

Water Sharing Plan for the Alstonville Plateau Groundwater Sources 2003

[2003-139]



New South Wales

Status Information

Currency of version

Historical version for 1 July 2004 to 9 December 2004 (accessed 26 June 2024 at 8:42)

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—

- **See also**
[Statute Law \(Miscellaneous Provisions\) Bill \(No 2\) 2004](#)
- **Note**
In incorporating the amendments made by the *Water Management (Minister's Plans) Order No 2 of 2004*, published in Gazette No 110 of 1.7.2004, p 5072, changes have been made to the numbering of some of the provisions to maintain appropriate numerical or alphabetical order.

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](#).

File last modified 19 November 2004

Water Sharing Plan for the Alstonville Plateau Groundwater Sources 2003



New South Wales

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Water Sharing Plan for the Alstonville Plateau Groundwater Sources 2003



New South Wales

Part 1 Introduction

1 Name of Plan

This Plan is the *Water Sharing Plan for the Alstonville Plateau Groundwater Sources 2003* (hereafter **this Plan**).

2 Nature and status of this Plan

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

3 Date of commencement

This Plan takes effect on 1 July 2004, and ceases 10 years after that date.

4 Area to which this Plan applies

- (1) The area in respect of which this Plan is made is that area of land within the Northern Rivers Water Management Area known as the Alstonville Plateau Groundwater Sources (hereafter **these groundwater sources**) as shown in Schedule 2.

Note—

The Northern Rivers Water Management Area is shown on the map in Appendix 1.

Note—

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

- (2) The following groundwater sources referred to in this Plan are shown on the map in Schedule 2:
 - (a) Alstonville groundwater source (hereafter **Zone 1**),

- (b) Tuckean groundwater source (hereafter **Zone 2**),
- (c) Bangalow groundwater source (hereafter **Zone 3**),
- (d) Coopers groundwater source (hereafter **Zone 4**),
- (e) Wyrallah groundwater source (hereafter **Zone 5**), and
- (f) Lennox groundwater source (hereafter **Zone 6**).

5 Waters to which this Plan applies

The waters in these groundwater sources includes all water contained in Alstonville Plateau basalt 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 4 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 for this Plan is that groundwater is managed in the Alstonville Plateau groundwater sources to ensure the economic, social and cultural well being of its communities, healthy water dependant ecosystems and contributions of flow to downstream catchments.

11 Objectives

The objectives of this Plan are to:

- (a) ensure the on-going maintenance and enhancement of groundwater quantity and quality across these groundwater sources,
- (b) provide sustainable access to water for town water supplies,
- (c) maintain the groundwater contribution to surface waters for the protection of water dependent ecosystems and extractions in downstream sub-catchments,
- (d) provide sustainable access to groundwater for irrigation and commercial purposes,
- (e) preserve and enhance ecosystems that depend on groundwater in these groundwater sources,
- (f) ensure Aboriginal cultural needs are considered in groundwater management decisions in these groundwater sources, to enable maintenance and protection of values and places of importance under traditional laws, customs and practices,
- (g) provide opportunities for access to groundwater in these groundwater sources for domestic and stock, and native title purposes,
- (h) minimise the risk of contamination of these groundwater sources, and
- (i) manage extraction in order to maintain the beneficial use category of these groundwater sources.

Note—

The beneficial use category is identified in clause 38.

12 Strategies

The strategies of this Plan are to:

- (a) establish environmental water rules and manage access to groundwater consistent

with those rules,

- (b) establish rules for the protection of basic landholder rights,
- (c) establish an extraction limit for each groundwater source, taking into account the requirements of the environment,
- (d) establish rules for the granting of access licences,
- (e) establish rules for determining the groundwater available from time to time under access licences,
- (f) establish water allocation account management rules,
- (g) establish rules for minimising the local impact of groundwater extraction on the environment, the aquifer itself, and between users,
- (h) establish the access licence dealing rules, and
- (i) 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 high priority 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 requirements 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 these groundwater sources will vary.
- (2) To give effect to subclause (1), this Plan has provisions that manage:
 - (a) the sharing of water in these groundwater sources within the limits of water availability on a long-term average basis, and
 - (b) water extractions to enable the protection of groundwater dependent ecosystems and water quality of these groundwater sources.

16 Recharge

The overall basis for water sharing in this Plan is the average annual recharge to each groundwater source as follows:

- (a) 11,575 megalitres per year (hereafter **ML/yr**) in Zone 1,
- (b) 12,404 ML/yr in Zone 2,
- (c) 11,667 ML/yr in Zone 3,
- (d) 3,533 ML/yr in Zone 4,
- (e) 3,573 ML/yr in Zone 5, and
- (f) 1,720 ML/yr in Zone 6.

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 impacts provisions in Part 10 of this Plan, will also protect the cultural and spiritual values of groundwater (see clause 11 (f)).

- (1) This Plan establishes the following planned environmental water rules:
 - (a) the long-term average storage component of each groundwater source minus the basic landholder rights extraction, is reserved for the environment,
 - (b) 80% of the average annual recharge to Zone 1 will be reserved for the environment,
 - (c) 80% of the average annual recharge to Zone 2 will be reserved for the environment,
 - (d) 80% of the average annual recharge to Zone 3 will be reserved for the environment,
 - (e) 80% of the average annual recharge to Zone 4 will be reserved for the environment,
 - (f) 80% of the average annual recharge to Zone 5 will be reserved for the environment, and
 - (g) 80% of the average annual recharge to Zone 6 will be reserved for the environment.
- (2) Pursuant to section 45 (1) (b) of the Act, the Minister may vary the proportion of recharge reserved as the planned environmental water in subclause (1) after 30 June 2008, based on further studies of groundwater ecosystems dependency undertaken by the Minister.

Note—

The extent of impact of this change on access by licence holders is limited by the provisions in clause 28.

- (3) Before making a variation under subclause (2), the Minister should seek the advice from:
 - (a) a water management committee with water sharing responsibilities for this water source,
 - (b) the relevant Catchment Management Authority, or
 - (c) an expert advisory panel or advisory committee established for this purpose by the Minister on the recommendation of a water management committee or Catchment Management Authority referenced at subclause (3) (a) or (b).
- (4) The body established in subclause (3) must, within 3 months of receiving a report on the studies undertaken in subclause (2), advise the Minister on any variation to the planned environmental water provisions.
- (5) In the event that the body established in subclause (3) cannot reach agreement within 3 months, the Minister may vary the planned environmental water provisions in

accordance with subclause (2).

- (6) The Minister should consult with the Minister for the Environment before varying planned environmental water in accordance with subclause (2).

19 Planned environmental water

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

20 Adaptive environmental water

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

Part 5 Basic landholder rights

21 Basic landholder rights

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

Note—

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

22 Domestic and stock rights

Note—

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

- (1) At the commencement of this Plan the water requirements of holders of domestic and stock rights are estimated to be a total of 1,552 ML/yr, comprising:
 - (a) 465 ML/yr in Zone 1,
 - (b) 718 ML/yr in Zone 2,
 - (c) 264 ML/yr in Zone 3,

- (d) 9 ML/yr in Zone 4,
- (e) 69 ML/yr in Zone 5, and
- (f) 27 ML/yr in Zone 6.

- (2) This Plan recognises that the exercise of domestic and stock rights may increase during the term of this Plan.

Note—

Increase in use of domestic and stock rights may occur as a result of an increase in the number of landholdings overlying these groundwater sources, or as a result of the increase in the exercise of 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 these groundwater sources having regard to:
- (a) the environmental water provisions established under Part 4 of this Plan,
 - (b) the requirements for basic landholder rights identified under Part 5 of this Plan, and
 - (c) the requirements for water for extraction under access licences identified under Part 7 of this Plan.
- (3) The bulk access regime established in subclause (2):
- (a) recognises the effect of climatic variability on the availability of water as provided for under Part 3 of this Plan,
 - (b) establishes rules according to which access licences are granted as provided for in Part 8 of this Plan,

- (c) recognises and is consistent with limits to the availability of water as provided for in Part 9, Division 1 of this Plan,
- (d) establishes rules according to which available water determinations are to be made as provided for in Part 9 Division 2 of this Plan,
- (e) establishes rules according to which access licences are managed as provided for in Part 10 of this Plan, and
- (f) establishes rules with respect to the priorities according to which access licences are to be adjusted as a consequence of any reduction in the availability of water as provided for in Parts 9 and 10 of this Plan.

Part 7 Requirements for water for extraction under access licences

25 Estimate of water requirements

- (1) This Part is made in accordance with section 20 (1) (c) of the Act.
- (2) At the commencement of this Plan, the requirements identified for water for extraction under access licences within these groundwater sources are estimated to be as follows:
 - (a) 2,660 ML/yr in Zone 1,
 - (b) 2,564 ML/yr in Zone 2,
 - (c) 1,173 ML/yr in Zone 3,
 - (d) 0 ML/yr in Zone 4,
 - (e) 38 ML/yr in Zone 5, and
 - (f) 5 ML/yr in Zone 6.
- (3) Subclause (2) includes local water utility access licences of 1,230 ML/year in these groundwater sources, made up of:
 - (a) 880 ML/yr in Zone 1, being 350 ML/yr for Ballina Shire Council, and 530 ML/yr for Rous Water,
 - (b) 200 ML/yr in Zone 2, being for Ballina Shire Council, and
 - (c) 150 ML/yr in Zone 3, being for Rous Water.

Note—

Subclauses (2) and (3) represent the total volumes specified on access licences in these groundwater sources. It is not a commitment to supply that water.

- (4) This Plan recognises that the total requirements for water for extraction under access

licences within these groundwater sources may change during the term of this Plan as a result of:

- (a) the granting, surrender or cancellation of access licences,
- (b) the granting of applications lodged before the making of the embargo under the [Water Act 1912](#), but only if the total access licence share components in each groundwater source remain below the extraction limits specified in clause 27,
- (c) the variation of local water utility access licences under section 66 of the Act, or
- (d) the volumetric quantification of the share components of existing access licences that are currently non-volumetric.

Part 8 Rules for granting access licences

26 Rules for granting access licences

- (1) This Part is made in accordance with sections 20 (2) (b) and 63 of the Act, having regard to the limits to water availability in these groundwater sources and the need to protect groundwater dependent ecosystems and groundwater quality.
- (2) Access licences may be granted in these groundwater sources subject to any embargo on the making of applications for access licences made under Chapter 3 Part 2 Division 7 of the Act.
- (3) The Minister should declare an embargo on the making of applications for access licences in these groundwater sources, other than access licences of the following kinds:
 - (a) local water utility access licences,
Note—

Pursuant to sections 66 (3) and 66 (4) of the Act, the Minister may also vary a local water utility's access licence share component at 5 yearly intervals, or on application of the local water utility where there is a rapid growth in population.
 - (b) domestic and stock access licences,
 - (c) aquifer (Aboriginal commercial) access licences, where the share component does not exceed 10 ML/yr per application,
 - (d) aquifer (Aboriginal cultural) access licences, up to 10 ML/yr per application,
 - (e) aquifer (research) access licences, up to 10 ML/yr per application, or
 - (f) specific purpose access licences for which applications are provided for under the regulations in accordance with section 61 (1) (a) of the Act.
- (4) The Minister should consider amending the embargo specified in subclauses (2) and

- (3) if extraction limits are increased to 25% of the average annual recharge in accordance with clause 28 (2), to allow the granting of access licences by up to an additional 5% of recharge in each groundwater source where total access licence share components are below the amended extraction limit.
- (5) 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.
- (6) Access licences granted under this Part cannot be extracted through a water supply work (bore) located in areas where the extraction authorised by the licence, plus the full extraction authorised by existing access licences through water supply works (bores) located in the area, and the exercise of basic landholder rights, are likely to cause adverse local impact, as outlined in Part 10 Division 3 of this Plan.
- (7) If an access licence share component applied for is significant, as determined by the Minister on the basis of particular aquifer characteristics, the application will not be granted until a water supply work (bore) approval has been granted and the work constructed.
- (8) Once the water supply work (bore) is constructed and the results of a pumping test or its equivalent are supplied by the applicant, in the required form and to the specification of the Minister, the access licence may be granted.
- (9) The share component of the access licence granted under subclause (8) will be the proportion of the share component sought that the water supply work (bore) is capable of extracting without adverse local impact as outlined in Part 10 Division 2 of this Plan.
- (10) Subclauses (5), (7), (8) and (9) do not apply to a new access licence arising from:
- (a) section 61 (1) (c), of the Act, where the right has been acquired by auction, tender or other open market process, or
 - (b) an access licence dealing.
- (11) (Repealed)
- (12) All new access licence applications must be sent to the NSW Aboriginal Land Council and the Local Aboriginal Land Councils or the Bundjalung Elders Group for assessment of impact on significant Aboriginal sites, and advice to the Minister on appropriate impact mitigation measures.
- (13) In the event of an application for an Aboriginal commercial access licence, the Minister will seek the views of the Aboriginal Reference Group as to the benefit derived from the proposed application. Where an Aboriginal Reference Group has yet

to be established, the advice of the Local Aboriginal Land Councils or the Bundjalung Elders Group will be sought.

Part 9 Limits to the availability of water

Division 1 Long-term average extraction limits

27 Long-term average extraction limits

- (1) This Division is made in accordance with section 20 (2) (a) of the Act.
- (2) The long-term average extraction limit for each groundwater source for each year of this Plan is the recharge established in clause 16, minus the proportion of recharge reserved as planned environmental water in clause 18, and is as follows:
 - (a) 2,315 ML/yr in Zone 1,
 - (b) 2,481 ML/yr in Zone 2,
 - (c) 2,333 ML/yr in Zone 3,
 - (d) 707 ML/yr in Zone 4,
 - (e) 715 ML/yr in Zone 5, and
 - (f) 344 ML/yr in Zone 6.

28 Variation of the long-term average extraction limits

- (1) Pursuant to section 45 (1) (b) of the Act, the Minister may vary the long-term average extraction limits established under clause 27 after 30 June 2008 as a result of any change to the planned environmental water arising from clause 18 (2).
- (2) If there is any change to the long-term average extraction limits arising from subclause (1) then:
 - (a) the extraction limits will not increase by more than 25%, and
 - (b) the extraction limits will not decrease.

Division 2 Available water determinations

29 Available water determinations

- (1) This Division is made in accordance with section 20 (2) (b) of the Act.
- (2) In making an available water determination under section 59 of the Act, the Minister should consider the following rules:
 - (a) water extraction in each groundwater source will be monitored in each water

accounting year to determine if any growth in volumes extracted is occurring above the extraction limit in clause 27, based on comparison of the extraction limit against the average extraction within the groundwater source over that year and the preceding 2 years,

Note—

A water accounting year is defined in clause 34 (3).

- (b) if water that, pursuant to an access licence, is committed as adaptive environmental water to be left in the aquifer for environmental purposes, then for the purpose of subclause (a), the extraction will be assumed to be 100% of the available water determination,
- (c) if water that, pursuant to an access licence, is committed as adaptive environmental water to be extracted for environmental purposes, then for the purpose of subclause (a), the extraction will be that measured through the approved water supply work (bore),
- (d) if the 3 year average of extraction in a groundwater source exceeds the long-term average extraction limit established in clause 27 by 5% or greater, the available water determination for the following water accounting year for aquifer access licences in that groundwater source should be reduced by an amount that is assessed necessary by the Minister to return subsequent total water extraction to the long-term average extraction limit,
- (e) if the 3 year average of extraction in a groundwater source is less than 95% of the long-term average extraction limit established in clause 27, then the available water determination for aquifer access licences in that groundwater source shall be increased to such an extent as to allow extraction to increase to that extraction limit,
- (f) notwithstanding subclause (e) the available water determination will not exceed 100% of total access licence share components,
- (g) the available water determination calculated in accordance with this clause will apply to all access licences excepting local water utility and domestic and stock access licences and will be the same percentage for all access licences to which it applies, and
- (h) separate available water determinations will be made for both local water utility and domestic and stock access licences, and subject to section 60 of the Act, this shall be 100% of these access licence share components.

Part 10 Rules for managing access licences

Division 1 General

30 Rules for managing access licences

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

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

Division 2 Water allocation account management

31 Water allocation account management

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

32 Water allocation accounts

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

Note—

Water allocations may be assigned to, or from, these accounts by a water allocation assignment made under section 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 these groundwater sources will be accounted for at least annually.
- (2) Water taken by an approved water supply work (bore) nominated by an access licence is taken to be extracted and will be periodically debited against the access licence water allocation account.
- (3) A water accounting year shall be the 12 month period commencing 1 July.
- (4) In any one water accounting year, subject to local impact management restrictions arising from Part 10, Division 3 of this Plan, water taken from any of these groundwater sources under an access licence may not exceed a volume consisting of:

- (a) 100% of the access licence share component,
 - (b) plus any water allocations assigned from another licence under section 71T of the Act in that year, and
 - (c) minus any water allocations assigned to another licence under section 71T of the Act in that year.
- (5) Total water in any account at any time may not exceed a volume consisting of:
- (a) 100% of the aquifer access licence share component,
 - (b) plus any water allocations assigned from another licence under section 71T of the Act in that year, and
 - (c) minus any water allocations assigned to another licence under section 71T of the Act in that year.
- (6) Allocations in a water allocation account cannot be carried over from one water accounting year to the next.
- (7) A water allocation account shall remain at or above zero at all times.

Division 3 Management of local impacts

35 Management of local impacts

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

36 Extraction interference between neighbouring bores

- (1) To minimise interference between extraction under different access licences in each groundwater source, extraction of greater than 20 ML/yr authorised by a new access licence will not be permitted from a water supply work (bore) within:
- (a) 400 metres of a Department of Land and Water Conservation monitoring bore, or an approved water supply work (bore) nominated by another access licence, authorised to extract greater than 20 ML/yr,
 - (b) 500 metres of an approved water supply work (bore) nominated by a local water utility access licence, or
 - (c) 200 metres of an approved water supply work (bore) from which basic landholder rights water is being extracted, or a water supply work nominated by an access licence, authorised to extract less than 20 ML/yr.
- (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) the Minister is satisfied that the proposed extraction will not have any adverse impact on local aquifer water levels, other licensed extraction, or basic landholder rights,
- (c) 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 those in the near vicinity.

- (d) 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.
- (4) Extraction of less than 20 ML/yr authorised by a new access licence or a basic landholder rights water supply work (bore) approval will not be permitted within 40 metres of extraction of less than 20 ML/yr authorised by an existing access licence or a basic landholder rights water supply work (bore) approval.

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 these groundwater sources, local extraction rules are to apply in a defined area, known as a local impact area.
- (2) Extraction from all water supply works (bores) within a local impact area declared under subclause (1), nominated by an access licence, will be restricted to such an extent and for such time as is required to reinstate water levels to such a degree as to mitigate or avoid any adverse impact, if:
 - (a) there is a decline in groundwater levels over 3 successive years,
 - (b) there is a significant drop in groundwater levels in a single year, or
 - (c) a minimum sustainable groundwater level is reached.
- (3) The terms significant drop and minimum sustainable groundwater level referred to in subclause (2) will be determined by the Minister.

- (4) The Minister may nominate specific water levels to define the terms referred to in subclauses (2) (b) and (2) (c), to ensure extraction does not cause an ongoing decline in groundwater levels.
- (5) When water levels recover, extraction restrictions may be eased to such an extent as to allow recovered water levels to be maintained and fluctuate within the normal bounds of climate variability.

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.

Note—

It is intended that local impact models will be developed and used to predict water level declines in a local area under different extraction scenarios. Significant drops and minimum sustainable groundwater levels can then be set for an area based on the requirements of groundwater dependent ecosystems in the locality, and on the impact that reduced water levels may have on basic rights and extraction in the locality.

38 Water quality management

- (1) The beneficial uses of these groundwater sources are raw water for drinking, and ecosystem protection, based on the Australian and New Zealand Environment and Conservation Council *Water Quality Guidelines 2001*, and the National Health and Medical Research Council *Raw Water for Drinking Purposes Guidelines 1996*.
- (2) Water quality decline will be deemed unacceptable if extraction is likely to cause water quality to decline to a lower beneficial use category.

Note—

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

- (3) The Minister may declare that, in order to protect water quality within these groundwater sources, local access rules are to apply in a defined area, known as a local impact area.
- (4) If unacceptable water quality declines are resulting from extraction, extraction from all water supply works (bores) within a local impact area declared under subclause (3) nominated by an access licence will be restricted to such an extent and for such time as required to halt that decline, or restore the beneficial use of these groundwater sources.
- (5) Construction of a new water supply work (bore) will not be permitted within 250 metres of a contamination source unless:
 - (a) the proponent can demonstrate to the Minister's satisfaction that a lesser distance will result in no more than minimal harm to the groundwater source or dependent ecosystems, and that extraction will not cause a threat to public health as advised

by the Minister for Health,

- (b) the contamination source is located a minimum of 100m down gradient of the extraction site, subject to assessment by the Minister, or
 - (c) the water supply work (bore) has an impermeable seal, as specified by the Minister, constructed within the bore to isolate aquifers preventing water ingress from the contamination source.
- (6) An existing water supply work (bore) within 100 metres of a contamination source will be able to continue extraction of groundwater at levels equivalent to 2002/03 access licence share components nominating that work, subject to any restrictions arising from subclause (4).
- (7) Extraction of groundwater from a new water supply work (bore) for any purpose except basic landholder rights, between 100 metres to 200 metres of a contamination source, will require:
- (a) an application to the Minister by the licence holder providing evidence that no drawdown of the watertable within 100 metres of the contamination source will occur,
 - (b) the Minister to assess the application as adequate, and
 - (c) the Minister to approve the application.
- (8) Schedule 4 lists contamination sources in these groundwater sources.
- (9) Subclauses (5), (6) and (7) may be applied by the Minister in relation to contamination sources not on Schedule 4, based on the results of a site inspection or other relevant information provided to the Minister.
- (10) Pursuant to section 45 (1) (b) of the Act, the Minister may vary Schedule 4 by inclusion or deletion of a contamination source based on the results of a site inspection or other relevant information provided to the Minister on that contamination source.

Note—

Schedule 4 is only to be used in relation to the granting of access licences and water supply work (bore) approvals under the [Water Management Act 2000](#).

39 Protection of groundwater dependent ecosystems

- (1) High priority groundwater dependent ecosystems are those shown in Schedule 5 and include the following:
- (a) terrestrial vegetation, including mapped rainforest,
 - (b) wetlands containing significant mapped vegetation communities, including

introduced melaleucas, and

(c) river baseflow systems which include aquatic, riparian and hyporheic ecosystems within and adjacent to rivers fed by groundwater.

- (2) Pursuant to section 45 (1) (b) of the Act, the Minister may amend Schedule 5 if further groundwater dependent ecosystem studies are undertaken by the Minister.
- (3) The Minister should consult with the Minister for the Environment before making an amendment in accordance with subclause (2).
- (4) Extraction of groundwater from a new or replacement water supply work (bore) of greater than 20ML/yr is excluded within 100 metres of high priority groundwater dependent ecosystems listed in Schedule 5, or 40 metres of any river, unless the water supply work (bore) has an impermeable seal, as specified by the Minister, constructed within the bore to isolate aquifers preventing water ingress from the restricted aquifer.

Note—

Subclause (2) will not apply to extraction from an existing water supply work (bore) until such time as the work is replaced.

- (5) Construction of a new or replacement water supply work (bore) authorised to extract greater than 20ML/yr is excluded within 100 metres to 200 metres of high priority groundwater dependent ecosystems, unless the approval holder demonstrates that there will be no drawdown resulting from groundwater extraction at the groundwater dependent ecosystem boundary.
- (6) Extraction of groundwater from a new or replacement water supply work (bore) of less than 20ML/yr, or pursuant to a basic landholder right, is excluded within 40 metres of high priority groundwater dependent ecosystems listed in Schedule 5, and any river, unless the water supply work (bore) has an impermeable seal, as specified by the Minister, constructed within the bore to isolate aquifers preventing water ingress from the restricted aquifer.
- (7) Extraction pursuant to existing access licences nominating a work within the distances specified in subclauses (4), (5) and (6) cannot increase the access licence share component nominating that work unless the conditions specified in this clause are met.
- (8) Subclause (6) does not apply to extraction of basic landholder rights from a water supply work within 40 metres of a river subject to a harvestable rights Order published in the NSW Government Gazette under section 54 of the Act.

Note—

A bore is deemed to be a replacement bore only if it is constructed to similar specifications of the bore being replaced, and if the replaced bore is abandoned.

Note—

River for the purposes of this clause is a 3rd order stream or above, and perennial rivers.

40 Extraction restrictions

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

41 Group registration

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

- (a) the group register will be maintained by the Minister,
- (b) holders of access licences must make a request to the Minister to form a group,
- (c) total extraction by all access licences within a group will be assessed as a whole against their combined restricted extraction and must not exceed that amount,
- (d) no access licence holder within the group may extract more than is permitted by Division 2 of this Part in any one water accounting year as a result of participation in a group,
- (e) an access licence holder may apply to be removed by the Minister from the group and the extraction by the group will be reduced by the extraction restriction of that access licence,
- (f) an access licence holder may apply to be added by the Minister to the group and the combined restricted extraction of the group will be increased by the extraction restriction of that access licence, and
- (g) the Minister reserves the right to remove a licence holder from a group where that individual causes the authorised group extraction to be exceeded, or to dissolve a group where its members exceed their combined extraction restriction.

42 Infrastructure failure

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

- (c) rely on another monitoring bore in the area to provide information.

Part 11 Access licence dealing rules

43 Access licence dealing rules

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

44 Rules relating to constraints within a groundwater source

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

45 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 these groundwater sources, except as provided for in this clause.
- (3) An access licence with a share component specifying one of these groundwater sources may be cancelled and a new licence issued specifying another of these groundwater sources only if the total share components of all access licences in the groundwater source in which the access licence is issued remains below the extraction limit for that groundwater source established in clause 27.
- (4) The volume of the share component on a licence issued under a dealing provided for in subclause (3) is to be the volume of the cancelled access licence share component.

46 Rules for conversion of access licence category

- (1) This clause relates to dealings under section 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 these groundwater sources.

47 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 these groundwater sources are prohibited.

48 Rules for water allocation assignments between water sources

- (1) This clause relates to dealings under section 71T of the Act for assignment of water allocations between water sources.
- (2) Dealings that assign water allocations between access licences in other water sources and access licences in these groundwater sources are prohibited.
- (3) Dealings that assign water allocations between an access licence in one of these groundwater sources and an access licence in another of these groundwater sources may be permitted only if:
 - (a) the total water allocations credited to all access licences in the groundwater source to which the water allocation is assigned remains below the extraction limit of that groundwater source established in clause 27, and
 - (b) the assignment would not result in the total extraction of credited water allocations through nominated works in the area, plus basic landholder rights extraction, causing any adverse local impact in accordance with Part 10 Division 3 of this Plan.

Note—

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

49 Rules for interstate assignment of water allocations

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

Part 12 Mandatory conditions

50 Mandatory conditions on access licences

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

51 Access licence conditions

- (1) All access licences shall have mandatory conditions to give effect to the provisions of this Plan in relation to the following:
 - (a) the specification of the share component of the access licence,
 - (b) the specification of the extraction component of the access licence,
 - (c) the requirement that all taking of water under the access licence will be subject to the available water determinations,
 - (d) the requirement that all taking of water under the access licence will be subject to any local impact management restrictions established in this Plan,
 - (e) the requirement that all taking of water under the access licence will be subject to the account management rules established in this Plan,
 - (f) the requirement that water may only be taken under the access licence by the water supply work (bore) nominated by the access licence,
 - (g) the taking of water in accordance with the access licence may only occur if the resulting debit from the access licence water allocation account will not exceed the volume of water allocation remaining in the account, and
 - (h) any other conditions required to implement the provisions of this Plan.
- (2) All 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.
- (3) 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.

- (4) All aquifer (Aboriginal cultural) access licences shall have mandatory conditions that only allow the taking of water by Aboriginal persons or communities for personal, domestic and communal purposes including the purposes of drinking, food preparation, washing, manufacturing traditional artefacts, watering domestic gardens, cultural teaching, hunting, fishing, and gathering, and for recreational, cultural and ceremonial purposes.
- (5) All aquifer (research) access licences shall have mandatory conditions that only allow the taking of water for the purpose of scientific research, experimentation or teaching by accredited tertiary institutions, government bodies or other organisations, where any primary production resulting from the research program is not sold for profit.

52 Mandatory conditions on water supply work (bore) approvals

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

- (a) the water supply work (bore) is only to be constructed by a driller licensed under section 349 of the Act,
- (b) the water supply work (bore) must comply with drilling standards as specified by the Minister,
- (c) construction of a water supply work (bore) must prevent contamination between aquifers through proper bore construction,
- (d) a water supply work (bore) approval holder must ensure decommissioning procedures comply with applicable standards as specified by the Minister,
- (e) a new or replacement water supply work (bore) to access water for basic rights will be required, as a condition of approval, to be constructed to sufficient depth to maintain access to the water source for the life of the work,
- (f) the water supply work (bore) approval holder is, within 2 months of completion of the work, or after the issue of the approval if the water supply work (bore) is existing, to furnish to the Minister with:
 - (i) details of the work on the prescribed form,
 - (ii) a plan showing accurately the location of the work in relation to portion and property boundaries, and
 - (iii) details of any water analysis and/or pumping tests required by the Minister,

- (g) if during the construction of the water supply work (bore), saline or contaminated water is encountered above the producing aquifer, such water is to be sealed off by:
 - (i) inserting the appropriate length(s) of casing to a depth sufficient to exclude the saline or contaminated water from the work, and
 - (ii) placing an impermeable seal between the casing(s) and the walls of the bore hole from the bottom of the casing to ground level, as specified by the Minister,
- (h) if a water supply work (bore) is abandoned, the water supply work (bore) approval holder is to:
 - (i) notify the Minister that the work has been abandoned, and
 - (ii) seal off the aquifer, as specified by the Minister,
- (i) an extraction measurement device shall be installed and maintained on each water supply work (bore) used for extraction of water under an access licence, and such devices shall be of a type, and shall be maintained in a manner, which is acceptable to the Minister,
- (j) a water supply work (bore) must comply with the relevant local impact management rules in Part 10 of this Plan,
- (k) notwithstanding the available water determination, it is the responsibility of the water supply work (bore) approval holder to ascertain from the Minister whether or not there are in place any local impact restrictions before commencing to take water from these groundwater sources,
- (l) extraction under an access licence through the approved water supply work (bore) is only authorised with respect to the access licences specified on the water supply work (bore) approval,
- (m) a water supply work (bore) approval holder must supply to the Minister on request, and to the required standards, a report pertaining to the quality of the water obtained from the water supply work (bore), and
- (n) any other conditions required to implement the provisions of this Plan.

Note—

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

Part 13 Monitoring and reporting

53 Monitoring

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

by the Minister.

Note—

Review and Audit of this Plan

In accordance with section 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 relevant natural resource management standards and targets in the catchment management area (as referred to in section 5 of the *Catchment Management Authorities Act 2003*).

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 catchment management area.

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

Note—

Implementation Program

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

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

The results of the review of the Implementation Program are included in the annual report for the Department.

Part 14 Amendment of this Plan

54 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 18 in respect to planned environmental water,
 - (b) clause 28 in respect to long-term average extraction limits,
 - (c) clause 38 in respect to contamination sources, or
 - (d) clause 39 in respect to high priority groundwater dependent ecosystems.

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.

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.

basalt aquifers are dark, fine grained, hard igneous rock formations that originate from a lava flow or minor intrusion, containing water within the fractures in the rocks. Basalt is the most common rock in the earth's crust.

contamination sources, relates to human activities that have resulted in the presence of a substance in the groundwater source at a concentration above that at which the substance is normally present, and at a level that presents a risk of harm to human health or reduces the beneficial use of a groundwater source.

Note—

Contamination sources can arise from a range of industrial and other land based activities. The impact of some activities will be temporary, while others pose a risk over a much longer timeframe. In some instances, particularly when the land use has involved hazardous substances, the source may be threatening to humans, or may affect the current or future beneficial uses of the groundwater source. Determining in any particular case whether or not contamination presents a significant risk of harm can be complex and difficult. It involves considerations such as the type, nature, quantity and concentration of contaminants, how they manifest themselves and the nature of their impact in the particular groundwater source. It also involves broader questions such as the current use of the groundwater source, who might be exposed to the contamination under that use, and whether they would be exposed.

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.

hyporheic zone is the fluctuating zone of water exchange between the surface stream and the groundwater.

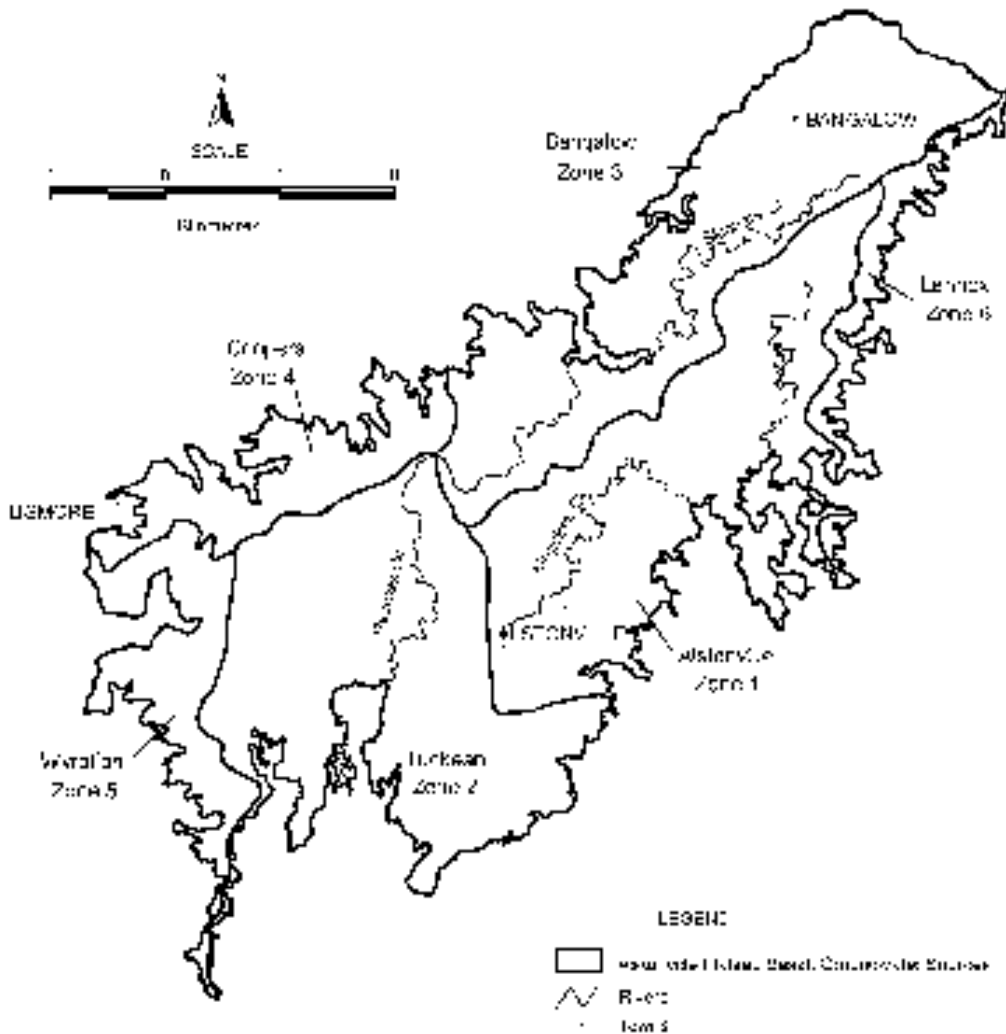
monitoring bore refers to a bore constructed for the purpose of measuring water levels and/or taking samples for water quality analysis.

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

share component is the share component of an access licence.

watertable is the upper surface of an unconfined aquifer.

Schedule 2 Alstonville Plateau Groundwater Sources



Schedule 3 Contribution to relevant targets in the December 2002 State Water Management Outcomes Plan

Levels of assessed contribution:

FULL—contributes to target in full

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

PARTIAL—goes some way to contributing to the target

LOW—only small degree of contribution to target

Relevant Target	Level of contribution	Comments
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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% of average annual recharge for a groundwater source where there is no significant ecosystem dependency; 70% of average annual recharge where there is significant ecosystem dependency

FULL

- This Plan clearly sets out the sustainable yield (SY), or extraction limit, as 20% of estimated average annual recharge.
- This Plan provides for a review of extraction limit in year 5 and allows for the extraction limit to be increased up to 25% of this Plan's average annual recharge figure.

Target 1f Rules for adjustments to future available water determinations in the event that the extraction limits are exceeded, clearly prescribed in consultation with the relevant management committee, and acted upon

FULL

- Rules set out in Part 9 of this Plan.

Target 2 All management plans incorporating mechanisms to protect and restore aquatic habitats, and the diversity and abundance of native animals and plants, with particular reference to threatened species, populations and communities and key threatening processes

HIGH

- This Plan clearly sets out the planned environmental water as 80% of estimated average annual recharge in each groundwater source.
- This Plan sets out extraction rules/buffer zones to limit local environmental impacts of extraction.
- This Plan identifies high priority groundwater dependent ecosystems, and establishes rules to protect them.
- This Plan established a shallow aquifer extraction exclusion zone for new extraction adjacent to a river.
- This Plan clarifies access licence share components, and limits interference between groundwater licences.

Target 5 Access rights for water access licensees clearly and legally specified in terms of share and extraction components

HIGH

- This plan enables trading of licence rights.
- The nature of the local extraction rules however means that access rights will not be exclusive but affected by the future location of other water supply works (bores). Licences with existing bores will have priority over licences requiring new bores.

<p>Target 6a For groundwater sources, the total volume of water specified on access licences reduced over the term of a water sharing plan to no more than 125% of the Sustainable Yield</p>	<p>FULL</p>	<ul style="list-style-type: none"> • The total access licence share components for the combined groundwater sources is less than 125% of SY (or the extraction limit).
<p>Target 10 Degree of connectivity between aquifers and rivers assessed, and zones of high connectivity mapped to enable baseflows to the river to be maintained or improved</p>	<p>HIGH</p>	<ul style="list-style-type: none"> • Baseflows to surface rivers are protected by low extraction limits and extraction exclusion zones for new extraction. • Types of dependent ecosystem have been identified and mapped, but ecological water requirements are not known.
<p>Target 11 Groundwater dependent ecosystems identified and mapped for all priority aquifers, and the ecological water requirements assessed to enable local groundwater extraction rates and/or Sustainable Yields to be reviewed</p>	<p>HIGH</p>	<ul style="list-style-type: none"> • This Plan sets out extraction rules/buffer zones to limit local environmental impacts of extraction on ecosystems. • This Plan identifies high priority groundwater dependent ecosystems with rules to protect them.
<p>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</p>	<p>FULL</p>	<ul style="list-style-type: none"> • This Plan has identified the volumes necessary to meet basic domestic and stock requirements. • Local management rules protect basic right extractions. • 2 Aboriginal community representatives have been involved in development of this Plan. • Meetings were held with the Bundjalung Elders, Ngulingah and Far North Coast Aboriginal Land Councils.
<p>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</p>	<p>HIGH</p>	<ul style="list-style-type: none"> • An Aboriginal Steering Group was established and has prepared a plan to assist in consultation with local Aboriginal people including a workshop, community meeting, protocols process and assistance in submission writing.

<p>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</p>	<p>HIGH</p>	<ul style="list-style-type: none"> • This Plan has recognised specific Aboriginal cultural or traditional requirements but has not listed them for reasons of cultural sensitivity and has a specific Aboriginal objective. • This Plan does provide extraction limits and buffers to protect these dependent ecosystems which should assist in protecting Aboriginal values. • This Plan does provide local management rules which should also assist in protecting Aboriginal values.
<p>Target 16a All share components of access licences tradeable</p>	<p>FULL</p>	<ul style="list-style-type: none"> • This Plan provides for trading of access licence share components. • This Plan does not allow trading out of these groundwater sources.
<p>Target 16c Conversion factors and protocols established to facilitate trading and dealings between water sources, whilst also protecting existing access and environmental water</p>	<p>FULL</p>	<ul style="list-style-type: none"> • This Plan does allow trading between groundwater sources within the area to which this Plan applies, with rules in place to minimise the impacts of such transfers on existing users and the environment.
<p>Target 16d Reduced conversion factors only applied when necessary to offset increased losses associated with water supply delivery</p>	<p>FULL</p>	<ul style="list-style-type: none"> • This Plan does not impose any reduction factors. • This Plan recommends placing an embargo on new access licences within the area, with some exceptions.
<p>Target 16e Any unassigned access rights identified and clear mechanisms established for their future assignment</p>	<p>FULL</p>	<ul style="list-style-type: none"> • The rules for granting of new licences are established in this Plan.
<p>Target 16f Zones established where necessary for environmental protection and limits/constraints on water dealings in them made explicit</p>	<p>FULL</p>	<ul style="list-style-type: none"> • This Plan establishes 6 separate groundwater sources, and the constraints to trading between these is based on access licence share component levels versus extraction limits for each source.

Target 35 All management plans incorporating water quality objectives that have considered Government approved Interim Environmental Objectives, the current Australian and New Zealand Environment and Conservation Council Guidelines and the recommendations of relevant Healthy Rivers Commission Inquiries

HIGH

- This Plan includes a general water quality objective.
- This Plan recognises the beneficial uses as raw water for drinking purposes, and ecosystem protection.
- Local management rules specifically address risks of groundwater contamination.

Target 38 Aquifer water quality vulnerability zones mapped and extraction limits reviewed to reduce the risk of lateral intrusion of poor quality water

PARTIAL

- Vulnerability mapping has not been referenced in this Plan.
- This Plan sets out rules for managing lateral movement of poor quality groundwater.

Schedule 4 Contamination sources

Contamination sources in the Alstonville Plateau Groundwater Sources include:

- (a) on site sewage disposal systems,
- (b) dip sites,
- (c) land based waste disposal facilities, and
- (d) any land declared a significant risk site, or an investigation area under the [Contaminated Land Management Act 1997](#).

Note—

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

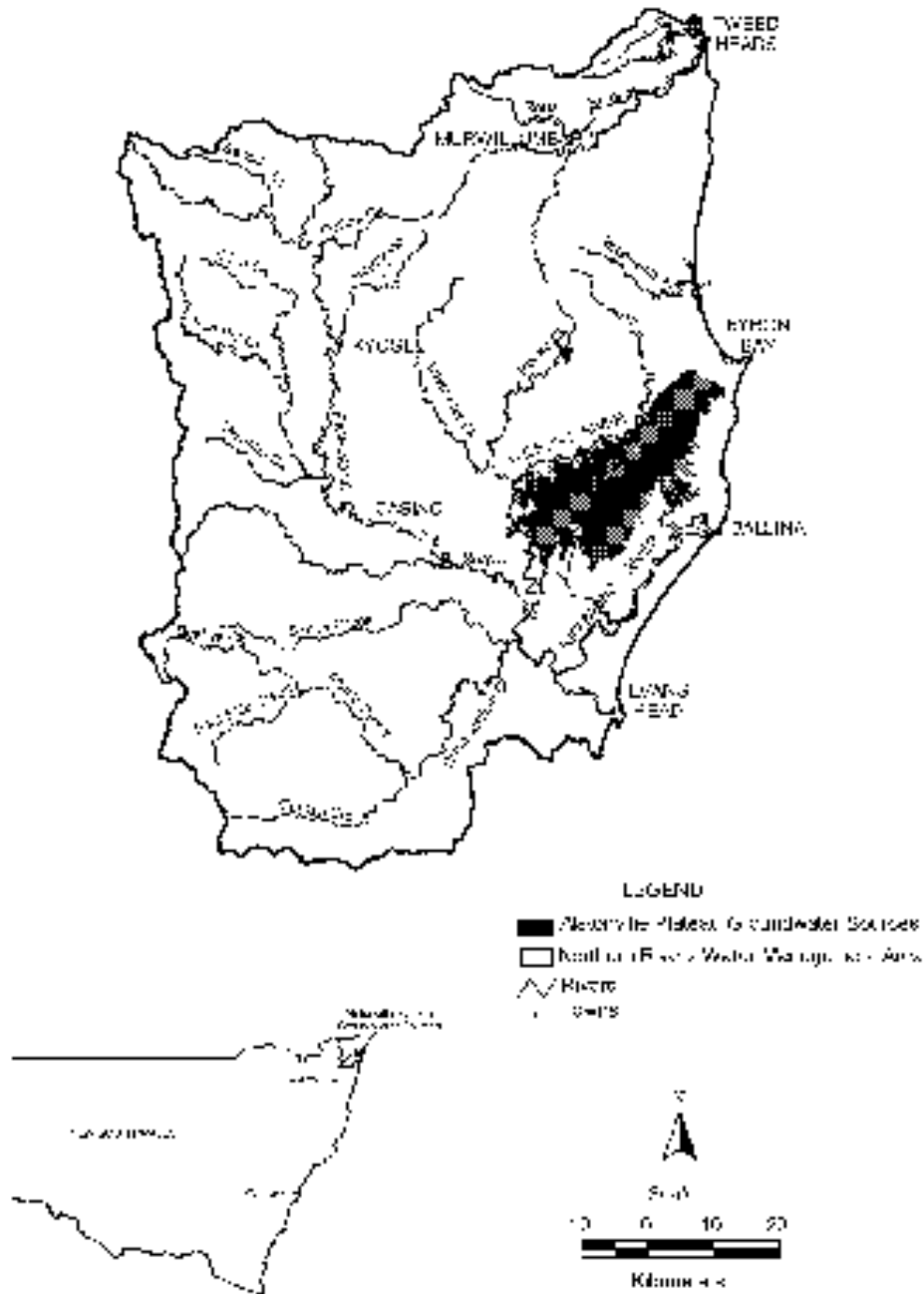
Schedule 5 High priority groundwater dependent ecosystems



- LEGEND: Ecosystems dependent on groundwater
- Ecosystems dependent on groundwater
 - Ecosystems dependent on groundwater
 - Ecosystems dependent on groundwater
 - Ecosystems dependent on groundwater
 - Ecosystems dependent on groundwater

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Appendix 1 Northern Rivers Water Management Area



Appendix 2 Location of maps

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

Regional Office
Department of Land and Water Conservation
76 Victoria Street
GRAFTON NSW 2460

District Office
 Department of Land and Water Conservation
 Office 3, Alstonville Plaza
 Main Street
 ALSTONVILLE NSW 2477

Appendix 3 Performance indicators

Performance indicators for the Alstonville Plateau Groundwater Sources Water Sharing Plan

Performance indicator	Related objective	As measured by	Commentary
(a) Change in groundwater extraction relative to the extraction limit.	All in clause 11	<ul style="list-style-type: none"> Average annual extraction volume for these groundwater sources as a percentage of the extraction limit (commonly known as the Sustainable Yield). 	<ul style="list-style-type: none"> Plan provisions set the mechanism to remain within the Sustainable Yield over the long-term.
(b) Change in climate adjusted groundwater levels.	All in clause 11 except 11 (f)	<ul style="list-style-type: none"> Average annual frequency and duration (in days) of water level drawdown below pre-plan baseline. Density of extraction in critical areas. 	<ul style="list-style-type: none"> Water levels will fluctuate with climate and resultant variable recharge. Some level declines will be expected during dry times, just as level rises are expected during wetter periods.
(c) Change in water levels adjacent to identified high priority groundwater dependent ecosystems.	11 (c) 11 (e)	<ul style="list-style-type: none"> Identification of high priority groundwater dependent ecosystems (GDEs). Assessment of the adequacy of buffer zones or local impact restrictions by comparison of water levels near or in high priority GDEs compared to plan baseline. 	<ul style="list-style-type: none"> High priority groundwater dependent ecosystems are identified in Schedule 5 of this plan.
(d) Change in groundwater quality.	11 (a) 11 (h)	<ul style="list-style-type: none"> Trends in selected water quality parameters at selected monitoring bores that are likely to be affected by groundwater extraction. 	<ul style="list-style-type: none"> Many water quality issues are a function of contamination by land based activities, rather than extraction.

<p>(e) Change in economic benefits derived from groundwater extraction and use.</p>	<p>11 (b) 11 (d) 11 (g)</p>	<ul style="list-style-type: none"> • Change in regional gross margins. • Change in unit price of water traded. 	<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 requirements have been met.</p>	<p>11 (g)</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>	<p>11 (b)</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. • Monitor increase in applications for water supply work (bore) approvals for native title basic rights. 	
<p>(h) Extent to which native title rights requirements have been met.</p>	<p>11 (g)</p>	<ul style="list-style-type: none"> • 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. 	

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| (i) Extent of recognition of spiritual, social and customary values of groundwater to Aboriginal people. | 11 (f) | <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.• Number of referrals to Bundjalung Elders and relevant Aboriginal Land Council/s of applications for new access licences or transfers. | <ul style="list-style-type: none">• The collection of information on the values associated with water is considered the first step in addressing the objects of the Act.• It would be expected that at the end of five years there should be relevant information collected for each groundwater source, as a minimum requirement. |
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Appendix 4 (Repealed)