot 13, DP 756541, Parish of Gonn, County of Wakool,
- (xxix) Merran Creek Cutting, off-taking from the Little Murray River in Campbells Island State Forest, Parish Nunnagoyt, County Wakool, to its confluence with Merran Creek, Lot 14, Parish Nunnagoyt, County Wakool,
- (xxx) Merran Creek, from block dam and regulator in Lot 21, Parish Nunnagoyt, County Wakool, to its confluence with the Wakool River in Lot 36, Parish Poon Boon, County Wakool,
- (xxxi) Merrit Creek, from its effluence from the Wakool River between Lot 143, Parish of Bookit, County of Wakool and Lot 47, Parish of Mia Mia, County of Wakool to its confluence with the Wakool River between Lot 125, Parish of Toolon, County of Wakool and Lot 46, Parish of Mia Mia and County of Wakool,
- (xxxii) Moira Creek,
- (xxxiii) Mulligans Creek, off-taking from St Helena Creek in Lot 12, Parish Moorangatta, County Wakool, to its confluence with Larrys Creek in Lot 26, Parish Toolmah, County Wakool,
- (xxxiv) Murray River, from the upper limit of the storage of Hume Dam downstream to the South Australian border,
- (xxxv) Neimur River, from its confluence with Colligen Creek within Werai State Forest No. 384 to its confluence with the Wakool River in Lots 21, Parish of Wetuppa and 48, Parish of Coobool both in the County of Wakool,
- (xxxvi) Nowranie Creek,
- (xxxvii) Paddock Lagoon,

 Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (xxxviii) Porthole Creek, from its confluence with the Wakool River between Lots 3 and 77, Parish of Porthole, County of Cadell upstream to the Boundary between Lots 3 and 72, Parish of Porthole, County of Cadell,
- (xxxix) Ruel Lagoon,
- (xl) Rufus River,
- (xli) Salt Creek, from its offtake from the Murray River within WL 165, Parish of Cal Lal, County of Tara to its intersection with the South Australian Border,
- (xlii) Sheepwash Lagoon, offtaking from the Murray River in Lot 1 DP751155, Parish of Perricoota, County of Cadell and bounded by Lot 1 DP751155, Lot 2 DP521201 and Lot 1 DP131403, Parish of Perricoota, County of Cadell,
- (xliii) St Helena Creek, from a concrete regulator in Lot 3, Parish Moorangatta, County Wakool, to its confluence with the Wakool River in Lot 42, Parish of Toolmah, County Wakool,
- (xliv) Taila Creek, offtaking from the Murray River in Lot 4441, DP 76426 in the Parish of Taila, County of Taila to Lake Benanee,
- (xlv) Tallys Lake, from the confluence of the Unnamed Watercourse (Box Creek) in Lot 55, Parish Merran, County Wakool, to the offtake of the Unnamed Watercourse (Box Creek) in Lot 54, Parish Merran, County Wakool,
- (xlvi) Tuckers Creek,
- (xlvii) unnamed lagoon, (known locally as Cemetery Creek), offtaking in part Temporary Common, Parish of Euston, County of Taila,
- (xlviii) unnamed lagoon, (known locally as Doctors Point Lagoon) offtaking from Murray River between Lots 317 and 26, Parish of Albury, County of Goulburn,
- (xlix) unnamed lagoon and watercourse, (known locally as Parlour or Howlong Creek), offtaking from the Murray River within Lot 63, Parish of Bungowannah, County of Hume, to its junction with Lesters Lagoon,
- (l) unnamed lagoon, offtaking from Colligen Creek in Lot 6, Parish of Tumudgery, County of Townsend,
- (li) unnamed lagoon, offtaking from Murray River in Lot 2, Parish of Boomanoomana, County of Denison,
- (lii) unnamed lagoon, offtaking from the Murray River between Lots 16 and 18, Parish of Woperana, County of Denison,
- (liii) unnamed lagoon, offtaking from the Murray River between Lots 29 and 65, Parish of Quat Quatta, County of Hume, and also between Lots 20 and 68,
- (liv) unnamed lagoon, offtaking from the Murray River in Lot 10, Parish of Wangumma, County of Tara,
- (lv) unnamed lagoon, offtaking from the Murray River in Lot 4, Parish of Collendina, County of Hume,
- (lvi) unnamed lagoon, offtaking from the Murray River in W.L. 673, Parish of Moorna, County of Tara,
- (lvii) unnamed lagoon, offtaking from the Murray River within Lot 298 Parish of Corowa, County of Hume,
- (lviii) unnamed lagoons, connected to the Murray River and situated within Lots 298, 297 and 299, Parish of Corowa, County of Hume,

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (lix) unnamed lagoons, connected to the Murray River and situated within Lots 298, 297 and 299, Parish of Corowa, County of Hume,
- (lx) unnamed watercourse, anabranch of the Murray River offtaking between Lots 80 and 83, forming the northern boundary of Lot 79, traversing Lot 92 and rejoining the Murray River within Lot 29, Parish of Quat Quatta, County of Hume,
- (lxi) unnamed watercourse and effluents, (known locally as Breakaway Creek) offtaking from the Murray River in Lot 14, Parish of Bungowannah, County of Hume,
- (lxii) unnamed watercourse and effluents, (known locally as Yellowbelly Creek) offtaking from the Murray River in Lot 3, Parish of Bungowannah, County of Hume,
- (lxiii) unnamed watercourse and lagoon, connecting Lesters Lagoon with Black Swan Lagoon, Parish of Howlong, County of Hume,
- (lxiv) unnamed watercourse, (Box Creek), offtaking from Coobool Creek in Lot 48, Parish Toolmah, County Wakool, to Tallys Lake in Lot 55, Parish Merran, County Wakool,
- (lxv) unnamed watercourse, (Box Creek), Offtaking from Tallys Lake in Lot 54, Parish Merran County Wakool, to earthen block dam and pipe regulator in Lot 12, Parish Merran, County Wakool,
- (lxvi) unnamed watercourse, (known as Hemp Creek) offtaking from the Bookit Creek in Lot 4 DP756559, Parish of Mia Mia, County of Wakool to the eastern boundary of Lot 4 DP756559, Parish of Mia Mia, County of Wakool,
- (lxvii) unnamed watercourse, (known locally as Boilingdown Creek), offtaking from the Murray River within Lot 524, Parish of Corowa, County of Hume, and rejoining the Murray River within Collendina State Forest No. 98, block 1,
- (lxviii) unnamed watercourse, (known locally as Hans Creek), offtaking from the Murray River, within Lot 199, Parish of Corowa, County of Hume,
- (lxix) unnamed watercourse, (known locally as Horseshoe Lagoon), offtaking from the Murray River between Lots 12 and 46, Parish of Tocumwal, County of Denison,
- (lxx) unnamed watercourse, connected to the Edward River within section 60, Town of South Deniliquin, Parish of South Deniliquin, County of Townsend, for a distance of 200 metres south easterly from the point of connection,
- (lxxi) unnamed watercourse, connecting Washpen Creek with Lake Caringay,
- (lxxii) unnamed watercourse, from its offtake from the Edward River in Lot 78 (T S & C R 35646) Parish of Tumudgery, County of Townsend to its confluence with Colligen Creek in Lot 47 Parish of Tumudgery, County of Townsend,
- (lxxiii) unnamed watercourse, offtaking from an unnamed lagoon within that part of Collendina State Forest No. 98 east of Lot 9, Parish of Collendina, County of Hume,
- (lxxiv) unnamed watercourse, offtaking from another unnamed watercourse within Lot 64, Parish of Bungowannah, County of Hume, and traversing downstream successively, in a north westerly direction, Lots 275, 257, 241, 240, 248, 249, 250, 251, 172 and 171 Parish of Howlong, County of Hume to its confluence with Lesters Lagoon,
- (lxxv) unnamed watercourse, offtaking from Gum Creek in Lot 49, Parish Toolmah, County Wakool, to its confluence with Coobool Creek in Lot 49, Parish Toolmah, County Wakool,
- (lxxvi) unnamed watercourse, offtaking from the Murray River within Lot 162, Parish of Albury, County of Goulburn, downstream to its confluence with Jingera Jingera Lagoon,

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (lxxvii) unnamed watercourse, offtaking from the Murray River within Lot 23, Parish of Albury, County of Goulburn,
- (lxxviii) unnamed watercourse, offtaking from the Murray River within Lot 34, Parish of Albury, County of Goulburn,
- (lxxix) unnamed watercourse, offtaking from the Murray River within Lot 5, Parish of Wangumma, County of Tara,
- (lxxx) unnamed watercourse, offtaking from the Murray River within Lot 56, Parish of Bungowannah, County of Hume,
- (lxxxi) unnamed watercourse, offtaking from the Murray River within that part of Mulwala State Forest No 100 west of Lot 209, Parish of Mulwala, County of Denilson,
- (lxxxii) Wakool River, from its offtake on the Edward River downstream to its confluence with the Murray River,
- (lxxxiii) Washpen Creek, to a point 805 metres upstream of the junction of the Unnamed Watercourse connecting Washpen Creek with Lake Caringay, and
- (lxxxiv) Yallakool Creek, from its effluence from the Edward River between TS & CR 25840, Parish of Brassi, County of Townsend and Lot 78, Parish of Tumudgery, County of Townsend and its confluence with the Wakool River between Lot 54, Parish of Gobran, County of Townsend and Lot 3, Parish of Corry, County of Wakool.

The **Lower Darling Regulated River Water Source** includes but is not limited to the following rivers and lakes:

- (i) Balaka Lake,
- (ii) Bijijie Lake,
- (iii) Cawndilla Creek,
- (iv) Copi Hollow,
- (v) Darling River; from adjacent to "Billilla Homestead" on Lot 3671, DP 766053, County of Livingstone (grid ref. YKD35760 Wilcannia 1:100 000), downstream to the north east corner of Lot 11 DP 756952, Parish of Merche, County of Wentworth,
- (vi) Lake Cawndilla,
- (vii) Lake Menindee,
- (viii) Lake Pamamaroo,
- (ix) Lake Spectacle,
- (x) Lake Speculation,
- (xi) Lake Wetherell,
- (xii) Malta Lake,
- (xiii) Menindee Creek,
- (xiv) Pamamaroo Creek,
- (xv) Redbank Creek; from Lake Tandou, downstream to the crossing situated within Lot W.L. 3345, Parish of Mitta, County of Menindee, known locally as Packers Crossing,
- (xvi) Tandou Creek; where it off takes from the southern most end of Cawndilla Channel (DP 767272, at easting 614946, northing 6391413, Zone 54) traversing Lot 2123 DP 764065 Parish of Bintullia, County of Menindee, Lot 2125 DP 764067 Parish of Bintullia, County of Menindee, and DP 767026 Parish of Mitta, County of Menindee,

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

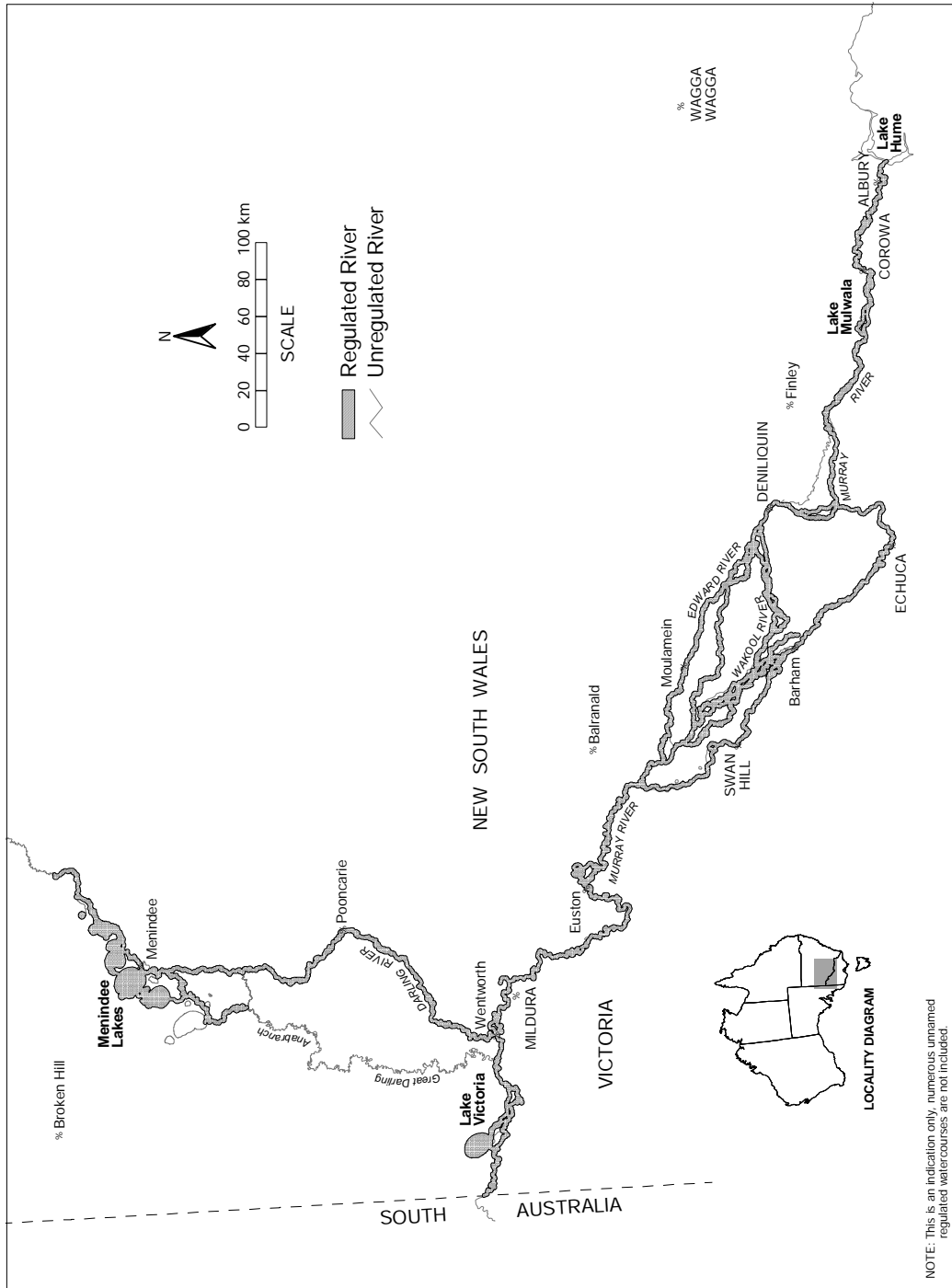
to where it joins Tandou Lake (Lot 3345 DP 765601 Parish of Mitta, County of Menindee, at easting 602179, northing 6380223, Zone 54),

- (xvii) Tandure Lake, and
- (xviii) unnamed lagoon; offtaking from the Darling River within Lot 89 Parish of Avoca County of Wentworth.

Note. The Great Anabranh of the Darling River receives domestic and stock replenishment flows from this Plan's area, but does not itself form part of this Plan's area.

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

Appendix 2 NSW Murray and Lower Darling Region



Appendix 3 State floodplain harvesting principles

Section 1 Definition and categories of floodplain harvesting

- (1) Floodplain harvesting is the collection, extraction or impoundment of water flowing across floodplains. The floodplain flows can originate from local runoff that has not yet entered the main channel of a river, or from water that has overflowed from the main channel of a river during a flood. For the purposes of this policy the floodplain is defined as extending to the 1 in 100 year flood line.
- (2) Floodplain harvesting can generally be put into one of three categories:
 - (a) diversion or capture of floodplain flows using purpose built structures or extraction works to divert water into storages, supply channels or fields or to retain flows,
 - (b) capture of floodplain flows originating from outside of irrigated areas using works built for purposes other than floodplain harvesting. Examples are:
 - (i) levees and supply works such as off river storages constructed in billabongs or depressions that fill from floodplain flows, and
 - (ii) below ground level water channels from which the water is pumped into on farm storages, and
 - (c) opportunistic diversions from floodplains, depressions or wetlands using temporary pumps or other means.

Note. Capture of rainfall or runoff from farm irrigation fields, via tailwater systems or other means, is not floodplain harvesting.

Section 2 Floodplain harvesting management issues

- (1) The harvesting of water from floodplains reduces the amount of water reaching or returning to rivers. This decreases the amount of water available to meet downstream river health, wetland and floodplain needs and the water supply entitlements of other users.
- (2) Floodplain harvesting can seriously affect the connectivity between the local floodplain, wetlands and the river, through the loss of flow volume and redirection of water flows.
- (3) The *Water Act 1912* provided powers to license floodplain harvesting. However this was never applied as there was generally no requirement to restrict total overall water extractions or off-allocation diversions. Harvested floodplain water has been treated as a freely available bonus to a farmer's licensed entitlement.
- (4) This situation has now changed. The Murray-Darling Basin cap applies to all water diverted from inland NSW catchments and rivers. Licensed and off-allocation access has been subject to increasing restrictions. Embargoes on water licences are also in place on many areas on the coast.
- (5) Floodplain harvesting works and water extractions also clearly fall into those activities that the *Water Management Act 2000* requires to be only undertaken by way of a licence. The Act also requires such licensing to consider the ecological functioning of floodplains.
- (6) Floodplain harvesting can no longer be left outside of the State's water management and compliance system or as a source of increase in further water extractions. Given this, it is the Government's intention that floodplain harvesting works and taking of water from floodplains be licensed and managed. It will take a

number of years to complete the process. However, the water sharing plans must signal the basic principles that will govern the process.

Section 3 Management of floodplain harvesting

- (1) Floodplain harvesting will not be a component of individual water sharing plans being produced for the regulated and unregulated rivers. During flood times water originating in one river system may flow across floodplains and along “flood runners” into adjacent river systems. It is therefore often not possible to assign an area of floodplain to a particular river.
- (2) Management of floodplain harvesting will occur on a state-wide basis, according to the six principles set out in section 4.
- (3) There are many thousands of existing floodplain works which will require licensing and this will be done over the next couple of years. The licensing process will include proper environmental impact assessments.
- (4) A separate category of licence will be established.

Section 4 Floodplain harvesting principles

- (1) Principle 1 is that all existing floodplain harvesting works and floodplain harvesting extractions will be licensed.
- (2) Principle 2 is that licensing will focus initially on controlling the structures, but with movement towards specifying volume limits and flow related access conditions, including metering of pumps

Note. While all surface and groundwater licences now (or will shortly) specify volume entitlements or annual limits to water, it is not possible to do this for floodplain harvesting licences at this stage. This is because the pattern of use is highly episodic and site and infrastructure specific, and current data on structures and use is minimal.

The Department of Land and Water Conservation will licence existing structures and specify monitoring of use (including metering of pumps) as a licence condition where possible. This may not be possible initially in cases where a tailwater system is also picking up floodplain water as they are difficult to separate, or where overland flow is being captured by a billabong for which we do not have any information on its capacity. Options for application of volumetric conditions will be developed and implemented where appropriate within the first five years of the initial water sharing plans.

- (3) Principle 3 is that no new works or expanded floodplain harvesting activities in the Murray-Darling Basin that will result in the diversion of additional water will be authorised.

Note. All new floodplain harvesting works are required by law to be licensed. However, as any new works would result in a growth in diversion, which would threaten river health and/or the water entitlements of others, such works would have to be offset by a reduction in other forms of water diversion.

- (4) Principle 4 is that floodplain diversions associated with works in place in the Murray-Darling Basin prior to the end of the 1994 irrigation season will be considered as within the NSW cap.

Note. Because cap is based on the use of water with development as it was in 1994, NSW considers that the water use that would result from use of the floodplain infrastructure in place in 1994, is part of the cap in each system.

- (5) Principle 5 is that once licensing is completed, an assessment of long-term use resulting from authorised structures against that from structures which existed in 1994 will be carried out and appropriate steps taken to keep harvesting to cap levels.

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

Note. It is likely that there has been some growth in floodplain harvesting works and extractions since 1994. However, it is expected that the licensing process will result in some modification of existing works. This may be adequate to offset any post 1994 development. If not, restrictions on the use of the licensed works will have to be applied to return diversions to cap levels. Such restrictions could include restrictions on pumping times or a requirement to modify the work to allow a proportion of flows to be bypassed. By preventing the construction or enlargement of new works, the opportunity for any further growth in floodplain harvesting diversions will be minimised.

- (6) Principle 6 is that floodplain harvesting rights will not be tradeable.

Note. Trading of floodplain harvesting rights will not be permitted because the frequency and volume of use is site and infrastructure specific, and volume management will take some time to implement.

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

Appendix 4 Performance indicators

| Performance indicator | Related objective | As measured by | Commentary |
|--|--|---|--|
| (a) Change in ecological condition of the water source and dependent ecosystems. | clauses 10 (a) to 10 (f) clause 10 (h) | <ul style="list-style-type: none"> € Monitoring of ecological response to changed flow regimes, by IMEF (each water source will have specific hypotheses from the set developed under IMEF). € Other relevant studies as may be undertaken in specific water sources. | <ul style="list-style-type: none"> € IMEF tests a number of hypotheses to indicate how elements of river ecology respond to different aspects of the flow regime (including EFRs, irrigation flows, and floods and wetland connectivity). |
| (b) Change in low flow regime | clause 10 (a) clause 10 (c) clause 10 (e) clause 10 (i) | <ul style="list-style-type: none"> € Number of days per water year where flow is below natural 95th and 80th percentiles. € Average and maximum number of days per water year of continuous periods of flow which is below natural 95th and 80th percentiles. € Measurement at end of system and specified key sampling sites. | <ul style="list-style-type: none"> € Government's River Flow Objectives (RFOs) 1 and 6. € Analysis would need to incorporate reference to seasonal indicators. € Long term modelling will reflect the influence of climate on flows. € Appropriate data relating to flow distribution, eg summer/winter cropping balance, agronomical practices, on farm storage development, management and operation of environmental releases etc. € Baseline audit should be the modelled WSP scenario (rather than natural flows). |
| (c) Change in moderate to high flow regime | clauses 10 (a) to 10 (h) | <ul style="list-style-type: none"> € Number of days per water year where flow is above natural 30th, 15th and 5th percentiles. € Average and maximum number of days per water year of continuous periods of flow which is above natural 30th, 15th and 5th percentiles. € Measurement at end of system and other key sampling sites in the water source. | <ul style="list-style-type: none"> € RFO 3 |

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

| Performance indicator | Related objective | As measured by | Commentary |
|---|-------------------|--|--|
| (d) Change in water quality | clause 10 (i) | <ul style="list-style-type: none"> € Assessment and statistical analysis of key water quality parameters, and relationship to flow. | <ul style="list-style-type: none"> € The Plan rules will contribute to a long-term change in water quality by affecting flow regimes and flow management to address issues such as algal management. € There are many non-Water Sharing Plan related factors that affect water quality (eg land-based activities and thermal pollution). |
| (e) Extent to which basic landholder rights requirements have been met | clause 10 (j) | <ul style="list-style-type: none"> € Basic rights allowances made according to plan provisions/implementation on program requirements. € Flows adequate to meet basic rights requirements (taking into consideration allowances for delivery). | <ul style="list-style-type: none"> € Basic rights usage figures in water sharing plans are estimated volumes (not actual use). € Basic rights represents a very small proportion of water extraction in regulated systems. |
| (f) Extent to which local water utility and major utility requirements (where major utilities are involved in urban water provision) have been met. | clause 10 (k) | <ul style="list-style-type: none"> € Percentage of years that reserves were adequate to satisfy urban water requirements. | |

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

| Performance indicator | Related objective | As measured by | Commentary |
|--|-------------------|--|---|
| (g) Change in economic benefits derived from water extraction and use | clause 10 (k) | <ul style="list-style-type: none"> € Change in regional gross margins versus annual total extractions based on year 1 benchmarks (as represented in IQQM). € Movement of water to higher value crops as measured by increases in area and/or water extracted by these enterprises versus lower value uses. € Change in unit price of water transferred. € Annual total volume of access licence transferred (ML) in each water year. | <ul style="list-style-type: none"> € Note that there are many factors affecting economic status of a region, for example commodity prices, other sources of water (eg groundwater). € The PI is intended to isolate as much as possible the effects of water availability and price on the gross margin returns at a regional level. € Assessment undertaken as part of plan performance monitoring will make assumptions to attempt to identify the impact of this Plan's provisions. |
| (h) Extent of recognition of spiritual, social and customary values of water to Aboriginal people. | clause 10 (k) | <ul style="list-style-type: none"> € Assessment of amount and type of information collected to identify the range of values of water to Aboriginal people. | <ul style="list-style-type: none"> € The collection of information on the values associated with water is considered the first step in addressing the objects of the Act. It would be expected that at the end of five years there should be relevant information collected for each water source, as a minimum requirement. |
| (i) Extent to which native title rights have been met. | clause 10 (k) | <ul style="list-style-type: none"> € Native title rights allowances made according to plan provisions/implementation program requirements. | |

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

Appendix 5 Minister's access licence dealing principles

The following is the text from the Access Licence Dealing Principles Order, published in the NSW Government Gazette on 27 December 2002.

Access Licence Dealing Principles Order 2002

Part 1 Introduction

1. Name of Order

This Order is the *Access Licence Dealing Principles Order 2002*.

2. Commencement

This Order commences on 20 December 2002.

3. Establishment of access licence dealing principles

The access licence dealing principles set out in this order are established.

4. Interpretation

- (1) References in this order to licences of category 'runoff harvesting' or 'regulated river (conveyance)' are subject to those categories being prescribed by regulation made under section 57 (k) of the Act.
- (2) Notes in this order do not form part of the order.

5. Effect

- (1) Consistent with section 71K (1) of the Act, all applications for access licence dealings under Division 4 of Part 2 of Chapter 3 of the Act are to be dealt with in accordance with:
 - (a) the water management principles, and
 - (b) the principles in this order, and
 - (c) access licence dealing rules established by any relevant management plan.
- (2) Consistent with section 71L of the Act, any access licence dealing rules established by management plans must be consistent with the principles in this order.

6. Definitions

In this order the following definitions apply:

dealing means a dealing under Chapter 3, Part 2 Division 4 of the *Water Management Act 2000*.

farm dam is a privately owned dam typically of earthen construction designed to collect and/or store water for use on one or a few properties. It does not include publicly owned dams or weirs.

groundwater source means a water source specified in a groundwater management plan.

hydrologically connected water sources are water sources where water from one flows into the other, or, in the case of river systems, where flow from both goes into a common river downstream.

management plan means a plan made under section 41 or 50 of the *Water Management Act 2000*.

regulated river water source means a water source specified in a regulated river management plan.

runoff harvesting dam is a farm dam on a hillside or minor stream which collects and stores rainfall runoff. Minor streams are as defined in an order made under section 53 of the *Water Management Act 2000*.

unregulated river water source means a water source specified in an unregulated river management plan.

Part 2 General principles

7. Impacts on water sources

- (1) Dealings should not adversely affect environmental water and water dependent ecosystems as identified in any relevant management plan.
- (2) Dealings should be consistent with any strategies to maintain or enhance water quality identified in any relevant management plan.
- (3) In unregulated river water sources, dealings should not increase commitments to take water from water sources or parts of water sources identified in any relevant management plan as being of high conservation value.
- (4) In unregulated river water sources or a groundwater sources, dealings should not increase commitments to take water from water sources or parts of water sources above sustainable levels identified in any relevant management plan.
- (5) In regulated river water sources, dealings should not increase daily demand for water delivery at those locations and times where it is identified in any relevant management plan that demand exceeds delivery capacity.
- (6) In regulated river water sources, dealings should not increase commitments to take water in lower river or effluent systems where this will result in flow at greater than 80% of channel capacity for more than 10% of days used for water delivery.
- (7) In this clause, **commitments to take water** refers, in relation to all access licences with nominated works in that water source or part of a water source, to:
 - (a) the total volume of share components, or
 - (b) the total volume of water allocations in water allocation accounts, or
 - (c) where relevant, the sum of limits on rates of extraction in extraction components.

8. Impacts on indigenous, cultural, heritage or spiritual matters

- (1) Dealings should not adversely affect geographical and other features of indigenous significance.
- (2) Dealings should not adversely affect geographical and other features of major cultural, heritage or spiritual significance.

9. Impacts on water users

- (1) Dealings should not adversely affect the ability of a person to exercise their basic landholder rights.
- (2) Dealings should have no more than minimal effect on the ability of a person to take water using an existing approved water supply work and any associated access licences. This should be addressed by constraints on dealings established in access licence dealing rules in relevant management plans.

10. Maximising social and economic benefits

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (1) The objective of access licence dealings is to help to facilitate maximising social and economic benefits to the community of access licences as required under the objects of the Act. Dealings do this by:
 - (a) allowing water to move from lower to higher value uses, and
 - (b) allowing the establishment of water markets that value the access licences, thereby encouraging investment in water efficient infrastructure, and
 - (c) allowing greater flexibility to access licence holders.
- (2) Subject to other principles in this order, access licence dealing rules should allow maximum flexibility in dealings to promote the objectives set out in subclause (1).

Part 3 Principles for specific types of access licence dealings

11. Transfer of access licences

- (1) This clause applies to dealings under section 71A of the Act.
- (2) Dealings under section 71A are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or
 - (b) if the licence is suspended under section 78 of the Act.
- (3) Access licence dealing rules established by a management plan shall not regulate or prohibit dealings under section 71A of the Act.

Note. as indicated in section 71A (3), consent to the transfer of a local water utility access licence may only be granted if the transferee is a local water utility, and consent to the transfer of a major water utility access licence may only be granted if the transferee is a major water utility.

12. Conversion of access licence to new category

- (1) This clause applies to access licence dealings under section 71B of the Act.
- (2) Dealings under section 71B are prohibited:
 - (a) if the licence is proposed to be converted to category regulated river (conveyance) or category estuarine or category coastal, or
 - (b) if there is an outstanding debt under the Act in respect of the licence, or
 - (c) if the licence is suspended under section 78 of the Act, or
 - (d) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, or
 - (e) if the licence share component is not numerically quantified.
- (3) Dealings under section 71B are prohibited unless provisions of the relevant management plan:
 - (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (4) The share and extraction components of a new licence issued under a dealing under section 71B must comply with any requirements that are specified in the relevant management plan for a licence granted under section 63 of the Act for the new category.

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (5) Except for where it is otherwise specified in access licence dealing rules in the relevant management plan or where this dealing is accompanied by a dealing under section 71E, water allocations remaining in the water allocation account of the cancelled licence are to be credited to the new licence, up to a maximum of the share component volume of the new licence.
- (6) The share component on a new access licence issued under a dealing under section 71B is to be of a volume equal to the volume on the cancelled licence multiplied by a conversion factor determined by the Minister in accordance with any rules set out in relevant management plans.
- (7) Conversion factor rules in management plans:
 - (a) must be based on protecting environmental water and basic landholder rights as specified in the management plans, and maintaining available water to other access licences, and
 - (b) are not to be set for the purpose of achieving a reduction in overall water extraction from water sources.
- (8) Subject to the granting of an application under section 71J, any nominated water supply works on the cancelled licence may be carried forward to the new licence.
- (9) For conversion of category from regulated river (high security), unregulated river or aquifer to major utility and vice versa:
 - (a) a major utility licence may only be converted to another category if it has components relating to only one water source, and
 - (b) subject to imposing such mandatory conditions as are required by the relevant management plan for the new category, the extraction component on the cancelled licence is to be carried over to the new licence.
- (10) For conversion of category from regulated river (general security) to regulated river (high security) and vice versa, and for conversion of category from domestic and stock to regulated river (high security) and vice versa, the extraction component on the cancelled licence is to be carried over to the new licence, subject to imposing such mandatory conditions as are required by the relevant management plan for the new category.
- (11) For conversion of category from regulated river (conveyance) to regulated river (high security) or regulated river (general security), the extraction component on the cancelled licence is to be carried over to the new licence, subject to imposing such mandatory conditions as are required by the relevant management plan for the new category.
- (12) For conversion of category from regulated river (general security) to unregulated river:
 - (a) no parts of the extraction component on the cancelled licence are to be carried over to the new licence, and
 - (b) the extraction component of the new licence is to specify a location or area which is on an unregulated river (apart from a minor stream as defined in an order made under section 53 of the Act), and
 - (c) the application for conversion of category from regulated river (general security) to unregulated river must be accompanied by an application under section 71E to change the share component to an unregulated river water source, and is conditional on granting of that application, and
 - (d) water allocations remaining in the water allocation account on the cancelled licence may not be credited to the new licence.

- (13) For conversion of category from unregulated river to runoff harvesting:
- (a) no parts of the extraction component on the cancelled licence are to be carried over to the new licence, and
 - (b) the extraction component of the new licence is to specify a location or area which is not on a river (apart from a minor stream as defined in an order made under section 53 of the Act), and
 - (c) the application for conversion of category from unregulated river to runoff harvesting access licence must be accompanied by an application under section 71J to nominate the water supply work to a runoff harvesting dam, and is conditional on granting of that application.
- (14) For conversion of category from runoff harvesting to unregulated river:
- (a) no parts of the extraction component on the cancelled licence are to be carried over to the new licence, and
 - (b) the extraction component of the new licence is to specify a location or area which is on an unregulated river (apart from a minor stream as defined in an order made under section 53 of the Act).
- (15) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. Under section 71B applications to convert local water utility access licences and supplementary access licences are prohibited, and licences granted are subject to the mandatory conditions applicable to the category or subcategory of licence to which it belongs. Also licences may only be granted in relation to the same water source or water management area as the cancelled licence.

13. Subdivision of access licences

- (1) This clause applies to subdivision dealings under section 71C of the Act.
- (2) Dealings under section 71C are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or
 - (b) if the licence is suspended under section 78 of the Act.
- (3) Subject to the granting of an application under section 71J, any nominated water supply works on the cancelled licence may be carried forward to the new licences.
- (4) The category of the new licences is to be the same as the category of the cancelled licence.
- (5) The areas or locations specified in the cancelled licence are to be carried over to all the new licences.
- (6) Any indivisible parts of the times, rates or circumstances specified in the extraction component of the cancelled licence are to be carried forward to all the new licences.
- (7) Water allocations remaining in the water allocation account of the cancelled licence are to be credited to the new licences so that the combined water allocations in the accounts of the new licences are no greater than the water allocations which remained in the account of the cancelled licence.
- (8) Access licence dealing rules established by a management plan shall not regulate or prohibit subdivision dealings under section 71C of the Act.

Note. As indicated in section 71C (3), the combined share components and combined extraction components of the new licences are to be no greater than the share and

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

extraction components of the cancelled licence, and conditions on the cancelled licence are to be carried over to the new licences.

14. Consolidation of access licences

- (1) This clause applies to consolidation dealings under section 71C of the Act.
- (2) Consolidation dealings under section 71C are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of any of the licences, or
 - (b) if any of the licences are suspended under section 78 of the Act, or
 - (c) if the licences to be consolidated do not have share components in the same water source, or
 - (d) if the location or area specified in the extraction component of the licences is not the same.
- (3) Subject to the granting of an application under section 71J, any nominated water supply works on the cancelled licences may be carried forward to the new licence.
- (4) Water allocations remaining in the water allocation accounts on the cancelled licences are to be credited to the new licence so that the water allocations in the account of the new licence is no greater than the sum of the water allocations remaining in the accounts of the cancelled licences.
- (5) Access licence dealing rules established by a management plan shall not regulate or prohibit consolidation dealings under section 71C of the Act.

Note. as indicated in section 71C, the licences to be consolidated must be of the same category or subcategory, the combined share components and combined extraction components of the new licences are to be no greater than the share and extraction components of the cancelled licence, and conditions on the cancelled licences are to be carried over to the new licences.

15. Assignment of rights under access licences

- (1) This clause applies to assignment of rights dealings under section 71D of the Act.
- (2) Dealings under section 71D are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of any of the licences, or
 - (b) if any of the licences are suspended under section 78 of the Act, or
 - (c) if any of the licences are of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act.
- (3) Only share or extraction components, or parts thereof, that are numerically quantified may be assigned from one licence to another.
- (4) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. As indicated in section 71D, the licences which are involved in a dealing under section 71D must be of the same category and have share components in the same water source or water management area. This dealing does not apply to local water utility access licences.

16. Change of water source

- (1) This clause applies to amendment of share component dealings under section 71E of the Act.
- (2) Dealings under section 71E are prohibited:

- (a) if there is an outstanding debt under the Act in respect of the licence, or
 - (b) if the licence is suspended under section 78 of the Act, or
 - (c) if the licence does not have the share component expressed as a volume, or
 - (d) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, or
 - (e) from an unregulated river water source to a regulated river water source, or
 - (f) from a groundwater source to a regulated river or unregulated river water source, or vice versa, or
 - (g) if the licence is of category major water utility or supplementary.
- (3) A dealing under section 71E is prohibited unless there is a hydrologic connection between the water sources of the cancelled and issued licences.
- (4) A dealing under section 71E is prohibited unless provisions of the relevant management plans:
- (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (5) The share and extraction components of a new licence issued under this dealing must comply with any requirements that are specified in the relevant management plan for a licence granted under section 63 of the Act.
- (6) The share component on the new access licence is to be of a volume equal to the volume on the cancelled licence multiplied by a conversion factor determined by the Minister in accordance with any rules set out in relevant management plans.
- (7) Conversion factors rules in management plans:
- (a) must be based on protecting environmental water and basic landholder rights as specified in the management plans, and maintaining the available water to other access licences, and
 - (b) are not to be set for the purpose of achieving a reduction in overall water extraction from water sources.
- (8) Nominated water supply works on the cancelled licence are not to be carried over to the new licence.
- (9) No water allocations remaining in the water allocation account of the cancelled licence may be credited to the new licence.
- (10) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. As indicated in section 71E, the new licence arising from a dealing under section 71E is subject to the mandatory conditions relevant to its category or subcategory and water source. This dealing does not apply to local water utility access licences.

17. Amendment of extraction component of access licence

- (1) This clause applies to amendment of extraction component dealings under section 71F of the Act.
- (2) Dealings under section 71F are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence,

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (b) if the licence is suspended under section 78 of the Act, or
 - (c) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences.
- (3) Amendment of the times, rates and circumstances part of the extraction component may only occur where:
- (a) access licence dealing rules in the relevant plan make provision for it consistent with the principles in Part 2 of this order, and
 - (b) those rules specifically indicate the nature of those amendments which are allowed.
- (4) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. As indicated in section 71F, the area or location arising from a variation of an access licence under this dealing must relate to the same water management area or water source as that to which the original area or location related.

18. Assignment of water allocations between access licences

- (1) This clause applies to assignment of water allocation dealings under section 71G of the Act.
- (2) Dealings under section 71G are prohibited:
- (a) if either of the access licences is suspended under section 78 of the Act, or
 - (b) if either of the access licences are of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences, or
 - (c) if a method of measurement of water extraction which is satisfactory to the Minister is not established for all nominated water supply works on both access licences, or
 - (d) if any of the access licences is of category runoff harvesting, or
 - (e) if any of the access licences is of category major utility, unless specific provision is made in access licence dealing rules to allow this, or
 - (f) from a supplementary water access licence to a licence of any other category.
- (3) Assignment of water allocations between access licences relating to different water sources is prohibited if:
- (a) either licence is of category supplementary, or
 - (b) there is no hydrologic connection between the water sources, or
 - (c) one water source is a regulated river and the other is an unregulated river, or
 - (d) one water source is a groundwater source and the other is a regulated river or unregulated river water source.
- (4) Assignment of water allocations between access licences relating to different water sources is prohibited unless provisions of the relevant management plans:
- (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (c) protect the available water under other access licences from being affected by such dealings.
- (5) Assignment of water allocations from a local water utility access licence is prohibited unless:
 - (a) the Minister has approved a demand management plan for all NSW towns supplied under the local water utility access licence, and
 - (b) the Minister has approved a drought management plan for all NSW towns supplied under the local water utility access licence, and
 - (c) the Minister is satisfied the assignment will not put the water supply for NSW towns supplied by the local water utility at risk.
- (6) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

19. Interstate transfer dealings

- (1) This clause applies to dealings under section 71H of the Act.
- (2) Any dealings under section 71H must be consistent with the relevant inter-state agreement.
- (3) Dealings under section 71H are prohibited unless the waters for which the interstate access licence equivalent has or will have rights to are hydrologically connected to the water source in which to which the access licence to be issued or revoked relates.
- (4) Dealings under section 71H which revoke an access licence are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or
 - (b) if the licence is suspended under section 78 of the Act, or
 - (c) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, or
 - (d) if the licence is of category local water utility or major water utility.
- (5) The share and extraction components of a new licence issued under this dealing must comply with any requirements that are specified in the relevant management plan for a licence granted under section 63 of the Act.
- (6) Dealings under section 71H are prohibited unless arrangements are in place which:
 - (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (7) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

20. Interstate assignment of water allocations

- (1) This clause applies to interstate assignment of water allocation dealings under section 71I of the Act.
- (2) Any dealings under section 71I must be consistent with the relevant inter-state agreement.

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (3) Dealings under section 71I are prohibited:
 - (a) if the access licence is suspended under section 78 of the Act, or
 - (b) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences, or
 - (c) if a method of measurement of water extraction which is satisfactory to the Minister is not established for all nominated water supply works on the access licence, or
 - (d) if the access licence is of category runoff harvesting or supplementary water, or
 - (e) if the access licence is of category major utility, unless specific provision is made in access licence dealing rules in the relevant management plan to allow this.
- (4) This dealing is prohibited unless arrangements are in place which:
 - (a) protect environmental water from being affected by the dealing, and
 - (b) protect basic landholder rights from being affected by the dealing, and
 - (c) protect the available water under other access licences from being affected by the dealing.
- (5) Interstate assignment of water allocations from a local water utility access licence is prohibited unless:
 - (a) the Minister has approved a demand management plan for all NSW towns supplied under the local water utility access licence, and
 - (b) the Minister has approved a drought management plan for all NSW towns supplied under the local water utility access licence, and
 - (c) the Minister is satisfied the assignment will not put the water supply for NSW towns supplied by the local water utility at risk.
- (6) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

21. Nomination of water supply works

- (1) This clause applies to nomination of water supply works dealings under section 71J of the Act.
- (2) Dealings under section 71J are prohibited if the access licence is suspended under section 78 of the Act.
- (3) Dealings under section 71J are prohibited if the access licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences, with the following exceptions:
 - (a) if new or additional works are to be nominated, where those works supply the same property as the current nominated works, or a contiguous property to the property supplied by the current nominated works which is occupied by the same landholder, or
 - (b) if a nominated work is withdrawn, that there remains at least one nominated work.

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (4) Dealings under section 71J are prohibited if the access licence is of category local water utility, with the following exceptions:
 - (a) if new or additional works are to be nominated, that those works supply the same town water supply scheme as the current nominated works, or
 - (b) if a nominated work is withdrawn, that there remains at least one nominated work.
- (5) Nomination of a water supply work is prohibited if the access licence does not have an extraction component allowing taking of water at the location of the nominated work.
- (6) With regard to runoff harvesting access licences:
 - (a) the nominated work must be a runoff harvesting dam of capacity consistent with the share component of the access licence, and
 - (b) withdrawal of nominated work may only be granted where arrangements are in place to ensure that the nominated work does not conserve any more water than is permitted pursuant to the exercise of basic landholder rights.
- (7) Withdrawal of nomination may not be prohibited by access licence dealing rules, except for as otherwise specified in this clause.
- (8) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

Appendix 6 Operational guidelines for delivering flows prescribed by the Murray Darling Basin Agreement

The following operational guidelines are to operate so that they do not contravene Parts V to XI of the Murray Darling Basin Agreement nor the intentions of that Agreement where they relate to the interstate sharing for the responsibility for the environmental management of the Murray – Lower Darling Rivers.

Note. Unless otherwise stated the flows noted in this section are provided out of combined resources as per the Murray Darling Basin Agreement.

Provide 1,850 GL per annum to the Murray at the South Australian Border

A total contribution of 1,850 GL per annum is provided to the South Australian Border as per the Murray Darling Basin Agreement. This is a minimum flow and is assented to by the Basin State Governments as well as the Commonwealth Government. The plan is constrained by the need to provide the daily flows indicated below.

Total Contribution to South Australian Entitlement

| Month | Monthly entitlement Total contribution (ML) | Daily flow at the South Australian Border (ML/day) |
|--------------|--|---|
| January | 217,000 | 7,000 |
| February | 194,000 | 6,929 |
| March | 186,000 | 6,000 |
| April | 135,000 | 4,500 |
| May | 93,000 | 3,000 |
| June | 90,000 | 3,000 |
| July | 108,500 | 3,500 |
| August | 124,000 | 4,000 |
| September | 135,000 | 4,500 |
| October | 170,500 | 5,500 |
| November | 180,000 | 6,000 |
| December | 217,000 | 7,000 |
| Total | 1,850,000 | |

Additional Dilution Flow to South Australia

In 1987, as part of the MDBC Salinity and Drainage Strategy, it was agreed that South Australia would be entitled to additional water to mitigate the impacts of surface water salinity. This volume, known as additional dilution flow, is only provided when the storage volumes in the Menindee Lakes exceed nominated trigger points, at the same time the combined storage volume of Hume and Dartmouth Reservoirs also exceed nominated triggers. The trigger volumes within the Menindee Lakes vary between months.

When these trigger volumes are exceeded, South Australia is entitled to an additional flow of 3,000 ML/day, 1,500 ML of which is from NSW resource.

It is recognised that these additional dilution flows have contributed to the reduction in the impact of salinity. It is recommended, however, that these additional dilution flows be monthly

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

totals rather than daily totals so that greater flexibility is available which can be translated into maximising both salinity and ecological outcomes.

Storage level triggers for additional dilution flow to South Australia

| Figures are ML | Jan | Feb | March | April | May | June |
|-------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Menindee Lakes trigger | 1,300,000 | 1,300,000 | 1,300,000 | 1,300,000 | 1,300,000 | 1,650,000 |
| Hume/Dartmouth trigger | 2,000,000 | 2,000,000 | 2,000,000 | 2,000,000 | 2,000,000 | 2,000,000 |

| Figures are ML | July | Aug | Sept | Oct | Nov | Dec |
|-------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Menindee Lakes trigger | 1,650,000 | 1,500,000 | 1,300,000 | 1,300,000 | 1,300,000 | 1,300,000 |
| Hume/Dartmouth trigger | 2,000,000 | 2,000,000 | 2,000,000 | 2,000,000 | 2,000,000 | 2,000,000 |

Minimum flows from Hume Dam

Minimum flows from combined resources are to be maintained out of Hume Dam to ensure that down stream diversion needs are met, as well as for environmental maintenance and water quality purposes. The minimum flows are currently as follows:

- (c) Minimum flows downstream of Hume Dam up stream of the Kiewa River are 600 ML/day.
- (d) Minimum flows downstream of Hume Dam at Doctors Point are 1,200 ML/day.

Minimum flows downstream of the Curlwaa pumps on the Murray

Minimum flows from combined resources are to be maintained downstream of the Curlwaa Irrigation District pumps on the Murray River during summer to ensure that down stream diversion needs are met, as well as for environmental maintenance and water quality purposes. The recommended minimum flow is 1,200 ML / day during summer.

- (e) The rates may be reduced below their minimum recommended flows if river conditions are not conducive to the production of blue green algae as determined by the Department of Land and Water Conservation in consultation with the MDBC.

Minimum flows from Menindee Lakes to the Lower Darling River

In order to maintain appropriate minimum flow rates from the Menindee Lakes to the Lower Darling River to maintain water quality and river health and minimise the occurrence of algal blooms the following are recommended minimum releases from Weir 32.

- (f) The rates may be reduced below their minimum recommended flows if river conditions are not conducive to the production of blue green algae as determined by the Department of Land and Water Conservation in consultation with the MDBC.

Minimum recommended flows for the mitigation of blue green algae in the Lower Darling River

 Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

| Month | ML/day |
|-------|--------|
| Jan | 350 |
| Feb | 350 |
| Mar | 350 |
| Apr | 300 |
| May | 200 |
| Jun | 200 |
| Jul | 200 |
| Aug | 200 |
| Sep | 200 |
| Oct | 200 |
| Nov | 300 |
| Dec | 300 |

Using Barmah Millewa Environmental Water Allocation to Provide Flow to the Werai Forest

Flows that are provided for flooding to the Barmah Millewa Forests under environmental flow rule and which are diverted through the Edward / Wakool system are to be managed to provide flood flows to the Werai Forest below Stevens Weir where possible.

Acceptance of Rainfall Rejection Events

- (g) NSW is to accept rainfall rejection events in the Murray River above the Barmah Choke every second year. NSW is to manage rainfall rejection events in the Murray River above the Barmah Choke in the year 2001.
- (h) Victoria manages rainfall rejection events in the alternate years.
- (i) NSW management of rainfall rejection is to mitigate the detrimental effects that such unseasonal flows would have on the forest ecosystems within the influence of the Barmah Choke.

Winter Draw down of Stevens Weir Pool

- (j) Maintain the Stevens weir pool at summer irrigation supply level until one week after the Easter school holidays;
- (k) At the time the summer irrigation season demands are reducing, Stevens weir pool is to be drawn down in steps equivalent to reduction in demand;
- (l) Weir pool draw down rates are to be no greater than 150 mm / day except where a greater rate reflects natural conditions;
- (m) Weir pool reinstatement rates (rise) are to be no greater than 300 mm / day except where a greater rate reflects natural conditions;
- (n) Unregulated flows into the Edward River are to be passed through Edward / Wakool river system alternately to the Wakool river and the Edward river down stream of Stevens weir.

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

- (o) If unregulated flows have not occurred by mid August to raise Stevens weir pool, the weir pool will be raised slowly in accordance with irrigation season start up requirements using regulated supply.

Winter Weir Pool Manipulation – Rise and Draw Down

Where possible all weir pools, including Lake Wetherell, and Lock 9, along the NSW Murray and Lower Darling rivers are to be managed for winter draw down in a similar manner as that of Stevens weir pool, as relates to their specific hydrology.

Rates of Rise and Fall

In order to minimise bank deterioration and unless natural conditions or other environmental flows dictate otherwise the following rates of rise and fall are to apply within the river channel.

i) Weir pools and Rivers, Streams and Waterways

- (p) Weir draw down rates be no greater than 150 mm per day except where a greater rate reflects natural conditions;
- (q) Weir pool reinstatement rates (rises) to be no greater than 300 mm per day except where a greater rate reflects natural conditions.

Lower Darling Flows from Menindee Lakes

- (r) Where total storage volume in the Menindee Lakes will exceed 1,680,000 ML, flow release patterns should be implemented which provides a hydrograph of similar shape to that of a ‘natural flood event’, consistent with the protection of property as far as possible.
- (s) Following extended periods of high flow greater than three weeks, apply the following recommended rates of reductions and monitor and record the effect of this action:
- (t) For within channel flows greater than 20,000 ML/day downstream of Menindee, reduce at a
- (u) similar rate of recession as occurred upstream of the lakes at Wilcannia.
- (v) For flows greater than 10,000 ML/day and less than 20,000 ML/day, releases should be reduced at no greater than 1,000 ML/day each day.
- (w) For flows greater than 5,000 ML/day and less than 10,000 ML/day, releases should be reduced at no greater than 500 ML/day each day.
- (x) For flows less than 5,000 ML/day, releases should be reduced at no greater than 250 ML/day each day.

Menindee Lakes

Environmental flows for the Menindee Lakes are not included in this Plan.

Great Anabranche of the Darling River

The Great Anabranche of the Darling River is not part of this Plan’s area. However, under an agreement between the Department of Land and Water Conservation and the Great Anabranche of the Darling River Water Trust, replenishment flows may be provided from NSW resources. Provision of supply depends on the availability of adequate water and on there being a need for additional water for domestic and stock purposes.

The present arrangements require a volume of approximately 50,000 megalitres per year. These may be replaced within the life of this Plan, with a likely option being a piped water supply

Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2003

system servicing landholdings along the Great Anabranh. Water would be pumped from the Darling and a licence or licences issued to secure the required water for the Anabranh landholders.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003 Order

under the

Water Management Act 2000

Pursuant to section 50 of the *Water Management Act 2000*, I, the Minister for Land and Water Conservation, make the following Minister's plan.

JOHN AQUILINA, M.P.,
Minister for Land and Water Conservation

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Contents

| | Page |
|--|------|
| Part 1 Introduction | 1 |
| Part 2 Vision, objectives, strategies and performance indicators | 3 |
| Part 3 Basis for water sharing | 5 |
| Part 4 Environmental water provisions..... | 6 |
| Part 5 Basic landholder rights..... | 8 |
| Part 6 Bulk access regime..... | 9 |
| Part 7 Requirements for water for extraction under access licences | 10 |
| Part 8 Rules for granting access licences..... | 12 |
| Part 9 Limit to the availability of water..... | 14 |
| Division 1 Long-term average extraction limit | 14 |
| Division 2 Available water determinations | 14 |
| Part 10 Rules for managing access licences | 16 |
| Division 1 General..... | 16 |
| Division 2 Water allocation account management..... | 16 |
| Division 3 Management of local impacts..... | 17 |
| Part 11 Access licence dealing rules..... | 23 |
| Part 12 Mandatory conditions..... | 25 |
| Part 13 Monitoring and reporting | 27 |
| Part 14 Amendment of this Plan..... | 28 |
| Schedule 1 Dictionary | 29 |
| Schedule 2 Lower Lachlan Groundwater Source..... | 30 |
| Schedule 3 Contribution to targets in the State Water Management Outcomes Plan..... | 31 |
| Schedule 4 Licences exempt from access licence share component adjustments | 35 |
| Schedule 5 High priority groundwater dependent ecosystems and identified Aboriginal cultural heritage values..... | 36 |
| Appendix 1 Lachlan and Western Water Management Areas | 37 |
| Appendix 2 Location of maps | 38 |
| Appendix 3 Performance indicators | 39 |
| Appendix 4 Minister's access licence dealing principles..... | 42 |

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Part 1 Introduction

1 Name of Plan

This Plan is the *Water Sharing Plan for the Lower Lachlan Groundwater Source 2003* (hereafter **this Plan**).

2 Nature and status of this Plan

- (1) This Plan is made under section 50 of the *Water Management Act 2000* as amended (hereafter **the Act**).
- (2) This Plan covers the core provisions of section 20 of the Act for water sharing, and additional provisions of section 21 of the Act, and other relevant matters.

3 Date of commencement

This Plan takes effect on 1 July 2003 and ceases 10 years after that date.

4 Area to which this Plan applies

- (1) The area in respect of which this Plan is made is that area of land within the Lachlan and Western Water Management Areas known as the Lower Lachlan Groundwater Source (hereafter **this groundwater source**) as shown on the map in Schedule 2.

Note. The Lachlan and Western Water Management Areas are shown on a map in Appendix 1.

Note. Maps referred to in this Plan may be inspected at offices of the Department of Land and Water Conservation listed in Appendix 2.

5 Waters to which this Plan applies

The waters in this groundwater source includes all water contained in the Lower Lachlan unconsolidated alluvial aquifers.

6 Interpretation

- (1) Terms that are defined in the Act have the same meaning in this Plan and the effect of these terms may be explained in Notes.
- (2) Additional terms to those identified in subclause (1) are defined in Schedule 1.
- (3) Notes in the text of this Plan do not form part of this Plan.
- (4) Schedules to this Plan form part of this Plan.
- (5) Appendices to this Plan do not form part of this Plan.

7 Effect on licences, authorities and permits under the *Water Act 1912*

- (1) This Plan applies from the date of commencement to those matters that are administered under the Act at that time.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

- (2) This Plan applies to other matters from the date the relevant provisions of the Act are commenced.

Note. To the extent possible, the rules embodied in this Plan will apply to matters administered under the *Water Act 1912* in the interim.

8 State Water Management Outcomes Plan

- (1) In accordance with section 16 (1) (a) of the Act, this Plan is consistent with the State Water Management Outcomes Plan published in the NSW Government Gazette on 20 December 2002 (hereafter *the SWMOP*).
- (2) Schedule 3 identifies the SWMOP targets applicable to this Plan and how this Plan contributes to those targets.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Part 2 Vision, objectives, strategies and performance indicators

9 Vision, objectives, strategies and performance indicators

This Part is made in accordance with section 35 (1) of the Act.

10 Vision

The vision of this Plan is to achieve a healthy environment and prosperous community through:

- (a) sustainable and equitable groundwater use for all users,
- (b) protection of groundwater dependent ecosystems,
- (c) protection of groundwater quality, and
- (d) community ownership of groundwater management.

11 Objectives

The objectives of this Plan are to:

- (a) protect ecological processes and biodiversity dependent on groundwater,
Note. The expected outcomes of this objective are that groundwater dependent ecosystems and their degree of dependency will be identified, and that there will be no loss of ecological values due to groundwater extraction.
- (b) determine resource access and clarify reliability for groundwater users,
Note. The expected outcomes of this objective are that: groundwater usage does not exceed the extraction limit; the rate of extraction does not induce detrimental changes to water quality; groundwater users have a clear understanding of resource access and reliability; sustainable economic benefits will be maximised; more flexible and efficient use of water will be facilitated; and, there will be equitable access to the groundwater source within the extraction limit.
- (c) recognise and protect community needs that rely on groundwater, and
Note. The expected outcomes of this objective are that: basic rights to access water will be protected; the rate of extraction will not induce detrimental changes to water quality; and, community well being is enhanced.
- (d) provide for the recognition and protection of heritage sites and cultural values associated with groundwater.
Note. The expected outcomes of this objective are that: heritage sites and cultural values associated with groundwater and their degree of dependency are identified; and, there is no loss of heritage and cultural values due to groundwater extraction.

12 Strategies

The strategies of this Plan are to:

- (a) establish environmental water rules and manage access to groundwater consistent with those rules,
- (b) establish rules for the protection of basic landholder rights,
- (c) establish an extraction limit for this groundwater source, taking into account the requirements of the environment,

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

- (d) reduce the share component of all access licences to 125% of the extraction limit in this groundwater source,
- (e) establish rules for the granting of access licences,
- (f) establish rules for determining the groundwater available from time to time under access licences,
- (g) establish water allocation account management rules,
- (h) establish rules for minimising the local impacts of groundwater extraction on the environment, the aquifer itself, and between groundwater users,
- (i) establish the access licence dealing rules, and
- (j) establish the conditions that will apply to all access licences and water supply work (bore) approvals.

13 Performance indicators

For the purpose of section 35 (1) (b) of the Act the following indicators are to be used to determine the performance of this Plan against its objectives:

- (a) change in groundwater extraction relative to the extraction limit,
- (b) change in climate adjusted groundwater levels,
- (c) change in water levels adjacent to identified groundwater dependent ecosystems,
- (d) change in groundwater quality,
- (e) change in economic benefits derived from groundwater extraction and use,
- (f) extent to which domestic and stock rights have been met,
- (g) extent to which local water utility requirements have been met,
- (h) extent to which native title rights requirements have been met, and
- (i) extent of recognition of spiritual, social and customary values of groundwater to Aboriginal people.

Note. Appendix 3 details the objectives to which these performance indicators relate and the methods for assessing these indicators.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Part 3 Basis for water sharing

14 Basis for water sharing

This Part is made in order to give effect to section 5 (3) of the Act, and in accordance with sections 20 (2) (c) and 21 (e) of the Act.

15 Climatic variability

- (1) This Plan recognises climatic variability and therefore that the level of natural recharge to this groundwater source will vary.
- (2) To give effect to subclause (1), this Plan has provisions that manage:
 - (a) the sharing of water in this groundwater source within the limits of water availability on a long-term average basis, and
 - (b) water extractions to enable the protection of groundwater dependent ecosystems, aquifer integrity and water quality of this groundwater source.

16 Recharge

- (1) The overall basis for water sharing in this Plan is the average annual recharge to this groundwater source, estimated to be 120,000 megalitres per year (hereafter *ML/yr*).
- (2) Pursuant to section 42 (2) of the Act, the average annual recharge for this groundwater source established in subclause (1) may be varied by the Minister at 30 June 2007, following further recharge studies undertaken by the Minister.
- (3) The Minister should take into account the review in subclause (4), and the advice provided in accordance with subclause (5), before making a variation under subclause (2).
- (4) The results of the studies undertaken in subclause (2) must be independently reviewed.
- (5) A water management committee, or in its absence an advisory committee established by the Minister to include representatives of domestic and stock rights groundwater users, water utilities, irrigation, industry, Aboriginal people, environmental groups and others, should:
 - (a) advise the Minister on the terms of reference and selection of consultants for the independent review established in subclause (4), and
 - (b) advise the Minister by December 2006 on any changes to recharge estimates based on the study and the outcomes of the independent review.

Note. The extent of impact of these changes on access by licence holders is limited in clause 28.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Part 4 Environmental water provisions

17 Environmental water provisions

This Part is made in accordance with sections 5 (3) and 8 (1), 8 (2) and 20 (1) (a) of the Act.

18 Environmental health water

Note. It is anticipated that the environmental health water provisions in this Part, and management of local impacts provisions in Part 10 of this Plan, will also protect heritage sites and cultural values associated with groundwater (see clause 11(d)).

- (1) This Plan establishes the following environmental health water rules:
 - (a) Subject to Part 10 Division 2 of this Plan the long-term average storage component of this groundwater source minus the basic landholder rights, shall be reserved for the environment, and
 - (b) Subject to Part 10 Division 2 of this Plan 20% of the average annual recharge to this groundwater source shall be reserved for the environment.
 - (2) Pursuant to section 42 (2) of the Act, the Minister may vary the proportion of recharge reserved as the environmental health water in subclause (1) at 30 June 2007, based on further studies of Aboriginal cultural heritage and groundwater ecosystem dependency undertaken by the Minister by June 2006.
 - (3) The Minister should take into account the review in subclause (4), and the advice provided in accordance with subclause (5), before making a variation under subclause (2).
 - (4) The results of the studies undertaken in subclause (2) must be independently reviewed.
 - (5) A water management committee, or in its absence an advisory committee established by the Minister to include representatives of domestic and stock rights groundwater users, water utilities, irrigation, industry, Aboriginal people, environmental groups and others, should:
 - (a) advise the Minister on the terms of reference and selection of consultants for the independent review established in subclause (4), and
 - (b) advise the Minister by December 2006 on any changes to environmental health water based on the study and the outcomes of the independent review.
- Note.** The extent of impact of these changes on access by licence holders is limited in clause 28.
- (6) The Minister should consult with the Minister for the Environment before varying environmental health water in accordance with subclause (2).

19 Supplementary environmental water

At the commencement of this Plan, there is no water committed for specified environmental purposes in accordance with section 8 (1) (b) of the Act.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

20 Adaptive environmental water

- (1) At any time, an access licence holder may, by a process determined by the Minister, commit all or part of their licence as adaptive environmental water.
- (2) The conditions of the commitment specified in subclause (1):
 - (a) are to be established by the Minister,
 - (b) are to be specified on the access licence, and
 - (c) shall be such as to ensure that there is a contribution to the objectives of this Plan.
- (3) At the commencement of this Plan there are no access licences committed to an environmental purpose in accordance with section 8 (1) (c) of the Act.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Part 5 Basic landholder rights

21 Basic landholder rights

- (1) This Part is made in accordance with sections 5 (3) and 20 (1) (b) of the Act.
- (2) If a landholder is unable to exercise their basic landholder rights due to interference to their supply caused by extraction from works nominated by access licences:
 - (a) the landholder's affected water supply work (bore) may be replaced or deepened to ensure continuing access to water for basic landholder rights, or
 - (b) basic rights water may be supplied by alternative means during critical times.
- (3) The Minister may impose a charge on access licence holders in these groundwater sources under section 114 of the Act, as a contribution to the costs of activities or works associated with subclause (2).

Note. The Minister may issue an Order under section 328 of the Act to restrict the exercise of basic landholder rights from these groundwater sources to protect the environment, for reasons of public health, or to preserve existing basic landholder rights.

22 Domestic and stock rights

Note. It is not recommended that the water from this groundwater source be consumed without prior treatment. Land use activities may have polluted the groundwater in some areas.

- (1) At the commencement of this Plan the water requirements of holders of domestic and stock rights are estimated to be a total of 4,000 ML/yr.
- (2) This Plan recognises that the exercise of domestic and stock rights may increase during the term of this Plan.

Note. Increase in use of domestic and stock rights may occur as a result of an increase in the number of landholdings overlying this groundwater source, or as a result of the increase in the exercise of basic landholder rights by existing landholders.

23 Native title rights

- (1) At the commencement of this Plan there are no holders of native title rights and therefore the water requirements for native title rights are a total of 0 ML/yr.
- (2) This Plan recognises that the exercise of native title rights may increase during the term of this Plan.

Note. An increase in native title rights may occur as a result of the granting of native title rights under the Commonwealth's *Native Title Act 1993*.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Part 6 Bulk access regime

24 Bulk access regime

- (1) This Part is made in accordance with section 20 (1) (e) of the Act.
- (2) This Plan establishes a bulk access regime for the extraction of water under access licences in this groundwater source having regard to:
 - (a) the environmental water provisions established under Part 4 of this Plan,
 - (b) the requirements for basic landholder rights identified under Part 5 of this Plan, and
 - (c) the requirements for water for extraction under access licences identified under Part 7 of this Plan.
- (3) The bulk access regime established in subclause (2):
 - (a) recognises the effect of climatic variability on the availability of water as provided for under Part 3 of this Plan,
 - (b) establishes rules according to which access licences are granted as provided for in Part 8 of this Plan,
 - (c) recognises and is consistent with any limit to the availability of water as provided for in Part 9, Division 1 of this Plan,
 - (d) establishes rules according to which available water determinations are to be made as provided for in Part 9 Division 2 of this Plan,
 - (e) establishes rules according to which access licences are managed as provided for in Parts 9 and 10 of this Plan, and
 - (f) establishes rules with respect to the priorities according to which access licences are to be adjusted as a consequence of any reduction in the availability of water as provided for in Part 9 of this Plan.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Part 7 Requirements for water for extraction under access licences

25 Estimate of water requirements

- (1) This Part is made in accordance with section 20 (1) (c) of the Act.
- (2) At the commencement of this Plan, the requirements identified for water for extraction under access licences within this groundwater source are estimated to be 215,417 ML/yr.
- (3) Subclause (2) includes 3 local water utility access licences totalling 2,247 ML/yr held by Carrathool Shire Council.

Note. Subclause (2) represents the total volumes specified on access licences in this groundwater source. It is not a commitment to supply that water.

- (4) Pursuant to section 42 (2) of the Act, the Minister should reduce the total share components of aquifer access licences in this groundwater source specified in subclause (2) to 125% of the extraction limit determined in clause 27, as amended by clause 28, over the term of this Plan, according to the following:
 - (a) at the commencement of year 5 of this Plan each aquifer access licence will have an amended aquifer access licence share component calculated as follows:

$$\text{Amended aquifer access licence share component} = \text{Aquifer access licence share component prior to amendment} \times \left[\frac{1.5 (\text{Recharge} - \text{EHW}) - \text{LWU} - (\text{total Schedule 4 entitlements})}{(\text{total access licence share components prior to Yr 5 amendment}) - \text{LWU} - (\text{total Schedule 4 entitlements})} \right]$$

- (b) at the end of year 10 of this Plan each aquifer access licence will have an amended aquifer access licence share component calculated as follows:

$$\text{End of year 10 amended aquifer access licence share component} = \text{aquifer access licence share component prior to Yr 10 amendment} \times \left[\frac{1.25 (\text{Recharge} - \text{EHW}) - \text{LWU} - (\text{total Schedule 4 entitlements})}{(\text{total access licence share components prior to Yr 10 amendment}) - \text{LWU} - (\text{total Schedule 4 entitlements})} \right]$$

- (5) Recharge in subclause (4) is the recharge established in clause 16 (1), as amended by clause 16 (2).
- (6) EHW in subclause (4) is the volume of recharge reserved as environmental health water in this groundwater source in clause 18 (1), as amended by clause 18 (2).
- (7) LWU in subclause (4) is the total of local water utility access licence share components in this groundwater source.
- (8) Subclause (4) does not apply to the share components of local water utility access licences.
- (9) Subclause (4) does not apply to access licences listed in Schedule 4.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

- (10) This Plan recognises that the total requirements for water for extraction under access licences within this groundwater source may change during the term of this Plan as a result of:
- (a) the granting, surrender, non-renewal or cancellation of access licences,
 - (b) the variation of local water utility access licences under section 66 of the Act, or
 - (c) the volumetric quantification of the share components of existing access licences that are currently non-volumetric.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Part 8 Rules for granting access licences

26 Rules for granting access licences

- (1) This Part is made in accordance with sections 20 (2) (b) and 63 of the Act, having regard to the limit to water availability in this groundwater source and the need to protect groundwater dependent ecosystems and groundwater quality.
- (2) Access licences may be granted in this groundwater source, subject to any embargo on the making of applications for access licences made under Chapter 3 Part 2 Division 7 of the Act.
- (3) The Minister should declare an embargo on the making of applications for access licences in this groundwater source, other than access licences of the following kinds:
 - (a) local water utility access licences,
Note. Pursuant to sections 66 (3) and 66 (4) of the Act, the Minister may also vary a local water utility's licence at 5 yearly intervals, or on application of the local water utility where there is a rapid growth in population.
 - (b) aquifer (community and education) access licences, or
 - (c) access licences resulting from an application of a type listed in section 82 (1) of the Act.
- (4) Notwithstanding subclause (3), if for any reason, additional aquifer access licences are granted, other than those specified in subclause (3), and after aquifer access licence share component have been amended in accordance with clause 25:
 - (a) any such additional aquifer access licence share components will be granted to those licences subject to aquifer access amendment under clause 25,
 - (b) such distribution of aquifer access licence share components will be on an equal proportional basis, and
 - (c) any additional aquifer access licence share component, plus existing share component will not exceed the share component existing immediately prior to a amendment under clause 25.
- (5) In applying for a new access licence, the applicant must establish the purpose and circumstance relating to that access licence, and that the share and extraction component sought will be the minimum required to meet that purpose and circumstance.
- (6) Access licences granted under this Part cannot be used to extract water through a water supply work (bore) located in areas where the extraction authorised by the licence plus the full extraction authorised by existing access licences nominating water supply works (bores) located in the area, and the exercise of basic landholder rights, are likely to cause an adverse local impact, as outlined in Part 10 Division 3 of this Plan.
- (7) If an access licence share component applied for is significant, as determined by the Minister on the basis of particular aquifer characteristics, the application will not be granted until a water supply work (bore) approval has been granted and the work constructed.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

- (8) Once the water supply work (bore) is constructed, and results of a pumping test or its equivalent are supplied by the applicant, in the required form and to the specification of the Minister, the access licence may be granted.
- (9) The share component of the access licence granted under subclause (8) will be the proportion of the share component sought that the water supply work (bore) is capable of extracting without causing any adverse local impact as outlined in Part 10 Division 3 of this Plan.
- (10) Subclause (5), (7), (8), and (9) do not apply to a new access licence arising from an application of a type listed in section 82 (1) of the Act.
- (11) Any applications for new access licenses and water supply works approvals will be sent to the NSW Aboriginal Land Council for assessment of the potential impacts on sites of significance and for advice on appropriate mitigation measures.
- (12) In accordance with section 56 of the Act, all access licences in this groundwater source shall have a share component expressed as a volume in megalitres per year.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Part 9 Limit to the availability of water

Division 1 Long-term average extraction limit

27 Long-term average extraction limit

- (1) This Division is made in accordance with section 20 (2) (a) of the Act.
- (2) The long-term average extraction limit for this groundwater source each year of this Plan is the recharge established in clause 16, minus the proportion of recharge reserved as environmental health water in clause 18, and is 96,000 ML/yr.

28 Variation of the long-term average extraction limit

- (1) Pursuant to section 42 (2) of the Act, the Minister may vary the long-term average extraction limit established under clause 27 (2) at 30 June 2007 as a result of:
 - (a) any change to the average annual recharge arising from clause 16 (2), or
 - (b) any change to the environmental health water arising from clause 18 (2).
- (2) If there is any change to the long-term average extraction limit arising from subclause (1) then:
 - (a) the extraction limit will not be more than 215,393 ML/yr, and
 - (b) the extraction limit will not be less than 73,500 ML/yr.

Division 2 Available water determinations

29 Available water determinations

- (1) This Division is made in accordance with section 20 (2) (b) of the Act.
- (2) In making an available water determination under section 59 of the Act, the Minister should consider the following rules:
 - (a) water extraction in this groundwater source will be monitored in each water accounting year to determine if any growth in volumes extracted is occurring above the extraction limit in clause 27 as varied by clause 28, based on comparison of the extraction limit against the average extraction within this groundwater source over that year and the preceding 2 years,
Note. A water accounting year is defined in clause 34 (3).
 - (b) if water that, pursuant to an access licence, is committed as adaptive environmental water to be left in the aquifer for environmental purposes, then for the purpose of subclause (a), the extraction will be assumed to be 100% of the available water determination,
 - (c) if water that, pursuant to an access licence, is committed as adaptive environmental water to be extracted for environmental purposes, then for the purpose of subclause (a), the extraction will be that measured through the approved water supply work (bore),

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

- (d) if the 3 year average of extraction in this groundwater source exceeds the long-term average extraction limit established in clause 27 as varied by clause 28 by 5% or greater, the available water determination for the following water accounting year for aquifer access licences in this groundwater source should be reduced by an amount that is assessed necessary by the Minister to return subsequent total water extraction to the long-term average extraction limit,
- (e) if the 3 year average of extraction in this groundwater source is less than 95% of the long-term average extraction limit established in clause 27, as varied by clause 28, then the available water determination for aquifer access licences in this groundwater source shall be increased to such an extent as to allow extraction to increase to that extraction limit,
- (f) notwithstanding subclause (e) the available water determination will not exceed 100% of total aquifer access licence share components,
- (g) the available water determination, calculated in accordance with subclauses (e), (f) and (g), will apply to all access licences in the groundwater source excepting local water utility and domestic and stock access licences, and will be the same percentage for all access licences to which it applies,
- (h) separate available water determinations will be made for both local water utility access licences and domestic and stock access licences each year, and subject to section 60 of the Act, this shall be 100% of these access licence share components, and
- (i) The Minister should consult with a representative group of access licence holders to determine the available water determination necessary to return total water extraction to the extraction limit.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Part 10 Rules for managing access licences

Division 1 General

30 Rules for managing access licences

This Part is made in accordance with sections 20 (2) (b) and 21 (a) and 21 (c) of the Act, having regard to:

- (a) the environmental water rules established in Part 4 of this Plan,
- (b) requirements for water to satisfy basic landholder rights identified in Part 5 of this Plan, and
- (c) requirements for water for extraction under access licences in Part 7 of this Plan.

Division 2 Water allocation account management

31 Water allocation account management

This Division is made in accordance with sections 20 (2) (b) and 21 (c) of the Act.

32 Water allocation accounts

In accordance with section 85 of the Act, a water allocation account shall be established for each access licence in this groundwater source.

Note. Water allocations may be assigned to, or from, these accounts by a water allocation assignment made under section 71G of the Act, where these are allowed under rules specified in Part 11 of this Plan.

33 Accrual of water allocations

Water allocations will be accrued into water allocation accounts each water accounting year in accordance with the Minister's available water determinations as specified in clause 29.

34 Annual accounting for water extraction

- (1) Water taken from this groundwater source will be accounted for at least annually.
- (2) Water taken through an approved water supply work (bore) nominated by an access licence is taken to be extracted and will be periodically debited against the access licence water allocation account.
- (3) A water accounting year shall be the 12 month period commencing 1 July.
- (4) In any one water accounting year, subject to local impact management restrictions arising from Part 10, Division 3 of this Plan, water taken from this groundwater source under an aquifer access licence may not exceed a volume consisting of:
 - (a) 120% of the access licence share component,
 - (b) plus any water allocations assigned from another licence under section 71G of the Act in that year, and

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

- (c) minus any water allocations assigned to another licence under section 71G of the Act in that year.
- (5) Extraction in any one year of greater than 100% of the aquifer access licence share component, in accordance with subclause (4) will be subject to approval by the Minister, and consideration of the possible local impact of that additional extraction.
- (6) Total water in any aquifer access licence account at any time may not exceed a volume consisting of:
 - (a) 120% of the aquifer access licence share component,
 - (b) plus any water allocations assigned from another licence under section 71G of the Act in that year, and
 - (c) minus any water allocations assigned to another licence under section 71G of the Act in that year.
- (7) A maximum of 20% of any aquifer access licence share component may be carried forward in a water allocation account from one water accounting year to the next.
- (8) Subclauses (4), (5), (6), and (7) do not apply to local water utility access licences or domestic and stock access licences.
- (9) For local water utility and domestic and stock access licences in any one water accounting year, subject to local impact management restrictions arising from Part 10, Division 3 of this Plan, water taken from this groundwater source, and total water in any water allocation account at any time may not exceed a volume consisting of:
 - (a) 100% of the access licence share component,
 - (b) plus any water allocations assigned from another licence under section 71G of the Act in that year,
 - (c) plus any water allocations recredited in accordance with section 76 of the Act in that year, and
 - (d) minus any water allocations assigned to another licence under section 71G of the Act in that year.
- (10) Allocations in a local water utility or domestic and stock access licence water allocation account cannot be carried over from one water accounting year to the next.
- (11) A water allocation account shall remain at or above zero at all times.

Division 3 Management of local impacts

35 Management of local impacts

This Division is made in accordance with section 21 (a) of the Act.

36 Extraction interference between neighbouring bores

- (1) To minimise interference between extraction under different access licences in this groundwater source, extraction from a water supply work (bore) nominated by an access licence will not be permitted within:

 Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

- (a) 1,000 metres of another water supply work (bore) nominated by an access licence authorised to extract up to, and including, 10 ML/day,
 - (b) 2,000 metres of another water supply work nominated by an access licence authorised to extract greater than 10 ML/day, and up to and including 15 ML/day, and
 - (c) 3,000 metres of another water supply work nominated by an access licence authorised to extract greater than 15 ML/day.
- (2) Notwithstanding the provisions of subclause (1), the Minister may, upon application by an access licence holder, vary the distance restrictions specified in subclause (1) if:
- (a) an hydrogeological study undertaken by the licence holder, and assessed as adequate by the Minister, demonstrates minimal potential for any adverse impact on existing licensed extraction,
 - (b) all potentially affected access licence holders have been notified by the proponent, and
Note. Potentially affected access licence holders are typically neighbouring access licence holders and/or those in the near vicinity.
 - (c) there is a process for remediation in the event that any adverse impact occurs in the future, specified as conditions on the licence.
- (3) Subclause (1) does not apply to extraction under existing access licences.
Note. The intention of this clause is to minimise the impact of extraction under new access licences on extraction under existing access licences. It is intended to develop models to support hydrogeological assessment of the adverse impacts of new groundwater extractions on existing licensed extraction.

37 Water level management

- (1) The Minister may declare that, in order to protect water levels within this groundwater source, local access rules are to apply in a defined area known as a local impact area.
- (2) If water levels in any part of this groundwater source have declined to such an extent that an adverse impact is occurring, or is likely to occur, extraction from all water supply works (bores) nominated by an access licence within a local impact area declared under subclause (1) will be restricted to such an extent and for such time as is required to reinstate water levels to such a degree as to mitigate or avoid that impact.
- (3) An adverse impact in subclause (2) will be considered to have occurred if the Minister considers that excessive drawdown has occurred, or if:
- (a) the average of the seasonally recovered water levels over a 5 year period is not maintained within 10% of the total available drawdown below the initial seasonally recovered water level over the 5 year period, or
 - (b) if the seasonally recovered water levels are not maintained within 20% of the total available drawdown below the seasonally recovered water level at the commencement of this Plan.

Note. This clause recognises that in some locations, at certain periods of high groundwater demand, critical water level declines may occur, and that additional extraction limitations may be required. The Department of Land and Water Conservation will identify monitoring bores, and determine the method for specifying an affected area.

38 Water quality management

- (1) The beneficial uses of this groundwater source based on the Australian and New Zealand Environment and Conservation Council *Water Quality Guidelines 2000*, and the National Health and Medical Research Council *Raw Water for Drinking Purposes Guidelines 1996*, are raw water for drinking supplies, and agriculture water.

- (2) Water quality decline will be deemed unacceptable if extraction is likely to cause water quality to decline to a lower beneficial use class.

Note. It is not recommended that the water from this groundwater source be consumed without prior treatment. Land use activities may have polluted the groundwater in some areas.

- (3) The Minister may declare that, in order to protect water quality within this groundwater source, local access rules are to apply in a defined area known as a local impact area.
- (4) A baseline of electrical conductivity (hereafter *EC*), against which changes in the salinity of groundwater will be measured, will be set in year 6 of this Plan based on the results of a salinity monitoring program undertaken by the Minister.
- (5) The EC limits adopted by this Plan for the beneficial use classes are as follows:
- (a) 800 EC for raw water for drinking supplies class, and
 - (b) 1,500 EC for agricultural water class.

Note. These are the limits specified in *Guidelines for Groundwater Protection in Australia*, Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand, 1995, (and as adopted by the NSW Government Groundwater Quality Protection Policy 1997).

- (6) If, for groundwater of less than 800 EC, as established by the salinity baseline set by subclause (4), there is an increase in salinity of more than 20% of the difference between the salinity baseline set by subclause (4) and the beneficial use class established in subclause (5) (a), then:
- (a) the Minister may declare a local impact area,
 - (b) access licence holders within the local impact area will need to demonstrate to the Minister that continual extraction, or a proposed new extraction regime, will not have an unacceptable impact on the groundwater quality of the aquifer, and
 - (c) until such time that this justification to continue to extract has been assessed and approved by the Minister:
 - (i) extraction from water supply works nominated by an access licence within the local impact area will be restricted to such an extent and for such time as required to halt that salinity increase, or
 - (ii) access licence holders may be issued with a directive to cease to pump.
- (7) If, for groundwater of less greater than 800 EC and less than 1,500 EC, as established by the salinity baseline set by subclause (4), there is an increase in salinity of more than 20% of the difference between the salinity baseline set by subclause (4) and the beneficial use class established in subclause (5) (b), then:
- (a) the Minister may declare a local impact area,

 Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

- (b) access licence holders within the local impact area will need to demonstrate to the Minister that continual extraction, or a proposed new extraction regime, will not have an unacceptable impact on the groundwater quality of the aquifer, and
 - (c) until such time that this justification to continue to extract has been assessed and approved by the Minister:
 - (i) extraction from water supply works nominated by an access licence within the local impact area will be restricted to such an extent and for such time as required to halt that salinity increase, or
 - (ii) access licence holders may be issued with a directive to cease to pump.
- (8) If, for groundwater in excess of 1,500 EC, as established by the salinity baseline set by subclause (4), there is an increase of more than 20% from the salinity baseline set by subclause (4) then:
- (a) the Minister may declare a local impact area,
 - (b) access licence holders within the local impact area will need to demonstrate to the Minister, that continual extraction, or a proposed new extraction regime, will not have an unacceptable impact on the groundwater quality of the aquifer, and
 - (c) until such time that this justification to continue to extract has been assessed and approved by the Minister:
 - (i) extraction from water supply works nominated by an access licence within the local impact area will be restricted to such an extent and for such time as required to halt that salinity increase, or
 - (ii) access licence holders may be issued with a directive to cease to pump.
- (9) If there is an increase in salinity from extraction that results in the current beneficial use class salinity limit being exceeded, then subclause (7) (c) will apply.

39 Protection of groundwater dependent ecosystems and Aboriginal cultural heritage values

- (1) Extraction of groundwater from a new or replacement water supply work (bore) is excluded:
 - (a) for works nominated by an access licence, within 200 metres of high priority groundwater dependent ecosystems, or where impact may occur on Aboriginal cultural heritage values,
 - (b) for those exercising basic landholder rights, within 100 metres of high priority groundwater dependent ecosystems, or where impact may occur on Aboriginal cultural heritage values, and
 - (c) within 40 metres of any river for any works.
- (2) Subclause (1) shall not apply to extraction from an existing water supply work (bore) until such time as the work is replaced.
- (3) The Minister may exempt a replacement water supply work (bore) from subclause (1) if:

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

- (a) the replacement water supply work (bore) only draws water from an aquifer at depths as approved by the Minister, and
 - (b) the approval holder demonstrates to the Minister's satisfaction that current authorised extraction from that water supply work (bore) will not cause more than minimal impact on priority groundwater dependent ecosystems or Aboriginal cultural heritage values.
- (4) Notwithstanding subclause (2), extraction from existing bores within the distances specified in subclauses (1) (a) and (1) (b) may be restricted to such an extent as to minimise the impact of extraction on the high priority groundwater dependent ecosystems and Aboriginal cultural heritage values.
 - (5) High priority groundwater dependent ecosystems and Aboriginal cultural heritage values are listed in Schedule 5.
 - (6) Pursuant to section 42 (2) of the Act, the Minister may identify further high priority groundwater dependent ecosystems and Aboriginal cultural heritage values, and include them in Schedule 5 at 30 June 2007, based on further studies of groundwater ecosystem dependency and Aboriginal cultural heritage undertaken by the Minister.
 - (7) The Minister should consult with the Minister for the Environment before adding further priority groundwater dependent ecosystems to Schedule 5.

40 Protection of aquifer integrity

- (1) The Minister may declare that, in order to protect the integrity of the aquifers within this groundwater source, local access restrictions are to apply in a defined area known as a local impact area.
- (2) The Minister may, on presentation of evidence of land subsidence or aquifer compaction, restrict extraction from all water supply works (bores) within a local impact area declared under subclause (1), and nominated by an access licence, to such an extent and for such time as to stabilise that subsidence or compaction.

41 Extraction restrictions

The Minister may, in the event of local impact restrictions arising from this Division, impose, by Order, a reduction in annual, quarterly, monthly, weekly or daily extraction rates from water supply works (bores) in the affected area.

42 Group registration

This Plan allows for the formation of a group of access licences with respect to the sharing of local impact restrictions arising from this Division, subject to the following rules:

- (a) the group register will be maintained by the Minister,
- (b) holders of access licences must make a request to the Minister to form a group,
- (c) total extraction by all access licences within a group will be assessed as a whole against their combined restricted extraction and must not exceed that amount,

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

- (d) no access licence holder within the group may extract more than is permitted by Division 2 of this Part, in any one water accounting year as a result of participation in a group,
- (e) an access licence holder may apply to be removed by the Minister from the group and the extraction by the group will be reduced by the extraction restriction of that access licence,
- (f) an access licence holder may apply to be added by the Minister to the group and the combined extraction of the group will be increased by the extraction restriction of that access licence, and
- (g) the Minister reserves the right to remove a licence holder from a group where that individual causes the group extraction limit to be exceeded, or to dissolve a group where its members exceed their combined extraction restriction.

43 Infrastructure failure

- (1) The operational rules relating to local impact management may rely on water levels at specified monitoring bores.
- (2) In the event of a monitoring bore failure the Minister may:
 - (a) continue with the current access rules until the monitoring bore is reinstated,
 - (b) adjust the current access rules based on climatic conditions and any other monitoring bore information, until the monitoring bore is reinstated, or
 - (c) rely on another monitoring bore in the area to provide information.

Part 11 Access licence dealing rules

44 Access licence dealing rules

- (1) This Part is made in accordance with section 20 (1) (e) of the Act and with the Minister's access licence dealing principles gazetted on 27 December 2002 under section 71L of the Act.

Note. The Minister's access licence dealing principles are contained in Appendix 4.

- (2) Applications for access licence dealings may be granted subject to the Minister's access licence dealing principles gazetted from time to time under section 71L of the Act and the rules in this Part.

Note. There are a number of mechanisms within the Act, called access licence dealings, to change either the ownership of all or part of an access licence, or the location within a water source at which all or part of the share and extraction components of access licences can be exercised. These dealings are governed by the principles in section 5 of the Act, Minister's access licence dealing principles, and the rules in this Part.

Note. Where there is an inconsistency between access licence dealing rules established in this Plan and Minister's access licence dealing principles gazetted subsequent to the commencement of this Plan, section 71L of the Act provides for the access licence dealing rules in this Plan to prevail.

45 Rules relating to constraints within this groundwater source

- (1) This clause applies to any relevant dealings under sections 71D, 71F, and 71J of the Act, and section 71G of the Act with respect to allocation assignments within this groundwater source.
- (2) Dealings are prohibited under this clause if:
 - (a) any of the access licences or water allocations involved are not within this groundwater source,
 - (b) the dealing would result in the total extraction under access licences through nominated works in the area, plus basic landholder rights extraction, causing any adverse local impact in accordance with Part 10 Division 3 of this Plan or otherwise.

46 Rules for change of water source

- (1) This clause relates to dealings under section 71E of the Act.

Note. Section 71E dealings are the mechanism by which access licences can move from one water source to another. Once the change in water source has been effected, if permitted, the new licence will have to nominate specified works (by a dealing under section 71J of the Act) in the receiving water source before extraction can commence.
- (2) Dealings under section 71E of the Act that change the water source to which an access licence applies are prohibited in this groundwater source.

47 Rules for conversion of access licence category

- (1) This clause relates to dealings under section 71B of the Act.
- (2) Dealings that result in conversion of an access licence of one category to an access licence of another category are prohibited in this groundwater source.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

48 Rules for interstate access licence transfer

- (1) This clause relates to dealings under section 71H of the Act.
- (2) Dealings that result in an interstate access licence transfer into or out of this groundwater source are prohibited.

49 Rules for water allocation assignments between water sources

- (1) This clause relates to dealings under section 71G of the Act for assignment of water allocations between water sources.
- (2) Dealings that assign water allocations between access licences in other water sources and access licences in this groundwater source are prohibited.

Note. Each water allocation assignment must be applied for. Access licence holders may enter into private contracts to assign water allocations for a number of years. Such contracts are not guaranteed by the Government, and approval must be sought annually. Approval will be subject to the rules in this Plan, including local impact assessment.

50 Rules for interstate assignment of water allocations

- (1) This clause relates to dealings under section 71I of the Act.
- (2) Dealings that result in an interstate assignment of water allocations to or from this groundwater source are prohibited.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Part 12 Mandatory conditions

51 Mandatory conditions on access licences

This Part is made in accordance with sections 17 (c) and 20 (2) (e) of the Act.

52 Access licence conditions

- (1) All access licences shall have mandatory conditions in relation to the following:
 - (a) the specification of the share component of the access licence,
 - (b) the specification of the extraction component of the access licence,
 - (c) the requirement that all taking of water under the access licence will be subject to the available water determinations,
 - (d) the requirement that all taking of water under the access licence will be subject to any local impact management restrictions established in this Plan,
 - (e) the requirement that all taking of water under the access licence will be subject to the account management rules established in this Plan,
 - (f) the requirement that water may only be taken under the access licence by the water supply work (bore) nominated by the access licence,
 - (g) the taking of water in accordance with the access licence may only occur if the resulting debit from the access licence water allocation account will not exceed the volume of water allocation remaining in the account, and
 - (h) any other conditions required to implement the provisions of this Plan.
- (2) All aquifer access licences shall have mandatory conditions to give effect to clause 25, in relation to the amendment of access licence share components.
- (3) All domestic and stock access licences shall have mandatory conditions that only allow the taking of water for the purpose of domestic consumption or stock watering as defined in section 52 of the Act.
- (4) All local water utility access licences shall have mandatory conditions that only allow the taking of water for the exercise of a water supply function of the local water utility or for other such purpose provided for under the Act.
- (5) All aquifer (community and education) access licences shall have mandatory conditions that only allow the taking of water for the purpose of school educational, and not for profit community recreational facilities.

53 Mandatory conditions on water supply work (bore) approvals

All approvals for a water supply work (bore) to which this Plan applies shall have mandatory conditions in relation to the following:

- (a) the water supply work (bore) is only to be constructed by a driller licensed under section 349 of the Act,
- (b) the water supply work (bore) must comply with drilling standards as specified by the Minister,
- (c) construction of a water supply work (bore) must prevent contamination between aquifers through proper bore construction,

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

- (d) a water supply work (bore) approval holder must ensure decommissioning procedures comply with applicable standards as specified by the Minister,
- (e) new or replacement water supply work (bore) to access water for basic rights will be required, as a condition of approval, to be constructed to sufficient depth to maintain access to the water source for the life of the work,
- (f) the water supply work (bore) approval holder is, within 2 months of completion of the work, or after the issue of the approval if the water supply work (bore) is existing, to provide to the Minister with:
 - (i) details of the work on the prescribed form,
 - (ii) a plan showing accurately the location of the work in relation to portion and property boundaries, and
 - (iii) details of any water analysis and/or pumping tests required by the Minister,
- (g) if during the construction of the water supply work (bore), saline or contaminated water is encountered above the producing aquifer, such water is to be sealed off by:
 - (i) inserting the appropriate length(s) of casing to a depth sufficient to exclude the saline or contaminated water from the work, and
 - (ii) placing an impermeable seal between the casing(s) and the walls of the bore hole from the bottom of the casing to ground level, as specified by the Minister,
- (h) if a water supply work (bore) is abandoned, the water supply work (bore) approval holder is to:
 - (i) notify the Minister that the work has been abandoned, and
 - (ii) seal off the aquifer by backfilling the work to ground level after withdrawing the casing (lining), as specified by the Minister,
- (i) an extraction measurement device shall be installed and maintained on each water supply work (bore) used for extraction of water under an access licence, and such devices shall be of a type, and shall be maintained in a manner, which is acceptable to the Minister,
- (j) a water supply work (bore) must comply with the relevant local impact management rules in Part 10 of this Plan,
- (k) notwithstanding the available water determination, it is the responsibility of the water supply work (bore) approval holder to ascertain from the Minister whether or not there are in place any local impact restrictions before commencing to take water from this groundwater source,
- (l) extraction under an access licence through the approved water supply work (bore) is only authorised with respect to the access licences specified on the water supply work (bore) approval,
- (m) a water supply work (bore) approval holder must supply to the Minister on request, and to the required standards, a report pertaining to the quality of the water obtained from the water supply work (bore), and
- (n) any other conditions required to implement the provisions of this Plan.

Note. It is recommended that the Minister also apply conditions to water use approvals requiring the supply of information on an annual basis on types and areas of irrigated crops.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Part 13 Monitoring and reporting

54 Monitoring

The monitoring of the performance indicators specified in clause 13 shall be undertaken by the Minister.

Note. Review and Audit of this Plan

In accordance with section 43 (2) of the Act, this Plan is to be reviewed, within the fifth year of its term, for the purpose of ascertaining whether its provisions remain adequate and appropriate for ensuring the effective implementation of the water management principles of the Act.

In accordance with section 44 of the Act, this Plan will be audited at intervals of no more than five years, for the purpose of ascertaining whether its provisions are being given effect to. This audit is to be carried out by an audit panel appointed by the Minister in consultation with a water management committee where one exists.

Note. The Implementation Program

In accordance with section 51 of the Act, the Minister may establish an Implementation Program that sets out the means by which the provisions of this Plan are to be achieved.

It is proposed that the Minister establish an Implementation Program for this Plan. Pursuant to section 51 (5) of the Act, the implementation program is to be reviewed annually by the Minister to determine whether it is effective in implementing this Plan.

The results of the review of the Implementation Program will be included in the annual report for the Department of Land and Water Conservation.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Part 14 Amendment of this Plan

55 Amendments of this Plan

- (1) This Part is made in accordance with section 42 (2) of the Act.
- (2) This Plan can be amended in accordance with the following clauses of this Plan:
 - (a) clause 16 in respect to the average annual recharge,
 - (b) clause 18 in respect to environmental health water,
 - (c) clause 25 in respect to share components of access licences,
 - (d) clause 28 in respect to long-term average extraction limit,
 - (e) clause 34 in respect to the water allocation account management rules, or
 - (f) clause 39 in respect to high priority groundwater dependent ecosystems and Aboriginal cultural heritage values.

Schedule 1 Dictionary

The following definitions apply to this Plan in addition to the definitions set out in the Act:

abandoned (work) refers to a water supply work (bore) that is no longer being used.

aquifer compaction refers to the reduction in the porosity (pore spaces) of an aquifer, and may result from over pumping the aquifer.

available water in relation to a water management area or water source, is the water that is available in that area or water source in accordance with an available water determination that is in force in respect of that area or water source.

available water determination is a written Order by the Minister as to the availability of water for the various categories of access licence in relation to a specified water management area or water source.

Note. An available water determination gives rise to a water allocation that is credited to a water allocation account for each licensed holder.

bedrock is the solid rock underlying unconsolidated sediments such as the soil and weathered rock. Bedrock is a general term for solid rock that lies beneath soil, loose sediments, or other unconsolidated material.

buffer zone is an area surrounding a groundwater dependent ecosystem or other feature (such as an area of low quality) within which extraction, or the impact of extraction, is restricted.

drawdown refers to a lowering of the the level to which water will rise in cased bores. Natural drawdown may occur due to seasonal climatic changes. Groundwater pumping may also result in seasonal and long-term drawdown.

extraction limit is the amount of the long-term average annual recharge and storage that can be extracted, on average, each water accounting year.

groundwater is water that occurs beneath the ground surface in the saturated zone.

groundwater dependent ecosystems are ecosystems which have their species composition and natural ecological processes wholly or partially determined by groundwater.

monitoring bore refers to a bore constructed for the purpose of measuring water levels and/or taking samples for water quality analysis.

recharge is the addition of water, usually by infiltration, to an aquifer.

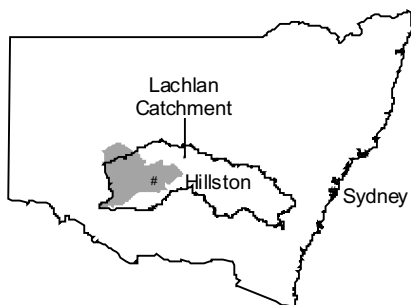
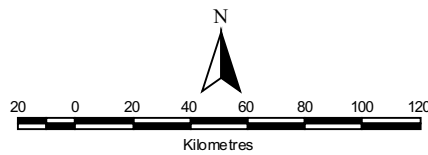
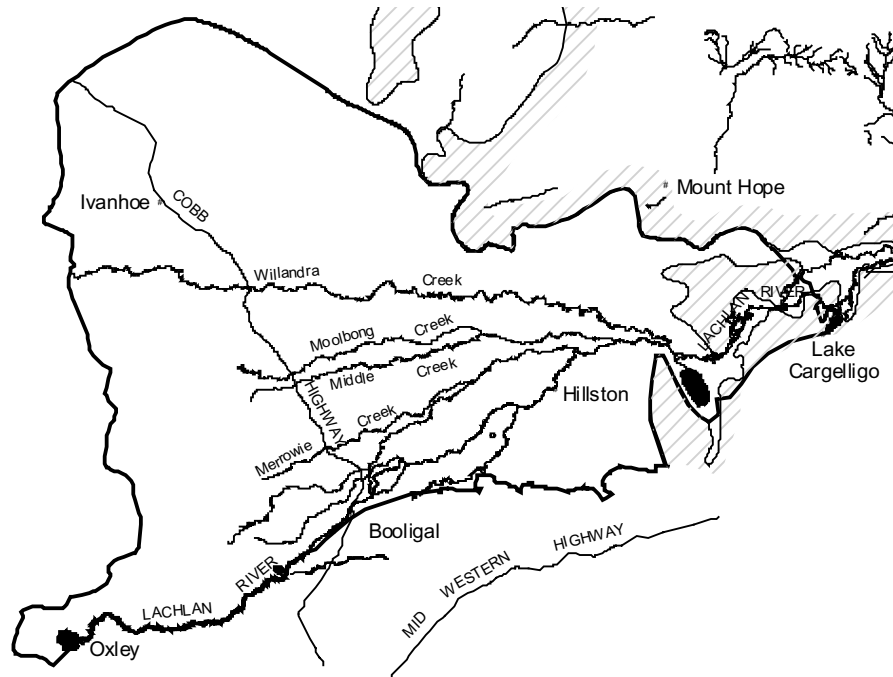
share component is the share component of an access licence.

total available drawdown is defined by the height of the piezometric level above the bedrock (i.e. base of the groundwater source). Groundwater levels will be measured in the winter months of June, July or August allowing the aquifer to recover from the previous pumping season.

unconsolidated alluvial aquifers are formed from sediments deposited by the action of flowing water in particular along river beds and floodplains, but not including lakes and seas.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Schedule 2 Lower Lachlan Groundwater Source



- # Town
- Highway
- River
- Creek
- Lower Lachlan Groundwater Source
- Water Storage
- ▨ Fractured Rock

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Schedule 3 Contribution to targets in the State Water Management Outcomes Plan

Levels of assessed contribution:

FULL – contributes to target in full

HIGH - while not fully contributing to target, there is a good level of contribution

PARTIAL - goes some way to contributing to the target

LOW - only small degree of contribution to the target

| Relevant Target | Level of Contribution | Comments |
|--|-----------------------|--|
| Target 1e The long term average annual extractions for groundwater limited (or being phased down) to an ecologically sustainable level (the Sustainable Yield) as determined by detailed assessment of each groundwater source and consultation with the relevant management committee. In the absence of such an assessment, the following to apply: 100 percent of average annual recharge for a groundwater source where there is no significant ecosystem dependency; 70 percent of average annual recharge where there is significant ecosystem dependency | PARTIAL | <ul style="list-style-type: none"> This Plan establishes as extraction limit of 80% of recharge. No detailed assessment of groundwater dependent ecosystems has been undertaken. An expert panel identified wetlands and floodplain vegetation along the Lachlan river and prior streams as likely to be groundwater dependent. The groundwater source also discharges to the Lachlan river. This Plan provides for the extraction limit to be reviewed by June 30 2007. |
| Target 1f Rules for adjustments to future available water determinations in the event that the extraction limits are exceeded, clearly prescribed in consultation with the relevant management committee, and acted upon | FULL | <ul style="list-style-type: none"> Rules set out in Part 9. |
| Target 2 All management plans incorporating mechanisms to protect and restore aquatic habitats, and the diversity and abundance | PARTIAL | <ul style="list-style-type: none"> Detailed assessment of groundwater dependent ecosystems was not undertaken, nevertheless an expert panel identified wetlands and floodplain vegetation along the Lachlan river and prior streams as |

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

| | | |
|---|---------|---|
| of native animals and plants, with particular reference to threatened species, populations and communities and key threatening processes | | likely to be groundwater dependent ecosystems. The groundwater source also discharges to the Lachlan River. <ul style="list-style-type: none"> • This Plan excludes licensed extraction from within 200 metres of wetlands and 40 metres of any creek or river. • This Plan prohibits new or replacement extraction bores within 200 metres of any high priority dependent groundwater ecosystems and 100 metres for basic rights bores. • This Plan establishes extraction rules/ specified drawdown limits to manage groundwater level declines, groundwater quality impacts, and to protect aquifer integrity. • This Plan provides for review (including more detailed investigation of groundwater dependency) and variation in Environmental Health Water and extraction limit by June 30 2007. |
| Target 5 Access rights for water access licensees clearly and legally specified in terms of share and extraction components | PARTIAL | <ul style="list-style-type: none"> • This Plan establishes transparent extraction limits and allocation/account rules. • This Plan embargos new licence applications. • The necessary reduction in licence volumes will not be completed until Year 10 and will therefore leave the water rights and market uncertain in the meantime. • The local extraction rules means that future rights will not be exclusive but affected by the future location of works. Access licences with existing bores will have priority over licences requiring new bores. |
| Target 6a For groundwater sources, the total volume of water specified on access licences reduced over the term of a water sharing plan to no more than 125 percent of the Sustainable Yield | FULL | <ul style="list-style-type: none"> • The total access licence volume for groundwater source is greater than 125% of the extraction limit. • This Plan proposes a reduction in access licence share components to 125% by the end of year 10. |
| Target 10 Degree of connectivity between aquifers and rivers assessed, and zones of high connectivity mapped to | PARTIAL | <ul style="list-style-type: none"> • While detailed assessment of connectivity was not undertaken, an expert panel concluded that the groundwater source would lose or gain from the river depending on season. |

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

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|---|---------|---|
| enable baseflows to the river to be maintained or improved | | <ul style="list-style-type: none"> The relatively high extraction limit may result in significant impacts on discharges to the river and creeks. This Plan excludes licensed extraction from within 40 metres of any creek. |
| Target 11 Groundwater dependent ecosystems identified and mapped for all priority aquifers, and the ecological water requirements assessed to enable local groundwater extraction rates and/or Sustainable Yields to be reviewed | PARTIAL | <ul style="list-style-type: none"> Detailed assessment of groundwater dependent ecosystems was not undertaken, nevertheless an expert panel identified wetlands and floodplain vegetation along the Lachlan river and prior streams as likely to be groundwater dependent particularly those in the shallow saturated zone between Hillston and Lake Brewster. This Plan excludes licensed extraction from within 200 metres of wetlands and prohibits new or replacement bores 200 metres (100 metres for basic rights bores) from any high priority dependent groundwater ecosystems. This Plan provides for review (including more detailed assessment of groundwater dependency) and variation in Environmental Health Water and extraction limit by June 30 2007. |
| Target 12 Measures in place in all water sources subject to a gazetted water sharing plan to protect domestic and stock rights from the impact of other water access and use | FULL | <ul style="list-style-type: none"> This Plan has identified the volumes necessary to meet basic domestic and stock requirements. It also protects domestic and stock bores from interference from higher yielding bores. |
| Target 13 The knowledge sharing, training and resources necessary to ensure that Aboriginal people have the capacity to be effectively involved in water management identified and addressed | PARTIAL | <ul style="list-style-type: none"> 1 Aboriginal community representatives has been involved in development of this Plan. A Department of Land and Water Conservation Aboriginal Natural Resources Officer consulted with local Aboriginal Communities. |
| Target 14 Water sources, ecosystems and sites of cultural or traditional importance to Aboriginal people identified, plans of management prepared, and measures put in place to protect and improve them | PARTIAL | <ul style="list-style-type: none"> No Aboriginal cultural or traditional sites or requirements have been identified. This Plan has a specific objective to protect heritage sites and cultural values. This Plan excludes licensed extraction from within 200 metres of wetlands and prohibits new or replacement bores (100 metres for basic rights bores) from any |

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

| | | |
|--|---------|---|
| | | <p>high priority dependent groundwater ecosystems.</p> <ul style="list-style-type: none"> • This Plan prohibits extraction new or replacement bores 200 metres (100 metres for basic rights bores) from any designated Aboriginal heritage sites. • This Plan provides for an assessment of the environmental and Aboriginal heritage requirements by 2006. • This Plan provides for assessment of new licence applications by Aboriginal interests. |
| Target 16a All share components of access licences tradeable | PARTIAL | <ul style="list-style-type: none"> • This Plan proposes the necessary reduction in access licence share component in years 5 and 10, therefore the market may be distorted by this higher level of entitlement. |
| Target 16f Zones established where necessary for environmental protection and limits/constraints on water dealings in them made explicit | FULL | <ul style="list-style-type: none"> • This Plan allows trading, but restricts it into areas where there may be impacts on the environment or other users. |
| Target 35 All management plans incorporating water quality objectives that have considered Government approved Interim Environmental Objectives, the current Australian and New Zealand Environment and Conservation Council Guidelines and the recommendations of relevant Healthy Rivers Commission Inquiries | FULL | <ul style="list-style-type: none"> • This Plan does include a general water quality objective and the beneficial use categories and references the ANZECC guidelines. • This Plan does establish specific rules to protect water quality. |
| Target 38 Aquifer water quality vulnerability zones mapped and extraction limits reviewed to reduce the risk of lateral intrusion of poor quality water | PARTIAL | <ul style="list-style-type: none"> • No vulnerability mapping of area is referenced in this Plan. • Rules established in this Plan to limit the movement of poor quality water. |

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Schedule 4 Licences exempt from access licence share component adjustments

| <i>Water Act 1912</i> licence number | Licence holder and volume |
|--------------------------------------|--|
| 70B153508 | Hilston Junior Rugby Club (24 ML/yr) |
| 70BL228160 | Burilda Water Users Association (24 ML/yr) |

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Schedule 5 High priority groundwater dependent ecosystems and identified Aboriginal cultural heritage values

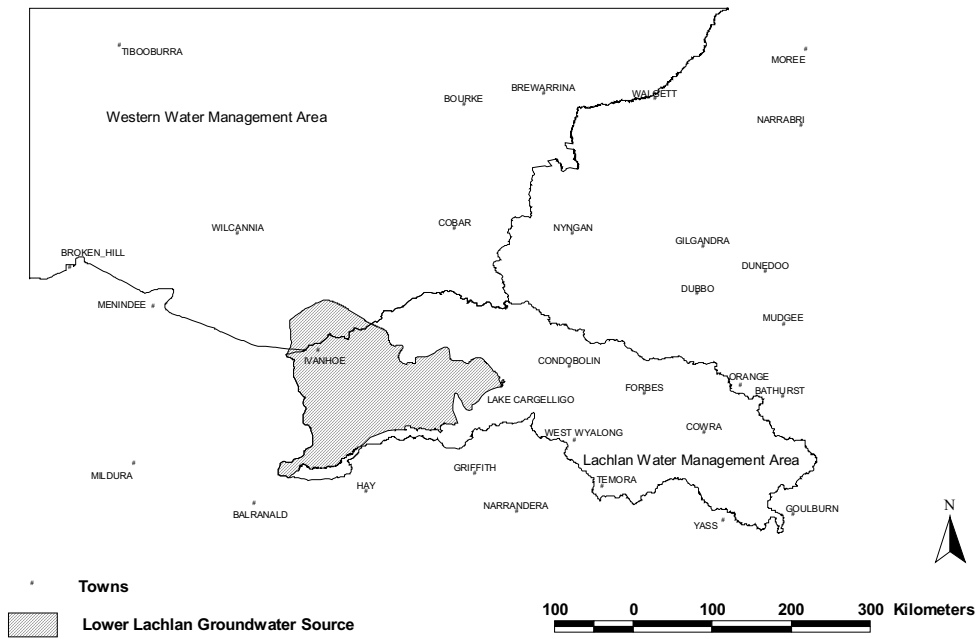
At the commencement of this Plan:

- (a) The Great Cumbung Swamp is the only identified high priority groundwater dependent ecosystem in the Lower Lachlan Groundwater Source, and
- (b) there are no identified Aboriginal cultural heritage values in the Lower Lachlan Groundwater Source.

Note. The high priority groundwater dependant ecosystems and identified Aboriginal cultural heritage values listed in this Schedule may change during the period of this Plan. The offices of the Department of Land and Water Conservation, shown in Appendix 2, should be contacted for a current list.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Appendix 1 Lachlan and Western Water Management Areas



Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Appendix 2 Location of maps

The maps in relation to this Plan may be inspected at:

District Office
Department of Land and Water Conservation
9 Spring Street
FORBES NSW 2871

District Office
Department of Land and Water Conservation
7 Hay Street
CONDOBOLIN NSW 2877

Regional Office
Department of Land and Water Conservation
Cnr Anson & Kite Streets
ORANGE NSW 2800

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Appendix 3 Performance indicators

| Performance indicators for the Lower Lachlan Groundwater Source Water Sharing Plan | | | |
|---|--------------------------|--|--|
| Performance indicator | Related Objective | As measured by | Commentary |
| (a) Change in groundwater extraction relative to the extraction limit. | 11 (a) | <ul style="list-style-type: none"> • Average annual extraction volume for the groundwater source as a percentage of the extraction limit. | <ul style="list-style-type: none"> • Plan provisions will set the mechanism to remain within the extraction limit over the long-term. |
| (b) Change in climate adjusted groundwater levels. | 11 (a) | <ul style="list-style-type: none"> • Change in recovered water levels at the end of each water year. • Density of extraction in critical areas. | <ul style="list-style-type: none"> • Water levels will fluctuate with climate and resultant variable recharge. Some level declines will be expected during dry times, just as level rises are expected during wetter periods. |
| (c) Change in water levels adjacent to identified groundwater dependent ecosystems. | 11 (a) | <ul style="list-style-type: none"> • Identification of groundwater dependent ecosystems (GDEs). • Assessment of the relationship between selected GDEs and local groundwater levels in terms of the water requirements of these GDEs. • Assessment of the adequacy of buffer zones or local impact restrictions by comparison of water levels near in or GDEs compared to plan baseline. • Frequency and duration of water level drawdown below critical levels. | <ul style="list-style-type: none"> • Groundwater dependent ecosystems should be identified in water sharing plans, or a process for their identification established. |
| (d) Change in groundwater quality. | 11 (a) 11 (b) | <ul style="list-style-type: none"> • Trends in selected water quality parameters at selected monitoring bores that are likely to be affected by groundwater extraction. | <ul style="list-style-type: none"> • Many water quality issues are a function of contamination by land based activities, rather than extraction. |

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

| Performance indicators for the Lower Lachlan Groundwater Source Water Sharing Plan | | | |
|---|--------------------------|---|--|
| Performance indicator | Related Objective | As measured by | Commentary |
| (e) Change in economic benefits derived from groundwater extraction and use. | 11 (b) 11 (c) | <ul style="list-style-type: none"> Change in regional gross margins. Change in unit price of water transferred. | <ul style="list-style-type: none"> There are many factors affecting economic status of a region, for example commodity prices, other sources of water (i.e. surface water) etc. Assessment undertaken as part of plan performance monitoring will make assumptions to attempt to identify the impact of the plan's provisions. |
| (f) Extent to which domestic and stock rights have been met. | 11 (b) 11 (c) | <ul style="list-style-type: none"> Monitor increase in applications for water supply work (bore) approvals. Number of reports of interference between high yield extraction and basic rights, or number of domestic and stock bores deepened. Assess frequency and duration of water level drawdown below critical thresholds. | <ul style="list-style-type: none"> Basic rights usage figures in water sharing plans are estimated (not actual use). Increases in licences may be due to past unlicensed works. |
| (g) Extent to which local water utility requirements have been met. | | <ul style="list-style-type: none"> Monitor increase in access by local water utilities. Monitor impact of interference between high yield extraction and local water utility extraction. | |
| (h) Extent to which native title rights requirements have been met. | 11 (c) 11 (d) | <ul style="list-style-type: none"> Monitor increase in applications for water supply work (bore) approvals for native title basic rights. Number of reports of interference between high | |

 Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

| Performance indicators for the Lower Lachlan Groundwater Source Water Sharing Plan | | | |
|--|--------------------------|---|---|
| Performance indicator | Related Objective | As measured by | Commentary |
| | | yield extraction and native title rights holders, or number of bores deepened. <ul style="list-style-type: none"> Assess frequency and duration of water level drawdown below critical thresholds. | |
| (i) Extent of recognition of spiritual, social and customary values of groundwater to Aboriginal people. | 11 (d) | <ul style="list-style-type: none"> Assessment of amount and type of information collected to identify the range of values of water to Aboriginal people. | <ul style="list-style-type: none"> The collection of information on the values associated with water is considered the first step in addressing the objects of the Act. It would be expected that at the end of five years there should be relevant information collected for the groundwater source, as a minimum requirement. |

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

Appendix 4 Minister's access licence dealing principles

The following is the text from the Access Licence Dealing Principles Order, published in the NSW Government Gazette on 27 December 2002.

Access Licence Dealing Principles Order 2002

Part 1 Introduction

1. Name of Order

This Order is the *Access Licence Dealing Principles Order 2002*.

2. Commencement

This Order commences on 20 December 2002.

3. Establishment of access licence dealing principles

The access licence dealing principles set out in this order are established.

4. Interpretation

- (1) References in this order to licences of category 'runoff harvesting' or 'regulated river (conveyance)' are subject to those categories being prescribed by regulation made under section 57 (k) of the Act.
- (2) Notes in this order do not form part of the order.

5. Effect

- (1) Consistent with section 71K (1) of the Act, all applications for access licence dealings under Division 4 of Part 2 of Chapter 3 of the Act are to be dealt with in accordance with:
 - (a) the water management principles, and
 - (b) the principles in this order, and
 - (c) access licence dealing rules established by any relevant management plan.
- (2) Consistent with section 71L of the Act, any access licence dealing rules established by management plans must be consistent with the principles in this order.

6. Definitions

In this order the following definitions apply:

dealing means a dealing under Chapter 3, Part 2 Division 4 of the *Water Management Act 2000*.

farm dam is a privately owned dam typically of earthen construction designed to collect and/or store water for use on one or a few properties. It does not include publicly owned dams or weirs.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

groundwater source means a water source specified in a groundwater management plan.

hydrologically connected water sources are water sources where water from one flows into the other, or, in the case of river systems, where flow from both goes into a common river downstream.

management plan means a plan made under section 41 or 50 of the *Water Management Act 2000*.

regulated river water source means a water source specified in a regulated river management plan.

runoff harvesting dam is a farm dam on a hillside or minor stream which collects and stores rainfall runoff. Minor streams are as defined in an order made under section 53 of the *Water Management Act 2000*.

unregulated river water source means a water source specified in an unregulated river management plan.

Part 2 General principles

7. Impacts on water sources

- (1) Dealings should not adversely affect environmental water and water dependent ecosystems as identified in any relevant management plan.
- (2) Dealings should be consistent with any strategies to maintain or enhance water quality identified in any relevant management plan.
- (3) In unregulated river water sources, dealings should not increase commitments to take water from water sources or parts of water sources identified in any relevant management plan as being of high conservation value.
- (4) In unregulated river water sources or a groundwater sources, dealings should not increase commitments to take water from water sources or parts of water sources above sustainable levels identified in any relevant management plan.
- (5) In regulated river water sources, dealings should not increase daily demand for water delivery at those locations and times where it is identified in any relevant management plan that demand exceeds delivery capacity.
- (6) In regulated river water sources, dealings should not increase commitments to take water in lower river or effluent systems where this will result in flow at greater than 80% of channel capacity for more than 10% of days used for water delivery.
- (7) In this clause, **commitments to take water** refers, in relation to all access licences with nominated works in that water source or part of a water source, to:
 - (a) the total volume of share components, or
 - (b) the total volume of water allocations in water allocation accounts, or
 - (c) where relevant, the sum of limits on rates of extraction in extraction components.

8. Impacts on indigenous, cultural, heritage or spiritual matters

- (1) Dealings should not adversely affect geographical and other features of indigenous significance.

- (2) Dealings should not adversely affect geographical and other features of major cultural, heritage or spiritual significance.

9. Impacts on water users

- (1) Dealings should not adversely affect the ability of a person to exercise their basic landholder rights.
- (2) Dealings should have no more than minimal effect on the ability of a person to take water using an existing approved water supply work and any associated access licences. This should be addressed by constraints on dealings established in access licence dealing rules in relevant management plans.

10. Maximising social and economic benefits

- (1) The objective of access licence dealings is to help to facilitate maximising social and economic benefits to the community of access licences as required under the objects of the Act. Dealings do this by:
 - (a) allowing water to move from lower to higher value uses, and
 - (b) allowing the establishment of water markets that value the access licences, thereby encouraging investment in water efficient infrastructure, and
 - (c) allowing greater flexibility to access licence holders.
- (2) Subject to other principles in this order, access licence dealing rules should allow maximum flexibility in dealings to promote the objectives set out in subclause (1).

Part 3 Principles for specific types of access licence dealings

11. Transfer of access licences

- (1) This clause applies to dealings under section 71A of the Act.
- (2) Dealings under section 71A are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or
 - (b) if the licence is suspended under section 78 of the Act.
- (3) Access licence dealing rules established by a management plan shall not regulate or prohibit dealings under section 71A of the Act.

Note. as indicated in section 71A (3), consent to the transfer of a local water utility access licence may only be granted if the transferee is a local water utility, and consent to the transfer of a major water utility access licence may only be granted if the transferee is a major water utility.

12. Conversion of access licence to new category

- (1) This clause applies to access licence dealings under section 71B of the Act.
- (2) Dealings under section 71B are prohibited:
 - (a) if the licence is proposed to be converted to category regulated river (conveyance) or category estuarine or category coastal, or
 - (b) if there is an outstanding debt under the Act in respect of the licence, or
 - (c) if the licence is suspended under section 78 of the Act, or

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

- (d) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, or
 - (e) if the licence share component is not numerically quantified.
- (3) Dealings under section 71B are prohibited unless provisions of the relevant management plan:
- (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (4) The share and extraction components of a new licence issued under a dealing under section 71B must comply with any requirements that are specified in the relevant management plan for a licence granted under section 63 of the Act for the new category.
- (5) Except for where it is otherwise specified in access licence dealing rules in the relevant management plan or where this dealing is accompanied by a dealing under section 71E, water allocations remaining in the water allocation account of the cancelled licence are to be credited to the new licence, up to a maximum of the share component volume of the new licence.
- (6) The share component on a new access licence issued under a dealing under section 71B is to be of a volume equal to the volume on the cancelled licence multiplied by a conversion factor determined by the Minister in accordance with any rules set out in relevant management plans.
- (7) Conversion factor rules in management plans:
- (a) must be based on protecting environmental water and basic landholder rights as specified in the management plans, and maintaining available water to other access licences, and
 - (b) are not to be set for the purpose of achieving a reduction in overall water extraction from water sources.
- (8) Subject to the granting of an application under section 71J, any nominated water supply works on the cancelled licence may be carried forward to the new licence.
- (9) For conversion of category from regulated river (high security), unregulated river or aquifer to major utility and vice versa:
- (a) a major utility licence may only be converted to another category if it has components relating to only one water source, and
 - (b) subject to imposing such mandatory conditions as are required by the relevant management plan for the new category, the extraction component on the cancelled licence is to be carried over to the new licence.
- (10) For conversion of category from regulated river (general security) to regulated river (high security) and vice versa, and for conversion of category from domestic and stock to regulated river (high security) and vice versa, the extraction component on the cancelled licence is to be carried over to the new licence, subject to imposing such mandatory conditions as are required by the relevant management plan for the new category.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

- (11) For conversion of category from regulated river (conveyance) to regulated river (high security) or regulated river (general security), the extraction component on the cancelled licence is to be carried over to the new licence, subject to imposing such mandatory conditions as are required by the relevant management plan for the new category.
- (12) For conversion of category from regulated river (general security) to unregulated river:
- (a) no parts of the extraction component on the cancelled licence are to be carried over to the new licence, and
 - (b) the extraction component of the new licence is to specify a location or area which is on an unregulated river (apart from a minor stream as defined in an order made under section 53 of the Act), and
 - (c) the application for conversion of category from regulated river (general security) to unregulated river must be accompanied by an application under section 71E to change the share component to an unregulated river water source, and is conditional on granting of that application, and
 - (d) water allocations remaining in the water allocation account on the cancelled licence may not be credited to the new licence.
- (13) For conversion of category from unregulated river to runoff harvesting:
- (a) no parts of the extraction component on the cancelled licence are to be carried over to the new licence, and
 - (b) the extraction component of the new licence is to specify a location or area which is not on a river (apart from a minor stream as defined in an order made under section 53 of the Act), and
 - (c) the application for conversion of category from unregulated river to runoff harvesting access licence must be accompanied by an application under section 71J to nominate the water supply work to a runoff harvesting dam, and is conditional on granting of that application.
- (14) For conversion of category from runoff harvesting to unregulated river:
- (a) no parts of the extraction component on the cancelled licence are to be carried over to the new licence, and
 - (b) the extraction component of the new licence is to specify a location or area which is on an unregulated river (apart from a minor stream as defined in an order made under section 53 of the Act).
- (15) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. Under section 71B applications to convert local water utility access licences and supplementary access licences are prohibited, and licences granted are subject to the mandatory conditions applicable to the category or subcategory of licence to which it belongs. Also licences may only be granted in relation to the same water source or water management area as the cancelled licence.

13. Subdivision of access licences

- (1) This clause applies to subdivision dealings under section 71C of the Act.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

- (2) Dealings under section 71C are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or
 - (b) if the licence is suspended under section 78 of the Act.
- (3) Subject to the granting of an application under section 71J, any nominated water supply works on the cancelled licence may be carried forward to the new licences.
- (4) The category of the new licences is to be the same as the category of the cancelled licence.
- (5) The areas or locations specified in the cancelled licence are to be carried over to all the new licences.
- (6) Any indivisible parts of the times, rates or circumstances specified in the extraction component of the cancelled licence are to be carried forward to all the new licences.
- (7) Water allocations remaining in the water allocation account of the cancelled licence are to be credited to the new licences so that the combined water allocations in the accounts of the new licences are no greater than the water allocations which remained in the account of the cancelled licence.
- (8) Access licence dealing rules established by a management plan shall not regulate or prohibit subdivision dealings under section 71C of the Act.

Note. As indicated in section 71C (3), the combined share components and combined extraction components of the new licences are to be no greater than the share and extraction components of the cancelled licence, and conditions on the cancelled licence are to be carried over to the new licences.

14. Consolidation of access licences

- (1) This clause applies to consolidation dealings under section 71C of the Act.
- (2) Consolidation dealings under section 71C are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of any of the licences, or
 - (b) if any of the licences are suspended under section 78 of the Act, or
 - (c) if the licences to be consolidated do not have share components in the same water source, or
 - (d) if the location or area specified in the extraction component of the licences is not the same.
- (3) Subject to the granting of an application under section 71J, any nominated water supply works on the cancelled licences may be carried forward to the new licence.
- (4) Water allocations remaining in the water allocation accounts on the cancelled licences are to be credited to the new licence so that the water allocations in the account of the new licence is no greater than the sum of the water allocations remaining in the accounts of the cancelled licences.
- (5) Access licence dealing rules established by a management plan shall not regulate or prohibit consolidation dealings under section 71C of the Act.

Note. as indicated in section 71C, the licences to be consolidated must be of the same category or subcategory, the combined share components and combined extraction components of the new licences are to be no greater than the share and extraction components of the cancelled licence, and conditions on the cancelled licences are to be carried over to the new licences.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

15. Assignment of rights under access licences

- (1) This clause applies to assignment of rights dealings under section 71D of the Act.
- (2) Dealings under section 71D are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of any of the licences, or
 - (b) if any of the licences are suspended under section 78 of the Act, or
 - (c) if any of the licences are of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act.
- (3) Only share or extraction components, or parts thereof, that are numerically quantified may be assigned from one licence to another.
- (4) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. As indicated in section 71D, the licences which are involved in a dealing under section 71D must be of the same category and have share components in the same water source or water management area. This dealing does not apply to local water utility access licences.

16. Change of water source

- (1) This clause applies to amendment of share component dealings under section 71E of the Act.
- (2) Dealings under section 71E are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or
 - (b) if the licence is suspended under section 78 of the Act, or
 - (c) if the licence does not have the share component expressed as a volume, or
 - (d) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, or
 - (e) from an unregulated river water source to a regulated river water source, or
 - (f) from a groundwater source to a regulated river or unregulated river water source, or vice versa, or
 - (g) if the licence is of category major water utility or supplementary.
- (3) A dealing under section 71E is prohibited unless there is a hydrologic connection between the water sources of the cancelled and issued licences.
- (4) A dealing under section 71E is prohibited unless provisions of the relevant management plans:
 - (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (5) The share and extraction components of a new licence issued under this dealing must comply with any requirements that are specified in the relevant management plan for a licence granted under section 63 of the Act.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

- (6) The share component on the new access licence is to be of a volume equal to the volume on the cancelled licence multiplied by a conversion factor determined by the Minister in accordance with any rules set out in relevant management plans.
- (7) Conversion factors rules in management plans:
 - (a) must be based on protecting environmental water and basic landholder rights as specified in the management plans, and maintaining the available water to other access licences, and
 - (b) are not to be set for the purpose of achieving a reduction in overall water extraction from water sources.
- (8) Nominated water supply works on the cancelled licence are not to be carried over to the new licence.
- (9) No water allocations remaining in the water allocation account of the cancelled licence may be credited to the new licence.
- (10) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. As indicated in section 71E, the new licence arising from a dealing under section 71E is subject to the mandatory conditions relevant to its category or subcategory and water source. This dealing does not apply to local water utility access licences.

17. Amendment of extraction component of access licence

- (1) This clause applies to amendment of extraction component dealings under section 71F of the Act.
- (2) Dealings under section 71F are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence,
 - (b) if the licence is suspended under section 78 of the Act, or
 - (c) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences.
- (3) Amendment of the times, rates and circumstances part of the extraction component may only occur where:
 - (a) access licence dealing rules in the relevant plan make provision for it consistent with the principles in Part 2 of this order, and
 - (b) those rules specifically indicate the nature of those amendments which are allowed.
- (4) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. As indicated in section 71F, the area or location arising from a variation of an access licence under this dealing must relate to the same water management area or water source as that to which the original area or location related.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

18. Assignment of water allocations between access licences

- (1) This clause applies to assignment of water allocation dealings under section 71G of the Act.
- (2) Dealings under section 71G are prohibited:
 - (a) if either of the access licences is suspended under section 78 of the Act, or
 - (b) if either of the access licences are of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences, or
 - (c) if a method of measurement of water extraction which is satisfactory to the Minister is not established for all nominated water supply works on both access licences, or
 - (d) if any of the access licences is of category runoff harvesting, or
 - (e) if any of the access licences is of category major utility, unless specific provision is made in access licence dealing rules to allow this, or
 - (f) from a supplementary water access licence to a licence of any other category.
- (3) Assignment of water allocations between access licences relating to different water sources is prohibited if:
 - (a) either licence is of category supplementary, or
 - (b) there is no hydrologic connection between the water sources, or
 - (c) one water source is a regulated river and the other is an unregulated river, or
 - (d) one water source is a groundwater source and the other is a regulated river or unregulated river water source.
- (4) Assignment of water allocations between access licences relating to different water sources is prohibited unless provisions of the relevant management plans:
 - (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (5) Assignment of water allocations from a local water utility access licence is prohibited unless:
 - (a) the Minister has approved a demand management plan for all NSW towns supplied under the local water utility access licence, and
 - (b) the Minister has approved a drought management plan for all NSW towns supplied under the local water utility access licence, and
 - (c) the Minister is satisfied the assignment will not put the water supply for NSW towns supplied by the local water utility at risk.
- (6) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

19. Interstate transfer dealings

- (1) This clause applies to dealings under section 71H of the Act.
- (2) Any dealings under section 71H must be consistent with the relevant inter-state agreement.
- (3) Dealings under section 71H are prohibited unless the waters for which the interstate access licence equivalent has or will have rights to are hydrologically connected to the water source in which to which the access licence to be issued or revoked relates.
- (4) Dealings under section 71H which revoke an access licence are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or
 - (b) if the licence is suspended under section 78 of the Act, or
 - (c) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, or
 - (d) if the licence is of category local water utility or major water utility.
- (5) The share and extraction components of a new licence issued under this dealing must comply with any requirements that are specified in the relevant management plan for a licence granted under section 63 of the Act.
- (6) Dealings under section 71H are prohibited unless arrangements are in place which:
 - (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (7) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

20. Interstate assignment of water allocations

- (1) This clause applies to interstate assignment of water allocation dealings under section 71I of the Act.
- (2) Any dealings under section 71I must be consistent with the relevant inter-state agreement.
- (3) Dealings under section 71I are prohibited:
 - (a) if the access licence is suspended under section 78 of the Act, or
 - (b) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences, or
 - (c) if a method of measurement of water extraction which is satisfactory to the Minister is not established for all nominated water supply works on the access licence, or
 - (d) if the access licence is of category runoff harvesting or supplementary water, or

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

- (e) if the access licence is of category major utility, unless specific provision is made in access licence dealing rules in the relevant management plan to allow this.
- (4) This dealing is prohibited unless arrangements are in place which:
 - (a) protect environmental water from being affected by the dealing, and
 - (b) protect basic landholder rights from being affected by the dealing, and
 - (c) protect the available water under other access licences from being affected by the dealing.
- (5) Interstate assignment of water allocations from a local water utility access licence is prohibited unless:
 - (a) the Minister has approved a demand management plan for all NSW towns supplied under the local water utility access licence, and
 - (b) the Minister has approved a drought management plan for all NSW towns supplied under the local water utility access licence, and
 - (c) the Minister is satisfied the assignment will not put the water supply for NSW towns supplied by the local water utility at risk.
- (6) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

21. Nomination of water supply works

- (1) This clause applies to nomination of water supply works dealings under section 71J of the Act.
- (2) Dealings under section 71J are prohibited if the access licence is suspended under section 78 of the Act.
- (3) Dealings under section 71J are prohibited if the access licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences, with the following exceptions:
 - (a) if new or additional works are to be nominated, where those works supply the same property as the current nominated works, or a contiguous property to the property supplied by the current nominated works which is occupied by the same landholder, or
 - (b) if a nominated work is withdrawn, that there remains at least one nominated work.
- (4) Dealings under section 71J are prohibited if the access licence is of category local water utility, with the following exceptions:
 - (a) if new or additional works are to be nominated, that those works supply the same town water supply scheme as the current nominated works, or
 - (b) if a nominated work is withdrawn, that there remains at least one nominated work.

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

- (5) Nomination of a water supply work is prohibited if the access licence does not have an extraction component allowing taking of water at the location of the nominated work.
- (6) With regard to runoff harvesting access licences:
 - (a) the nominated work must be a runoff harvesting dam of capacity consistent with the share component of the access licence, and
 - (b) withdrawal of nominated work may only be granted where arrangements are in place to ensure that the nominated work does not conserve any more water than is permitted pursuant to the exercise of basic landholder rights.
- (7) Withdrawal of nomination may not be prohibited by access licence dealing rules, except for as otherwise specified in this clause.
- (8) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003 Order

under the

Water Management Act 2000

Pursuant to section 50 of the *Water Management Act 2000*, I, the Minister for Land and Water Conservation, make the following Minister's plan.

JOHN AQUILINA, M.P.,
Minister for Land and Water Conservation

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

Contents

| | Page |
|------------|---|
| Part 1 | Introduction 1 |
| Part 2 | Vision, objectives, strategies and performance indicators 3 |
| Part 3 | Basis for water sharing 5 |
| Part 4 | Environmental water provisions 6 |
| Part 5 | Basic landholder rights 7 |
| Part 6 | Bulk access regime 8 |
| Part 7 | Requirements for water for extraction under access licences 9 |
| Part 8 | Rules for granting access licences 11 |
| Part 9 | Limits to the availability of water 13 |
| Division 1 | Long-term average extraction limits 13 |
| Division 2 | Available water determinations 13 |
| Part 10 | Rules for managing access licences 15 |
| Division 1 | General 15 |
| Division 2 | Water allocation account management 15 |
| Division 3 | Management of local impacts 17 |
| Part 11 | Access licence dealing rules 20 |
| Part 12 | Mandatory conditions 22 |
| Part 13 | Monitoring and reporting 24 |
| Part 14 | Amendment of this Plan 25 |
| Schedule 1 | Dictionary 26 |
| Schedule 2 | Lower Murrumbidgee Groundwater Sources 28 |
| Schedule 3 | Contribution to targets in the State Water Management Outcomes Plan 29 |
| Schedule 4 | High priority groundwater dependent ecosystems 33 |
| Appendix 1 | Murrumbidgee, Lachlan and Murray Water Management Areas 34 |
| Appendix 2 | Location of maps 35 |
| Appendix 3 | Performance indicators 36 |
| Appendix 4 | Minister's access licence dealing principles 39 |

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

Part 1 Introduction

1 Name of Plan

This Plan is the *Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003* (hereafter **this Plan**).

2 Nature and status of this Plan

- (1) This Plan is made under section 50 of the *Water Management Act 2000* as amended (hereafter **the Act**).
- (2) This Plan covers the core provisions of section 20 of the Act for water sharing, and additional provisions of section 21 of the Act, and other relevant matters.

3 Date of commencement

This Plan takes effect on 1 July 2003, and ceases 10 years after that date.

4 Area to which this Plan applies

- (1) The area in respect of which this Plan is made is that area of land within the Murrumbidgee, Lachlan and Murray Water Management Areas known as the Lower Murrumbidgee Groundwater Sources (hereafter **these groundwater sources**) as shown on the map in Schedule 2.

Note. The Murrumbidgee, Lachlan and Murray Water Management Areas are shown on the map in Appendix 1.

- (2) The groundwater sources referred to in this Plan are:
 - (a) the Lower Murrumbidgee Shepparton Groundwater Source (hereafter **the Shepparton**), characterised by yellow and brown poorly sorted sand and clay sediments that extend to a depth of between 50 and 70 metres below the ground surface, and
 - (b) the Lower Murrumbidgee Calivil and Renmark Groundwater Source (hereafter **the Calivil and Renmark**), characterised by pale grey to white quartz sand layers, with lenses of grey to white clay, extending from the bottom of the Shepparton down to the bedrock, with a typical thickness of 100 to 300 metres.

Note. Maps referred to in this plan may be inspected at offices of the Department of Land and Water Conservation listed in Appendix 2. A schematic representation of these groundwater sources is also available at these offices.

5 Waters to which this plan applies

The water in these groundwater sources includes all water contained in the Shepparton, Calivil and Renmark unconsolidated alluvial aquifers.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

6 Interpretation

- (1) Terms that are defined in the Act have the same meaning in this Plan and the effect of these terms may be explained in Notes.
- (2) Additional terms to those identified in subclause (1) are defined in Schedule 1.
- (3) Notes in the text of this Plan do not form part of this Plan.
- (4) Schedules to this Plan form part of this Plan.
- (5) Appendices to this Plan do not form part of this Plan.

7 Effect on licences, authorities and permits under the *Water Act 1912*

- (1) This Plan applies from the date of commencement to those matters that are administered under the Act at that time.
- (2) This Plan applies to other matters from the date the relevant provisions of the Act are commenced.

Note. To the extent possible, the rules embodied in this Plan will apply to matters administered under the *Water Act 1912* in the interim.

8 State Water Management Outcomes Plan

- (1) In accordance with section 16 (1) (a) of the Act this Plan is consistent with the State Water Management Outcomes Plan published in the NSW Government Gazette on 20 December 2002 (hereafter *the SWMOP*).
- (2) Schedule 3 identifies the SWMOP targets applicable to this Plan and how this Plan contributes to those targets.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

Part 2 Vision, objectives, strategies and performance indicators

9 Vision, objectives, strategies and performance indicators

This Part is made in accordance with section 35 (1) of the Act.

10 Vision

The vision for this Plan is the optimal, equitable and sustainable management of groundwater for environmental, economic and social purposes in the Lower Murrumbidgee.

11 Objectives

The objectives of this Plan are to:

- (a) share groundwater sustainably between users and the environment,
- (b) share groundwater equitably amongst extractive users,
- (c) provide for basic landholder rights and priorities of use,
- (d) protect groundwater quality,
- (e) maximise the social, economic and environmental benefits of groundwater management strategies, and
- (f) minimise the negative social and economic impacts of groundwater management strategies.

12 Strategies

The strategies of this Plan are to:

- (a) establish environmental water rules and manage access to groundwater consistent with those rules,
- (b) establish rules for the protection of basic landholder rights,
- (c) establish an extraction limit for each groundwater source, taking into account the requirements of the environment,
- (d) reduce the total share component of access licences in the Calivil and Renmark to 125% of the extraction limit in that groundwater source,
- (e) establish rules for the granting of access licences,
- (f) establish rules for determining the groundwater available from time to time under access licences,
- (g) establish water allocation account management rules,
- (h) establish rules for minimising the local impacts of groundwater extraction on the environment, the aquifer itself, and between users,
- (i) establish the access licence dealing rules, and
- (j) establish the mandatory conditions that will apply to all access licences and water supply work (bore) approvals.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

13 Performance indicators

For the purpose of section 35 (1) (b) of the Act, the following indicators are to be used to determine the performance of this Plan against its objectives:

- (a) change in groundwater extraction relative to the extraction limits,
- (b) change in climate adjusted groundwater levels,
- (c) change in water levels adjacent to identified groundwater dependent ecosystems,
- (d) change in groundwater quality,
- (e) change in economic benefits derived from groundwater extraction and use,
- (f) change in structural integrity of the aquifer,
- (g) extent to which domestic and stock requirements have been met,
- (h) extent to which local water utility requirements have been met,
- (i) extent to which native title rights requirements have been met, and
- (j) extent of recognition of spiritual, social and customary values of groundwater to Aboriginal people.

Note. Appendix 3 details the objectives to which these performance indicators relate and the methods for assessing these indicators.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

Part 3 Basis for water sharing

14 Basis for water sharing

This Part is made in order to give effect to section 5 (3) of the Act, and in accordance with sections 20 (2) (c) and 21 (e) of the Act.

15 Climatic variability

- (1) This Plan recognises climatic variability and therefore that the level of natural recharge to these groundwater sources will vary.
- (2) To give effect to subclause (1), this Plan has provisions that manage:
 - (a) the sharing of water in these groundwater sources within the limits of water availability on a long-term average basis, and
 - (b) water extractions to enable the protection of groundwater dependent ecosystems, aquifer integrity and water quality of these groundwater sources.

16 Recharge

- (1) The overall basis for water sharing in this Plan is the average annual recharge to each groundwater source as follows:
 - (a) 65,000 megalitres per year (hereafter *ML/yr*) to the Shepparton, and,
 - (b) 335,000 ML/yr to the Calivil and Renmark.

Note. These recharge figures incorporate some recharge from irrigation losses to the shallow groundwater system. It is expected that, as irrigation losses diminish through infrastructure refurbishment and water efficiency measures, this component of the recharge will also diminish.

- (2) Pursuant to section 42 (2) of the Act, the average annual recharge for each groundwater source established in subclause (1) may be varied by the Minister after 30 June 2008 following further recharge studies undertaken by the Minister.

Note. The extent of impact of this change on access by licence holders is limited by the provisions in clause 28.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

Part 4 Environmental water provisions

17 Environmental water provisions

This Part is made in accordance with sections 5 (3) and 8 (1), 8 (2) and 20 (1) (a) of the Act.

18 Environmental health water

- (1) This Plan establishes the following environmental health water rules:
 - (a) the long-term average storage component of each groundwater source, minus the basic landholder rights extraction, is reserved for the environment,
 - (b) 55,000 ML/yr of the average annual recharge to the Shepparton will be reserved for the environment, and
 - (c) 65,000 ML/yr of the average annual recharge to the Calivil and Renmark, minus the access permitted under supplementary water access licences, will be reserved for the environment.
- (2) Pursuant to section 42(2) of the Act, the Minister may vary the proportion of recharge reserved as the environmental health water in subclause (1) after 30 June 2008, based on further studies of groundwater ecosystem dependency undertaken by the Minister.

Note. The extent of impact of this change on access by licence holders is limited by the provisions in clause 28.
- (3) The Minister should consult with the Minister for the Environment before varying the environmental health water in accordance with subclause (2).

19 Supplementary environmental water

At the commencement of this Plan, there is no water committed for specified environmental purposes in accordance with section 8 (1) (b) of the Act.

20 Adaptive environmental water

- (1) At any time, an access licence holder may, by a process determined by the Minister, commit all or part of their licence as adaptive environmental water.
- (2) The conditions of the commitment specified in subclause (1):
 - (a) are to be established by the Minister,
 - (b) are to be specified on the access licence, and
 - (c) shall be such as to ensure that there is a contribution to the objectives of this Plan.
- (3) At the commencement of this Plan there are no access licences committed to an environmental purpose in accordance with section 8 (1) (c) of the Act.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

Part 5 Basic landholder rights

21 Basic landholder rights

- (1) This Part is made in accordance with sections 5 (3) and 20 (1) (b) of the Act.
- (2) If a landholder is unable to exercise their basic landholder rights due to interference to supply caused by extraction authorised by access licences:
 - (a) the landholder's affected water supply work (bore) or pump equipment may be replaced or deepened to ensure continuing access to water for basic landholder rights, or
 - (b) basic rights water may be supplied by alternative means during critical times.
- (3) The Minister may impose a charge on access licence holders in these groundwater sources under section 114 of the Act, as a contribution to the costs of activities or works associated with subclause (2).

Note. The Minister may issue an Order under section 328 of the Act to restrict the exercise of basic landholder rights from these groundwater sources to protect the environment, for reasons of public health, or to preserve existing basic landholder rights.

Note. Access for basic landholder rights is permitted without the need for an access licence. A works approval will, however, be required. Such works approvals are not subject to an embargo.

22 Domestic and stock rights

Note. It is not recommended that the water from these groundwater sources be consumed without prior treatment. Land use activities may have polluted the groundwater in some areas.

- (1) At the commencement of this Plan, the water requirements of holders of domestic and stock rights are estimated to be a total of 4,000 ML/yr, comprising:
 - (a) 3,000 ML/yr in the Shepparton,
 - (b) 1,000 ML/yr in the Calivil and Renmark,
- (2) This Plan recognises that the exercise of domestic and stock rights may increase during the term of this Plan.

Note. Increase in use of domestic and stock rights may occur as a result of an increase in the number of landholdings overlying these groundwater sources, or as a result of the increase in the exercise of basic landholder rights by existing landholders.

23 Native title rights

- (1) At the commencement of this Plan there are no holders of native title rights and therefore the water requirements for native title rights are a total of 0 ML/yr.
- (2) This Plan recognises that the exercise of native title rights may increase during the term of this Plan.

Note. An increase in native title rights may occur as a result of the granting of native title rights under the Commonwealth's *Native Title Act 1993*.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

Part 6 Bulk access regime

24 Bulk access regime

- (1) This Part is made in accordance with section 20 (1) (e) of the Act.
- (2) This Plan establishes a bulk access regime for the extraction of water under access licences in these groundwater sources having regard to:
 - (a) the environmental water provisions established under Part 4 of this Plan,
 - (b) the requirements for basic landholder rights identified under Part 5 of this Plan, and
 - (c) the requirements for water for extraction under access licences identified under Part 7 of this Plan.
- (3) The bulk access regime established in subclause (2):
 - (a) recognises the effect of climatic variability on the availability of water as provided for under Part 3 of this Plan,
 - (b) establishes rules according to which access licences are granted as provided for in Part 8 of this Plan,
 - (c) recognises and is consistent with limits to the availability of water as provided for in Part 9, Division 1 of this Plan,
 - (d) establishes rules according to which available water determinations are to be made as provided for in Part 9 Division 2 of this Plan,
 - (e) establishes rules according to which access licences are managed as provided for in Parts 9 and 10 of this Plan, and
 - (f) establishes rules with respect to the priorities according to which access licences are to be adjusted as a consequence of any reduction in the availability of water as provided for in Part 9 of this Plan.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

Part 7 Requirements for water for extraction under access licences

25 Estimate of water requirements

- (1) This Part is made in accordance with section 20 (1) (c) of the Act.
- (2) At the commencement of this Plan, the requirements identified for water for extraction under access licences within these groundwater sources are estimated to be as follows:
 - (a) 0 ML/yr in the Shepparton, and
 - (b) 522,233 ML/yr in the Calivil and Renmark,
- (3) Subclause (2) includes local water utility access licences of 2,210 ML/yr in these groundwater sources, made up of:
 - (a) 0 ML/yr in the Shepparton, and
 - (b) 2,210 ML/yr in the Calivil and Renmark, being for Carrathool, Coleambally and Darlington Point.

Note. Subclauses (2) and (3) represent the total volumes specified on access licences in these groundwater sources. These are not a commitment to supply that water.

- (4) Pursuant to section 42 (2) of the Act, and at the commencement of year six of this plan the Minister should reduce the total share components of aquifer access licences specified in subclause (2) in the Calivil and Renmark to 125% of the extraction limit determined in clause 27, according to the following;

$$\text{Amended access licence share component} = \text{access licence share component prior to amendment} \times \left[\frac{(1.25 (\text{recharge} - \text{EHW})) - \text{LWU}}{\text{Total access licence share components prior to amendment} - \text{LWU}} \right]$$

- (5) Recharge in subclause (4) is the recharge established in clause 16(1), as amended by clause 16(2).
- (6) EHW in subclause (4) is the volume of recharge reserved as environmental health water in the Calivil and Renmark in clause 18(1), as amended by clause 18(2).
- (7) LWU in subclause (4) is the total of local water utility access licence share components in the Calivil and Renmark existing prior to any access licence amendments under subclause (4).
- (8) Subclause (4) does not apply to the share components of local water utility access licences.
- (9) At the time of commencement of Part 2 of Chapter 3 of the Act, aquifer access licences in the Calivil and Renmark with a history of extraction greater than 80% of the aquifer access licence share component, as amended by subclause (4), will have a second licence, called a supplementary water access licence.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

- (10) A supplementary water access licence referred to in subclause (9), will have an initial share component equivalent to the history of extraction, minus 80% of the aquifer access licence share component, as if amended by subclause (4).
- (11) The history of extraction referred to in subclauses (9) and (10) will be the greater of:
 - (a) the average extraction over the seven water years from 1995/96 to 2001/02, or the average of the years within that period from which extraction was first measured, not exceeding the access licence share component equivalent in 2001/02, or
 - (b) the average extraction over the five water years from 1997/98 to 2001/02, or the average of the years within that period from which extraction was first measured, not exceeding the access licence share component equivalent in 2001/02.
- (12) Share components of all supplementary water access licences will be reduced to 0 ML/yr at 30 June 2012.
- (13) This Plan recognises that the total requirements for water for extraction under access licences within these groundwater sources may change during the term of this Plan as a result of:
 - (a) the granting, surrender, non-renewal or cancellation of access licences,
 - (b) the variation of local water utility access licences under section 66 of the Act, or
 - (c) the volumetric quantification of the share components of existing access licences that are currently non-volumetric.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

Part 8 Rules for granting access licences

26 Rules for granting access licences

- (1) This Part is made in accordance with sections 20 (2) (b) and 63 of the Act, having regard to the limits to water availability in these groundwater sources and the need to protect groundwater dependent ecosystems and groundwater quality.
- (2) Access licences may be granted in these groundwater sources, subject to any embargo on the making of applications for access licences made under Chapter 3 Part 2 Division 7 of the Act.
- (3) The Minister should declare an embargo on the making of applications for access licences in these groundwater sources, other than access licences of the following kinds:
 - (a) local water utility access licences,

Note. Pursuant to sections 66 (3) and 66 (4) of the Act, the Minister may also vary a local water utility's licence at 5 yearly intervals, or on application of the local water utility where there is a rapid growth in population.
 - (b) access licences within the Shepparton that access water from less than 20 metres below the ground surface and, in the opinion of the Minister, are in areas where the water table has risen, and lowering of the water table is required, and only if the total access licence share components in the Shepparton remain below 10,000 ML/yr, or
 - (c) access licences resulting from an application of a type listed in section 82 (1) of the Act.
- (4) Notwithstanding subclause (3), if for any reason additional aquifer access licences are granted in the Calivil and Renmark, other than those specified in subclause (3), and after aquifer access licence share component have been amended in accordance with clause 25:
 - (a) any such additional share components will be granted to those licences subject to share component amendment under clause 25,
 - (b) such distribution of share components will be on an equal proportional basis, and
 - (c) any additional share component plus existing share component will not exceed the share component existing immediately prior to the amendment under clause 25.
- (5) In applying for a new access licence, the applicant must establish the purpose and circumstance relating to that access licence, and that the share and extraction component sought will be the minimum required to meet that purpose and circumstance.
- (6) Access licences granted under this Part cannot be used to extract water through a water supply work (bore) located in areas where the extraction authorised by the licence, plus the full extraction authorised by existing access licences nominating water supply works (bores) located in the area, and the exercise of basic landholder rights, are likely to cause an adverse local impact, as outlined in Part 10 Division 3 of this Plan.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

- (7) If an access licence share component applied for is significant, as determined by the Minister on the basis of particular aquifer characteristics:
 - (a) the application will not be granted until a water supply work (bore) approval has been granted and the work constructed, and
 - (b) once the water supply work (bore) is constructed, and the results of a pumping test or its equivalent are supplied by the applicant, in the required form and to the specification of the Minister, the access licence may be granted.
- (8) The share component of the access licence granted under subclause (7) will be the proportion of the share component sought that the water supply work (bore) is capable of extracting without causing any adverse local impact as outlined in Part 10 Division 3 of this Plan.
- (9) Subclauses (5), (7), and (8) do not apply to a new access licence arising from an application of a type listed in section 82 (1) of the Act.
- (10) In accordance with section 56 of the Act, all access licences in these groundwater sources shall have a share component expressed as a volume in megalitres per year.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

Part 9 Limits to the availability of water

Division 1 Long-term average extraction limits

27 Long-term average extraction limits

- (1) This Division is made in accordance with section 20 (2) (a) of the Act.
- (2) The long-term average extraction limit for each groundwater source each year of this Plan is the recharge established in clause 16, plus the total supplementary access provided for in clause 25, as varied by clause 29, minus the proportion of recharge reserved as environmental health water in clause 18, and is as follows:
 - (a) 10,000 ML/yr in the Shepparton, and
 - (b) 270,000 ML/yr in the Calivil and Renmark, plus the total supplementary access provided for in clause 25, as varied by clause 29.

28 Variation of the long-term extraction limit

- (1) Pursuant to section 42 (2) of the Act, the Minister may vary the long-term average extraction limit established under clause 27 (2) (b) after 30 June 2008 as a result of:
 - (a) any change to the average annual recharge arising from clauses 16 (2), and
 - (b) any change to the environmental health water arising from clause 18 (2).
- (2) If there is any change to the long-term average extraction limit arising from subclause (1) then:
 - (a) the extraction limit will not be greater than 390,000 ML/yr in the Calivil and Renmark, plus the total supplementary access provided for in clause 25, as varied by clause 29, and
 - (b) the long term extraction limit will not be less than 230,000 ML/yr in the Calivil and Renmark, plus the total supplementary access provided for in clause 25, as varied by clause 29.

Division 2 Available water determinations

29 Available water determinations

- (1) This Division is made in accordance with section 20 (2) (b) of the Act.
- (2) In making an available water determination under section 59 of the Act, the Minister should consider the following rules:
 - (a) water extraction in each groundwater source will be monitored each water accounting year to determine if any growth in volumes extracted is occurring above the extraction limit in clause 27, based on a comparison of the extraction limit against the average extraction within the groundwater source over that year and the preceding 2 years,

Note. A water accounting year is defined in clause 34 (3).

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

- (b) if water that, pursuant to an access licence, is committed as adaptive environmental water to be left in the aquifer for environmental purposes, then for the purpose of subclause (a), the extraction will be assumed to be 100% of the available water determination,
- (c) if water that, pursuant to an access licence, is committed as adaptive environmental water to be extracted for environmental purposes, then for the purpose of subclause (a), the extraction will be that measured through the approved water supply work (bore),
- (d) total water available under aquifer access licences will be equal to the recharge established in clause 16, minus the proportion of recharge reserved for the environment in clause 18, minus the total water available to local water utility access licences,
- (e) if the 3 year average of extraction in a groundwater source exceeds the long-term average extraction limit established in clause 27 by 5% or greater, the available water determination for the following water accounting year for aquifer access licences in that groundwater source should be reduced by an amount that is assessed necessary by the Minister to return subsequent total water extraction to the long-term average extraction limit,
- (f) if the 3 year average of extraction in a groundwater source is less than 95% of the long-term average extraction limit established in clause 27, then the available water determination for aquifer access licences in that groundwater source shall be increased to such an extent as to allow extraction to increase to that extraction limit,
- (g) notwithstanding subclause (f), the available water determination shall not exceed 100% of total aquifer access licence share components,
- (h) the available water determination calculated in accordance with subclauses (e) and (f) will apply to all access licences in the groundwater source excepting local water utility and supplementary water access licences, and will be the same percentage of aquifer access licence share component for all access licences to which it applies,
- (i) separate available water determinations will be made in each groundwater source each water year for local water utility access licences, and subject to section 60 of the Act, these shall be 100% of these access licence share components,
- (j) an available water determination of 90% of supplementary water access licence share components will be made in Year 1 of this Plan,
- (k) the available water determination for supplementary access licences will be reduced by a further 10% of the supplementary water access licence share component each year of this Plan, and
- (l) there will be no water made available under supplementary water access licences in Year 10 of this Plan.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

Part 10 Rules for managing access licences

Division 1 General

30 Rules for managing access licences

This Part is made in accordance with sections 20 (2) (b), 21 (a) and 21 (c) of the Act, having regard to:

- (a) the environmental water rules established in Part 4 of this Plan,
- (b) requirements for water to satisfy basic landholder rights identified in Part 5 of this Plan, and
- (c) requirements for water for extraction under access licences in Part 7 of this Plan.

Division 2 Water allocation account management

31 Water allocation account management

This Division is made in accordance with sections 20 (2) (b) and 21 (c) of the Act.

32 Water allocation accounts

In accordance with section 85 of the Act, a water allocation account shall be established for each access licence in these groundwater sources.

Note. Water allocations may be assigned to, or from, these accounts by a water allocation assignment made under section 71G of the Act, where these are allowed under rules specified in Part 11 of this Plan.

33 Accrual of water allocations

Water allocations will be accrued into these water allocation accounts each water accounting year in accordance with the Minister's available water determinations as specified in clause 29.

34 Annual accounting for water extraction

- (1) Water taken from these groundwater sources will be accounted for at least annually.
- (2) Water taken by an approved water supply work (bore) nominated by an access licence is taken to be extracted and will be periodically debited against the access licence water allocation account.
- (3) A water accounting year shall be the 12 month period commencing 1 July.
- (4) In any one water accounting year, subject to local impact management restrictions arising from Part 10, Division 3 of this Plan, water taken from any of these groundwater sources under an aquifer access licence may not exceed a volume consisting of:
 - (a) 100% of the access licence share component,
 - (b) plus any water allocations assigned from another licence under section 71G of the Act in that year, and

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

- (c) minus any water allocations assigned to another licence under section 71G of the Act in that year.
- (5) Total water in any aquifer access licence account at any time may not exceed a volume consisting of:
 - (a) 150% of the aquifer access licence share component,
 - (b) plus any water allocations assigned from another licence under section 71G of the Act in that year, and
 - (c) minus any water allocations assigned to another licence under section 71G of the Act in that year.
- (6) A maximum of 50% of any aquifer access licence share component may be carried forward in a water allocation account from one water accounting year to the next.
- (7) Subclauses (4), (5), and (6) do not apply to local water utility or supplementary water access licences.
- (8) For local water utility access licences in any one water accounting year, subject to local impact management restrictions arising from Part 10, Division 3 of this Plan, water taken from any of these groundwater sources, and total water in any water allocation account at any time, may not exceed a volume consisting of:
 - (a) 100% of the access licence share component,
 - (b) plus any water allocations assigned from another licence under section 71G of the Act in that year,
 - (c) minus any water allocations assigned to another licence under section 71G of the Act in that year.
- (9) Allocations in a local water utility water allocation account cannot be carried over from one water accounting year to the next.
- (10) Pursuant to section 42(2) of the Act, the limits specified in subclauses (4) (a), (5) (a) and (6) may be varied by the Minister after July 1 2008.
- (11) If any variation is made in accordance with subclause (10), the limit in subclause (4) (a) will not exceed 150%, the limit in subclause (5) (a) will not exceed 200%, and the limit in subclause (6) will not exceed 100%.
- (12) Subclauses (4) to (11) do not apply to supplementary water access licences.
- (13) For supplementary water access licences, in any one water accounting year, subject to local impact management restrictions arising from Part 10, Division 3 of this Plan, water taken from any of these groundwater sources may not exceed the allocation arising from supplementary water access licence available water determination.
- (14) Allocations in a supplementary water access licence water allocation account cannot be carried over from one water accounting year to the next.
- (15) Where both an aquifer access licence, and a supplementary water access licence are held, water allocations will be debited from an aquifer access licence account to the limit specified in subclause (4), before water is debited from a supplementary water access licence account.
- (16) A water allocation account shall remain at or above zero at all times.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

Division 3 Management of local impacts

35 Management of local impacts

This Division is made in accordance with section 21 (a) of the Act.

36 Water level management

- (1) The Minister may declare that, in order to protect water levels within these groundwater sources, local access rules are to apply in a defined area known as a local impact area.
- (2) Local extraction restrictions will first apply once contoured drawdown or recovery depths exceed trigger levels specified by the Minister for 2 or more successive years, or unacceptable levels of drawdown or recovery specified by the Minister are observed in a single year.
- (3) Local extraction restrictions will apply to such an extent and for such time as to reduce the rate of pressure decline, or in response to unacceptable seasonal drawdown or recovery, to ensure pressure recovery occurs to acceptable levels.
- (4) Local extraction restrictions may increase to prevent unacceptable seasonal drawdown and unacceptable recovery levels, as specified by the Minister.
- (5) In the Shepparton, if depth to watertable outside areas where the water table has risen unnaturally, and its lowering is required, is identified as having a declining trend to the extent that local ecosystems could be adversely impacted upon by year 10 of this Plan, then a review of extraction by access licence holders in the affected area will be undertaken.
- (6) If the review in subclause (5) reveals it is required, extraction will be restricted in the local impact area to such an extent and for such a time as required to stabilise and if necessary restore the watertable to an appropriate level, as determined by the Minister.
- (7) This clause does not apply to local water utility access licences.

Note. This clause recognises that in some locations, at certain periods of high groundwater demand, critical water level declines may occur, and that additional extraction limitations may be required.

Groundwater pressures are referenced to the top of the relevant aquifer. A local impact area is to be identified from a map of the piezometric surface change, showing seasonal, annual or longer patterns of drawdown or recovery in an aquifer.

37 Water quality management

- (1) The beneficial uses of these groundwater sources, based on the beneficial use classes identified in the Australian and New Zealand Environment and Conservation Council *Water Quality Guidelines 2001*, and the National Health and Medical Research Council *Raw Water for Drinking Purposes Guidelines 1996*, are:
 - (a) ecosystem protection and agricultural water for the Shepparton, and
 - (b) raw water for drinking, ecosystem protection and agricultural water for the Calivil and Renmark,

Note. It is not recommended that the groundwater from these water sources be consumed without prior treatment. Land use activities may have polluted the groundwater in some areas.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

- (2) Water quality decline will be deemed unacceptable if extraction is likely to cause water quality to decline to a lower beneficial use class.
- (3) The Minister may declare that, in order to protect water quality within these groundwater sources, local access rules are to apply in a defined area known as a local impact area.
- (4) If unacceptable water quality declines are occurring, extraction from all water supply works (bores) within a local impact area declared under subclause (3) that are nominated by an access licence will be restricted to such an extent and for such a time as is required to halt that decline, or restore the beneficial uses of these groundwater sources.

38 Protection of groundwater dependent ecosystems

- (1) High priority groundwater dependent ecosystems are listed in Schedule 4.
- (2) Pursuant to section 42(2) of the Act, the Minister may identify further high priority groundwater dependent ecosystems and include them in Schedule 4 after 30 June 2008, based on further studies of groundwater ecosystem dependency undertaken by the Minister.
- (3) The Minister should consult with the Minister for the Environment before adding further high priority groundwater dependent ecosystems to Schedule 4.
- (4) Extraction of groundwater from a new or replacement water supply work (bore) is excluded within 200 metres of designated high priority groundwater dependent ecosystems, or any creek or river, for those exercising basic landholder rights, and 1,000 metres for extraction authorised by all other access licences, unless the water supply work (bore):
 - (a) only draws water from an aquifer at depths as approved by the Minister, and
 - (b) has an impermeable seal constructed within the annulus of the bore to isolate aquifers preventing water ingress from the restricted aquifer, as specified by the Minister.
- (5) Subclause (4) will not apply to extraction from an existing water supply work (bore) until such time as the work is replaced.

39 Protection of aquifer integrity

- (1) The Minister may declare that, in order to protect the integrity of the aquifers within these groundwater sources, local access restrictions are to apply in a defined area known as a local impact area.
- (2) The Minister may, on presentation of evidence of land subsidence or aquifer compaction, restrict extraction from all water supply works (bores) within a local impact area declared under subclause (1), that are nominated by an access licence, to such an extent and for such time as to stabilise that subsidence or compaction.

Note. This clause recognises that damage of aquifers through excessive water storage loss is irreversible, and destroys the resource for future water users, including the environment.

40 Extraction restrictions

The Minister may, in the event of local impact restrictions arising from this Division, impose by Order a reduction in annual, quarterly, monthly, weekly or daily extraction rates from water supply works (bores) in the affected area.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

41 Group registration

This Plan allows for the formation of a group of access licences with respect to the sharing of local impact restrictions arising from this Division, subject to the following rules:

- (a) the group register will be maintained by the Minister,
- (b) holders of access licences must make a request to the Minister to form a group,
- (c) total extraction by all access licences within a group will be assessed as a whole against their combined restricted extraction and must not exceed that amount,
- (d) no access licence holder within the group may extract more than is permitted by Division 2 of this Part in any one water accounting year as a result of participation in a group,
- (e) an access licence holder may apply to be removed by the Minister from the group and the extraction by the group will be reduced by the extraction restriction of that access licence,
- (f) an access licence holder may apply to be added by the Minister to the group and the combined restricted extraction of the group will be increased by the extraction restriction of that access licence, and
- (g) the Minister reserves the right to remove a licence holder from a group where that individual causes the group extraction restriction to be exceeded, or to dissolve a group where its members exceed their combined extraction restriction.

42 Infrastructure failure

- (1) The operational rules relating to local impact management may rely on water levels at specified monitoring bores.
- (2) In the event of a monitoring bore failure the Minister may:
 - (a) continue with the current access rules until the monitoring bore is reinstated,
 - (b) adjust the current access rules based on climatic conditions and any other monitoring bore information, until the monitoring bore is reinstated, or
 - (c) rely on another monitoring bore in the area to provide information.

Part 11 Access licence dealing rules

43 Access licence dealing rules

- (1) This Part is made in accordance with section 20 (1) (d) of the Act and with the Minister's access licence dealing principles gazetted on 27 December 2002 under section 71L of the Act.

Note. The Minister's access licence dealing principles are contained in Appendix 4.

- (2) Applications for access licence dealings may be granted subject to the Minister's access licence dealing principles gazetted from time to time under section 71L of the Act and the rules in this Part.

Note. There are a number of mechanisms within the Act, called access licence dealings, to change either the ownership of all or part of an access licence, or the location within a water source at which all or part of the share and extraction components of access licences can be exercised. These dealings are governed by the principles in section 5 of the Act, Minister's access licence dealing principles, and the rules in this Part.

Note. Where there is an inconsistency between access licence dealing rules established in this Plan and Minister's access licence dealing principles gazetted subsequent to the commencement of this Plan, section 71L of the Act provides for the access licence dealing rules in this Plan to prevail.

44 Rules relating to constraints within a groundwater source

- (1) This clause applies to any relevant dealings under sections 71D, 71F, and 71J of the Act, and section 71G of the Act with respect to water allocation assignments within a groundwater source.
- (2) Dealings are prohibited under this clause if:
 - (a) any of the access licences or water allocations involved are not within these groundwater sources,
 - (b) the dealing would result in the total extraction under access licences through nominated works in an area, plus basic landholder rights extraction, causing any adverse local impact in accordance with Part 10 Division 3 of this Plan, or
 - (c) the dealing involves a supplementary water access licence, or any water allocation credited to a supplementary water access licence water allocation account.

45 Rules for change of water source

- (1) This clause relates to dealings under section 71E of the Act.

Note. Section 71E dealings are the mechanism by which access licences can move from one water source to another. Once the change in water source has been effected, if permitted, the new licence will have to nominate specified works (by a dealing under section 71J of the Act) in the receiving water source before extraction can commence.
- (2) Dealings under this section 71E of the Act that change the water source to which an access licence applies are prohibited in these groundwater sources, except as provided for in this clause,

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

- (3) An access licence with a share component specifying one of these groundwater sources may be cancelled and a new licence issued specifying another of these groundwater sources only if the total share components of all access licences in the groundwater source in which the access licence is issued remains below the extraction limit for that groundwater source established in clause 27.
- (4) The volume of the share component on a licence issued under a dealing provided for in subclause (3) is to be the volume of the cancelled access licence share component.

46 Rules for conversion of access licence category

- (1) This clause relates to dealings under section 71B of the Act.
- (2) Dealings that result in conversion of an access licence of one category to an access licence of another category are prohibited in these groundwater sources.

47 Rules for interstate access licence transfer

- (1) This clause relates to dealings under section 71H of the Act.
- (2) Dealings that result in an interstate access licence transfer into or out of these groundwater sources are prohibited.

48 Rules for water allocation assignments between water sources

- (1) This clause relates to dealings under section 71G of the Act for assignment of water allocations between water sources.
- (2) Dealings that assign water allocations between access licences in other water sources and access licences in these groundwater sources are prohibited.
- (3) Dealings that assign water allocations between an access licence in one of these groundwater sources and an access licence in another of these groundwater sources may be permitted only if:
 - (a) the total water allocations credited to all access licences in the groundwater source to which the water allocation is assigned remain below the extraction limit of that groundwater source established in clause 27, and
 - (b) the assignment would not result in the total extraction of credited water allocations through nominated works in an area, plus basic landholder rights extraction, causing any adverse local impact in accordance with Part 10 Division 3 of this Plan,
 - (c) the assignment is not from or to a supplementary water access licence.

Note. Each water allocation assignment must be applied for. access licence holders may enter into private contracts to assign water allocations for a number of years. Such contracts are not guaranteed by the Government, and approval must be sought annually. Approval will be subject to the rules in this Plan, including local impact assessment.

49 Rules for interstate assignment of water allocations

- (1) This clause relates to dealings under section 71I of the Act.
- (2) Dealings that result in an interstate assignment of water allocations to or from these groundwater sources are prohibited.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

Part 12 Mandatory conditions

50 Mandatory conditions on access licences

This Part is made in accordance with sections 17 (c) and 20 (2) (e) of the Act.

51 Access licence conditions

- (1) All access licences shall have mandatory conditions to give effect to the provisions of this Plan in relation to the following:
 - (a) the specification of the share component of the access licence,
 - (b) the specification of the extraction component of the access licence,
 - (c) the requirement that all taking of water under the access licence will be subject to the available water determinations,
 - (d) the requirement that all taking of water under the access licence will be subject to any local impact management restrictions established in this Plan,
 - (e) the requirement that all taking of water under the access licence will be subject to the account management rules established in this Plan,
 - (f) the requirement that water may only be taken under the access licence by the water supply work (bore) nominated by the access licence,
 - (g) the taking of water in accordance with the access licence may only occur if the resulting debit from the access licence water allocation account will not exceed the volume of water allocation remaining in the account, and
 - (h) any other conditions required to implement the provisions of this Plan.
- (2) All aquifer access licences shall have mandatory conditions to give effect to clause 25, in relation to the amendment of access licence share components.
- (3) All supplementary water access licences shall have mandatory conditions to give effect to clause 25, in relation to the amendment of access licence share components.
- (4) All local water utility access licences shall have mandatory conditions that only allow the taking of water for the exercise of a water supply function of the local water utility or for other such purpose provided for under the Act.

52 Mandatory conditions on water supply work (bore) approvals

All approvals for a water supply work (bore) to which this Plan applies shall have mandatory conditions in relation to the following:

- (a) the water supply work (bore) is only to be constructed by a driller licensed under section 349 of the Act,
- (b) the water supply work (bore) must comply with drilling standards as specified by the Minister,
- (c) construction of a water supply work (bore) must prevent contamination between aquifers through proper bore construction,
- (d) a water supply work (bore) approval holder must ensure decommissioning procedures comply with applicable standards as specified by the Minister,

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

- (e) a new or replacement water supply work (bore) to access water for basic rights will be required, as a condition of approval, to be constructed to sufficient depth to maintain access to the water source for the life of the work,
- (f) the water supply work (bore) approval holder is, within 2 months of completion of the work, or after the issue of the approval if the water supply work (bore) is existing, to provide the Minister with:
 - (i) details of the work on the prescribed form,
 - (ii) a plan showing accurately the location of the work in relation to portion and property boundaries, and
 - (iii) details of any water analysis and/or pumping tests required by the Minister,
- (g) if during the construction of the water supply work (bore), saline or contaminated water is encountered above the producing aquifer, such water is to be sealed off by:
 - (i) inserting the appropriate length(s) of casing to a depth sufficient to exclude the saline or contaminated water from the work, and
 - (ii) placing an impermeable seal between the casing(s) and the walls of the bore hole from the bottom of the casing to ground level, as specified by the Minister,
- (h) if a water supply work (bore) is abandoned, the water supply work (bore) approval holder is to:
 - (i) notify the Minister that the work has been abandoned, and
 - (ii) seal off the aquifer by backfilling the work to ground level after withdrawing the casing (lining), as specified by the Minister,
- (i) an extraction measurement device shall be installed and maintained on each water supply work (bore) used for extraction of water under an access licence, and such device shall be of a type, and shall be maintained in a manner, which is acceptable to the Minister,
- (j) a water supply work (bore) must comply with the relevant local impact management rules in Part 10 of this Plan,
- (k) notwithstanding the available water determination, it is the responsibility of the water supply work (bore) approval holder to ascertain from the Minister whether or not there are in place any local impact restrictions before commencing to take water from these groundwater sources,
- (l) extraction under an access licence through the approved water supply work (bore) is only authorised with respect to the access licences specified on the water supply work (bore) approval,
- (m) a water supply work (bore) approval holder must supply to the Minister on request, and to the required standards, a report pertaining to the quality of the water obtained from the water supply work (bore), and
- (n) any other conditions required to implement the provisions of this Plan.

Note. It is recommended that the Minister also apply conditions to water use approvals requiring the supply of information on an annual basis on types and areas of irrigated crops.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

Part 13 Monitoring and reporting

53 Monitoring

The monitoring of the performance indicators specified in clause 13 shall be undertaken by the Minister.

Note. Review and Audit of this Plan

In accordance with section 43 (2) of the Act, this Plan is to be reviewed, within the fifth year of its term, for the purpose of ascertaining whether its provisions remain adequate and appropriate for ensuring the effective implementation of the water management principles of the Act.

In accordance with section 44 of the Act, this Plan will be audited at intervals of no more than five years, for the purpose of ascertaining whether its provisions are being given effect to. This audit is to be carried out by an audit panel appointed by the Minister in consultation with a water management committee where one exists.

Note. The Implementation Program

In accordance with section 51 of the Act, the Minister may establish an Implementation Program that sets out the means by which the provisions of this Plan are to be achieved.

It is proposed that the Minister establish an Implementation Program for this Plan. Pursuant to section 51 (5) of the Act, the Implementation Program is to be reviewed annually by the Minister to determine whether it is effective in implementing this Plan.

The results of the review of the Implementation Program will be included in the annual report for the Department of Land and Water Conservation.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

Part 14 Amendment of this Plan

54 Amendment of this Plan

- (1) This Part is made in accordance with section 42 (2) of the Act.
- (2) This Plan can be amended in accordance with the following clauses of this Plan:
 - (a) clause 16 in respect to average annual recharge,
 - (b) clause 18 in respect to environmental health water,
 - (c) clause 25 in respect to share components of access licences,
 - (d) clause 28 in respect to long-term average extraction limits,
 - (e) clause 34 in respect to the water allocation account management rules, or
 - (f) clause 38 in respect to high priority groundwater dependent ecosystems.

Schedule 1 Dictionary

The following definitions apply to this Plan in addition to the definitions set out in the Act:

abandoned (work) refers to a water supply work (bore) that is no longer being used.

aquifer compaction refers to the reduction in the porosity (pore spaces) of an aquifer, and may result from over pumping the aquifer.

available head is the difference between the depth to the top of the target aquifer, and an initial piezometric level.

available water in relation to a water management area or water source, is the water that is available in that area or water source in accordance with an available water determination that is in force in respect of that area or water source.

available water determination is a written Order by the Minister as to the availability of water for the various categories of access licence in relation to a specified water management area or water source.

Note. An available water determination gives rise to a water allocation that is credited to a water allocation account for each licensed holder.

bedrock is the solid rock underlying unconsolidated sediments such as the soil and weathered rock. Bedrock is a general term for solid rock that lies beneath soil, loose sediments, or other unconsolidated material.

buffer zone is an area surrounding a groundwater dependent ecosystem or other feature (such as an area of low quality) within which extraction, or the impact of extraction, is restricted.

contoured drawdown or recovery depths refers to spatial water levels data indicating drawdown or lack of recovery.

drawdown refers to a lowering of the the level to which water will rise in cased bores. Natural drawdown may occur due to seasonal climatic changes. Groundwater pumping may also result in seasonal and long-term drawdown.

extraction limit is the amount of the long-term average annual recharge and storage that can be extracted, on average, each water accounting year.

groundwater is water that occurs beneath the ground surface in the saturated zone.

groundwater dependent ecosystems are ecosystems which have their species composition and natural ecological processes wholly or partially determined by groundwater.

monitoring bore refers to a bore constructed for the purpose of measuring water levels and/or taking samples for water quality analysis.

piezometric surface (potentiometric surface) is a surface that represents the level to which water will rise in cased bores. (The watertable is the potentiometric surface of an unconfined aquifer).

recharge is the addition of water, usually by infiltration, to an aquifer.

recovery depths see contoured drawdown

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

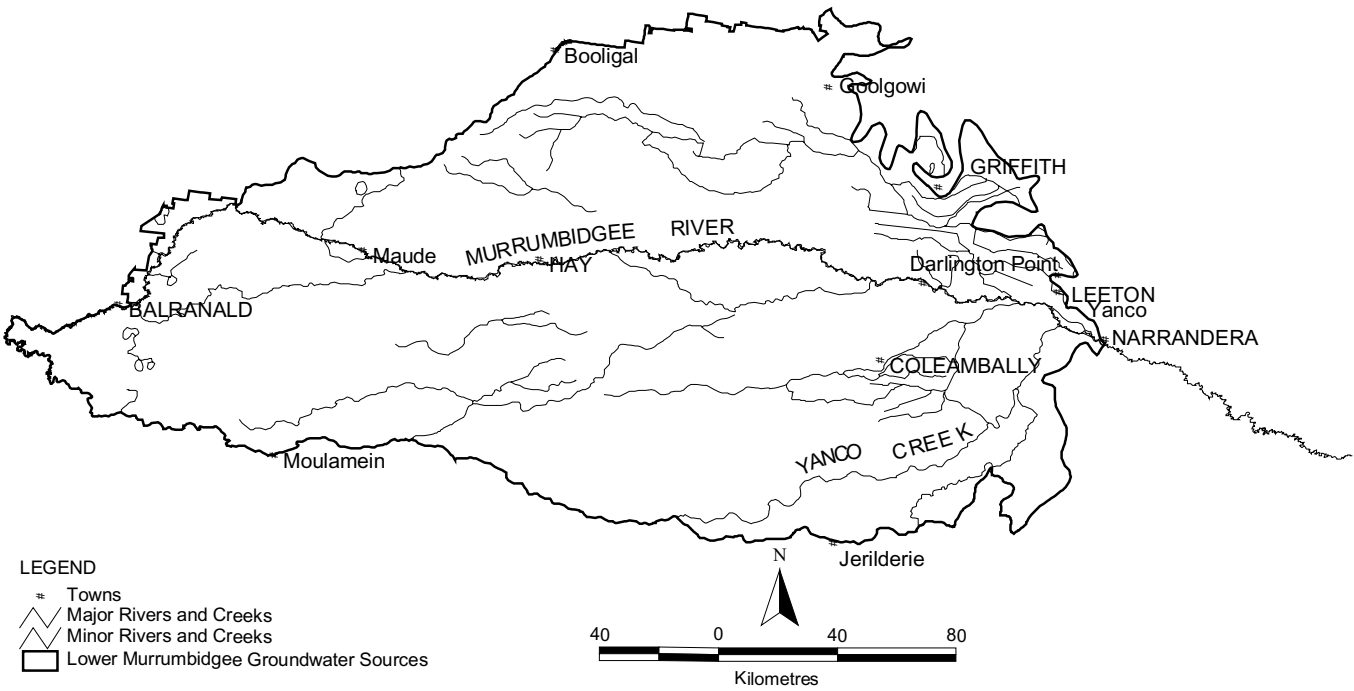
share component is the share component of an access licence.

unconsolidated alluvial aquifers are aquifers formed by sediment deposited by the action of flowing water in particular along river beds and floodplains, but not including lakes and seas.

watertable is the upper surface of an unconfined aquifer.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

Schedule 2 Lower Murrumbidgee Groundwater Sources



Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

Schedule 3 Contribution to targets in the State Water Management Outcomes Plan

Level of assessed contribution:

FULL – contributes to target in full

HIGH - while not fully contributing to target, there is a good level of contribution

PARTIAL - goes some way to contributing to the target

LOW - only small degree of contribution to target

| Relevant target | Level of contribution | Comments |
|--|-----------------------|--|
| Target 1e The long term average annual extractions for groundwater limited (or being phased down) to an ecologically sustainable level (the Sustainable Yield) as determined by detailed assessment of each groundwater source and consultation with the relevant management committee. In the absence of such an assessment, the following to apply: 100 percent of average annual recharge for a groundwater source where there is no significant ecosystem dependency; 70 percent of average annual recharge where there is significant ecosystem dependency | FULL | <ul style="list-style-type: none"> This Plan establishes as extraction limit of 15% of recharge in the Shepparton groundwater source, and phases extraction down to 80% of recharge in the Calivil and Renmark groundwater source. |
| Target 1f Rules for adjustments to future available water determinations in the event that the extraction limits are exceeded, clearly prescribed in consultation with the relevant management committee, and acted upon | FULL | <ul style="list-style-type: none"> Rules set out in Part 9. |
| Target 2 All management plans incorporating mechanisms to protect and restore aquatic habitats, and the diversity and abundance of native animals and plants, with particular reference to threatened species, populations and communities and key threatening processes | HIGH | <ul style="list-style-type: none"> This Plan also prohibits new or replacement extraction bores within 1000 metres (or 200 metres for basic landholder rights bores) of any designated high priority dependent groundwater ecosystems (Schedule 4 which nominates prior streams) or any creek or river. Part 10 sets out local impact management rules in response to local groundwater pressure or level declines, and groundwater quality impacts. |

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

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|--|------|---|
| <p>Target 5 Access rights for water access licensees clearly and legally specified in terms of share and extraction components</p> | HIGH | <ul style="list-style-type: none"> • This Plan establishes transparent extraction limits and allocation/account rules. • This Plan embargoes new licence applications. • Licences are tradeable. • The local extraction rules means that future rights will not be exclusive but affected by the future location of works. Licences with existing bores will have priority over licences requiring new bores. |
| <p>Target 6a For groundwater sources, the total volume of water specified on access licences reduced over the term of a water sharing plan to no more than 125 percent of the Sustainable Yield</p> | FULL | <ul style="list-style-type: none"> • The total licence volumes for the Calivil/Renmark groundwater source is greater than 125% of the extraction limit. • However, this Plan proposes to reduce the total licence volumes to 125% by year 6 of this Plan. |
| <p>Target 10 Degree of connectivity between aquifers and rivers assessed, and zones of high connectivity mapped to enable baseflows to the river to be maintained or improved</p> | HIGH | <ul style="list-style-type: none"> • There is little information in this Plan on connectivity, other than that the prior streams in the Shepparton groundwater source but not on the Calivil/Renmark groundwater source are connected. • These should be protected by reserving 85% of recharge to the Shepparton groundwater source. • This Plan also prohibits new or replacement extraction bores within 1000 metres (or 200 metres for basic landholder rights bores) of any creek or river. |
| <p>Target 11 Groundwater dependent ecosystems identified and mapped for all priority aquifers, and the ecological water requirements assessed to enable local groundwater extraction rates and/or Sustainable Yields to be reviewed</p> | HIGH | <ul style="list-style-type: none"> • The ecosystems directly dependent on the Shepparton groundwater source, but not on the Calivil/Renmark groundwater source, are listed in Schedule 4. • They should be protected by reserving 85% of recharge and |

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

| | | |
|---|---------|---|
| | | <p>to the Shepparton aquifer.</p> <ul style="list-style-type: none"> • This Plan also prohibits new or replacement extraction bores within 1000 metres (or 200 metres for basic landholder rights bores) of any designated high priority dependent groundwater ecosystems (Schedule 4 which nominates only prior streams) or any creek or river. • Part 10 sets out local impact management rules in response to local groundwater pressure or level declines, and groundwater quality impacts. |
| Target 12 Measures in place in all water sources subject to a gazetted water sharing plan to protect domestic and stock rights from the impact of other water access and use | HIGH | <ul style="list-style-type: none"> • This Plan has identified the volumes necessary to meet basic domestic and stock requirements. • It also protects domestic and stock bores from interference from higher yielding bores. |
| Target 13 The knowledge sharing, training and resources necessary to ensure that Aboriginal people have the capacity to be effectively involved in water management identified and addressed | PARTIAL | <ul style="list-style-type: none"> • 1 Aboriginal community representative has been involved in development of this Plan. |
| Target 14 Water sources, ecosystems and sites of cultural or traditional importance to Aboriginal people identified, plans of management prepared, and measures put in place to protect and improve them | PARTIAL | <ul style="list-style-type: none"> • No Aboriginal cultural or traditional sites or requirements have been identified. • The environmental health provisions should protect dependent ecosystems of importance to Aboriginal people. |
| Target 16a All share components of access licences tradeable | FULL | <ul style="list-style-type: none"> • Licence volumes and water allocations are tradeable. • However this Plan proposes the necessary reduction in licence volumes to occur by year 6 therefore the market may be distorted by this higher level of entitlement in the meantime. |

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

| | | |
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| | | |
| Target 16e Any unassigned access rights identified and clear mechanisms established for their future assignment | FULL | <ul style="list-style-type: none"> Rules in place to grant licences in the Shepparton groundwater source. |
| Target 16f Zones established where necessary for environmental protection and limits/constraints on water dealings in them made explicit | HIGH | <ul style="list-style-type: none"> This Plan does not establish but restricts transfers within these groundwater sources such that there are no unacceptable impacts on existing users or the environment. |
| Target 35 All management plans incorporating water quality objectives that have considered Government approved Interim Environmental Objectives, the current Australian and New Zealand Environment and Conservation Council Guidelines and the recommendations of relevant Healthy Rivers Commission Inquiries | HIGH | <ul style="list-style-type: none"> This Plan includes a water quality objective, and establishes rules to protect water quality. This Plan is explicit about the beneficial uses and criteria. |
| Target 38 Aquifer water quality vulnerability zones mapped and extraction limits reviewed to reduce the risk of lateral intrusion of poor quality water | PARTIAL | <ul style="list-style-type: none"> No vulnerability mapping of area is referenced in this Plan. This Plan includes rules for managing the impacts of extraction on water quality. |

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

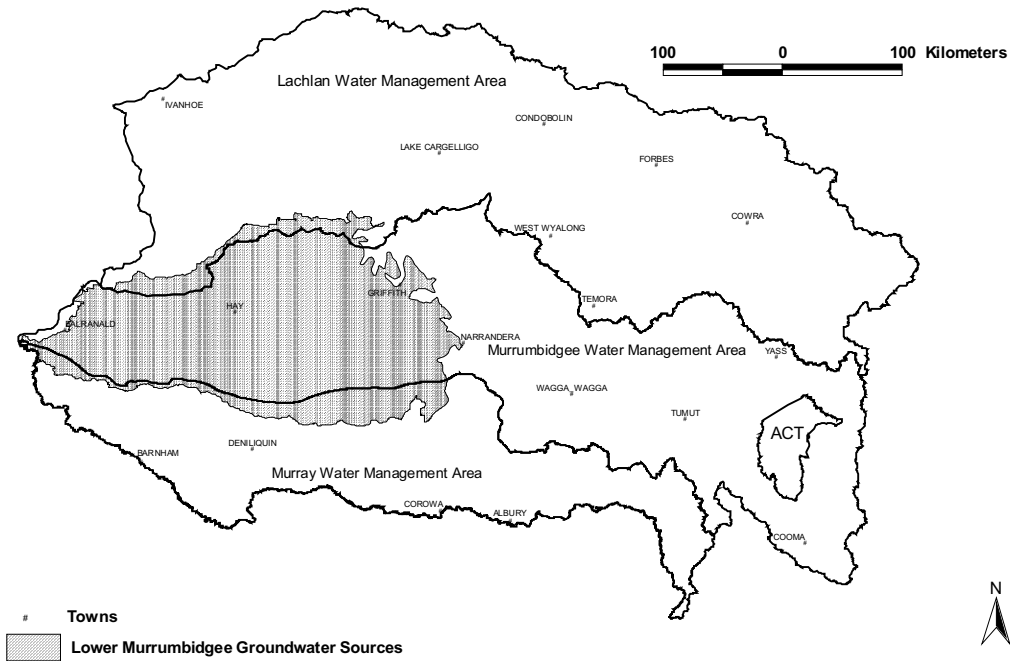
Schedule 4 High priority groundwater dependent ecosystems

High priority groundwater dependent ecosystems in the Lower Murrumbidgee Groundwater Sources are, 'Prior streams' as shown on Sheet 1 of 3 drawings accompanying in the Murrumbidgee Local Environment Plan 1994.

Note. The high priority groundwater dependant ecosystems listed in this Schedule may change during the period of this Plan. The offices of the Department of Land and Water Conservation, shown in Appendix 2, should be contacted for a current list.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

Appendix 1 Murrumbidgee, Lachlan and Murray Water Management Areas



Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

Appendix 2 Location of maps

The maps in relation to this Plan may be inspected at:

Regional Office
Department of Land and Water Conservation
43 Johnston Street
WAGGA WAGGA NSW 2650

District Office
Department of Land and Water Conservation
Chelmsford Place
LEETON NSW 2705

District Office
Department of Land and Water Conservation
8-20 Edwardes Street
DENILQUIN NSW 2710

District Office
Department of Land and Water Conservation
126 Lachlan Street
HAY NSW 2711

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

Appendix 3 Performance indicators

| Performance indicators for the Lower Murrumbidgee Groundwater Sources Water Sharing Plan | | | |
|---|---------------------------|--|--|
| Performance indicator | Related objectives | As measured by | Commentary |
| (a) Change in groundwater extraction relative to the extraction limits. | 11(a), 11(b) and 11(c) | <ul style="list-style-type: none"> Average annual extraction volume for the groundwater source as a percentage of the extraction limit. | <ul style="list-style-type: none"> Plan provisions will set the mechanism to remain within the extraction limit over the long-term. |
| (b) Change in climate adjusted groundwater levels. | 11(a), 11(b) and 11(e) | <ul style="list-style-type: none"> Average annual frequency and duration (in days) of water level drawdown below pre-plan baseline. Density of extraction in critical areas. | <ul style="list-style-type: none"> Note that water levels will fluctuate with climate and resultant variable recharge. Some level declines will be expected during dry times, just as level rises are expected during wetter periods. |
| (c) Change in water levels adjacent to identified groundwater dependent ecosystems. | 11(a), and 11(c) | <ul style="list-style-type: none"> Identification of groundwater dependent ecosystems (GDEs). Assessment of the relationship between selected GDEs and local groundwater levels in terms of the water requirements of these GDEs. Assessment of the adequacy of buffer zones or local impact restrictions by comparison of water levels near or in GDEs compared to plan baseline. Frequency and duration of water level drawdown below critical levels. | <ul style="list-style-type: none"> Groundwater dependent ecosystems should be identified in the water sharing plans. |

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

| Performance indicators for the Lower Murrumbidgee Groundwater Sources Water Sharing Plan | | | |
|---|--------------------------------|--|--|
| Performance indicator | Related objectives | As measured by | Commentary |
| (d) Change in groundwater quality relative to beneficial use. | 11(a), 11(c), 11(d), and 11(f) | <ul style="list-style-type: none"> Trends in selected water quality parameters at selected monitoring bores that are likely to be affected by groundwater extraction. | <ul style="list-style-type: none"> Note that many water quality issues are a function of contamination by land based activities, rather than extraction. |
| (e) Change in economic benefits derived from groundwater extraction and use. | 11(b), 11(c), 11(e), and 11(f) | <ul style="list-style-type: none"> Change in regional gross margins Change in unit price of water transferred. | <ul style="list-style-type: none"> Note that there are many factors affecting economic status of a region, for example commodity prices, other sources of water (i.e. surface water) etc. Assessment undertaken as part of plan performance monitoring will make assumptions to attempt to identify the impact of the plan provisions. |
| (f) Change in structural integrity of the aquifer. | 11(a), 11(b) and 11(e) | <ul style="list-style-type: none"> Annual number of reports of new land subsidence and reduced bore yields. Survey if necessary. | |
| (g) Extent to which domestic and stock rights have been met. | 11(a), 11(b) and 11(e) | <ul style="list-style-type: none"> Monitor increase in applications for water supply work (bore) approvals. Number of reports of interference between high yield extraction and basic landholder rights, or number of domestic and stock bores deepened. Assess frequency and duration of water level drawdown below critical thresholds. | <ul style="list-style-type: none"> Basic landholder rights usage figures in water sharing plans are estimated (not actual use). Increases in licences may be due to past unlicensed works. |

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

| Performance indicators for the Lower Murrumbidgee Groundwater Sources Water Sharing Plan | | | |
|--|--------------------------------|--|--|
| Performance indicator | Related objectives | As measured by | Commentary |
| (h) Extent to which local water utility requirements have been met. | 11(a), 11(b), 11(d), and 11(e) | <ul style="list-style-type: none"> • Monitor increase in access by local water utilities. • Monitor impact of interference between high yield extraction and local water utility extraction. | |
| (i) Extent to which native title rights requirements have been met. | 11(c) and 11(e) | <ul style="list-style-type: none"> • Monitor increase in applications for water supply work (bore) approvals for native title basic landholder rights. • Number of reports of interference between high yield extraction and native title rights holders, or number of bores deepened. • Assess frequency and duration of water level drawdown below critical thresholds. | |
| (j) Extent of recognition of spiritual, social and customary values of water to Aboriginal people. | 11(c) and 11(e) | <ul style="list-style-type: none"> • Assessment of amount and type of information collected to identify the range of values of water to Aboriginal people. | <ul style="list-style-type: none"> • The collection of information on the values associated with water is considered the first step in addressing the objects of the Act. • It would be expected that at the end of five years there should be relevant information collected for each groundwater source, as a minimum requirement. |

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

Appendix 4 Minister's access licence dealing principles

The following is the text from the Access Licence Dealing Principles Order, published in the NSW Government Gazette on 27 December 2002.

Access Licence Dealing Principles Order 2002

Part 1 Introduction

1. Name of Order

This Order is the *Access Licence Dealing Principles Order 2002*.

2. Commencement

This Order commences on 20 December 2002.

3. Establishment of access licence dealing principles

The access licence dealing principles set out in this order are established.

4. Interpretation

- (1) References in this order to licences of category 'runoff harvesting' or 'regulated river (conveyance)' are subject to those categories being prescribed by regulation made under section 57 (k) of the Act.
- (2) Notes in this order do not form part of the order.

5. Effect

- (1) Consistent with section 71K (1) of the Act, all applications for access licence dealings under Division 4 of Part 2 of Chapter 3 of the Act are to be dealt with in accordance with:
 - (a) the water management principles, and
 - (b) the principles in this order, and
 - (c) access licence dealing rules established by any relevant management plan.
- (2) Consistent with section 71L of the Act, any access licence dealing rules established by management plans must be consistent with the principles in this order.

6. Definitions

In this order the following definitions apply:

dealing means a dealing under Chapter 3, Part 2 Division 4 of the *Water Management Act 2000*.

farm dam is a privately owned dam typically of earthen construction designed to collect and/or store water for use on one or a few properties. It does not include publicly owned dams or weirs.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

groundwater source means a water source specified in a groundwater management plan.

hydrologically connected water sources are water sources where water from one flows into the other, or, in the case of river systems, where flow from both goes into a common river downstream.

management plan means a plan made under section 41 or 50 of the *Water Management Act 2000*.

regulated river water source means a water source specified in a regulated river management plan.

runoff harvesting dam is a farm dam on a hillside or minor stream which collects and stores rainfall runoff. Minor streams are as defined in an order made under section 53 of the *Water Management Act 2000*.

unregulated river water source means a water source specified in an unregulated river management plan.

Part 2 General principles

7. Impacts on water sources

- (1) Dealings should not adversely affect environmental water and water dependent ecosystems as identified in any relevant management plan.
- (2) Dealings should be consistent with any strategies to maintain or enhance water quality identified in any relevant management plan.
- (3) In unregulated river water sources, dealings should not increase commitments to take water from water sources or parts of water sources identified in any relevant management plan as being of high conservation value.
- (4) In unregulated river water sources or a groundwater sources, dealings should not increase commitments to take water from water sources or parts of water sources above sustainable levels identified in any relevant management plan.
- (5) In regulated river water sources, dealings should not increase daily demand for water delivery at those locations and times where it is identified in any relevant management plan that demand exceeds delivery capacity.
- (6) In regulated river water sources, dealings should not increase commitments to take water in lower river or effluent systems where this will result in flow at greater than 80% of channel capacity for more than 10% of days used for water delivery.
- (7) In this clause, **commitments to take water** refers, in relation to all access licences with nominated works in that water source or part of a water source, to:
 - (a) the total volume of share components, or
 - (b) the total volume of water allocations in water allocation accounts, or
 - (c) where relevant, the sum of limits on rates of extraction in extraction components.

8. Impacts on indigenous, cultural, heritage or spiritual matters

- (1) Dealings should not adversely affect geographical and other features of indigenous significance.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

- (2) Dealings should not adversely affect geographical and other features of major cultural, heritage or spiritual significance.

9. Impacts on water users

- (1) Dealings should not adversely affect the ability of a person to exercise their basic landholder rights.
- (2) Dealings should have no more than minimal effect on the ability of a person to take water using an existing approved water supply work and any associated access licences. This should be addressed by constraints on dealings established in access licence dealing rules in relevant management plans.

10. Maximising social and economic benefits

- (1) The objective of access licence dealings is to help to facilitate maximising social and economic benefits to the community of access licences as required under the objects of the Act. Dealings do this by:
 - (a) allowing water to move from lower to higher value uses, and
 - (b) allowing the establishment of water markets that value the access licences, thereby encouraging investment in water efficient infrastructure, and
 - (c) allowing greater flexibility to access licence holders.
- (2) Subject to other principles in this order, access licence dealing rules should allow maximum flexibility in dealings to promote the objectives set out in subclause (1).

Part 3 Principles for specific types of access licence dealings

11. Transfer of access licences

- (1) This clause applies to dealings under section 71A of the Act.
- (2) Dealings under section 71A are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or
 - (b) if the licence is suspended under section 78 of the Act.
- (3) Access licence dealing rules established by a management plan shall not regulate or prohibit dealings under section 71A of the Act.

Note. as indicated in section 71A (3), consent to the transfer of a local water utility access licence may only be granted if the transferee is a local water utility, and consent to the transfer of a major water utility access licence may only be granted if the transferee is a major water utility.

12. Conversion of access licence to new category

- (1) This clause applies to access licence dealings under section 71B of the Act.
- (2) Dealings under section 71B are prohibited:
 - (a) if the licence is proposed to be converted to category regulated river (conveyance) or category estuarine or category coastal, or
 - (b) if there is an outstanding debt under the Act in respect of the licence, or
 - (c) if the licence is suspended under section 78 of the Act, or

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

- (d) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, or
 - (e) if the licence share component is not numerically quantified.
- (3) Dealings under section 71B are prohibited unless provisions of the relevant management plan:
 - (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (4) The share and extraction components of a new licence issued under a dealing under section 71B must comply with any requirements that are specified in the relevant management plan for a licence granted under section 63 of the Act for the new category.
- (5) Except for where it is otherwise specified in access licence dealing rules in the relevant management plan or where this dealing is accompanied by a dealing under section 71E, water allocations remaining in the water allocation account of the cancelled licence are to be credited to the new licence, up to a maximum of the share component volume of the new licence.
- (6) The share component on a new access licence issued under a dealing under section 71B is to be of a volume equal to the volume on the cancelled licence multiplied by a conversion factor determined by the Minister in accordance with any rules set out in relevant management plans.
- (7) Conversion factor rules in management plans:
 - (a) must be based on protecting environmental water and basic landholder rights as specified in the management plans, and maintaining available water to other access licences, and
 - (b) are not to be set for the purpose of achieving a reduction in overall water extraction from water sources.
- (8) Subject to the granting of an application under section 71J, any nominated water supply works on the cancelled licence may be carried forward to the new licence.
- (9) For conversion of category from regulated river (high security), unregulated river or aquifer to major utility and vice versa:
 - (a) a major utility licence may only be converted to another category if it has components relating to only one water source, and
 - (b) subject to imposing such mandatory conditions as are required by the relevant management plan for the new category, the extraction component on the cancelled licence is to be carried over to the new licence.
- (10) For conversion of category from regulated river (general security) to regulated river (high security) and vice versa, and for conversion of category from domestic and stock to regulated river (high security) and vice versa, the extraction component on the cancelled licence is to be carried over to the new licence, subject to imposing such mandatory conditions as are required by the relevant management plan for the new category.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

- (11) For conversion of category from regulated river (conveyance) to regulated river (high security) or regulated river (general security), the extraction component on the cancelled licence is to be carried over to the new licence, subject to imposing such mandatory conditions as are required by the relevant management plan for the new category.
- (12) For conversion of category from regulated river (general security) to unregulated river:
- (a) no parts of the extraction component on the cancelled licence are to be carried over to the new licence, and
 - (b) the extraction component of the new licence is to specify a location or area which is on an unregulated river (apart from a minor stream as defined in an order made under section 53 of the Act), and
 - (c) the application for conversion of category from regulated river (general security) to unregulated river must be accompanied by an application under section 71E to change the share component to an unregulated river water source, and is conditional on granting of that application, and
 - (d) water allocations remaining in the water allocation account on the cancelled licence may not be credited to the new licence.
- (13) For conversion of category from unregulated river to runoff harvesting:
- (a) no parts of the extraction component on the cancelled licence are to be carried over to the new licence, and
 - (b) the extraction component of the new licence is to specify a location or area which is not on a river (apart from a minor stream as defined in an order made under section 53 of the Act), and
 - (c) the application for conversion of category from unregulated river to runoff harvesting access licence must be accompanied by an application under section 71J to nominate the water supply work to a runoff harvesting dam, and is conditional on granting of that application.
- (14) For conversion of category from runoff harvesting to unregulated river:
- (a) no parts of the extraction component on the cancelled licence are to be carried over to the new licence, and
 - (b) the extraction component of the new licence is to specify a location or area which is on an unregulated river (apart from a minor stream as defined in an order made under section 53 of the Act).
- (15) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. Under section 71B applications to convert local water utility access licences and supplementary access licences are prohibited, and licences granted are subject to the mandatory conditions applicable to the category or subcategory of licence to which it belongs. Also licences may only be granted in relation to the same water source or water management area as the cancelled licence.

13. Subdivision of access licences

- (1) This clause applies to subdivision dealings under section 71C of the Act.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

- (2) Dealings under section 71C are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or
 - (b) if the licence is suspended under section 78 of the Act.
- (3) Subject to the granting of an application under section 71J, any nominated water supply works on the cancelled licence may be carried forward to the new licences.
- (4) The category of the new licences is to be the same as the category of the cancelled licence.
- (5) The areas or locations specified in the cancelled licence are to be carried over to all the new licences.
- (6) Any indivisible parts of the times, rates or circumstances specified in the extraction component of the cancelled licence are to be carried forward to all the new licences.
- (7) Water allocations remaining in the water allocation account of the cancelled licence are to be credited to the new licences so that the combined water allocations in the accounts of the new licences are no greater than the water allocations which remained in the account of the cancelled licence.
- (8) Access licence dealing rules established by a management plan shall not regulate or prohibit subdivision dealings under section 71C of the Act.

Note. As indicated in section 71C (3), the combined share components and combined extraction components of the new licences are to be no greater than the share and extraction components of the cancelled licence, and conditions on the cancelled licence are to be carried over to the new licences.

14. Consolidation of access licences

- (1) This clause applies to consolidation dealings under section 71C of the Act.
- (2) Consolidation dealings under section 71C are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of any of the licences, or
 - (b) if any of the licences are suspended under section 78 of the Act, or
 - (c) if the licences to be consolidated do not have share components in the same water source, or
 - (d) if the location or area specified in the extraction component of the licences is not the same.
- (3) Subject to the granting of an application under section 71J, any nominated water supply works on the cancelled licences may be carried forward to the new licence.
- (4) Water allocations remaining in the water allocation accounts on the cancelled licences are to be credited to the new licence so that the water allocations in the account of the new licence is no greater than the sum of the water allocations remaining in the accounts of the cancelled licences.
- (5) Access licence dealing rules established by a management plan shall not regulate or prohibit consolidation dealings under section 71C of the Act.

Note. as indicated in section 71C, the licences to be consolidated must be of the same category or subcategory, the combined share components and combined extraction components of the new licences are to be no greater than the share and extraction components of the cancelled licence, and conditions on the cancelled licences are to be carried over to the new licences.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

15. Assignment of rights under access licences

- (1) This clause applies to assignment of rights dealings under section 71D of the Act.
- (2) Dealings under section 71D are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of any of the licences, or
 - (b) if any of the licences are suspended under section 78 of the Act, or
 - (c) if any of the licences are of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act.
- (3) Only share or extraction components, or parts thereof, that are numerically quantified may be assigned from one licence to another.
- (4) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. As indicated in section 71D, the licences which are involved in a dealing under section 71D must be of the same category and have share components in the same water source or water management area. This dealing does not apply to local water utility access licences.

16. Change of water source

- (1) This clause applies to amendment of share component dealings under section 71E of the Act.
- (2) Dealings under section 71E are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or
 - (b) if the licence is suspended under section 78 of the Act, or
 - (c) if the licence does not have the share component expressed as a volume, or
 - (d) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, or
 - (e) from an unregulated river water source to a regulated river water source, or
 - (f) from a groundwater source to a regulated river or unregulated river water source, or vice versa, or
 - (g) if the licence is of category major water utility or supplementary.
- (3) A dealing under section 71E is prohibited unless there is a hydrologic connection between the water sources of the cancelled and issued licences.
- (4) A dealing under section 71E is prohibited unless provisions of the relevant management plans:
 - (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (5) The share and extraction components of a new licence issued under this dealing must comply with any requirements that are specified in the relevant management plan for a licence granted under section 63 of the Act.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

- (6) The share component on the new access licence is to be of a volume equal to the volume on the cancelled licence multiplied by a conversion factor determined by the Minister in accordance with any rules set out in relevant management plans.
- (7) Conversion factors rules in management plans:
 - (a) must be based on protecting environmental water and basic landholder rights as specified in the management plans, and maintaining the available water to other access licences, and
 - (b) are not to be set for the purpose of achieving a reduction in overall water extraction from water sources.
- (8) Nominated water supply works on the cancelled licence are not to be carried over to the new licence.
- (9) No water allocations remaining in the water allocation account of the cancelled licence may be credited to the new licence.
- (10) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. As indicated in section 71E, the new licence arising from a dealing under section 71E is subject to the mandatory conditions relevant to its category or subcategory and water source. This dealing does not apply to local water utility access licences.

17. Amendment of extraction component of access licence

- (1) This clause applies to amendment of extraction component dealings under section 71F of the Act.
- (2) Dealings under section 71F are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence,
 - (b) if the licence is suspended under section 78 of the Act, or
 - (c) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences.
- (3) Amendment of the times, rates and circumstances part of the extraction component may only occur where:
 - (a) access licence dealing rules in the relevant plan make provision for it consistent with the principles in Part 2 of this order, and
 - (b) those rules specifically indicate the nature of those amendments which are allowed.
- (4) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. As indicated in section 71F, the area or location arising from a variation of an access licence under this dealing must relate to the same water management area or water source as that to which the original area or location related.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

18. Assignment of water allocations between access licences

- (1) This clause applies to assignment of water allocation dealings under section 71G of the Act.
- (2) Dealings under section 71G are prohibited:
 - (a) if either of the access licences is suspended under section 78 of the Act, or
 - (b) if either of the access licences are of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences, or
 - (c) if a method of measurement of water extraction which is satisfactory to the Minister is not established for all nominated water supply works on both access licences, or
 - (d) if any of the access licences is of category runoff harvesting, or
 - (e) if any of the access licences is of category major utility, unless specific provision is made in access licence dealing rules to allow this, or
 - (f) from a supplementary water access licence to a licence of any other category.
- (3) Assignment of water allocations between access licences relating to different water sources is prohibited if:
 - (a) either licence is of category supplementary, or
 - (b) there is no hydrologic connection between the water sources, or
 - (c) one water source is a regulated river and the other is an unregulated river, or
 - (d) one water source is a groundwater source and the other is a regulated river or unregulated river water source.
- (4) Assignment of water allocations between access licences relating to different water sources is prohibited unless provisions of the relevant management plans:
 - (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (5) Assignment of water allocations from a local water utility access licence is prohibited unless:
 - (a) the Minister has approved a demand management plan for all NSW towns supplied under the local water utility access licence, and
 - (b) the Minister has approved a drought management plan for all NSW towns supplied under the local water utility access licence, and
 - (c) the Minister is satisfied the assignment will not put the water supply for NSW towns supplied by the local water utility at risk.
- (6) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

19. Interstate transfer dealings

- (1) This clause applies to dealings under section 71H of the Act.
- (2) Any dealings under section 71H must be consistent with the relevant inter-state agreement.
- (3) Dealings under section 71H are prohibited unless the waters for which the interstate access licence equivalent has or will have rights to are hydrologically connected to the water source in which to which the access licence to be issued or revoked relates.
- (4) Dealings under section 71H which revoke an access licence are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or
 - (b) if the licence is suspended under section 78 of the Act, or
 - (c) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, or
 - (d) if the licence is of category local water utility or major water utility.
- (5) The share and extraction components of a new licence issued under this dealing must comply with any requirements that are specified in the relevant management plan for a licence granted under section 63 of the Act.
- (6) Dealings under section 71H are prohibited unless arrangements are in place which:
 - (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (7) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

20. Interstate assignment of water allocations

- (1) This clause applies to interstate assignment of water allocation dealings under section 71I of the Act.
- (2) Any dealings under section 71I must be consistent with the relevant inter-state agreement.
- (3) Dealings under section 71I are prohibited:
 - (a) if the access licence is suspended under section 78 of the Act, or
 - (b) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences, or
 - (c) if a method of measurement of water extraction which is satisfactory to the Minister is not established for all nominated water supply works on the access licence, or
 - (d) if the access licence is of category runoff harvesting or supplementary water, or

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

- (e) if the access licence is of category major utility, unless specific provision is made in access licence dealing rules in the relevant management plan to allow this.
- (4) This dealing is prohibited unless arrangements are in place which:
 - (a) protect environmental water from being affected by the dealing, and
 - (b) protect basic landholder rights from being affected by the dealing, and
 - (c) protect the available water under other access licences from being affected by the dealing.
- (5) Interstate assignment of water allocations from a local water utility access licence is prohibited unless:
 - (a) the Minister has approved a demand management plan for all NSW towns supplied under the local water utility access licence, and
 - (b) the Minister has approved a drought management plan for all NSW towns supplied under the local water utility access licence, and
 - (c) the Minister is satisfied the assignment will not put the water supply for NSW towns supplied by the local water utility at risk.
- (6) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

21. Nomination of water supply works

- (1) This clause applies to nomination of water supply works dealings under section 71J of the Act.
- (2) Dealings under section 71J are prohibited if the access licence is suspended under section 78 of the Act.
- (3) Dealings under section 71J are prohibited if the access licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences, with the following exceptions:
 - (a) if new or additional works are to be nominated, where those works supply the same property as the current nominated works, or a contiguous property to the property supplied by the current nominated works which is occupied by the same landholder, or
 - (b) if a nominated work is withdrawn, that there remains at least one nominated work.
- (4) Dealings under section 71J are prohibited if the access licence is of category local water utility, with the following exceptions:
 - (a) if new or additional works are to be nominated, that those works supply the same town water supply scheme as the current nominated works, or
 - (b) if a nominated work is withdrawn, that there remains at least one nominated work.

Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003

- (5) Nomination of a water supply work is prohibited if the access licence does not have an extraction component allowing taking of water at the location of the nominated work.
- (6) With regard to runoff harvesting access licences:
 - (a) the nominated work must be a runoff harvesting dam of capacity consistent with the share component of the access licence, and
 - (b) withdrawal of nominated work may only be granted where arrangements are in place to ensure that the nominated work does not conserve any more water than is permitted pursuant to the exercise of basic landholder rights.
- (7) Withdrawal of nomination may not be prohibited by access licence dealing rules, except for as otherwise specified in this clause.
- (8) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003 Order

under the

Water Management Act 2000

Pursuant to section 50 of the *Water Management Act 2000*, I, the Minister for Land and Water Conservation, make the following Minister's plan.

JOHN AQUILINA, M.P.,
Minister for Land and Water Conservation

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Contents

| | Page |
|--|------|
| Part 1 Introduction | 1 |
| Part 2 Vision, objectives, strategies and performance indicators | 3 |
| Part 3 Basis for water sharing | 5 |
| Part 4 Environmental water provisions..... | 6 |
| Part 5 Basic landholder rights..... | 7 |
| Part 6 Bulk access regime | 8 |
| Part 7 Requirements for water for extraction under access licences | 9 |
| Part 8 Rules for granting access licences..... | 11 |
| Part 9 Limit to the availability of water | 12 |
| Division 1 Long-term average extraction limit | 12 |
| Division 2 Available water determinations | 12 |
| Part 10 Rules for managing access licences | 14 |
| Division 1 General..... | 14 |
| Division 2 Water allocation account management..... | 14 |
| Division 3 Management of local impacts..... | 16 |
| Part 11 Access licence dealing rules..... | 20 |
| Part 12 Mandatory conditions..... | 22 |
| Part 13 Monitoring and reporting | 25 |
| Part 14 Amendment of this Plan..... | 26 |
| Schedule 1 Dictionary | 27 |
| Schedule 2 Lower Gwydir Groundwater Source | 28 |
| Schedule 3 Contribution to relevant targets in the December 2002 State Water Management Outcomes Plan | 29 |
| Schedule 4 Special access licence rules and conditions..... | 32 |
| Schedule 5 High priority groundwater dependant ecosystems | 34 |
| Appendix 1 Gwydir and Border Rivers Water Management Areas..... | 35 |
| Appendix 2 Location of maps | 36 |
| Appendix 3 Performance indicators | 37 |
| Appendix 4 Calculation of domestic and stock rights..... | 40 |
| Appendix 5 Minister's access licence dealing principles..... | 42 |

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Part 1 Introduction

1 Name of Plan

This Plan is the *Water Sharing Plan for the Lower Gwydir Groundwater Source 2003* (hereafter **this Plan**).

2 Nature and status of this Plan

- (1) This Plan is made under section 50 of the Water Management Act 2000 as amended (hereafter **the Act**).
- (2) This Plan covers the core provisions of section 20 of the Act for water sharing, and additional provisions of section 21 of the Act, and other relevant matters.

3 Date of commencement

This Plan takes effect on 1 July 2003, and ceases 10 years after that date.

4 Area to which this Plan applies

- (1) The area in respect of which this Plan is made is that area of land within the Gwydir and Border Rivers Water Management Areas known as the Lower Gwydir Groundwater Source (hereafter **this groundwater source**) as shown on the map in Schedule 2.

Note. The Gwydir and Border Rivers Water Management Areas are shown on the map in Appendix 1.

5 Waters to which this plan applies

- (2) The water in this groundwater source includes all water contained in the unconsolidated alluvial sediment aquifers associated with the Gwydir River, its tributaries, and effluents downstream of Gravesend.

Note. Maps referred to in this Plan may be inspected at offices of the Department of Land and Water Conservation listed in Appendix 2.

Note. Water supply works drilled through the unconsolidated sediments into the underlying Great Artesian Basin (GAB) are tapping a different resource. On plan, they may lie within the boundaries of the Lower Gwydir Groundwater Sources, however they are within the deeper GAB Groundwater Source and are not included as a part of this Plan.

6 Interpretation

- (1) Terms that are defined in the Act have the same meaning in this Plan and the effect of these terms may be explained in Notes.
- (2) Additional terms to those identified in subclause (1) are defined in Schedule 1.
- (3) Notes in the text of this Plan do not form part of this Plan.
- (4) Schedules to this Plan form part of this Plan.
- (5) Appendices to this Plan do not form part of this Plan.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

7 Effect on licences, authorities and permits under the Water Act 1912

- (1) This Plan applies from the date of commencement to those matters that are administered under the Act at that time.
- (2) This Plan applies to other matters from the date the relevant provisions of the Act are commenced.

Note. To the extent possible, the rules embodied in this Plan will apply to matters administered under the *Water Act 1912* in the interim.

8 State Water Management Outcomes Plan

- (1) In accordance with section 16 (1) (a) of the Act, this Plan is consistent with the State Water Management Outcomes Plan published in the NSW Government Gazette on 20 December 2002 (hereafter *the SWMOP*).
- (2) Schedule 3 identifies the SWMOP targets applicable to this Plan and how this Plan contributes to those targets.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Part 2 Vision, objectives, strategies and performance indicators

9 Vision, objectives, strategies and performance indicators

This Part is made in accordance with section 35 (1) of the Act.

10 Vision

The vision for this Plan is an ecologically sustainable groundwater resource that provides an assured supply of good quality groundwater for the social and economic benefit of the people in the Gwydir Catchment.

11 Objectives

The objectives of this Plan are to:

- (a) protect and maintain groundwater dependent ecosystems by minimising the impacts of extraction,
- (b) manage and share the groundwater resources of the Gwydir Valley in a sustainable and equitable manner, while minimising negative local and regional impacts,
- (c) protect the structural integrity of the aquifer by ensuring extraction does not cause any aquifer compaction, aquitard compaction or land subsidence,
- (d) protect and maintain groundwater quality by ensuring extraction does not result in a change in the beneficial use of the aquifer,
- (e) provide opportunities for market based trading of groundwater rights within the extraction limit and interference constraints,
- (f) preserve basic landholder rights to this groundwater source,
- (g) ensure there are no long term declines in water levels by managing allocations and extractions within the extraction limit, and
- (h) protect and maintain cultural and heritage values through the management of this groundwater source.

12 Strategies

The strategies of this Plan are to:

- (a) establish environmental water rules and manage access to groundwater consistent with those rules,
- (b) establish rules for the protection of basic landholder rights,
- (c) establish an extraction limit for this groundwater source, taking into account the requirements of the environment,
- (d) reduce the total share component of access to 125% of the final extraction limit,
- (e) establish rules for granting of access licences,

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

- (f) establish rules for determining the groundwater available from time to time under access licences,
- (g) establish water allocation account management rules,
- (h) establish rules for minimising the local impacts of groundwater extraction on the environment, the aquifer itself, and between users,
- (i) establish the access licence dealing rules, and
- (j) establish the conditions that will apply to access licences and water supply work (bore) approvals.

13 Performance indicators

For the purpose of section 35 (1) (b) of the Act, the following indicators are to be used to determine the performance of this Plan against its objectives.

- (a) change in groundwater extraction relative to the extraction limit,
- (b) change in climate adjusted groundwater levels,
- (c) change in water levels adjacent to identified groundwater dependent ecosystems,
- (d) change in groundwater quality,
- (e) change in the economic benefits derived from groundwater extraction and use,
- (f) change in structural integrity of the aquifer,
- (g) extent to which domestic and stock rights requirements have been met,
- (h) extent to which local water utility requirements have been met,
- (i) extent to which native title rights requirements have been met, and
- (j) extent of recognition of spiritual, social and customary values of groundwater to Aboriginal people.

Note. Appendix 3 details the objectives to which these performance indicators relate and the methods for assessing these indicators.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Part 3 Basis for water sharing

14 Basis for water sharing

This Part is made in order to give effect to section 5 (3) of the Act, and in accordance with sections 20 (2) (c) and 21 (e) of the Act.

15 Climatic variability

- (1) This Plan recognises climatic variability and therefore that the level of natural recharge to this groundwater source will vary.
- (2) To give effect to subclause (1), this Plan has provisions that manage:
 - (a) the sharing of water in this groundwater source within the limits of water availability on a long-term average basis, and
 - (b) water extractions to enable the protection of groundwater dependent ecosystems, aquifer integrity and water quality in this groundwater source.

16 Recharge

- (1) The overall basis for water sharing in this Plan is the average annual recharge to this groundwater source, estimated to be 38,000 megalitres per year (hereafter *ML/yr*).
- (2) Pursuant to section 42 (2) of the Act, the average annual recharge established in subclause (1) may be varied by the Minister at 30 June 2007 following further recharge studies undertaken by the Minister.

Note. The extent of impact of this change on access by licence holders is limited by clause 28.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Part 4 Environmental water provisions

17 Environmental water provisions

This Part is made in accordance with sections 5 (3) and 8 (1), 8 (2) and 20 (1) (a) of the Act.

18 Environmental health water

Note. It is anticipated that the environmental health water provisions in this Part and management of local impacts provisions in Part 10 of this Plan will maintain the cultural and heritage values associated with this groundwater source (see clause 11(h)).

- (1) This Plan establishes the following environmental health water rules:
 - (a) subject to Part 10 Division 2 of this Plan, the long-term average storage component of this groundwater source, minus the basic landholder rights, minus the supplementary access permitted under clause 25, as varied by clause 29 is reserved for the environment,
 - (b) subject to Part 10 Division 2 of this Plan 15% of the average annual recharge to this groundwater source, being 5,700 ML/yr, is reserved for the environment.
- (2) Pursuant to section 42 (2) of the Act, the Minister may vary the proportion of recharge reserved as the environmental health water in subclause (1) (b) at 30 June 2007, based on further studies of groundwater ecosystem dependency undertaken by the Minister.

Note. The extent of impact of this change on access by licence holders is limited by the provisions in clause 28.
- (3) The Minister should consult with the Minister for the Environment before varying the environmental health water in accordance with subclause (2).

19 Supplementary environmental water

At the commencement of this Plan, there is no water committed for specified environmental purposes in accordance with section 8 (1) (b) of the Act.

20 Adaptive environmental water

- (1) At any time an access licence holder may, by a process determined by the Minister, commit all or part of their licence as adaptive environmental water.
- (2) The conditions of the commitment specified in subclause (1):
 - (a) are to be established by the Minister,
 - (b) are to be specified on the access licence, and
 - (c) shall be such as to ensure that there is a contribution to the objectives of this Plan.
- (3) At the commencement of this Plan there are no access licences committed to an environmental purpose in accordance with section 8 (1) (c) of the Act.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Part 5 Basic landholder rights

21 Basic landholder rights

- (1) This Part is made in accordance with sections 5 (3) and 20 (1) (b) of the Act.
- (2) If a landholder is unable to exercise their basic landholder rights due to interference to their supply caused by extraction from water supply works (bores) nominated by access licences:
 - (a) the landholder's affected water supply work (bore) may be replaced or deepened to ensure continuing access to water for basic landholder rights, or
 - (b) basic rights water may be supplied by alternative means during critical times.
- (3) The Minister may impose a charge on access licence holders in this groundwater source under section 114 of the Act, as a contribution to the costs of activities or works associated with subclause (2).

Note. The Minister may issue an Order under section 328 of the Act to restrict the exercise of basic landholder rights from these groundwater sources to protect the environment, for reasons of public health, or to preserve existing basic landholder rights.

Note. A basic landholder right allows an owner or occupier of a landholding to take water from an aquifer underlying the land without the need for an access licence, for domestic consumption, stock watering, and native title purposes only. Those exercising basic rights from a bore must still obtain a water supply works approval for the bore. These approvals are renewable every 20 years. This is to ensure that information about bore location and condition are kept up to date, for the protection of the resource from deteriorating bores, and in the case of a pollution event.

22 Domestic and stock rights

Note. It is not recommended that the water from this groundwater source be consumed without prior treatment. Land use activities may have polluted the groundwater in some areas.

- (1) At the commencement of this Plan the water requirements of holders of domestic and stock rights are estimated to be a total of 700 ML/yr.

Note: The volumes of water identified in subclause (2) are the total volumes of water estimated for domestic and stock rights in this groundwater source. Refer to Appendix 4 for the calculation of domestic and stock rights.

- (2) This Plan recognises that the exercise of domestic and stock rights may increase during the term of this Plan.

Note. Increase in use of domestic and stock rights may occur as a result of an increase in the number of landholdings overlying this groundwater source, or as a result of the increase in the exercise of domestic and stock rights by existing landholders.

23 Native title rights

- (1) At the commencement of this Plan there are no holders of native title rights and therefore the water requirements for native title rights are a total of 0 ML/yr.
- (2) This Plan recognises that the exercise of native title rights may increase during the term of this Plan.

Note. An increase in native title rights may occur as a result of the granting of native title rights under the Commonwealth's *Native Title Act 1993*.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Part 6 Bulk access regime

24 Bulk access regime

- (1) This Part is made in accordance with section 20 (1) (e) of the Act.
- (2) This Plan establishes a bulk access regime for the extraction of water under access licences in this groundwater source having regard to:
 - (a) the environmental water provisions established under Part 4 of this Plan,
 - (b) the requirements for basic landholder rights identified under Part 5 of this Plan, and
 - (c) the requirements for water for extraction under access licences identified under Part 7 of this Plan.
- (3) The bulk access regime established in subclause (2):
 - (a) recognises the effect of climatic variability on the availability of water as provided for under Part 3 of this Plan,
 - (b) establishes rules according to which access licences are granted as provided for in Part 8 of this Plan,
 - (c) recognises and is consistent with limits to the availability of water as provided for in Part 9, Division 1 of this Plan,
 - (d) establishes rules according to which available water determinations are to be made as provided for in Part 9 Division 2 of this Plan,
 - (e) establishes rules according to which access licences are managed as provided for in Parts 9 and 10 of this Plan, and
 - (f) establishes rules with respect to the priorities according to which access licences are to be adjusted as a consequence of any reduction in the availability of water as provided for in Part 9 of this Plan.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Part 7 Requirements for water for extraction under access licences

25 Estimate of water requirements

- (1) This Part is made in accordance with section 20 (1) (c) of the Act.
- (2) At the commencement of this Plan, the requirements identified for water for extraction under access licences within this groundwater source is estimated to be 70,109 ML/yr.
- (3) Subclause (2) includes local water utility access licences of 3,581 ML/year in this groundwater source, made up of 3,506 ML/yr for Moree, 73 ML/yr for Pallamallawa, and 2 ML/yr for Ashley.
Note. Subclauses (2) and (3) represent the total volumes specified on access licences in these groundwater sources. It is not a commitment to supply that water.
- (4) Pursuant to section 42 (2) of the Act, at the commencement of Year 1 of this Plan the Minister should reduce the total share components of aquifer access licences in this groundwater source to 125% of the recharge established in clause 16, minus the environmental water established in clause 18, being $1.25 \times (38,000 - 5,700)$, which equals 40,375 ML/yr.
- (5) Local water utility access licences, and access licences with a share component of less than 50 ML/yr will not be subject to any access licence share component reductions made in accordance with subclause (4).
- (6) Access licences of greater than 50 ML/yr will not be reduced below 50 ML/yr as a result of access licence share component reductions made in accordance with subclause (4).
- (7) At the time of commencement of Part 2 of Chapter 3 of the Act, aquifer access licences in this groundwater source with a history of extraction greater than 80% of their access licence share component, as amended by subclause (4), will have a second licence, called a supplementary water access licence.
- (8) The supplementary water access licence referred to in subclause (7), will have an initial share component equivalent to the history of extraction, minus 80% of their aquifer access licence share component, as amended by subclause (4).
- (9) The history of extraction referred to in subclauses (7) and (8) will be for each access licence the greater of:
 - (a) the average metered extraction in the water years 1993/94 to 1997/98, or the average of the years within that period from which extraction was first measured, not exceeding the licence volumes preceding this Plan, or
 - (b) the average metered extraction in the water years 1997/98 to 2001/02, or the average of the years within that period from which extraction was first measured, not exceeding the licence volumes preceding this Plan.
- (10) The metered extraction each year referred to in subclause (9) will include any extraction resulting from carryover or borrowing in those years, but will be adjusted to exclude any transfers to or from access licence equivalents in those years.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

- (11) Share components of supplementary water access licences specified in subclause (7) will be reduced to 0 ML/yr at 30 June 2012.
- (12) This Plan recognises that the total requirements for water for extraction under access licences within this groundwater source may change during the term of this Plan as a result of:
 - (a) the granting, surrender, cancellation or non-renewal of access licences,
 - (b) the variation of a local water utility access licences under section 66 of the Act, or
 - (c) the volumetric quantification of the share components of existing access licences that are currently non-volumetric.

Part 8 Rules for granting access licences

26 Rules for granting access licences

- (1) This Part is made in accordance with sections 20 (2) (b) and 63 of the Act, having regard to the limits to water availability in this groundwater source and the need to protect groundwater dependent ecosystems, aquifer integrity and groundwater quality.
- (2) Access licences may be granted in this groundwater source, subject to any embargo on the making of applications for access licences made under Chapter 3 Part 2 Division 7 of the Act.
- (3) The Minister should declare an embargo on the making of applications for access licences in this groundwater source, other than access licences of the following kinds:
 - (a) local water utility access licences, and

Note. Pursuant to sections 66 (3) and 66 (4) of the Act, the Minister may also vary a local water utility's entitlement to water at 5 yearly intervals, or on application of the local water utility where there is a rapid growth in population.

 - (b) access licences resulting from an application of a type listed in section 82 (1) of the Act.
- (4) In applying for a new access licence, the applicant must establish the purpose and circumstance relating to that access licence, and that the share or extraction component sought will be the minimum required to meet that purpose and circumstance.
- (5) Access licences granted under this Part cannot extract water through a water supply work (bore) located in areas where the full extraction authorised by access licences nominating water supply works located in the area, plus the exercise of basic landholder rights, are likely to cause an adverse local impact, as outlined in Part 10 Division 3 of this Plan.
- (6) If an access licence share component applied for is significant, as determined by the Minister on the basis of the particular aquifer characteristics, the application will not be granted until a water supply work (bore) approval has been granted and the work constructed.
- (7) Once the water supply work (bore) is constructed, and the results of a pumping test or its equivalent are supplied by the applicant, in the required form and to the specification of the Minister, the access licence may be granted.
- (8) The share component of the access licence granted under subclause (7) will be the proportion of the share component sought that the water supply work (bore) is capable of extracting without causing any adverse local impact, as outlined in Part 10 Division 3 of this Plan.
- (9) Subclauses (4), (6), (7) and (8) do not apply to a new access licence arising from an application of a type listed in section 82 (1) of the Act.
- (10) In accordance with section 56 of the Act, all access licences in this groundwater source shall have a share component expressed as a volume in megalitres per year (ML/yr).

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Part 9 Limit to the availability of water

Division 1 Long-term average extraction limit

27 Long-term average extraction limit

- (1) This Division is made in accordance with section 20 (2) (a) of the Act.
- (2) The long-term average extraction limit for this groundwater source is initially 32,300 ML/yr, plus the total access permitted under supplementary water access licences provided for in clause 25, as varied by clause 29.

28 Variation of the long-term average extraction limit

- (1) Pursuant to section 42 (2) of the Act, the Minister may vary the long-term average extraction limit established under clause 27 at 30 June 2007 as a result of:
 - (a) any change to the average annual recharge arising from clause 16 (2), and
 - (b) any change to the environmental health water arising from clause 18 (2).
- (2) If there is any change to the long-term average extraction limit arising from subclause (1) then:
 - (a) the extraction limit will not be greater than 38,760 ML/yr, plus the total access permitted under supplementary water access licences provided for in clause 25, as varied by clause 29, and
 - (b) the extraction limit will not be less than 25,840 ML/yr, plus the total access permitted under supplementary water access licences provided for in clause 25, as varied by clause 29.

Division 2 Available water determinations

29 Available water determinations

- (1) This Division is made in accordance with section 20 (2) (b) of the Act.
- (2) In making an available water determination under section 59 of the Act, the Minister should consider the following rules:
 - (a) water extraction in this groundwater source will be monitored in each water accounting year to determine if any growth in volumes extracted is occurring above the extraction limit in clause 27, as varied by clause 28, based on a comparison of the extraction limit against the average extraction within the groundwater source over that year and the preceding 2 years.

Note. A water accounting year is defined in clause 34 (3).
 - (b) if water that, pursuant to an access licence, is committed as adaptive environmental water to be left in the aquifer for environmental purposes, then for the purpose of subclause (a), the extraction will be assumed to be 100% of the available water determination,
 - (c) if water that, pursuant to an access licence, is committed as adaptive environmental water to be extracted for environmental purposes, then for the

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

- purpose of subclause (a), the extraction will be that measured through the approved water supply work (bore),
- (d) total water available under aquifer access licences will be equal to the recharge established in clause 16, minus the proportion of recharge reserved as environmental health water in subclause 18, minus the total water available to local water utility access licences,
 - (e) if the 3 year average of extraction in this groundwater source exceeds the long term average extraction limit established in clause 27 by 5% or greater, the available water determination for the following water accounting year for access licences in this groundwater source should be reduced by an amount that is assessed necessary by the Minister to return subsequent total water extraction to the long-term average extraction limit,
 - (f) if the 3 year average of extraction in this groundwater source is less than 95% of the long-term average extraction limit established in clause 27, then the available water determination for access licences in this groundwater source shall be increased to such an extent as to allow extraction to increase to the extraction limit,
 - (g) notwithstanding subclause (f), an available water determination shall not exceed 100% of total access licence share components to which it applies,
 - (h) an available water determination calculated in accordance with subclauses (e) to (g) will be made each water accounting year, will apply to all access licences in the groundwater source, excepting local water utility and supplementary water access licences, and will be the same percentage for all access licence share components to which it applies,
 - (i) a separate available water determination will be made in this groundwater source each water year for local water utility access licences, and subject to section 60 of the Act, this shall be 100% of these access licence share components,
 - (j) an available water determination of 100% of total supplementary water access licence share components will be made in Years 1 to 3 of this Plan,
 - (k) the available water determination for supplementary water access licences will be reduced by 1/7 each year commencing at the start of Year 4 of this Plan, and
 - (l) there will be no water made available to supplementary water access licences from the start of Year 10 of this Plan.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Part 10 Rules for managing access licences

Division 1 General

30 Rules for managing access licences

This Part is made in accordance with sections 20 (2) (b) and 21 (a) and 21 (c) of the Act, having regard to:

- (a) the environmental water rules established in Part 4 of this Plan,
- (b) requirements for water to satisfy basic landholder rights identified in Part 5 of this Plan, and
- (c) requirements for water for extraction under access licences in Part 7 of this Plan.

Division 2 Water allocation account management

31 Water allocation account management

This Division is made in accordance with sections 20 (2) (b) and 21 (c) of the Act.

32 Water allocation accounts

In accordance with section 85 of the Act, a water allocation account shall be established for each access licence in this groundwater source.

Note. Water allocations may be assigned to, or from, these accounts by a water allocation assignment made under section 71G of the Act, where these are allowed under rules specified in Part 11 of this Plan.

33 Accrual of water allocations

Water allocations will be accrued into water allocation accounts each water accounting year in accordance with the Minister's available water determinations as specified in clause 29.

34 Annual accounting for water extraction

- (1) Water taken from this groundwater source will be accounted for at least annually.
- (2) Water taken by an approved water supply work (bore) nominated by an access licence is taken to be extracted and will be periodically debited against the access licence water allocation account.
- (3) A water accounting year shall be the 12 month period commencing 1 July.
- (4) A water allocation account shall remain at or above zero at all times.
- (5) In any one water accounting year, subject to local impact management restrictions arising from Part 10, Division 3 of this Plan, water taken from this groundwater source under an aquifer access licence may not exceed a volume consisting of:
 - (a) 160% of access licence share component, as amended by clause 25,

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

- (b) plus any water allocations assigned from another licence under section 71G of the Act in that year, and
 - (c) minus any water allocations assigned to another licence under section 71G of the Act in that year.
- (6) Total water in any account at any time may not exceed a volume consisting of:
 - (a) 240% of aquifer access licence share component, as amended by clause 25,
 - (b) plus any water allocations assigned from another licence under section 71G of the Act in that year, and
 - (c) minus any water allocations assigned to another licence under section 71G of the Act in that year.
- (7) A maximum of 160% of any aquifer access licence share component may be carried forward in a water allocation account from one water accounting year to the next.
- (8) Subclauses (5), (6) and (7) do not apply to local water utility access licences.
- (9) For local water utility access licences in any one water accounting year, subject to local impact management restrictions arising from Part 10, Division 3 of this Plan, water taken from this groundwater source, and total water in any water allocation account at any time may not exceed a volume consisting of:
 - (a) 100% of the access licence share component,
 - (b) plus any water allocations assigned from another licence under section 71G of the Act in that year, and
 - (c) minus any water allocations assigned to another licence under section 71G of the Act in that year.
- (10) Allocations in a local water utility water allocation account cannot be carried over from one water accounting year to the next.
- (11) Subclauses (5) to (10) do not apply to supplementary water access licences.
- (12) For supplementary water access licences, in any one water accounting year, subject to local impact management restrictions arising from Part 10, Division 3 of this Plan, water taken from this groundwater source may not exceed the allocation resulting from the supplementary water access licence available water determination for that year.
- (13) Allocations in a supplementary water access licence water allocation account cannot be carried over from one water accounting year to the next.
- (14) Where both an aquifer access licence, and a supplementary water access licence are held, water allocations will be debited from the supplementary water access licence account, before water is debited from the aquifer access licence account.
- (15) Subclauses (5) to (14) do not apply to any access licence specified in Schedule 4 of this Plan.
- (16) Any access licence specified in Schedule 4 will be subject to the water allocation account management rules specified in that Schedule, in addition to clauses 31, 32, 33 and 34 (1) to (4).

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Division 3 Management of local impacts

35 Management of local impacts

This Division is made in accordance with section 21 (a) of the Act.

36 Extraction interference between neighbouring bores

- (1) The minimum allowable distance between a property boundary and extraction from new and replacement water supply works (bores) authorised to extract equal to or greater than 20 ML/yr is 200 metres.
- (2) New and replacement water supply works (bores) authorised to extract less than 20 ML/yr which are within 100 metres of any basic rights water supply work, will require an investigation of potential impacts on neighbouring water supply works (bores).
- (3) The Minister may, upon application by an access licence holder, vary the distance restrictions specified in subclause (1) if:
 - (a) an hydrogeological study undertaken by the licence holder, and assessed as adequate by the Minister, demonstrates minimal potential for any adverse impact on existing licensed extraction,
 - (b) all potentially affected access licence holders, and adjacent landholders have been notified by the proponent, and
- (4) Subclause (1) does not apply to extraction under existing access licences until such time as the nominated water supply work (bore) is replaced.

Note. Potentially affected access licence holders are typically neighbouring access licence holders and/or those in the near vicinity.

(c) there is a process for remediation in the event that any adverse impact occurs in the future, specified as conditions on the licence.

Note. The intention of this clause is to minimise the impact of extraction under new access licences on extraction under existing access licences. It is intended to develop models to support hydrogeological assessment of the adverse impacts of new groundwater extractions on existing licensed extraction.

37 Water level management

- (1) The Minister may declare that, in order to maintain water levels within this groundwater source, local access rules are to apply in a defined area known as a local impact area.
- (2) If water levels in any part of a groundwater source have declined to such an extent that, in the opinion of the Minister, an adverse impact is occurring, or is likely to occur, extraction from all water supply works (bores) within a local impact area declared under subclause (1) that are nominated by an access licence will be restricted to such an extent and for such time as is required to reinstate water levels to such a degree as to mitigate or avoid that impact.

Note. This clause recognises that in some locations, at certain periods of high groundwater demand, critical water level declines may occur, and that additional extraction limitations may be required. The Department of Land and Water Conservation will identify monitoring bores, specify the target levels, and determine the method for specifying an affected area.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

38 Water quality management

- (1) The beneficial uses of this groundwater source are raw water for drinking, and irrigation, based on beneficial use classes identified in the Australian and New Zealand Environment and Conservation Council *Water Quality Guidelines 2001*, and the National Health and Medical Research Council *Raw Water for Drinking Purposes Guidelines 1996*.
Note. It is not recommended that the water from this groundwater source be consumed without prior treatment. Land use activities may have polluted the groundwater in some areas.
- (2) Water quality decline will be deemed unacceptable if extraction is likely to cause water quality to decline to a lower beneficial use class.
- (3) The Minister may declare that, in order to protect water quality within this groundwater source, local access rules are to apply in a defined area known as a local impact area.
- (4) If unacceptable water quality declines are resulting from extraction, extraction from all water supply works (bores) within a local impact area declared under subclause (3) that are nominated by an access licence will be restricted to such an extent and for such time as required to halt that decline, or restore the beneficial use of this groundwater source.
- (5) Extraction under local water utility access licences shall be subject to restrictions under this Part, but not to such an extent as access is denied.

39 Protection of groundwater dependent ecosystems

- (1) Extraction of groundwater from a new or replacement water supply work (bore) is excluded within 100 metres of high priority groundwater dependent ecosystems, or any creek or river, for those exercising basic landholder rights, and 200 metres for extraction authorised by all other access licences unless the water supply work (bore):
 - (a) only draws water from an aquifer at depths greater than 50 metres, and
 - (b) has an impermeable seal, constructed within the annulus of the water supply work (bore), as specified by the Minister, to isolate aquifers above 50 metres depth, and to prevent water ingress from the shallow aquifers.**Note.** Subclause (1) will not apply to extraction from an existing water supply work (bore) until such time as the work is replaced.
- (2) High priority groundwater dependent ecosystems are those listed in Schedule 5.
- (3) Pursuant to section 42 (2) of the Act, the Minister may identify further high priority groundwater dependent ecosystems and include them in Schedule 5 at any time, based on further studies of groundwater ecosystems dependency undertaken by the Minister.
- (4) The Minister should consult with the Minister for the Environment before adding further high priority groundwater dependent ecosystems to Schedule 5.
Note. At the commencement of this Plan, there is not sufficient information to identify high priority groundwater dependent ecosystems within the Lower Gwydir Groundwater Source.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

40 Protection of aquifer integrity

- (1) The Minister may declare that, in order to protect the integrity of the aquifers within this groundwater source, local access restrictions are to apply in a defined area known as a local impact area.
- (2) The Minister may, on presentation of evidence of land subsidence or aquifer compaction, restrict extraction from all water supply works (bores) nominated by an access licence within a local impact area declared under subclause (1), to such an extent and for such time as to stabilise that subsidence or compaction.

Note. This clause recognises that damage of aquifers through excessive water storage loss is irreversible, and destroys the resource for future water users, including the environment.

41 Extraction Restrictions

The Minister may, in the event of local impacts restrictions arising from this Division, impose, by Order, a reduction in annual, quarterly, weekly or daily extraction rates from water supply works (bores) in the local impact area.

Note. The Minister will attempt to give licence holders prior notice of any local impact restrictions so as to minimise the impacts of such restrictions on access within a season.

42 Group registration

This Plan allows for the formation of a group of access licences with respect to the sharing of local impact restrictions arising from this Division, subject to the following rules:

- (a) the group register will be maintained by the Minister,
- (b) holders of access licences must make a request to the Minister to form a group,
- (c) total extraction by all access licences within a group will be assessed as a whole against their combined restricted extraction and must not exceed that amount,
- (d) no access licence holder within the group may extract more than is permitted by Division 2 of this Part in any one water accounting year as a result of participation in a group,
- (e) an access licence holder may apply to be removed by the Minister from the group and the extraction by the group will be reduced by the extraction restriction of that access licence,
- (f) an access licence holder may apply to be added by the Minister to the group and the combined restricted extraction of the group will be increased by the extraction restriction of that access licence, and
- (g) the Minister reserves the right to remove a licence holder from a group where that individual causes the group extraction restriction to be exceeded, or to dissolve a group where its members exceed their combined extraction restriction.

43 Infrastructure failure

- (1) The operational rules relating to local impact management may rely on water levels at specified monitoring bores.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

- (2) In the event of a monitoring bore failure the Minister may:
- (a) continue with the current access rules until the monitoring bore is reinstated,
 - (b) adjust the current access rules based on climatic conditions and any other monitoring bore information, until the monitoring bore is reinstated, or
 - (c) rely on another monitoring bore in the area to provide information.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Part 11 Access licence dealing rules

44 Access licence dealing rules

- (1) This Part is made in accordance with section 20 (1) (d) of the Act and with the Minister's access licence dealing principles gazetted on 27 December 2002 under section 71L of the Act.

Note. The Minister's access licence dealing principles are contained in Appendix 5.

- (2) Applications for access licence dealings may be granted subject to the Minister's access licence dealing principles gazetted from time to time under section 71L of the Act and the rules in this Part.

Note. There are a number of mechanisms within the Act, called access licence dealings, to change either the ownership of all or part of an access licence, or the location within a water source at which all or part of the share and extraction components of access licences can be exercised. These dealings are governed by the principles in section 5 of the Act, Minister's access licence dealing principles, and the rules in this Part.

Note. Where there is an inconsistency between access licence dealing rules established in this Plan and Minister's access licence dealing principles gazetted subsequent to the commencement of this Plan, section 71L of the Act provides for the access licence dealing rules in this Plan to prevail.

45 Rules relating to constraints within a groundwater source

- (1) This clause applies to any relevant dealings under sections 71D, 71F, and 71J of the Act, and section 71G of the Act with respect to allocation assignments within this groundwater source.
- (2) Dealings are prohibited under this clause if:
 - (a) any of the access licences or water allocations involved are not within this groundwater source,
 - (b) the dealing would result in the total extraction under access licences through nominated works in the area, plus basic landholder rights extraction, causing any adverse local impact in accordance with Part 10 Division 3 of this Plan,
 - (c) the dealing would result in any increase in the total access licence share components nominating works within the Gwydir Watercourse Plan of Management area, as shown in Schedule 2,
 - (d) the dealing would result in any increase in the total water allocations credited to access licences nominating works within the Gwydir Watercourse Plan of Management area, as shown in Schedule 2,
 - (e) the dealing involves a supplementary water access licence, or any water allocation credited to a supplementary water access licence water allocation account,
 - (f) the dealing involves any assignment of access rights from any access licence specified in Schedule 4,
 - (g) the dealing involves any water allocation assignments from any access licence specified in Schedule 4, or

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

- (h) the dealing involves any nomination of works by any access licence specified in Schedule 4, other than those nominated by the licence at the commencement of this Plan.

46 Rules for change of water source

- (1) This clause relates to dealings under section 71E of the Act.

Note. Section 71E dealings are the mechanism by which access licences can move from one water source to another. Once the change in water source has been effected, if permitted, the new licence will have to nominate specified works (by a dealing under section 71J of the Act) in the receiving water source before extraction can commence.

- (2) Dealings under section 71E of the Act that change the water source to which an access licence applies are prohibited in this groundwater source.

47 Rules for conversion of access licence category

- (1) This clause relates to dealings under section 71B of the Act.

- (2) Dealings that result in conversion of an access licence of one category to an access licence of another category are prohibited in this groundwater source.

48 Rules for interstate access licence transfer

- (1) This clause relates to dealings under section 71H of the Act.

- (2) Dealings that result in an interstate access licence transfer into or out of this groundwater source are prohibited.

49 Rules for water allocation assignments between water sources

- (1) This clause relates to dealings under section 71G of the Act for assignment of water allocations between water sources.

- (2) Dealings that assign water allocations between access licences in other water sources and access licences in this groundwater source are prohibited.

50 Rules for interstate assignment of water allocations

- (1) This clause relates to dealings under section 71I of the Act.

- (2) Dealings that result in an interstate assignment of water allocations to or from this groundwater source are prohibited.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Part 12 Mandatory conditions

51 Mandatory conditions on access licences

This Part is made in accordance with sections 17 (c) and 20 (2) (e) of the Act.

52 Access licence conditions

- (1) All access licences shall have mandatory conditions in relation to the following:
 - (a) the specification of the share component of the access licence,
 - (b) the specification of the extraction component of the access licence,
 - (c) the requirement that all taking of water under the access licence will be subject to the available water determinations,
 - (d) the requirement that all taking of water under the access licence will be subject to any local impact management restrictions established in this Plan,
 - (e) the requirement that all taking of water under the access licence will be subject to the water allocation account management rules established in this Plan,
 - (f) the requirement that water may only be taken under the access licence by the water supply work (bore) nominated by the access licence,
 - (g) the taking of water in accordance with the access licence may only occur if the resulting debit from the access licence water allocation account will not exceed the volume of water allocation remaining in the account, and
 - (h) any other conditions required to implement the provisions of this Plan.
- (2) All aquifer access licences shall have mandatory conditions to give effect to clause 25, in relation to the amendment of access licence share components.
- (3) All supplementary water access licences shall have mandatory conditions to give effect to clause 25, in relation to the amendment of access licence share components.
- (4) All local water utility access licences shall have mandatory conditions that only allow the taking of water for the exercise of a water supply function of the local water utility or for other such purpose provided for under the Act.
- (5) Any access licence specified in Schedule 4 will have addition mandatory conditions applied, as specified in that Schedule.

53 Mandatory conditions on water supply work (bore) approvals

All approvals for a water supply work (bore) to which this Plan applies shall have mandatory conditions in relation to the following:

- (a) the water supply work (bore) is only to be constructed by a driller licensed under section 349 of the Act,
- (b) the water supply work (bore) must comply with drilling standards as specified by the Minister,
- (c) construction of a water supply work (bore) must prevent contamination between aquifers through proper bore construction,

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

- (d) a water supply work (bore) approval holder must ensure decommissioning procedures comply with applicable standards as specified by the Minister,
- (e) a new or replacement water supply work (bore) to access water for basic rights will be required, as a condition of approval, to be constructed to sufficient depth to maintain access to the water source for the life of the work,
- (f) the water supply work (bore) approval holder is, within 2 months of completion of the work, or after the issue of the approval if the water supply work (bore) is existing, to provide the Minister with:
 - (i) details of the work on the prescribed form,
 - (ii) a plan showing accurately the location of the work in relation to portion and property boundaries, and
 - (iii) details of any water analysis and/or pumping tests required by the Minister,
- (g) if during the construction of the water supply work (bore), saline or contaminated water is encountered above the producing aquifer, such water is to be sealed off by:
 - (i) inserting the appropriate length(s) of casing to a depth sufficient to exclude the saline or contaminated water from the work, and
 - (ii) placing an impermeable seal between the casing(s) and the walls of the bore hole from the bottom of the casing to ground level, as specified by the Minister,
- (h) if a water supply work (bore) is abandoned, the water supply work (bore) approval holder is to:
 - (i) notify the Minister that the work has been abandoned, and
 - (ii) seal off the aquifer by backfilling the work to ground level after withdrawing the casing (lining), as specified by the Minister,
- (i) an extraction measurement device shall be installed and maintained on each water supply work (bore) used for extraction of water under an access licence, and such devices shall be of a type and shall be maintained in a manner, which is acceptable to the Minister,
- (j) a water supply work (bore) must comply with the relevant local impact management rules in Part 10 of this Plan,
- (k) notwithstanding the available water determination, it is the responsibility of the water supply work (bore) approval holder to ascertain from the Minister whether or not there are in place any local impact restrictions before commencing to take water from this groundwater source,
- (l) extraction under an access licence through the approved water supply work (bore) is only authorised with respect to the access licences specified on the water supply work (bore) approval,
- (m) a water supply work (bore) approval holder must supply to the Minister on request, and to the required standards, a report pertaining to the quality of the water obtained from the water supply work (bore), and

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

(n) any other conditions required to implement the provisions of this Plan.

Note. It is recommended that the Minister also apply conditions to water use approvals requiring the supply of information on an annual basis on types and areas of irrigated crops.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Part 13 Monitoring and reporting

54 Monitoring and reporting of performance indicators

The monitoring and reporting of the performance indicators specified in clause 13 shall be undertaken by the Minister.

Note. Review and Audit of this Plan

In accordance with section 43 (2) of the Act, this Plan is to be reviewed, within the fifth year of its term, for the purpose of ascertaining whether its provisions remain adequate and appropriate for ensuring the effective implementation of the water management principles of the Act.

In accordance with section 44 of the Act, this Plan will be audited at intervals of no more than five years, for the purpose of ascertaining whether its provisions are being given effect to. This audit is to be carried out by an audit panel appointed by the Minister in consultation with a water management committee where one exists.

Note. The Implementation Program

In accordance with section 51 of the Act, the Minister may establish an Implementation Program that sets out the means by which the provisions of this Plan are to be achieved.

It is proposed that the Minister establish an Implementation Program for this Plan. Pursuant to section 51 (5) of the Act, the implementation program is to be reviewed annually by the Minister to determine whether it is effective in implementing this Plan.

The results of the review of the Implementation Program will be included in the annual report for the Department of Land and Water Conservation.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Part 14 Amendment of this Plan

55 Amendment of this Plan.

- (1) This Part is made in accordance with section 42 (2) of the Act.
- (2) This Plan can be amended in accordance with the following clauses of this Plan:
 - (a) clause 16 in respect to average annual recharge,
 - (b) clause 18 in respect to environmental health water,
 - (c) clause 25 in respect to share components of access licences,
 - (d) clause 28 in respect to long-term average extraction limits, and
 - (e) clause 39 in respect to high priority groundwater dependent ecosystems.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Schedule 1 Dictionary

The following definitions apply to this Plan in addition to the definitions set out in the Act:

abandoned (work) refers to a water supply work (bore) that is no longer being used.

aquifer compaction refers to the reduction in the porosity (pore spaces) of an aquifer, and may result from over pumping the aquifer

available water in relation to a water management area or water source, is the water that is available in that area or water source in accordance with an available water determination that is in force in respect of that area or water source.

available water determination is a written Order by the Minister as to the availability of water for the various categories of access licence in relation to a specified water management area or water source.

Note. An available water determination gives rise to a water allocation that is credited to a water allocation account for each licensed holder.

buffer zone is an area surrounding a groundwater dependent ecosystem or other feature (such as an area of low quality) within which extraction, or the impact of extraction, is restricted.

drawdown refers to a lowering of the the level to which water will rise in cased bores. Natural drawdown may occur due to seasonal climatic changes. Groundwater pumping may also result in seasonal and long-term drawdown.

extraction limit is the amount of the long-term average annual recharge and storage that can be extracted, on average, each water accounting year.

Great Artesian Basin is a 'confined' groundwater basin comprised of a complex multi-layered system of water bearing strata (porous sandstone aquifers) separated by largely impervious rock units, underlying largely arid and semi-arid landscapes to the west of the Great Dividing Range, and extending from Queensland through New South Wales and the Northern Territory, to South Australia.

groundwater is water that occurs beneath the ground surface in the saturated zone.

groundwater dependent ecosystems are ecosystems which have their species composition and natural ecological processes wholly or partially determined by groundwater.

monitoring bore refers to a bore constructed for the purpose of measuring water levels and/or taking samples for water quality analysis.

recharge is the addition of water, usually by infiltration, to an aquifer.

sandstone is sedimentary rock formed by the consolidation of sand grains, the sand component is often predominantly quartz and cemented by a fine grained matrix.

share component is the share component of an access licence.

unconsolidated alluvium/sediment is sediment deposited by the action of flowing water in particular along river beds and floodplains, but not including lakes and seas.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Schedule 3 Contribution to relevant targets in the December 2002 State Water Management Outcomes Plan

Levels of assessed contribution:

FULL – contributes to target in full

HIGH - while not fully contributing to target, there is a good level of contribution

PARTIAL - goes some way to contributing to the target

LOW - only small degree of contribution to the target

| Relevant target | Level of contribution | Comments |
|---|-----------------------|---|
| <p>Target 1e The long term average annual extractions for groundwater limited (or being phased down) to an ecologically sustainable level (the Sustainable Yield) as determined by detailed assessment of each groundwater source and consultation with the relevant management committee. In the absence of such an assessment, the following to apply: 100 percent of average annual recharge for a groundwater source where there is no significant ecosystem dependency; 70 percent of average annual recharge where there is significant ecosystem dependency</p> | PARTIAL | <ul style="list-style-type: none"> • This Plan clearly sets out the final extraction limit as 85% of estimated recharge. • While detailed assessment of groundwater dependent ecosystems was not undertaken, preliminary studies suggest that there may not be significant groundwater dependent ecosystems in this groundwater source. • This Plan provides for the extraction limit to be reviewed by year 5 and the extraction limit revised by up to 20%. |
| <p>Target 1f Rules for adjustments to future available water determinations in the event that the extraction limits are exceeded, clearly prescribed in consultation with the relevant management committee, and acted upon</p> | FULL | <ul style="list-style-type: none"> • Rules set out in Part 9. |
| <p>Target 2 All management plans incorporating mechanisms to protect and restore aquatic habitats, and the diversity and abundance of native animals and plants, with particular reference to threatened species, populations and communities and key threatening processes</p> | HIGH | <ul style="list-style-type: none"> • While detailed assessment of groundwater dependent ecosystems was not undertaken, preliminary studies suggest that there may not be significant groundwater dependent ecosystems in this area and the Lower Gwydir is a losing river. • This Plan prohibits new or replacement extraction bores within 200 metres of any designated high priority dependent groundwater ecosystems and 100 metres for basic rights bores, but these are not likely to be identified before year 5. • This Plan recognises the Minister's right to take action to prevent local groundwater level declines, groundwater quality impacts, and to protect aquifer integrity. |

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

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| | | <ul style="list-style-type: none"> This Plan provides for an assessment of groundwater dependency and variation in environmental health water by up to 20% before year 5. |
| Target 5 Access rights for water access licensees clearly and legally specified in terms of share and extraction components | HIGH | <ul style="list-style-type: none"> This Plan establishes a transparent extraction limit and water allocation account rules. This Plan embargoes new licence applications. Access rights are tradeable. The local extraction rules means that future rights will not be exclusive but affected by the future location of works. Licences with existing bores will have priority over licences requiring new bores. |
| Target 6a For groundwater sources, the total volume of water specified on access licences reduced over the term of a water sharing plan to no more than 125 percent of the Sustainable Yield | FULL | <ul style="list-style-type: none"> The total aquifer access licence share components for this groundwater source will be reduced to 125% of the final extraction limit at the commencement of this Plan. |
| Target 10 Degree of connectivity between aquifers and rivers assessed, and zones of high connectivity mapped to enable baseflows to the river to be maintained or improved | HIGH | <ul style="list-style-type: none"> While detailed assessment of connectivity was not undertaken, preliminary information suggests that the aquifer gains water from the Lower Gwydir River and the river is not therefore dependent on any groundwater baseflow. The top end of the Gwydir regulated river around Gravesend is a gaining river but with low dependency on groundwater baseflows. Groundwater extraction should not have significant impacts on discharges to the river and creeks. |
| Target 11 Groundwater dependent ecosystems identified and mapped for all priority aquifers, and the ecological water requirements assessed to enable local groundwater extraction rates and/or Sustainable Yields to be reviewed | PARTIAL | <ul style="list-style-type: none"> While detailed assessment of groundwater dependent ecosystems was not undertaken, preliminary studies suggest that there may not be significant groundwater dependent ecosystems in this groundwater source. This Plan prohibits new or replacement extraction bores within 200 metres of any designated high priority dependent groundwater ecosystems and 100 metres for basic rights bores, but these are not likely to be identified before year 5. This Plan provides for an assessment of groundwater dependency and variation |

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

| | | |
|--|---------|--|
| | | in environmental health water by up to 20% before year 5. |
| Target 12 Measures in place in all water sources subject to a gazetted water sharing plan to protect domestic and stock rights from the impact of other water access and use | HIGH | <ul style="list-style-type: none"> This Plan has identified the volumes necessary to meet basic domestic and stock requirements. It also protects domestic and stock bores from interference from higher yielding bores. |
| Target 13 The knowledge sharing, training and resources necessary to ensure that Aboriginal people have the capacity to be effectively involved in water management identified and addressed | PARTIAL | <ul style="list-style-type: none"> 1 Aboriginal community representative has been involved in development of this Plan. |
| Target 14 Water sources, ecosystems and sites of cultural or traditional importance to Aboriginal people identified, plans of management prepared, and measures put in place to protect and improve them | PARTIAL | <ul style="list-style-type: none"> No Aboriginal cultural or traditional sites or requirements have been identified. This Plan includes a general objective for protection of cultural values. This Plan prohibits new or replacement extraction bores within 200 metres of any designated high priority dependent groundwater ecosystems and 100 metres for basic rights bores, but these are not likely to be identified before year 5. |
| Target 16a All share components of access licences tradeable | HIGH | <ul style="list-style-type: none"> Aquifer access licence share components and water allocations are tradeable. |
| Target 16f Zones established where necessary for environmental protection and limits/constraints on water dealings in them made explicit | FULL | <ul style="list-style-type: none"> This Plan does not establish zones but does restrict transfers into the areas covered by the Gwydir Watercourse Plan of Management. |
| Target 35 All management plans incorporating water quality objectives that have considered Government approved Interim Environmental Objectives, the current Australian and New Zealand Environment and Conservation Council Guidelines and the recommendations of relevant Healthy Rivers Commission Inquiries | HIGH | <ul style="list-style-type: none"> This Plan includes a general water quality objective. This Plan establishes rules to protect water quality. This Plan is explicit about the beneficial uses and criteria. |
| Target 38 Aquifer water quality vulnerability zones mapped and extraction limits reviewed to reduce the risk of lateral intrusion of poor quality water | PARTIAL | <ul style="list-style-type: none"> No vulnerability mapping of area is referenced. This Plan provides rules for managing lateral movement of poor quality water. |

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Schedule 4 Special access licence rules and conditions

1 General

- (1) This Schedule applies to bore licence numbers 90BL017406, 90BL031080, 90BL031082, 90BL031083, 90BL031085, 90BL031089, 90BL031092, 90BL031093, 90BL031096, 90BL031097, 90BL031098, 90BL031099, 90BL031104, 90BL031106, 90BL031107, 90BL031109, 90BL031110, 90BL031112, 90BL132841, 90BL132843, 90BL132846, 90BL247831, 90BL247832, 90BL247833, 90BL247834, 90BL247835, 90BL247836, 90BL247837, 90BL247838, 90BL247839, 90BL247840, 90BL247841, 90BL247842, 90BL247843, 90BL247844, 90BL247845, 90BL247846, 90BL247847, 90BL247848, 90BL247849, 90BL247850, 90BL247941, 90BL247942, 90BL247943, 90BL247944, 90BL247945, 90BL247946, 90BL247949, 90BL247950, 90BL247951, 90BL247952 and 90BL247953 granted under the *Water Act 1912*, being associated with property account number 90PT981567, and any aquifer access licence arising from these at the commencement of Part 2 of Chapter 3 of the Act.
- (2) If any access licence specified in subclause (1) is subject to a dealing under sections 71D, 71E, 71F, 71J, or 71G of the Act, and that dealing results in the assignment of access rights or water allocations to or from the licence specified in subclause (1), or the nomination of a water supply work at a location other than that specified on the licence, then Schedule 4 will be removed from this Plan, and any special mandatory conditions attached to the access licence arising from this Schedule removed from the licence.

2 Additional annual accounting for water extraction rules

- (1) In any one water accounting year, subject to local impact management restrictions arising from Part 10, Division 3 of this Plan, water taken from this groundwater source under any aquifer access licence may not exceed a volume of 750% of the access licence share component, as amended by clause 25.
- (2) Total water in any account at any time may not exceed a volume of 750% of the aquifer access licence share component, as amended by clause 25.
- (3) A maximum of 670% of any aquifer access licence share component may be carried forward in a water allocation account from one water accounting year to the next.

3 Additional mandatory conditions

The aquifer access licence on this schedule shall have mandatory conditions in relation to the following:

- (a) water may only be taken if the available water determination for regulated river (high security) access licences in the Gwydir Regulated River water source is less than 100%,
- (b) water may only be taken if there is no allocation remaining in the water allocation account of licence number SA001044 granted under the *Water Act 1912*, and any regulated river (high security) access licence arising from this at the commencement of Part 2 of Chapter 3 of the Act,

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

- (c) water may not be taken in any water year that the licence specified in subclause (3) (b) has been or is subject to a dealing under sections 71D, 71E, 71F, 71J, or 71G of the Act, and that dealing results in the assignment of access rights or water allocations from the licence specified in subclause (3) (b), or the nomination of a water supply work at a location other than that specified on the licence, and
- (d) notwithstanding clause 2 of this Schedule, the total water that may be taken in a water accounting year under this access licence, and the regulated river (high security) access licence specified in subclause (3) (b), shall not exceed 13,275 megalitres, plus any water allocations assigned to these access licences in that year.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

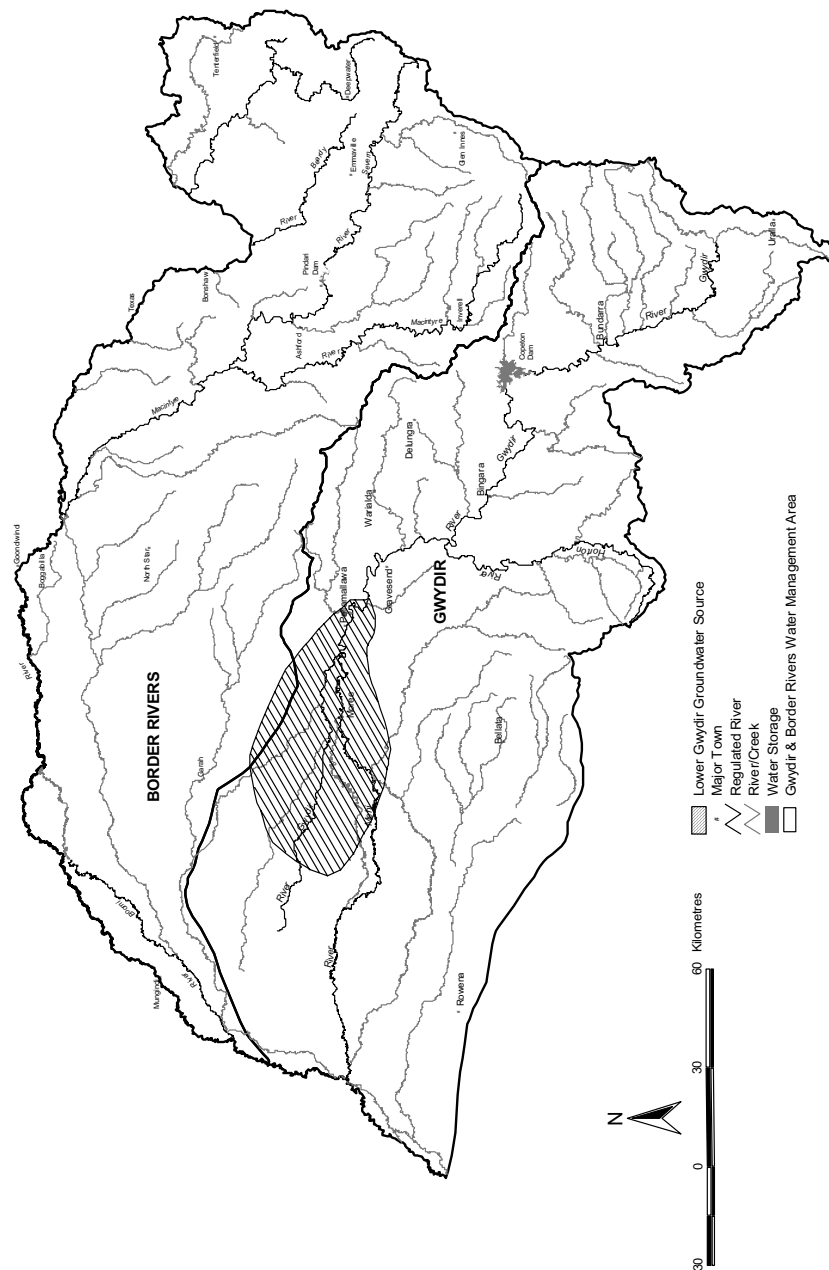
Schedule 5 High priority groundwater dependant ecosystems

To be inserted by the Minister in accordance with clause 39 (3).

Note. The offices of the Department of Land and Water Conservation, shown in Appendix 2, should be contacted for details applicable to this Schedule.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Appendix 1 Gwydir and Border Rivers Water Management Areas



Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Appendix 2 Location of maps

The maps in relation to this Plan may be inspected at:

District Office
Department of Land and Water Conservation
66-68 Frome Street
MOREE NSW 2400

Regional Office
Department of Land and Water Conservation
155-157 Marius Street
TAMWORTH NSW 2340

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Appendix 3 Performance indicators

| Performance indicators for the Lower Gwydir Groundwater Source Water Sharing Plan | | | |
|--|-------------------------------------|--|--|
| Performance indicator | Related objective | As measured by | Commentary |
| (a) Change in groundwater extraction relative to the extraction limit. | 11(a), (b), (c), (d), (f), and (g). | <ul style="list-style-type: none"> Average annual extraction volume for the groundwater as a percentage of the extraction limit (commonly known as the sustainable yield). | <ul style="list-style-type: none"> Plan provisions will set the mechanism to remain within the sustainable yield over the long-term. |
| (b) Change in climate adjusted groundwater levels. | 11(a), (b), (c), (d), (f), and (g). | <ul style="list-style-type: none"> Average annual frequency and duration (in days) of water level drawdown below pre-plan hydrographs. Density of extraction in critical areas. | <ul style="list-style-type: none"> Water levels will fluctuate with climate and resultant variable recharge. Some level declines will be expected during dry times, just as level rises are expected during wetter periods. |
| (c) Change in water levels adjacent to identified groundwater dependent ecosystems. | 11(a) and (g). | <ul style="list-style-type: none"> Identification of groundwater dependent ecosystems (GDEs). Assessment of the relationship between selected GDEs and local groundwater levels in terms of the water requirements of these GDEs. Assessment of the adequacy of buffer zones or local impact restrictions by comparison of water levels near in or GDEs compared to plan baseline. Frequency and duration of water level drawdown below critical levels. | <ul style="list-style-type: none"> Groundwater dependent ecosystems should be identified in the water sharing plans. |
| (d) Change in groundwater quality. | 11 (b), (d), (f), and (h). | <ul style="list-style-type: none"> Trends in selected water quality parameters at selected monitoring bores that are likely to be affected by groundwater extraction. | <ul style="list-style-type: none"> Many water quality issues are a function of contamination by land based activities, rather than extraction. |
| (e) Change in | 11 (b), | <ul style="list-style-type: none"> Change in regional | <ul style="list-style-type: none"> Note that there are |

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

| Performance indicators for the Lower Gwydir Groundwater Source Water Sharing Plan | | | |
|--|---------------------------------|--|--|
| Performance indicator | Related objective | As measured by | Commentary |
| economic benefits derived from groundwater extraction and use. | (e), and (h). | gross margins. <ul style="list-style-type: none"> • Change in unit price of water transferred. | <ul style="list-style-type: none"> • many factors affecting economic status of a region, for example commodity prices, other sources of water (i.e. surface water) etc. • Assessment undertaken as part of plan performance monitoring will make assumptions to attempt to identify the impact of the plan's provisions. |
| (f) Change in structural integrity of the aquifer. | 11 (b) and (c). | <ul style="list-style-type: none"> • Annual number of reports of new land subsidence and reduced bore yields. • Survey if necessary. | |
| (g) Extent to which domestic and stock rights requirements have been met. | 11(j) and (g). | <ul style="list-style-type: none"> • Monitor increase in applications for water supply work (bore) approvals. • Number of reports of interference between high yield extraction and basic rights, or number of domestic and stock water supply works deepened. • Assess frequency and duration of water level drawdown below critical thresholds. | <ul style="list-style-type: none"> • Basic rights usage figures in water sharing plans are estimated (not actual use). • Increases in licences may be due to past unlicensed works. |
| (h) Extent to which local water utility requirements have been met. | 11 (b), (e), (f), (g), and (h). | <ul style="list-style-type: none"> • Monitor increase in access by local water utilities. • Monitor impact of interference between high yield extraction and local water utility extraction. | |
| (i) Extent to which native title rights requirements have been met. | 11(f), (g), and (h). | <ul style="list-style-type: none"> • Monitor increase in applications for water supply work (bore) approvals for native title basic rights. • Number of reports of | |

 Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

| Performance indicators for the Lower Gwydir Groundwater Source Water Sharing Plan | | | |
|---|---|---|--|
| Performance indicator | Related objective | As measured by | Commentary |
| | | <p>interference between high yield extraction and native title rights holders, or number of water supply works deepened.</p> <ul style="list-style-type: none"> Assess frequency and duration of water level drawdown below critical thresholds. | |
| (j) Extent of recognition of spiritual, social, and customary values of groundwater to Aboriginal people. | 11(a), (b), (c), (d), (f), (g) and (h). | <ul style="list-style-type: none"> Assessment of amount and type of information collected to identify the range of values of water to Aboriginal people. | <ul style="list-style-type: none"> The collection of information on the values associated with water is considered the first step in addressing the objects of the Act. It would be expected that at the end of five years there should be relevant information collected for each water source, as a minimum requirement. |

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Appendix 4 Calculation of domestic and stock rights

Requirements for Lower Gwydir Groundwater Source

A component of the Lower Gwydir Groundwater Source Water Sharing Plan is the provision of basic landholder rights to groundwater for domestic and stock purposes.

The domestic and stock requirements for the Lower Gwydir Groundwater Source was calculated for water supply works identified within the Lower Gwydir Groundwater Source. These domestic and stock water supply works are those that are not within the boundaries of a property with a groundwater access licence, and do not form part of a local water utility access licence.

It is difficult to measure extraction from these water supply works as their use is not metered. The domestic and stock requirements in this Plan of 694 ML/yr is likely to be an overestimate, the Gwydir Groundwater Management Committee agreed that this figure be included in this Plan and understood the process used in estimating this figure.

The following assumptions were made to calculate the requirements for basic rights domestic and stock extraction:

- each property has an equivalent domestic use irrelevant of the size of the property,
- drinking, cooking, bathing, washing of clothes and cars and other domestic purposes is 0.064 ML/yr per person,
- the average house hold has 4 residents,
- average garden usage is 2 ML/yr,
- stock use is assumed to be the Dry Sheep Equivalent, and the average consumption per head per day is 6 litres (*Management options during a drought*, NSW Agriculture, 1986),
- at a carrying capacity of 4 head/hectare, and
- there may be other sources of water including water from creeks/rivers, dams and tanks.

Calculations

Domestic – A per property usage

$$4 \times 0.064 = 0.256 \text{ ML/yr}$$

$$\text{Garden} = 2.000 \text{ ML/yr}$$

$$\text{Total Domestic Use} = 2.250 \text{ ML/yr}$$

Stock

$$6\text{L/d} \times 365 \text{ days} \times 4 \text{ (sheep/ha)} / 1,000,000\text{L} = 0.0088 \text{ ML/yr/ha}$$

Total Domestic and Stock Requirements

214 properties, with a total area of 26,484 hectares were identified in the Lower Gwydir Groundwater Source as having domestic and stock water supply work(s). The total domestic

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

and stock demand is therefore 694 ML/yr, with 482 ML/yr and 212 ML/yr for domestic use and stock use respectively.

Future Development

Based on historical development of stock and domestic water supply works in the Lower Gwydir Groundwater Source it is estimated that there will be a growth rate of 21% over the period of the water sharing plan, an additional 42 domestic and stock water supply works to access basic landholder rights.

It is assumed that all new domestic and stock water supply works will be drilled and constructed on separate properties. The existing data indicates that the average size of these properties would be 81.5 hectares. The total additional stock and domestic requirements for the period of this Plan will be 125 ML/yr. This is 94.5 ML/yr and 30.5 ML/yr for domestic use and stock use respectively.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

Appendix 5 Minister's access licence dealing principles

The following is the text from the Access Licence Dealing Principles Order, published in the NSW Government Gazette on 27 December 2002.

Access Licence Dealing Principles Order 2002

Part 1 Introduction

1. Name of Order

This Order is the *Access Licence Dealing Principles Order 2002*.

2. Commencement

This Order commences on 20 December 2002.

3. Establishment of access licence dealing principles

The access licence dealing principles set out in this order are established.

4. Interpretation

- (1) References in this order to licences of category 'runoff harvesting' or 'regulated river (conveyance)' are subject to those categories being prescribed by regulation made under section 57 (k) of the Act.
- (2) Notes in this order do not form part of the order.

5. Effect

- (1) Consistent with section 71K (1) of the Act, all applications for access licence dealings under Division 4 of Part 2 of Chapter 3 of the Act are to be dealt with in accordance with:
 - (a) the water management principles, and
 - (b) the principles in this order, and
 - (c) access licence dealing rules established by any relevant management plan.
- (2) Consistent with section 71L of the Act, any access licence dealing rules established by management plans must be consistent with the principles in this order.

6. Definitions

In this order the following definitions apply:

dealing means a dealing under Chapter 3, Part 2 Division 4 of the *Water Management Act 2000*.

farm dam is a privately owned dam typically of earthen construction designed to collect and/or store water for use on one or a few properties. It does not include publicly owned dams or weirs.

groundwater source means a water source specified in a groundwater management plan.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

hydrologically connected water sources are water sources where water from one flows into the other, or, in the case of river systems, where flow from both goes into a common river downstream.

management plan means a plan made under section 41 or 50 of the *Water Management Act 2000*.

regulated river water source means a water source specified in a regulated river management plan.

runoff harvesting dam is a farm dam on a hillside or minor stream which collects and stores rainfall runoff. Minor streams are as defined in an order made under section 53 of the *Water Management Act 2000*.

unregulated river water source means a water source specified in an unregulated river management plan.

Part 2 General principles

7. Impacts on water sources

- (1) Dealings should not adversely affect environmental water and water dependent ecosystems as identified in any relevant management plan.
- (2) Dealings should be consistent with any strategies to maintain or enhance water quality identified in any relevant management plan.
- (3) In unregulated river water sources, dealings should not increase commitments to take water from water sources or parts of water sources identified in any relevant management plan as being of high conservation value.
- (4) In unregulated river water sources or a groundwater sources, dealings should not increase commitments to take water from water sources or parts of water sources above sustainable levels identified in any relevant management plan.
- (5) In regulated river water sources, dealings should not increase daily demand for water delivery at those locations and times where it is identified in any relevant management plan that demand exceeds delivery capacity.
- (6) In regulated river water sources, dealings should not increase commitments to take water in lower river or effluent systems where this will result in flow at greater than 80% of channel capacity for more than 10% of days used for water delivery.
- (7) In this clause, **commitments to take water** refers, in relation to all access licences with nominated works in that water source or part of a water source, to:
 - (a) the total volume of share components, or
 - (b) the total volume of water allocations in water allocation accounts, or
 - (c) where relevant, the sum of limits on rates of extraction in extraction components.

8. Impacts on indigenous, cultural, heritage or spiritual matters

- (1) Dealings should not adversely affect geographical and other features of indigenous significance.
- (2) Dealings should not adversely affect geographical and other features of major cultural, heritage or spiritual significance.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

9. Impacts on water users

- (1) Dealings should not adversely affect the ability of a person to exercise their basic landholder rights.
- (2) Dealings should have no more than minimal effect on the ability of a person to take water using an existing approved water supply work and any associated access licences. This should be addressed by constraints on dealings established in access licence dealing rules in relevant management plans.

10. Maximising social and economic benefits

- (1) The objective of access licence dealings is to help to facilitate maximising social and economic benefits to the community of access licences as required under the objects of the Act. Dealings do this by:
 - (a) allowing water to move from lower to higher value uses, and
 - (b) allowing the establishment of water markets that value the access licences, thereby encouraging investment in water efficient infrastructure, and
 - (c) allowing greater flexibility to access licence holders.
- (2) Subject to other principles in this order, access licence dealing rules should allow maximum flexibility in dealings to promote the objectives set out in subclause (1).

Part 3 Principles for specific types of access licence dealings

11. Transfer of access licences

- (1) This clause applies to dealings under section 71A of the Act.
- (2) Dealings under section 71A are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or
 - (b) if the licence is suspended under section 78 of the Act.
- (3) Access licence dealing rules established by a management plan shall not regulate or prohibit dealings under section 71A of the Act.

Note. as indicated in section 71A (3), consent to the transfer of a local water utility access licence may only be granted if the transferee is a local water utility, and consent to the transfer of a major water utility access licence may only be granted if the transferee is a major water utility.

12. Conversion of access licence to new category

- (1) This clause applies to access licence dealings under section 71B of the Act.
- (2) Dealings under section 71B are prohibited:
 - (a) if the licence is proposed to be converted to category regulated river (conveyance) or category estuarine or category coastal, or
 - (b) if there is an outstanding debt under the Act in respect of the licence, or
 - (c) if the licence is suspended under section 78 of the Act, or
 - (d) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, or

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

- (e) if the licence share component is not numerically quantified.
- (3) Dealings under section 71B are prohibited unless provisions of the relevant management plan:
 - (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (4) The share and extraction components of a new licence issued under a dealing under section 71B must comply with any requirements that are specified in the relevant management plan for a licence granted under section 63 of the Act for the new category.
- (5) Except for where it is otherwise specified in access licence dealing rules in the relevant management plan or where this dealing is accompanied by a dealing under section 71E, water allocations remaining in the water allocation account of the cancelled licence are to be credited to the new licence, up to a maximum of the share component volume of the new licence.
- (6) The share component on a new access licence issued under a dealing under section 71B is to be of a volume equal to the volume on the cancelled licence multiplied by a conversion factor determined by the Minister in accordance with any rules set out in relevant management plans.
- (7) Conversion factor rules in management plans:
 - (a) must be based on protecting environmental water and basic landholder rights as specified in the management plans, and maintaining available water to other access licences, and
 - (b) are not to be set for the purpose of achieving a reduction in overall water extraction from water sources.
- (8) Subject to the granting of an application under section 71J, any nominated water supply works on the cancelled licence may be carried forward to the new licence.
- (9) For conversion of category from regulated river (high security), unregulated river or aquifer to major utility and vice versa:
 - (a) a major utility licence may only be converted to another category if it has components relating to only one water source, and
 - (b) subject to imposing such mandatory conditions as are required by the relevant management plan for the new category, the extraction component on the cancelled licence is to be carried over to the new licence.
- (10) For conversion of category from regulated river (general security) to regulated river (high security) and vice versa, and for conversion of category from domestic and stock to regulated river (high security) and vice versa, the extraction component on the cancelled licence is to be carried over to the new licence, subject to imposing such mandatory conditions as are required by the relevant management plan for the new category.
- (11) For conversion of category from regulated river (conveyance) to regulated river (high security) or regulated river (general security), the extraction component on the cancelled licence is to be carried over to the new licence, subject to imposing

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

such mandatory conditions as are required by the relevant management plan for the new category.

- (12) For conversion of category from regulated river (general security) to unregulated river:
- (a) no parts of the extraction component on the cancelled licence are to be carried over to the new licence, and
 - (b) the extraction component of the new licence is to specify a location or area which is on an unregulated river (apart from a minor stream as defined in an order made under section 53 of the Act), and
 - (c) the application for conversion of category from regulated river (general security) to unregulated river must be accompanied by an application under section 71E to change the share component to an unregulated river water source, and is conditional on granting of that application, and
 - (d) water allocations remaining in the water allocation account on the cancelled licence may not be credited to the new licence.
- (13) For conversion of category from unregulated river to runoff harvesting:
- (a) no parts of the extraction component on the cancelled licence are to be carried over to the new licence, and
 - (b) the extraction component of the new licence is to specify a location or area which is not on a river (apart from a minor stream as defined in an order made under section 53 of the Act), and
 - (c) the application for conversion of category from unregulated river to runoff harvesting access licence must be accompanied by an application under section 71J to nominate the water supply work to a runoff harvesting dam, and is conditional on granting of that application.
- (14) For conversion of category from runoff harvesting to unregulated river:
- (a) no parts of the extraction component on the cancelled licence are to be carried over to the new licence, and
 - (b) the extraction component of the new licence is to specify a location or area which is on an unregulated river (apart from a minor stream as defined in an order made under section 53 of the Act).
- (15) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. Under section 71B applications to convert local water utility access licences and supplementary access licences are prohibited, and licences granted are subject to the mandatory conditions applicable to the category or subcategory of licence to which it belongs. Also licences may only be granted in relation to the same water source or water management area as the cancelled licence.

13. Subdivision of access licences

- (1) This clause applies to subdivision dealings under section 71C of the Act.
- (2) Dealings under section 71C are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

- (b) if the licence is suspended under section 78 of the Act.
- (3) Subject to the granting of an application under section 71J, any nominated water supply works on the cancelled licence may be carried forward to the new licences.
- (4) The category of the new licences is to be the same as the category of the cancelled licence.
- (5) The areas or locations specified in the cancelled licence are to be carried over to all the new licences.
- (6) Any indivisible parts of the times, rates or circumstances specified in the extraction component of the cancelled licence are to be carried forward to all the new licences.
- (7) Water allocations remaining in the water allocation account of the cancelled licence are to be credited to the new licences so that the combined water allocations in the accounts of the new licences are no greater than the water allocations which remained in the account of the cancelled licence.
- (8) Access licence dealing rules established by a management plan shall not regulate or prohibit subdivision dealings under section 71C of the Act.

Note. As indicated in section 71C (3), the combined share components and combined extraction components of the new licences are to be no greater than the share and extraction components of the cancelled licence, and conditions on the cancelled licence are to be carried over to the new licences.

14. Consolidation of access licences

- (1) This clause applies to consolidation dealings under section 71C of the Act.
- (2) Consolidation dealings under section 71C are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of any of the licences, or
 - (b) if any of the licences are suspended under section 78 of the Act, or
 - (c) if the licences to be consolidated do not have share components in the same water source, or
 - (d) if the location or area specified in the extraction component of the licences is not the same.
- (3) Subject to the granting of an application under section 71J, any nominated water supply works on the cancelled licences may be carried forward to the new licence.
- (4) Water allocations remaining in the water allocation accounts on the cancelled licences are to be credited to the new licence so that the water allocations in the account of the new licence is no greater than the sum of the water allocations remaining in the accounts of the cancelled licences.
- (5) Access licence dealing rules established by a management plan shall not regulate or prohibit consolidation dealings under section 71C of the Act.

Note. as indicated in section 71C, the licences to be consolidated must be of the same category or subcategory, the combined share components and combined extraction components of the new licences are to be no greater than the share and extraction components of the cancelled licence, and conditions on the cancelled licences are to be carried over to the new licences.

15. Assignment of rights under access licences

- (1) This clause applies to assignment of rights dealings under section 71D of the Act.
- (2) Dealings under section 71D are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of any of the licences, or
 - (b) if any of the licences are suspended under section 78 of the Act, or
 - (c) if any of the licences are of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act.
- (3) Only share or extraction components, or parts thereof, that are numerically quantified may be assigned from one licence to another.
- (4) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. As indicated in section 71D, the licences which are involved in a dealing under section 71D must be of the same category and have share components in the same water source or water management area. This dealing does not apply to local water utility access licences.

16. Change of water source

- (1) This clause applies to amendment of share component dealings under section 71E of the Act.
- (2) Dealings under section 71E are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or
 - (b) if the licence is suspended under section 78 of the Act, or
 - (c) if the licence does not have the share component expressed as a volume, or
 - (d) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, or
 - (e) from an unregulated river water source to a regulated river water source, or
 - (f) from a groundwater source to a regulated river or unregulated river water source, or vice versa, or
 - (g) if the licence is of category major water utility or supplementary.
- (3) A dealing under section 71E is prohibited unless there is a hydrologic connection between the water sources of the cancelled and issued licences.
- (4) A dealing under section 71E is prohibited unless provisions of the relevant management plans:
 - (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (5) The share and extraction components of a new licence issued under this dealing must comply with any requirements that are specified in the relevant management plan for a licence granted under section 63 of the Act.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

- (6) The share component on the new access licence is to be of a volume equal to the volume on the cancelled licence multiplied by a conversion factor determined by the Minister in accordance with any rules set out in relevant management plans.
- (7) Conversion factors rules in management plans:
 - (a) must be based on protecting environmental water and basic landholder rights as specified in the management plans, and maintaining the available water to other access licences, and
 - (b) are not to be set for the purpose of achieving a reduction in overall water extraction from water sources.
- (8) Nominated water supply works on the cancelled licence are not to be carried over to the new licence.
- (9) No water allocations remaining in the water allocation account of the cancelled licence may be credited to the new licence.
- (10) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. As indicated in section 71E, the new licence arising from a dealing under section 71E is subject to the mandatory conditions relevant to its category or subcategory and water source. This dealing does not apply to local water utility access licences.

17. Amendment of extraction component of access licence

- (1) This clause applies to amendment of extraction component dealings under section 71F of the Act.
- (2) Dealings under section 71F are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence,
 - (b) if the licence is suspended under section 78 of the Act, or
 - (c) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences.
- (3) Amendment of the times, rates and circumstances part of the extraction component may only occur where:
 - (a) access licence dealing rules in the relevant plan make provision for it consistent with the principles in Part 2 of this order, and
 - (b) those rules specifically indicate the nature of those amendments which are allowed.
- (4) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. As indicated in section 71F, the area or location arising from a variation of an access licence under this dealing must relate to the same water management area or water source as that to which the original area or location related.

18. Assignment of water allocations between access licences

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

- (1) This clause applies to assignment of water allocation dealings under section 71G of the Act.
- (2) Dealings under section 71G are prohibited:
 - (a) if either of the access licences is suspended under section 78 of the Act, or
 - (b) if either of the access licences are of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences, or
 - (c) if a method of measurement of water extraction which is satisfactory to the Minister is not established for all nominated water supply works on both access licences, or
 - (d) if any of the access licences is of category runoff harvesting, or
 - (e) if any of the access licences is of category major utility, unless specific provision is made in access licence dealing rules to allow this, or
 - (f) from a supplementary water access licence to a licence of any other category.
- (3) Assignment of water allocations between access licences relating to different water sources is prohibited if:
 - (a) either licence is of category supplementary, or
 - (b) there is no hydrologic connection between the water sources, or
 - (c) one water source is a regulated river and the other is an unregulated river, or
 - (d) one water source is a groundwater source and the other is a regulated river or unregulated river water source.
- (4) Assignment of water allocations between access licences relating to different water sources is prohibited unless provisions of the relevant management plans:
 - (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (5) Assignment of water allocations from a local water utility access licence is prohibited unless:
 - (a) the Minister has approved a demand management plan for all NSW towns supplied under the local water utility access licence, and
 - (b) the Minister has approved a drought management plan for all NSW towns supplied under the local water utility access licence, and
 - (c) the Minister is satisfied the assignment will not put the water supply for NSW towns supplied by the local water utility at risk.
- (6) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

19. Interstate transfer dealings

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

- (1) This clause applies to dealings under section 71H of the Act.
- (2) Any dealings under section 71H must be consistent with the relevant inter-state agreement.
- (3) Dealings under section 71H are prohibited unless the waters for which the interstate access licence equivalent has or will have rights to are hydrologically connected to the water source in which to which the access licence to be issued or revoked relates.
- (4) Dealings under section 71H which revoke an access licence are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or
 - (b) if the licence is suspended under section 78 of the Act, or
 - (c) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, or
 - (d) if the licence is of category local water utility or major water utility.
- (5) The share and extraction components of a new licence issued under this dealing must comply with any requirements that are specified in the relevant management plan for a licence granted under section 63 of the Act.
- (6) Dealings under section 71H are prohibited unless arrangements are in place which:
 - (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (7) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

20. Interstate assignment of water allocations

- (1) This clause applies to interstate assignment of water allocation dealings under section 71I of the Act.
- (2) Any dealings under section 71I must be consistent with the relevant inter-state agreement.
- (3) Dealings under section 71I are prohibited:
 - (a) if the access licence is suspended under section 78 of the Act, or
 - (b) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences, or
 - (c) if a method of measurement of water extraction which is satisfactory to the Minister is not established for all nominated water supply works on the access licence, or
 - (d) if the access licence is of category runoff harvesting or supplementary water, or

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

- (e) if the access licence is of category major utility, unless specific provision is made in access licence dealing rules in the relevant management plan to allow this.
- (4) This dealing is prohibited unless arrangements are in place which:
 - (a) protect environmental water from being affected by the dealing, and
 - (b) protect basic landholder rights from being affected by the dealing, and
 - (c) protect the available water under other access licences from being affected by the dealing.
- (5) Interstate assignment of water allocations from a local water utility access licence is prohibited unless:
 - (a) the Minister has approved a demand management plan for all NSW towns supplied under the local water utility access licence, and
 - (b) the Minister has approved a drought management plan for all NSW towns supplied under the local water utility access licence, and
 - (c) the Minister is satisfied the assignment will not put the water supply for NSW towns supplied by the local water utility at risk.
- (6) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

21. Nomination of water supply works

- (1) This clause applies to nomination of water supply works dealings under section 71J of the Act.
- (2) Dealings under section 71J are prohibited if the access licence is suspended under section 78 of the Act.
- (3) Dealings under section 71J are prohibited if the access licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences, with the following exceptions:
 - (a) if new or additional works are to be nominated, where those works supply the same property as the current nominated works, or a contiguous property to the property supplied by the current nominated works which is occupied by the same landholder, or
 - (b) if a nominated work is withdrawn, that there remains at least one nominated work.
- (4) Dealings under section 71J are prohibited if the access licence is of category local water utility, with the following exceptions:
 - (a) if new or additional works are to be nominated, that those works supply the same town water supply scheme as the current nominated works, or
 - (b) if a nominated work is withdrawn, that there remains at least one nominated work.

Water Sharing Plan for the Lower Gwydir Groundwater Source 2003

- (5) Nomination of a water supply work is prohibited if the access licence does not have an extraction component allowing taking of water at the location of the nominated work.
- (6) With regard to runoff harvesting access licences:
 - (a) the nominated work must be a runoff harvesting dam of capacity consistent with the share component of the access licence, and
 - (b) withdrawal of nominated work may only be granted where arrangements are in place to ensure that the nominated work does not conserve any more water than is permitted pursuant to the exercise of basic landholder rights.
- (7) Withdrawal of nomination may not be prohibited by access licence dealing rules, except for as otherwise specified in this clause.
- (8) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003 Order

under the

Water Management Act 2000

Pursuant to section 50 of the *Water Management Act 2000*, I, the Minister for Land and Water Conservation, make the following Minister's plan.

JOHN AQUILINA, M.P.,
Minister for Land and Water Conservation

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

Contents

| | Page |
|--|------|
| Part 1 Introduction | 1 |
| Part 2 Vision, objectives, strategies and performance indicators | 3 |
| Part 3 Basis for water sharing | 5 |
| Part 4 Environmental water provisions..... | 7 |
| Part 5 Basic landholder rights..... | 9 |
| Part 6 Bulk access regime..... | 10 |
| Part 7 Requirements for water for extraction under access licences | 11 |
| Part 8 Rules for granting access licences..... | 13 |
| Part 9 Limits to the availability of water | 14 |
| Division 1 Long-term average extraction limits..... | 14 |
| Division 2 Available water determinations | 15 |
| Part 10 Rules for managing access licences | 17 |
| Division 1 General..... | 17 |
| Division 2 Water allocation account management..... | 17 |
| Division 3 Management of local impacts..... | 19 |
| Part 11 Access licence dealing rules..... | 24 |
| Part 12 Mandatory conditions..... | 26 |
| Part 13 Monitoring and reporting | 29 |
| Part 14 Amendment of this Plan..... | 30 |
| Schedule 1 Dictionary | 31 |
| Schedule 2 Lower Macquarie Groundwater Sources..... | 32 |
| Schedule 3 Contribution to relevant targets in the December 2002 State Water Management Outcomes Plan | 33 |
| Schedule 4 High priority groundwater dependent ecosystems | 37 |
| Appendix 1 Macquarie Water Management Area..... | 38 |
| Appendix 2 Location of maps | 39 |
| Appendix 3 Performance indicators | 40 |
| Appendix 4 Minister's access licence dealing principles..... | 43 |

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

Part 1 Introduction

1 Name of Plan

This Plan is the *Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003* (hereafter **this Plan**).

2 Nature and status of this Plan

- (1) This Plan is made under section 50 of the *Water Management Act 2000* as amended (hereafter **the Act**).
- (2) This Plan covers the core provisions of section 20 of the Act for water sharing, and additional provisions of section 21 of the Act, and other relevant matters.

3 Date of commencement

This Plan takes effect on 1 July 2003 and ceases 10 years after that date.

4 Area to which this Plan applies

- (1) The area in respect of which this Plan is made is that area of land within the Macquarie Water Management Area known as the Lower Macquarie Groundwater Sources (hereafter **these groundwater sources**) as shown in Schedule 2.

Note. The Macquarie Water Management Area is shown on a map in Appendix 1.

Note. Maps referred to in this Plan may be inspected at offices of the Department of Land and Water Conservation listed in Appendix 2.

- (2) The following groundwater sources referred to in this Plan are shown on the map in Schedule 2:
 - (a) Lower Macquarie Zone 1 groundwater source (hereafter **Zone 1**),
 - (b) Lower Macquarie Zone 2 groundwater source (hereafter **Zone 2**),
 - (c) Lower Macquarie Zone 3 groundwater source (hereafter **Zone 3**),
 - (d) Lower Macquarie Zone 4 groundwater source (hereafter **Zone 4**),
 - (e) Lower Macquarie Zone 5 groundwater source (hereafter **Zone 5**), and
 - (f) Lower Macquarie Zone 6 groundwater source (hereafter **Zone 6**).

Note. The Lower Macquarie Groundwater Sources were previously known as Groundwater Management Area 008. Zones 1, 2, 3, 4, and 5 were previously known as 8A, 8B, 8C, 8D and 8E, respectively. Zone 6 was previously within the Upper Macquarie Groundwater Management Area 009.

5 Waters to which this Plan applies

The waters in these groundwater sources include all water contained in the unconsolidated alluvial aquifers and the sandstone aquifers of the Great Artesian Basin within the area to which this Plan applies.

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

6 Interpretation

- (1) Terms that are defined in the Act have the same meaning in this Plan and the effect of these terms may be explained in Notes.
- (2) Additional terms to those identified in subclause (1) are defined in Schedule 1.
- (3) Notes in the text of this Plan do not form part of this Plan.
- (4) Schedules to this Plan form part of this Plan.
- (5) Appendices to this Plan do not form part of this Plan.

7 Effect on licences, authorities and permits under the Water Act 1912

- (1) This Plan applies from the date of commencement to those matters that are administered under the Act at that time.
- (2) This Plan applies to other matters from the date the relevant provisions of the Act are commenced.

Note. To the extent possible, the rules embodied in this Plan will apply to matters administered under the *Water Act 1912* in the interim.

8 State Water Management Outcomes Plan

- (1) In accordance with section 16 (1) (a) of the Act, this Plan is consistent with the State Water Management Outcomes Plan published in the NSW Government Gazette on 20 December 2002 (hereafter *the SWMOP*).
- (2) Schedule 3 identifies the SWMOP targets applicable to this Plan and how this Plan contributes to those targets.

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

Part 2 Vision, objectives, strategies and performance indicators

9 Vision, objectives, strategies and performance indicators

This Part is made in accordance with section 35 (1) of the Act.

10 Vision

The vision for this Plan is to ensure the ecological, social, cultural and economic sustainability of the Lower Macquarie Groundwater Sources.

11 Objectives

The objectives of this Plan are to:

- (a) maintain, and if necessary restore groundwater dependent ecological processes and biodiversity,

Note. Subclause (a) is an environmental objective. The outcomes of this objective would include: the identification of dependent ecosystems and their critical ecological processes; identification and measurement of key indicators of dependent ecosystem health; the implementation of management systems to support high priority dependent ecosystems' ecological processes and, the environmental impacts of management change as assessed against the Vision.

- (b) optimise or maximise the social outcomes of groundwater management,

Note. Subclause (b) is a social objective. The outcomes of this objective would include: no decline in groundwater quality as a result of extraction; sustainable groundwater source for present and future generations; priority of access for town water supply and basic rights; and social impacts of management changes defined and assessed against the Vision.

- (c) contribute to a sustainable regional economy,

Note. Subclause (c) is an economic objective. The outcomes of this objective would include: access to the resource clearly defined (reliability, trading and other management); and, economic impacts of management changes defined and assessed against the Vision.

- (d) recognise and respect Aboriginal cultural responsibilities and obligations to the landscape, and

- (e) preserve and enhance the cultural benefits and values derived from groundwater.

Note. Subclauses (d) and (e) are cultural objectives. The outcomes of these objectives would be to have the cultural benefits and values of the Lower Macquarie Groundwater Sources identified, and the cultural impacts of management changes defined and assessed against the Vision.

12 Strategies

The strategies of this Plan are to:

- (a) establish environmental water rules and manage access to groundwater consistent with those rules,
- (b) establish rules for the protection of basic landholder rights,

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

- (c) establish an extraction limit for each groundwater source, taking into account the requirements of the environment,
- (d) reduce the share component of all access to 125% of the extraction limit in each groundwater source,
- (e) establish rules for the granting of access licences,
- (f) establish rules for determining the groundwater available from time to time under access licences,
- (g) establish water allocation account management rules,
- (h) establish rules for minimising the local impacts of groundwater extraction on the environment, on the aquifer itself, and between users,
- (i) establish the access licence dealing rules, and
- (j) establish the conditions that will apply to access licences and water supply work (bore) approvals.

13 Performance indicators

For the purpose of section 35 (1) (b) of the Act, the following indicators are to be used to determine the performance of this Plan against its objectives:

- (a) change in groundwater extraction relative to the extraction limits,
- (b) change in climate adjusted groundwater levels,
- (c) change in water levels adjacent to identified groundwater dependent ecosystems,
- (d) change in groundwater quality,
- (e) change in economic benefits derived from groundwater extraction and use,
- (f) change in structural integrity of the aquifer,
- (g) extent to which domestic and stock rights have been met,
- (h) extent to which local water utility requirements have been met,
- (i) extent to which native title rights requirements have been met, and
- (j) extent of recognition of spiritual, social and customary values of groundwater to Aboriginal people.

Note. Appendix 3 details the objectives to which these performance indicators relate and the methods for assessing these indicators.

Part 3 Basis for water sharing

14 Basis for water sharing

This Part is made in order to give effect to section 5 (3) of the Act, and in accordance with sections 20 (2) (c) and 21 (e) of the Act.

15 Climatic variability

- (1) This Plan recognises climatic variability and therefore that the level of natural recharge to these groundwater sources will vary.
- (2) To give effect to subclause (1), this Plan has provisions that manage:
 - (a) the sharing of water in these groundwater sources within the limits of water availability on a long-term average basis, and
 - (b) water extractions to enable the protection of groundwater dependent ecosystems, aquifer integrity and water quality in these groundwater sources.

16 Recharge

- (1) The overall basis for water sharing in this Plan is the average annual recharge to each groundwater source as follows:
 - (a) 25,500 megalitres per year (here after *ML/yr*) in Zone 1,
 - (b) 26,600 ML/yr in Zone 2,
 - (c) 11,000 ML/yr in Zone 3,
 - (d) 6,000 ML/yr in Zone 4,
 - (e) undefined in Zone 5, and
 - (f) 9,600 ML/yr in Zone 6.
- (2) A review of recharge for each groundwater source should be undertaken by the Minister by the end of year 2 of this Plan, that should:
 - (a) recommend an average annual recharge for Zone 5, and
 - (b) recommend any changes to the average annual recharge for Zones 1, 2, 3, 4 and 6.
- (3) Pursuant to Section 42 (2) of the Act, the average annual recharge to each groundwater source established in subclause (1) may be varied by the Minister at the end of year 4 of this Plan, following the review of each average annual recharge established in subclause (2), and this variation should:
 - (a) establish the average annual recharge in Zone 5, and
 - (b) revise the estimated average annual recharge for each of Zones 1, 2, 3, 4 and 6.
- (4) The Minister should undertake a second review of the average annual recharge for each groundwater source by the end of year 8 of this Plan.
- (5) Pursuant to Section 42 (2) of the Act, the average annual recharge to each groundwater source established in subclause (1), as varied by subclause (3), may be

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

varied by the Minister at the end of year 9 of this Plan, following the second review of average annual recharge established in subclause (4).

- (6) The Minister shall cause to have undertaken an independent evaluation of the reviews established in subclauses (2) and (4) and such review is to be undertaken prior to any change to this Plan by the Minister under subclauses (3) and (5).
- (7) The Minister will seek advice from the Water Management Committee, or in its absence an advising committee established by the Minister, including, where possible, local representatives of domestic and stock rights groundwater users, water utilities, irrigation and industry, Aboriginal persons, and environment groups, before making any changes to this Plan under subclauses (3) and (5).

Note. The extent of impact of these changes on access by licence holders is limited by the provisions in clause 28.

Part 4 Environmental water provisions

17 Environmental water provisions

This Part is made in accordance with sections 5 (3) and 8 (1), 8 (2) and 20 (1) (a) of the Act.

18 Environmental health water

Note. It is anticipated that the environmental health water provisions in this Part, and management of local impacts provisions in Part 10 of this Plan, will also preserve and enhance the cultural benefits and values derived from groundwater (see clause 11(e)).

- (1) This Plan establishes the following environmental health water rules:
 - (a) subject to Part 10 Division 2 of this Plan, the long-term average storage component of each groundwater source, minus the basic landholder rights, is reserved for the environment, and
 - (b) subject to Part 10 Division 2 of this Plan, 15% of the average annual recharge to each groundwater source, will be reserved for the environment, and Aboriginal cultural heritage.
- (2) A review of the proportion in subclause 1 (b) reserved as environmental health water in each groundwater source, should be undertaken by the Minister at the end of year 2 of this Plan and should:
 - (a) recommend the proportion of the annual average recharge to be reserved for the environment and Aboriginal cultural heritage in Zone 5,
 - (b) recommend any change to the proportion of the annual average recharge to be reserved for the environment and Aboriginal cultural heritage in each of Zones 1, 2, 3, 4 and 6, and
 - (c) identify groundwater dependent ecosystems, establish their groundwater requirements and recommend appropriate management options to protect them.
- (3) Pursuant to Section 42 (2) of the Act, the Minister may vary the portion of average annual recharge reserved as environmental health water in each groundwater source in subclause (1) at the end of year 4 of this Plan, based on the review established in subclause (2), and this variation should:
 - (a) establish the proportion of the annual average recharge to be reserved for the environment and Aboriginal cultural heritage in Zone 5,
 - (b) if required, change the proportion of the annual average recharge to be reserved for the environment and Aboriginal cultural heritage in each of Zones 1, 2, 3, 4 and 6, and
 - (c) designate further high priority groundwater dependent ecosystems, and include them in Schedule 4.
- (4) The Minister should undertake a second review of the proportion of the average annual recharge reserved as environmental health water in each groundwater source, by the end of year 8 of this Plan.
- (5) Pursuant to Section 42 (2) of the Act, the Minister may vary the proportion of the average annual recharge reserved as environment health water in subclause (1), as

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

varied by subclause (3), at the end of year 9 of this Plan, following a review established in subclause (4).

- (6) The Minister shall cause to have undertaken an independent evaluation of the reviews established in subclauses (2) and (4) prior to any change to this Plan in accordance with subclauses (3) and (5).
- (7) The Minister will seek advice from the Water Management Committee, or in its absence a steering committee established by the Minister, including, where possible, representatives of domestic and stock rights and groundwater users, local water utilities, irrigation and industry, Aboriginal persons, environment groups, before making any changes to this Plan under subclauses (3) and (5).

Note. The extent of impact of these changes on access by licence holders is limited by the provisions in clause 28.
- (8) The Minister should consult with the Minister for the Environment before varying environmental health water in accordance with subclauses (3) and (5).
- (9) Any change in environmental health water arising from subclauses (3) and (5) shall not result in the proportion of recharge reserved for the environment being less than 10%, or greater than 30% in any groundwater source.

19 Supplementary environmental water

At the commencement of this Plan, there is no water committed for specified environmental purposes in accordance with section 8 (1) (b) of the Act.

20 Adaptive environmental water

- (1) At any time an access licence holder may, by a process determined by the Minister, commit all or part of their licence as adaptive environmental water.
- (2) The conditions of the commitment specified in subclause (1):
 - (a) are to be established by the Minister,
 - (b) are to be specified on the access licence, and
 - (c) shall be such as to ensure that there is a contribution to the objectives of this Plan.
- (3) At the commencement of this Plan there are no access licences committed to an environmental purpose in accordance with section 8 (1) (c) of the Act.

Part 5 Basic landholder rights

21 Basic landholder rights

- (1) This Part is made in accordance with sections 5 (3) and 20 (1) (b) of the Act.
- (2) If a landholder is unable to exercise their basic landholder rights due to interference to their supply caused by extraction from works nominated by access licences:
 - (a) the landholder's affected water supply work (bore) may be replaced or deepened to ensure continuing access to water for basic landholder rights, or
 - (b) basic rights water may be supplied by alternative means during critical times.
- (3) The Minister may impose a charge on access licence holders in these groundwater sources under section 114 of the Act, as a contribution to the costs of activities or works associated with subclause (2).

Note. The Minister may issue an Order under section 328 of the Act to restrict the exercise of basic landholder rights from these groundwater sources to protect the environment, for reasons of public health, or to preserve existing basic landholder rights.

22 Domestic and stock rights

Note. It is not recommended that the water from these groundwater sources be consumed without prior treatment. Land use activities may have polluted the groundwater in some areas.

- (1) At the commencement of this Plan, the water requirements of holders of domestic and stock rights are estimated to be a total of 1,730 ML/yr, comprising:
 - (a) 70 ML/yr in Zone 1,
 - (b) 315 ML/yr in Zone 2,
 - (c) 520 ML/yr in Zone 3,
 - (d) 215 ML/yr in Zone 4,
 - (e) 445 ML/yr in Zone 5, and
 - (f) 165 ML/yr in Zone 6.
- (2) This Plan recognises that the exercise of domestic and stock rights may increase during the term of this Plan.

Note. Increase in use of domestic and stock rights may occur as a result of an increase in the number of landholdings overlying these groundwater sources, or as a result of the increase in the exercise of domestic and stock rights by existing landholders.

23 Native title rights

- (1) At the commencement of this Plan there are no holders of native title rights and therefore the water requirements for native title rights are a total of 0 ML/yr.
- (2) This Plan recognises that the exercise of native title rights may increase during the term of this Plan.

Note. An increase in native title rights may occur as a result of the granting of native title rights under the Commonwealth's *Native Title Act 1993*.

Part 6 Bulk access regime

24 Bulk access regime

- (1) This Part is made in accordance with section 20 (1) (e) of the Act.
- (2) This Plan establishes a bulk access regime for the extraction of water under access licences in these groundwater sources having regard to:
 - (a) the environmental water provisions established under Part 4 of this Plan,
 - (b) the requirements for basic landholder rights identified under Part 5 of this Plan, and
 - (c) the requirements for water for extraction under access licences identified under Part 7 of this Plan.
- (3) The bulk access regime established in subclause (2):
 - (a) recognises the effect of climatic variability on the availability of water as provided for under Part 3 of this Plan,
 - (b) establishes rules according to which access licences are granted as provided for in Part 8 of this Plan,
 - (c) recognises and is consistent with limits to the availability of water as provided for in Part 9, Division 1 of this Plan,
 - (d) establishes rules according to which available water determinations are to be made as provided for in Part 9 Division 2 of this Plan,
 - (e) establishes rules according to which access licences are managed as provided for in Parts 9 and 10 of this Plan, and
 - (f) establishes rules with respect to the priorities according to which access licences are to be adjusted as a consequence of any reduction in the availability of water as provided for in Part 10 of this Plan.

Part 7 Requirements for water for extraction under access licences

25 Estimate of water requirements

- (1) This Part is made in accordance with section 20 (1) (c) of the Act.
- (2) At the commencement of this Plan, the requirements identified for water for extraction under access licences within these groundwater sources are estimated to be a total of 137,301 ML/yr, as follows:
 - (a) 34,784 ML/yr in Zone 1,
 - (b) 33,253 ML/yr in Zone 2,
 - (c) 39,446 ML/yr in Zone 3,
 - (d) 20,470 ML/yr in Zone 4,
 - (e) 1,880 ML/yr in Zone 5, and
 - (f) 7,468 ML/yr in Zone 6.

Note. Subclause (2) represents the total volumes specified on access licences in these groundwater sources. It is not a commitment to supply that water.

- (3) Subclause (2) includes local water utility access licences of 3,093 ML/year in these groundwater sources, made up of:
 - (a) 2,000 ML/yr in Zone 1, being for Narromine,
 - (b) 1,090 ML/yr in Zone 3, being for Trangie, Warren and Nevertire, and
 - (c) 3 ML/yr in Zone 6, being for Narromine.
- (4) Pursuant to section 42 (2) of the Act, the Minister should reduce the total share components of aquifer access licences in each groundwater source specified in subclause (2) to 125% of the extraction limits determined in clause 27 over the term of this Plan, according to the following:
 - (a) at the end of year 4, each aquifer access licence in a groundwater source (Zone) will have an access licence share component calculated as follows:

$$\text{Amended aquifer access licence share component} = \text{Aquifer access licence share component prior to amendment} \times \left[\frac{(1.5 \times (\text{Recharge} - \text{EHW})) - \text{EX}}{(\text{total Zone access licence share components prior to amendment} - \text{EX})} \right]$$

- (b) at the end of year 9, each aquifer access licence in a groundwater source (Zone) will have an access licence share component calculated as follows:

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

$$\begin{array}{l} \text{End of year 9} \\ \text{amended} \\ \text{aquifer access} \\ \text{licence share} \\ \text{component} \end{array} = \begin{array}{l} \text{aquifer access} \\ \text{licence share} \\ \text{component} \\ \text{prior to year 9} \\ \text{amendment} \end{array} \times \left[\frac{(1.25 \times (\text{Recharge} - \text{EHW})) - \text{EX}}{(\text{total Zone access licence share} \\ \text{components} \\ \text{prior to year 10 amendment} - \text{EX})} \right]$$

- (5) Recharge in subclause (4) (a) is the recharge for the groundwater source established in clause 16 (1), as amended by clause 16 (3).
- (6) EHW in subclause (4) (a) is the volume of recharge reserved as environmental health water in the groundwater source established in clause 18 (1), as amended by clause 18 (3).
- (7) Recharge in subclause (4) (b) is the recharge for the groundwater source established in clause 16 (1), as amended by clause 16 (5).
- (8) EHW in subclause (4) (b) is the volume of recharge reserved as environmental health water in the groundwater source established in clause 18 (1), as amended by clause 18 (5).
- (9) EX in subclause (4) is the total share components of access licences in the groundwater source exempt from access licence share component reductions, including the total of local water utility access licence share components in the groundwater source, and the total of domestic and stock access licence share components in the groundwater source.
- (10) Subclause (4) does not apply to:
- (a) access licences in groundwater sources (Zones) where the 125% of the recharge minus the environmental health water, is greater than the total Zone access licence share component prior to amendment, or
 - (b) local water utility and domestic and stock access licences.
- (11) This Plan recognises that the total requirements for water for extraction under access licences within these groundwater sources may change during the term of this Plan as a result of:
- (a) the granting, surrender or cancellation of access licences,
 - (b) the variation of local water utility access licences under section 66 of the Act, or
 - (c) the volumetric quantification of the share components of existing access licences that are currently non-volumetric.

Part 8 Rules for granting access licences

26 Rules for granting access licences

- (1) This Part is made in accordance with sections 20 (2) (b) and 63 of the Act, having regard to the limits to water availability in these groundwater sources and the need to protect groundwater dependent ecosystems and groundwater quality.
- (2) Access licences may be granted in these groundwater sources, subject to any embargo on the making of applications for access licences made under Chapter 3 Part 2 Division 7 of the Act.
- (3) The Minister should declare an embargo on the making of applications for access licences in these groundwater sources, other than access licences of the following kinds:
 - (a) local water utility access licences, or

Note. Pursuant to sections 66(3) and 66(4) of the Act, the Minister may also vary a local water utility's licence at 5 yearly intervals, or on application of the local water utility where there is a rapid growth in population.

 - (b) access licences resulting from an application of a type listed in section 82 (1) of the Act.
- (4) In applying for a new access licence, the applicant must establish the purpose and circumstance relating to that access licence, and that the share component sought will be the minimum required to meet that purpose and circumstance.
- (5) Access licences granted under this Part cannot be used to extract water through a water supply work (bore) located in areas where the full extraction authorised by access licences nominating water supply works (bores) located in the area, and the exercise of basic landholder rights, are likely to cause an adverse local impact, as outlined in Part 10 Division 3 of this Plan.
- (6) If an access licence share component applied for is significant, as determined by the Minister on the basis of particular aquifer characteristics, the application will not be granted until a water supply work (bore) approval has been granted and the work constructed.
- (7) Once the water supply work (bore) is constructed, and the results of a pumping test or its equivalent are supplied by the applicant, in the required form and to the specification of the Minister, the access licence may be granted.
- (8) The share component of the access licence granted under subclause (7) will be the proportion of the share component sought that the water supply work (bore) is capable of extracting without causing any adverse local impact as outlined in Part 10 Division 3 of this Plan.
- (9) Subclauses (4), (6), (7) and (8) do not apply to a new access licence arising from an application of a type listed in section 82 (1) of the Act.
- (10) In accordance with section 56 of the Act, all access licences in these groundwater sources shall have a share component expressed as a volume in megalitres per year.

Part 9 Limits to the availability of water

Division 1 Long-term average extraction limits

27 Long-term average extraction limits

- (1) This Division is made in accordance with section 20 (2) (a) of the Act.
- (2) The long-term average extraction limit for each groundwater source, except Zone 5, is the recharge established in clause 16, minus the proportion of recharge reserved as environmental health water in clause 18, and are initially as follows:
 - (a) 21,680 ML/yr in Zone 1,
 - (b) 22,610 ML/yr in Zone 2,
 - (c) 9,350 ML/yr in Zone 3,
 - (d) 5,100 ML/yr in Zone 4, and
 - (e) 8,160 ML/yr in Zone 6.
- (3) For Zone 5, until the average annual recharge and the proportion of recharge reserved for the environment are established under clauses 16 and 18, the long term average extraction limit is taken to be 1,880 ML/yr, being the requirements for water at the commencement of this plan identified in clause 25 (2).

28 Variation of the long-term average extraction limits

- (1) Pursuant to section 42 (2) of the Act, the Minister may vary the long-term average extraction limits established under clause 27 at the end of year 4 of this plan as a result of:
 - (a) any change to the average annual recharge arising from clause 16 (3), and
 - (b) any change to the environmental health water arising from clause 18 (3).
- (2) If there is any change to the long-term average extraction limits arising from subclause (1) then:
 - (a) in Zone 1 the extraction limit will not be more than 27,540 ML/yr, and will not be less than 16,065 ML/yr,
 - (b) in Zone 2 the extraction limit will not be more than 28,730 ML/yr, and will not be less than 16,760 ML/yr,
 - (c) in Zone 3 the extraction limit will not be more than 11,880 ML/yr, and will not be less than 6,930 ML/yr,
 - (d) in Zone 4 the extraction limit will not be more than 6,480 ML/yr, and will not be less than 3,780 ML/yr,
 - (e) in Zone 5 the extraction limit will not be less than 1,880 ML/yr, and
 - (f) in Zone 6 the extraction limit will not be more than 10,370 ML/yr, and will not be less than 7,340 ML/yr.

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

- (3) Pursuant to section 42 (2) of the Act, the Minister may vary the long-term average extraction limits established under clause 27 at the end of year 9 of this plan as a result of:
 - (a) any change to the average annual recharge arising from clause 16 (5), and
 - (b) any change to the environmental health water arising from clause 18 (5).
- (4) If there is any change to the long-term average extraction limits arising from subclause (1) then:
 - (a) in Zone 1 the extraction limit will not be less than 16,065 ML/yr,
 - (b) in Zone 2 the extraction limit will not be less than 16,760 ML/yr,
 - (c) in Zone 3 the extraction limit will not be less than 6,930 ML/yr,
 - (d) in Zone 4 the extraction limit will not be less than 3,780 ML/yr,
 - (e) in Zone 5 the extraction limit will not be less than 1,880 ML/yr, and
 - (f) in Zone 6 the extraction limit not be less than 7,340 ML/yr.

Division 2 Available water determinations

29 Available water determinations

- (1) This Division is made in accordance with section 20 (2) (b) of the Act.
- (2) In making an available water determination under section 59 of the Act, the Minister should consider the following rules:
 - (a) water extraction in each groundwater source will be monitored in each water accounting year to determine if any growth in volumes extracted is occurring above the extraction limit in clause 27, as varied by clause 28, based on comparison of the extraction limit against the average extraction within the groundwater source over that year and the preceding 2 years,
Note. A water accounting year is defined in clause 34 (3).
 - (b) if water that, pursuant to an access licence, is committed as adaptive environmental water to be left in the aquifer for environmental purposes, then for the purpose of subclause (a), the extraction will be assumed to be 100% of the available water determination,
 - (c) if water that, pursuant to an access licence, is committed as adaptive environmental water to be extracted for environmental purposes, then for the purpose of subclause (a), the extraction will be that measured through the approved water supply work (bore),
 - (d) an available water determination will be made in each groundwater source each water year for aquifer access licences,
 - (e) until the end of year 4 of this Plan, if the 3 year average of extraction in a groundwater source exceeds 90% of the long-term average extraction limit established in clause 27, the available water determination for the following water accounting year for aquifer access licences in that groundwater source should be reduced by an amount that is assessed necessary by the Minister to

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

- keep subsequent total water extraction to the long-term average extraction limit,
- (f) until the end of year 4 of this Plan, if the 3 year average of extraction in a groundwater source is less than 90% of the long-term average extraction limit established in clause 27, then the available water determination for aquifer access licences in that groundwater source shall be increased to such an extent as to allow extraction to increase towards that extraction limit,
 - (g) notwithstanding subclause (f), the available water determination shall not exceed 100% of total access licence share components,
 - (h) from the start of year 5 of this Plan, the available water determination for each aquifer access licence in each groundwater source will be that aquifer access licence's share of the recharge established in clause 16, minus the proportion of recharge reserved for the environment in subclause 18, minus the total water available to local water utility and domestic and stock access licences,
 - (i) the available water determination for aquifer access licences will be expressed as a percentage of the aquifer access licence share component, will apply to all aquifer access licences in the groundwater source, and will be the same percentage for all access licences to which it applies, and
 - (j) separate available water determinations will be made for both local water utility and domestic and stock access licences, and subject to section 60 of the Act, these shall be 100% of these access licence share components.

Part 10 Rules for managing access licences

Division 1 General

30 Rules for managing access licences

This Part is made in accordance with sections 20 (2) (b), 21 (a) and 21 (c) of the Act, having regard to:

- (a) the environmental water rules established in Part 4 of this Plan,
- (b) requirements for water to satisfy basic landholder rights identified in Part 5 of this Plan, and
- (c) requirements for water for extraction under access licences in Part 7 of this Plan.

Division 2 Water allocation account management

31 Water allocation account management

This Division is made in accordance with sections 20 (2) (b) and 21 (c) of the Act.

32 Water allocation accounts

In accordance with section 85 of the Act, a water allocation account shall be established for each access licence in these groundwater sources.

Note. Water allocations may be assigned to, or from, these accounts by a water allocation assignment made under section 71G of the Act, where these are allowed under rules specified in Part 11 of this Plan.

33 Accrual of water allocations

Water allocations will be accrued into water allocation accounts each water accounting year in accordance with the Minister's available water determinations as specified in clause 29.

34 Annual accounting for water extraction

- (1) Water taken from these groundwater sources shall be accounted for at least annually.
- (2) Water taken through an approved water supply work (bore) nominated by an access licence is taken to be extracted and shall be periodically debited against the access licence water allocation account.
- (3) A water accounting year shall be the 12 month period commencing 1 July.
- (4) In any one water accounting year until the end of year 4 of this Plan, subject to local impact management restrictions arising from Part 10, Division 3 of this Plan, water taken from any of these groundwater sources under an aquifer access licence may not exceed a volume consisting of:
 - (a) 100% of the access licence share component,

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

- (b) plus any water allocations assigned from another licence under section 71G of the Act in that year, and
 - (c) minus any water allocations assigned to another licence under section 71G of the Act in that year.
- (5) Until the end of year 4 of this Plan, total water in any account at any time may not exceed a volume consisting of:
 - (a) 100% of the aquifer access licence share component,
 - (b) plus any water allocations assigned from another licence under section 71G of the Act in that year, and
 - (c) minus any water allocations assigned to another licence under section 71G of the Act in that year.
- (6) Until the end of year 4 of this Plan, water allocations in an aquifer access licence water allocation account, cannot be carried over from one water accounting year to the next.
- (7) In any one water accounting year from the start of year 5 of this Plan, subject to local impact management restrictions arising from Part 10, Division 3 of this Plan, water taken from any of these groundwater sources under an aquifer access licence may not exceed a volume consisting of:
 - (a) 115% of the access licence share component, as amended by clause 25,
 - (b) plus any water allocations assigned from another licence under section 71G of the Act in that year, and
 - (c) minus any water allocations assigned to another licence under section 71G of the Act in that year.
- (8) From the start of year 5 of this Plan, total water in any account at any time may not exceed a volume consisting of:
 - (a) 130% of the aquifer access licence share component, as amended by clause 25 (4) (a),
 - (b) plus any water allocations assigned from another licence under section 71G of the Act in that year, and
 - (c) minus any water allocations assigned to another licence under section 71G of the Act in that year.
- (9) From the start of year 5 of this Plan, a maximum of 30% of an aquifer access licence share component may be carried over in a water allocation account from one water accounting year to the next.
- (10) Subclauses (4) to (9) do not apply to domestic and stock and local water utility access licences.
- (11) For domestic and stock and local water utility access licences in any one water accounting year, subject to local impact management restrictions arising from Part 10, Division 3 of this Plan, water taken from any of these groundwater sources, and total water in any water allocation account at any time may not exceed a volume consisting of:
 - (a) 100% of the access licence share component,

- (b) plus any water allocations assigned from another licence under section 71G of the Act in that year,
 - (c) plus any water allocations reccredited in accordance with section 76 of the Act in that year, and
 - (d) minus any water allocations assigned to another licence under section 71G of the Act in that year.
- (12) Allocations in a local water utility or domestic and stock access licence water allocation account cannot be carried over from one water accounting year to the next.
- (13) A water allocation account shall remain at or above zero at all times.

Division 3 Management of local impacts

35 Management of local impacts

This Division is made in accordance with section 21 (a) of the Act.

36 Extraction interference between neighbouring bores

- (1) To minimise interference between extraction under different access licences in Zones 1, 2 and 6, extraction from a new water supply work (bore) nominated by an access licence shall not be permitted within:
- (a) 1,000 metres (hereafter *m*) of an existing water supply work (bore) nominated by an access licence, if the new water supply work (bore) will extract up to and including 10 ML/day,
 - (b) 2,000 m of an existing water supply work (bore) nominated by an access licence, if the new water supply work (bore) will extract greater than 10 ML/day and up to and including 20 ML/day, and
 - (c) 3,000 m of an existing water supply work (bore) nominated by an access licence, if the new water supply work (bore) will extract greater than 20 ML/day.
- (2) To minimise interference between extraction under different access licences in Zones 3, 4 and 5 extraction from a new water supply work (bore) nominated by an access licence shall not be permitted within:
- (a) 1,000 m of an existing water supply work (bore) nominated by an access licence, if the new water supply work (bore) will extract up to and including 5 ML/day,
 - (b) 2,500 m of an existing water supply work (bore) nominated by an access licence, if the new water supply work (bore) will extract greater than 5 ML/day and up to and including 10 ML/day,
 - (c) 3,500 m of an existing water supply work (bore) nominated by an access licence, if the new water supply work (bore) will extract greater than 10 ML/day and up to and including 15 ML/day, and
 - (d) 4,000 m of an existing water supply work (bore) nominated by an access licence, if the new water supply work (bore) will extract greater than 15 ML/day.

 Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

- (3) The distances and daily extraction rates referred to in subclauses (1) and (2) shall be specified on the new water supply work (bore) approval.
- (4) All new water supply works (bores) that are screened, slotted, or in any way open, within the Great Artesian Basin sandstone aquifers, shall have an annual extraction limit of 500 ML/yr.
- (5) Notwithstanding the provisions of subclauses (1), (2), and (4), the Minister may, upon application by an access licence holder, vary the distance restrictions specified in this clause if:
 - (a) an hydrogeological study, undertaken by the licence holder, and assessed as adequate by the Minister, demonstrates minimal potential for any adverse impact on existing licensed extraction,
 - (b) all potentially affected access licence holders have been notified by the proponent, and
- (6) Subclauses (1) to (3) do not apply to extraction under existing access licences.

Note. Potentially affected access licence holders are typically neighbouring access licence holders and/or those in the near vicinity.

- (c) there is a process for remediation in the event that any adverse impact occurs in the future, specified as conditions on the licence.

Note. The intention of this clause is to minimise the impact of extraction under new access licences on extraction under existing access licences. It is intended to develop models to support hydrogeological assessment of the adverse impacts of new groundwater extractions on existing licensed extraction.

37 Water level management

- (1) The Minister may declare that, in order to maintain water levels within these groundwater sources, local access rules are to apply in a defined area, known as a local impact area.
- (2) If water levels in any part of a groundwater source have declined to such an extent that an adverse impact is occurring, or is likely to occur, extraction from all water supply works (bores) nominated by an access licence within a local impact area declared under subclause (1) shall be restricted to such an extent and for such time as is required to reinstate water levels to such a degree as to mitigate or avoid that impact.
- (3) An adverse impact in subclause (2) shall be considered to have occurred if the Minister considers that excessive drawdown has occurred, or if:
 - (a) the average of the seasonally recovered water levels over a 5 year period is not maintained within 10% of the total available drawdown below the initial seasonally recovered water level over the 5 year period, or
 - (b) if the seasonally recovered water levels are not maintained within 20% of the total available drawdown below the July 2002 water level.

Note. This clause recognises that in some locations, at certain periods of high groundwater demand, critical water level declines may occur, and that additional extraction limitations may be required. The Department of Land and Water Conservation will identify monitoring bores, and determine the method for specifying an affected area. The total available drawdown is defined by the height of the piezometric level above the bedrock (i.e. base of the groundwater source). Groundwater levels will be measured in the winter months of June, July or August allowing the aquifer to recover from the previous pumping season.

38 Water quality management

- (1) The beneficial uses of these groundwater sources, based on beneficial use classes identified in the Australian and New Zealand Environment and Conservation Council *Water Quality Guidelines 2001*, and the National Health and Medical Research Council *Raw Water for Drinking Purposes Guidelines 1996*, are:

- (a) raw water for drinking purposes, and
- (b) agricultural water,

Note. It is not recommended that the water from this groundwater source be consumed without prior treatment. Land use activities may have polluted the groundwater in some areas.

- (2) Water quality decline will be deemed unacceptable if extraction is likely to cause water quality to decline to a lower beneficial use class.
- (3) The Minister may declare that, in order to protect water quality within this groundwater source, local access rules are to apply in a defined area known as a local impact area.
- (4) A baseline of electrical conductivity (hereafter *EC*), against which changes in the salinity of groundwater will be measured, will be set in year 6 of this Plan based on the results of a salinity monitoring program undertaken by the Minister.
- (5) The EC limits adopted by this Plan for the beneficial use categories are as follows:
- (a) 800 EC for Raw Water for Drinking Supplies Class, and
 - (b) 1,500 EC for Agricultural Water Class.

Note. These are the limits specified in Guidelines for Groundwater Protection in Australia, Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand, (1995, as adopted by the NSW Government Groundwater Quality Protection Policy 1997).

- (6) If, for groundwater of less than or equal to 800 EC, as established by the salinity baseline set by subclause (4), there is an increase in salinity of more than 20% of the difference between the salinity baseline set by subclause (4) and the beneficial use class limits established in subclause (5) (a), then:
- (a) the Minister may declare a local impact area,
 - (b) access licence holders within the local impact area will need to demonstrate to the Minister that continual extraction, or a proposed new extraction regime, will not have an unacceptable impact on the groundwater quality of the aquifer, and
 - (c) until such time that this justification to continue to extract has been assessed and approved by the Minister:
 - (i) extraction from water supply works nominated by an access licence within the local impact area will be restricted to such an extent and for such time as required to halt that salinity increase, or
 - (ii) access licence holders may be issued with a directive to cease to pump.
- (7) If, for groundwater of greater than 800 EC and less than or equal to 1,500 EC, as established by the salinity baseline set by subclause (4), there is an increase in salinity of more than 20% of the difference between the salinity baseline set by

subclause (4) and the beneficial use class limit established in subclause (5) (b), then:

- (a) the Minister may declare a local impact area,
 - (b) access licence holders within the local impact area will need to demonstrate to the Minister that continual extraction, or a proposed new extraction regime, will not have an unacceptable impact on the groundwater quality of the aquifer, and
 - (c) until such time that this justification to continue to extract has been assessed and approved by the Minister:
 - (i) extraction from water supply works nominated by an access licence within the local impact area shall be restricted to such an extent and for such time as required to halt that salinity increase, or
 - (ii) access licence holders may be issued with a directive to cease to pump.
- (8) If there is an increase in salinity from extraction that results in the current beneficial use class salinity limit being exceeded, then subclauses (7) (a) and 7 (c) shall apply.

39 Protection of groundwater dependent ecosystems

- (1) Extraction of groundwater from a new or replacement water supply work (bore) is excluded:
 - (a) within 100 m of high priority groundwater dependent ecosystems for water supply works (bores) exercising basic rights,
 - (b) within 200 m of high priority groundwater dependent ecosystems for water supply works (bores) nominated by an access licence, and
 - (c) within 40 m of any river for any works.

Note. Subclause (1) will not apply to extraction from an existing water supply work (bore) until such time as the work is replaced.
- (2) High priority groundwater dependent ecosystems are those listed in Schedule 4.
- (3) Pursuant to section 42 (2) of the Act, the Minister may identify further high priority groundwater dependent ecosystems and include them in Schedule 4 at the end of years 4 and 9, based on further studies of groundwater ecosystem dependency undertaken by the Minister.
- (4) The Minister should consult with the Minister for the Environment before adding further high priority groundwater dependent ecosystems to Schedule 4.

40 Protection of aquifer integrity

- (1) The Minister may declare that, in order to protect the integrity of the aquifers within these groundwater sources, local access restrictions are to apply in a defined area known as a local impact area.
- (2) The Minister may, on presentation of evidence of land subsidence or aquifer compaction, restrict extraction from all water supply works (bores) nominated by an access licence within a local impact area declared under subclause (1), to such an extent and for such time as to stabilise that subsidence or compaction.

41 Extraction restrictions

The Minister may, in the event of local impact restrictions arising from this Division, impose, by Order, a reduction in annual, quarterly, monthly, weekly or daily extraction rates from water supply works (bores) in the local impact area.

42 Group registration

This Plan allows for the formation of a group of access licences with respect to the sharing of local impact restrictions arising from this Division, subject to the following rules:

- (a) the group register will be maintained by the Minister,
- (b) holders of access licences must make a request to the Minister to form a group,
- (c) total extraction by all access licences within a group will be assessed as a whole against their combined restricted extraction and must not exceed that amount,
- (d) no access licence holder within the group may extract more than is permitted by Division 2 of this Part in any one water accounting year as a result of participation in a group,
- (e) an access licence holder may apply to be removed by the Minister from the group and the extraction by the group will be reduced by the extraction restriction of that access licence,
- (f) an access licence holder may apply to be added by the Minister to the group and the combined restricted extraction of the group will be increased by the extraction restriction of that access licence, and
- (g) the Minister reserves the right to remove a licence holder from a group where that individual causes the group extraction restriction to be exceeded, or to dissolve a group where its members exceed their combined extraction restriction.

43 Infrastructure failure

- (1) The operational rules relating to local impact management may rely on water levels at specified monitoring bores.
- (2) In the event of a monitoring bore failure the Minister may:
 - (a) continue with the current access rules until the monitoring bore is reinstated,
 - (b) adjust the current access rules based on climatic conditions and any other monitoring bore information, until the monitoring bore is reinstated, or
 - (c) rely on another monitoring bore in the area to provide information.

Part 11 Access licence dealing rules

44 Access licence dealing rules

- (1) This Part is made in accordance with section 20 (1) (d) of the Act and with the Minister's access licence dealing principles gazetted on 27 December 2002 under section 71L of the Act.

Note. The Minister's access licence dealing principles are contained in Appendix 4.

- (2) Applications for access licence dealings may be granted subject to the Minister's access licence dealing principles gazetted from time to time under section 71L of the Act and the rules in this Part.

Note. There are a number of mechanisms within the Act, called access licence dealings, to change either the ownership of all or part of an access licence, or the location within a water source at which all or part of the share and extraction components of access licences can be exercised. These dealings are governed by the principles in section 5 of the Act, Minister's access licence dealing principles, and the rules in this Part.

Note. Where there is an inconsistency between access licence dealing rules established in this plan and Minister's access licence dealing principles gazetted subsequent to the commencement of this plan, section 71L of the Act provides for the access licence dealing rules in this plan to prevail.

45 Rules relating to constraints within a groundwater source

- (1) This clause applies to any relevant dealings under sections 71D, 71F, and 71J of the Act, and section 71G of the Act with respect to allocation assignments within a groundwater source.
- (2) Dealings are prohibited under this clause if:
 - (a) any of the access licences or water allocations involved are not within these groundwater sources, or
 - (b) the dealing would result in the total extraction under access licences through nominated works in the area, plus basic landholder rights extraction, causing any adverse local impact in accordance with Part 10 Division 3 of this Plan, or otherwise.

46 Rules for change of water source

- (1) This clause relates to dealings under section 71E of the Act.

Note. Section 71E dealings are the mechanism by which access licences can move from one water source to another. Once the change in water source has been effected, if permitted, the new licence will have to nominate specified works (by a dealing under section 71J of the Act) in the receiving water source before extraction can commence.
- (2) Dealings under section 71E of the Act that change the water source to which an access licence applies are prohibited in these groundwater sources, except as provided for in this clause.
- (3) An access licence with a share component specifying one of these groundwater sources may be cancelled and a new licence issued specifying another of these groundwater sources only if the total share components of all access licences in the groundwater source in which the access licence is issued remains below the

extraction limit for that groundwater source established in clause 27, as amended in clause 28.

- (4) Notwithstanding subclause (3), a new licence specifying Zone 3, 4 or 5 may not be issued following cancellation of an access licence in Zone 1, 2, or 6.
- (5) The volume of the share component on an access licence issued under this clause is to be the volume of the cancelled access licence share component.

47 Rules for conversion of access licence category

- (1) This clause relates to dealings under section 71B of the Act.
- (2) Dealings that result in conversion of an access licence of one category to an access licence of another category are prohibited in these groundwater sources.

48 Rules for interstate access licence transfer

- (1) This clause relates to dealings under section 71H of the Act.
- (2) Dealings that result in an interstate access licence transfer into or out of these groundwater sources are prohibited.

49 Rules for water allocation assignments between water sources

- (1) This clause relates to dealings under section 71G of the Act for assignment of water allocations between water sources.
- (2) Dealings that assign water allocations between an access licence in one of these groundwater sources and an access licence in another of these groundwater sources may be permitted only if:
 - (a) the total water allocations credited to all access licences in the groundwater source to which the water allocation is assigned remains below the extraction limit of that groundwater source established in clause 27, as amended by clause 28, or
 - (b) the assignment would not result in the total extraction of credited water allocations through nominated works in the area, plus basic landholder rights extraction, causing any adverse local impact in accordance with Part 10 Division 3 of this Plan, or otherwise.
- (3) Notwithstanding subclause (2), water allocations may not be assigned from an access licence in Zone 1,2 or 6, to an access licence in Zone 3, 4 or 5.

Note. Each water allocation assignment must be applied for. Access licence holders may enter into private contracts to assign water allocations for a number of years. Such contracts are not guaranteed by the Government, and approval must be sought annually. Approval will be subject to the rules in this Plan, including local impact assessment.

50 Rules for interstate assignment of water allocations

- (1) This clause relates to dealings under section 71I of the Act.
- (2) Dealings that result in an interstate assignment of water allocations to or from these groundwater sources are prohibited.

Part 12 Mandatory conditions

51 Mandatory conditions on access licences

This Part is made in accordance with sections 17 (c) and 20 (2) (e) of the Act.

52 Access licence conditions

- (1) All access licences shall have mandatory conditions to give effect to the provisions of this Plan in relation to the following:
 - (a) the specification of the share component of the access licence,
 - (b) the specification of the extraction component of the access licence,
 - (c) the requirement that all taking of water under the access licence will be subject to the available water determinations,
 - (d) the requirement that all taking of water under the access licence will be subject to any local impact management restrictions established in this Plan,
 - (e) the requirement that all taking of water under the access licence will be subject to the account management rules established in this Plan,
 - (f) the requirement that water may only be taken under the access licence by the water supply work (bore) nominated by the access licence,
 - (g) the taking of water in accordance with the access licence may only occur if the resulting debit from the access licence water allocation account will not exceed the volume of water allocation remaining in the account, and
 - (h) any other conditions required to implement the provisions of this Plan.
- (2) All aquifer access licences shall have mandatory conditions to give effect to clause 25, in relation to the amendment of access licence share components.
- (3) All domestic and stock access licences shall have mandatory conditions that only allow the taking of water for the purpose of domestic consumption or stock watering as defined in section 52 of the Act.
- (4) All local water utility access licences shall have mandatory conditions that only allow the taking of water for the exercise of a water supply function of the local water utility or for other such purpose provided for under the Act.

53 Mandatory conditions on water supply work (bore) approvals

All approvals for a water supply work (bore) to which this Plan applies shall have mandatory conditions in relation to the following:

- (a) the water supply work (bore) is only to be constructed by a driller licensed under section 349 of the Act,
- (b) the water supply work (bore) must comply with drilling standards as specified by the Minister,
- (c) construction of a water supply work (bore) must prevent contamination between aquifers through proper bore construction,
- (d) a water supply work (bore) approval holder must ensure decommissioning procedures comply with applicable standards as specified by the Minister,

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

- (e) a new or replacement water supply work (bore) to access water for basic rights will be required, as a condition of approval, to be constructed to sufficient depth to maintain access to the water source for the life of the work,
- (f) the water supply work (bore) approval holder is, within 2 months of completion of the work, or after the issue of the approval if the water supply work (bore) is existing, to provide the Minister with:
 - (i) details of the work on the prescribed form,
 - (ii) a plan showing accurately the location of the work in relation to portion and property boundaries, and
 - (iii) details of any water analysis and/or pumping tests required by the Minister,
- (g) if, during the construction of the water supply work (bore), saline or contaminated water is encountered above the producing aquifer, such water is to be sealed off by:
 - (i) inserting the appropriate length(s) of casing to a depth sufficient to exclude the saline or contaminated water from the work, and
 - (ii) placing an impermeable seal between the casing(s) and the walls of the bore hole from the bottom of the casing to ground level, as specified by the Minister,
- (h) if a water supply work (bore) is abandoned, the water supply work (bore) approval holder is to:
 - (i) notify the Minister that the work has been abandoned, and
 - (ii) seal off the aquifer by backfilling the work to ground level after withdrawing the casing (lining), as specified by the Minister,
- (i) an extraction measurement device shall be installed and maintained on each water supply work (bore) used for extraction of water under an access licence, and such devices shall be of a type, and shall be maintained in a manner, which is acceptable to the Minister,
- (j) a water supply work (bore), excluding a water supply work granted for extraction of basic landholder rights, must comply with the relevant local impact management rules in Part 10 of this Plan,
- (k) notwithstanding the available water determination, it is the responsibility of the water supply work (bore) approval holder, excluding the holder of a water supply work approval for extraction of basic landholder rights, to ascertain from the Minister whether or not there are in place any local impact restrictions before commencing to take water from the groundwater source,
- (l) extraction under an access licence through the approved water supply work (bore) is only authorised with respect to the access licences specified on the water supply work (bore) approval,
- (m) a water supply work (bore) approval holder must supply to the Minister on request, and to the required standards, a report pertaining to the quality of the water obtained from the water supply work (bore),

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

- (n) any new applications for water supply works (bore) approvals are to be sent to the NSW Aboriginal Land Council for assessment of potential impacts on sites of significance and for advice on appropriate distance restrictions, and
- (o) any other conditions required to implement the provisions of this Plan.

Note. It is recommended that the Minister also apply conditions to water use approvals requiring the supply of information on an annual basis on types and areas of irrigated crops.

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

Part 13 Monitoring and reporting

54 Monitoring

The monitoring of the performance indicators specified in clause 13 shall be undertaken by the Minister.

Note. Review and Audit of this Plan

In accordance with section 43 (2) of the Act, this Plan is to be reviewed, within the fifth year of its term, for the purpose of ascertaining whether its provisions remain adequate and appropriate for ensuring the effective implementation of the water management principles of the Act.

In accordance with section 44 of the Act, this Plan will be audited at intervals of no more than five years, for the purpose of ascertaining whether its provisions are being given effect to. This audit is to be carried out by an audit panel appointed by the Minister in consultation with a water management committee where one exists.

Note. The Implementation Program

In accordance with section 51 of the Act, the Minister may establish an Implementation Program that sets out the means by which the provisions of this Plan are to be achieved.

It is proposed that the Minister establish an Implementation Program for this Plan. Pursuant to section 51 (5) of the Act, the implementation program is to be reviewed annually by the Minister to determine whether it is effective in implementing this Plan.

The results of the review of the Implementation Program will be included in the annual report for the Department of Land and Water Conservation.

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

Part 14 Amendment of this Plan

55 Amendment of this Plan

- (1) This Part is made in accordance with section 42 (2) of the Act.
- (2) This Plan can be amended in accordance with the following clauses of this Plan:
 - (a) clause 16 in respect to average annual recharge,
 - (b) clause 18 in respect to environmental health water,
 - (c) clause 25 in respect to share components of access licences,
 - (d) clause 28 in respect to long-term average extraction limits, or
 - (e) clause 39 in respect to high priority groundwater dependent ecosystems.

Schedule 1 Dictionary

The following definitions apply to this Plan in addition to the definitions set out in the Act:

abandoned (work) refers to a water supply work (bore) that is no longer being used.

aquifer compaction refers to the reduction in the porosity (pore spaces) of an aquifer, and may result from over pumping the aquifer.

available water in relation to a water management area or water source, is the water that is available in that area or water source in accordance with an available water determination that is in force in respect of that area or water source.

available water determination is a written Order by the Minister as to the availability of water for the various categories of access licence in relation to a specified water management area or water source.

Note. An available water determination gives rise to a water allocation that is credited to a water allocation account for each licensed holder.

bedrock is the solid rock underlying unconsolidated sediments such as the soil and weathered rock. Bedrock is a general term for solid rock that lies beneath soil, loose sediments, or other unconsolidated material.

drawdown refers to a lowering of the the level to which water will rise in cased bores. Natural drawdown may occur due to seasonal climatic changes. Groundwater pumping may also result in seasonal and long-term drawdown.

extraction limit is that proportion of the long term average annual recharge and storage which can be extracted each year without causing adverse impact on the environment or groundwater users, including landholders exercising basic rights.

Great Artesian Basin is a 'confined' groundwater basin comprised of a complex multi-layered system of water bearing strata (porous sandstone aquifers) separated by largely impervious rock units, underlying largely arid and semi-arid landscapes to the west of the Great Dividing Range, and extending from Queensland through New South Wales and the Northern Territory, to South Australia.

groundwater is water that occurs beneath the ground surface in the saturated zone.

groundwater dependent ecosystems are ecosystems which have their species composition and natural ecological processes wholly or partially determined by groundwater.

groundwater is water that occurs beneath the ground surface in the saturated zone.

monitoring bore refers to a bore constructed for the purpose of measuring water levels and/or taking samples for water quality analysis.

recharge is the addition of water, usually by infiltration, to an aquifer.

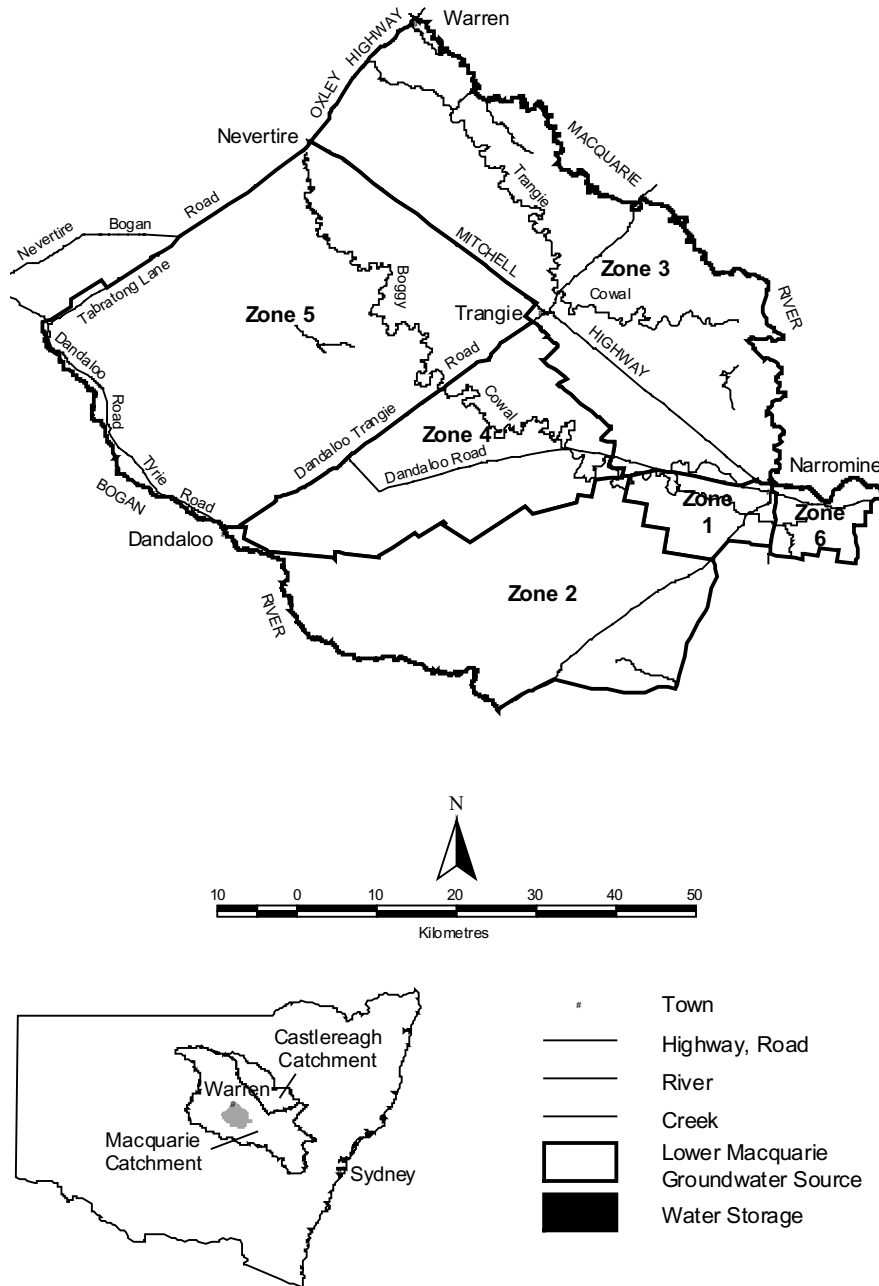
sandstone is sedimentary rock formed by the consolidation of sand grains, the sand component is often predominantly quartz and cemented by a fine grained matrix.

share component is the share component of an access licence.

unconsolidated alluvial aquifers are formed from sediments deposited by the action of flowing water in particular along river beds and floodplains, but not including lakes and seas.

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

Schedule 2 Lower Macquarie Groundwater Sources



Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

Schedule 3 Contribution to relevant targets in the December 2002 State Water Management Outcomes Plan

Levels of assessed contribution:

FULL – contributes to target in full

HIGH - while not fully contributing to target, there is a good level of contribution

PARTIAL - goes some way to contributing to the target

LOW - only small degree of contribution to target

| Relevant Target | Level of contribution | Comments |
|---|-----------------------|--|
| <p>Target 1e The long term average annual extractions for groundwater limited (or being phased down) to an ecologically sustainable level (the Sustainable Yield) as determined by detailed assessment of each groundwater source and consultation with the relevant management committee. In the absence of such an assessment, the following to apply: 100 percent of average annual recharge for a groundwater source where there is no significant ecosystem dependency; 70 percent of average annual recharge where there is significant ecosystem dependency</p> | HIGH | <ul style="list-style-type: none"> • This Plan clearly sets out the extraction limit as 85% of estimated recharge, for each groundwater source. • An expert panel had insufficient information to identify significant groundwater dependent ecosystems. • An expert panel could not identify significant groundwater dependent ecosystems and therefore this Plan has adopted the extraction limit of 85%. • The extraction limit will be reviewed twice in the term of this Plan, however, the review provision limits any adjustment of the extraction limit to a maximum of 70% of recharge. |
| <p>Target 1f Rules for adjustments to future available water determinations in the event that the extraction limits are exceeded, clearly prescribed in consultation with the relevant management committee, and acted upon</p> | FULL | <ul style="list-style-type: none"> • Rules set out in Part 9. |
| <p>Target 2 All management plans incorporating mechanisms to protect and restore aquatic habitats, and the diversity and abundance of native animals and plants, with particular reference to threatened species, populations and communities and key threatening processes</p> | PARTIAL | <ul style="list-style-type: none"> • While detailed assessment of environmental requirements was not undertaken, an expert panel could not, on the basis of existing information, identify any specific groundwater dependent ecosystems. River red gums may have some groundwater dependency, and the closer these are to the river channels and cowals, the more likely they are to have a groundwater dependence. • This Plan sets out the Environmental Health Water as 15% of estimated recharge for each groundwater source. |

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

| | | |
|---|------|--|
| | | <ul style="list-style-type: none"> • This Plan excludes licensed extraction from within 200 metres of wetlands and high priority dependent groundwater ecosystems subsequently identified, and 40 metres of any river. • This Plan establishes extraction rules/ specified drawdown limits to manage groundwater level declines, groundwater quality impacts, and to protect aquifer integrity. • This Plan provides for review (including more detailed investigation of groundwater dependency) and variation in environmental health water/ extraction limit by June 30 2007. • The review provision limits any upward adjustment of the environmental health water to 30% of recharge. |
| Target 5 Access rights for water access licensees clearly and legally specified in terms of share and extraction components | HIGH | <ul style="list-style-type: none"> • This Plan establishes transparent extraction limits and allocation rules. • Access rights are tradeable under this Plan. • This Plan embargos new access licence applications. • The necessary reduction in entitlement will not be complete until the start of year 10 and may leave rights and the market uncertain until that time. • The local impact rules mean that future rights will not be exclusive but affected by the future location of works. Licences with existing bores will have priority over licences requiring new bores. |
| Target 6a For groundwater sources, the total volume of water specified on access licences reduced over the term of a water sharing plan to no more than 125 percent of the Sustainable Yield | FULL | <ul style="list-style-type: none"> • The total licence volumes for some of the groundwater sources are greater than 125% of the extraction limit. • This Plan provides for a two-stage reduction in access licence share components to 125% of the extraction limit. • The reduction to 150% of extraction limit will occur after 4 years, and the reduction to 125% will occur at the |

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

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|---|---------|---|
| | | start of year 10. |
| Target 10 Degree of connectivity between aquifers and rivers assessed, and zones of high connectivity mapped to enable baseflows to the river to be maintained or improved | PARTIAL | <ul style="list-style-type: none"> No assessment of connectivity has been undertaken. This Plan excludes licensed extraction from within 40 metres of any river. |
| Target 11 Groundwater dependent ecosystems identified and mapped for all priority aquifers, and the ecological water requirements assessed to enable local groundwater extraction rates and/or Sustainable Yields to be reviewed | PARTIAL | <ul style="list-style-type: none"> No detailed assessment or mapping of groundwater dependent ecosystems has been undertaken. This Plan excludes licensed extraction from within 200 metres of wetlands and any high priority dependent groundwater ecosystems (although these have not been identified yet). This Plan provides for review (including more detailed investigation of groundwater dependency) and variation in environmental health water by 30 June 2007. |
| Target 12 Measures in place in all water sources subject to a gazetted water sharing plan to protect domestic and stock rights from the impact of other water access and use | FULL | <ul style="list-style-type: none"> This Plan has identified the volumes necessary to meet basic domestic and stock requirements. It also protects domestic and stock bores from interference from higher yielding bores. |
| Target 13 The knowledge sharing, training and resources necessary to ensure that Aboriginal people have the capacity to be effectively involved in water management identified and addressed | PARTIAL | <ul style="list-style-type: none"> All water supply works approvals will be sent to the NSW Aboriginal Lands Council. |
| Target 14 Water sources, ecosystems and sites of cultural or traditional importance to Aboriginal people identified, plans of management prepared, and measures put in place to protect and improve them | HIGH | <ul style="list-style-type: none"> This Plan addresses Aboriginal cultural or traditional requirements and it includes an objective to this effect. A review of such requirements is also in this Plan. |
| Target 16a All share components of access licences tradeable | FULL | <ul style="list-style-type: none"> This Plan provides for trading of access licence share components and water allocations. |
| Target 16c Conversion factors and protocols established to facilitate trading and dealings between water sources, whilst also protecting existing access and environmental water | HIGH | <ul style="list-style-type: none"> This Plan does not allow trading out of these groundwater sources, but does allow trading within the area, subject to rules that provide protection for the environment and existing users. |
| Target 16d Reduced conversion | FULL | <ul style="list-style-type: none"> This Plan does not impose reduction |

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

| | | |
|--|---------|---|
| factors only applied when necessary to offset increased losses associated with water supply delivery | | factors. |
| Target 16f Zones established where necessary for environmental protection and limits/constraints on water dealings in them made explicit | FULL | <ul style="list-style-type: none"> This Plan establishes 6 separate groundwater sources and prohibits trading between them based on the extraction levels versus the extraction limit for each zone |
| Target 35 All management plans incorporating water quality objectives that have considered Government approved Interim Environmental Objectives, the current Australian and New Zealand Environment and Conservation Council Guidelines and the recommendations of relevant Healthy Rivers Commission Inquiries | HIGH | <ul style="list-style-type: none"> This Plan does include a water quality objective and sets out criteria and management rules for salinity. The beneficial use categories and criteria are in this Plan. |
| Target 38 Aquifer water quality vulnerability zones mapped and extraction limits reviewed to reduce the risk of lateral intrusion of poor quality water | PARTIAL | <ul style="list-style-type: none"> No vulnerability mapping of area is referenced in this Plan. Rules are contained in this Plan to manage the risk of lateral movement of poor quality groundwater. |

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

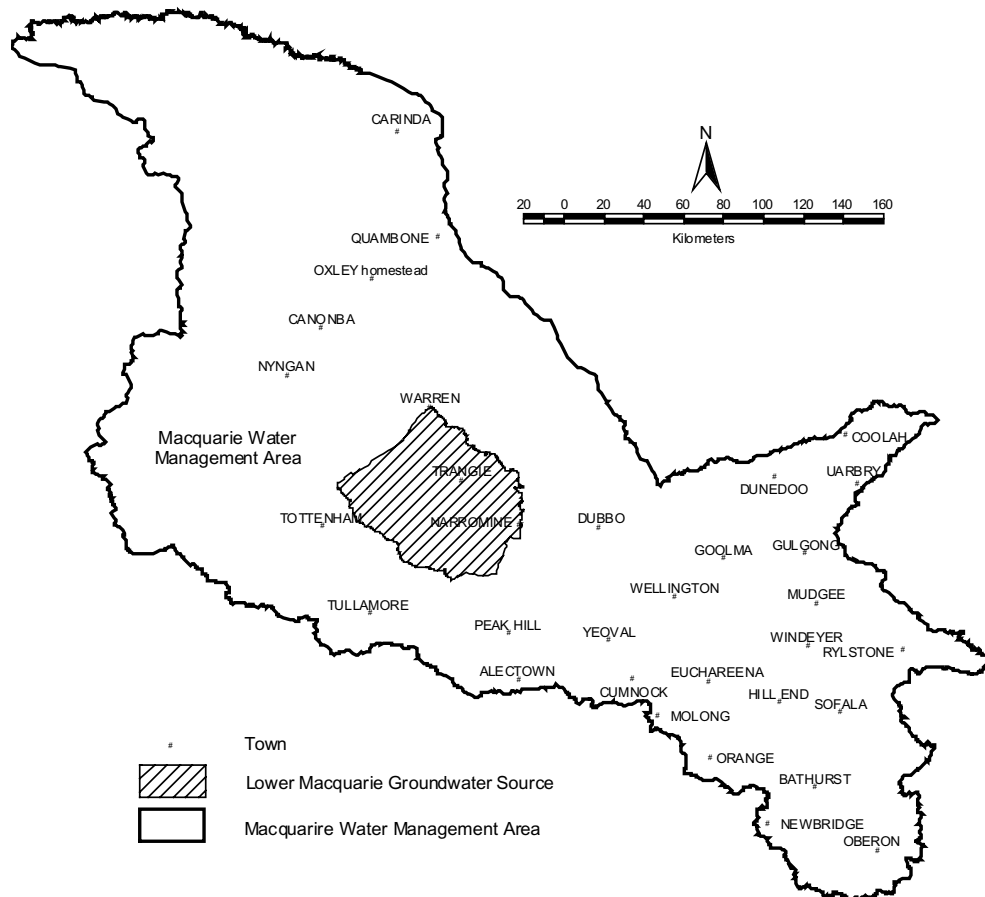
Schedule 4 High priority groundwater dependent ecosystems

There are no high priority groundwater dependent ecosystems identified at the commencement of this Plan.

Note. The high priority groundwater dependant ecosystems listed in this Schedule may change during the period of this Plan. The offices of the Department of Land and Water Conservation, shown in Appendix 3, should be contacted for a current list.

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

Appendix 1 Macquarie Water Management Area



Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

Appendix 2 Location of maps

The maps in relation to this Plan may be inspected at:

District Office
Department of Land and Water Conservation
209 Cobra Street
DUBBO NSW 2830

Regional Office
Department of Land and Water Conservation
181 Anson Street
ORANGE NSW 2800

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

Appendix 3 Performance indicators

| Performance indicators for the Lower Macquarie Groundwater Sources Water Sharing Plan | | | |
|--|----------------------------|--|--|
| Performance indicator | Related objective | As measured by | Commentary |
| (a) Change in groundwater extraction relative to the extraction limits. | 11 (a) 11 (b) 11 (c) | <ul style="list-style-type: none"> Average annual extraction volume for aquifer/zone as a percentage of the extraction limit (commonly known as the sustainable yield). | <ul style="list-style-type: none"> Plan provisions will set the mechanism to remain within the sustainable yield over the long term. |
| (b) Change in climate adjusted groundwater levels. | 11 (a) 11 (b) 11 (c) | <ul style="list-style-type: none"> Average annual frequency and duration (in days) of water level drawdown below pre-plan baseline. Density of extraction in critical areas. | <ul style="list-style-type: none"> Water levels will fluctuate with climate and resultant variable recharge. Some level declines will be expected during dry times, just as level rises are expected during wetter periods. |
| (c) Change in water levels adjacent to identified groundwater dependent ecosystems. | 11 (a) | <ul style="list-style-type: none"> Identification of groundwater dependent ecosystems (GDEs). Assessment of the relationship between selected GDEs and local groundwater levels in terms of the water requirements of these GDEs. Assessment of the adequacy of buffer zones or local impact restrictions by comparison of water levels near in or GDEs compared to plan baseline. Frequency and duration of water level drawdown below critical levels. | <ul style="list-style-type: none"> Groundwater dependent ecosystems will be identified during the term of the Plan. |
| (d) Change in groundwater quality. | 11 (a) | <ul style="list-style-type: none"> Trends in selected water quality parameters at selected monitoring bores that are likely to be affected by groundwater extraction. | <ul style="list-style-type: none"> Many water quality issues are a function of contamination by land based activities, rather than extraction. |
| (e) Change in | 11 (c) | <ul style="list-style-type: none"> Change in regional | <ul style="list-style-type: none"> There are many factors |

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

| Performance indicators for the Lower Macquarie Groundwater Sources Water Sharing Plan | | | |
|--|----------------------------|---|--|
| Performance indicator | Related objective | As measured by | Commentary |
| economic benefits derived from groundwater extraction and use. | | gross margins. <ul style="list-style-type: none"> Change in unit price of water transferred. | affecting economic status of a region, for example commodity prices, other sources of water (i.e. surface water) etc. <ul style="list-style-type: none"> Assessment undertaken as part of plan performance monitoring will make assumptions to attempt to identify the impact of the plan's provisions. |
| (f) Change in structural integrity of the aquifer. | 11 (a) 11 (b) 11 (c) | <ul style="list-style-type: none"> Annual number of reports of new land subsidence and reduced bore yields. Survey if necessary. | |
| (g) Extent to which basic landholder rights requirements have been met. | 11 (b) | <ul style="list-style-type: none"> Monitor increase in applications for water supply work (bore) approvals. Number of reports of interference between high yield extraction and basic rights, or number of domestic and stock bores deepened. Assess frequency and duration of water level drawdown below critical thresholds. | <ul style="list-style-type: none"> Basic rights usage figures in water sharing plans are estimated (not actual use). Increases in licences may be due to past unlicensed works. |
| (h) Extent to which local water utility requirements have been met. | 11 (a) 11 (b) 11 (c) | <ul style="list-style-type: none"> Monitor increase in access by local water utilities. Monitor impact of interference between high yield extraction and local water utility extraction. | |
| (i) Extent to which native title rights requirements have been met. | 11 (d) | <ul style="list-style-type: none"> Monitor increase in applications for water supply work (bore) approvals for native title basic rights. Number of reports of | |

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

| Performance indicators for the Lower Macquarie Groundwater Sources Water Sharing Plan | | | |
|--|--------------------------|--|--|
| Performance indicator | Related objective | As measured by | Commentary |
| | | <p>interference between high yield extraction and native title rights holders, or number of bores deepened.</p> <ul style="list-style-type: none"> Assess frequency and duration of water level drawdown below critical thresholds. | |
| (j) Extent of recognition of spiritual, social and customary values of groundwater to Aboriginal people. | 11 (d) 11(e) | <ul style="list-style-type: none"> Assessment of amount and type of information collected to identify the range of values of water to Aboriginal people. | <ul style="list-style-type: none"> The collection of information on the values associated with water is considered the first step in addressing the objects of the Act. It would be expected that at the end of five years there should be relevant information collected for each groundwater source, as a minimum requirement. |

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

Appendix 4 Minister's access licence dealing principles

The following is the text from the Access Licence Dealing Principles Order, published in the NSW Government Gazette on 27 December 2002.

Access Licence Dealing Principles Order 2002

Part 1 Introduction

1. Name of Order

This Order is the *Access Licence Dealing Principles Order 2002*.

2. Commencement

This Order commences on 20 December 2002.

3. Establishment of access licence dealing principles

The access licence dealing principles set out in this order are established.

4. Interpretation

- (1) References in this order to licences of category 'runoff harvesting' or 'regulated river (conveyance)' are subject to those categories being prescribed by regulation made under section 57 (k) of the Act.
- (2) Notes in this order do not form part of the order.

5. Effect

- (1) Consistent with section 71K (1) of the Act, all applications for access licence dealings under Division 4 of Part 2 of Chapter 3 of the Act are to be dealt with in accordance with:
 - (a) the water management principles, and
 - (b) the principles in this order, and
 - (c) access licence dealing rules established by any relevant management plan.
- (2) Consistent with section 71L of the Act, any access licence dealing rules established by management plans must be consistent with the principles in this order.

6. Definitions

In this order the following definitions apply:

dealing means a dealing under Chapter 3, Part 2 Division 4 of the *Water Management Act 2000*.

farm dam is a privately owned dam typically of earthen construction designed to collect and/or store water for use on one or a few properties. It does not include publicly owned dams or weirs.

groundwater source means a water source specified in a groundwater management plan.

hydrologically connected water sources are water sources where water from one flows into the other, or, in the case of river systems, where flow from both goes into a common river downstream.

management plan means a plan made under section 41 or 50 of the *Water Management Act 2000*.

regulated river water source means a water source specified in a regulated river management plan.

runoff harvesting dam is a farm dam on a hillside or minor stream which collects and stores rainfall runoff. Minor streams are as defined in an order made under section 53 of the *Water Management Act 2000*.

unregulated river water source means a water source specified in an unregulated river management plan.

Part 2 General principles

7. Impacts on water sources

- (1) Dealings should not adversely affect environmental water and water dependent ecosystems as identified in any relevant management plan.
- (2) Dealings should be consistent with any strategies to maintain or enhance water quality identified in any relevant management plan.
- (3) In unregulated river water sources, dealings should not increase commitments to take water from water sources or parts of water sources identified in any relevant management plan as being of high conservation value.
- (4) In unregulated river water sources or a groundwater sources, dealings should not increase commitments to take water from water sources or parts of water sources above sustainable levels identified in any relevant management plan.
- (5) In regulated river water sources, dealings should not increase daily demand for water delivery at those locations and times where it is identified in any relevant management plan that demand exceeds delivery capacity.
- (6) In regulated river water sources, dealings should not increase commitments to take water in lower river or effluent systems where this will result in flow at greater than 80% of channel capacity for more than 10% of days used for water delivery.
- (7) In this clause, **commitments to take water** refers, in relation to all access licences with nominated works in that water source or part of a water source, to:
 - (a) the total volume of share components, or
 - (b) the total volume of water allocations in water allocation accounts, or
 - (c) where relevant, the sum of limits on rates of extraction in extraction components.

8. Impacts on indigenous, cultural, heritage or spiritual matters

- (1) Dealings should not adversely affect geographical and other features of indigenous significance.
- (2) Dealings should not adversely affect geographical and other features of major cultural, heritage or spiritual significance.

9. Impacts on water users

- (1) Dealings should not adversely affect the ability of a person to exercise their basic landholder rights.
- (2) Dealings should have no more than minimal effect on the ability of a person to take water using an existing approved water supply work and any associated access licences. This should be addressed by constraints on dealings established in access licence dealing rules in relevant management plans.

10. Maximising social and economic benefits

- (1) The objective of access licence dealings is to help to facilitate maximising social and economic benefits to the community of access licences as required under the objects of the Act. Dealings do this by:
 - (a) allowing water to move from lower to higher value uses, and
 - (b) allowing the establishment of water markets that value the access licences, thereby encouraging investment in water efficient infrastructure, and
 - (c) allowing greater flexibility to access licence holders.
- (2) Subject to other principles in this order, access licence dealing rules should allow maximum flexibility in dealings to promote the objectives set out in subclause (1).

Part 3 Principles for specific types of access licence dealings**11. Transfer of access licences**

- (1) This clause applies to dealings under section 71A of the Act.
- (2) Dealings under section 71A are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or
 - (b) if the licence is suspended under section 78 of the Act.
- (3) Access licence dealing rules established by a management plan shall not regulate or prohibit dealings under section 71A of the Act.

Note. as indicated in section 71A (3), consent to the transfer of a local water utility access licence may only be granted if the transferee is a local water utility, and consent to the transfer of a major water utility access licence may only be granted if the transferee is a major water utility.

12. Conversion of access licence to new category

- (1) This clause applies to access licence dealings under section 71B of the Act.
- (2) Dealings under section 71B are prohibited:
 - (a) if the licence is proposed to be converted to category regulated river (conveyance) or category estuarine or category coastal, or
 - (b) if there is an outstanding debt under the Act in respect of the licence, or
 - (c) if the licence is suspended under section 78 of the Act, or
 - (d) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, or

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

- (e) if the licence share component is not numerically quantified.
- (3) Dealings under section 71B are prohibited unless provisions of the relevant management plan:
 - (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (4) The share and extraction components of a new licence issued under a dealing under section 71B must comply with any requirements that are specified in the relevant management plan for a licence granted under section 63 of the Act for the new category.
- (5) Except for where it is otherwise specified in access licence dealing rules in the relevant management plan or where this dealing is accompanied by a dealing under section 71E, water allocations remaining in the water allocation account of the cancelled licence are to be credited to the new licence, up to a maximum of the share component volume of the new licence.
- (6) The share component on a new access licence issued under a dealing under section 71B is to be of a volume equal to the volume on the cancelled licence multiplied by a conversion factor determined by the Minister in accordance with any rules set out in relevant management plans.
- (7) Conversion factor rules in management plans:
 - (a) must be based on protecting environmental water and basic landholder rights as specified in the management plans, and maintaining available water to other access licences, and
 - (b) are not to be set for the purpose of achieving a reduction in overall water extraction from water sources.
- (8) Subject to the granting of an application under section 71J, any nominated water supply works on the cancelled licence may be carried forward to the new licence.
- (9) For conversion of category from regulated river (high security), unregulated river or aquifer to major utility and vice versa:
 - (a) a major utility licence may only be converted to another category if it has components relating to only one water source, and
 - (b) subject to imposing such mandatory conditions as are required by the relevant management plan for the new category, the extraction component on the cancelled licence is to be carried over to the new licence.
- (10) For conversion of category from regulated river (general security) to regulated river (high security) and vice versa, and for conversion of category from domestic and stock to regulated river (high security) and vice versa, the extraction component on the cancelled licence is to be carried over to the new licence, subject to imposing such mandatory conditions as are required by the relevant management plan for the new category.
- (11) For conversion of category from regulated river (conveyance) to regulated river (high security) or regulated river (general security), the extraction component on the cancelled licence is to be carried over to the new licence, subject to imposing

such mandatory conditions as are required by the relevant management plan for the new category.

- (12) For conversion of category from regulated river (general security) to unregulated river:
- (a) no parts of the extraction component on the cancelled licence are to be carried over to the new licence, and
 - (b) the extraction component of the new licence is to specify a location or area which is on an unregulated river (apart from a minor stream as defined in an order made under section 53 of the Act), and
 - (c) the application for conversion of category from regulated river (general security) to unregulated river must be accompanied by an application under section 71E to change the share component to an unregulated river water source, and is conditional on granting of that application, and
 - (d) water allocations remaining in the water allocation account on the cancelled licence may not be credited to the new licence.
- (13) For conversion of category from unregulated river to runoff harvesting:
- (a) no parts of the extraction component on the cancelled licence are to be carried over to the new licence, and
 - (b) the extraction component of the new licence is to specify a location or area which is not on a river (apart from a minor stream as defined in an order made under section 53 of the Act), and
 - (c) the application for conversion of category from unregulated river to runoff harvesting access licence must be accompanied by an application under section 71J to nominate the water supply work to a runoff harvesting dam, and is conditional on granting of that application.
- (14) For conversion of category from runoff harvesting to unregulated river:
- (a) no parts of the extraction component on the cancelled licence are to be carried over to the new licence, and
 - (b) the extraction component of the new licence is to specify a location or area which is on an unregulated river (apart from a minor stream as defined in an order made under section 53 of the Act).
- (15) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. Under section 71B applications to convert local water utility access licences and supplementary access licences are prohibited, and licences granted are subject to the mandatory conditions applicable to the category or subcategory of licence to which it belongs. Also licences may only be granted in relation to the same water source or water management area as the cancelled licence.

13. Subdivision of access licences

- (1) This clause applies to subdivision dealings under section 71C of the Act.
- (2) Dealings under section 71C are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

- (b) if the licence is suspended under section 78 of the Act.
- (3) Subject to the granting of an application under section 71J, any nominated water supply works on the cancelled licence may be carried forward to the new licences.
- (4) The category of the new licences is to be the same as the category of the cancelled licence.
- (5) The areas or locations specified in the cancelled licence are to be carried over to all the new licences.
- (6) Any indivisible parts of the times, rates or circumstances specified in the extraction component of the cancelled licence are to be carried forward to all the new licences.
- (7) Water allocations remaining in the water allocation account of the cancelled licence are to be credited to the new licences so that the combined water allocations in the accounts of the new licences are no greater than the water allocations which remained in the account of the cancelled licence.
- (8) Access licence dealing rules established by a management plan shall not regulate or prohibit subdivision dealings under section 71C of the Act.

Note. As indicated in section 71C (3), the combined share components and combined extraction components of the new licences are to be no greater than the share and extraction components of the cancelled licence, and conditions on the cancelled licence are to be carried over to the new licences.

14. Consolidation of access licences

- (1) This clause applies to consolidation dealings under section 71C of the Act.
- (2) Consolidation dealings under section 71C are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of any of the licences, or
 - (b) if any of the licences are suspended under section 78 of the Act, or
 - (c) if the licences to be consolidated do not have share components in the same water source, or
 - (d) if the location or area specified in the extraction component of the licences is not the same.
- (3) Subject to the granting of an application under section 71J, any nominated water supply works on the cancelled licences may be carried forward to the new licence.
- (4) Water allocations remaining in the water allocation accounts on the cancelled licences are to be credited to the new licence so that the water allocations in the account of the new licence is no greater than the sum of the water allocations remaining in the accounts of the cancelled licences.
- (5) Access licence dealing rules established by a management plan shall not regulate or prohibit consolidation dealings under section 71C of the Act.

Note. as indicated in section 71C, the licences to be consolidated must be of the same category or subcategory, the combined share components and combined extraction components of the new licences are to be no greater than the share and extraction components of the cancelled licence, and conditions on the cancelled licences are to be carried over to the new licences.

15. Assignment of rights under access licences

- (1) This clause applies to assignment of rights dealings under section 71D of the Act.
- (2) Dealings under section 71D are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of any of the licences, or
 - (b) if any of the licences are suspended under section 78 of the Act, or
 - (c) if any of the licences are of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act.
- (3) Only share or extraction components, or parts thereof, that are numerically quantified may be assigned from one licence to another.
- (4) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. As indicated in section 71D, the licences which are involved in a dealing under section 71D must be of the same category and have share components in the same water source or water management area. This dealing does not apply to local water utility access licences.

16. Change of water source

- (1) This clause applies to amendment of share component dealings under section 71E of the Act.
- (2) Dealings under section 71E are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or
 - (b) if the licence is suspended under section 78 of the Act, or
 - (c) if the licence does not have the share component expressed as a volume, or
 - (d) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, or
 - (e) from an unregulated river water source to a regulated river water source, or
 - (f) from a groundwater source to a regulated river or unregulated river water source, or vice versa, or
 - (g) if the licence is of category major water utility or supplementary.
- (3) A dealing under section 71E is prohibited unless there is a hydrologic connection between the water sources of the cancelled and issued licences.
- (4) A dealing under section 71E is prohibited unless provisions of the relevant management plans:
 - (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (5) The share and extraction components of a new licence issued under this dealing must comply with any requirements that are specified in the relevant management plan for a licence granted under section 63 of the Act.

- (6) The share component on the new access licence is to be of a volume equal to the volume on the cancelled licence multiplied by a conversion factor determined by the Minister in accordance with any rules set out in relevant management plans.
- (7) Conversion factors rules in management plans:
 - (a) must be based on protecting environmental water and basic landholder rights as specified in the management plans, and maintaining the available water to other access licences, and
 - (b) are not to be set for the purpose of achieving a reduction in overall water extraction from water sources.
- (8) Nominated water supply works on the cancelled licence are not to be carried over to the new licence.
- (9) No water allocations remaining in the water allocation account of the cancelled licence may be credited to the new licence.
- (10) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. As indicated in section 71E, the new licence arising from a dealing under section 71E is subject to the mandatory conditions relevant to its category or subcategory and water source. This dealing does not apply to local water utility access licences.

17. Amendment of extraction component of access licence

- (1) This clause applies to amendment of extraction component dealings under section 71F of the Act.
- (2) Dealings under section 71F are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence,
 - (b) if the licence is suspended under section 78 of the Act, or
 - (c) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences.
- (3) Amendment of the times, rates and circumstances part of the extraction component may only occur where:
 - (a) access licence dealing rules in the relevant plan make provision for it consistent with the principles in Part 2 of this order, and
 - (b) those rules specifically indicate the nature of those amendments which are allowed.
- (4) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

Note. As indicated in section 71F, the area or location arising from a variation of an access licence under this dealing must relate to the same water management area or water source as that to which the original area or location related.

18. Assignment of water allocations between access licences

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

- (1) This clause applies to assignment of water allocation dealings under section 71G of the Act.
- (2) Dealings under section 71G are prohibited:
 - (a) if either of the access licences is suspended under section 78 of the Act, or
 - (b) if either of the access licences are of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences, or
 - (c) if a method of measurement of water extraction which is satisfactory to the Minister is not established for all nominated water supply works on both access licences, or
 - (d) if any of the access licences is of category runoff harvesting, or
 - (e) if any of the access licences is of category major utility, unless specific provision is made in access licence dealing rules to allow this, or
 - (f) from a supplementary water access licence to a licence of any other category.
- (3) Assignment of water allocations between access licences relating to different water sources is prohibited if:
 - (a) either licence is of category supplementary, or
 - (b) there is no hydrologic connection between the water sources, or
 - (c) one water source is a regulated river and the other is an unregulated river, or
 - (d) one water source is a groundwater source and the other is a regulated river or unregulated river water source.
- (4) Assignment of water allocations between access licences relating to different water sources is prohibited unless provisions of the relevant management plans:
 - (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (5) Assignment of water allocations from a local water utility access licence is prohibited unless:
 - (a) the Minister has approved a demand management plan for all NSW towns supplied under the local water utility access licence, and
 - (b) the Minister has approved a drought management plan for all NSW towns supplied under the local water utility access licence, and
 - (c) the Minister is satisfied the assignment will not put the water supply for NSW towns supplied by the local water utility at risk.
- (6) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

19. Interstate transfer dealings

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

- (1) This clause applies to dealings under section 71H of the Act.
- (2) Any dealings under section 71H must be consistent with the relevant inter-state agreement.
- (3) Dealings under section 71H are prohibited unless the waters for which the interstate access licence equivalent has or will have rights to are hydrologically connected to the water source in which to which the access licence to be issued or revoked relates.
- (4) Dealings under section 71H which revoke an access licence are prohibited:
 - (a) if there is an outstanding debt under the Act in respect of the licence, or
 - (b) if the licence is suspended under section 78 of the Act, or
 - (c) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, or
 - (d) if the licence is of category local water utility or major water utility.
- (5) The share and extraction components of a new licence issued under this dealing must comply with any requirements that are specified in the relevant management plan for a licence granted under section 63 of the Act.
- (6) Dealings under section 71H are prohibited unless arrangements are in place which:
 - (a) protect environmental water from being affected by such dealings, and
 - (b) protect basic landholder rights from being affected by such dealings, and
 - (c) protect the available water under other access licences from being affected by such dealings.
- (7) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

20. Interstate assignment of water allocations

- (1) This clause applies to interstate assignment of water allocation dealings under section 71I of the Act.
- (2) Any dealings under section 71I must be consistent with the relevant inter-state agreement.
- (3) Dealings under section 71I are prohibited:
 - (a) if the access licence is suspended under section 78 of the Act, or
 - (b) if the licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences, or
 - (c) if a method of measurement of water extraction which is satisfactory to the Minister is not established for all nominated water supply works on the access licence, or
 - (d) if the access licence is of category runoff harvesting or supplementary water, or

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

- (e) if the access licence is of category major utility, unless specific provision is made in access licence dealing rules in the relevant management plan to allow this.
- (4) This dealing is prohibited unless arrangements are in place which:
 - (a) protect environmental water from being affected by the dealing, and
 - (b) protect basic landholder rights from being affected by the dealing, and
 - (c) protect the available water under other access licences from being affected by the dealing.
- (5) Interstate assignment of water allocations from a local water utility access licence is prohibited unless:
 - (a) the Minister has approved a demand management plan for all NSW towns supplied under the local water utility access licence, and
 - (b) the Minister has approved a drought management plan for all NSW towns supplied under the local water utility access licence, and
 - (c) the Minister is satisfied the assignment will not put the water supply for NSW towns supplied by the local water utility at risk.
- (6) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

21. Nomination of water supply works

- (1) This clause applies to nomination of water supply works dealings under section 71J of the Act.
- (2) Dealings under section 71J are prohibited if the access licence is suspended under section 78 of the Act.
- (3) Dealings under section 71J are prohibited if the access licence is of a kind which is not subject to embargo in accordance with an order made under sections 80 or 81 of the Act, apart from local water utility access licences, with the following exceptions:
 - (a) if new or additional works are to be nominated, where those works supply the same property as the current nominated works, or a contiguous property to the property supplied by the current nominated works which is occupied by the same landholder, or
 - (b) if a nominated work is withdrawn, that there remains at least one nominated work.
- (4) Dealings under section 71J are prohibited if the access licence is of category local water utility, with the following exceptions:
 - (a) if new or additional works are to be nominated, that those works supply the same town water supply scheme as the current nominated works, or
 - (b) if a nominated work is withdrawn, that there remains at least one nominated work.

Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003

- (5) Nomination of a water supply work is prohibited if the access licence does not have an extraction component allowing taking of water at the location of the nominated work.
- (6) With regard to runoff harvesting access licences:
 - (a) the nominated work must be a runoff harvesting dam of capacity consistent with the share component of the access licence, and
 - (b) withdrawal of nominated work may only be granted where arrangements are in place to ensure that the nominated work does not conserve any more water than is permitted pursuant to the exercise of basic landholder rights.
- (7) Withdrawal of nomination may not be prohibited by access licence dealing rules, except for as otherwise specified in this clause.
- (8) Subject to the other parts of this clause, access licence dealing rules may prohibit or regulate these dealings provided this is done consistent with the principles in Part 2 of this order.

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