Summary of
WIMMERA–AVOCA
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 Wimmera-Avoca region.

**THE REGION**

The Wimmera–Avoca region is comprised of the major surface-water catchments of the Wimmera and Avoca rivers and includes the major townships of Horsham, Stawell, Ouyen, Charlton, St Arnaud and Avoca. To the south-west, the region is bound by the Grampians, where rainfall feeds the tributaries of the Wimmera River, with the Pyrenees in the south-east. The northern areas of the region include the dunefields of the Little Desert to the west, and the riverine floodplains of the Avoca River.

The major watercourses in the region flow north from the Grampians and flow into terminal lakes rather than draining into the River Murray. The Wimmera River has headwaters across the Grampians to the south and Pyrenees in the south-east. It flows west through the town of Horsham and then north to terminate in lakes Hindmarsh and Albacutya.
The Avoca River flows north from its headwaters in the central highlands into Lake Bael Bael then through the Avoca Marshes and the Avoca outfall floodplain. Under flood conditions flows may enter Lake Boga via a diversion channel, which in turn under high floods can discharge to the Little Murray River.

**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) [the Act]. 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 136 GL/y for the Wimmera-Avoca region. The Basin wide groundwater long-term average current diversion limit is 1,786 GL/y.

**Wimmera-Avoca Region surface water Current Diversion Limit (GL/y)**

<table>
<thead>
<tr>
<th>Interceptions</th>
<th>Watercourse diversions</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>62</td>
<td>74</td>
<td>136</td>
</tr>
</tbody>
</table>

Dryland agriculture is the dominant land use in the Wimmera–Avoca region, dominated by broadacre cropping of cereals, oilseed, pulses and hay.

Prior to commissioning of the Wimmera Mallee Pipeline, surface-water was primarily used for stock and domestic uses, and was delivered to farm dams by the domestic and stock channel supply system. Around 17% of surface-water was supplied to urban centres and small volumes were used for irrigation.

Irrigation is currently limited to small areas (approximately 3,000 ha) near Horsham and Murtoa in the Wimmera catchment, and a small area of the Avoca catchment north-west of the Loddon River, near Swan Hill. The largest number of agricultural businesses irrigating in the Wimmera catchment are grape producers extracting water from upper catchment dams.

There are a number of factors indicating very poor ecological condition in the Wimmera-Avoca region. For example: Remnant vegetation cover is very poor throughout the catchment and along watercourses. Only a small proportion of expected native fish species are present. Native fish species are abundant in the Wimmera and depleted in the Avoca but in both catchments alien species dominate the biomass. The hydrological condition for the Wimmera valley is poor, but moderate to good for the Avoca. Stream condition is moderate or poor and macroinvertebrate diversity is low. The primary water quality issue in the Wimmera region is high salinity levels due to saline groundwater intrusion.

**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 Act 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 3,000GL/y to 7,600GL/y from the 19,100 GL/y currently available for the environment).

In the Wimmera-Avoca region, 82 key environmental assets have been identified. Of the 106 hydrological indicator sites across the Basin the Wimmera-Avoca region contains 3 hydrological indicator sites for key ecosystem functions and 1 hydrologic indicator site for key environmental assets. This is the Wimmera River Terminal Wetlands.

The environmental water requirements for the Wimmera-Avoca region have been estimated at 323 GL/y (323 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 4 GL/y for the Wimmera-Avoca 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 Wimmera-Avoca region are not proposed.

The SDL proposals would also required 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 Wimmera-Avoca 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 Wimmera-Avoca 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.

SUSTAINABLE DIVERSION LIMIT PROPOSALS
WIMMERA–AVOCA REGION

<table>
<thead>
<tr>
<th>SURFACE WATER</th>
<th>GROUNDWATER</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is one surface-water SDL area in the Wimmera-Avoca region.</td>
<td>There are three groundwater SDL areas wholly or partly contained within the Wimmera-Avoca region.</td>
</tr>
<tr>
<td><strong>1) Wimmera-Mallee</strong></td>
<td><strong>1) West Wimmera</strong></td>
</tr>
<tr>
<td>Current diversion limit</td>
<td>Current diversion limit</td>
</tr>
<tr>
<td>SDL proposal</td>
<td>SDL proposal</td>
</tr>
<tr>
<td>Reduction</td>
<td>Reduction</td>
</tr>
<tr>
<td><strong>2) Wimmera-Avoca Highlands</strong></td>
<td><strong>2) Wimmera-Avoca Highlands</strong></td>
</tr>
<tr>
<td>Current diversion limit</td>
<td>Current diversion limit</td>
</tr>
<tr>
<td>SDL proposal</td>
<td>SDL proposal</td>
</tr>
<tr>
<td>Reduction</td>
<td>Reduction</td>
</tr>
<tr>
<td><strong>3) Wimmera-Mallee Sedimentary Plain</strong></td>
<td><strong>3) Wimmera-Mallee Sedimentary Plain</strong></td>
</tr>
<tr>
<td>Current diversion limit</td>
<td>Current diversion limit</td>
</tr>
<tr>
<td>SDL proposal</td>
<td>SDL proposal</td>
</tr>
<tr>
<td>Reduction</td>
<td>Reduction</td>
</tr>
</tbody>
</table>
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:

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

PHOTOGRAPHER CREDITS

Jim Donaldson: page 1
Arthur Mostead: page 2, 3
Linton Argall: back page