



**Government of South Australia**

Northern and Yorke Natural  
Resources Management Board



Northern and Yorke Natural Resources Management Board

# Concept Statement for the Water Allocation Plan for the Baroota Prescribed Water Resources Area

September 2009

The Concept Statement for the Water Allocation Plan for the Baroota Prescribed Water Resources Area has been prepared by the Northern and Yorke Natural Resources Management Board and the Department of Water Land and Biodiversity Conservation in accordance with the requirements of Section 78 of the *Natural Resources Management Act 2004*

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## 1. INTRODUCTION

This concept statement relates specifically to the Water Allocation Plan for the Baroota Prescribed Water Resources Area in South Australia.

### 1.1. Background

The Natural Resources Management Act 2004 (the Act) requires the Northern and Yorke Natural Resources Management Board (the Board) to prepare a water allocation plan for each of the prescribed water resources in its region. A water allocation plan is a legal document that is used for various purposes in the administration of the Act, in particular, to guide the granting of entitlements and water allocations and to allow for the transfer of water entitlements and allocations. In addition it can control the issue of approvals for the control of relevant water affecting activities.

Before preparing the draft Water Allocation Plan for the Baroota Prescribed Water Resources Area (the plan), the Board must prepare a concept statement in accordance with Section 78 of the NRM Act. The concept statement must set out:

- in general terms, the proposed content of the plan;
- matters to be investigated by the Board before preparation of the draft plan; and
- the proposals (if any) for consultation on the draft plan that are in addition to the requirements for consultation in the Act.

The Act requires that the concept statement be referred for comment to:

- a) any government department or other agency that has a direct interest in the proposed plan; and
- b) the Natural Resources Management Council; and
- c) each constituent council for the region; and
- d) the public (by notice published in a newspaper circulating throughout the region) for a minimum period of 6 weeks.

The intent of the concept statement is not to explore issues in detail, or provide solutions, as this will be done as part of the process to prepare the draft plan.

## **1.2. The Baroota Prescribed Water Resources Area**

The Baroota Prescribed Water Resources Area (Baroota PWRA) incorporates the surface and underground water in the hundred boundaries of Baroota and Telowie. The Baroota PWRA is located approximately 250 km north of Adelaide and covers an area of approximately 13,800 hectares.

The general area of the Mambray Coast comprises a number of small, unconnected catchments, of which Baroota is one. These catchments all rise in the Southern Flinders Ranges and drain towards the west, terminating in Spencer Gulf between Port Pirie and Port Augusta. Major land uses in the region are broadacre cropping and/or grazing, conservation reserves and irrigated horticulture.

The combination of small catchment areas and semi-arid climate results in ephemeral watercourses that flow only following significant rainfall in the ranges. A zone of faulting and jointing occurs where the ranges meet the plains and this, in combination with extensive gravel beds near to the foothills, leads to high stream losses with water recharging the groundwater aquifer. As a result of these factors, only the largest flow events are capable of reaching the coast.

Flows down Baroota Creek have been infrequent in recent decades. The most recent flow to reach the Gulf occurred in 1992. Prior to completion of the Baroota Reservoir in 1921, streamflow from this creek was effectively perennial, but since the dam wall was constructed flows have been rare. Relatively fresh groundwater inflows to the near-shore marine environment may still have some ecological significance, for example as a source of nutrients.

The region supports a variety of agricultural activities including the production of sheep and wool, cattle, pigs and broadscale cropping. Over the last 20 or so years, a sizeable irrigation area has become established downstream of the Baroota Reservoir. Recent years have seen an expansion in the number, diversity and size of these developments. This has seen the establishment of potato crops, vineyards and olive groves. The increased level of development has raised community concerns for the sustainability of water resources and dependent ecosystems, resulting in the current moratorium on water resource development.

The Minister for Environment and Conservation gazetted a Notice of Prohibition on the taking of water from the Baroota area on 30 June 2000. The purpose of this notice was to place a moratorium on further groundwater extraction in this area until such time as a long term management plan was in place. This has since been renewed and the current notice expires on 20 August 2010. The Minister issued a Notice of Intent to Prescribe the Baroota PWRA on 13 June 2002. The area was prescribed on 19 June 2008.

## 2. PROPOSED CONTENT OF THE WATER ALLOCATION PLAN

Section 76 of the Act requires that a water allocation plan 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;
- determine or provide for a mechanism to determine a consumptive pool(s) for the water resource;
- set out principles associated with the determination of water access entitlements and for the taking and use of water so that:
  - an equitable balance is achieved between environmental, social and economic needs for the water; and
  - the rate of taking and 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;
- to the extent that the regional NRM plan does not provide:
  - set out the matters that the Board will consider when exercising its powers to grant or refuse permits under the Act; and
  - identify any policies reflected in a Development Plan under the *Development Act 1993* that apply within its region that should, in the opinion of the Board, be reviewed under that Act in order to improve the relationship between the policies in the Development Plan and the related policies reflected in the water allocation plan; and
  - 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).

Additionally, a water allocation plan may:

- provide for the constitution of consumptive pools with respect to a particular water resource and in relation to each consumptive pool, assign a particular purpose to that consumptive pool.

- specify the basis on which a water access entitlement will be determined.
- set out appropriate policies and principles to assist in regulating the transfer of or other dealings with water management authorisations or water access entitlements (which policies may include provisions that provide for the varying of any water management authorisation or water access entitlements or prevent specified classes of transfers or dealings in specified circumstances;
- provide for the variation of site use approvals or water resource works approvals of classes specified by the plan in circumstances specified by the plan.

The Act also specifies that:

- if the taking or the taking and use of water from a water resource has or is likely to have a detrimental effect on the quantity or quality of water that is available from another water resource, the water allocation plan for the first mentioned resource must take into account the needs of persons and ecosystems using water from the other resource as well as the needs of persons and ecosystems from its own resource and may, to achieve an equitable balance between competing interests, include provisions designed to prevent or reduce those detrimental effects.
- if the taking or use of water from a water resource affects or is likely to affect the management of water in another water resource, the water allocation plan for the second water resource may include provisions relating to the taking, or the taking and use of water from the first water resource.

The draft plan will fulfil the requirements of the Act in relation to the context of the plan. Additionally, sections 2.1 to 2.12 promote more detail of the likely content of the draft plan.

### **2.1. Purpose of the Water Allocation Plan**

- Provide a clear and concise statement about the purpose and role of the draft plan.

### **2.2. Description of the Prescribed Water Resources**

- Describe the general geography of the region, including the hydrogeology of the main aquifer systems that underlie the Baroota PWRA and a map;
- Describe water dependent environmental assets and values;
- Describe impacts of past, present and future land use change on water quantity and quality;
- Provide any information identified through current monitoring arrangements and other investigations that provide information on the description of the Baroota PWRA; and
- Describe the health and condition of system.

### **2.3. Water-dependent Ecosystems**

- Identify water-dependent ecosystems.
- Assess the quantity and quality of water needed by water dependent

ecosystems and the time or period when water is needed by those ecosystems.

- Determine the environmental impacts of water use within the Baroota PWRA including prescribed water resources and imported water.
- Determine environmental water requirements and provisions for water-dependent ecosystems.

#### **2.4. Assessment of Effects on Other Water Resources**

- Assess the effect of taking and using water from the prescribed water resources on the quantity and quality of other water resources.
- If the taking or using of water could result in detrimental effects on other water resources:
  - analyse the requirements of users and water dependent ecosystems of the other water resources.
  - identify provisions designed to prevent or reduce the possible detrimental effects.

#### **2.5. Assessment of the Capacity of the Resource to Meet Demands**

- Assess the quantity and quality of the water resources.
- Identify current demands for licensed and non-licensed requirements including stock and domestic use and cultural requirements.
- Identify future demands for licensed and non-licensed requirements including stock and domestic use and cultural requirements.
- Identify social and economic impacts of water use and policies within the WAP.
- Assess the capacity of the resource to meet demands for water on a continuing basis, including an indication of the accuracy of the assessment.
- Assess the land capacity to meet current and future demands.

#### **2.6. Water Access Entitlements/Consumptive Pools**

- Specify the objectives for the policies around consumptive pools and water access entitlements.
- Determine or provide a mechanism to determine the consumptive pool or pools.
- Determine or provide a mechanism to determine the number of shares of water access entitlements that will be issued for each consumptive pool.
- Set out reasons when the consumptive pool and the number of shares might be adjusted.
- Establish rules for available water determinations from each consumptive pool. Determine the basis for the allocation methodology for each consumptive pool.
- Establish criteria for determining water access entitlements and consumptive pools.
- Determine the rates, times and circumstances under which water may be taken from the resource.
- Determine the quantity of water that may be delivered to the area within the prescribed resource boundary.
- Provide for the re-allocation of water that has been returned to a consumptive pool.

- Establish a pathway for review of the water entitlement processes in the event of over allocation and over use.

## **2.7. Site Use and Water Resource Works Approvals**

- Specify the objectives for the policies around site use approvals and water resource works approvals (and delivery capacity entitlement where appropriate).
- Determine criteria for site use and water resource works approvals.
- Determine the rates, times and circumstances under which water may be taken from the resource.
- Make provision for the variation of site use and water resource works approvals.

## **2.8. Water Allocations**

- Specify the objectives for the policies around water allocations.
- Establish criteria for determining water allocations.
- Specify impacts of water allocation and transfer policies both short- and long-term.
- Establish possible trigger mechanisms for highlighting changes to water resource condition and the status of dependent ecosystems.
- Determine responses to triggers when activated.
- Provide guidance on the efficient taking, storage and use of water.
- Provide an impact assessment of water use including off-site and environmental impacts.
- Make provision for stock and/or domestic uses.
- Establish a pathway for the review of the water allocation process in the event of over allocations and over use.

## **2.9. Water Transfer**

- Determine water transfer criteria including temporary and permanent transfers.
- Make provisions for review of water transfer processes and policies.
- Make provision for transfers between consumptive pools, if necessary.

## **2.10. Permits**

- Identification of water-affecting activities requiring permits (eg dams, diversions, well construction, minimum distance between wells, minimum well depth and depth of casing, seals between aquifers).
- Policy for aquifer storage and recovery.
- Policies and criteria for granting permits.

## **2.11. Taking and Use of Other Water Resources**

- Establish provisions relating to taking and use of water from another resource, if this is likely to affect the management of the prescribed resource.

## **2.12. Monitoring**

- Specify 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 and the capacity to meet demands for water on a continuing basis.

- Identify current knowledge gaps and further research needs.

### 3. DETAILED INVESTIGATIONS TO BE UNDERTAKEN

Technical investigations to be undertaken during the development of the plan are likely to include the following:

- assessment of the current capacity of the surface and groundwater resources and potential risks due to climate change;
- assessment of the quality, quantity and timing of environmental water required for water dependent ecosystems;
- estimates of current levels of water use;
- assessment of future water demands and the capacity of the resource to meet those demands;
- assessment of the effects of water use on other water resources (both within and outside the Baroota area);
- determination of sustainable yield of all water resources;
- monitoring of the resource condition;
- assessment of appropriate management area boundaries;
- assessment of the indigenous cultural significance of the land and water resources of the area.

### 4. LINKS TO OTHER LEGISLATION AND AGREEMENTS

The draft plan will have regard to the benefits of consistency with other relevant Acts, policies and plans including:

- relevant Development Plans under the Development Act, 1993;
- relevant environmental protection policies under the Environment Protection Act, 1993;
- relevant management plans under the National Parks and Wildlife Act, 1972;
- Native Vegetation Act, 1991;
- Drainage impacts under the Marine Parks Act 2007;
- The State Natural Resources Management Plan 2006;
- The Northern and Yorke Regional NRM Plan 2009;
- The Intergovernmental Agreement on a National Water Initiative; and
- South Australia's Strategic Plan 2007.

### 5. INDICATIVE WATER ALLOCATION PLAN DEVELOPMENT TIMETABLE

Activity	Indicative timelines
Public and Key Stakeholder Consultation on Concept Statement	Mid 2009

Amend concept statement if required to reflect written submissions	Mid-late 2009
Initiate policy development	Late 2009-early 2010
Public and Key stakeholder Consultation on Draft WAP including public meeting.	2010

*Please note these are indicative timelines only and unavoidable delays at any part of the process will change the WAP adoption date.*

### **5.1. Additional Consultation**

In addition to the consultation required under the Act, the Board will seek to further strengthen its planning process through the following consultative mechanisms.

#### **Water Allocation Planning Committee**

The Baroota Water Allocation Planning Committee will be formed to provide advice and direction to the development of the plan. This will be a sub-committee of the Board with the following terms of reference:

- Advise the Board on the management of water resources within the Baroota PWRA;
- Advise the Board on the best methods of communicating and consulting with the Baroota – Port Germein community during the development of the plan;
- Advise the Board on further studies or investigations required in the Baroota PWRA to improve the Board's knowledge and understanding of the local groundwater and surface water resources;
- Review and comment on draft policies as they are developed for the draft plan;
- Assist the Board to implement the strategies in the plan for the Baroota PWRA; and
- Assist the Board in evaluating data collected in the water monitoring program.

#### **Discussion or Issue Papers**

The Board will endeavour to develop a range of issue/topic papers for community information as a basis for consultation, particularly prior to the drafting of the plan. This may include issue based workshops to discuss key elements of the plan. Particular details will be available from the Board office and website.

#### **Native Title Notification**

The Board will notify registered native title claimants and representative Aboriginal bodies of the preparation of the plan and seek comment under section 24 of the Native Title Amendment Act 1998.





# Baroota Prescribed Water Resources Area

