

New South Wales

Annual report on water resource use

2015-2016 water year

Introduction

This report highlights key aspects of surface water and groundwater management and use in New South Wales (NSW) during the 2015-16 water year commencing 1 July 2015. The report is submitted to the Murray Darling Basin Authority (MDBA) by NSW Department of Primary Industries (DPI) Water under Section 71(1) of the *Water Act 2007* (Cth), Schedule E of the MDB Agreement and Schedule 12, Matter 9.1 and 9.2 of the Basin Plan.

This report is a summary of the detailed data provided to MDBA in the s71/Cap/Matter 9.1/ Matter 9.2 reporting spreadsheets. For more detailed information, such as water use by licence category, valley-specific Cap compliance, or held environmental water (HEW), refer to the spreadsheet reports.

Water resource management overview for the State

All groundwater and surface water sources within the NSW Murray-Darling Basin (MDB) are managed under Water Sharing Plans (WSPs) and the *Water Management Act 2000* (the Act). The long-term average annual extraction limits (LTAAEL) for each NSW groundwater source and surface water source are outlined in the respective WSP.

Surface water

All licensed diversions from regulated rivers in the NSW portion of the MDB are metered. Diversions from the Barwon-Darling unregulated water source and under the Fish River Water Supply Scheme are also metered. For other unregulated systems extraction is not currently metered and an annual estimate of usage is shown in the section 71 data sheets.

Regulated river diversions in the NSW portion of the MDB for the year totalled 2,797 GL, including 377 GL of use by HEW licences. Estimates of diversions from unregulated systems totalled 385 GL (including 73 GL of metered use in the Barwon-Darling).

Dry conditions and associated low inflows continued across much of inland NSW during the 2015-16 water year. Most regulated river water sources commenced the 2015-16 water year with very low or zero general security allocations. Some incremental increases were received during the year, including for the Lachlan regulated river water source which received its first general security allocations for some time, finishing the water year with total general security allocations equivalent to 25% of entitlement. Despite these increases, all regulated river valleys (with the exception of the Upper Namoi and Border Rivers general security A Class) finished the water year with general security allocations well below 50%. The Belubula, Lower Darling and Lower Namoi regulated rivers did not receive any general security allocations for the year.

As in past years, water user behaviour reflected water availability in the respective river valleys, with licence holders utilising carry-over from the 2014-15 water year and/or trading water in. In some valleys, the river operator (WaterNSW) implemented strategies such as periods of bulk water delivery in order to limit losses. Licence holders were limited to ordering and extraction of regulated water during these periods. Only limited opportunities existed across most valleys during the water year for licence holders to extract supplementary and/or unregulated flows.

Levels in Menindee Lakes continued to decline during the water year, with restrictions placed on access to carryover water in Lower Darling accounts, and usage reserved for critical human needs and permanent plantings only. Emergency short term strategies were employed to ensure water supply for the city of Broken Hill was maintained. NSW also adopted a plan to construct a water supply pipeline from the Murray River to secure the long term urban water needs for Broken Hill.

Groundwater

Only 28 of the 44 NSW groundwater Sustainable Diversion Limit (SDL) units within the MDB are fully metered. These also represent the majority of licensed entitlements (88%) in the NSW part of the MDB. The remaining 16 SDL units are only partially metered.

During 2015-16 year 860 GL was extracted from the groundwater SDL units within the MDB. The high level of extraction reflected the continued dry conditions and low surface water availability (including low general security allocation for regulated rivers) experienced during 2014-15 water year. There was high reliance on groundwater in valleys such as Gwydir, Namoi, Lachlan, Murray and Murrumbidgee.

A total of 109 GL of groundwater was traded permanently; no groundwater was traded between any water sources during the water year. This includes sale of access licences (71M change in ownership) and transfer of shares (71Q assignment of rights). 222 GL of groundwater allocation was traded (commonly referred to as temporary trade) with most of this occurring within the Lower Gwydir, Lower Lachlan Alluvium, Upper Lachlan Alluvial, Lower Murrumbidgee Alluvium (Deep), Lower Murray Alluvium (Deep) and Upper and Lower Namoi Alluvial Groundwater Sources. During 2015-16 supplementary water access licence (SWAL) allocations were not available except in Lower Lachlan Alluvium. It is likely that allocations were traded temporarily to make up the reduced access under SWAL.

Cap compliance

Assessment of Cap performance for the 2015-16 water year using computer simulation models indicated that actual diversions were less than the modelled Cap target (adjusted for trade and environmental use) for almost all regulated river valleys. The exception was the Macquarie/Castlereagh which had a small debit for 2015-16 of 8 GL. All valleys were fully Cap compliant and continue to maintain cumulative credits.

All diversions are in accordance with the MDBA Register of Diversion Definitions to the extent that availability of information allows.

Transition period section 71 reporting

During the transition to SDL period, up to July 2019, NSW is continuing to fulfil its reporting obligations under Section 71 of the *Water Act 2007* (Cth), including accounting against Cap while Schedule E remains current. The reporting requirements under s71 have increased in this transition period to include other forms of non-modelled take such as interception by farm dams and commercial plantations, and Matter 9 reporting under the Basin Plan. Utilising the best available information for 2015-16, permitted take and actual take for these additional forms of non-modelled take are assumed to equal the volumes outlined for the Baseline Diversion Limit (BDL) in Schedule 3 of the Basin Plan.

Environmental water

Similar to past years, the majority of the total held environmental water (HEW) use in NSW during 2015-16 occurred in the Murrumbidgee and NSW Murray which together accounted for approximately 80% of all HEW use in the NSW portion of the MDB. HEW use in the Murrumbidgee was down to just over 50% of that used in 2014-15. Reduced opportunities for take from supplementary events may have contributed to this decline. HEW use in the

NSW Murray increased significantly from the volume used in the previous water year. Net temporary trade-outward of water from NSW Murray environmental water accounts to other NSW valleys and interstate in 2015-16 totalled just 26 GL; down from 201 GL in 2014-15. This suggests a greater proportion of available water (from allocations and trade-inward) was retained in accounts for environmental use in the NSW Murray system than in the previous year. In the northern portion of the NSW MDB very low or zero allocations resulted in the continued reliance on carryover water held in accounts and subsequent low HEW use. For example, in the Gwydir use of licensed environmental water was just over 8 GL for the water year – down from 56 GL the previous year.

In NSW planned environmental water (PEW) may be either 'rules-based' or managed in a specified account similar to water accounts for other (licensed) water users. Rules-based PEW include translucent, stimulus, and end of system flows, as well as environmental share of supplementary flows.

Environmental Water Advisory Groups (EWAGs) advise on the management and use of account-based PEW in the respective regulated valleys, generally targeting specific environmental assets such as the Gwydir Wetlands and the Macquarie Marshes.

Progress of water reform

During the 2015-16 water year NSW continued to implement the 2013 Intergovernmental Agreement on Implementing Water Reform in the MDB and participated in a range of Basin Plan processes and working groups. Officers from DPI Water and other NSW agencies were actively involved in the Northern Basin Review, SDL adjustment processes, Constraints Management Strategy and working towards the development of water resource plans.