Summary of WARREGO 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 Warrego region.

THE REGION

The Warrego region, predominantly in Queensland and extending into New South Wales, is based around the Warrego River and includes the towns of Charleville and Cunnamulla. The river has its source in the Carnarvon Range at the most northerly point of the Murray-Darling Basin, and flows for about 800 km to its junction with the Darling River downstream of Bourke.

Land is chiefly used for dryland cattle and sheep grazing, with about 2,200 ha of irrigated cotton and horticulture. Water diversions in the region are low and there are no major dams. Rainfall and run-off are highly variable and streamflow mostly occurs as major but infrequent floods.
Grazing, both beef cattle and sheep for wool production, is the predominant industry in the catchment.

The region's river flows are generally too erratic for irrigated cropping. However, small areas of cotton which are currently declining and horticulture (including wheat, barley and irrigated pastures) have been established using water stored in the weir near Cunnamulla and in on-farm storages surrounding Cunnamulla and Bourke. These storages take advantage of high flow periods in the rivers after major rainfall.

Water which is not captured is also necessary for the inundation of floodplains for some farming in the region.

There are a number of factors indicating the moderate ecological condition of the Warrego region. For example: vegetation condition is very good given the very high proportion of remnant cover in the catchment and along watercourses. However, there are only half the expected native fish species present and macroinvertebrate diversity is low. The hydrological condition for the Warrego is good while stream condition is medium to poor. The major water quality issues for the waterholes in the Warrego River region are low dissolved oxygen, high temperatures, high pH (alkaline) and moderate nutrients.

**WARREGO REGION SURFACE WATER CURRENT DIVERSION LIMIT (GL/Y)**

<table>
<thead>
<tr>
<th>Interceptions</th>
<th>Watercourse diversions</th>
<th>Total</th>
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<tr>
<td>83</td>
<td>45</td>
<td>128</td>
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**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

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*Image: Cattle on the Myroolia property near Bourke, New South Wales*
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 3,000GL/y to 7,600GL/y from the 19,100 GL/y currently available for the environment).

In the Warrego region, 278 key environmental assets have been identified. Of the 106 hydrological indicator sites across the Basin the Warrego region contains five hydrological indicator sites for key ecosystem functions.

The environmental water requirements for the Warrego region have been estimated between 515 GL/y and 523 GL/y (an increase between 5 GL/y and 13 GL/y from the 510 GL/y 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 4 GL/y for the Warrego 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%).

For the Warrego region this would equate to a reduction in the current long-term average surface water diversion limit from 128 GL/y to between 110 GL and 108 GL per year (reduction between 18 GL and 20 GL per year or 14% to 16%).

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 Warrego 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 Warrego 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.

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**SUSTAINABLE DIVERSION LIMIT PROPOSALS**

**WARREGO REGION**

### SURFACE WATER

There is one surface water SDL area in the Warrego region.

1) **Warrego**
   - Current diversion limit: 128 GL/y from 110 GL/y to 108 GL/y
   - SDL proposal: from 18 GL/y (14%) to 20 GL/y (16%)
   - Reduction: Nil – potential for unassigned water

### GROUNDWATER

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

1) **NSW Alluvium above the Great Artesian Basin**
   - Current diversion limit: 1.2 GL/y
   - SDL proposal: 1.2 GL/y
   - Reduction: Nil – potential for unassigned water

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

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

4) **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

5) **Warrego Alluvium**
   - Current diversion limit: 0.7 GL/y
   - SDL proposal: 0.7 GL/y
   - Reduction: Nil – potential for unassigned water
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:

Murray–Darling Basin Authority
GPO Box 3001, Canberra ACT 2601.

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.

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