Summary of PAROO REGION

From the Guide to the proposed Basin Plan

This publication summarises proposals outlined in the Guide to the proposed Basin Plan as they relate to the Paroo region.

THE REGION

The Paroo stretches along the north-western boundary of the Murray-Darling Basin. The region takes its name from its major river, running from the Warrego Range in the north to near Wilcannia in the south. The region is roughly divided in half by the New South Wales–Queensland border.

Considered the last free-flowing river in the Basin, the Paroo’s floodwaters typically terminate on the floodplain south of Wanaaring and only reach the Darling River in exceptionally wet years, which has occurred only four times between 1900 and 2010.

The Paroo and other rivers within the region are ephemeral and only flow intermittently following high rainfall. Hence there are long periods when the rivers in the Paroo region do not flow at all.
WATER USE AND ENVIRONMENTAL HEALTH

The Authority has compiled the current limits for all forms of water extraction in the Murray-Darling Basin. For surface water these current diversion limits include watercourse diversions for town and community water supplies, irrigation and industries, floodplain harvesting, and interception activities such as farm dams and forestry plantations. For groundwater they include all water diverted from the aquifers of the area. Current diversions are limited by existing transitional and interim water resource plans where these are in place. These are existing plans, prepared by Basin states, and recognised under the Water Act 2007 (Cwlth). Where there are no existing plans, or plans do not apply to certain types of water extraction, the current diversion limit reflects the current level of use.

The surface water long-term average current diversion limit for the Basin as a whole has been estimated at around 13,700 GL/y and at 9.9 GL/y for the Paroo region. The Basin wide groundwater long-term average current diversion limit is 1,786 GL/y.

<table>
<thead>
<tr>
<th>Paroo Region surface water Current Diversion Limit (GL/y)</th>
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<tbody>
<tr>
<td>Interceptions</td>
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<td>9.7</td>
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The availability of surface water in the Paroo is solely dependent upon the region’s rainfall, which is highly variable from year to year. Unlike other catchments, the Paroo does not have any major water storages to capture floodwaters. The environment is the region’s main water user, with run-off from the Paroo flowing into a number of Ramsar-listed wetlands and onto floodplains supporting many waterbirds.

There are a number of factors that indicate the good ecological condition of the Paroo region. For example: vegetation condition is good given the very high proportion of remnant cover in the catchment and along watercourses, native fish diversity is good and nearly all of the expected macroinvertebrate are present. The hydrological condition for the Paroo is good while stream condition is moderate to good. The major water quality issues for the waterholes in the Paroo region are low dissolved oxygen, high temperatures, high pH (alkaline) and a moderate level of nutrients.

ASSESSING ENVIRONMENTAL WATER NEEDS

Many of the environmental assets and functions of the Murray-Darling Basin have been degraded by the over-extraction of water from the Basin’s rivers. The Water Act 2007 (Cwlth) and Basin Plan seek to address the over-extraction of water to restore and maintain the Basin’s key environmental assets and key ecosystem functions.

To determine sustainable diversion limit (SDL) proposals it is necessary to work out how much water is needed to sustain the health of the Basin’s river systems, wetlands and floodplains. To do this, the Authority has undertaken an assessment of the environmental water requirements of key environmental assets and key ecosystem functions across the Murray-Darling Basin. In the most part, the assets assessed are large flood-dependent wetland and floodplain systems that support populations of waterbirds and fish, and large forests and woodlands. The assessment of key ecosystem functions gave particular attention to the environmental water requirements of rivers, and system wide processes such as connectivity between rivers and floodplains.

Together, these assessments included specific analysis of flows at 106 hydrologic indicator sites across the Basin (88 sites to assess the water needs for the Basin’s key ecosystem functions and 18 to assess the water needs for key environmental assets), as well as analysis of end of system flows in each region.
The environmental water requirements at a Basin scale have been estimated between 22,100 GL/y and 26,700 GL/y (an increase between 3,000 GL/y to 7,600 GL/y from the 19,100 GL/y currently available for the environment).

In the Paroo region, 251 key environmental assets have been identified. Of the 106 hydrological indicator sites across the Basin, the Paroo region contains four hydrological indicator sites for key ecosystem functions.

The environmental water requirements for the Paroo region have been estimated as 678 GL/y (678 GL/y are currently available for the environment).


**SUSTAINABLE DIVERSION LIMIT PROPOSALS AT THE BASIN AND REGIONAL SCALE**

The Authority is required to establish new long-term average SDLs for surface water and groundwater. SDLs represent the long-term average amount of water which can be used for consumptive purposes after meeting the environmental water needs that have been identified.

In the Guide, the Authority presents the SDLs as a range of scenarios for discussion at this stage, rather than choosing a particular value in this range. This range takes into account all the available evidence, the quality of that evidence, and the inherent uncertainty of modelling.

The Authority has determined that 3% of the current diversion limit (around 410 GL/y for the Basin as a whole and around 0.3 GL/y for the Paroo region) is an appropriate allowance to account for the effect of climate change on surface water SDL proposals. The SDL proposals for groundwater do not include a climate change component.

The SDL proposals would require a reduction in the current long-term average surface water diversion limit at the Basin scale from 13,700 GL per year to between 10,700 GL and 9,700 GL per year (reduction between 3,000 GL and 4,000 GL per year or 22% to 29%).

Reductions in surface water current diversion limits for the Paroo region are not proposed.

The SDL proposals would also require a reduction in the current long-term average groundwater diversion limit at the Basin scale by an aggregate 186 GL or an average reduction of 10% across the Basin. The reductions in current diversion limits are required in only 11 of the 78 groundwater SDL areas. No reductions are proposed for the remaining 67 groundwater SDL areas where the current diversions are assessed as sustainable.

SDL proposals for the surface water and groundwater SDL areas of the Paroo region are set out on page 5.

**SUPPORTING COMMUNITIES**

The Murray–Darling Basin Authority acknowledges that implementing SDLs may have significant social and economic implications for individual entitlement holders and communities across the Basin.

However, the Australian Government has committed to recovering sufficient water access entitlements to fully offset the impact of SDLs across the Basin, including the Paroo region. This will be achieved through a combination of purchasing entitlements in the market and investments in more efficient irrigation infrastructure.

Consequently, should these targets be met, there are likely to be no reductions in individual water entitlement holder allocations.

For further information about these activities go to www.environment.gov.au/water.
There is one surface water SDL area in the Paroo region.

### 1) Paroo
- Current diversion limit: 9.9 GL/y
- SDL proposal: 9.9 GL/y
- Reduction: Nil

There are five groundwater SDL areas wholly or partly contained within the Paroo region.

### 1) Kanmantoo Fold Belt
- Current diversion limit: 8.2 GL/y
- SDL proposal: 8.2 GL/y
- Reduction: Nil – potential for unassigned water

### 2) Lachlan Fold Belt: Western
- Current diversion limit: 1.2 GL/y
- SDL proposal: 1.2 GL/y
- Reduction: Nil – potential for unassigned water

### 3) NSW Sediments above the Great Artesian Basin
- Current diversion limit: 1 GL/y
- SDL proposal: 1 GL/y
- Reduction: Nil – potential for unassigned water

### 4) Upper Darling Alluvium
- Current diversion limit: 2.4 GL/y
- SDL proposal: 2.4 GL/y
- Reduction: Nil – potential for unassigned water

### 5) Sediments above the Great Artesian Basin Warrego-Paroo-Nebine
- Current diversion limit: 1.1 GL/y
- SDL proposal: 1.1 GL/y
- Reduction: Nil – potential for unassigned water
ABOUT MDBA

The Murray–Darling Basin Authority (MDBA) is the statutory agency that manages, in conjunction with the Basin states, the Murray–Darling Basin’s water resources in the national interest.

MDBA is responsible for preparing and overseeing a legally-enforceable management plan — the Basin Plan.

The Basin Plan will:

- optimise social, economic and environmental outcomes
- set and enforce environmentally sustainable limits on the quantities of water that may be taken from Basin water resources
- set Basin-wide environmental, water quality and salinity objectives
- develop efficient water trading regimes across the Basin
- set requirements for state water resource plans
- improve water security for all Basin users.

This document has been prepared by the Murray–Darling Basin Authority for public consultation purposes, using the best efforts to ensure that the material it presents is current and accurate. The opinions, comments and analysis (including those of third parties) expressed in this document are for consultation purposes only.

FURTHER INFORMATION AND FEEDBACK

For further information on the Guide to the proposed Basin Plan, visit the MDBA website at:

www.mdba.gov.au

Our website also provides details about community information sessions and ways to provide feedback on the Guide.

You can also find out about upcoming events and information releases by subscribing to our engagement email and the monthly E-newsletter.

You may also phone us on 1800 230 067 (free call) or write to us at:

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