Summary of LODDON 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 Loddon region.

THE REGION

The Loddon region includes the Loddon River and smaller tributaries, such as the Bendigo and Bet Bet creeks. The region contains the city of Bendigo and is part of Victoria’s food bowl, supporting highly productive irrigation areas with extensive dairy farming, pasture and irrigated horticulture.
The main irrigation area in the region is the Boort–Pyramid Irrigation Area. It is supplied predominantly with water from the Goulburn region, but is also supplemented by water from the Loddon and Campaspe rivers. Numerous private diverters draw water for irrigation directly from waterways within the region.

Major irrigated crops are hay, cereals, fruit and nuts, grapes and vegetables. Dairy, sheep and beef cattle are also significant water users in the region.

A number of factors indicate that the ecology of the Loddon region is in extremely poor condition. For example, vegetation condition is very poor with low levels of remnant cover in the catchment and along watercourses. Fish populations are extremely poor with a low diversity of native fish species. Hydrological condition in the Loddon is considered moderate but with poor to very poor scores for stream condition. Overall, macroinvertebrate diversity is moderate. The water quality of the Loddon River decreases downstream due to high turbidity and nutrients and low in dissolved oxygen, with elevated salinity levels.

### 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 (Cwth) 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 Loddon region, 42 key environmental assets have been identified. Of the 106 hydrological indicator sites across the Basin, the Loddon region contains 6 hydrological indicator sites for key ecosystem functions.

The environmental water requirements for the Loddon region have been estimated to be between 129 GL/y and 170 GL/y (an increase between 28 GL/y and 69 GL/y from the 101 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 6 GL/y for the Loddon 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 Loddon region this would equate to a reduction in the current long-term average surface water diversion limit from 185 GL/y to between 147 GL and 142 GL per year (reduction between 38 GL and 43 GL per year or 21% to 23%).

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. There are no reductions proposed for groundwater diversion limits in the Loddon region.

SDL proposals for the surface-water and groundwater SDL areas of the Loddon 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 Loddon 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
LODDON REGION

SURFACE WATER

There is one surface-water SDL area within the Loddon region.

1) Loddon
   - Current diversion limit: 185 GL/y
   - SDL proposal: from 147 GL/y to 142 GL/y
   - Reduction: from 38 GL/y (21%) to 43 GL/y (23%)

GROUNDWATER

There are two groundwater SDL areas wholly or partly contained within the Loddon region.

1) Loddon–Campaspe Highlands
   - Current diversion limit: 9.4 GL/y
   - SDL proposal: 9.4 GL/y
   - Reduction: Nil

2a) Victorian Riverine Sedimentary Plain: shallow Shepparton Formation
    - Current diversion limit: 83.3 GL/y
    - SDL proposal: 83.3 GL/y
    - Reduction: Nil - potential for unassigned water

2b) Victorian Riverine Sedimentary Plain: deep Renmark Group and Calivil Formation
    - Current diversion limit: 89.6 GL/y
    - SDL proposal: 89.6 GL/y
    - Reduction: Nil - potential for unassigned water
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.