

Water Sharing Plan for the Lower Lachlan Groundwater Source 2003

[2003-187]



New South Wales

Status Information

Currency of version

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Legislation on this site is usually updated within 3 working days after a change to the legislation.

Provisions in force

The provisions displayed in this version of the legislation have all commenced.

Notes—

- **Repeal**

This Plan was repealed by cl 3 of the [Water Sharing Plan for the Lachlan Alluvial Groundwater Sources Order 2020 \(352\)](#) with effect from 30.6.2020.

Authorisation

This version of the legislation is compiled and maintained in a database of legislation by the Parliamentary Counsel's Office and published on the NSW legislation website, and is certified as the form of that legislation that is correct under section 45C of the [Interpretation Act 1987](#).

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Water Sharing Plan for the Lower Lachlan Groundwater Source 2003



New South Wales

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Water Sharing Plan for the Lower Lachlan Groundwater Source 2003



New South Wales

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 February 2008, and ceases on the 30 June 2018.

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.
- (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.

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,
- (d) reduce the total share component of access licences to the final extraction limit,
- (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.

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) For the purposes of section 5 (3) of the Act, the overall basis for water sharing in this Plan is the average annual recharge to this groundwater source, estimated to be 108,000 megalitres per year (hereafter ML/yr) plus the requirements for basic landholder rights at the commencement of this Plan.

Note—

The recharge provided for in this subclause is uncertain and the Natural Resources Commission has recommended a precautionary approach and the average annual recharge has been set at 108,000 ML/yr.

Note—

Recharge west of the Cobb Highway that infiltrates into unusable saline aquifers is excluded from the average annual recharge in this clause.

- (2) Pursuant to section 45 (1) (b) of the Act, the average annual recharge for this groundwater source established in subclause (1) may be varied by the Minister after 30 June 2010, following further recharge studies undertaken by the Minister.
- (3) The results of the studies undertaken in subclause (2) must be independently reviewed.
- (4) 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 (3), and
 - (b) advise the Minister by 31 March 2010 on any changes to recharge estimates based on the study and the outcomes of the independent review.
- (5) The Minister must take into account the review in subclause (3), and the advice provided in accordance with subclause (4), before making a variation under subclause (2).

Note—

The extent of impact of these changes on access by licence holders is limited 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 Planned environmental water

Note—

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

- (1) Subject to Part 10 Division 2 of this Plan, the physical water contained in the storage component of this groundwater source, minus the amount required for supplementary water access permitted under clause 25D, as varied by clause 29, will be reserved for the environment.

Note—

Access to water under supplementary water access licences in this water source will not be permitted after 30 June 2017 and from that date the physical water contained in the storage component of this groundwater source will be reserved for the environment.

- (2) The Minister may under section 45 (1) (b) of the Act amend subclause (1) after 30 June 2010 to include a portion of the average annual recharge to this groundwater source as planned environmental water, based on further studies of groundwater ecosystem dependency undertaken by the Minister.

Note—

The Minister should undertake further studies of the groundwater dependency of ecosystems within this Groundwater Source, as recommended by the Natural Resources Commission, including any potential groundwater ecosystem located beyond this Groundwater Source that may be affected by the management of this Groundwater Source.

Note—

The extent to which this change may impact on access licence holders is limited by clause 28.

Note—

The studies may recommend management options other than reservation of a portion of recharge to protect groundwater dependant ecosystems.

- (3) The results of the studies undertaken in subclause (2) must be independently reviewed.
- (4) 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 (3), and
 - (b) advise the Minister by 31 March 2010 on any changes to planned environmental water based on the study and the outcomes of the independent review.
- (5) The Minister should take into account the review in subclause (4), and the advice provided in accordance with subclause (3), before making a variation under subclause (2).

19 (Repealed)

20 Adaptive environmental water

- (1) Water may be committed in this water source for environment purposes by an adaptive environmental water condition pursuant to section 8B of the Act.
- (2) The holder of an access licence may request that the Minister impose an adaptive environmental water condition in respect of the whole or a part of the share component of the access licence.
- (3) The condition imposed under subclause (2) will continue until the holder requests its removal.
- (4) An access licence may be held by the Minister, Local Land Services or another public body to the extent that the whole or part of that access licence has been surrendered as a result of water use savings made by works or other improvements, subject to:
 - (a) the share component of the access licence held being equal to the value of the water use savings made, and
 - (b) an adaptive environmental water condition being imposed on the access licence and that condition not being removed.
- (5) The adaptive environmental water condition specified in subclause (1) and the plan for implementation of that condition, as required by section 8E (7) of the Act:
 - (a) are to be established by the Minister, and
 - (b) shall be such as to ensure that there will be a contribution to the objectives of this Plan.
- (6) The allocation of water for access licences with an adaptive environmental water condition will be in accordance with the available water determination for the relevant category of access licence under this Plan.
- (7) If the adaptive environmental water condition on an access licence requires the water

to be left in the water source for environmental purposes, then the water allocation account is to be debited when the water is available in accordance with the adaptive environmental water condition on the access licence.

- (8) If the adaptive environmental water condition requires the environmental water to be taken from the water source then the water allocation account is to be debited when it is taken.
- (9) For the purposes of auditing compliance with the long-term extraction limit under this Plan, the delivery of water pursuant to an access licence that has been committed as adaptive environmental water shall be accounted for as extraction where it occurs pursuant to a licence under subclause (7) or subclause (8).
- (10) To the extent that the water allocation of an access licence which is subject to an adaptive environmental water condition is not required to meet the requirement of the condition, it may be the subject of an assignment dealing in accordance with the Dealings Rules in this Plan.
- (11) Notwithstanding subclause (10) an access licence with an adaptive environmental water condition may be the subject of any other dealing permitted by the Dealing Rules in this Plan, provided the benefit to the environment provided for in the adaptive environmental condition is not diminished.
- (12) At the commencement of this Plan, there were no access licences with an adaptive environmental water condition in this water source.

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 of their supply by extraction authorised by access licences:
 - (a) the Minister may amend a water supply works approval to allow the landholder's affected bore to be replaced or deepened to ensure continuing access to water for basic landholder rights, or
 - (b) the Minister may amend another water supply works approval so that basic landholder rights water may be supplied by an alternative water supply work during critical times.

Note—

The Minister may, by order made under section 323 of the Act, impose temporary restrictions on basic landholder rights when it is necessary to do so in the public interest, such as to cope with a period of severe water shortage or threat to public health or safety.

- (3) In accordance with the legislative requirements, 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).
- (4) Basic landholders rights exercised under section 52 of the Act must be exercised in accordance with any guidelines established by the Minister with respect to the reasonable use of water for domestic consumption and stock watering by landholders authorised to use water for either or both of those purposes.

Note—

The Minister may enforce any reasonable use guidelines by serving orders on individual landholders under section 325 of the Act. The Minister may also order individual landholders accessing basic landholder rights to take specified measures to protect the environment, to preserve basic landholder rights or to overcome a threat to public health under section 328 of the Act.

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](#).

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.

Part 7 Requirements for water for extraction under access licences

25 Requirements for water for extraction 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 or total shares specified in the share components on access licences in this groundwater source. The actual volume of water available at any time will depend on climate, access licence priority and the rules in this Plan.

25A Share components of domestic and stock access licences

It is estimated that at the time of commencement of this Plan, the share components of domestic and stock access licences authorised to extract water from this groundwater source will total 24 ML/yr.

25B Share components of local water utility access licences

It is estimated that at the time of commencement of this Plan, the share components of local water utility access licences authorised to extract water from this groundwater source will total 2,322 ML/year made up of:

- (a) 2,247 ML/yr held by Carrathool Shire Council, and
- (b) 75 ML/year held by Central Darling Shire Council.

Note—

Clause 25B represents the total volumes specified on access licences in this groundwater source. It is not a commitment to supply that water.

25C Share components of aquifer access licences

- (1) For each entitlement referred to in Column 1 of Schedule 4 applying to the licences listed in Column 2 of Schedule 4 that are to become aquifer access licences in this groundwater source at the commencement of this Plan, the share component is to be equal to the share component in Column 3 of Schedule 4.
- (2) For those Water Act property entitlements not listed in Column 1 of Schedule 4 that are to become aquifer access licences in this groundwater source at the commencement of this Plan, the total share component (TSC) will be calculated using the following formulae:

$$TSC = R - LWU - SD - \Sigma EXC$$

Where:

- (a) **R** is the recharge established in clause 16 (1) plus the requirements for basic landholder rights at the commencement of this Plan,
 - (b) **LWU** is the total of local water utility access licence share components in this groundwater source at the commencement of this Plan,
 - (c) **SD** is the share component for stock and domestic access licences in this groundwater source at the commencement of this Plan, and
 - (d) **ΣEXC** is the sum of share components specified in Column 3 of Schedule 4.
- (3) For those Water Act property entitlements not listed in Column 1 of Schedule 4 that are to become aquifer access licences in this groundwater source at the commencement of this Plan, the individual share component will be calculated using the following formulae:

$$\text{Share component} = IAC + AC + EC$$

Where:

(a) **IAC** is the inactive component and:

$$IAC = (WAE - HoE) \times 0.09$$

Where:

- (i) **WAE** is the Water Act entitlement, and
- (ii) **HoE** is the history of extraction for each Water Act property entitlement defined in subclause (5).

(b) **AC** is the active component and:

$$AC = (TSC - \Sigma IAC) \times HoE / \Sigma HoE$$

provided that AC is capped if:

for a Water Act property entitlements for which a history of extraction is defined for a late developer in subclause (4) $WAE_{LD} \times 0.45$ is less than $IAC + AC$ then the active component

$$AC = (WAE_{LD} \times 0.45) - IAC,$$

or if:

for any other Water Act property entitlement $WAE \times 0.72$ is less than $IAC + AC$ then the active component

$$AC = (WAE \times 0.72) - IAC$$

Where:

- (i) **TSC** is the total share component calculated in subclause (2),
 - (ii) **ΣIAC** is the sum of the inactive components calculated in subclause (3) (a),
 - (iii) **ΣHoE** is the sum of the history of extractions for each Water Act property entitlement defined in subclause (5) for property entitlements not listed in Column 1 of Schedule 4, and
 - (iv) **WAE_{LD}** is the Water Act property entitlement for which a history of extraction is defined for a late developer in subclause (4).
- (c) **EC** is the entitlement component and equals zero for those aquifer access licences where the share component is capped in subclause (3) (b), otherwise

$$EC = WAE / \Sigma WAE_{NC} \times (TSC - \Sigma IAC - \Sigma AC)$$

provided that EC is capped if:

for a Water Act property entitlements for which a history of extraction is defined for a late developer in subclause (4) $WAE_{LD} \times 0.45$ is less than $IAC + AC + EC$ then the entitlement component

$$EC = (WAE_{LD} \times 0.45) - IAC - AC,$$

or if,

for any other Water Act property entitlement $WAE \times 0.72$ is less than $IAC + AC + EC$ then the entitlement component

$$EC = (WAE \times 0.72) - IAC - AC$$

Where:

- (i) ΣWAE_{NC} is the sum of the Water Act property entitlements where the share component is not capped in subclause (3) (b), and
 - (ii) ΣAC is the sum of the active components calculated in subclause (3) (b)
- (4) For the purposes of subclause (3) history of extraction for each late developer Water Act Property entitlement is equal to the minimum of:
- (a) for entitlements where the average of the 3 highest years of extraction from 1998/99–2003/04 is less than half of the Water Act entitlement and the licensee developed irrigation infrastructure after the 30 June 2003 the daily bore capacity in megalitres multiplied by 150, or
 - (b) for entitlements where the average of the 3 highest years of extraction from 1998/99–2003/04 is less than half of the Water Act entitlement, the licensee developed irrigation infrastructure after the 30 June 2003 and the licensee did not have a surface water entitlement; the area developed for irrigation multiplied by 6.5 ML per hectare, or
 - (c) for entitlements where the average of the 3 highest years of extraction from 1998/99–2003/04 is less than half of the Water Act entitlement, the licensee developed irrigation infrastructure after the 30 June 2003 and the licensee had a surface water entitlement the area developed for groundwater irrigation multiplied by 6.5 ML per hectare where the area developed for groundwater irrigation is calculated from the formulae:

$$\frac{\text{Area Developed (ha)} \times \text{Water Act 1912 entitlement}}{\text{Water Act 1912 entitlement} + \text{Water Act 1912 surface water entitlement} \times 0.61}$$

- (5) For the purposes of subclause (3) and for clause 25D history of extraction (HoE) for

each Water Act Property entitlement is equal to the lesser of:

(a) the Water Act entitlement, or

(b) the greater of:

(i) the average of the 3 highest years of extraction from 1998/99–2003/04; or

(ii) history of extraction for late developers defined in subclause (4).

(6) It is estimated that at the time of commencement of this Plan the share components of access licences established under this clause will total 105,654.

25D Share components of supplementary water access licences

(1) Those Water Act entitlements that are to be converted to an aquifer access licence in this groundwater source under clause 25C may also receive a supplementary water access licence where history of extraction (as defined in subclause 25C (5)) is greater than the share component determined in clause 25C.

(2) The share component of a supplementary water access licence created under subclause (1) will be established for those licenses in accordance with the following formula:

$$\text{Share component (SWAL)} = \text{HoE} - \text{SC}_{\text{AAL}}$$

Where:

(a) **HoE** is the history of extraction for each Water Act property entitlement defined in subclause (5),

(b) **SC_{AAL}** is the share component of the aquifer access licence established under subclauses 25C.

(3) It is estimated that at the time of commencement of this Plan the sum of the share components of supplementary water access licences established under subclause (2) will total 21,252 megalitres.

Note—

Not all aquifer access licences will receive a supplementary water access licence. Only those licences that have a HoE as defined in subclauses 25C (5) which is greater than their new Aquifer Access Licence Share component will receive supplementary water access licences.

25E Changes to share components

(1) This Plan recognises that the total requirements for water for extraction within this groundwater source may change during the term of this Plan as a result of:

(a) the granting, surrender or cancellation of access licences, or

- (b) the variation of local water utility access licences under section 66 of the Act.
- (2) Pursuant to section 68A of the Act the share component of each supplementary water access licence will be reduced to 0 ML on 1 July 2018.
- (3) Pursuant to section 77A of the Act supplementary water access licences will be cancelled after 1 July 2018.

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), 61 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) Applications for access licences may be made and access licences granted in this groundwater source if they are for:
 - (a) a specific purpose access licence for which application is provided for under clause 19 of the *Water Management (General) Regulation 2004* (hereafter **the Regulation**) in accordance with section 61 (1) (a) of the Act,

Note—

At the commencement of this Plan, clause 19 of the Regulation provides for the following specific purpose access licences to be applied for:

- (i) a local water utility access licence (subcategory “domestic and commercial”), for the purpose of domestic consumption and commercial activities,
- (ii) a domestic and stock access licence (subcategory “domestic”), for the purpose of domestic consumption,
- (iii) an aquifer access licence (subcategory “town water supply”), for the purpose of supply to communities for domestic consumption and commercial activities, and
- (iv) any category of specific purpose access licence (subcategory “Aboriginal cultural”), for Aboriginal cultural purposes.

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.

- (b) an access licence with a zero share component in accordance with sections 61 (1) (b) and 63 (5) of the Act,
- (c) an access licence that may be granted in accordance with a dealing that is permitted by Part 11 of this Plan, or

- (3) 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 component sought will be the minimum required to meet that purpose and circumstance.
- (4) 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 access 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.
- (5) An access licences may be granted in this groundwater source where:
 - (a) a *Water Act 1912* licence was not converted at the commencement of this Plan, or
 - (b) a licence is found to be taking water from a water source in this Plan but has been incorrectly identified as taking of water from another groundwater source and the licence is cancelled in the other water source.
- (6) Aquifer access licences granted under subclause (5) shall be subject to the rules specified in clauses 25C and 25D.

Part 9 Limit to the availability of water

Division 1 Long-term average extraction limit

27 Extraction limit

- (1) This Division is made in accordance with section 20 (2) (a) of the Act.
- (2) The extraction limit for this groundwater source is initially 108,000 ML/yr, plus total water allocations made to supplementary water access licences under clause 29, plus the total requirements for basic landholder rights at the commencement of this Plan.

28 Variation of extraction limits

- (1) The Minister may under section 45 (1) (b) of the Act amend clause 27 after 30 June 2010 of this Plan to vary the extraction limit in accordance with:
 - (a) any change to the average annual recharge arising from clause 16 (2), and
 - (b) any change to the planned environmental water arising from clause 18 (2).
- (2) If there is any change to the extraction limit arising from subclause (1) then:
 - (a) the extraction limit will not be greater than 215,393 ML/yr, plus the total requirements for basic landholder rights at the commencement of this Plan and,

- (b) the extraction limit will not be less than 73,500 ML/yr, plus total water allocations made to supplementary water access licences under clause 29, plus the total requirements for landholder basic landholder rights.

28A Compliance with the extraction limit

- (1) Water extraction in this groundwater source will be monitored each water year to determine if there is any growth in volume extracted above the extraction limit specified in clause 27, based on a comparison of the extraction limit against the extraction within this groundwater source over that year and the preceding 2 years.
- (2) For the purposes of auditing compliance with the extraction limit, if water that:
 - (a) pursuant to an access licence is committed as adaptive environmental water to be left in the aquifer for environmental purposes, then extraction will be assumed to be equal to the available water determination made under clause 29, or
 - (b) pursuant to an access licence is committed as adaptive environmental water to be extracted for environmental purposes, then extraction will be that measured through the approved water supply work (bore).
- (3) If the 3 year average of extraction in this groundwater source exceeds the extraction limit established in clause 27 (2) by 5% or greater, then the available water determination made for aquifer access licences under clause 29 (6) for the following water year, should be reduced by an amount that is assessed as necessary by the Minister to return subsequent total water extraction to the extraction limit.

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) Pursuant to section 58 (4) of the Act, this Plan amends the relative priorities of the categories of aquifer access licence and supplementary water access licence to the extent necessary to legally make the available water determinations as set out in this clause.
- (3) All available water determinations in this groundwater source shall be expressed as either:
 - (a) a percentage of the share component for all access licences where share components are specified as megalitres per year, or
 - (b) megalitres per unit of share component for all access licences where share components are specified as a number of shares.
- (4) An available water determination for each category of access licence in this

groundwater source should be made at the commencement of each water year.

- (5) The available water determinations made at the commencement of each water year for domestic and stock and local water utility access licences should be 100% of share components.
- (6) The available water determination made at the commencement of each water year for water access licences should be such that the total of available water determinations under this clause equals the extraction limit set in clause 27 (2) as varied by clause 28 minus the total available water determinations for domestic and stock access licence minus total available water determinations for local water utility access licences minus total available water determinations for supplementary water access licences minus the requirements for basic landholder rights at the commencement of this Plan, or such lower amount as results from the operation of clause 28A (3).
- (7) The available water determination made at the commencement of this Plan for supplementary water access licences should be 1 ML per unit of share component.
- (8) The available water determination made at the commencement of each year after the 2007/08 water year for supplementary water access licences will be reduced by 0.1 ML per unit of share component each year, and
- (9) The available water determination for supplementary water access licences will be reduced to 0 ML per unit of share component at the commencement of the 2017/18 water year.

Note—

Subclause (8) means that allocations for supplementary water access licences will diminish each year by 0.1 ML per unit share each year from 2008/09. Thus, the available water determination for 1 February 2008 to 30 June 2008 is 1 ML, 2008/09 water year is 0.9 ML, 2009/10 water year is 0.8 ML, 2010/11 water year is 0.7 ML, 2011/12 water year is 0.6 ML, 2012/13 water year is 0.5 ML, 2013/14 water year is 0.4 ML, 2014/15 water year is 0.3 ML, 2015/16 water year is 0.2 ML, 2016/17 water year is 0.1 ML and 2017/18 water year is 0 ML.

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 allocation may be assigned to, or from, these accounts by a water allocation assignment made under section 71T 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 a water supply work (bore) nominated by an access licence will be periodically debited against the access licence water allocation account.
- (3) A water allocation account shall remain at or above zero at all times.
- (4) Unused water allocations in the water allocation account of a domestic and stock access licence or of local water utility access licence, cannot be carried over from one water year to the next.
- (5) In any water year, subject to local impact management restrictions arising from Part 10, Division 3 of this Plan, water taken from this groundwater source under a local water utility access licence or a domestic and stock access licence may not exceed a volume equal to:
 - (a) 100% of the share component of the access licence,
 - (b) plus any water allocations assigned from another access licence water allocation account under section 71T of the Act in that year,
 - (c) plus any water allocations re-credited in accordance with section 76 of the Act in that year, and
 - (d) minus any water allocations assigned to another licence water allocation account

under section 71T of the Act in that year.

- (6) Unused water allocations in an access licence water allocation account may be carried over from one water year to the next.
- (7) In any water 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 that is equal to:
 - (a) 1.5 ML per unit of access licence share component,
 - (b) plus any water allocations assigned from another access licence water allocation account under section 71T of the Act in that year, and
 - (c) minus any water allocations assigned to another access licence water allocation account under section 71T of the Act in that year.
- (8) The maximum water allocation that can be carried over in the water allocation account for an aquifer access licence in these water sources from one water year to the next is 1 ML per unit share of access licence share component.
- (9) Unused water allocations in a supplementary water access licences water allocation account cannot be carried over from one water year to the next.
- (10) In any water year, subject to local impact management restrictions arising from Part 10, Division 3 of this Plan, water taken from this groundwater source under a supplementary water access licence, may not exceed the allocation resulting from the available water determination.
- (11) Where both an aquifer access licence and a supplementary water access licence nominate the same water supply works and use approvals, water taken will be debited from a supplementary water access licence water allocation account before water is debited from an aquifer access licence water allocation account.

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:
 - (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,
 - (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:

(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 are listed in Schedule 5.

(6) The Minister may under section 45 (1) (b) of the Act, identify high priority groundwater dependent ecosystems and include them in Schedule 5 at 30 June 2010, 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,
- (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) (d) of the Act and with the Minister's access licence dealing principles gazetted under section 71Z of the Act.
- (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 71Z 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 71Z of the Act provides for the Minister's access licence dealing principles to prevail.

45 Rules relating to constraints within this groundwater source

- (1) This clause applies to any relevant dealings under sections 71Q, 71S, and 71W of the Act, and section 71T 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, or

(c) the dealing involves a supplementary water access licence.

46 Rules for change of water source

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

Note—

Section 71R 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 71W of the Act) in the receiving water source before extraction can commence.

(2) Dealings under section 71R 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 71O 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 71U 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 71T of the Act.

(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 71V of the Act.

(2) Dealings that result in an interstate assignment of water allocations to or from this groundwater source 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 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 supplementary water access licences shall have mandatory conditions to give effect to clause 25E (2) and (3), in relation to the amendment of access licence share components and the cancellation of supplementary water access licences.
- (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) must be constructed by a driller licensed under the [Water Act 1912](#),
- (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,
- (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 a form approved by the Minister,
 - (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 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 in writing within 90 days that the work is no longer used, 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 must be installed and maintained on each water supply work (bore) used for extraction of water under an access licence, and such devices must be of a type, and must 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 of the Minister, 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.

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 43A of the Act, the Natural Resources Commission must undertake a review of this Plan prior to any decision to extend its term or to make a new plan. The review must consider the extent to which the Plan's water sharing provisions have contributed to achieving or not achieving the State priorities for local land services relevant to natural resource management (as referred to in the [Local Land Services Act 2013](#)).

When undertaking this review, the Natural Resources Commission is required to call for public submissions. The Commission will take into consideration any submission received as well as any other relevant State-wide or regional government policies or agreements that apply to the Local Land Services region.

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.

Part 14 Amendment of this Plan

55 Amendment of this Plan

- (1) This Part is made in accordance with section 45 (1) (b) 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 planned environmental water,
 - (c) clause 28 in respect to the extraction limit,
 - (d) clause 39 in respect to high priority groundwater dependent ecosystems.

56 Amendment relating to planned environmental water

- (1) The Minister may amend this Plan to provide for the recovery of planned environmental water as follows:
 - (a) the recovery is only to apply where the Minister has cancelled an access licence held by the Minister in accordance with section 8A of the Act,
 - (b) the amount of additional water to be provided as planned environmental water is to be equivalent to the annual average extraction of water under the cancelled licence over the long-term,
 - (c) the average annual long-term availability of water for the remaining access licences that relate to the water source concerned is to be reduced by the average annual long-term extraction of water under the cancelled licence.
- (2) The Minister may amend this Plan to specify the purposes for which planned environmental water committed under section 8A of the Act is to be used.

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.

area developed is the area of land developed for irrigation through the construction and or installation of pumps, pipelines, channels, centre pivots, lateral moves, travelling irrigators, drip irrigation systems, sprays or other means of applying water for the purpose of irrigation. It does not include the maintenance, replacement or enhancement of existing works or infrastructure.

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 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.

long term average storage component is the volume of water in the aquifer less the average annual recharge, and exceeds the combined requirements for basic landholder rights extraction and supplementary access provided for in this Plan.

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 year is a 12 month period from 1 July to 30 June.

Water Act entitlement is the total of the [Water Act 1912](#) entitlements for all bore licences managed under a single property entitlement.

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 establishes an extraction limit of 100% 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 2010.
<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.

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

- 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 ecosystems. The groundwater source also discharges to the Lachlan River.
- 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 landholder 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 planned environmental water and extraction limit after 30 June 2010.
- 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 30 June 2016 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 5 Access rights for water access licensees clearly and legally specified in terms of share and extraction components

PARTIAL

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

- The total access licence volume for this groundwater source is greater than 125% of the extraction limit.
- This Plan provides for a reduction in access licence share components to 100% at the start of the Plan.
- This Plan provides for supplementary water access licences with share components of an additional 38% of the extraction limit to be reduced to zero prior to the end of the 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

PARTIAL

- While detailed assessment of connectivity was not undertaken, an expert panel concluded that this groundwater source would lose or gain from the river depending on season.
- 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 or 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

- 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 which are 200 metres (100 metres for basic landholder rights bores) from any high priority dependent groundwater ecosystems.
- This Plan provides for review (including more detailed assessment of groundwater dependency) and variation in planned environmental water and extraction limit after 30 June 2010.

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

- 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

- One aboriginal community representative has been involved in development of this Plan.
- A Department Officer consulted with local Aboriginal Communities.
- 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 which are 200 metres (100 metres for basic landholder rights bores) from any high priority dependent groundwater ecosystems.

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

- This Plan prohibits extraction from new or replacement bores which are 200 metres (100 metres for basic landholder rights bores) from any designated Aboriginal heritage sites.
- This Plan provides for an assessment of the environmental and Aboriginal heritage requirements by 2010.
- This Plan provides for assessment of new licence applications by Aboriginal interests.

Target 16a All share components of access licences tradeable

PARTIAL

- 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

- This Plan allows trading, but restricts it in 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

- 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

- No vulnerability mapping of area is referenced in this Plan.
- Rules are established in this Plan to limit the movement of poor quality water.

Schedule 4 Aquifer access licence share component

(Clauses 25C (1) and 25C (2))

Column 1	Column 2	Column 3
Water Act Property Entitlement	Licence	Aquifer Access Licence Share Component
70PT960437	70BL153508	24
70PT960416	70BL226849	395
70PT960417	70BL226850	353
70PT960418	70BL226851	808

Schedule 5 High priority groundwater dependent ecosystems

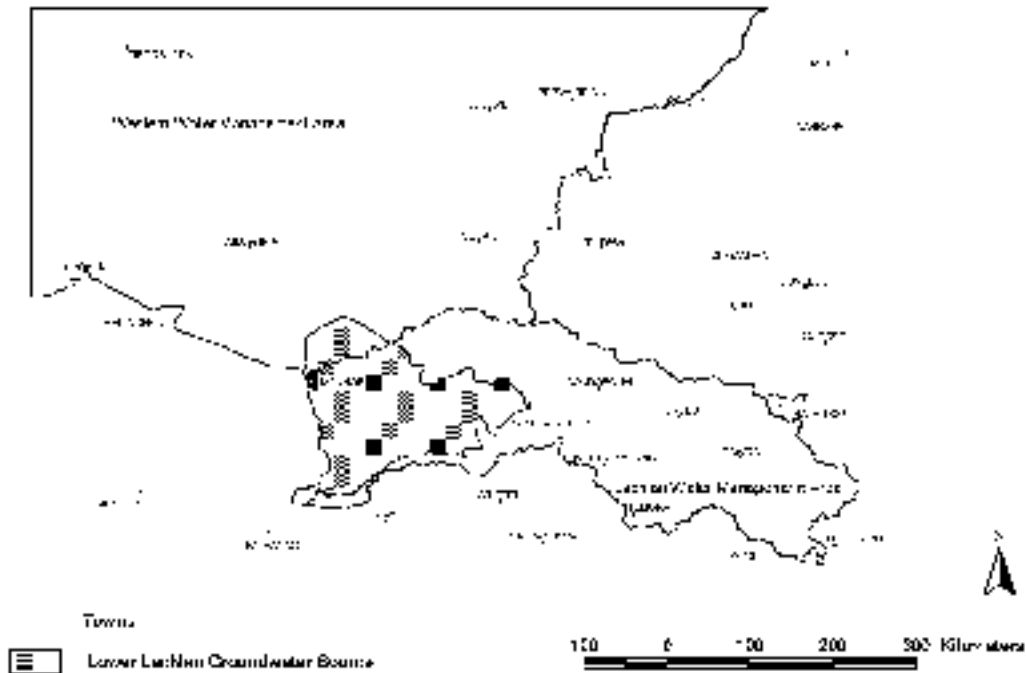
Note—

There are no high priority groundwater dependent ecosystems identified and scheduled at the commencement of this Plan.

Note—

High priority groundwater dependant ecosystems may be added to this Schedule during the period of this Plan. The Department Offices shown in Appendix 2 should be contacted for a current list.

Appendix 1 Lachlan and Western Water Management Areas



Appendix 2 Location of maps

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

Department of Water and Energy
 9 Spring Street
 FORBES NSW 2871

Department of Water and Energy
 7 Hay Street
 CONDOBOLIN NSW 2877

Department of Water and Energy
 Cnr Anson & Kite Streets
 ORANGE NSW 2800

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. • 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. 	<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"> • 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.
(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.

- | | | | |
|-----------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>(f) Extent to which domestic and stock rights have been met.</p> | <p>11 (b)
11 (c)</p> | <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. |
| <p>(g) Extent to which local water utility requirements have been met.</p> | | <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. | |
| <p>(h) Extent to which native title rights requirements have been met.</p> | <p>11 (c)
11 (d)</p> | <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 yield extraction and native title rights holders, or number of bores deepened. • Assess frequency and duration of water level drawdown below critical thresholds. | |
| <p>(i) Extent of recognition of spiritual, social and customary values of groundwater to Aboriginal people.</p> | <p>11 (d)</p> | <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. |

Appendix 4 Rules for determining History of Extraction

(Clause 25C (4))

Rule 1 The history of extraction (HOE) for each entitlement, being the total entitlement of all bores managed under a property entitlement, is calculated separately, irrespective of ownership.

Rule 2 When meter failure has prevented the measurement of actual extraction, extraction will be estimated on the basis of:

- (a) the extraction that was estimated at the time of meter failure held on record by the Department, or
- (b) pump running times held on record by the Department, or
- (c) areas of crops grown and water usage for similar crops.

Rule 3 Estimates made under Rule 2 will be capped at licensed access to water for the entitlement for the year in question.

Rule 4 Where non-volumetric entitlements have been converted to volumetric entitlements during or after the period being used to calculate the HOE, any relevant historical extraction or other data used in converting the entitlements will be used to calculate the HOE.

Rule 5 In the event of zero or reduced extraction resulting from bore failure, the year in which the bore failed will be excluded in calculating the HOE.

If a licence holder substantiates a case that the failure of a bore had a greater impact on extraction in the water year following bore failure, then this year rather than the year in which the failure occurred, will be the year excluded.

The licence holder must provide documented evidence of the bore failure.

Rule 6 Failure of associated bore equipment (eg motor, gearbox etc) will not be considered bore failure for the purpose of calculating the HOE.

Rule 7 Reduced levels of extraction from a bore due to lower aquifer levels will not be considered bore failure for the purpose of determining the HOE.

Rule 8 In the event of lower extraction resulting from crop failure, no allowance will be made in calculating the HOE.

Rule 9 Water extracted pursuant to a temporary transfer of entitlement will be accounted in the HOE of the seller or transferor.

Rule 10 Where properties have been amalgamated, all extraction prior to amalgamation will be combined and together with extraction occurring after amalgamation will be used to calculate the HOE.

Rule 11 When new entitlements have been created due to subdivision, extractions under the original entitlement will be apportioned to each new entitlement in proportion to the entitlement at the commencement of the Plan and together with extraction occurring after subdivision will be used to

calculate the HOE.

Alternately, where all the new entitlement holders unanimously agreed, extraction under the original entitlement will be calculated for each bore licence and together with extraction occurring after the subdivision will be used to calculate the HOE.

Rule 12 Where extractions have not been metered extraction will be assessed on the basis of (in priority order):

- (a) any relevant historical extraction data used in converting non-volumetric entitlement to volumetric entitlement,
- (b) recorded pump usage hours if available, and
- (c) areas of crops grown and water usage for similar crops each year.

Rule 13 Where an entitlement holder is unable to or does not provide information on which to base an assessment for a year the extraction for that year will be assessed as zero megalitres.

Rule 14 All extractions that a licence holder 'carried over' and/or 'borrowed' that were in accordance with management rules applying at the time will be included as extraction for determining the HOE.

Rule 15 Metered extraction will first be allocated to:

- (a) groundwater only extraction capped at the allocation for that year, then;
- (b) conjunctive groundwater allocation (where applicable) capped at the conjunctive groundwater entitlement for that year, then;
- (c) carry over within management rule limits and then;
- (d) borrowing within management rule limits.

The sum of extraction from groundwater only entitlement, conjunctive groundwater entitlement, carryover & borrowing provision and temporary transfers will be used to calculate the HOE. Any remaining extraction will not be used to calculate the HOE.

Rule 16 Extraction for the purpose of determining the HOE may be:

- (a) the extraction capacity of a bore or bores constructed after the 1 July 2003 if a licensee demonstrates that the licensee constructed a bore after this date, or
- (b) the average irrigation requirement for land developed for irrigation after 1 July 2003 if a licensee demonstrates that the licensee developed land for irrigation after this date.

For the purposes of this rule:

- (a) extraction capacity of a bore is calculated by multiplying the safe extraction rate in ML/day, or where this is not available the measured production rate from a bore in ML/day by 150 days per year.
- (b) the average irrigation requirement is the area developed in hectares multiplied by 6.5 ML/ha

- (c) area developed is the area of land developed for irrigation through the construction and or installation of pumps, pipelines, channels, centre pivots, lateral moves, travelling irrigators, drip irrigation systems, sprays or other means of applying water for the purpose of irrigation. It does not include the maintenance, replacement or enhancement of existing works or infrastructure.
- (d) Where the licensee has a surface water entitlement, the area developed for groundwater irrigation is calculated from the formulae:

$$\frac{\text{Area Developed (ha)} \times \text{Water Act 1912 groundwater entitlement}}{\text{Water Act 1912 groundwater entitlement} + \text{Water Act 1912 surface water entitlement} \times 0.61}$$