

# CONCEPT STATEMENT

Central Adelaide Prescribed Wells Area  
April 2008



**Government of South Australia**  
Adelaide and Mount Lofty Ranges  
Natural Resources Management Board

The Concept Statement for the Central Adelaide Water Allocation Plan has been prepared by the Adelaide and Mount Lofty Ranges Natural Resources Management Board in line with the requirements of Section 78 of the *Natural Resources Management Act 2004*

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# 1 Introduction

## Background

The Central Adelaide Prescribed Wells Area (CAPWA) of the Adelaide Coastal Plain extends from Outer Harbour in the north to Noarlunga in the south and the Mount Lofty Ranges in the east. It is bounded by the Gulf St Vincent, the Northern Adelaide Plains Prescribed Wells Area and the Western Mount Lofty Ranges Prescribed Water Resources Area (**Map 1, page 9**). Generally groundwater flows in a north-westerly direction from the fractured rocks of the Mount Lofty Ranges to the sedimentary aquifers of the metropolitan coastal plain. The major fault systems that bound these two regions are considered to be transmissive in many parts, permitting limited through flow (recharge) from the fractured rock aquifers. The CAPWA fractured rock aquifer systems generally receive recharge from local rainfall; however there is some connectivity with the fractured rock aquifers of the Western Mount Lofty Ranges Prescribed Water Resources Area. The sedimentary aquifer system of the CAPWA and the Northern Adelaide Plains Prescribed Wells Area are one and the same and groundwater flows in and between these two management areas.

Regional groundwater resources are under increasing demand from large industries, sporting organisations, and agriculture. Industry, primary producers, and domestic water users require secure access to water to plan for the future. At the same time, the need to ensure water is being managed sustainably has become a State priority. There are an estimated 500 commercial and irrigation groundwater users in the CAPWA, although a recent survey indicates that 20% of these are not currently using groundwater. The biggest users of groundwater in the region are large industries (including breweries, beverage industry and manufacturing sectors), golf courses and local councils. Numerous small agricultural enterprises also use small volumes of groundwater from the region.

The CAPWA was prescribed by regulation made pursuant to section 125 of the *Natural Resources Management Act 2004* (NRM Act) on 7 June 2007. The regulation does not apply if the water from the well is only used for domestic purposes including the irrigation of less than or equal to 0.4 hectares of land or for watering stock (other than stock subject to intensive farming).

Wells used for stock and domestic purposes are typically developed in the shallow aquifers that are relatively thin and of limited extent. These uses constitute a relatively small proportion of groundwater abstraction in the CAPWA. Water levels in the shallowest aquifers are predominantly influenced by the varying seasonal conditions and these aquifers respond to rainfall.

The deep aquifers constitute the largest and most important groundwater resource in the CAPWA and are typically developed for commercial, industrial and irrigation uses. These uses comprise the majority of abstraction in the CAPWA. Natural recharge of these extensive aquifers is a long term process and hence the long term sustainability of these aquifers is best served by the formal management system instigated by prescription.

## Legislative Requirements for Preparing a Water Allocation Plan

The NRM Act requires the Adelaide and Mount Lofty Ranges Natural Resources Management (AMLR NRM) Board to prepare a Water Allocation Plan (WAP) for each of the prescribed water resources in its area. WAP's are statutory instruments used for various purposes in the administration of the Act

including guiding the granting of licences to take water and the transfer of licences and water allocations.

Before preparing the draft WAP, the Board must prepare a concept statement in accordance with Section 78(1) of the Act. The concept statement must:

- Set out, in general terms, the proposed content of the draft WAP
- Specify matters to be investigated by the Board before preparation of the draft WAP
- Set out the proposals (if any) for consultation on the draft WAP (including proposals for public consultation during preparation of a draft water allocation plan) that are in addition to the requirements of the NRM Act (see below) for consultation.

The NRM Act requires the following consultation:

- Consultation on the concept statement (Government Agencies, Natural Resources Management Council, Local Government, the public [by notice in local papers]).
- Consultation on the draft plan. (Government Agencies, Natural Resources Management Council, Local Government, the public [by notice in local papers]); consultation to include both a call for written submissions and at least one public meeting.

**This concept statement does not explore issues in detail, or provide solutions, as this will be done as part of the process to prepare the plan.**

## 2 Proposed Content of the Water Allocation Plan

Section 76 of the NRM Act requires that a WAP must:

- Include an assessment of the quantity and quality of water needed by the ecosystems that depend on the water resource and the times at which, or the periods during which, those ecosystems will need that water.
- Include an assessment as to whether the taking or use of water from the resource will have a detrimental effect on the quantity or quality of water that is available from any other water resource.
- Provide for the allocation (including the quantity of water that is to be available for allocation) and use of water so that:
  - An equitable balance is achieved between environmental, social and economic needs for the water.
  - The rate of use of the water is sustainable.

- In providing for the allocation of water take into account the present and future needs of the occupiers of land in relation to the existing requirements and future capacity of the land and the likely effect of those provisions on the value of the land.
- Assess the capacity of the resource to meet the demands for water on a continuing basis and provide for regular monitoring of the capacity of the resource to meet those demands.
- Identify and assess methods for the conservation, use and management of water in an efficient and sustainable manner.
- Provide for the transfer of, and other dealings with, water allocations.
- Specify the applications for the transfer of a licence or the water allocation of a licence (if any) in relation to which requirements for notification of applications to transfer are required under the Act.
- To the extent that the regional NRM plan does not so provide:
  - Set out the matters that the board will consider when exercising its powers to grant or refuse permits under the Act.
  - Identify the changes (if any) considered by the Board to be necessary or desirable to a development plan under the *Development Act 1993* that applies within its region that should, in the opinion of the Board, be reviewed under that Act in order to improve the relationship in the policies in the development plan and the policies reflected in the WAP.
  - Identify the changes (if any) considered by the board to be necessary or desirable to any other statutory instrument, plan or policy (including subordinate legislation).
- Include such other information or material contemplated by this Act or required by the regulations.

The intended content of the Central Adelaide Groundwater Prescribed Wells Area Water Allocation Plan is broadly outlined below.

## Purpose of the Water Allocation Plan

- Clear statement of the purpose and role of the WAP.

## Description of the Prescribed Water Resource Area and water resources

- General description and map, including delineation of sub-catchments and groundwater systems,
- Interactions between surface water, watercourse and groundwater.
- Impacts of past, present and future land use change on water quantity and quality.

## Water-dependent ecosystems

- Identification of water-dependent ecosystems (including estuaries).

- Assessment of the quantity and quality of water needed by water dependent ecosystems and the time or period when water is needed by those ecosystems.
- Environmental impacts of water use within the Prescribed Wells Area including the prescribed water resource and imported water.
- Environmental water provisions for water-dependent ecosystems.

## Assessment of effects on other water resources

- Assessment of the effect of taking and using water from the prescribed water resource on the quantity and quality of other water resources (including estuaries).
- If the taking or using of water would result in detrimental effects on other water resources:
  - Analysis of the needs of users and dependent ecosystems of the other water resources.
  - Provisions designed to prevent or reduce the detrimental effects identified.
- Assessment of the options for joint management of the Central Adelaide Prescribed Wells Area and the Northern Adelaide Plains Prescribed Wells Area (given that the aquifers are the same aquifers and are connected between the two prescribed areas).
- Assessment of the option for joint management of the CAPWA and the Western Mount Lofty Ranges Prescribed Water Resources Area (given that the fractured rock aquifers are contiguous).

## Assessment of the capacity of the resource to meet demands

- Assessment of the quantity and quality of the water resource.
- Identification of current demands for licensed and non-licensed needs including stock and domestic use.
- Identification of future demands for licensed and non-licensed needs including stock and domestic use.
- Assessment of the capacity of the resource to meet demands for water on a continuing basis including an indication of the accuracy of the assessment.
- Land capacity to meet future demands.

## Water allocation and transfer

- Provide for the allocation of the water resource and transfer of allocation from each aquifer within the prescribed wells area based on hydrogeological sustainability, including an assessment of the need for management zones.
- Provide for (if required and sustainable) transfer of allocation between the Central Adelaide Prescribed Wells Area and the Northern Adelaide Plains Prescribed Wells Area.

- Set sustainable extraction volumes or levels and provide a review mechanism.
- Provide the basis for water allocation such as volume or share of the available resource, and how this may vary across the region to match availability of water at a sub-regional level.
- Provide criteria for water allocation including holding and taking allocations.
- Provide for allocation of managed aquifer recharged water.
- Provide water transfer criteria including temporary and permanent transfers; transfer criteria may vary across the region to suit local water resource availability.
- Assess impacts of water allocation and transfer policies both short- and long-term.
- Define management zone boundaries.
- Identify trigger mechanisms for highlighting changes to water resource condition and the status of dependent ecosystems, and outline responses to triggers when activated.
- Provide for efficient taking, storage and use of water.
- Assess the impact of water use including off-site and environmental impacts.

## Permits

- Identify water-affecting activities requiring permits including, importation of water, use of effluent and managed aquifer recharge.
- Provide policies and criteria for granting permits.

## Monitoring

- Provide mechanisms for the regular monitoring, evaluation and publication of status reports on the condition of the water resource including the health of water dependent ecosystems.
- Provide appropriate monitoring and evaluation, including performance indicators, and reporting requirements at a regional and property scale.
- Identify knowledge gaps and further research needs.

# 3 Detailed Investigations to be Undertaken

The Department of Water, Land and Biodiversity Conservation and the AMLR NRM Board have completed a number of studies and monitoring programs to characterise the water resources of the Central Adelaide Prescribed Wells Area.

Technical investigations to be undertaken during the development of the WAP will assess the following aspects of the resource:

- the capacity of the groundwater resources.
- the quality, quantity and timing of water required for ecosystems.
- the future water demands and the capacity of the resource to meet those demands; and
- the effects of water use on other water resources (both within and outside the region).

Investigations undertaken as part of the WAP process will also:

- Estimate of current quality, quantity and timing of water use.
- Determine the sustainable yield of the underground water resources.
- Monitor and report resource condition; and
- Determine appropriate management area boundaries.

## 4 Development Plan Amendments

The *Natural Resources Management Act 2004* provides the opportunity to identify any policies in a Council Development Plan within the region, that in the opinion of the Board, should be reviewed in order to promote the objects of the Act. Changes may also be proposed to improve the relationship between the policies in the Development Plan and the policies in the WAP.

Any changes proposed to development plans will be defined in consultation with Local Government and will contribute to development plan amendments. Required amendments to development plans will not affect the completion of the WAP.

## 5 Links to Other Legislation and Agreements

The draft water allocation plan will have regard to the benefits of consistency with other relevant Acts including the *Environment Protection Act 1993*, and other such plans and policies or guidelines as prescribed by regulation. The water allocation plan will also have regard to consistency with the State Natural Resources Management Plan 2006 and South Australia's Strategic Plan.

The *Intergovernmental Agreement on a National Water Initiative* is an agreement that aims to set a national framework for the management of Australia's water resources. The draft water allocation plan will have regard to the requirements of the National Water Initiative, particularly in relation to water access entitlements, water planning frameworks and the setting of sustainable levels of extraction.

## 6 Timelines for a New Water Allocation Plan

The process to develop a water allocation plan has a number of stages. An indicative timeline for each stage is provided in Figure 1.

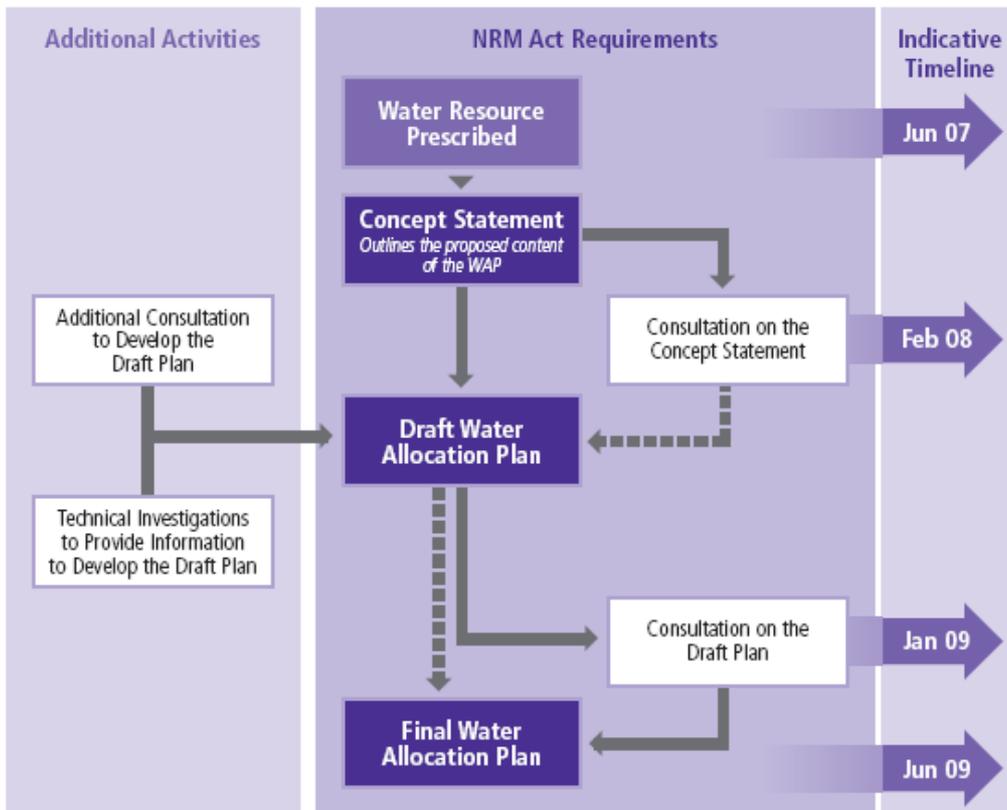


Figure 1: Indicative Timeline for Development of Water Allocation Plan

## 7 Additional Consultation

While the *Natural Resources Management Act 2004* specifies the consultation required to prepare a water allocation plan, the Board is committed to undertaking a far more comprehensive consultation process during the development and finalisation of the water allocation plan for the Central Adelaide Prescribed Wells Area. The consultation program proposed will seek to ensure that all stakeholders in the region have the opportunity to understand the key water resource management issues in the region, and participate in developing the management framework for inclusion in the WAP, particularly in relation to ensuring local relevance of policy options. The communication and consultation program for the water allocation plan will be further defined through the development of a comprehensive consultation strategy.

## Water Allocation Planning Reference Groups

The Board is proposing to use a range of industry reference groups to support the development of the WAP. These groups will meet on an as needs basis to provide input into the development of policy options within the water allocation plan. The reference groups will ensure the involvement of water users in the development of policy and will ensure that policy is locally relevant.

The reference groups will report to the Board's Water Resources Committee.

## Discussion or Issue Papers

The Board will develop a range of discussion or issue papers to provide the stakeholders and the community with key information and to provide the basis for discussions with the community on a range of policy options for inclusion in the draft WAP. This may include issues based workshops to discuss key elements of the WAP.

## Workshops

The Board will hold a range of stakeholder workshops to allow the community input to the development of policies within the draft plan. This will be in addition to the requirements of the NRM Act for public meetings.

## Notification under section 24HA of the Native Title Amendment Act 1998

The Board will notify registered native title claimants and representative aboriginal bodies of the development of the WAP plan and seek comment under Section 24HA of the Native Title Amendment Act.

Map 1: Central Adelaide Prescribed Wells Area

