



Australian Government



Gwydir Wetlands, north-west of Moree, New South Wales

Summary of **GWYDIR 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 Gwydir region.

THE REGION

The region is named after its largest river, which rises in the New England Tablelands and flows west to join the Barwon River. The region is bounded to the north by the Mastermans Range, to the east by the Great Dividing Range and to the south by the Nandewar Range.

The Gwydir Wetlands are located on the Lower Gwydir floodplain. The four Ramsar-listed sites that comprise the floodplain wetlands lie along the Lower Gwydir (Big Leather) and Gingham watercourses.

The region's largest town, Moree, is highly dependent on agriculture.



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 451 GL/y for the Gwydir region. The Basin wide groundwater long-term average current diversion limit is 1,786 GL/y.

Gwydir Region surface water Current Diversion Limit (GL/y)		
Interceptions	Watercourse diversions	Total
125	326	451



Mehi River near Moree, New South Wales

Cotton is the major irrigated commodity in the region and irrigation water is mostly sourced from regulated surface supplies. The industry also relies heavily on surplus flows. Cotton is grown on the alluvial plains, while lucerne and pasture are grown in the upper catchment along the small alluvial floodplains close to the Gwydir River and its tributaries.

A number of factors indicate poor ecological condition in the Gwydir region. For example vegetation condition is poor, with very low levels of remnant vegetation in the catchment. There is a moderate diversity of native fish species however exotic species make up over 75% of individuals. Hydrological conditions in the Gwydir are considered moderate to good, while stream condition varies but is moderate overall. Macroinvertebrate communities exhibit moderate to high diversity. The Gwydir River has moderate salinity levels and cold water pollution downstream of Copeton Dam is considered to be an issue for environmental health.

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

In the Gwydir region, 47 key environmental assets have been identified. Of the 106 hydrological indicator sites across the Basin, the Gwydir region contains four hydrological indicator sites for key ecosystem functions and one hydrologic indicator site for key environmental assets. This is the Gwydir wetlands.

The environmental water requirements for the Gwydir region have been estimated to be between 596 GL/y and 741 GL/y (an increase between 89 GL/y and 234 GL/y from the 507 GL/y currently available for the environment).

Further information on assessing the environmental water requirements of the Basin is available at http://www.mdba.gov.au/basin_plan/water-assessment-report.

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 14 GL/y for the Gwydir 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 Gwydir region this would equate to reduction in the current long-term average surface water diversion limit from 451 GL/y to between 361 GL and 330 GL per year (reduction between 89 GL and 121 GL per year or 20% to 27%).

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 Gwydir region are set out on page 5.

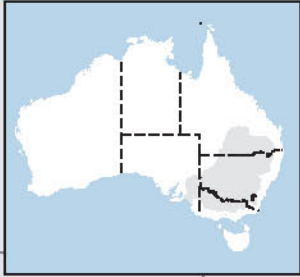
SUPPORTING COMMUNITIES

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 Gwydir 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 GWYDIR REGION

SURFACE WATER

1) Gwydir

Current diversion limit	451 GL/y
SDL proposal	from 361 GL/y to 330 GL/y
Reduction	from 89 GL/y (20%) to 121 GL/y (27%)

GROUNDWATER

There are seven groundwater SDL areas wholly or partly contained within the Gwydir region.

1) Eastern Porous Rock: Namoi-Gwydir

Current diversion limit	10.3 GL/y
SDL proposal	10.3 GL/y
Reduction	Nil

2) Inverell Basalt

Current diversion limit	2.9 GL/y
SDL proposal	2.9 GL/y
Reduction	Nil

3) Lower Gwydir Alluvium

Current diversion limit	32.3 GL/y
SDL proposal	32.3 GL/y
Reduction	Nil

4) Lower Namoi Alluvium

Current diversion limit	86 GL/y
SDL proposal	75 GL/y
Reduction	11 GL/y or 13%

5) 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

6) New England Fold Belt: Gwydir

Current diversion limit	4.1 GL/y
SDL proposal	4.1 GL/y
Reduction	Nil

7) Upper Gwydir Alluvium

Current diversion limit	0.8 GL/y
SDL proposal	0.8 GL/y
Reduction	Nil



Sprinkler irrigation on a farm near Moree, New South Wales

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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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.