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MURRAY–DARLING BASIN AUTHORITY

Observed Flows in the Barwon–Darling 1990-2017: A Hydrologic Investigation

TECHNICAL REPORT

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Acknowledgement of the Traditional Owners of the Murray–Darling Basin

The Murray–Darling Basin Authority acknowledges and pays respect to the Traditional Owners, and their Nations, of the Murray–Darling Basin, who have a deep cultural, social, environmental, spiritual and economic connection to their lands and waters. The MDBA understands the need for recognition of Traditional Owner knowledge and cultural values in natural resource management associated with the Basin.

The approach of Traditional Owners to caring for the natural landscape, including water, can be expressed in the words of the Northern Basin Aboriginal Nations Board:

> …As the First Nations peoples (Traditional Owners) we are the knowledge holders, connected to Country and with the cultural authority to share our knowledge. We offer perspectives to balance and challenge other voices and viewpoints. We aspire to owning and managing water to protect our totemic obligations, to carry out our way of life, and to teach our younger generations to maintain our connections and heritage through our law and customs. When Country is happy, our spirits are happy.

Cover image: Small in-channel fresh at Louth Weir on 17 March 2006

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Executive Summary

In November 2016 the MDBA released the findings from the Northern Basin Review, recommending a reduction in the total volume of water to be recovered for the environment across the Northern Basin. As a result of the Northern Basin Review's extensive research and community consultation, the MDBA recommended that the 390 GL recovery volume set in 2012 be reduced to 320 GL, contingent upon commitments from governments to implement a range of 'toolkit measures'.

The purpose of the toolkit measures is to improve water management practices. The Authority believes that implementing these measures will provide improved environmental outcomes and lessen the social and economic impacts compared with the original 390 GL Basin Plan recovery settings.

One of these measures specifies the need for the protection of smaller but ecologically significant flows across the Northern Basin. Smaller flows are critical for both communities and the environment, particularly in dry-times. The Authority believes that the protection of the most ecologically significant small flows is critical to achieve the desired outcomes of the Basin Plan, particularly in the Barwon-Darling. This sentiment was reiterated by stakeholders from their lived experience of living and working on the river. Protecting environmental water and restoring ecologically important small flows was also identified as a policy priority to be addressed by Basin governments by the recent MDBA Compliance review and Ken Matthews Review (Matthews, 2017) commissioned by the NSW government.

This report forms an important component of the next step, helping understand the observed flow behaviour of the Barwon-Darling to better characterise the requirements for sustainable small flows. This forms one line of evidence which feeds into ongoing work by NSW and the Commonwealth on the protection of environmental flows.

This report presents a hydrologic analysis of observed low flow and small fresh events at major gauges in the Barwon–Darling river system from 1990–2017 using publicly-available observed gauge data (NSW DPI). The aim of this analysis was to detect any observable change in the historical characteristics of this part of the flow regime.

For the purpose of this analysis, 'low flow and small fresh events' have been defined to be those less than 2,000 ML/d, which carry ecological significance as described in previous studies (Thoms et al. 1996, MDBA 2011 and NSW DPI 2015). A separate report (MDBA 2018) outlines the ecological significance of these flows.

The results presented here suggest a change to the hydrologic behaviour of the Barwon–Darling has occurred since the turn of the Millennium (particularly in the mid-sections of the system) reflected in the characteristics of both individual low and fresh flow events, and in the dry spells between events.

Some individual flow events in the post-2000 period were seen to be very heavily attenuated in both the Collarenebri-to-Walgett and (particularly) the Walgett-to-Brewarrina reaches, contrary to the established pre-2000 trend. Of these, a small number of individual flow events were attenuated to zero after passing Walgett and Geera gauges and before reaching Brewarrina gauge. That is, flow events recorded at Walgett (and Geera) at the upstream end or mid sections

of a river reach were found to have disappeared completely with no corresponding flow recorded 50 km downstream at Brewarrina.

Additionally, periods of low or no flow were found to have increased significantly in length for gauges downstream of Bourke post 2000 when compared to pre 2000, which includes a climate signal originating from the Millennium Drought. When studying dry spells for particular reaches however, it was found that dry spells since the Millennium Drought were as long as during the drought itself for the mid-sections of the Barwon–Darling, again particularly in the Walgett to Brewarrina section. Furthermore, additional work by Sheldon (2017) has shown a break in the correlation between Barwon–Darling flows and the Southern Oscillation Index (SOI) from 2001 onwards, again indicating that climate is not the only driver of the observed change in hydrological behaviour. Any marked reduction in low-to-fresh flow event frequency has significant social, cultural, economic and environmental impacts on the river system, especially at the most downstream locations.

It is important to note that the movement of flows along a river system can be attributed to a number of factors, both natural and development-related. Natural hydrological behaviour (such as groundwater seepage, pool recharge, evapotranspiration) can vary greatly from event-to-event in an ephemeral river such as the Barwon–Darling, hence it is possible that the change observed in the early 2000s is naturally derived. It is also possible that changed extraction behaviour in the tributaries has contributed to the observed trend.

But there are a number of compelling signs indicating that river extraction on the Barwon–Darling is a significant contributor to the heavy attenuation of these events—they occurred only in specific reaches (Collarenebri-to-Walgett and Walgett-to-Brewarrina), only in the post-2000 period, they often occurred in pairs, and often at similar times of the year (i.e. spring/summer).

Additional work is required to disentangle the relative contributions of both the natural and development-related process to the observed change, which includes the need for additional data such as water usage information, cropping patterns, on-farm business and infrastructure changes, market information, development within Barwon-Darling tributaries, more detailed climate information and geomorphological change. Also, satellite imagery could be used to check if any visible cause of flow impact can be seen in the landscape. This work is beyond the scope of this report. However, the analysis presented here indicates that it is likely that a significant anthropogenic impact has occurred in the small and low-to-zero flow part of the Barwon–Darling flow regime since the year 2000, which is difficult to fully attribute to climate.

The use of data analysis, such as that outlined in this report, for compliance related activities has attracted considerable attention in recent times. Whilst not a principle focus of the report it is noted that analysis of this nature can provide a very useful tool by providing a relatively rapid assessment of flows as measured in near-real-time on the river, allowing regulators information to rapidly assess risk and target traditional compliance activities. The analysis does not, however, enable actual levels of water extraction to be measured.

Irrespective of the attribution of the attenuation of small and low flows in the system, assessment of the ecological needs of the system (MDBA 2018) indicates that strengthened protection of small and low flows will be required to maintain the ecological integrity of the system. Any policy response will also require consideration of any impacts on water users. This report is focussed on historical trends in hydrological patterns. It provides a compelling case and can inform the

NSW policy review process. It is one line of evidence to be considered by policy makers in responding to the Northern Basin Review and subsequent calls for strengthened protection of environmental water including small and low flows within the northern Basin.

Introduction

The Barwon–Darling River flows through north-western New South Wales, from upstream of Mungindi on the New South Wales and Queensland border to the Murray-Darling junction near Wentworth. The catchment is very dry and experiences an arid climate with highly variable flows originating from a complex system of tributaries. Several towns such as Mungindi, Brewarrina, Walgett, Bourke, Wilcannia and Menindee rely on the Barwon–Darling for town water supply. Users utilise water for livestock grazing and irrigated agriculture, particularly cotton.

The Barwon–Darling is a naturally ephemeral river reflecting the highly variable hydrology that is characteristic of Australian semi-arid rivers. During extreme dry periods, the river will cease to flow and become a series of disconnected waterholes. These waterholes provide refuges for fish and other water dependent aquatic biota. Refreshment flows which provide connectivity are critical during dry periods to provide an adequate level and quality of water in the waterholes. The waterholes also have significant social and cultural value.

The Barwon–Darling is an unregulated system, with users holding unregulated water licenses, with sharing arrangements prescribed in the Water Sharing Plan (WSP) for the Barwon–Darling Unregulated and Alluvial Water Sources which commenced on 4 October 2012. The WSP comprises rules for managing extraction from Mungindi to upstream of Lake Wetherell. This includes specifying commence-to-pump thresholds for four classes of licenses, namely A, B and C, and Stock & Domestic. The New South Wales Government is currently in the process of developing a Water Resource Plan for the Barwon–Darling system which, under the Basin Plan, must be accredited by mid-2019. A timeline of major water management development for the Barwon–Darling is presented in Appendix A.

A number of concerns have been raised by stakeholders and the media surrounding existing water management arrangements in the Barwon–Darling river system, including specific allegations of non-compliance with the rules of the WSP and an overall lack of compliance regulation by the NSW Government (Matthews, 2017; MDBA, 2017). Another major concern is a lack of flow protection in the Barwon–Darling within current WSP rules. Statements have been made that the current rules are resulting in entire flow events, including those which include a portion of Commonwealth environmental water delivered from upstream tributaries, being taken for productive use, with a subsequent negative impact on achieving Basin Plan outcomes, as well as significant socio-economic impacts in downstream reaches of the river.

As part of the Northern Basin Review (MDBA, 2016a,b,c) the MDBA recommended a set of ‘toolkit measures’ to maximise the environmental benefits and minimise the economic impacts of the Basin Plan. These measures encompass a broad range of actions, and are largely based on local knowledge and perspectives provided by communities and members of the Northern Basin Advisory Committee. One of these measures recommended improvements to state water management arrangements to safeguard low flows across the Northern Basin, particularly in the Condamine–Balonne and Barwon–Darling. This measure also recommended an event-based management approach to improve the effectiveness of environmental water use.

These measures were agreed by the Commonwealth, NSW and Queensland governments, and they are currently working through the implementation of these measures. The purpose of the work described in this report is to analyse the observed hydrology of low flow and small fresh

events in the Barwon–Darling from 1990-2017 and to gain an understanding of the behaviour of these individual flows as they passed through the system.

'Low flow and small fresh events' for this purpose are defined from an ecological perspective, comprising flow events of less than 2,000 ML/d. This threshold has been applied to the analysis, and is significantly higher than flow rates associated with A-class commence to pump thresholds and stock and domestic thresholds throughout the system.

This work will become part of the information base to assist efforts to improve water management in the system for all users, including the environment. Through the analysis, this investigation aimed to answer the following questions:

- How have low flow and small fresh events typically behaved as they passed through the system?
    a. Is there any evidence of a typical behaviour? If so, when does it occur and in which part of the system?
- What are the trends in the length and frequency of dry spells spatially and temporally?
    a. Do dry spells behave differently in recent times when compared to more historical behaviour?

The focus is on low and small fresh flows, which, as previously described are defined as flows less than 2,000 ML/d as measured at major gauges along the length of the river. Barwon–Darling A-class licence holders can access flows of typically a few hundred ML/d (depending on their location), with B and C-class licences activating progressively for increasing flow rates up to 12,000 ML/d, depending on location. Therefore low flows and small freshes are highly susceptible to impacts through extraction.

Understanding the Gauged Data (1990 – 2017)

Gauged Data versus Hydrologic Modelling for the Barwon–Darling

Although susceptible to errors of measurement, observed gauged data provide the best available representation of actual individual flow event-by-event behaviour and on-ground hydrological change as it has occurred historically. Observed data also typically reflects the lived experience of local stakeholders who are dependent on the river, and reflects any on-ground decisions that have affected flow behaviour in the landscape.

Hydrologic modelling provides one mechanism to test flow behaviour over the long-term with assumed management practices and behaviours. As such modelling is good for assessing different management options on overall flow behaviour but does not represent individual decisions that can have a large impact on flows actually observed in the river. Models also do not represent all parts of the flow regime equally well and are notoriously uncertain when dealing with low flows or for event by event analysis, making them not fit for purpose for this work. Due to these reasons it was decided hydrologic modelling would provide too much uncertainty to assist with this analysis.

Data Availability and Sources

To analyse hydrologic behaviour, a continuous historical record (hydrograph) of observed flow data was required. The Barwon–Darling WSP specifies commence to pump thresholds at 15 gauges along the system. This analysis used a subset of these gauges, to split the river into a series of reaches, using those gauges with complete data availability from 1990 and sufficient spatial coverage from Mungindi to Wilcannia. Flow data is collected and owned by the New South Wales Department of Primary Industries (NSW DPI) and is publically available on the NSW RealTimeData website[1]. Data was downloaded for these gauges for 1/1/1990 to 30/6/2017 for the subset of gauges.

It can be common for hydrographs to contain gaps (no flow data available for a period of time). If any gaps were present, additional data from the MDBA's internal Hydstra and Hydro databases was used if it existed for those periods with gaps. The Hydstra database stores all telemetry, operational and hydrographic data which is supplied to the MDBA by partner government agencies (or their contractors), including NSW. Critical processes occur in Hydstra such as the validation of telemetry data and the export of the operational and hydrographic data. The operational and hydrographic data is exported to the MDBA's Hydro database and to the Bureau of Meteorology and published on the MDBA's website as Live River Data.

Determining the "Best Available" data

Once the State, Hydstra and Hydro data sets were obtained, the gap-filling process (if required) was performed automatically through in-house developed software. This software determines where there were gaps or data of poor quality (using NSW-derived quality control flags assigned to the data) and filled these gaps by replacing the poor-quality data with better quality data. This resulted in a single time series for each of the 15 gauges.

It is still possible for gaps to exist in the data. Attenuation-derived flow estimates or modelled data can be used to further fill gaps although this was not necessary for this investigation. Data completeness was calculated for each of the gauges (the percentage of days in a year where data is present) and it was found that a sufficient portion of the gauges had 100% completeness to perform a sound investigation. Table 1 shows the data completeness for each of the gauges for each water year and Table 2 shows how much of the data originated where. Figure 1 shows the location of these gauges in the system.

Table 1 shows that 100% data completeness was found between 1990 and 2017 for the major reliable gauges at Mungindi, Collarenebri, Walgett, Brewarrina and Bourke. The reaches studied in this investigation are hence between these gauges. A fifth reach, between Bourke and Wilcannia was also included as that location has a near-complete set of data (between 1990 and 2017 it is 98% complete) and it was important to include this downstream reach to reveal any wider spatial trends. As can be seen in Figure 1, this set of gauges provides near-whole-of-length coverage of the Barwon–Darling system, albeit with hundreds of kilometres between gauges.

[1] 'Real Time Data - Rivers And Streams' NSW DPI, http://realtimedata.water.nsw.gov.au/water.stm?ppbm=SURFACE_WATER&rs&3&rskm_url

Table 1: Data completeness table for gauges in the Barwon–Darling. Major gauges used in the main analysis (Mungindi, Collarenebri, Walgett, Brewarrina, Bourke and Wilcannia) are highlighted.

Gauge	416001	416050	422004	422003	422025	422001	422026	422027	422002	422028	425039	425003	425004	425900	425008
Site	Barwon River at Mungindi	Barwon River upstream Presbury Weir	Barwon River at Mogil Mogil	Barwon River at Collarenebri Main Channel	Barwon River at Tara	Barwon River at Walgett	Barwon River at Boorooma	Barwon River at Geera	Barwon River at Brewarrina	Barwon River at Beemery	Darling River at Warraweena	Darling River at Bourke	Darling River at Louth	Darling River at Tilpa	Darling River at Wilcannia
1990	**100%**	18%	100%	**100%**	0%	**100%**	0%	0%	**100%**	0%	0%	**100%**	0%	0%	**100%**
1991	**100%**	96%	100%	**100%**	0%	**100%**	0%	0%	**100%**	0%	0%	**100%**	0%	0%	**100%**
1992	**100%**	84%	100%	**100%**	0%	**100%**	0%	0%	**100%**	0%	0%	**100%**	67%	0%	**100%**
1993	**100%**	100%	100%	**100%**	0%	**100%**	0%	0%	**100%**	0%	0%	**100%**	100%	0%	**100%**
1994	**100%**	100%	100%	**100%**	0%	**100%**	0%	0%	**100%**	0%	0%	**100%**	100%	0%	**100%**
1995	**100%**	100%	100%	**100%**	0%	**100%**	0%	0%	**100%**	0%	0%	**100%**	100%	65%	**100%**
1996	**100%**	100%	100%	**100%**	0%	**100%**	0%	0%	**100%**	0%	0%	**100%**	100%	100%	**100%**
1997	**100%**	100%	100%	**100%**	0%	**100%**	0%	0%	**100%**	0%	0%	**100%**	100%	100%	**100%**
1998	**100%**	100%	100%	**100%**	0%	**100%**	0%	0%	**100%**	0%	0%	**100%**	68%	100%	**100%**
1999	**100%**	93%	100%	**100%**	50%	**100%**	51%	51%	**100%**	52%	52%	**100%**	100%	92%	**100%**
2000	**100%**	100%	100%	**100%**	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%	70%	**100%**
2001	**100%**	100%	100%	**100%**	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**
2002	**100%**	100%	100%	**100%**	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**
2003	**100%**	100%	100%	**100%**	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%	100%	**73%**
2004	**100%**	100%	100%	**100%**	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%	100%	**84%**
2005	**100%**	100%	100%	**100%**	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%	96%	**100%**
2006	**100%**	100%	100%	**100%**	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**
2007	**100%**	100%	100%	**100%**	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**
2008	**100%**	100%	100%	**100%**	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**
2009	**100%**	100%	100%	**100%**	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**
2010	**100%**	100%	100%	**100%**	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**
2011	**100%**	100%	100%	**100%**	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**

Gauge	416001	416050	422004	422003	422025	422001	422026	422027	422002	422028	425039	425003	425004	425900	425008
Site	Barwon River at Mungindi	Barwon River upstream Presbury Weir	Barwon River at Mogil Mogil	Barwon River at Collarenebri Main Channel	Barwon River at Tara	Barwon River at Walgett	Barwon River at Boorooma	Barwon River at Geera	Barwon River at Brewarrina	Barwon River at Beemery	Darling River at Warraweena	Darling River at Bourke	Darling River at Louth	Darling River at Tilpa	Darling River at Wilcannia
2012	**100%**	100%	100%	**100%**	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**
2013	**100%**	100%	100%	**100%**	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**
2014	**100%**	100%	100%	**100%**	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**
2015	**100%**	100%	100%	**100%**	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**
2016	**100%**	100%	100%	**100%**	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**
2017	**100%**	100%	100%	**100%**	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**

Table 2: Data source (expressed as percentage) for each of the gauges used in the main analysis presented within this report

	416001	422003	422001	422002	425003	425008
	Barwon River at Mungindi	Barwon River at Collarenebri Main Channel	Barwon River at Walgett	Barwon River at Brewarrina	Darling River at Bourke	Darling River at Wilcannia
State Data	90.0%	100.0%	99.3%	78.9%	88.9%	57.8%
Hydstra	10.0%	0.0%	0.7%	21.1%	11.0%	40.6%
Hydro	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
No data	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%

Figure 1 shows the key reaches and the location of the gauges used in the investigation.

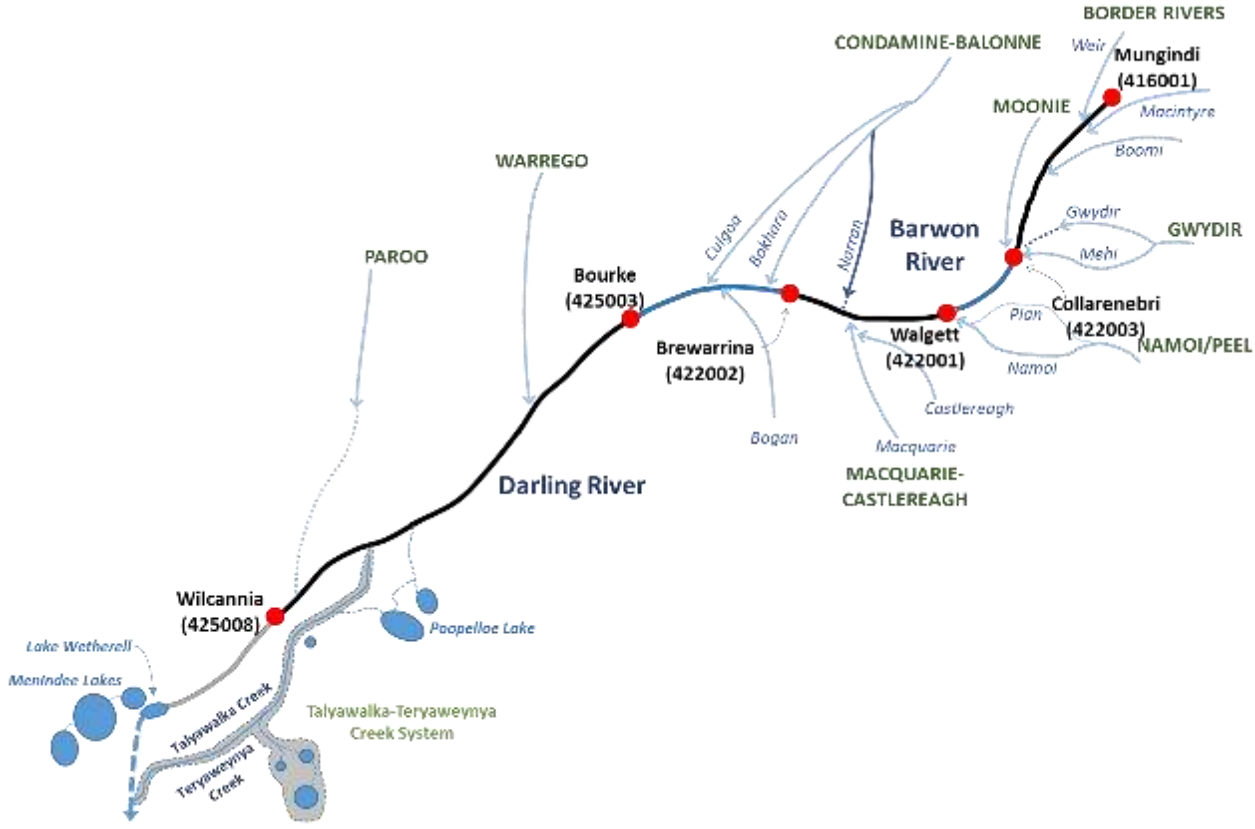


Figure 1: The Barwon–Darling system showing key reaches (black and light blue sections of the Barwon–Darling River) used for analysis presented within this report and their associated upstream and downstream gauges (red markers).

Understanding the Hydrology

Annual Flow Volumes and Climate

To determine whether years were wet or dry, the daily flows as measured at each major gauge were summed over the water year and shown in Figure 2 below. The figure highlights a

consistent pattern across each of the gauges with relatively dry periods between 1991 and 1994 and between 2001 and 2009. Conversely, 1998, 2010 and 2011 were particularly wet, with moderate flows in other years.

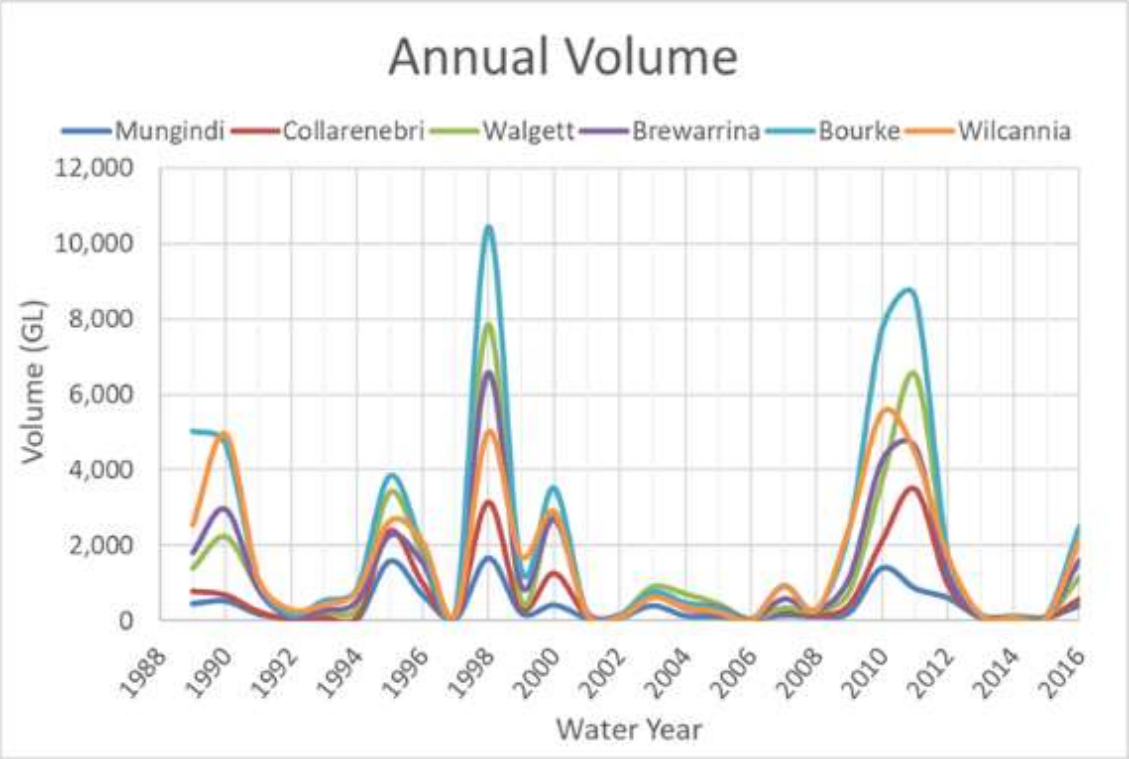


Figure 2: Total annual volume for each water year at key sites along the Barwon–Darling.

Identifying Individual Flow Events

To investigate flow behaviour the first step was to produce a catalogue of discrete flow events for each of the key gauges. This involved identifying separate events within the observed flow record and making a list of the characteristics of each event. This work was automated using the software algorithm package "FreshFind", which was developed in-house at the MDBA.

The FreshFind program divides a hydrograph into discrete hydrological events, using tuneable input parameters outlined in Table 3 to define what kind of flow is counted, and calculates the properties of those detected events. The conditions to define the boundary between events are the catchment area upstream of each gauge, an estimate of flow attenuation effects, and a comparison of the peak and trough inflection points between consecutive events. The input parameters used to produce the catalogue of flow events are outlined in Table 3.

Table 3: FreshFind input parameters for identifying discrete flow events.

Parameter	Value	Justification
Minimum event duration	1 day	To include events of all duration and flow peak
Lower event threshold	1 ML/d	To include events of all duration and flow peak

Parameter	Value	Justification
Upper event threshold	999,999 ML/d	To include events of all duration and flow peak
Start month	July	Water year
End month	June	Water year
Minimum separation of individual events	1 day	To maximise number of events detected

FreshFind identified for each gauge all events in the observed flow time series which has a minimum duration of one day, had a peak >1 ML/d, occurred at any time of year, and were at least one day apart. Each of the detected events was written to a catalogue with the set of properties for each. These properties were:

- Event start date
- Peak flow (ML/d)
- Duration of event (days)
- Volume of the event (ML)
- Rate of rise (days)
- Rate of fall (days)

In total over two thousand discrete flow events were detected by FreshFind with a significant number of flow events found at each site (Table 4). However, the number of detected events substantially decreases from upstream to downstream. As flow events travel downstream they can merge together (two peaks attenuate into the one peak) or the various tributaries which flow into the Barwon–Darling could deliver more events part way down the system. Both effects change the number of events detected depending on where in the system it is being measured.

The complete catalogue of flow events at each major gauge, including the properties of each event, can be found in Appendix C.

Table 4: Number of flow events detected using FreshFind for each of the key sites along the Barwon–Darling.

Site	Mungindi	Collarenebri	Walgett	Brewarrina	Bourke	Wilcannia	Total
Number of events	740	491	337	258	250	155	**2231**

Matching of Flow Events - Attenuation and Outliers

Flow events typically attenuate to some extent as they travel downstream (unless boosted by tributary inflow), whereby the peak of an event diminishes, and volume decreases because of evaporation and seepage. Once the catalogue was created the next part of the analysis aimed to determine what the typical attenuation of a flow event looked like for each of the reaches in the Barwon–Darling. This information was then used to identify any events that behaved

unexpectedly compared to the typical attenuation. Any unexpected differences indicates an impact to that event which could be explained by either natural processes such as higher than normal evaporation and seepage rates or indicate an anthropogenic impact through consumptive users extraction.

A further MDBA software package "FlowMatch", was used to match flow events from one gauge to the nearest downstream gauge. FlowMatch uses typical attenuation and travel time estimates to match an event at the upstream gauge with the same event at the downstream gauge. Matched flow events identified using FlowMatch were plotted and visually checked to see if the matches were logical.

In total 897 matched flow events <2,000 ML/d were identified using FlowMatch (Table 5), which is less than half the number of discrete events originally detected by FreshFind (for the reasons previously stated). A full list of the matched flow events can be found in Appendix D. Once events were paired, the relative change in the peak of the event was calculated.

Table 5: Number of matched flow events <2000 ML/d for each reach in the Barwon–Darling.

Reach	Mungindi to Collarenebri	Collarenebri to Walgett	Walgett to Brewarrina	Brewarrina to Bourke	Bourke to Wilcannia	Total
Num of matched flow events	336	223	138	127	73	**897**

Flow Event Analysis by Reach

Figure 4 to Figure 13 present graphically the changes in the peak observed for matched flow events between the upstream site and downstream site for each reach along the Barwon–Darling (black dots) from 1990 to 2017. The points shown in the figures relate only to events with a peak less than 2,000 ML/d. The position of the dot along the x-axis indicates when the flow event occurred between 1990 and 2017 and the y-axis indicates how much (in terms of a percentage) of the flow at the upstream gauge arrived at the downstream gauge. Typical hydrology would have a scatter driven by natural losses (which reduce the flow peak) and tributary inflows or local rainfall or groundwater gain (which increases the peak) which would be consistent between years and driven purely by the local climate. The annual flow volume as measured at both gauges for that reach is also plotted to indicate broad climatic conditions.

It was found that in most reaches the behaviour of the flow events followed a consistent pattern which can be attributed to local system losses and inflows, with no real changes in behaviour, or break in the pattern, seen from 1990-2017. However, in the Collarenebri to Walgett and Walgett to Brewarrina reaches, an apparent break is seen in hydrologic behaviour pre and post 2002, with a similar but weaker change also evident for the reaches downstream of Brewarrina, where extended dry periods are apparent in both the observed data as well as the lived experience of local stakeholders.

A total of thirteen flow events are very heavily attenuated in the Collarenebri to Walgett and Walgett to Brewarrina reaches, some reduced to zero before reaching Brewarrina, with no direct example observed pre 2002. These flow events are correlated in terms of time of the year and often occur in pairs, and only occur in these two reaches of the system, despite local climate conditions being experienced by all reaches of the river at those times. Although not impossible, it is difficult to attribute the behaviour of these individual flow events purely to the local climate. While climate does play a role in all hydrologic analysis, significant additional data is required to accurately disentangle the degree to which climate is driving the results—a work program beyond the scope of this report.

Mungindi to Collarenebri

The Mungindi to Collarenebri reach includes inflows from the Border Rivers effluent streams as well as the Gwydir and Moonie Rivers. These tributaries have a medium to high level of connectivity with the Barwon–Darling depending on local catchment condition. A map for the reach is presented in Figure 3 which highlights the local landscape as well as infrastructure present. Note that capacity information is not readily available for the majority of the various weirs marked. Where it is available, it has been provided.

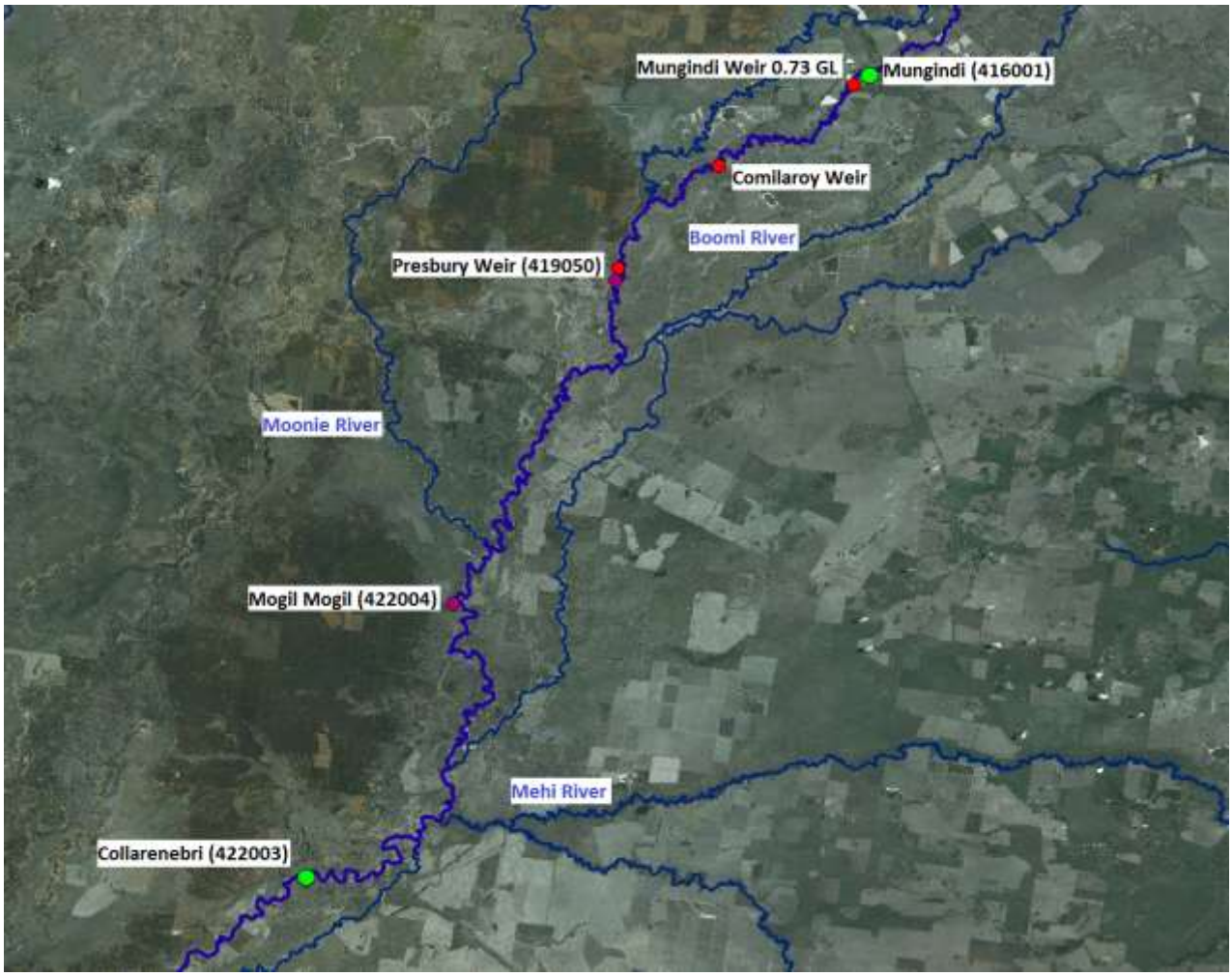


Figure 3: Map of the Mungindi to Collarenebri reach

A total of 336 individual flow events were matched for the Mungindi to Collarenebri reach which are plotted in Figure 4. The following can be concluded for this reach:

- There are many discrete flow events due to the short sharp nature of inflows from catchments at the top of the Barwon–Darling system.
- There is no evidence of an apparent change to the hydrological behaviour throughout the period of 1990 to 2017, based on the general pattern of flows being consistent across the period. There is a cluster of highly attenuated events in 2002 and 2005 but these are consistent with a similar pattern seen in the early-to-mid 1990's, indicating a link to local drought conditions.

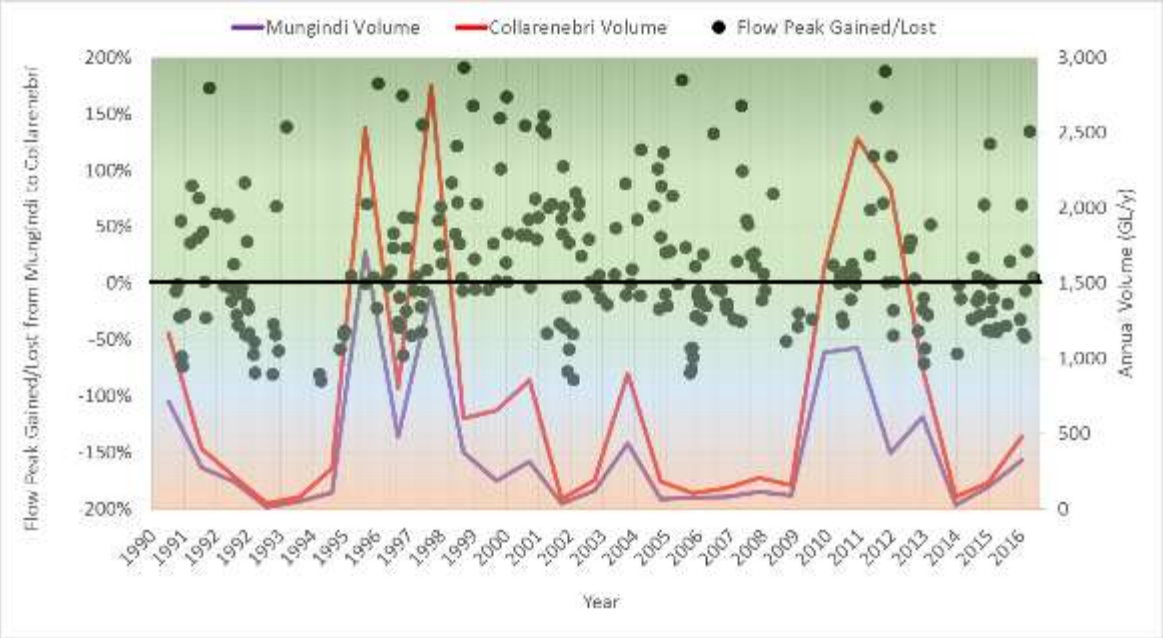


Figure 4: Relative change in flow event peak (events <2,000 ML/d) between Mungindi and Collarenebri and the annual flow volume at those gauges.

Collarenebri to Walgett

The Collarenebri to Walgett reach includes tributary inflows from the Namoi River which displays a relatively high level of connectivity to the Barwon–Darling, depending on local catchment conditions. A map of the reach is presented in Figure 5, which highlights the local landscape as well as infrastructure present.

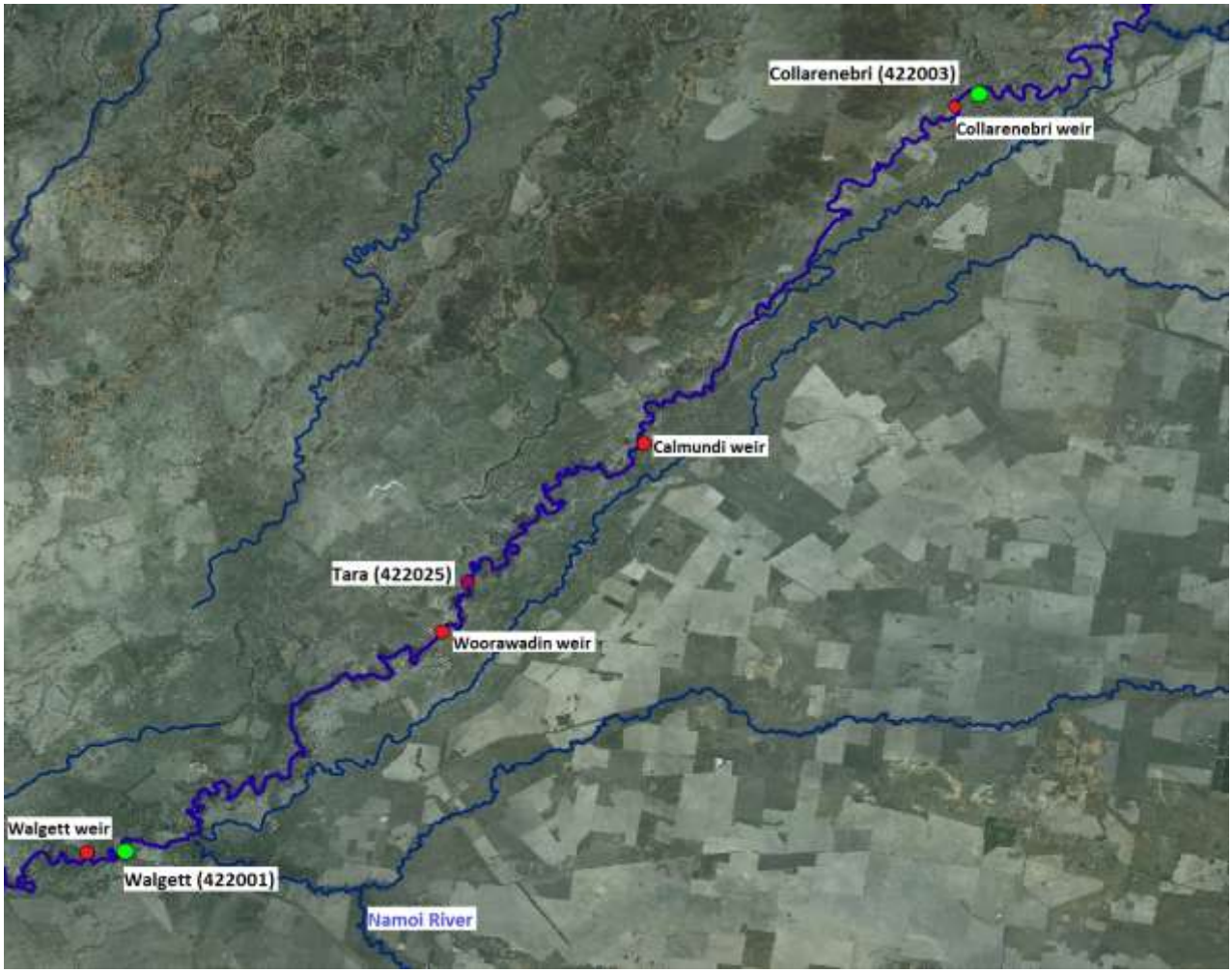


Figure 5: A map of the Collarenebri to Walgett reach

A total of 223 event matches were found from Collarenebri to Walgett which are plotted in Figure 6. This reach shows some indications of a change to hydrological behaviour particularly pre-and post-2002. The following can be concluded for this reach:

- The general behaviour of the flow events follows the expected trend resulting from system losses and tributary inflows, in that some flow events are boosted from tributary inflows and some undergo loss from local natural processes.
- However, there is evidence of an apparent step change in hydrological behaviour from 2002 onwards, with flow events beginning to be very heavily attenuated, for which there is no direct example pre-2002.
- From 1990 until 2001, the flow peak never decreased by more than 50%, indicating the degree to which natural losses are influencing flow events in this reach.
- Post 2002 however, there are six occurrences of "heavy" attenuation, i.e. the peak decreases by more than 75% between Collarenebri and Walgett, which is seen as a cluster of points close to the -100% level in Figure 6. These events occurred in 2003, 2007, 2009, 2012 and 2015. Consistent with this trend, a similar analysis of change in low flow *volume* (i.e. rather than flow) also exhibited similar patterns of heavy attenuation post-2002.
- The change in hydrological behaviour is highlighted by the dotted line, in that the pattern of flow attenuation to the left of the line is different, and systematically includes

more loss, to that seen to the right of the line, both during and after the Millennium drought.

- The heavily attenuated events have no analogous example in the mid-1990's dry period.
- Individual flow events preceding and following the impacted events often do not show the same loss behaviour, which is difficult to attribute wholly to climatic effects, Anthropogenic effects must also be a consideration in this reach, although further work is needed to determine what degree development versus climate is driving the results.

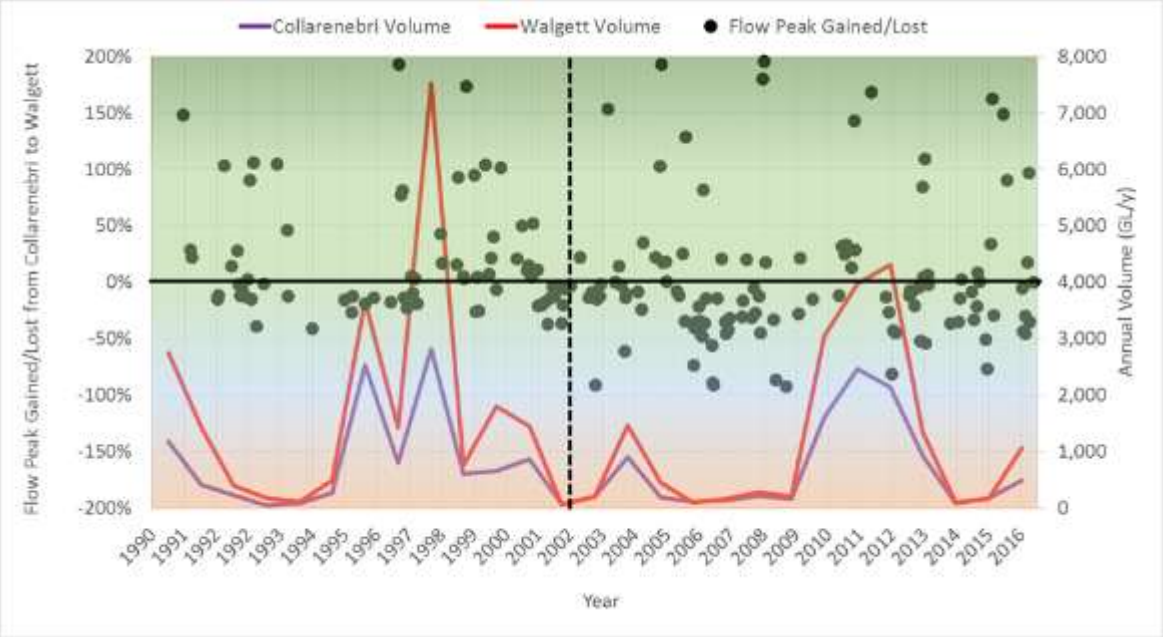


Figure 6: Relative change in flow event peak (events <2,000 ML/d) between Collarenebri and Walgett and the annual flow volume at those gauges.

Walgett to Brewarrina

The Walgett to Brewarrina reach includes tributary inflows from the Namoi (at Walgett), along with the Macquarie and Castlereagh Rivers, The Namoi is considered to have a high level of connectivity to the Barwon–Darling whereas the Macquarie-Castlereagh is considered to have a low to medium level of connectivity depending on local catchment conditions.

A map of the reach is presented in Figure 7 which highlights the local landscape as well as infrastructure present.

Figure 7: A map of the Walgett to Brewarrina reach

A total of 138 event matches were found from Walgett to Brewarrina which are plotted in Figure 8. This reach also shows evidence of a change to hydrological behaviour pre- and post-2002. The following can be concluded for this reach:

- As for the previous reach, there is evidence of an apparent step change in hydrological behaviour from 2002 onwards.
- Prior to this, the flow peak never decreased by more than 50%, which is likely to be attributable to natural system losses. However, post-2002, there are multiple occasions where the attenuation was significantly higher.
- The change in hydrological behaviour is highlighted by the dotted line, in that the pattern of flow attenuation to the left of the line is different to that seen to the right of the line, with systematically more loss to individual flow events, both during and after the Millennium drought.
- There are six occurrences of "heavy" attenuation, i.e. the peak decreases by more than 75% between Walgett and Brewarrina. These events occurred in 2002, 2003, 2006, 2007 and 2009. An analysis of event volume shows the same trend post 2002.
- In five of the six events, none of the flow which passed Walgett reached Brewarrina—they were effectively removed from the system.
- The heavily attenuated events generally occurred in pairs and occur late in the calendar year, during dry periods and have no analogous example in the mid-1990's dry period or if the analysis is extended to include the 1980s dry period (Figure 9).
- Often, individual flow events immediately preceding and following the impacted events (as seen in Appendix B) do not show the same loss behaviour, which is difficult to attribute wholly to climatic effects, and suggests in this reach an anthropogenic impact on the heavily attenuated flow events, although further work is needed to determine what degree development versus climate is driving the results.

- The flow events are seen in the hydrograph as measured at Geera (Figure 7), hence narrowing the point of impact as being between Geera and Brewarrina gauge, a length of approximately 50km, and upstream of the Brewarrina Weir.
- Hydrographs for these 100% attenuated flow events are presented in Appendix B.
- In addition to the 100% loss events, a large number of flow events are significantly attenuated and clustered in 2013 and 2014.

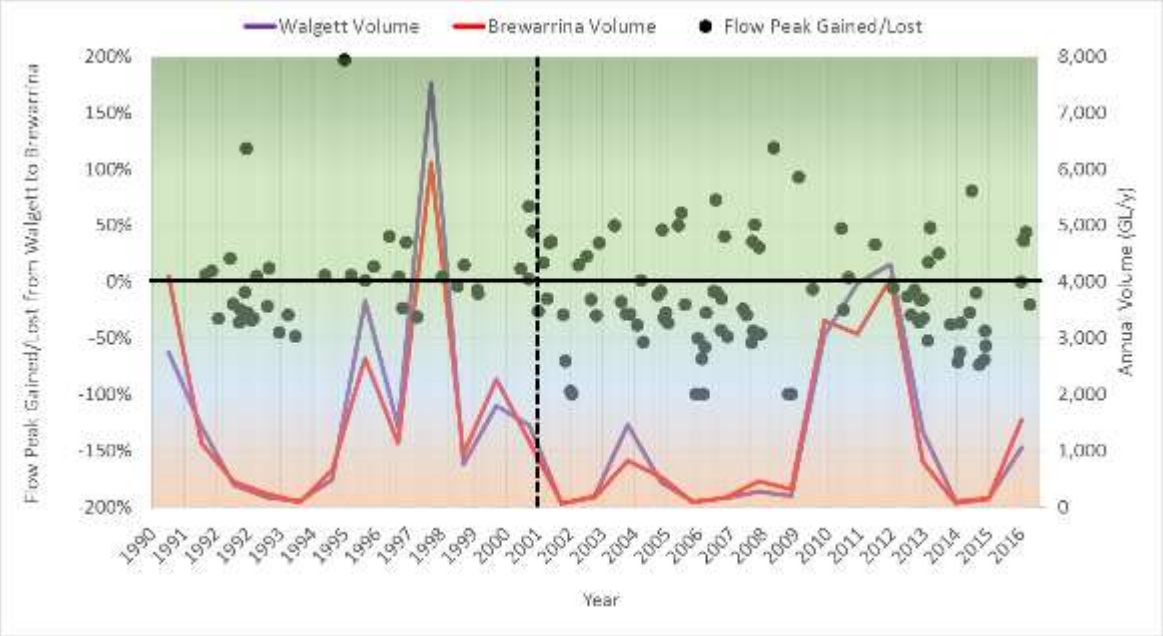


Figure 8: Relative change in flow event peak (events <2,000 ML/d) between Walgett and Brewarrina and the annual flow volume at those gauges.

Extension to 1980

The conclusions provided above also hold if the analysis is extended to include flow events in the 1980s. For 1980 – 1989, an additional 74 events at Walgett and 39 events at Brewarrina were found, which all could be matched to upstream flows (Appendix E). Figure 9 shows the extended flow behaviour for the Walgett to Brewarrina reach. It is evident that again:

- The flow peak does not decrease by more than 50% between 1980 – 1989 which mirrors the behaviour observed in the 1990 – 2001 period; and
- No further total attenuated events are recorded previous to 2002, further highlighting the unusual behaviour of these specific flows.

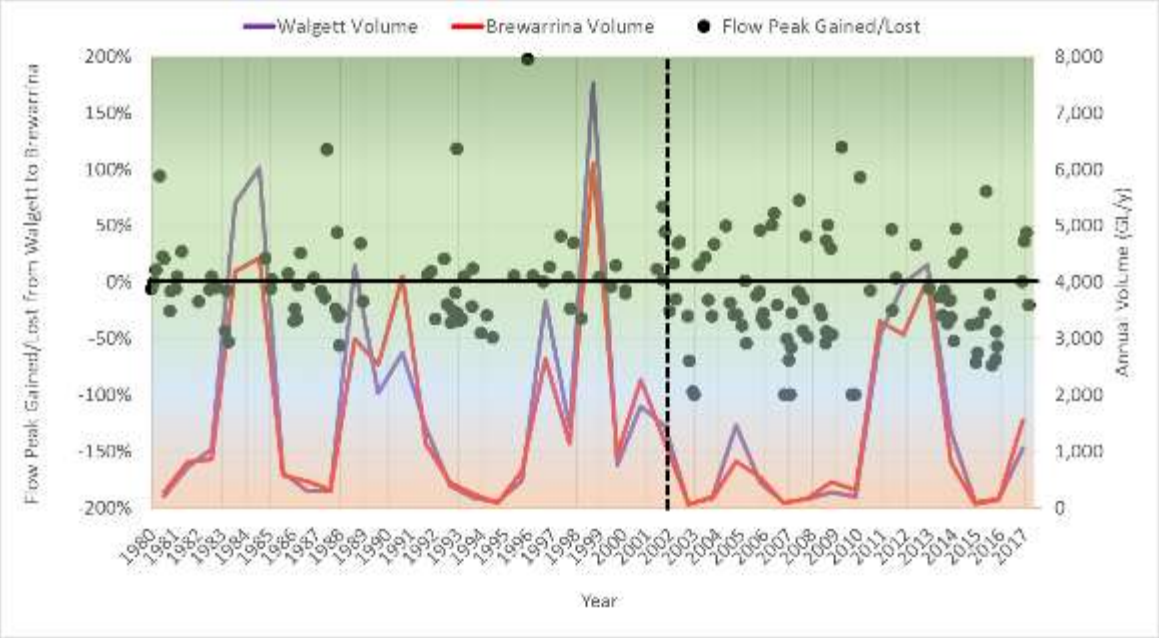


Figure 9: Relative change in flow event peak (events <2,000 ML/d) between Walgett and Brewarrina and the annual flow volume at those gauges extended back to 1980.

Brewarrina to Bourke

The Brewarrina to Bourke reach includes tributary inflows from the Culgoa, Bokhara and Bogan rivers which are considered to have a medium level of connectivity to the Barwon–Darling depending on local catchment conditions. A map of the reach is presented in Figure 10 which highlights the local landscape as well as infrastructure present.

Figure 10: A map of the Brewarrina to Bourke reach

A total of 127 event matches were found from Brewarrina to Bourke which are plotted in Figure 11. The following can be concluded for this reach:

- There is a slight trend for higher losses in flow event peak post 2002, but this trend is far weaker than was found for the Collarenebri-to-Walgett-to-Brewarrina reaches. The evidence for this (more subtle) change in low flow hydrology is an increase in the number of events where the peak flow is reduced by more than 50% post 2002 compared to the preceding period.
- This weaker change in hydrological behaviour is highlighted by the dotted line, in that the pattern of flow attenuation to the left of the line appears different to that seen to the right of the line.

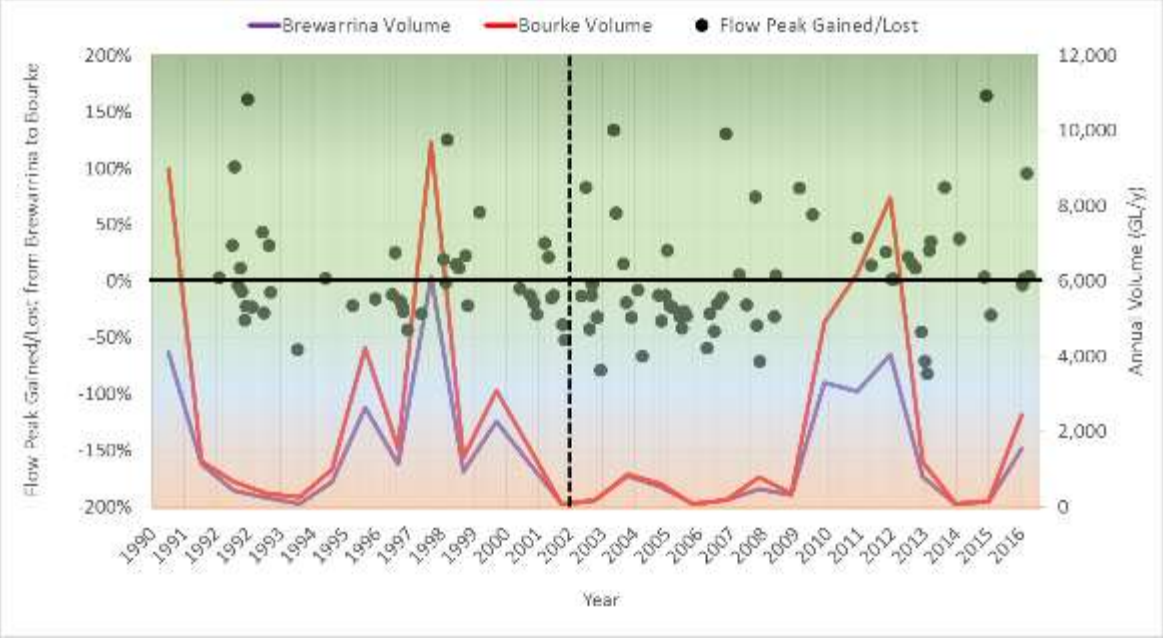


Figure 11: Relative change in flow event peak (events <2,000 ML/d) between Brewarrina and Bourke and the annual flow volume at those gauges.

Bourke to Wilcannia

The Bourke to Wilcannia reach includes tributary inflows from the Warrego and Paroo rivers, both of which are considered to have a low degree of connectivity with the Barwon–Darling depending on local catchment conditions, particularly the Paroo. Over the long-term, Bourke is the point of maximum flow for the system. A map of the reach is presented in Figure 12 which highlights the local landscape as well as infrastructure present.

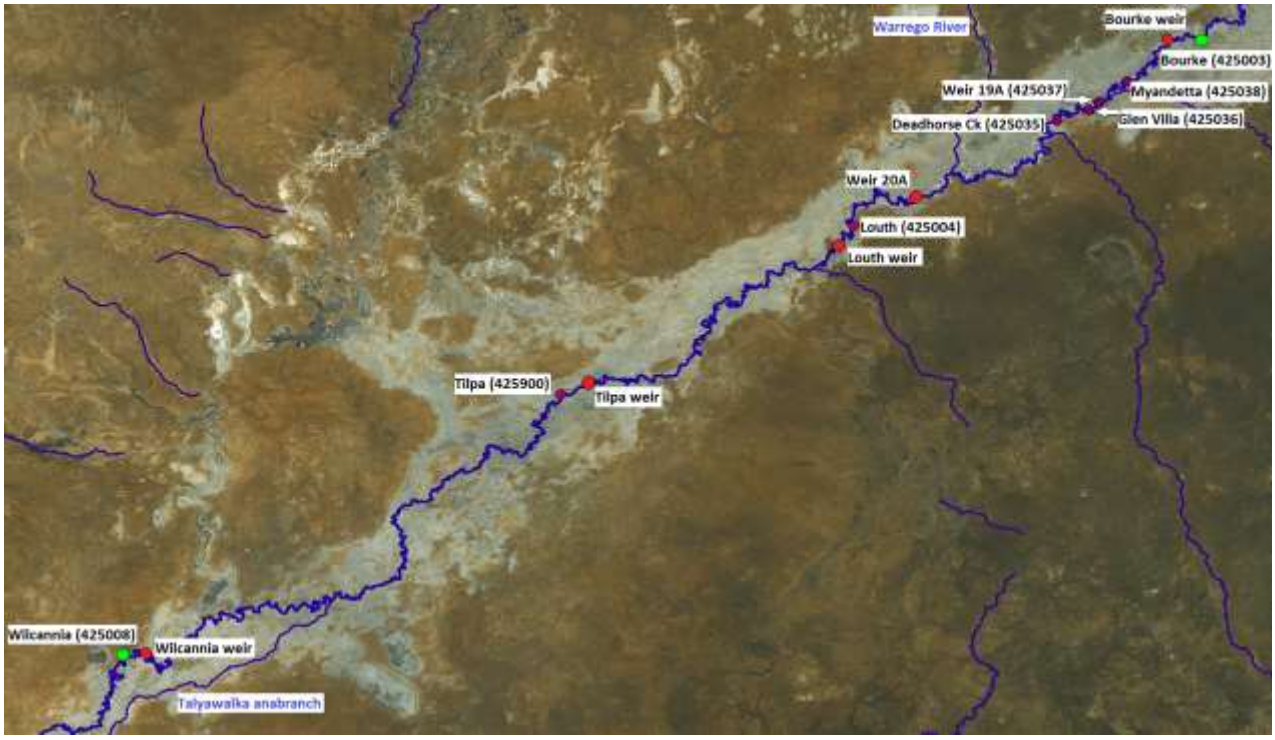


Figure 12: A map of the Bourke to Wilcannia reach

A total of 73 event matches were found from Bourke to Wilcannia which are plotted in Figure 13. The following can be concluded for this reach:

- In comparison to upstream reaches, there are significantly fewer flow events in this reach, attributed to flow attenuation processes as flow events travel downstream over large distances along the Barwon–Darling river system.
- Additionally, the heavy attenuation of low flows in upstream reaches post 2002 would reduce the number of flow events propagating to this reach.
- There is slight trend for higher losses in flow event peak post 2002 with an increase in the number of events where the peak flow is reduced by more than 50% post 2002 compared to the preceding period. This trend is far weaker than was found for the Collarenebri-to-Walgett-to-Brewarrina reaches.
- This weaker change in hydrological behaviour is highlighted by the dotted line, in that the pattern of flow attenuation to the left of the line appears different to that seen to the right of the line, albeit not significantly.
- There are very few flow events in this reach that are increased in peak since 1990, which would require boosting through ephemeral flow originating in the Warrego and Paroo rivers.

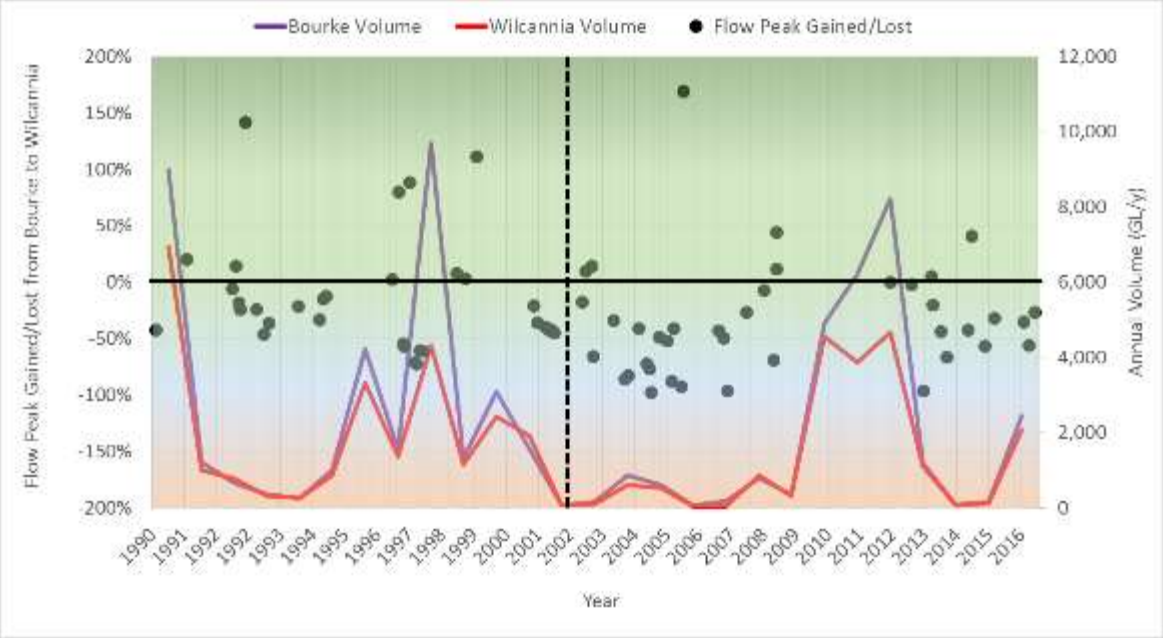


Figure 13: Relative change in flow event peak (events <2,000 ML/d) between Bourke and Wilcannia and the annual flow volume at those gauges.

Dry Spells - Periods of Low or No Flow

Periods of extreme low flow and cease to flow or dry spells naturally occur in the Barwon–Darling, due to the highly variable nature of the hydrology. However, when dry spells occur for extended periods of time it can have negative ecological, socio-economic and cultural impacts. In addition to the individual flow event analysis, the work included a component to analyse dry spells for the period between 1990 and 2017 for all gauges represented in Table 1. The aim was to determine whether any trends in either the length and/or frequency of dry spell events occur spatially or temporally, which can also indicate a change to hydrological behaviour has occurred in the system. This change could be due to water resource development not only in the Barwon–Darling, but also other Northern Basin catchments.

For this analysis the length of each dry spell was defined by any period where the flow was continually less than 20 ML/d, selected as a flow considered sufficiently large to ensure connectivity had recommenced, and was determined for each of the fifteen gauges along the Barwon–Darling. The results were then used to calculate both the number of dry spells and the average dry spell length at each of the gauges.

Figure 14 shows that dry spell behaviour varies from the upstream (green) to downstream (orange through red) gauges, with more numerous but much shorter dry spells present at upstream gauges compared to downstream gauges. As this includes dry spells of any length, this would be largely driven by local climate, with contribution from local natural attenuation processes and in-channel infrastructure, as seen in Figure 3 to Figure 12 presented above. For the downstream gauges dry spells are very long indeed, with a spell of at least 80 days having occurred every year since 2013 at Wilcannia.

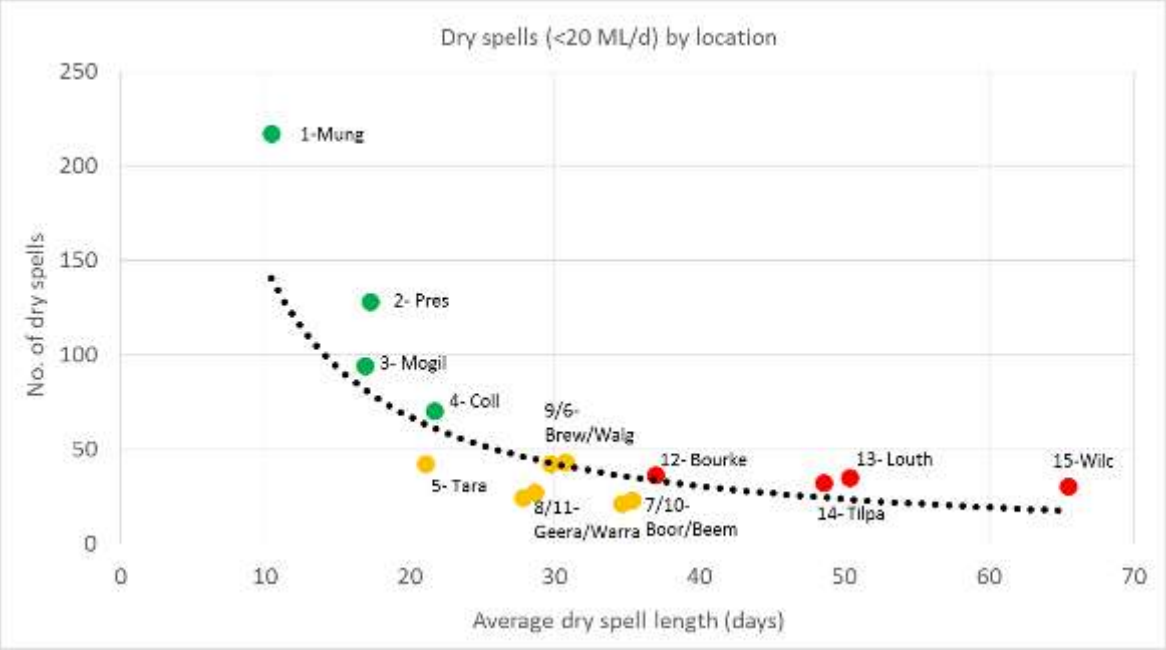


Figure 14: Number and average length of all dry spells for each of the 15 gauges in the Barwon–Darling (green points represent sites along the upper Barwon, yellow along the lower Barwon, and red along the Darling). The dotted line shows the upstream to downstream trend (also presented in MDBA2017a).

Refining the dry spell analysis to focus on events with a duration of 30 days or longer reveals upstream-to-downstream behaviour of lengthy dry periods. Generally, the highest number of dry spells exceeding 30 days duration and the highest average dry spell length occur in the downstream reaches of the Barwon–Darling River (red), downstream of Bourke (Figure 15).

In contrast, the number and average length of dry spells exceeding 30 days is lowest in the mid sections of the Barwon–Darling between Collarenebri and Warraweena (orange). The increase in the length and number of dry spells measured at upstream gauges (green) compared to the reach downstream can be explained by tributary inflows in the mid sections of the Barwon–Darling breaking dry spell events. There is a significant increase in dry spell length from Geera to Brewarrina despite only representing approximately 50 km of river length, consistent with the location of several 100% attenuated flow events presented in Figure 8 and Figure 9.

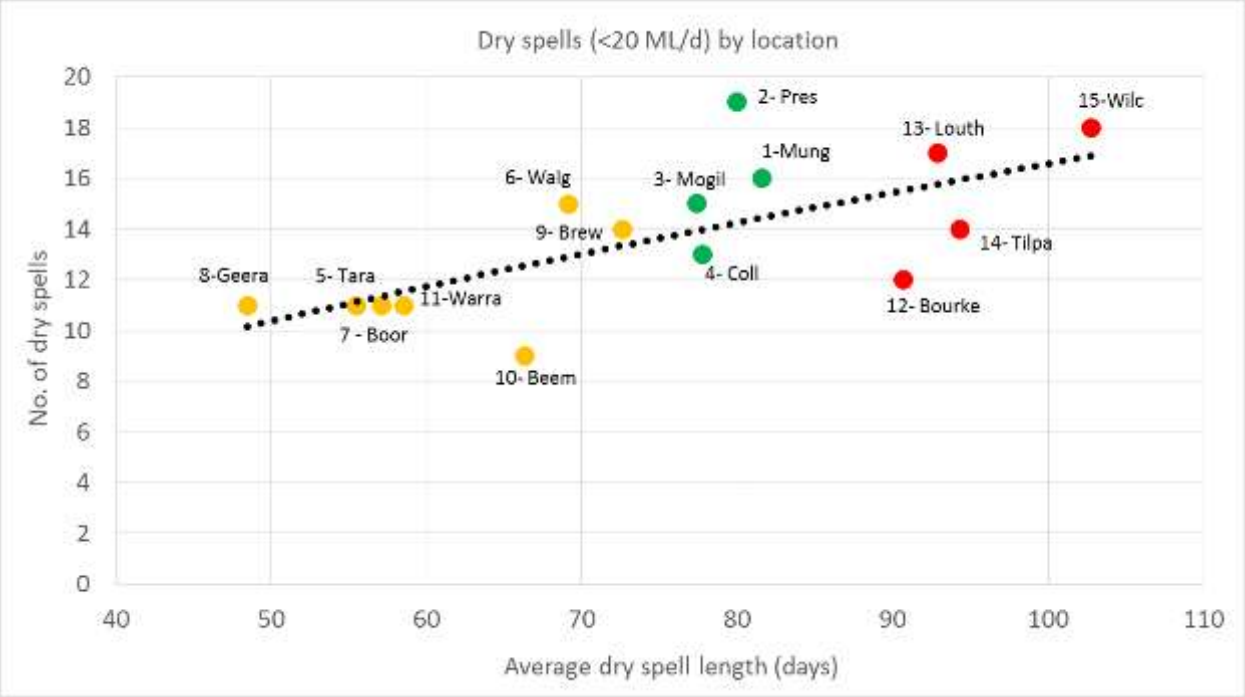


Figure 15: Number and average length of dry spell events exceeding 30 days for each of the 15 gauges in the Barwon–Darling (green points represent sites along the upper Barwon, yellow along the lower Barwon, and red along the Darling). Note the significant increase in length from Geera to Brewarrina.

As well as studying historic dry spells spatially along the river, their temporal behaviour was also examined, by analysing the average length of dry spell for key time periods since 1990. Figure 16 presents the results for comparing 1990–2000 and 2000–2017 dry spells, whereas Figure 17 shows this further split into 1990–1999, 2000–2010 and 2011–2017. This is in order to gauge how much local whether climate is a key driver for observed dry spells.

The results show that dry spells downstream of Bourke lasted considerably longer post 2000 than they did pre 2000 (Figure 16), with no corresponding major change evident at other gauges for these same two time periods. Similarly, the average dry spell length as measured at Brewarrina almost doubled post 2000 relative to the preceding period, which would have significant socio-economic and environmental consequences in the lower reaches of the river.

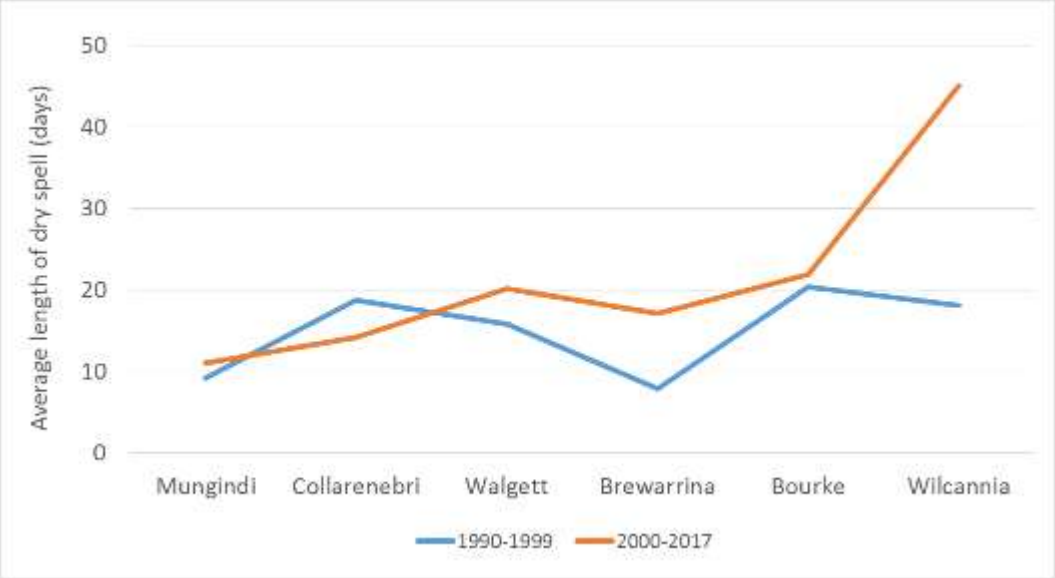


Figure 16: Change in average length of dry spells for key gauges between two time periods (1990-2000 and 2000 to 2017).

When the time periods studied are further broken up it can be seen in Figure 17 that dry spells downstream of Bourke are significantly higher for the period covering the Millennium drought, suggesting that local climate (i.e. drought) is playing a significant role in determining dry spells in the lower reaches of the river, as would be expected.

However, for Walgett and Brewarrina particularly the average dry spell length post the Millennium drought is similar to that seen during the drought, whereas pre-drought they were significantly shorter in length.

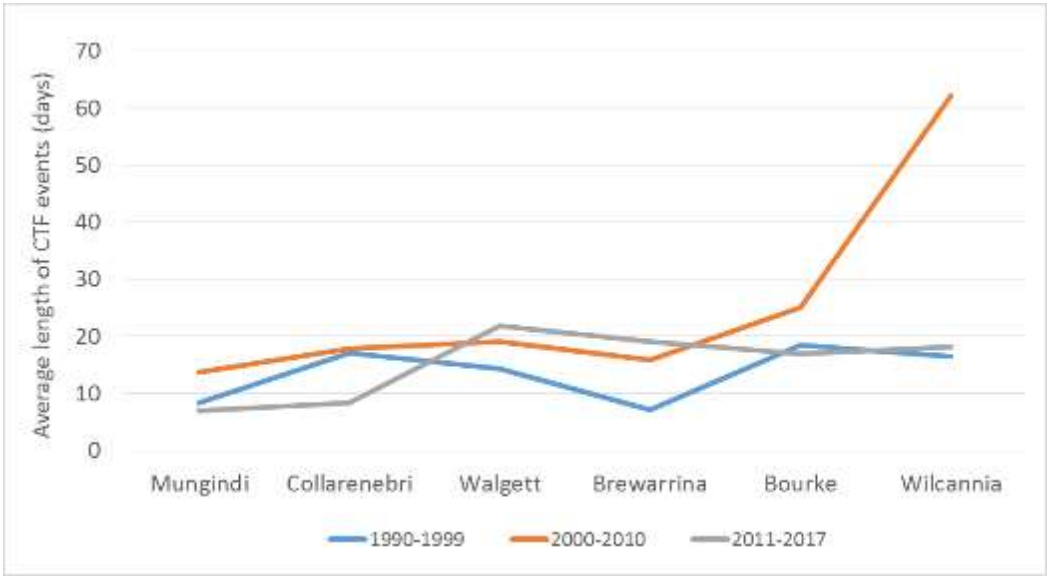


Figure 17: Change in average length of dry spells for key gauges between three time periods (1990-1999, 2000-2010 and 2011 to 2017).

Local climate plays a significant role in determining dry spell length in any hydrological system, as seen in Figure 17, however both the individual flow event analysis (Figure 6, Figure 8 and Figure 9) and dry spell analysis (Figure 17) presented in this report both show evidence of

hydrological impact in the central regions of the Barwon–Darling, particularly between Walgett and Brewarrina which is difficult to reconcile with impacts purely caused by climate.

Sheldon (2017) analysed dry spells using the same data as in this report and compared the results with information from the Southern Oscillation Index (SOI), which is known to have a strong correlation with Barwon–Darling flows. A divergence in the correlation was observed from 2001 -2017 when compared to historical trends which is attributed in that report to increased extractions in the system.

Additional work in addition to that of Sheldon 2017 is required to help tease apart how much of a role climate is playing on the results, on both local and more broad scales. Currently the evidence is compelling that climate is not the only factor at work and that water resource development must also play a critical role.

Conclusions

This report has presented the results of a detailed investigation into the historical behaviour of observed low and small fresh (<2,000 ML/d) flow events in the Barwon–Darling river system from 1990-2017 using publicly available data. The analysis sought to assess changes in behaviour of individual flow events and periods of no or low flow as measured along the river since 1990.

Analysis such as that presented here can provide a very useful tool in terms of compliance and enforcement activities into the future by providing a relatively rapid assessment of flows as measured in near-real-time on the river, allowing regulators information to rapidly assess risk and any need for subsequent further investigation. However, it is important to understand that analysis of this kind does not, in its own right, provide any direct evidence of extraction by individual water users.

The work produced a comprehensive catalogue of individual flow events, more than 2000 in all, which had their individual properties mapped. The results presented here suggest a change to the hydrologic behaviour of the Barwon–Darling has occurred since the turn of the Millennium, particularly in the mid-sections of the system. A number of individual flow events from the post-2002 period were identified to have exhibited unusual gauge-to-gauge behaviour with large amounts of loss and, in some cases, flow events have been removed from the system entirely.

Most of the heavily attenuated flow events share common attributes in that they occurred only between Collarenebri and Walgett or Walgett/Geera and Brewarrina (a 50km reach from Geera to Brewarrina), often occurred in pairs, only occurred since 2002, and often around the end of the calendar year. While further work is needed to pinpoint the exact cause, the common characteristics of these flow events suggests an element of anthropogenic impact most likely through water resource development.

In addition to the event-by-event analysis, this work included an analysis of dry spells, calculating the number and average length of periods of no-to-low-flow since 1990 both spatially and temporally. The results have shown that downstream of Bourke dry spells since the year 2000 were significantly longer than pre 2000, which includes a signal originating from local climate, particularly the Millennium Drought. When studying the drought period separately it was found that dry spells in the Walgett to Brewarrina reach are similar since the Millennium Drought (2011-2017) as they were during it (2000-2010), which is difficult to reconcile to climate alone. Sheldon

2017 has also shown a break in the correlation between Barwon–Darling flow and the Southern Oscillation Index, since 2001.

This analysis is part of ongoing work to understand and characterise the hydrology of the Barwon–Darling river system and ultimately use science and the best available information, including the lived experience of local stakeholders, to help frame options for protecting low and small fresh outcomes, in line with the conclusions of the Northern Basin Review and both the MDBA and NSW compliance reviews.

References

Matthews (2017), Independent investigation into NSW water management and compliance – Final Report, Advice on implementation, NSW Department of Industry.

MDBA (2011), The proposed 'environmentally sustainable Level of take' for surface water of the Murray-Darling Basin: methods and outcomes, Murray-Darling Basin Authority, Canberra.

MDBA (2016a) The Northern Basin Review: Understanding the economic, social and environmental outcomes from water recovery in the northern Basin, MDBA publication no: 39/16

MDBA (2016b), Hydrological Modelling for the Northern Basin Review, Murray-Darling Basin Authority, Canberra.

MDBA (2016c), Northern Basin Review – Community consultation report, Murray-Darling Basin Authority, Canberra.

MDBA (2018), Ecological needs of low flows in the Barwon–Darling, Murray-Darling Basin Authority, Canberra.

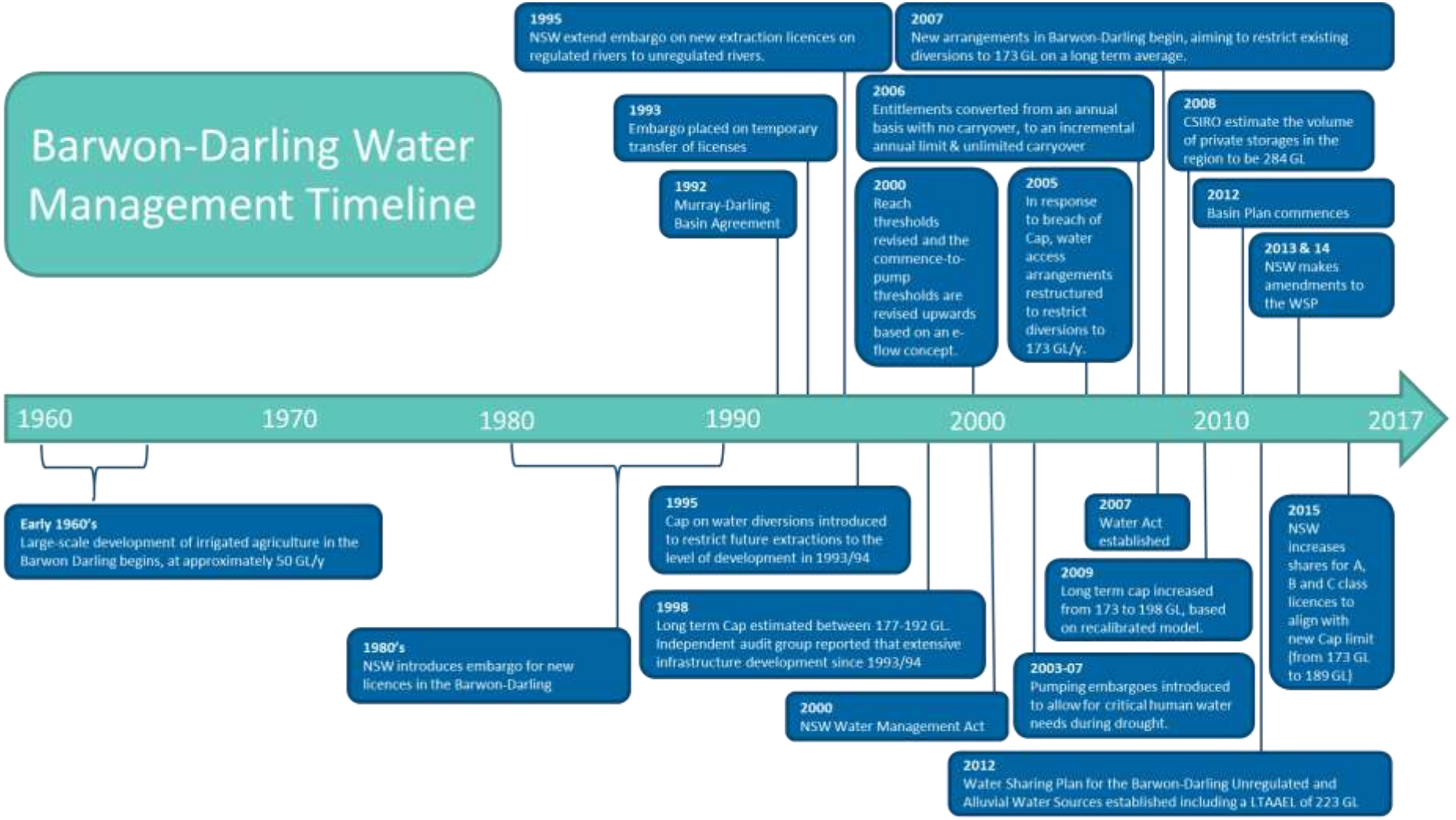
MDBA (2017), The Murray-Darling Basin Water Compliance Review, Containing reports by the Murray-Darling Basin Authority and Independent Review Panel, Murray-Darling Basin Authority, Canberra.

NSW DPI (2015), Fish and flows in the Northern Basin - responses of fish to changes in flow in the Northern Murray-Darling Basin, reach scale report, New South Wales Department of Primary Industries - Fisheries, prepared for the MDBA.

Sheldon (2017), Changes in the 'low-flow hydrology' of the Barwon–Darling River, Australian Rivers Institute, Griffith University, Advice to the Commonwealth Environmental Water Holder Office.

Thoms, M., Sheldon, F., Roberts, J., Harris, J. and Hillman, T. (1996), Scientific panel assessment of environmental flows for the Barwon–Darling river system, a report to the technical services division of the NSW Department of Land and Water Conservation.

Appendix A – Timeline of Major Barwon–Darling Water Management Development



Appendix B – Hydrographs of Anomalous Flow Events – six 100% loss events in the Walgett to Brewarrina Reach

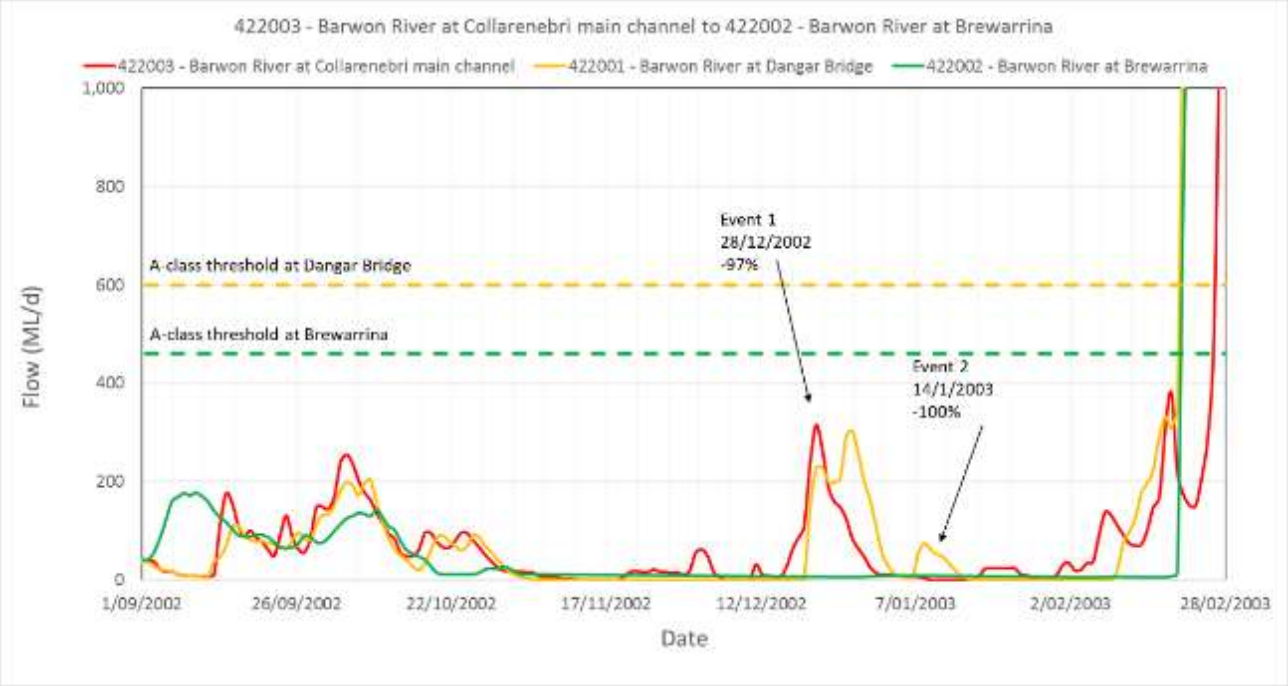


Figure 18: Events 1, 2 and associated flows in the river stretch between Walgett and Brewarrina.

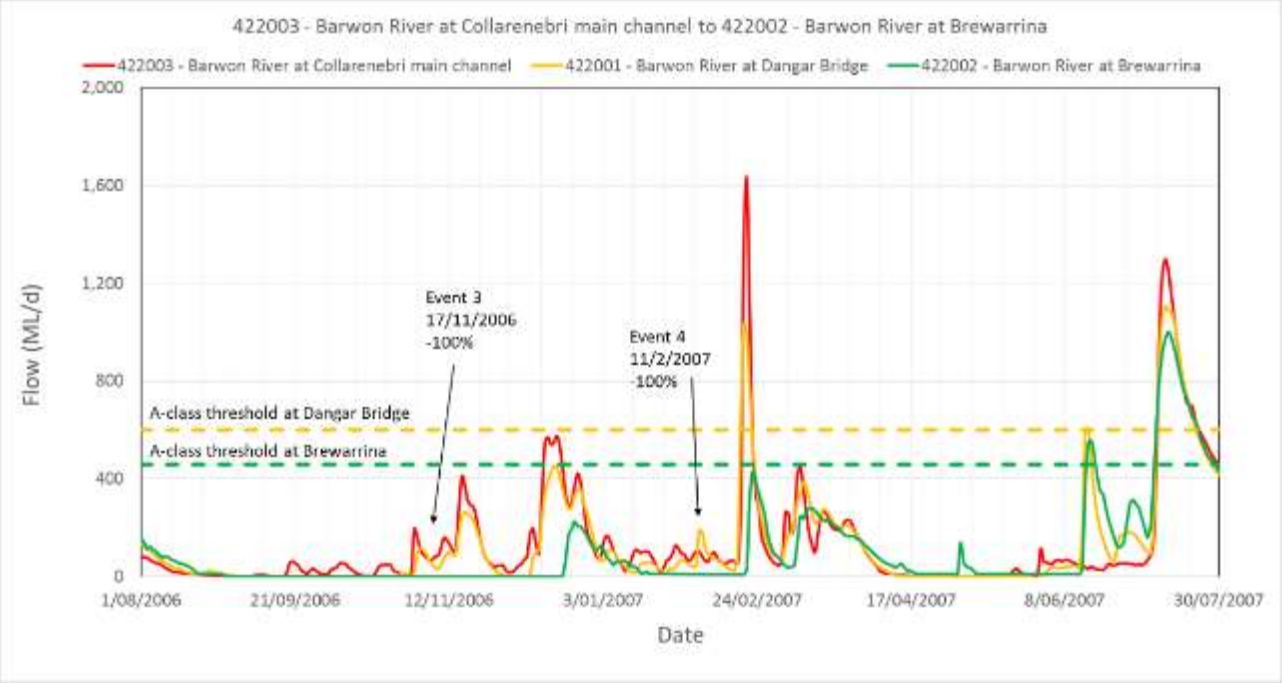


Figure 19: Events 3, 4 and associated flows, in the river stretch between Walgett and Brewarrina.

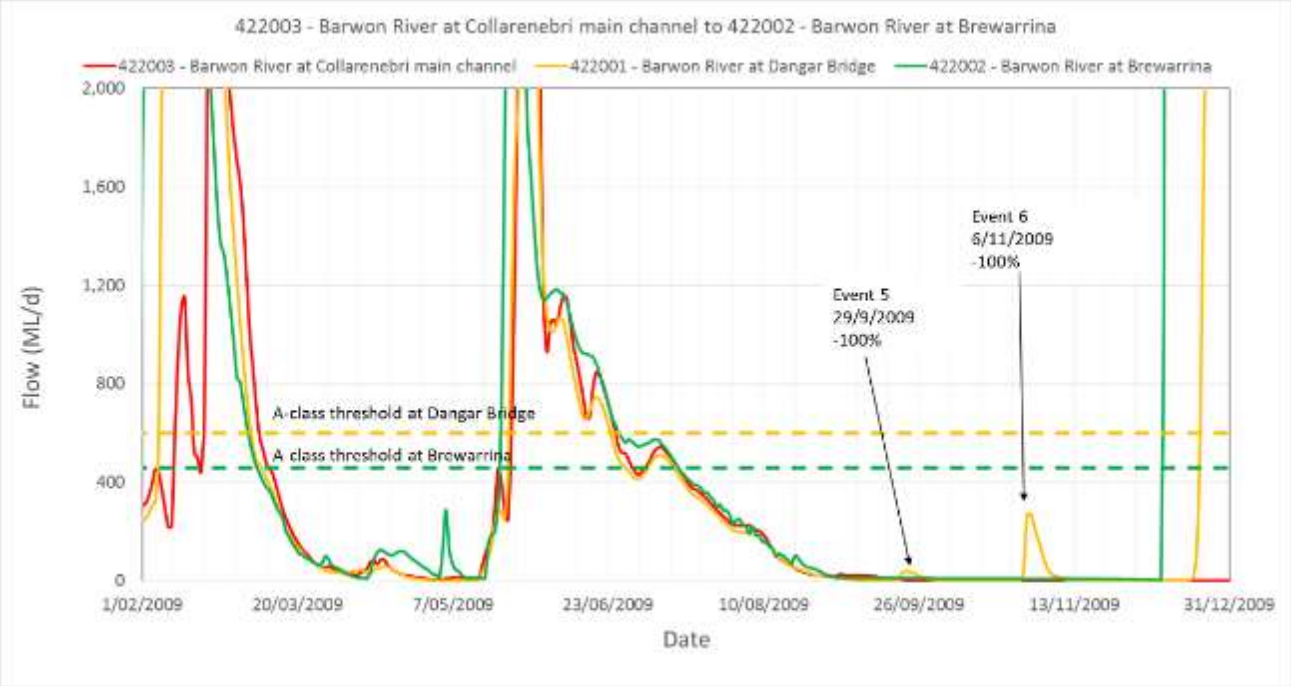


Figure 20: Events 5, 6 and associated flows in the river stretch between Walgett and Brewarrina. Event 5 is small yet highlights the ability of FreshFind and FlowMatch in flow detection capability.

Appendix C - Catalogue of Gauged Flow Events 1990 - 2017

Table 6: Catalogue of flow events including the start date, peak flow, event duration, event volume and rate of rise and fall of the event for Mungindi, Collarenebri, Walgett, Brewarrina, Bourke and Wilcannia gauges.

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	1/01/1990	639	10	6789	6	4
Mungindi	12/01/1990	50	2	82	2	0
Mungindi	15/01/1990	3473	26	31859	12	14
Mungindi	9/02/1990	4435	42	73484	16	26
Mungindi	22/03/1990	8872	67	163320	49	18
Mungindi	27/05/1990	8128	30	154303	17	13
Mungindi	25/06/1990	4973	36	112059	22	14
Mungindi	30/07/1990	6018	41	134991	17	24
Mungindi	8/09/1990	3282	16	25660	5	11
Mungindi	23/09/1990	1278	15	8203	5	10
Mungindi	7/10/1990	377	25	4819	13	12
Mungindi	31/10/1990	54	5	184	4	1
Mungindi	4/11/1990	80	6	278	4	2
Mungindi	9/11/1990	58	4	135	3	1
Mungindi	12/11/1990	46	3	94	2	1
Mungindi	19/11/1990	30	3	72	2	1
Mungindi	21/11/1990	55	6	204	4	2
Mungindi	2/12/1990	204	5	476	2	3
Mungindi	6/12/1990	297	7	916	5	2
Mungindi	17/12/1990	121	2	177	1	1
Mungindi	2/01/1991	150	5	371	2	3
Mungindi	6/01/1991	66	3	140	2	1
Mungindi	8/01/1991	221	5	547	3	2
Mungindi	12/01/1991	384	5	1149	4	1
Mungindi	16/01/1991	378	6	1718	2	4

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	21/01/1991	9572	49	223615	37	12
Mungindi	10/03/1991	359	7	1058	3	4
Mungindi	16/03/1991	269	15	3045	13	2
Mungindi	30/03/1991	276	16	3208	6	10
Mungindi	14/04/1991	226	39	5395	7	32
Mungindi	22/05/1991	126	8	806	4	4
Mungindi	29/05/1991	93	6	397	4	2
Mungindi	3/06/1991	172	10	1086	4	6
Mungindi	12/06/1991	144	13	1298	5	8
Mungindi	24/06/1991	130	7	666	3	4
Mungindi	30/06/1991	77	4	246	3	1
Mungindi	3/07/1991	147	11	990	8	3
Mungindi	13/07/1991	80	6	297	3	3
Mungindi	18/07/1991	91	9	430	4	5
Mungindi	26/07/1991	116	6	409	3	3
Mungindi	31/07/1991	118	11	784	5	6
Mungindi	10/08/1991	137	9	527	6	3
Mungindi	18/08/1991	78	11	536	5	6
Mungindi	28/08/1991	81	5	250	3	2
Mungindi	4/09/1991	108	10	738	4	6
Mungindi	13/09/1991	18	3	28	2	1
Mungindi	18/09/1991	44	9	212	3	6
Mungindi	29/09/1991	23	6	68	5	1
Mungindi	11/10/1991	27	5	81	3	2
Mungindi	31/10/1991	88	3	137	2	1
Mungindi	2/11/1991	136	4	219	2	2
Mungindi	5/11/1991	103	4	208	3	1

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	11/11/1991	78	4	149	2	2
Mungindi	14/11/1991	57	4	97	3	1
Mungindi	22/11/1991	123	7	325	5	2
Mungindi	10/12/1991	516	8	1353	5	3
Mungindi	17/12/1991	4077	12	24264	6	6
Mungindi	1/01/1992	302	3	346	2	1
Mungindi	6/01/1992	2710	11	12811	8	3
Mungindi	16/01/1992	2485	10	11493	6	4
Mungindi	25/01/1992	133	7	559	3	4
Mungindi	31/01/1992	197	7	985	4	3
Mungindi	6/02/1992	3189	11	17259	6	5
Mungindi	16/02/1992	6132	35	82111	12	23
Mungindi	21/03/1992	278	28	4620	7	21
Mungindi	17/04/1992	78	10	636	7	3
Mungindi	26/04/1992	98	11	736	4	7
Mungindi	6/05/1992	71	20	1037	4	16
Mungindi	25/05/1992	338	21	3397	15	6
Mungindi	14/06/1992	324	14	2223	4	10
Mungindi	27/06/1992	87	7	471	3	4
Mungindi	3/07/1992	85	7	488	3	4
Mungindi	9/07/1992	146	26	2163	11	15
Mungindi	3/08/1992	187	16	1786	8	8
Mungindi	18/08/1992	688	8	2335	4	4
Mungindi	25/08/1992	80	4	249	2	2
Mungindi	28/08/1992	202	7	839	5	2
Mungindi	3/09/1992	102	5	309	3	2
Mungindi	7/09/1992	1260	20	12768	7	13

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	26/09/1992	872	13	5918	3	10
Mungindi	8/10/1992	284	25	2959	8	17
Mungindi	1/11/1992	42	10	288	2	8
Mungindi	10/11/1992	56	12	394	7	5
Mungindi	21/11/1992	17	5	42	3	2
Mungindi	25/11/1992	433	6	1083	4	2
Mungindi	3/12/1992	514	10	3232	7	3
Mungindi	12/12/1992	1535	14	9402	9	5
Mungindi	25/12/1992	204	6	634	4	2
Mungindi	3/01/1993	113	5	261	2	3
Mungindi	7/01/1993	117	4	274	3	1
Mungindi	10/01/1993	82	4	237	3	1
Mungindi	13/01/1993	86	5	216	3	2
Mungindi	17/01/1993	12	3	18	2	1
Mungindi	19/01/1993	47	4	77	3	1
Mungindi	24/01/1993	20	1	20	1	0
Mungindi	28/01/1993	65	5	162	3	2
Mungindi	1/02/1993	30	3	39	2	1
Mungindi	5/02/1993	1	1	1	1	0
Mungindi	10/02/1993	3	1	3	1	0
Mungindi	12/02/1993	5	3	7	1	2
Mungindi	14/02/1993	21	5	34	4	1
Mungindi	20/02/1993	338	5	771	3	2
Mungindi	24/02/1993	268	7	724	4	3
Mungindi	2/03/1993	25	4	66	2	2
Mungindi	5/03/1993	29	4	56	3	1
Mungindi	8/03/1993	109	17	1090	7	10

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	24/03/1993	55	12	545	8	4
Mungindi	4/04/1993	51	19	527	4	15
Mungindi	22/04/1993	20	20	227	7	13
Mungindi	11/05/1993	14	13	81	4	9
Mungindi	23/05/1993	6	10	51	5	5
Mungindi	1/06/1993	82	7	184	3	4
Mungindi	7/06/1993	28	11	147	5	6
Mungindi	17/06/1993	18	22	276	7	15
Mungindi	8/07/1993	85	10	377	3	7
Mungindi	17/07/1993	25	16	296	6	10
Mungindi	1/08/1993	10	15	63	3	12
Mungindi	13/09/1993	17	11	62	3	8
Mungindi	29/09/1993	9	2	13	2	0
Mungindi	4/10/1993	24	7	74	3	4
Mungindi	10/10/1993	10	17	62	7	10
Mungindi	3/11/1993	19	1	19	1	0
Mungindi	5/11/1993	10	7	31	4	3
Mungindi	11/11/1993	5	4	12	3	1
Mungindi	14/11/1993	109	6	166	3	3
Mungindi	19/11/1993	6	5	21	3	2
Mungindi	3/12/1993	47	5	76	4	1
Mungindi	7/12/1993	29	4	51	2	2
Mungindi	16/12/1993	32	2	38	1	1
Mungindi	17/12/1993	135	7	492	3	4
Mungindi	23/12/1993	25	3	44	2	1
Mungindi	25/12/1993	40	4	63	3	1
Mungindi	30/12/1993	80	4	117	3	1

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	21/01/1994	20	1	20	1	0
Mungindi	24/01/1994	2	1	2	1	0
Mungindi	6/02/1994	101	6	376	2	4
Mungindi	11/02/1994	72	6	245	3	3
Mungindi	16/02/1994	4930	16	40843	7	9
Mungindi	3/03/1994	185	3	359	2	1
Mungindi	5/03/1994	187	4	372	2	2
Mungindi	8/03/1994	154	4	264	3	1
Mungindi	11/03/1994	989	9	4233	5	4
Mungindi	19/03/1994	588	7	2367	3	4
Mungindi	27/03/1994	4	1	4	1	0
Mungindi	29/03/1994	112	8	543	4	4
Mungindi	5/04/1994	76	17	445	3	14
Mungindi	21/04/1994	19	27	180	14	13
Mungindi	18/07/1994	6	13	41	3	10
Mungindi	15/01/1995	376	4	1167	2	2
Mungindi	18/01/1995	558	8	2744	7	1
Mungindi	27/01/1995	2228	16	13607	6	10
Mungindi	11/02/1995	260	10	1268	3	7
Mungindi	20/02/1995	36	5	135	3	2
Mungindi	24/02/1995	81	4	195	2	2
Mungindi	27/02/1995	109	4	238	4	0
Mungindi	4/03/1995	103	5	239	1	4
Mungindi	8/03/1995	87	7	344	5	2
Mungindi	16/03/1995	119	7	516	3	4
Mungindi	22/03/1995	94	7	454	3	4
Mungindi	28/03/1995	73	22	680	4	18

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	20/10/1995	302	4	538	2	2
Mungindi	23/10/1995	293	8	994	6	2
Mungindi	30/10/1995	336	16	2789	5	11
Mungindi	14/11/1995	2102	10	6902	7	3
Mungindi	23/11/1995	6534	22	72968	6	16
Mungindi	14/12/1995	15	3	33	2	1
Mungindi	16/12/1995	381	6	776	3	3
Mungindi	21/12/1995	424	5	947	3	2
Mungindi	25/12/1995	312	9	1324	2	7
Mungindi	2/01/1996	51745	30	588203	22	8
Mungindi	31/01/1996	51309	30	579669	4	26
Mungindi	29/02/1996	834	8	3374	5	3
Mungindi	7/03/1996	2179	22	17078	5	17
Mungindi	28/03/1996	217	10	1664	5	5
Mungindi	6/04/1996	272	19	2867	10	9
Mungindi	24/04/1996	168	8	964	4	4
Mungindi	1/05/1996	22578	97	358028	20	77
Mungindi	5/08/1996	1674	24	18825	7	17
Mungindi	28/08/1996	478	9	3048	4	5
Mungindi	5/09/1996	3707	22	29430	9	13
Mungindi	26/09/1996	2512	11	15664	7	4
Mungindi	6/10/1996	6144	43	115085	17	26
Mungindi	17/11/1996	903	21	8622	4	17
Mungindi	7/12/1996	258	7	1159	4	3
Mungindi	13/12/1996	422	6	1574	3	3
Mungindi	18/12/1996	355	8	1622	3	5
Mungindi	25/12/1996	1194	14	5428	5	9

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	7/01/1997	58	4	117	2	2
Mungindi	10/01/1997	25	5	90	3	2
Mungindi	17/01/1997	76	7	281	5	2
Mungindi	23/01/1997	40	5	106	2	3
Mungindi	27/01/1997	151	5	389	4	1
Mungindi	31/01/1997	10097	20	131600	10	10
Mungindi	19/02/1997	17622	40	296276	14	26
Mungindi	30/03/1997	666	28	9105	4	24
Mungindi	26/04/1997	243	13	2044	8	5
Mungindi	8/05/1997	704	23	5918	21	2
Mungindi	30/05/1997	593	12	3896	3	9
Mungindi	10/06/1997	220	8	1303	5	3
Mungindi	17/06/1997	264	12	1933	5	7
Mungindi	28/06/1997	181	18	2734	8	10
Mungindi	15/07/1997	203	34	3911	6	28
Mungindi	17/08/1997	144	13	843	9	4
Mungindi	29/08/1997	159	7	510	4	3
Mungindi	8/09/1997	244	6	732	2	4
Mungindi	13/09/1997	72	5	202	3	2
Mungindi	19/09/1997	23	2	25	2	0
Mungindi	23/09/1997	7	2	9	1	1
Mungindi	26/09/1997	26	2	34	1	1
Mungindi	30/09/1997	5	2	10	2	0
Mungindi	8/10/1997	81	3	181	2	1
Mungindi	10/10/1997	123	5	324	3	2
Mungindi	14/10/1997	883	15	6645	4	11
Mungindi	28/10/1997	241	6	948	4	2

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	2/11/1997	165	4	472	2	2
Mungindi	5/11/1997	187	10	1424	7	3
Mungindi	14/11/1997	375	8	2025	6	2
Mungindi	21/11/1997	904	12	5614	4	8
Mungindi	2/12/1997	161	5	453	2	3
Mungindi	6/12/1997	319	10	1777	6	4
Mungindi	15/12/1997	632	9	1792	3	6
Mungindi	23/12/1997	176	5	324	3	2
Mungindi	27/12/1997	216	6	456	3	3
Mungindi	7/01/1998	70	2	98	2	0
Mungindi	11/01/1998	97	2	110	1	1
Mungindi	17/01/1998	180	5	333	2	3
Mungindi	27/01/1998	100	7	279	2	5
Mungindi	2/02/1998	24	3	50	3	0
Mungindi	8/02/1998	114	6	465	2	4
Mungindi	13/02/1998	120	7	645	5	2
Mungindi	19/02/1998	832	8	3133	3	5
Mungindi	26/02/1998	129	4	298	3	1
Mungindi	1/03/1998	192	4	588	3	1
Mungindi	4/03/1998	261	10	1516	4	6
Mungindi	13/03/1998	163	26	2421	9	17
Mungindi	7/04/1998	320	34	4610	30	4
Mungindi	10/05/1998	426	7	1591	4	3
Mungindi	16/05/1998	540	6	1331	4	2
Mungindi	21/05/1998	24	3	33	2	1
Mungindi	23/05/1998	139	6	309	4	2
Mungindi	28/05/1998	116	7	552	4	3

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	3/06/1998	242	8	792	3	5
Mungindi	10/06/1998	105	10	573	5	5
Mungindi	19/06/1998	117	16	1144	13	3
Mungindi	4/07/1998	485	11	2637	9	2
Mungindi	14/07/1998	466	5	1602	2	3
Mungindi	18/07/1998	1181	7	4425	3	4
Mungindi	24/07/1998	29325	37	477941	20	17
Mungindi	29/08/1998	61393	48	863194	10	38
Mungindi	15/10/1998	1741	14	19029	5	9
Mungindi	28/10/1998	5109	25	58467	7	18
Mungindi	21/11/1998	1374	13	11061	4	9
Mungindi	3/12/1998	482	9	1802	4	5
Mungindi	11/12/1998	332	7	702	5	2
Mungindi	17/12/1998	134	7	637	5	2
Mungindi	23/12/1998	48	4	85	2	2
Mungindi	26/12/1998	593	16	3742	7	9
Mungindi	10/01/1999	235	6	628	3	3
Mungindi	18/01/1999	122	3	244	2	1
Mungindi	20/01/1999	248	6	677	3	3
Mungindi	25/01/1999	357	14	1984	9	5
Mungindi	7/02/1999	344	7	1272	5	2
Mungindi	13/02/1999	929	7	2217	3	4
Mungindi	19/02/1999	187	8	878	4	4
Mungindi	26/02/1999	452	6	1800	5	1
Mungindi	3/03/1999	12748	43	185053	21	22
Mungindi	14/04/1999	1601	43	22959	5	38
Mungindi	26/05/1999	256	15	2914	9	6

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	9/06/1999	357	17	4459	10	7
Mungindi	25/06/1999	371	18	4467	6	12
Mungindi	12/07/1999	327	19	4607	8	11
Mungindi	30/07/1999	171	12	1150	3	9
Mungindi	10/08/1999	262	12	2081	8	4
Mungindi	21/08/1999	323	16	2867	4	12
Mungindi	5/09/1999	144	6	648	4	2
Mungindi	10/09/1999	183	6	509	3	3
Mungindi	15/09/1999	68	8	335	6	2
Mungindi	22/09/1999	60	6	247	2	4
Mungindi	27/09/1999	68	5	212	3	2
Mungindi	1/10/1999	101	7	402	5	2
Mungindi	7/10/1999	93	9	440	4	5
Mungindi	15/10/1999	90	5	177	3	2
Mungindi	19/10/1999	88	11	532	6	5
Mungindi	29/10/1999	6810	45	126048	29	16
Mungindi	12/12/1999	187	7	794	2	5
Mungindi	18/12/1999	179	6	678	3	3
Mungindi	23/12/1999	275	6	1157	4	2
Mungindi	28/12/1999	515	7	2149	4	3
Mungindi	3/01/2000	67	3	131	2	1
Mungindi	7/01/2000	41	3	50	2	1
Mungindi	9/01/2000	1274	11	6144	5	6
Mungindi	21/01/2000	44	3	55	2	1
Mungindi	25/01/2000	46	4	79	2	2
Mungindi	31/01/2000	1	1	1	1	0
Mungindi	2/02/2000	169	4	342	2	2

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	5/02/2000	221	7	545	3	4
Mungindi	15/02/2000	345	6	1125	2	4
Mungindi	20/02/2000	408	8	1728	5	3
Mungindi	27/02/2000	410	12	3549	3	9
Mungindi	9/03/2000	277	9	2001	5	4
Mungindi	17/03/2000	3456	14	14663	11	3
Mungindi	30/03/2000	894	6	3481	2	4
Mungindi	4/04/2000	519	56	11514	7	49
Mungindi	29/05/2000	374	36	5279	16	20
Mungindi	3/07/2000	143	48	4748	32	16
Mungindi	19/08/2000	75	12	675	7	5
Mungindi	30/08/2000	168	9	680	6	3
Mungindi	7/09/2000	79	6	329	3	3
Mungindi	12/09/2000	46	5	129	3	2
Mungindi	18/09/2000	201	7	527	4	3
Mungindi	24/09/2000	17	4	32	2	2
Mungindi	29/09/2000	36	4	89	2	2
Mungindi	2/10/2000	41	4	68	2	2
Mungindi	5/10/2000	17	3	23	2	1
Mungindi	10/10/2000	32	2	44	1	1
Mungindi	13/10/2000	10	3	14	2	1
Mungindi	19/10/2000	318	6	1188	2	4
Mungindi	24/10/2000	411	12	3370	8	4
Mungindi	4/11/2000	442	9	2354	4	5
Mungindi	12/11/2000	1540	6	3885	5	1
Mungindi	17/11/2000	11672	27	116152	19	8
Mungindi	13/12/2000	56	3	126	3	0

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	18/12/2000	763	11	2823	7	4
Mungindi	31/12/2000	99	6	334	4	2
Mungindi	5/01/2001	150	5	508	3	2
Mungindi	9/01/2001	254	5	649	3	2
Mungindi	13/01/2001	55	4	140	3	1
Mungindi	16/01/2001	159	8	553	3	5
Mungindi	25/01/2001	114	4	313	3	1
Mungindi	31/01/2001	322	7	1505	2	5
Mungindi	6/02/2001	12611	21	114249	14	7
Mungindi	26/02/2001	272	8	1543	4	4
Mungindi	5/03/2001	237	4	767	3	1
Mungindi	8/03/2001	4779	23	48657	19	4
Mungindi	30/03/2001	5622	23	70593	13	10
Mungindi	21/04/2001	1001	47	26002	17	30
Mungindi	6/06/2001	468	26	8922	17	9
Mungindi	1/07/2001	228	7	1257	3	4
Mungindi	7/07/2001	185	4	587	2	2
Mungindi	10/07/2001	236	15	2594	4	11
Mungindi	24/07/2001	831	6	2317	4	2
Mungindi	29/07/2001	1685	20	14165	8	12
Mungindi	17/08/2001	345	14	2710	5	9
Mungindi	30/08/2001	139	8	822	3	5
Mungindi	6/09/2001	307	9	1501	5	4
Mungindi	14/09/2001	158	6	440	3	3
Mungindi	19/09/2001	272	9	1201	7	2
Mungindi	27/09/2001	226	15	1133	3	12
Mungindi	14/10/2001	3	6	15	5	1

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	22/10/2001	66	29	1044	22	7
Mungindi	19/11/2001	101	6	429	5	1
Mungindi	24/11/2001	168	5	492	3	2
Mungindi	28/11/2001	937	9	3233	7	2
Mungindi	6/12/2001	1261	10	7916	6	4
Mungindi	15/12/2001	287	8	1317	3	5
Mungindi	22/12/2001	139	6	468	5	1
Mungindi	27/12/2001	241	9	1156	5	4
Mungindi	4/01/2002	108	4	299	3	1
Mungindi	9/01/2002	24	2	30	1	1
Mungindi	13/01/2002	32	5	76	3	2
Mungindi	17/01/2002	4	2	6	2	0
Mungindi	25/01/2002	21	2	25	1	1
Mungindi	31/01/2002	337	8	1298	4	4
Mungindi	9/02/2002	128	7	654	4	3
Mungindi	15/02/2002	88	5	210	2	3
Mungindi	26/02/2002	352	13	3265	4	9
Mungindi	10/03/2002	230	5	787	3	2
Mungindi	14/03/2002	141	16	1351	4	12
Mungindi	29/03/2002	1867	15	8331	12	3
Mungindi	15/04/2002	257	48	6409	5	43
Mungindi	1/06/2002	106	19	969	4	15
Mungindi	19/06/2002	83	42	2421	18	24
Mungindi	30/07/2002	59	18	789	5	13
Mungindi	16/08/2002	47	14	410	11	3
Mungindi	29/08/2002	62	5	183	4	1
Mungindi	7/09/2002	24	3	41	2	1

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	12/09/2002	51	6	198	4	2
Mungindi	17/09/2002	98	6	207	2	4
Mungindi	22/09/2002	91	4	127	3	1
Mungindi	27/09/2002	65	5	191	2	3
Mungindi	1/10/2002	125	10	588	5	5
Mungindi	10/10/2002	51	5	156	3	2
Mungindi	14/10/2002	57	6	218	3	3
Mungindi	19/10/2002	156	7	612	4	3
Mungindi	25/10/2002	103	12	512	6	6
Mungindi	7/11/2002	44	8	224	3	5
Mungindi	14/11/2002	60	6	241	4	2
Mungindi	19/11/2002	97	11	401	5	6
Mungindi	2/12/2002	70	3	164	2	1
Mungindi	6/12/2002	76	7	349	5	2
Mungindi	12/12/2002	232	10	1003	5	5
Mungindi	24/12/2002	21	2	32	1	1
Mungindi	25/12/2002	32	4	94	2	2
Mungindi	28/12/2002	52	5	144	2	3
Mungindi	3/01/2003	36	3	82	2	1
Mungindi	5/01/2003	38	3	68	2	1
Mungindi	18/01/2003	43	4	119	2	2
Mungindi	24/01/2003	295	4	677	2	2
Mungindi	27/01/2003	236	8	778	3	5
Mungindi	3/02/2003	33	7	133	2	5
Mungindi	9/02/2003	157	10	797	6	4
Mungindi	20/02/2003	212	11	1070	5	6
Mungindi	2/03/2003	1653	27	24935	7	20

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	28/03/2003	656	9	4563	4	5
Mungindi	5/04/2003	694	9	5144	4	5
Mungindi	13/04/2003	794	12	6734	3	9
Mungindi	24/04/2003	1053	13	9019	5	8
Mungindi	6/05/2003	351	6	1600	2	4
Mungindi	11/05/2003	298	39	6013	4	35
Mungindi	18/06/2003	219	54	7994	36	18
Mungindi	10/08/2003	218	23	1688	4	19
Mungindi	9/09/2003	7	6	28	2	4
Mungindi	19/09/2003	46	10	240	3	7
Mungindi	28/09/2003	75	10	378	5	5
Mungindi	7/10/2003	1614	38	21718	13	25
Mungindi	13/11/2003	241	16	1966	8	8
Mungindi	28/11/2003	125	9	531	4	5
Mungindi	6/12/2003	3594	20	25208	16	4
Mungindi	25/12/2003	1127	14	8156	3	11
Mungindi	7/01/2004	178	10	761	9	1
Mungindi	16/01/2004	15307	27	211188	15	12
Mungindi	11/02/2004	1431	30	20767	5	25
Mungindi	11/03/2004	799	5	2304	4	1
Mungindi	15/03/2004	11519	51	84373	7	44
Mungindi	4/05/2004	160	18	2093	7	11
Mungindi	21/05/2004	117	67	3674	7	60
Mungindi	26/07/2004	16	7	91	2	5
Mungindi	1/08/2004	15	18	203	4	14
Mungindi	18/08/2004	41	26	604	23	3
Mungindi	12/09/2004	1302	48	17075	9	39

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	29/10/2004	48	12	333	9	3
Mungindi	9/11/2004	49	4	146	2	2
Mungindi	12/11/2004	1361	17	3152	15	2
Mungindi	28/11/2004	356	7	1388	2	5
Mungindi	4/12/2004	14629	16	76217	11	5
Mungindi	19/12/2004	1137	7	5253	4	3
Mungindi	25/12/2004	759	11	5038	4	7
Mungindi	4/01/2005	923	9	3083	3	6
Mungindi	12/01/2005	299	8	1356	3	5
Mungindi	19/01/2005	247	6	1145	2	4
Mungindi	24/01/2005	1192	6	2365	4	2
Mungindi	29/01/2005	242	12	1668	4	8
Mungindi	9/02/2005	74	9	478	4	5
Mungindi	17/02/2005	61	13	560	8	5
Mungindi	1/03/2005	120	27	1213	8	19
Mungindi	27/03/2005	18	19	173	5	14
Mungindi	12/06/2005	19	8	66	4	4
Mungindi	19/06/2005	5	5	17	2	3
Mungindi	28/06/2005	1010	10	2617	8	2
Mungindi	7/07/2005	584	3	1333	2	1
Mungindi	9/07/2005	1415	6	5366	3	3
Mungindi	14/07/2005	872	19	8016	3	16
Mungindi	1/08/2005	265	42	4779	4	38
Mungindi	11/09/2005	65	10	355	4	6
Mungindi	20/09/2005	237	26	2131	14	12
Mungindi	15/10/2005	81	8	407	3	5
Mungindi	22/10/2005	90	24	1220	6	18

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	14/11/2005	118	10	652	6	4
Mungindi	23/11/2005	1275	19	12076	15	4
Mungindi	11/12/2005	1034	4	2881	2	2
Mungindi	14/12/2005	936	12	8997	4	8
Mungindi	25/12/2005	1070	11	5104	3	8
Mungindi	4/01/2006	162	3	318	2	1
Mungindi	6/01/2006	121	6	508	3	3
Mungindi	11/01/2006	107	3	229	2	1
Mungindi	13/01/2006	377	5	644	3	2
Mungindi	17/01/2006	461	9	2497	7	2
Mungindi	25/01/2006	1588	19	11240	7	12
Mungindi	12/02/2006	263	5	1011	3	2
Mungindi	16/02/2006	1725	10	6060	8	2
Mungindi	25/02/2006	1523	60	31433	7	53
Mungindi	25/04/2006	131	46	2238	10	36
Mungindi	11/06/2006	14	8	63	2	6
Mungindi	25/07/2006	65	13	359	3	10
Mungindi	6/08/2006	17	15	141	5	10
Mungindi	10/09/2006	30	13	306	9	4
Mungindi	22/09/2006	145	7	429	3	4
Mungindi	28/09/2006	137	7	566	5	2
Mungindi	4/10/2006	128	4	380	3	1
Mungindi	7/10/2006	120	5	432	2	3
Mungindi	11/10/2006	110	6	519	4	2
Mungindi	16/10/2006	139	12	963	4	8
Mungindi	27/10/2006	48	12	480	3	9
Mungindi	7/11/2006	139	5	366	3	2

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	11/11/2006	581	14	3391	7	7
Mungindi	24/11/2006	107	6	450	5	1
Mungindi	29/11/2006	75	4	209	2	2
Mungindi	2/12/2006	126	4	363	3	1
Mungindi	5/12/2006	219	7	693	4	3
Mungindi	11/12/2006	655	13	5632	6	7
Mungindi	23/12/2006	454	9	2355	4	5
Mungindi	31/12/2006	201	11	971	5	6
Mungindi	10/01/2007	256	6	637	4	2
Mungindi	15/01/2007	161	6	635	2	4
Mungindi	20/01/2007	84	3	148	2	1
Mungindi	22/01/2007	140	5	377	3	2
Mungindi	26/01/2007	150	4	246	2	2
Mungindi	29/01/2007	60	7	223	4	3
Mungindi	4/02/2007	19	4	43	3	1
Mungindi	7/02/2007	78	6	241	5	1
Mungindi	12/02/2007	56	5	190	2	3
Mungindi	16/02/2007	47	5	158	3	2
Mungindi	20/02/2007	101	10	632	3	7
Mungindi	1/03/2007	106	14	630	10	4
Mungindi	14/03/2007	342	45	5572	4	41
Mungindi	27/04/2007	19	8	63	3	5
Mungindi	18/05/2007	6	2	8	2	0
Mungindi	6/06/2007	49	6	189	3	3
Mungindi	11/06/2007	33	23	354	2	21
Mungindi	3/07/2007	1363	60	20045	10	50
Mungindi	31/08/2007	1338	29	17036	6	23

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	28/09/2007	134	7	683	3	4
Mungindi	4/10/2007	116	12	938	3	9
Mungindi	15/10/2007	56	11	424	4	7
Mungindi	25/10/2007	68	8	247	6	2
Mungindi	1/11/2007	175	8	876	4	4
Mungindi	8/11/2007	858	12	3665	7	5
Mungindi	19/11/2007	86	4	265	2	2
Mungindi	22/11/2007	115	8	683	3	5
Mungindi	29/11/2007	169	8	876	3	5
Mungindi	6/12/2007	100	4	317	2	2
Mungindi	9/12/2007	132	4	377	2	2
Mungindi	12/12/2007	3318	31	27072	11	20
Mungindi	11/01/2008	1066	25	14535	16	9
Mungindi	4/02/2008	3152	10	16329	5	5
Mungindi	13/02/2008	2717	14	23089	9	5
Mungindi	26/02/2008	1055	34	13384	5	29
Mungindi	30/03/2008	89	8	518	4	4
Mungindi	6/04/2008	113	14	762	3	11
Mungindi	19/04/2008	30	8	163	3	5
Mungindi	26/04/2008	48	14	266	4	10
Mungindi	12/06/2008	84	14	452	3	11
Mungindi	25/06/2008	53	30	915	11	19
Mungindi	24/07/2008	54	25	569	9	16
Mungindi	5/09/2008	38	6	122	2	4
Mungindi	10/09/2008	202	13	1196	4	9
Mungindi	22/09/2008	230	20	1334	4	16
Mungindi	30/10/2008	36	5	78	2	3

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	3/11/2008	23	12	162	5	7
Mungindi	20/11/2008	17	3	41	1	2
Mungindi	22/11/2008	549	10	1956	8	2
Mungindi	1/12/2008	1464	17	17657	9	8
Mungindi	17/12/2008	1379	19	17308	9	10
Mungindi	4/01/2009	784	5	2511	3	2
Mungindi	8/01/2009	1210	25	13178	6	19
Mungindi	1/02/2009	83	6	337	4	2
Mungindi	13/02/2009	3124	15	11490	12	3
Mungindi	27/02/2009	1519	44	15155	4	40
Mungindi	11/04/2009	48	13	381	4	9
Mungindi	23/04/2009	55	21	474	5	16
Mungindi	20/05/2009	57	9	273	3	6
Mungindi	28/05/2009	196	6	726	3	3
Mungindi	2/06/2009	1390	92	39273	6	86
Mungindi	1/09/2009	54	26	544	9	17
Mungindi	30/11/2009	23	3	27	1	2
Mungindi	7/12/2009	158	4	334	1	3
Mungindi	14/12/2009	84	6	272	2	4
Mungindi	19/12/2009	37	4	59	2	2
Mungindi	27/12/2009	152	2	208	1	1
Mungindi	30/12/2009	285	6	919	4	2
Mungindi	4/01/2010	1399	19	14803	13	6
Mungindi	22/01/2010	1351	16	10451	4	12
Mungindi	6/02/2010	231	10	1276	3	7
Mungindi	15/02/2010	86	6	224	2	4
Mungindi	20/02/2010	203	9	967	4	5

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	28/02/2010	9253	43	165509	22	21
Mungindi	11/04/2010	217	60	5129	13	47
Mungindi	21/06/2010	345	23	3892	3	20
Mungindi	13/07/2010	701	29	10087	20	9
Mungindi	10/08/2010	4166	33	63664	29	4
Mungindi	11/09/2010	14713	41	338365	32	9
Mungindi	21/10/2010	12336	29	209088	12	17
Mungindi	18/11/2010	3619	7	19842	3	4
Mungindi	24/11/2010	6665	21	104464	12	9
Mungindi	14/12/2010	27691	64	599499	44	20
Mungindi	15/02/2011	1405	18	14716	6	12
Mungindi	4/03/2011	374	9	1629	4	5
Mungindi	12/03/2011	426	5	1341	3	2
Mungindi	16/03/2011	709	10	4901	7	3
Mungindi	25/03/2011	1312	33	23784	9	24
Mungindi	26/04/2011	1008	11	6751	5	6
Mungindi	6/05/2011	466	12	3217	5	7
Mungindi	17/05/2011	252	10	1215	9	1
Mungindi	26/05/2011	424	12	2780	6	6
Mungindi	6/06/2011	99	5	405	3	2
Mungindi	10/06/2011	236	10	1436	5	5
Mungindi	21/06/2011	153	3	271	2	1
Mungindi	23/06/2011	1066	20	11476	6	14
Mungindi	12/07/2011	695	45	13957	5	40
Mungindi	25/08/2011	1820	26	21276	18	8
Mungindi	19/09/2011	1311	17	14394	4	13
Mungindi	5/10/2011	1322	21	19617	17	4

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	25/10/2011	1444	12	13862	6	6
Mungindi	5/11/2011	1414	18	16314	6	12
Mungindi	22/11/2011	11130	15	93706	9	6
Mungindi	6/12/2011	17836	35	358293	11	24
Mungindi	9/01/2012	766	12	4952	4	8
Mungindi	20/01/2012	17413	41	267447	20	21
Mungindi	29/02/2012	1629	22	17774	7	15
Mungindi	21/03/2012	193	8	1015	5	3
Mungindi	28/03/2012	194	12	1646	10	2
Mungindi	8/04/2012	265	7	944	3	4
Mungindi	16/04/2012	201	15	1673	6	9
Mungindi	30/04/2012	160	10	918	6	4
Mungindi	9/05/2012	152	11	1048	9	2
Mungindi	19/05/2012	258	10	1382	4	6
Mungindi	28/05/2012	98	6	500	3	3
Mungindi	2/06/2012	134	9	872	4	5
Mungindi	10/06/2012	102	5	276	2	3
Mungindi	16/06/2012	21	4	60	2	2
Mungindi	19/06/2012	130	8	567	6	2
Mungindi	26/06/2012	124	11	681	4	7
Mungindi	6/07/2012	1656	49	25599	21	28
Mungindi	23/08/2012	94	9	612	2	7
Mungindi	31/08/2012	239	17	2149	13	4
Mungindi	16/09/2012	132	5	417	3	2
Mungindi	22/09/2012	1	1	1	1	0
Mungindi	24/09/2012	17	2	27	1	1
Mungindi	25/09/2012	94	6	270	4	2

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	30/09/2012	127	7	361	3	4
Mungindi	6/10/2012	97	5	253	4	1
Mungindi	13/10/2012	98	7	395	2	5
Mungindi	23/10/2012	21	2	30	1	1
Mungindi	24/10/2012	139	12	986	6	6
Mungindi	4/11/2012	72	5	207	2	3
Mungindi	10/11/2012	56	5	156	2	3
Mungindi	14/11/2012	35	5	97	2	3
Mungindi	20/11/2012	81	5	196	4	1
Mungindi	24/11/2012	76	5	218	3	2
Mungindi	9/12/2012	120	4	268	3	1
Mungindi	15/12/2012	453	8	2089	4	4
Mungindi	22/12/2012	821	14	5732	10	4
Mungindi	4/01/2013	449	10	2936	4	6
Mungindi	16/01/2013	154	5	516	2	3
Mungindi	22/01/2013	511	6	1902	3	3
Mungindi	27/01/2013	379	5	1555	3	2
Mungindi	31/01/2013	34255	22	258140	9	13
Mungindi	21/02/2013	14098	107	281354	26	81
Mungindi	7/06/2013	922	27	11764	22	5
Mungindi	3/07/2013	1103	27	20125	10	17
Mungindi	29/07/2013	1431	31	19287	4	27
Mungindi	28/08/2013	613	39	9244	3	36
Mungindi	7/10/2013	113	10	699	5	5
Mungindi	16/10/2013	34	20	491	3	17
Mungindi	29/11/2013	139	6	460	2	4
Mungindi	4/12/2013	161	9	642	4	5

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	15/12/2013	245	5	682	4	1
Mungindi	19/12/2013	201	5	548	3	2
Mungindi	23/12/2013	268	7	981	5	2
Mungindi	29/12/2013	108	5	316	4	1
Mungindi	6/01/2014	80	2	95	1	1
Mungindi	10/01/2014	83	3	135	2	1
Mungindi	22/01/2014	30	3	64	2	1
Mungindi	27/01/2014	396	8	2087	6	2
Mungindi	8/02/2014	111	5	319	3	2
Mungindi	12/02/2014	128	3	221	2	1
Mungindi	16/02/2014	197	11	1271	9	2
Mungindi	26/02/2014	136	6	526	3	3
Mungindi	3/03/2014	25	4	60	3	1
Mungindi	6/03/2014	52	8	291	2	6
Mungindi	13/03/2014	103	11	574	5	6
Mungindi	23/03/2014	261	9	867	6	3
Mungindi	31/03/2014	797	6	2444	4	2
Mungindi	5/04/2014	1091	70	14696	7	63
Mungindi	13/06/2014	12	6	58	3	3
Mungindi	18/06/2014	27	13	230	7	6
Mungindi	30/06/2014	23	34	478	5	29
Mungindi	4/08/2014	2	7	12	3	4
Mungindi	17/08/2014	5	9	26	2	7
Mungindi	30/08/2014	8	9	34	3	6
Mungindi	19/12/2014	91	3	166	2	1
Mungindi	21/12/2014	608	12	3062	6	6
Mungindi	1/01/2015	227	7	1327	5	2

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	7/01/2015	1357	28	13640	4	24
Mungindi	3/02/2015	1840	22	14333	7	15
Mungindi	24/02/2015	129	17	1670	2	15
Mungindi	12/03/2015	91	17	981	4	13
Mungindi	28/03/2015	2078	17	6662	14	3
Mungindi	13/04/2015	1584	27	22873	4	23
Mungindi	9/05/2015	2238	30	27127	8	22
Mungindi	7/06/2015	604	10	4489	4	6
Mungindi	16/06/2015	509	12	4168	3	9
Mungindi	27/06/2015	745	29	12609	6	23
Mungindi	25/07/2015	347	8	2122	6	2
Mungindi	1/08/2015	1200	14	8001	7	7
Mungindi	14/08/2015	622	18	6807	4	14
Mungindi	31/08/2015	453	6	1691	5	1
Mungindi	5/09/2015	918	53	16499	7	46
Mungindi	27/10/2015	38	10	267	3	7
Mungindi	5/11/2015	21	4	70	2	2
Mungindi	8/11/2015	363	10	1321	8	2
Mungindi	19/11/2015	108	4	261	2	2
Mungindi	22/11/2015	221	9	1331	4	5
Mungindi	30/11/2015	159	4	410	2	2
Mungindi	3/12/2015	83	4	132	2	2
Mungindi	6/12/2015	81	6	318	3	3
Mungindi	11/12/2015	114	15	1135	5	10
Mungindi	25/12/2015	115	7	507	3	4
Mungindi	31/12/2015	72	4	240	2	2
Mungindi	3/01/2016	243	5	534	2	3

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	7/01/2016	686	8	3233	5	3
Mungindi	14/01/2016	653	9	3754	3	6
Mungindi	22/01/2016	390	5	1577	3	2
Mungindi	26/01/2016	909	6	3309	4	2
Mungindi	31/01/2016	775	7	3832	4	3
Mungindi	6/02/2016	1039	22	10533	5	17
Mungindi	27/02/2016	60	17	577	3	14
Mungindi	14/03/2016	111	8	461	6	2
Mungindi	21/03/2016	87	9	511	5	4
Mungindi	29/03/2016	105	28	1223	4	24
Mungindi	25/04/2016	29	12	219	9	3
Mungindi	6/05/2016	22	6	86	5	1
Mungindi	11/05/2016	20	13	120	4	9
Mungindi	4/06/2016	29	11	97	2	9
Mungindi	20/06/2016	39	17	171	1	16
Mungindi	6/07/2016	842	12	6529	4	8
Mungindi	17/07/2016	1296	30	21225	9	21
Mungindi	15/08/2016	864	20	10681	4	16
Mungindi	3/09/2016	343	6	1313	4	2
Mungindi	8/09/2016	1797	11	10822	8	3
Mungindi	18/09/2016	8778	42	185528	21	21
Mungindi	29/10/2016	3222	43	55284	6	37
Mungindi	10/12/2016	171	10	805	5	5
Mungindi	19/12/2016	302	17	2406	10	7
Mungindi	4/01/2017	29	4	80	3	1
Mungindi	11/01/2017	664	9	2752	4	5
Mungindi	19/01/2017	129	6	334	4	2

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Mungindi	24/01/2017	588	13	3855	9	4
Mungindi	5/02/2017	355	5	1215	3	2
Mungindi	9/02/2017	293	7	1381	2	5
Mungindi	15/02/2017	179	5	639	3	2
Mungindi	19/02/2017	287	8	1652	5	3
Mungindi	26/02/2017	399	11	2654	5	6
Mungindi	8/03/2017	51	4	105	2	2
Mungindi	11/03/2017	39	4	92	3	1
Mungindi	16/03/2017	16	2	30	2	0
Mungindi	19/03/2017	500	14	2639	13	1
Mungindi	1/04/2017	963	6	4264	3	3
Mungindi	6/04/2017	4153	15	29902	10	5
Mungindi	20/04/2017	1711	43	42608	19	24
Collarenebri	1/01/1990	3368	42	52591	30	12
Collarenebri	11/02/1990	4685	40	73405	17	23
Collarenebri	22/03/1990	7849	18	36418	11	7
Collarenebri	8/04/1990	17252	11	93240	4	7
Collarenebri	18/04/1990	17209	40	336599	6	34
Collarenebri	27/05/1990	10659	34	202330	23	11
Collarenebri	29/06/1990	6208	34	136473	21	13
Collarenebri	1/08/1990	8141	42	199901	19	23
Collarenebri	11/09/1990	3357	16	30611	6	10
Collarenebri	26/09/1990	1187	18	9075	5	13
Collarenebri	13/10/1990	374	15	3549	10	5
Collarenebri	27/10/1990	232	18	2009	4	14
Collarenebri	13/11/1990	41	7	188	3	4
Collarenebri	19/11/1990	85	14	684	11	3

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Collarenebri	2/12/1990	71	12	595	8	4
Collarenebri	13/12/1990	78	15	468	4	11
Collarenebri	27/12/1990	109	12	398	11	1
Collarenebri	7/01/1991	325	14	2306	12	2
Collarenebri	20/01/1991	11454	54	283898	30	24
Collarenebri	14/03/1991	487	6	2239	3	3
Collarenebri	19/03/1991	502	63	18672	12	51
Collarenebri	20/05/1991	1082	11	5011	6	5
Collarenebri	30/05/1991	593	9	3145	3	6
Collarenebri	7/06/1991	241	12	1959	4	8
Collarenebri	18/06/1991	252	13	2066	4	9
Collarenebri	30/06/1991	249	37	4751	24	13
Collarenebri	5/08/1991	172	21	1892	7	14
Collarenebri	25/08/1991	79	16	899	6	10
Collarenebri	9/09/1991	75	22	758	4	18
Collarenebri	30/09/1991	22	8	110	4	4
Collarenebri	7/10/1991	6	9	33	3	6
Collarenebri	15/10/1991	74	9	357	6	3
Collarenebri	23/10/1991	41	9	261	3	6
Collarenebri	31/10/1991	20	6	104	2	4
Collarenebri	5/11/1991	78	32	1380	12	20
Collarenebri	6/12/1991	10426	14	35835	9	5
Collarenebri	19/12/1991	5128	14	38302	5	9
Collarenebri	1/01/1992	488	5	2026	3	2
Collarenebri	5/01/1992	1094	8	5946	5	3
Collarenebri	12/01/1992	1973	8	9484	4	4
Collarenebri	19/01/1992	1900	12	11505	5	7

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Collarenebri	30/01/1992	560	9	3883	6	3
Collarenebri	7/02/1992	4032	13	29513	7	6
Collarenebri	19/02/1992	7188	37	99850	13	24
Collarenebri	26/03/1992	273	12	2501	5	7
Collarenebri	6/04/1992	217	19	3031	8	11
Collarenebri	24/04/1992	157	19	2129	11	8
Collarenebri	12/05/1992	136	20	2067	11	9
Collarenebri	31/05/1992	323	19	3349	12	7
Collarenebri	18/06/1992	274	27	3173	4	23
Collarenebri	14/07/1992	170	24	2705	10	14
Collarenebri	6/08/1992	176	16	1948	9	7
Collarenebri	21/08/1992	496	13	2286	4	9
Collarenebri	2/09/1992	127	7	611	4	3
Collarenebri	8/09/1992	1211	22	13056	9	13
Collarenebri	29/09/1992	785	16	5551	3	13
Collarenebri	14/10/1992	271	14	1733	6	8
Collarenebri	27/10/1992	208	11	998	9	2
Collarenebri	6/11/1992	245	11	1131	3	8
Collarenebri	16/11/1992	106	16	876	7	9
Collarenebri	1/12/1992	236	6	854	3	3
Collarenebri	6/12/1992	702	12	4487	3	9
Collarenebri	17/12/1992	1241	13	7549	7	6
Collarenebri	29/12/1992	157	12	1126	5	7
Collarenebri	9/01/1993	65	17	674	7	10
Collarenebri	25/01/1993	1146	30	5255	4	26
Collarenebri	27/02/1993	123	4	307	3	1
Collarenebri	2/03/1993	128	15	579	3	12

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Collarenebri	16/03/1993	22	11	157	6	5
Collarenebri	26/03/1993	269	30	927	4	26
Collarenebri	27/04/1993	3	7	17	4	3
Collarenebri	5/06/1993	258	7	930	3	4
Collarenebri	11/06/1993	333	20	1956	8	12
Collarenebri	30/06/1993	23	7	127	4	3
Collarenebri	6/07/1993	729	33	7420	7	26
Collarenebri	7/08/1993	144	14	637	2	12
Collarenebri	20/08/1993	57	14	526	8	6
Collarenebri	2/09/1993	43	5	166	2	3
Collarenebri	6/09/1993	117	8	450	5	3
Collarenebri	13/09/1993	180	20	1179	3	17
Collarenebri	4/10/1993	2	3	4	2	1
Collarenebri	8/10/1993	15	6	63	3	3
Collarenebri	13/10/1993	174	12	719	6	6
Collarenebri	24/10/1993	19	8	99	3	5
Collarenebri	31/10/1993	15	5	41	3	2
Collarenebri	4/11/1993	10	5	30	3	2
Collarenebri	8/11/1993	17	7	76	4	3
Collarenebri	14/11/1993	85	6	136	2	4
Collarenebri	8/12/1993	19	3	30	1	2
Collarenebri	13/12/1993	2361	20	13141	8	12
Collarenebri	21/02/1994	7471	17	58498	5	12
Collarenebri	9/03/1994	445	5	1561	2	3
Collarenebri	13/03/1994	1844	44	17479	13	31
Collarenebri	11/06/1994	11	14	73	5	9
Collarenebri	10/12/1994	21	9	125	2	7

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Collarenebri	18/12/1994	17	7	60	3	4
Collarenebri	24/12/1994	31	6	73	3	3
Collarenebri	29/12/1994	14	8	46	3	5
Collarenebri	7/01/1995	218	5	547	2	3
Collarenebri	11/01/1995	57	7	202	3	4
Collarenebri	19/01/1995	3825	8	15016	3	5
Collarenebri	26/01/1995	3387	10	21288	6	4
Collarenebri	4/02/1995	3667	11	29180	4	7
Collarenebri	14/02/1995	2275	12	20376	3	9
Collarenebri	25/02/1995	4513	27	32114	9	18
Collarenebri	23/03/1995	23	8	115	3	5
Collarenebri	30/03/1995	10	9	51	4	5
Collarenebri	18/05/1995	176	8	309	1	7
Collarenebri	29/07/1995	8	4	22	3	1
Collarenebri	1/08/1995	6	10	40	4	6
Collarenebri	9/11/1995	138	8	680	2	6
Collarenebri	16/11/1995	12000	36	150573	20	16
Collarenebri	21/12/1995	206	6	827	3	3
Collarenebri	26/12/1995	179	10	1423	6	4
Collarenebri	4/01/1996	88854	61	1764068	36	25
Collarenebri	4/03/1996	887	7	4116	5	2
Collarenebri	10/03/1996	1650	14	11717	5	9
Collarenebri	23/03/1996	525	38	10350	6	32
Collarenebri	29/04/1996	24538	98	484106	28	70
Collarenebri	4/08/1996	1670	25	21190	11	14
Collarenebri	28/08/1996	811	13	8589	6	7
Collarenebri	9/09/1996	3847	21	36720	9	12

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Collarenebri	29/09/1996	7977	53	166318	28	25
Collarenebri	20/11/1996	950	17	9604	5	12
Collarenebri	6/12/1996	2111	20	15456	5	15
Collarenebri	25/12/1996	930	15	7092	8	7
Collarenebri	8/01/1997	191	18	1857	8	10
Collarenebri	25/01/1997	14353	27	200117	19	8
Collarenebri	20/02/1997	21234	43	497515	13	30
Collarenebri	3/04/1997	678	29	10810	4	25
Collarenebri	1/05/1997	240	14	2223	7	7
Collarenebri	14/05/1997	780	33	10901	18	15
Collarenebri	15/06/1997	346	18	4194	11	7
Collarenebri	2/07/1997	260	56	8460	8	48
Collarenebri	26/08/1997	94	10	522	5	5
Collarenebri	4/09/1997	96	8	478	4	4
Collarenebri	11/09/1997	213	11	1242	4	7
Collarenebri	21/09/1997	159	10	1049	5	5
Collarenebri	30/09/1997	148	13	1395	9	4
Collarenebri	12/10/1997	329	8	1570	4	4
Collarenebri	19/10/1997	317	4	908	3	1
Collarenebri	22/10/1997	730	10	4397	5	5
Collarenebri	31/10/1997	381	19	5688	6	13
Collarenebri	18/11/1997	493	7	2482	5	2
Collarenebri	24/11/1997	679	14	5354	4	10
Collarenebri	7/12/1997	4992	10	23637	6	4
Collarenebri	16/12/1997	3878	26	29645	4	22
Collarenebri	10/01/1998	153	9	777	6	3
Collarenebri	18/01/1998	96	9	607	6	3

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Collarenebri	26/01/1998	331	12	2130	7	5
Collarenebri	6/02/1998	818	13	6861	7	6
Collarenebri	18/02/1998	776	10	5587	5	5
Collarenebri	27/02/1998	641	23	6680	4	19
Collarenebri	21/03/1998	173	25	2505	7	18
Collarenebri	14/04/1998	360	25	2956	23	2
Collarenebri	8/05/1998	253	14	2922	3	11
Collarenebri	21/05/1998	307	8	1800	3	5
Collarenebri	28/05/1998	333	12	2682	4	8
Collarenebri	8/06/1998	224	19	2090	4	15
Collarenebri	26/06/1998	526	19	4195	10	9
Collarenebri	14/07/1998	1319	13	8734	10	3
Collarenebri	26/07/1998	37471	38	722163	23	15
Collarenebri	1/09/1998	118660	55	1934573	11	44
Collarenebri	25/10/1998	5599	31	99924	14	17
Collarenebri	24/11/1998	2143	14	19864	5	9
Collarenebri	7/12/1998	645	10	3971	3	7
Collarenebri	16/12/1998	556	8	2581	4	4
Collarenebri	23/12/1998	376	9	2293	4	5
Collarenebri	31/12/1998	695	24	7563	7	17
Collarenebri	23/01/1999	2762	21	21961	13	8
Collarenebri	12/02/1999	3062	14	23110	9	5
Collarenebri	25/02/1999	13654	40	265345	31	9
Collarenebri	5/04/1999	3158	12	21549	2	10
Collarenebri	16/04/1999	2008	46	33741	6	40
Collarenebri	31/05/1999	366	15	4376	11	4
Collarenebri	14/06/1999	790	15	6736	10	5

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Collarenebri	28/06/1999	634	20	7816	5	15
Collarenebri	17/07/1999	443	29	8816	10	19
Collarenebri	14/08/1999	274	13	2717	8	5
Collarenebri	26/08/1999	302	15	3148	3	12
Collarenebri	9/09/1999	420	13	2997	4	9
Collarenebri	21/09/1999	311	12	2277	5	7
Collarenebri	2/10/1999	925	19	11431	6	13
Collarenebri	20/10/1999	8981	62	179294	43	19
Collarenebri	20/12/1999	460	8	2695	4	4
Collarenebri	27/12/1999	624	13	5949	10	3
Collarenebri	8/01/2000	1245	6	4296	3	3
Collarenebri	13/01/2000	1208	19	9160	5	14
Collarenebri	31/01/2000	287	12	2292	5	7
Collarenebri	11/02/2000	1517	20	16385	14	6
Collarenebri	1/03/2000	13958	22	55739	11	11
Collarenebri	22/03/2000	2524	44	28009	9	35
Collarenebri	4/05/2000	282	28	4082	4	24
Collarenebri	31/05/2000	351	35	6144	21	14
Collarenebri	4/07/2000	266	22	4331	10	12
Collarenebri	25/07/2000	193	30	4200	13	17
Collarenebri	23/08/2000	612	32	7623	17	15
Collarenebri	23/09/2000	205	7	1034	3	4
Collarenebri	29/09/2000	135	5	527	2	3
Collarenebri	3/10/2000	229	19	2527	13	6
Collarenebri	21/10/2000	782	10	4124	5	5
Collarenebri	30/10/2000	828	11	5960	8	3
Collarenebri	9/11/2000	21445	46	490623	22	24

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Collarenebri	24/12/2000	900	10	5037	4	6
Collarenebri	2/01/2001	395	13	3419	7	6
Collarenebri	14/01/2001	256	8	1263	3	5
Collarenebri	21/01/2001	229	10	1491	4	6
Collarenebri	30/01/2001	33270	43	547457	13	30
Collarenebri	13/03/2001	5366	22	58614	18	4
Collarenebri	3/04/2001	6768	27	95722	13	14
Collarenebri	29/04/2001	1262	41	36121	5	36
Collarenebri	8/06/2001	667	45	17835	18	27
Collarenebri	22/07/2001	3392	31	49822	15	16
Collarenebri	21/08/2001	493	19	5385	5	14
Collarenebri	8/09/2001	481	17	5143	6	11
Collarenebri	24/09/2001	262	16	3477	7	9
Collarenebri	9/10/2001	218	9	1473	5	4
Collarenebri	17/10/2001	289	30	6381	10	20
Collarenebri	15/11/2001	291	18	3883	13	5
Collarenebri	2/12/2001	1746	23	18163	14	9
Collarenebri	24/12/2001	1040	10	5932	5	5
Collarenebri	2/01/2002	381	19	3192	3	16
Collarenebri	20/01/2002	73	7	424	4	3
Collarenebri	26/01/2002	394	10	2344	6	4
Collarenebri	4/02/2002	798	22	10623	7	15
Collarenebri	25/02/2002	875	14	7169	9	5
Collarenebri	10/03/2002	711	11	5190	4	7
Collarenebri	20/03/2002	329	10	2712	4	6
Collarenebri	29/03/2002	310	6	1286	2	4
Collarenebri	3/04/2002	1037	25	11699	11	14

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Collarenebri	27/04/2002	349	6	1433	3	3
Collarenebri	2/05/2002	250	24	4577	5	19
Collarenebri	25/05/2002	181	34	4172	16	18
Collarenebri	27/06/2002	118	61	4436	5	56
Collarenebri	26/08/2002	40	21	549	11	10
Collarenebri	15/09/2002	175	13	1043	5	8
Collarenebri	27/09/2002	131	6	478	3	3
Collarenebri	2/10/2002	255	18	2555	8	10
Collarenebri	19/10/2002	95	8	558	4	4
Collarenebri	26/10/2002	95	22	729	3	19
Collarenebri	24/11/2002	21	11	165	6	5
Collarenebri	4/12/2002	61	7	216	4	3
Collarenebri	16/12/2002	31	5	65	1	4
Collarenebri	20/12/2002	315	25	2021	7	18
Collarenebri	22/01/2003	24	10	172	3	7
Collarenebri	3/02/2003	34	5	99	4	1
Collarenebri	7/02/2003	138	11	819	6	5
Collarenebri	17/02/2003	381	11	1943	7	4
Collarenebri	27/02/2003	5262	30	68158	14	16
Collarenebri	28/03/2003	1053	13	11503	10	3
Collarenebri	9/04/2003	1190	14	12988	7	7
Collarenebri	22/04/2003	1300	66	23951	9	57
Collarenebri	26/06/2003	305	50	8768	26	24
Collarenebri	14/08/2003	220	10	1704	6	4
Collarenebri	23/08/2003	277	39	2492	2	37
Collarenebri	30/09/2003	40	6	93	4	2
Collarenebri	5/10/2003	76	11	417	4	7

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Collarenebri	15/10/2003	1549	35	20805	8	27
Collarenebri	18/11/2003	257	17	2506	7	10
Collarenebri	4/12/2003	108	8	520	4	4
Collarenebri	11/12/2003	3660	31	40858	14	17
Collarenebri	10/01/2004	196	4	542	3	1
Collarenebri	13/01/2004	167	4	509	2	2
Collarenebri	16/01/2004	22840	31	372037	14	17
Collarenebri	15/02/2004	1159	8	7142	4	4
Collarenebri	22/02/2004	909	8	6297	6	2
Collarenebri	29/02/2004	11406	20	59406	17	3
Collarenebri	19/03/2004	13372	51	144972	9	42
Collarenebri	8/05/2004	172	18	2501	13	5
Collarenebri	25/05/2004	174	16	1929	7	9
Collarenebri	9/06/2004	108	15	1137	4	11
Collarenebri	23/06/2004	80	34	1798	5	29
Collarenebri	26/07/2004	57	32	673	2	30
Collarenebri	26/08/2004	32	13	205	7	6
Collarenebri	7/09/2004	77	12	667	5	7
Collarenebri	18/09/2004	1160	48	17759	7	41
Collarenebri	4/11/2004	121	7	314	3	4
Collarenebri	10/11/2004	48	11	350	3	8
Collarenebri	20/11/2004	1527	19	11411	15	4
Collarenebri	8/12/2004	26157	47	286655	13	34
Collarenebri	23/01/2005	1865	32	16545	9	23
Collarenebri	23/02/2005	54	6	275	3	3
Collarenebri	28/02/2005	262	31	3109	14	17
Collarenebri	30/03/2005	60	19	594	5	14

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Collarenebri	17/04/2005	16	7	64	3	4
Collarenebri	23/04/2005	6	9	45	3	6
Collarenebri	13/05/2005	17	18	234	6	12
Collarenebri	30/05/2005	18	13	191	8	5
Collarenebri	11/06/2005	84	8	338	5	3
Collarenebri	18/06/2005	6770	18	27640	13	5
Collarenebri	5/07/2005	7041	43	77452	7	36
Collarenebri	16/08/2005	377	30	5124	4	26
Collarenebri	14/09/2005	131	17	1237	5	12
Collarenebri	30/09/2005	183	16	1328	9	7
Collarenebri	15/10/2005	203	5	513	3	2
Collarenebri	19/10/2005	114	7	670	3	4
Collarenebri	25/10/2005	167	13	1601	8	5
Collarenebri	6/11/2005	325	5	1083	3	2
Collarenebri	10/11/2005	314	10	2003	2	8
Collarenebri	19/11/2005	254	9	1607	8	1
Collarenebri	27/11/2005	1150	18	10687	14	4
Collarenebri	14/12/2005	1189	16	13339	8	8
Collarenebri	29/12/2005	849	9	4098	3	6
Collarenebri	6/01/2006	379	12	2828	9	3
Collarenebri	17/01/2006	2034	30	23725	15	15
Collarenebri	15/02/2006	3052	58	56623	13	45
Collarenebri	13/04/2006	401	20	2954	2	18
Collarenebri	2/05/2006	130	29	1881	8	21
Collarenebri	30/05/2006	19	11	161	6	5
Collarenebri	9/06/2006	27	13	174	3	10
Collarenebri	21/06/2006	40	23	338	5	18

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Collarenebri	13/07/2006	69	12	404	4	8
Collarenebri	24/07/2006	116	5	313	2	3
Collarenebri	28/07/2006	85	40	1342	3	37
Collarenebri	12/09/2006	6	7	29	3	4
Collarenebri	22/09/2006	61	9	278	4	5
Collarenebri	30/09/2006	32	7	124	3	4
Collarenebri	6/10/2006	54	15	383	6	9
Collarenebri	20/10/2006	48	15	326	6	9
Collarenebri	3/11/2006	194	8	724	3	5
Collarenebri	10/11/2006	159	10	1067	6	4
Collarenebri	19/11/2006	408	19	2966	3	16
Collarenebri	7/12/2006	197	11	901	9	2
Collarenebri	17/12/2006	575	11	4800	7	4
Collarenebri	27/12/2006	422	11	2718	4	7
Collarenebri	6/01/2007	167	10	953	4	6
Collarenebri	15/01/2007	110	13	928	5	8
Collarenebri	27/01/2007	127	11	847	6	5
Collarenebri	6/02/2007	104	7	567	3	4
Collarenebri	12/02/2007	98	11	731	3	8
Collarenebri	22/02/2007	1633	15	6210	4	11
Collarenebri	8/03/2007	264	5	821	3	2
Collarenebri	12/03/2007	450	9	2290	4	5
Collarenebri	20/03/2007	271	33	3820	4	29
Collarenebri	19/05/2007	3	2	5	1	1
Collarenebri	24/05/2007	32	10	130	4	6
Collarenebri	2/06/2007	115	24	1159	3	21
Collarenebri	25/06/2007	1299	72	23825	22	50

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Collarenebri	4/09/2007	1252	36	19211	6	30
Collarenebri	9/10/2007	152	16	1582	9	7
Collarenebri	24/10/2007	193	11	708	3	8
Collarenebri	3/11/2007	55	5	161	2	3
Collarenebri	7/11/2007	134	8	745	4	4
Collarenebri	14/11/2007	701	15	3702	5	10
Collarenebri	28/11/2007	590	14	3321	8	6
Collarenebri	11/12/2007	488	6	1811	5	1
Collarenebri	16/12/2007	7285	33	77482	9	24
Collarenebri	17/01/2008	726	18	10000	16	2
Collarenebri	3/02/2008	4058	11	25107	8	3
Collarenebri	13/02/2008	10631	18	99619	10	8
Collarenebri	1/03/2008	1255	36	16103	4	32
Collarenebri	5/04/2008	75	14	774	10	4
Collarenebri	18/04/2008	78	15	855	9	6
Collarenebri	2/05/2008	95	8	608	6	2
Collarenebri	9/05/2008	110	26	1042	3	23
Collarenebri	5/06/2008	130	18	1232	13	5
Collarenebri	22/06/2008	141	11	1043	4	7
Collarenebri	2/07/2008	80	32	1707	7	25
Collarenebri	2/08/2008	67	26	1143	8	18
Collarenebri	27/08/2008	176	16	1030	11	5
Collarenebri	11/09/2008	255	17	2556	9	8
Collarenebri	27/09/2008	264	13	2265	4	9
Collarenebri	9/10/2008	128	6	572	2	4
Collarenebri	14/10/2008	129	20	1980	10	10
Collarenebri	2/11/2008	168	11	716	3	8

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Collarenebri	12/11/2008	356	19	1848	8	11
Collarenebri	30/11/2008	1241	21	15513	14	7
Collarenebri	20/12/2008	1494	19	18693	10	9
Collarenebri	7/01/2009	1128	18	15977	12	6
Collarenebri	24/01/2009	872	13	6772	4	9
Collarenebri	5/02/2009	453	9	3137	5	4
Collarenebri	13/02/2009	1151	11	7255	6	5
Collarenebri	23/02/2009	4058	49	40967	5	44
Collarenebri	12/04/2009	86	25	918	9	16
Collarenebri	6/05/2009	15	13	120	7	6
Collarenebri	18/05/2009	454	11	2163	8	3
Collarenebri	28/05/2009	6223	100	74278	8	92
Collarenebri	4/09/2009	26	24	394	4	20
Collarenebri	6/01/2010	887	11	4025	6	5
Collarenebri	16/01/2010	857	11	7357	6	5
Collarenebri	26/01/2010	992	15	7638	5	10
Collarenebri	9/02/2010	1498	7	4803	3	4
Collarenebri	15/02/2010	882	9	4606	6	3
Collarenebri	23/02/2010	25989	118	397748	24	94
Collarenebri	28/06/2010	234	22	2811	4	18
Collarenebri	19/07/2010	19587	126	845857	92	34
Collarenebri	21/11/2010	13175	31	239900	21	10
Collarenebri	21/12/2010	31103	60	949138	44	16
Collarenebri	18/02/2011	1634	19	19725	4	15
Collarenebri	8/03/2011	5668	21	38525	12	9
Collarenebri	28/03/2011	4120	15	32819	7	8
Collarenebri	11/04/2011	925	20	13936	5	15

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Collarenebri	30/04/2011	1006	11	7545	4	7
Collarenebri	10/05/2011	495	23	5754	5	18
Collarenebri	1/06/2011	295	13	2028	4	9
Collarenebri	13/06/2011	153	14	1399	6	8
Collarenebri	26/06/2011	1164	20	11832	7	13
Collarenebri	15/07/2011	707	44	13110	6	38
Collarenebri	27/08/2011	82	4	247	2	2
Collarenebri	30/08/2011	1557	24	18587	16	8
Collarenebri	22/09/2011	1534	19	19847	9	10
Collarenebri	10/10/2011	1574	20	22473	10	10
Collarenebri	29/10/2011	1565	12	15197	5	7
Collarenebri	9/11/2011	1392	14	14167	6	8
Collarenebri	22/11/2011	61718	20	502123	15	5
Collarenebri	11/12/2011	58192	42	1126350	8	34
Collarenebri	21/01/2012	155025	79	1781152	22	57
Collarenebri	8/04/2012	329	13	3523	7	6
Collarenebri	20/04/2012	331	13	3541	6	7
Collarenebri	2/05/2012	547	32	10171	25	7
Collarenebri	2/06/2012	347	19	4883	5	14
Collarenebri	20/06/2012	4233	82	103675	36	46
Collarenebri	9/09/2012	407	23	4686	7	16
Collarenebri	1/10/2012	366	26	3871	11	15
Collarenebri	26/10/2012	65	5	247	3	2
Collarenebri	30/10/2012	201	30	3823	15	15
Collarenebri	28/11/2012	379	16	3580	14	2
Collarenebri	13/12/2012	959	16	6635	7	9
Collarenebri	28/12/2012	439	12	3564	7	5

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Collarenebri	8/01/2013	339	14	2667	3	11
Collarenebri	21/01/2013	516	11	2157	8	3
Collarenebri	31/01/2013	34535	28	360381	17	11
Collarenebri	27/02/2013	17591	100	461718	25	75
Collarenebri	6/06/2013	1210	32	18215	27	5
Collarenebri	7/07/2013	1522	26	27913	9	17
Collarenebri	1/08/2013	1965	32	30200	6	26
Collarenebri	1/09/2013	637	32	8807	3	29
Collarenebri	2/10/2013	105	9	702	3	6
Collarenebri	10/10/2013	65	5	243	3	2
Collarenebri	14/10/2013	80	17	842	5	12
Collarenebri	30/10/2013	834	27	9268	10	17
Collarenebri	25/11/2013	102	5	380	3	2
Collarenebri	29/11/2013	106	7	549	3	4
Collarenebri	5/12/2013	139	17	1635	9	8
Collarenebri	21/12/2013	71	5	284	3	2
Collarenebri	25/12/2013	82	6	377	4	2
Collarenebri	30/12/2013	113	18	665	3	15
Collarenebri	23/01/2014	205	11	1475	4	7
Collarenebri	2/02/2014	285	17	2211	5	12
Collarenebri	18/02/2014	207	22	2489	15	7
Collarenebri	11/03/2014	76	11	615	6	5
Collarenebri	21/03/2014	6286	16	31232	10	6
Collarenebri	5/04/2014	3268	54	28761	5	49
Collarenebri	28/05/2014	57	81	2772	6	75
Collarenebri	16/08/2014	30	22	297	2	20
Collarenebri	12/10/2014	916	20	10433	6	14

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Collarenebri	31/10/2014	164	19	1272	4	15
Collarenebri	1/01/2015	227	10	1484	3	7
Collarenebri	10/01/2015	1325	14	9307	4	10
Collarenebri	23/01/2015	320	9	1824	7	2
Collarenebri	31/01/2015	1587	57	24103	13	44
Collarenebri	28/03/2015	286	11	1461	7	4
Collarenebri	7/04/2015	3522	36	47860	9	27
Collarenebri	12/05/2015	2013	31	27903	8	23
Collarenebri	11/06/2015	410	17	5692	3	14
Collarenebri	27/06/2015	912	26	13126	9	17
Collarenebri	22/07/2015	1008	27	14068	20	7
Collarenebri	17/08/2015	659	19	8879	4	15
Collarenebri	4/09/2015	649	59	17269	8	51
Collarenebri	1/11/2015	64	12	350	3	9
Collarenebri	17/11/2015	374	13	1405	3	10
Collarenebri	2/12/2015	92	13	569	3	10
Collarenebri	14/12/2015	73	18	839	14	4
Collarenebri	31/12/2015	543	13	3771	10	3
Collarenebri	12/01/2016	512	15	5272	4	11
Collarenebri	26/01/2016	904	16	10315	7	9
Collarenebri	10/02/2016	897	37	10813	5	32
Collarenebri	27/03/2016	50	9	249	5	4
Collarenebri	4/04/2016	63	26	817	5	21
Collarenebri	4/05/2016	4	13	34	9	4
Collarenebri	4/06/2016	471	15	2469	5	10
Collarenebri	18/06/2016	338	24	2722	6	18
Collarenebri	11/07/2016	521	8	2497	4	4

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Collarenebri	18/07/2016	1061	33	19996	11	22
Collarenebri	19/08/2016	1030	21	14063	8	13
Collarenebri	8/09/2016	4887	17	40484	11	6
Collarenebri	24/09/2016	12825	40	304830	21	19
Collarenebri	2/11/2016	3423	45	63305	7	38
Collarenebri	16/12/2016	116	9	636	5	4
Collarenebri	24/12/2016	181	4	378	2	2
Collarenebri	27/12/2016	513	21	3992	8	13
Collarenebri	16/01/2017	364	6	1250	3	3
Collarenebri	21/01/2017	307	20	4320	16	4
Collarenebri	9/02/2017	263	5	865	3	2
Collarenebri	13/02/2017	272	12	2088	6	6
Collarenebri	24/02/2017	369	18	4269	9	9
Collarenebri	13/03/2017	343	6	1125	3	3
Collarenebri	18/03/2017	345	6	1390	3	3
Collarenebri	23/03/2017	1172	18	11389	7	11
Collarenebri	9/04/2017	6982	21	69363	10	11
Collarenebri	29/04/2017	1725	35	37957	13	22
Walgett	1/01/1990	3831	19	30381	3	16
Walgett	19/01/1990	2821	29	30829	15	14
Walgett	16/02/1990	4397	36	73561	14	22
Walgett	23/03/1990	5955	18	34816	14	4
Walgett	9/04/1990	21897	12	159010	8	4
Walgett	20/04/1990	33599	36	726545	8	28
Walgett	25/05/1990	14109	39	362557	23	16
Walgett	2/07/1990	12390	26	222047	17	9
Walgett	27/07/1990	29327	49	818907	28	21

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Walgett	13/09/1990	14664	33	276592	7	26
Walgett	15/10/1990	2103	17	27866	7	10
Walgett	31/10/1990	1450	27	20792	5	22
Walgett	26/11/1990	326	10	2472	3	7
Walgett	5/12/1990	266	10	1902	4	6
Walgett	14/12/1990	194	20	2076	7	13
Walgett	2/01/1991	1482	21	13502	13	8
Walgett	22/01/1991	1381	10	9683	7	3
Walgett	31/01/1991	18011	46	443282	19	27
Walgett	17/03/1991	625	8	3919	4	4
Walgett	24/03/1991	613	38	16628	10	28
Walgett	30/04/1991	360	21	6079	6	15
Walgett	20/05/1991	16108	24	174421	18	6
Walgett	12/06/1991	18876	32	226336	13	19
Walgett	13/07/1991	11153	30	141910	14	16
Walgett	11/08/1991	1544	30	19076	4	26
Walgett	9/09/1991	483	41	10609	24	17
Walgett	19/10/1991	292	24	4574	13	11
Walgett	11/11/1991	520	30	10660	19	11
Walgett	10/12/1991	28568	31	356312	12	19
Walgett	9/01/1992	1675	14	16777	9	5
Walgett	22/01/1992	1667	11	11858	6	5
Walgett	1/02/1992	12773	58	250850	28	30
Walgett	29/03/1992	555	70	19488	6	64
Walgett	6/06/1992	312	36	7294	21	15
Walgett	11/07/1992	634	67	15647	49	18
Walgett	15/09/1992	1183	18	12413	6	12

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Walgett	2/10/1992	690	18	6746	3	15
Walgett	19/10/1992	255	14	2292	5	9
Walgett	1/11/1992	1825	18	11871	10	8
Walgett	18/11/1992	1125	19	10131	9	10
Walgett	6/12/1992	611	14	6399	9	5
Walgett	19/12/1992	1269	32	14346	7	25
Walgett	19/01/1993	123	11	1034	9	2
Walgett	29/01/1993	975	14	5509	5	9
Walgett	11/02/1993	226	7	1095	3	4
Walgett	17/02/1993	127	8	660	3	5
Walgett	24/02/1993	254	35	3939	10	25
Walgett	30/03/1993	163	55	2589	4	51
Walgett	1/06/1993	41	8	217	3	5
Walgett	8/06/1993	2459	12	12596	5	7
Walgett	19/06/1993	329	19	3036	3	16
Walgett	7/07/1993	5207	32	44316	15	17
Walgett	7/08/1993	756	11	5364	5	6
Walgett	17/08/1993	494	22	7834	13	9
Walgett	7/09/1993	2054	43	29105	17	26
Walgett	19/10/1993	3705	30	30226	12	18
Walgett	17/11/1993	173	12	1151	3	9
Walgett	28/11/1993	238	20	2406	11	9
Walgett	17/12/1993	1947	25	12921	7	18
Walgett	10/01/1994	39	8	189	3	5
Walgett	17/01/1994	40	15	257	13	2
Walgett	31/01/1994	142	13	1147	5	8
Walgett	12/02/1994	1558	12	6382	9	3

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Walgett	23/02/1994	7231	21	67717	7	14
Walgett	15/03/1994	1598	10	12255	4	6
Walgett	24/03/1994	1616	28	13109	5	23
Walgett	20/04/1994	100	18	714	3	15
Walgett	19/06/1994	133	34	2228	5	29
Walgett	6/01/1995	18	4	40	2	2
Walgett	19/01/1995	19236	42	289603	14	28
Walgett	1/03/1995	4309	49	31454	8	41
Walgett	16/05/1995	911	11	4429	5	6
Walgett	26/05/1995	303	45	2410	3	42
Walgett	13/07/1995	2	3	4	2	1
Walgett	20/11/1995	13821	35	160434	20	15
Walgett	24/12/1995	172	7	1010	4	3
Walgett	30/12/1995	134083	70	2636935	44	26
Walgett	8/03/1996	1204	19	13008	10	9
Walgett	26/03/1996	460	36	9002	5	31
Walgett	30/04/1996	34910	105	625962	32	73
Walgett	12/08/1996	1347	20	16357	6	14
Walgett	31/08/1996	4087	34	68610	13	21
Walgett	3/10/1996	7899	53	179934	27	26
Walgett	24/11/1996	816	14	7844	5	9
Walgett	7/12/1996	8109	54	133309	11	43
Walgett	29/01/1997	29402	27	437545	18	9
Walgett	24/02/1997	35967	85	860073	15	70
Walgett	19/05/1997	639	106	25990	21	85
Walgett	1/09/1997	276	14	2159	9	5
Walgett	14/09/1997	281	23	4357	14	9

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Walgett	6/10/1997	268	8	1535	3	5
Walgett	13/10/1997	1753	13	12305	4	9
Walgett	25/10/1997	629	29	10902	5	24
Walgett	22/11/1997	521	17	6198	10	7
Walgett	8/12/1997	5099	39	66895	15	24
Walgett	15/01/1998	160	10	1185	5	5
Walgett	24/01/1998	298	18	2901	14	4
Walgett	10/02/1998	3702	22	30927	10	12
Walgett	3/03/1998	662	26	7942	4	22
Walgett	28/03/1998	140	24	2045	5	19
Walgett	20/04/1998	2608	64	26677	24	40
Walgett	22/06/1998	7387	28	93461	18	10
Walgett	19/07/1998	97668	47	2527681	34	13
Walgett	3/09/1998	242708	58	4572970	14	44
Walgett	30/10/1998	10145	52	293052	12	40
Walgett	20/12/1998	794	13	7443	4	9
Walgett	1/01/1999	809	29	12937	12	17
Walgett	29/01/1999	2670	18	23557	9	9
Walgett	15/02/1999	2573	16	22513	8	8
Walgett	2/03/1999	14172	43	294688	30	13
Walgett	13/04/1999	4224	53	66472	4	49
Walgett	4/06/1999	913	27	16016	18	9
Walgett	30/06/1999	1225	62	32955	11	51
Walgett	30/08/1999	317	14	3840	4	10
Walgett	12/09/1999	432	15	4617	5	10
Walgett	26/09/1999	2528	28	23441	21	7
Walgett	23/10/1999	9889	70	254268	43	27

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Walgett	31/12/1999	1218	18	12106	11	7
Walgett	17/01/2000	893	20	8190	4	16
Walgett	5/02/2000	299	9	1972	3	6
Walgett	13/02/2000	1126	21	12338	12	9
Walgett	4/03/2000	11482	27	141572	13	14
Walgett	30/03/2000	2072	35	26152	4	31
Walgett	3/05/2000	575	40	12004	13	27
Walgett	11/06/2000	375	29	7432	13	16
Walgett	9/07/2000	323	24	5882	12	12
Walgett	1/08/2000	270	27	5094	11	16
Walgett	27/08/2000	265	8	1494	6	2
Walgett	3/09/2000	570	35	9297	10	25
Walgett	7/10/2000	1573	40	27655	27	13
Walgett	15/11/2000	90622	74	1542521	19	55
Walgett	27/01/2001	83991	50	1073292	17	33
Walgett	17/03/2001	6888	42	151785	33	9
Walgett	27/04/2001	1524	49	53421	10	39
Walgett	14/06/2001	1002	26	18263	14	12
Walgett	9/07/2001	702	16	8372	3	13
Walgett	24/07/2001	4298	47	74992	17	30
Walgett	8/09/2001	798	7	3720	3	4
Walgett	14/09/2001	553	31	9768	5	26
Walgett	14/10/2001	228	9	1679	4	5
Walgett	22/10/2001	438	34	10152	10	24
Walgett	24/11/2001	2059	21	20548	12	9
Walgett	14/12/2001	1931	14	15778	5	9
Walgett	27/12/2001	822	37	9504	5	32

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Walgett	1/02/2002	619	26	9895	12	14
Walgett	26/02/2002	714	42	14950	12	30
Walgett	8/04/2002	648	29	8486	9	20
Walgett	6/05/2002	214	23	3312	11	12
Walgett	28/05/2002	173	35	4164	19	16
Walgett	1/07/2002	104	31	2644	6	25
Walgett	31/07/2002	97	32	1874	4	28
Walgett	31/08/2002	38	20	511	9	11
Walgett	19/09/2002	111	15	992	7	8
Walgett	3/10/2002	204	23	2635	15	8
Walgett	25/10/2002	90	8	500	5	3
Walgett	1/11/2002	90	13	538	3	10
Walgett	28/12/2002	303	18	2631	9	9
Walgett	14/01/2003	74	12	370	4	8
Walgett	18/02/2003	2496	16	12010	14	2
Walgett	5/03/2003	5731	25	79534	10	15
Walgett	29/03/2003	1454	97	49069	25	72
Walgett	3/07/2003	264	49	8212	24	25
Walgett	20/08/2003	251	15	2750	9	6
Walgett	3/09/2003	178	28	1651	4	24
Walgett	3/10/2003	4	6	12	3	3
Walgett	16/10/2003	1315	38	16475	10	28
Walgett	22/11/2003	224	13	1856	5	8
Walgett	4/12/2003	106	14	916	3	11
Walgett	17/12/2003	3406	28	37801	10	18
Walgett	13/01/2004	32296	44	574234	24	20
Walgett	25/02/2004	2305	18	23563	9	9

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Walgett	13/03/2004	13022	63	221419	19	44
Walgett	14/05/2004	172	46	5859	11	35
Walgett	28/06/2004	92	29	1820	7	22
Walgett	26/07/2004	55	36	946	8	28
Walgett	30/08/2004	12	9	60	5	4
Walgett	7/09/2004	67	17	726	10	7
Walgett	23/09/2004	1034	42	15433	6	36
Walgett	3/11/2004	388	23	3732	14	9
Walgett	25/11/2004	60933	64	662582	30	34
Walgett	27/01/2005	1698	43	18695	8	35
Walgett	10/03/2005	199	24	2376	8	16
Walgett	2/04/2005	81	25	953	7	18
Walgett	12/06/2005	22663	94	316846	31	63
Walgett	13/09/2005	640	21	8668	6	15
Walgett	3/10/2005	370	16	4601	4	12
Walgett	18/10/2005	334	13	3134	8	5
Walgett	30/10/2005	368	24	5399	16	8
Walgett	22/11/2005	1354	27	13371	22	5
Walgett	18/12/2005	1192	24	12641	8	16
Walgett	10/01/2006	1308	40	18572	26	14
Walgett	18/02/2006	2309	56	51594	13	43
Walgett	14/04/2006	368	25	4198	4	21
Walgett	8/05/2006	115	32	1622	7	25
Walgett	8/06/2006	138	24	1824	4	20
Walgett	1/07/2006	50	14	540	5	9
Walgett	14/07/2006	45	7	242	3	4
Walgett	20/07/2006	195	39	3118	18	21

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Walgett	27/08/2006	24	19	182	6	13
Walgett	4/11/2006	13	5	40	3	2
Walgett	8/11/2006	115	10	619	4	6
Walgett	17/11/2006	263	25	2639	10	15
Walgett	18/12/2006	452	25	6496	9	16
Walgett	11/01/2007	109	12	753	4	8
Walgett	22/01/2007	58	12	444	6	6
Walgett	2/02/2007	65	10	436	6	4
Walgett	11/02/2007	190	14	1091	3	11
Walgett	24/02/2007	1031	18	5823	5	13
Walgett	13/03/2007	384	43	6829	8	35
Walgett	2/05/2007	1	2	2	1	1
Walgett	19/05/2007	1	2	3	2	0
Walgett	30/05/2007	3	4	11	1	3
Walgett	5/06/2007	10	5	38	2	3
Walgett	9/06/2007	609	24	3512	16	8
Walgett	2/07/2007	182	14	1913	7	7
Walgett	15/07/2007	1108	48	21170	6	42
Walgett	31/08/2007	1527	9	6781	4	5
Walgett	8/09/2007	1507	37	23975	6	31
Walgett	14/10/2007	98	15	1046	9	6
Walgett	28/10/2007	105	17	650	4	13
Walgett	13/11/2007	404	20	2776	10	10
Walgett	2/12/2007	400	14	3028	8	6
Walgett	15/12/2007	10664	35	116576	16	19
Walgett	18/01/2008	9266	79	157662	40	39
Walgett	5/04/2008	102	20	1301	5	15

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Walgett	24/04/2008	54	15	661	9	6
Walgett	8/05/2008	79	14	684	4	10
Walgett	21/05/2008	15	13	130	4	9
Walgett	2/06/2008	27	6	98	4	2
Walgett	7/06/2008	86	10	439	5	5
Walgett	16/06/2008	156	56	4463	9	47
Walgett	10/08/2008	46	15	492	7	8
Walgett	24/08/2008	35	6	160	4	2
Walgett	29/08/2008	167	21	1589	13	8
Walgett	18/09/2008	184	14	1754	7	7
Walgett	1/10/2008	539	33	5098	12	21
Walgett	2/11/2008	147	17	1152	8	9
Walgett	18/11/2008	196	18	1307	6	12
Walgett	5/12/2008	3478	16	25359	8	8
Walgett	20/12/2008	4413	23	44170	8	15
Walgett	11/01/2009	1328	30	23692	6	24
Walgett	9/02/2009	7844	64	102442	15	49
Walgett	13/04/2009	45	8	290	5	3
Walgett	20/04/2009	57	20	535	6	14
Walgett	20/05/2009	2	3	4	2	1
Walgett	22/05/2009	2786	118	59086	17	101
Walgett	24/09/2009	2	2	3	1	1
Walgett	29/09/2009	39	13	248	3	10
Walgett	6/11/2009	272	14	1405	3	11
Walgett	27/12/2009	18276	34	254124	19	15
Walgett	29/01/2010	712	14	7213	4	10
Walgett	11/02/2010	1813	23	24336	7	16

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Walgett	5/03/2010	32321	120	477490	19	101
Walgett	2/07/2010	198	25	2718	5	20
Walgett	26/07/2010	25818	102	889456	90	12
Walgett	4/11/2010	21226	22	347085	9	13
Walgett	25/11/2010	46572	51	1427518	28	23
Walgett	14/01/2011	40263	57	1021390	25	32
Walgett	11/03/2011	4666	21	38172	12	9
Walgett	31/03/2011	3785	33	46185	7	26
Walgett	2/05/2011	886	27	13530	6	21
Walgett	28/05/2011	388	21	5575	12	9
Walgett	17/06/2011	1446	33	18546	19	14
Walgett	19/07/2011	942	25	15146	5	20
Walgett	12/08/2011	713	23	9633	5	18
Walgett	3/09/2011	1752	35	41212	21	14
Walgett	7/10/2011	3367	13	31756	8	5
Walgett	19/10/2011	3822	14	39622	6	8
Walgett	1/11/2011	2009	25	35950	10	15
Walgett	25/11/2011	99817	58	2848219	27	31
Walgett	21/01/2012	240966	96	3454603	25	71
Walgett	25/04/2012	890	18	11191	11	7
Walgett	12/05/2012	1061	22	14983	7	15
Walgett	2/06/2012	1101	13	9085	10	3
Walgett	14/06/2012	1491	30	22735	4	26
Walgett	13/07/2012	12401	87	263145	12	75
Walgett	7/10/2012	317	28	5147	9	19
Walgett	3/11/2012	147	34	3401	16	18
Walgett	6/12/2012	39	9	222	3	6

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Walgett	14/12/2012	48	11	289	4	7
Walgett	24/12/2012	176	9	909	4	5
Walgett	1/01/2013	251	30	4130	7	23
Walgett	30/01/2013	43891	36	549005	22	14
Walgett	6/03/2013	28315	98	697146	23	75
Walgett	11/06/2013	1063	30	15859	25	5
Walgett	10/07/2013	1407	18	18612	10	8
Walgett	27/07/2013	1814	40	36491	14	26
Walgett	4/09/2013	503	46	10224	5	41
Walgett	19/10/2013	76	15	731	6	9
Walgett	2/11/2013	35	7	202	3	4
Walgett	8/11/2013	400	22	5306	5	17
Walgett	29/11/2013	195	13	1573	8	5
Walgett	11/12/2013	145	14	1465	11	3
Walgett	24/12/2013	149	9	819	3	6
Walgett	1/01/2014	51	27	498	6	21
Walgett	27/01/2014	218	11	1177	6	5
Walgett	6/02/2014	279	18	2193	5	13
Walgett	23/02/2014	211	12	1544	8	4
Walgett	6/03/2014	166	15	1633	5	10
Walgett	20/03/2014	8536	74	78088	17	57
Walgett	1/06/2014	95	41	2283	15	26
Walgett	11/07/2014	28	37	484	7	30
Walgett	16/08/2014	9	26	77	4	22
Walgett	18/10/2014	582	39	8367	7	32
Walgett	5/01/2015	858	24	7088	12	12
Walgett	28/01/2015	274	9	1840	4	5

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Walgett	5/02/2015	1629	53	23210	12	41
Walgett	8/04/2015	3655	39	47806	13	26
Walgett	16/05/2015	1294	30	19720	7	23
Walgett	14/06/2015	373	18	5609	9	9
Walgett	1/07/2015	607	33	12405	8	25
Walgett	2/08/2015	792	15	8146	11	4
Walgett	16/08/2015	711	24	12756	8	16
Walgett	8/09/2015	653	56	16964	16	40
Walgett	2/11/2015	298	12	1481	5	7
Walgett	13/11/2015	308	10	1491	4	6
Walgett	22/11/2015	183	15	922	3	12
Walgett	13/12/2015	21	8	80	2	6
Walgett	31/12/2015	659	17	4744	9	8
Walgett	16/01/2016	388	12	3443	4	8
Walgett	27/01/2016	2371	19	19290	3	16
Walgett	14/02/2016	634	33	8001	3	30
Walgett	17/03/2016	3	4	7	2	2
Walgett	6/06/2016	1171	14	7248	8	6
Walgett	19/06/2016	1457	26	17981	14	12
Walgett	14/07/2016	989	27	19820	16	11
Walgett	9/08/2016	3658	31	45079	28	3
Walgett	8/09/2016	21805	106	931759	32	74
Walgett	22/12/2016	484	29	5188	18	11
Walgett	19/01/2017	206	8	964	5	3
Walgett	26/01/2017	215	20	3111	15	5
Walgett	14/02/2017	143	6	674	4	2
Walgett	19/02/2017	432	27	6712	21	6

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Walgett	17/03/2017	678	13	4751	8	5
Walgett	29/03/2017	756	11	5154	5	6
Walgett	8/04/2017	7439	25	72397	14	11
Walgett	2/05/2017	1717	59	50543	14	45
Brewarrina	1/01/1990	5914	26	48215	6	20
Brewarrina	26/01/1990	2000	27	26668	13	14
Brewarrina	21/02/1990	3610	39	69144	16	23
Brewarrina	31/03/1990	31334	99	1737206	39	60
Brewarrina	7/07/1990	36231	195	2236677	59	136
Brewarrina	17/01/1991	12614	109	389317	42	67
Brewarrina	5/05/1991	10809	45	148437	38	7
Brewarrina	18/06/1991	12791	30	194811	12	18
Brewarrina	17/07/1991	9786	73	186830	14	59
Brewarrina	27/09/1991	512	30	8849	12	18
Brewarrina	26/10/1991	570	46	12847	43	3
Brewarrina	10/12/1991	16619	36	255530	20	16
Brewarrina	14/01/1992	1118	25	21503	19	6
Brewarrina	7/02/1992	10299	99	268435	27	72
Brewarrina	15/05/1992	281	30	5166	18	12
Brewarrina	13/06/1992	376	39	9218	17	22
Brewarrina	21/07/1992	171	11	1337	8	3
Brewarrina	31/07/1992	507	49	12770	37	12
Brewarrina	17/09/1992	759	22	9952	11	11
Brewarrina	8/10/1992	517	31	9345	7	24
Brewarrina	7/11/1992	1216	22	13090	13	9
Brewarrina	28/11/1992	1019	20	11726	6	14
Brewarrina	17/12/1992	1334	8	5298	3	5

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Brewarrina	24/12/1992	920	11	6864	8	3
Brewarrina	3/01/1993	637	28	6747	7	21
Brewarrina	30/01/1993	642	34	8746	11	23
Brewarrina	4/03/1993	171	24	3618	7	17
Brewarrina	27/03/1993	171	64	4802	4	60
Brewarrina	29/05/1993	125	15	714	5	10
Brewarrina	12/06/1993	1360	35	12987	7	28
Brewarrina	16/07/1993	3001	30	32047	10	20
Brewarrina	14/08/1993	590	17	8512	7	10
Brewarrina	30/08/1993	555	11	5454	4	7
Brewarrina	9/09/1993	2172	45	58565	27	18
Brewarrina	23/10/1993	4449	43	72510	13	30
Brewarrina	4/12/1993	908	20	10728	8	12
Brewarrina	23/12/1993	1071	51	9362	6	45
Brewarrina	11/02/1994	4539	37	49324	23	14
Brewarrina	19/03/1994	1138	100	22834	15	85
Brewarrina	26/06/1994	68	26	1181	16	10
Brewarrina	21/07/1994	68	60	1588	5	55
Brewarrina	18/09/1994	38	55	1096	9	46
Brewarrina	11/11/1994	22060	116	469141	87	29
Brewarrina	6/03/1995	3041	29	29496	7	22
Brewarrina	3/04/1995	35	10	213	4	6
Brewarrina	12/04/1995	145	11	428	4	7
Brewarrina	22/04/1995	30	18	241	12	6
Brewarrina	9/05/1995	16	5	65	3	2
Brewarrina	13/05/1995	337	6	551	5	1
Brewarrina	18/05/1995	965	29	13232	8	21

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Brewarrina	15/06/1995	146	165	4196	4	161
Brewarrina	26/11/1995	9837	36	140641	18	18
Brewarrina	31/12/1995	512	5	1394	3	2
Brewarrina	4/01/1996	384	9	2120	2	7
Brewarrina	12/01/1996	62133	67	1493647	39	28
Brewarrina	18/03/1996	1273	37	24497	5	32
Brewarrina	23/04/1996	1088	11	5507	9	2
Brewarrina	3/05/1996	20997	107	655493	37	70
Brewarrina	17/08/1996	1357	21	23883	11	10
Brewarrina	6/09/1996	5044	33	98008	11	22
Brewarrina	8/10/1996	8911	54	241752	26	28
Brewarrina	30/11/1996	924	14	10727	6	8
Brewarrina	13/12/1996	7596	57	145082	13	44
Brewarrina	7/02/1997	23359	90	942136	42	48
Brewarrina	7/05/1997	558	20	8653	11	9
Brewarrina	26/05/1997	898	51	23944	21	30
Brewarrina	15/07/1997	303	49	9562	7	42
Brewarrina	1/09/1997	182	9	865	3	6
Brewarrina	9/09/1997	288	15	2448	9	6
Brewarrina	23/09/1997	1000	26	9473	22	4
Brewarrina	18/10/1997	1339	29	21332	6	23
Brewarrina	15/11/1997	605	15	7037	6	9
Brewarrina	29/11/1997	704	17	9257	13	4
Brewarrina	15/12/1997	4480	54	68529	14	40
Brewarrina	6/02/1998	2466	60	32988	20	40
Brewarrina	6/04/1998	95	15	1098	5	10
Brewarrina	20/04/1998	478	6	1166	4	2

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Brewarrina	25/04/1998	454	18	4646	6	12
Brewarrina	12/05/1998	1811	41	23441	7	34
Brewarrina	21/06/1998	421	9	2821	3	6
Brewarrina	29/06/1998	6299	25	78377	15	10
Brewarrina	23/07/1998	87524	50	2375782	27	23
Brewarrina	10/09/1998	118508	125	3627510	14	111
Brewarrina	12/01/1999	846	22	12925	7	15
Brewarrina	2/02/1999	1669	21	19500	11	10
Brewarrina	22/02/1999	1813	18	23259	6	12
Brewarrina	11/03/1999	13276	36	296701	28	8
Brewarrina	15/04/1999	12006	56	205843	7	49
Brewarrina	9/06/1999	1280	16	11413	2	14
Brewarrina	24/06/1999	1174	75	52332	24	51
Brewarrina	6/09/1999	495	27	10735	19	8
Brewarrina	2/10/1999	1295	28	17565	20	8
Brewarrina	29/10/1999	9367	58	284587	41	17
Brewarrina	25/12/1999	2021	49	57718	11	38
Brewarrina	11/02/2000	277	13	2653	4	9
Brewarrina	23/02/2000	162	6	686	2	4
Brewarrina	28/02/2000	1010	12	8715	4	8
Brewarrina	10/03/2000	10908	37	206690	11	26
Brewarrina	15/04/2000	8161	185	504674	37	148
Brewarrina	16/10/2000	63840	107	1597857	60	47
Brewarrina	30/01/2001	28182	53	668586	27	26
Brewarrina	23/03/2001	6691	91	217567	30	61
Brewarrina	21/06/2001	1114	36	31028	13	23
Brewarrina	26/07/2001	4163	50	83452	20	30

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Brewarrina	13/09/2001	817	8	5512	5	3
Brewarrina	20/09/2001	922	39	22385	8	31
Brewarrina	28/10/2001	634	35	14221	12	23
Brewarrina	1/12/2001	1059	34	23439	11	23
Brewarrina	3/01/2002	609	38	8659	5	33
Brewarrina	9/02/2002	833	66	30966	35	31
Brewarrina	15/04/2002	548	31	9941	9	22
Brewarrina	15/05/2002	287	24	4641	10	14
Brewarrina	7/06/2002	235	98	11250	17	81
Brewarrina	12/09/2002	178	29	2885	14	15
Brewarrina	10/10/2002	143	29	2324	16	13
Brewarrina	7/11/2002	27	68	682	9	59
Brewarrina	13/01/2003	9	51	348	10	41
Brewarrina	4/03/2003	5363	34	79704	16	18
Brewarrina	6/04/2003	1673	94	54587	23	71
Brewarrina	8/07/2003	322	47	9159	27	20
Brewarrina	23/08/2003	191	5	749	3	2
Brewarrina	27/08/2003	212	28	3423	10	18
Brewarrina	23/09/2003	41	14	294	3	11
Brewarrina	6/10/2003	33	10	170	5	5
Brewarrina	15/10/2003	44	13	251	4	9
Brewarrina	27/10/2003	915	36	13543	6	30
Brewarrina	1/12/2003	300	24	2948	7	17
Brewarrina	24/12/2003	2642	28	34263	9	19
Brewarrina	20/01/2004	18959	46	379402	26	20
Brewarrina	5/03/2004	1626	12	14743	6	6
Brewarrina	16/03/2004	9560	45	190193	20	25

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Brewarrina	29/04/2004	737	26	8785	2	24
Brewarrina	24/05/2004	258	84	9007	4	80
Brewarrina	15/08/2004	45	41	613	2	39
Brewarrina	24/09/2004	738	58	13040	13	45
Brewarrina	20/11/2004	276	15	2103	6	9
Brewarrina	4/12/2004	24917	62	417362	31	31
Brewarrina	3/02/2005	1046	49	16692	6	43
Brewarrina	23/03/2005	201	24	1888	6	18
Brewarrina	15/04/2005	37	58	758	6	52
Brewarrina	11/06/2005	12970	102	241438	39	63
Brewarrina	20/09/2005	565	38	14284	7	31
Brewarrina	27/10/2005	306	14	3019	6	8
Brewarrina	9/11/2005	538	29	8302	18	11
Brewarrina	7/12/2005	921	21	12116	13	8
Brewarrina	27/12/2005	861	29	13021	5	24
Brewarrina	24/01/2006	831	33	14173	19	14
Brewarrina	25/02/2006	1191	85	42702	10	75
Brewarrina	20/05/2006	173	31	3652	23	8
Brewarrina	19/06/2006	222	24	3017	3	21
Brewarrina	12/07/2006	151	21	1617	5	16
Brewarrina	1/08/2006	155	44	3045	16	28
Brewarrina	5/01/2007	225	28	2783	5	23
Brewarrina	1/02/2007	18	33	332	2	31
Brewarrina	5/03/2007	431	18	2794	6	12
Brewarrina	22/03/2007	279	37	5754	9	28
Brewarrina	27/04/2007	52	22	405	3	19
Brewarrina	18/05/2007	138	29	568	2	27

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Brewarrina	15/06/2007	557	27	4196	18	9
Brewarrina	11/07/2007	314	11	2396	6	5
Brewarrina	21/07/2007	1001	47	21282	8	39
Brewarrina	5/09/2007	864	9	4929	5	4
Brewarrina	13/09/2007	1281	42	23332	9	33
Brewarrina	24/10/2007	138	23	1186	2	21
Brewarrina	15/11/2007	207	13	522	11	2
Brewarrina	27/11/2007	631	16	3102	5	11
Brewarrina	12/12/2007	22248	37	321586	26	11
Brewarrina	17/01/2008	2040	16	19378	3	13
Brewarrina	1/02/2008	8220	50	166413	28	22
Brewarrina	21/03/2008	1343	59	10295	3	56
Brewarrina	18/05/2008	60	32	1175	5	27
Brewarrina	18/06/2008	110	63	3777	16	47
Brewarrina	19/08/2008	21	4	61	2	2
Brewarrina	22/08/2008	48	17	458	10	7
Brewarrina	7/09/2008	94	22	1336	12	10
Brewarrina	28/09/2008	277	16	2014	9	7
Brewarrina	13/10/2008	290	19	3094	7	12
Brewarrina	31/10/2008	79	14	928	4	10
Brewarrina	13/11/2008	191	16	1261	7	9
Brewarrina	28/11/2008	105	15	906	7	8
Brewarrina	12/12/2008	2001	14	14661	5	9
Brewarrina	25/12/2008	2753	51	50348	7	44
Brewarrina	13/02/2009	679	3	1404	2	1
Brewarrina	15/02/2009	9347	56	137947	11	45
Brewarrina	11/04/2009	100	14	652	3	11

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Brewarrina	24/04/2009	125	25	1838	7	18
Brewarrina	18/05/2009	288	10	748	3	7
Brewarrina	27/05/2009	3588	100	70524	15	85
Brewarrina	3/09/2009	102	113	1572	2	111
Brewarrina	24/12/2009	27504	43	676139	26	17
Brewarrina	4/02/2010	1371	13	11003	3	10
Brewarrina	16/02/2010	2485	23	42491	11	12
Brewarrina	10/03/2010	19523	114	397489	24	90
Brewarrina	1/07/2010	19	6	88	3	3
Brewarrina	6/07/2010	184	23	2024	9	14
Brewarrina	28/07/2010	17389	126	1230333	97	29
Brewarrina	30/11/2010	59767	108	2911597	29	79
Brewarrina	17/03/2011	4704	19	51993	9	10
Brewarrina	4/04/2011	3882	65	72781	7	58
Brewarrina	7/06/2011	570	29	12858	13	16
Brewarrina	5/07/2011	1086	45	31497	6	39
Brewarrina	18/08/2011	740	18	10226	6	12
Brewarrina	4/09/2011	3704	88	143142	55	33
Brewarrina	30/11/2011	56076	59	1716800	33	26
Brewarrina	27/01/2012	110429	140	2697366	29	111
Brewarrina	14/06/2012	1986	24	39940	11	13
Brewarrina	7/07/2012	11507	103	429421	30	73
Brewarrina	17/10/2012	647	65	30232	36	29
Brewarrina	20/12/2012	412	23	6704	9	14
Brewarrina	11/01/2013	238	27	4649	13	14
Brewarrina	6/02/2013	19160	34	313642	25	9
Brewarrina	11/03/2013	13973	101	410852	25	76

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Brewarrina	19/06/2013	922	30	17422	24	6
Brewarrina	18/07/2013	1282	56	46076	31	25
Brewarrina	11/09/2013	467	34	8139	7	27
Brewarrina	14/10/2013	90	17	909	7	10
Brewarrina	30/10/2013	48	19	471	7	12
Brewarrina	17/11/2013	334	24	4834	7	17
Brewarrina	10/12/2013	164	15	1598	6	9
Brewarrina	24/12/2013	99	12	860	7	5
Brewarrina	4/01/2014	158	15	1034	7	8
Brewarrina	18/01/2014	119	24	1660	9	15
Brewarrina	10/02/2014	104	7	549	4	3
Brewarrina	16/02/2014	327	13	2143	5	8
Brewarrina	28/02/2014	129	5	467	2	3
Brewarrina	4/03/2014	311	29	4903	7	22
Brewarrina	1/04/2014	89	4	278	3	1
Brewarrina	4/04/2014	3792	61	42677	6	55
Brewarrina	3/06/2014	119	72	4325	15	57
Brewarrina	13/08/2014	108	36	1737	5	31
Brewarrina	17/09/2014	48	15	544	6	9
Brewarrina	1/10/2014	28	28	468	5	23
Brewarrina	28/10/2014	362	26	3331	7	19
Brewarrina	22/11/2014	20	42	464	3	39
Brewarrina	27/01/2015	249	12	1348	5	7
Brewarrina	7/02/2015	103	7	481	3	4
Brewarrina	13/02/2015	1036	66	16237	11	55
Brewarrina	19/04/2015	2240	34	35175	7	27
Brewarrina	22/05/2015	941	28	17325	8	20

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Brewarrina	18/06/2015	673	40	20586	19	21
Brewarrina	27/07/2015	796	16	9528	8	8
Brewarrina	11/08/2015	710	37	20790	15	22
Brewarrina	16/09/2015	556	36	13873	17	19
Brewarrina	21/10/2015	173	12	1331	3	9
Brewarrina	1/11/2015	93	4	292	3	1
Brewarrina	4/11/2015	914	20	4999	3	17
Brewarrina	23/11/2015	173	10	1137	3	7
Brewarrina	2/12/2015	79	44	767	4	40
Brewarrina	14/01/2016	929	127	20535	22	105
Brewarrina	4/06/2016	6119	55	115680	32	23
Brewarrina	28/07/2016	4916	39	117231	21	18
Brewarrina	4/09/2016	23319	126	1303233	51	75
Brewarrina	7/01/2017	485	21	5893	9	12
Brewarrina	27/01/2017	281	10	2099	4	6
Brewarrina	5/02/2017	293	24	3994	5	19
Brewarrina	28/02/2017	623	27	5726	22	5
Brewarrina	26/03/2017	603	23	9852	14	9
Brewarrina	17/04/2017	3614	74	75125	9	65
Bourke	1/01/1990	3509	35	52522	13	22
Bourke	4/02/1990	1741	22	18944	9	13
Bourke	25/02/1990	4061	39	73334	14	25
Bourke	4/04/1990	137220	103	5246308	39	64
Bourke	15/07/1990	70480	171	3613063	62	109
Bourke	1/01/1991	515	16	5727	3	13
Bourke	16/01/1991	538	20	7501	17	3
Bourke	4/02/1991	14703	55	435934	23	32

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Bourke	30/03/1991	846	45	31211	16	29
Bourke	13/05/1991	690	18	10654	10	8
Bourke	30/05/1991	11402	23	145267	16	7
Bourke	21/06/1991	14711	30	228550	13	17
Bourke	20/07/1991	9900	50	180970	14	36
Bourke	7/09/1991	600	53	19839	7	46
Bourke	29/10/1991	18109	83	290551	66	17
Bourke	19/01/1992	527	11	4381	7	4
Bourke	29/01/1992	1149	14	7392	12	2
Bourke	11/02/1992	17479	132	429249	28	104
Bourke	21/06/1992	494	37	11541	12	25
Bourke	27/07/1992	345	29	7003	18	11
Bourke	24/08/1992	486	32	9366	18	14
Bourke	24/09/1992	845	17	8393	9	8
Bourke	10/10/1992	470	38	8170	6	32
Bourke	16/11/1992	796	12	5946	8	4
Bourke	27/11/1992	726	11	5619	2	9
Bourke	7/12/1992	793	12	5711	3	9
Bourke	18/12/1992	3481	15	23454	6	9
Bourke	1/01/1993	2608	40	45038	19	21
Bourke	9/02/1993	496	9	3015	6	3
Bourke	17/02/1993	906	24	9193	7	17
Bourke	12/03/1993	167	16	1624	5	11
Bourke	27/03/1993	179	5	432	3	2
Bourke	31/03/1993	248	10	1209	4	6
Bourke	9/04/1993	74	16	443	6	10
Bourke	24/04/1993	15	11	118	6	5

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Bourke	4/05/1993	15	5	56	3	2
Bourke	8/05/1993	19	23	298	7	16
Bourke	30/05/1993	182	6	485	4	2
Bourke	4/06/1993	180	9	1043	4	5
Bourke	12/06/1993	979	40	13791	14	26
Bourke	21/07/1993	2128	14	15243	8	6
Bourke	3/08/1993	745	14	6295	3	11
Bourke	16/08/1993	776	20	9374	7	13
Bourke	4/09/1993	499	7	2828	5	2
Bourke	10/09/1993	526	9	3484	4	5
Bourke	18/09/1993	3304	35	54062	24	11
Bourke	22/10/1993	6063	47	135805	16	31
Bourke	7/12/1993	2788	10	20577	8	2
Bourke	16/12/1993	5670	23	63815	17	6
Bourke	7/01/1994	461	8	2526	3	5
Bourke	14/01/1994	272	28	2471	4	24
Bourke	14/02/1994	102	6	214	2	4
Bourke	19/02/1994	256	8	1180	4	4
Bourke	26/02/1994	5904	99	223680	49	50
Bourke	7/06/1994	3	2	4	2	0
Bourke	11/07/1994	27	49	682	9	40
Bourke	17/01/1995	29868	48	795126	18	30
Bourke	5/03/1995	1561	44	20474	12	32
Bourke	17/04/1995	494	21	4905	8	13
Bourke	7/05/1995	1517	25	15040	20	5
Bourke	31/05/1995	991	67	11243	3	64
Bourke	5/08/1995	3	7	15	4	3

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Bourke	17/08/1995	3	3	6	2	1
Bourke	6/12/1995	10990	26	158075	14	12
Bourke	31/12/1995	3964	16	48950	12	4
Bourke	15/01/1996	80357	66	2207660	43	23
Bourke	20/03/1996	999	40	24206	9	31
Bourke	28/04/1996	30959	119	1549313	52	67
Bourke	24/08/1996	4712	50	116741	28	22
Bourke	12/10/1996	8589	55	212091	25	30
Bourke	5/12/1996	775	13	7692	7	6
Bourke	17/12/1996	6374	50	113711	13	37
Bourke	4/02/1997	33534	125	1385506	52	73
Bourke	8/06/1997	789	85	33312	11	74
Bourke	31/08/1997	196	18	2429	4	14
Bourke	17/09/1997	238	13	2244	7	6
Bourke	29/09/1997	596	17	5602	13	4
Bourke	15/10/1997	771	8	4336	4	4
Bourke	22/10/1997	982	46	21156	10	36
Bourke	6/12/1997	398	14	4080	10	4
Bourke	19/12/1997	3396	18	29386	12	6
Bourke	5/01/1998	1446	9	6547	3	6
Bourke	13/01/1998	1055	33	20239	10	23
Bourke	14/02/1998	923	21	9006	16	5
Bourke	6/03/1998	638	10	5250	6	4
Bourke	15/03/1998	845	37	12094	6	31
Bourke	20/04/1998	1923	28	17715	6	22
Bourke	17/05/1998	613	8	3189	5	3
Bourke	24/05/1998	1293	29	18494	7	22

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Bourke	21/06/1998	5326	30	67407	25	5
Bourke	20/07/1998	126799	59	3529654	40	19
Bourke	16/09/1998	231248	58	5719688	15	43
Bourke	14/11/1998	14800	13	159995	1	12
Bourke	26/11/1998	10950	51	199457	3	48
Bourke	15/01/1999	1012	25	15870	17	8
Bourke	8/02/1999	1639	17	20841	15	2
Bourke	24/02/1999	4088	19	43589	7	12
Bourke	14/03/1999	21714	90	768188	29	61
Bourke	11/06/1999	1467	18	19868	6	12
Bourke	28/06/1999	1312	58	48287	23	35
Bourke	24/08/1999	638	32	17306	4	28
Bourke	24/09/1999	608	22	11019	6	16
Bourke	15/10/1999	1014	19	13440	12	7
Bourke	2/11/1999	11333	51	313042	39	12
Bourke	22/12/1999	3565	25	70447	10	15
Bourke	15/01/2000	1535	7	8417	2	5
Bourke	21/01/2000	1430	38	28371	9	29
Bourke	27/02/2000	1627	13	10382	11	2
Bourke	10/03/2000	23732	33	435262	14	19
Bourke	11/04/2000	10181	145	584422	45	100
Bourke	2/09/2000	2252	49	77804	5	44
Bourke	20/10/2000	76217	104	2237890	64	40
Bourke	31/01/2001	37806	58	871166	34	24
Bourke	29/03/2001	6322	62	167848	27	35
Bourke	29/05/2001	1294	68	62581	12	56
Bourke	4/08/2001	3069	45	64011	13	32

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Bourke	17/09/2001	788	46	24599	14	32
Bourke	1/11/2001	507	38	13173	11	27
Bourke	8/12/2001	749	66	24383	13	53
Bourke	11/02/2002	524	24	6488	16	8
Bourke	6/03/2002	1114	45	25844	14	31
Bourke	19/04/2002	664	31	10517	9	22
Bourke	19/05/2002	244	26	4188	11	15
Bourke	13/06/2002	205	97	9131	18	79
Bourke	17/09/2002	109	29	1620	15	14
Bourke	15/10/2002	68	31	989	16	15
Bourke	15/03/2003	4934	27	69208	8	19
Bourke	10/04/2003	1452	63	51279	29	34
Bourke	11/06/2003	346	43	8735	7	36
Bourke	23/07/2003	186	28	3985	22	6
Bourke	19/08/2003	167	13	1561	6	7
Bourke	31/08/2003	206	57	3883	10	47
Bourke	3/11/2003	621	37	8593	6	31
Bourke	9/12/2003	64	12	565	4	8
Bourke	20/12/2003	2621	31	33339	15	16
Bourke	19/01/2004	21586	51	441702	30	21
Bourke	9/03/2004	10485	52	238764	31	21
Bourke	29/04/2004	1722	32	19781	4	28
Bourke	30/05/2004	414	57	11636	11	46
Bourke	25/07/2004	136	35	2818	3	32
Bourke	28/08/2004	52	34	990	4	30
Bourke	30/09/2004	597	52	10563	13	39
Bourke	20/11/2004	823	9	2557	4	5

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Bourke	28/11/2004	187	9	1276	6	3
Bourke	6/12/2004	192	5	734	2	3
Bourke	10/12/2004	25558	60	436615	31	29
Bourke	7/02/2005	963	51	16341	6	45
Bourke	29/03/2005	68	34	1044	9	25
Bourke	1/05/2005	21	32	553	14	18
Bourke	1/06/2005	42	23	505	14	9
Bourke	23/06/2005	252	11	927	7	4
Bourke	3/07/2005	12740	85	224928	20	65
Bourke	25/09/2005	493	53	15142	7	46
Bourke	16/11/2005	346	28	5097	15	13
Bourke	13/12/2005	805	16	7369	12	4
Bourke	28/12/2005	1292	35	18219	3	32
Bourke	31/01/2006	652	30	9495	17	13
Bourke	1/03/2006	909	90	36372	11	79
Bourke	29/05/2006	112	28	2406	11	17
Bourke	25/06/2006	129	20	2087	7	13
Bourke	14/07/2006	110	17	1407	3	14
Bourke	30/07/2006	107	50	3157	23	27
Bourke	5/04/2007	114	23	1310	4	19
Bourke	27/04/2007	37	12	223	2	10
Bourke	12/05/2007	1593	56	14484	13	43
Bourke	6/07/2007	310	14	2512	6	8
Bourke	19/07/2007	799	56	19138	17	39
Bourke	12/09/2007	1094	43	22259	17	26
Bourke	24/10/2007	318	15	1211	3	12
Bourke	7/11/2007	111	15	685	5	10

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Bourke	25/11/2007	765	10	4557	4	6
Bourke	4/12/2007	2052	9	12560	5	4
Bourke	12/12/2007	26300	53	574142	31	22
Bourke	2/02/2008	10317	52	286083	31	21
Bourke	24/03/2008	1416	57	14830	4	53
Bourke	19/05/2008	41	22	662	18	4
Bourke	9/06/2008	101	19	623	3	16
Bourke	27/06/2008	87	66	2967	15	51
Bourke	31/08/2008	18	20	238	2	18
Bourke	24/09/2008	35	12	287	8	4
Bourke	5/10/2008	483	5	922	3	2
Bourke	9/10/2008	236	13	1965	4	9
Bourke	21/10/2008	175	28	2273	6	22
Bourke	17/11/2008	29	7	149	4	3
Bourke	23/11/2008	56	14	406	5	9
Bourke	6/12/2008	14	6	45	3	3
Bourke	13/12/2008	1154	18	10303	10	8
Bourke	30/12/2008	1598	46	42626	5	41
Bourke	13/02/2009	13093	9	53405	3	6
Bourke	21/02/2009	9390	55	140926	9	46
Bourke	16/04/2009	510	19	4225	4	15
Bourke	4/05/2009	303	20	2141	18	2
Bourke	23/05/2009	368	14	3563	4	10
Bourke	5/06/2009	2398	119	69514	10	109
Bourke	27/12/2009	45075	50	1302267	28	22
Bourke	14/02/2010	3397	8	18644	4	4
Bourke	21/02/2010	33817	142	1100301	50	92

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Bourke	12/07/2010	292	23	4965	12	11
Bourke	3/08/2010	22854	123	1570813	96	27
Bourke	3/12/2010	78569	58	2967450	40	18
Bourke	29/01/2011	88007	53	2864081	23	30
Bourke	22/03/2011	6654	14	69969	8	6
Bourke	4/04/2011	8454	31	197752	12	19
Bourke	4/05/2011	7072	57	161697	16	41
Bourke	29/06/2011	1371	72	76934	15	57
Bourke	8/09/2011	2917	87	136194	54	33
Bourke	3/12/2011	74837	64	2686306	40	24
Bourke	4/02/2012	257306	119	5638106	31	88
Bourke	1/06/2012	15588	145	638677	69	76
Bourke	23/10/2012	813	65	36076	39	26
Bourke	26/12/2012	418	23	6677	8	15
Bourke	17/01/2013	242	27	4067	7	20
Bourke	12/02/2013	24014	32	403050	24	8
Bourke	15/03/2013	23646	101	703953	26	75
Bourke	23/06/2013	1116	85	69356	35	50
Bourke	15/09/2013	520	71	14124	8	63
Bourke	24/11/2013	183	42	3497	14	28
Bourke	4/01/2014	28	18	327	8	10
Bourke	29/01/2014	416	41	3420	32	9
Bourke	10/03/2014	419	14	4042	6	8
Bourke	23/03/2014	770	16	6711	7	9
Bourke	7/04/2014	2821	13	19484	7	6
Bourke	19/04/2014	2686	59	37435	7	52
Bourke	16/06/2014	528	58	8413	15	43

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Bourke	12/08/2014	197	44	3638	21	23
Bourke	24/09/2014	50	20	534	2	18
Bourke	10/11/2014	156	25	1488	4	21
Bourke	4/12/2014	17	8	93	3	5
Bourke	26/01/2015	342	11	1957	4	7
Bourke	5/02/2015	2886	64	39337	19	45
Bourke	26/04/2015	1878	44	33858	3	41
Bourke	8/06/2015	595	8	3865	3	5
Bourke	15/06/2015	1363	48	30311	17	31
Bourke	1/08/2015	729	16	8725	7	9
Bourke	16/08/2015	646	38	18436	14	24
Bourke	22/09/2015	445	44	12428	4	40
Bourke	4/11/2015	946	13	6742	6	7
Bourke	16/11/2015	458	36	4259	4	32
Bourke	30/01/2016	648	15	5288	9	6
Bourke	13/02/2016	716	13	6932	7	6
Bourke	25/02/2016	1354	48	14915	4	44
Bourke	18/06/2016	8522	42	179627	21	21
Bourke	29/07/2016	8148	42	237690	24	18
Bourke	8/09/2016	39098	130	2000430	53	77
Bourke	15/01/2017	466	19	6185	7	12
Bourke	2/02/2017	287	35	6202	5	30
Bourke	8/03/2017	1218	22	8700	18	4
Bourke	29/03/2017	628	22	10383	16	6
Bourke	19/04/2017	4732	27	49424	11	16
Bourke	15/05/2017	1074	19	12352	14	5
Wilcannia	1/01/1990	3426	47	68384	22	25

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Wilcannia	16/02/1990	1000	23	14704	8	15
Wilcannia	10/03/1990	3589	33	63905	13	20
Wilcannia	11/04/1990	47965	295	6812089	74	221
Wilcannia	30/01/1991	644	18	8664	6	12
Wilcannia	16/02/1991	11889	100	396108	23	77
Wilcannia	26/05/1991	8869	37	127275	29	8
Wilcannia	1/07/1991	11446	30	219655	12	18
Wilcannia	30/07/1991	9177	119	220748	13	106
Wilcannia	25/11/1991	13325	71	245844	48	23
Wilcannia	3/02/1992	13613	154	414177	46	108
Wilcannia	5/07/1992	463	40	14735	8	32
Wilcannia	13/08/1992	394	26	8396	7	19
Wilcannia	7/09/1992	395	34	9707	16	18
Wilcannia	10/10/1992	638	39	13344	7	32
Wilcannia	17/11/1992	694	8	2786	6	2
Wilcannia	24/11/1992	1922	23	19173	5	18
Wilcannia	16/12/1992	8037	109	208076	9	100
Wilcannia	3/04/1993	187	39	3436	9	30
Wilcannia	11/05/1993	38	14	395	4	10
Wilcannia	24/05/1993	33	29	659	6	23
Wilcannia	21/06/1993	526	35	10808	19	16
Wilcannia	25/07/1993	992	44	21116	16	28
Wilcannia	6/09/1993	490	26	10696	7	19
Wilcannia	1/10/1993	612	9	3935	5	4
Wilcannia	9/10/1993	2918	27	43035	15	12
Wilcannia	4/11/1993	3726	43	73451	14	29
Wilcannia	16/12/1993	685	22	10744	8	14

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Wilcannia	6/01/1994	1609	40	17096	7	33
Wilcannia	14/02/1994	33	5	136	3	2
Wilcannia	18/02/1994	1989	15	13148	7	8
Wilcannia	4/03/1994	5708	159	221048	50	109
Wilcannia	9/08/1994	21	75	622	16	59
Wilcannia	20/01/1995	32	9	92	2	7
Wilcannia	28/01/1995	24544	51	726739	27	24
Wilcannia	19/03/1995	1038	45	23907	9	36
Wilcannia	2/05/1995	419	26	6250	10	16
Wilcannia	27/05/1995	1330	121	28212	11	110
Wilcannia	24/09/1995	7	27	118	3	24
Wilcannia	20/10/1995	2	14	17	5	9
Wilcannia	4/11/1995	2	13	17	3	10
Wilcannia	19/12/1995	8462	25	125745	9	16
Wilcannia	12/01/1996	2609	15	31747	9	6
Wilcannia	26/01/1996	30960	100	1480440	60	40
Wilcannia	4/05/1996	25716	125	1458489	61	64
Wilcannia	5/09/1996	3672	48	103470	29	19
Wilcannia	22/10/1996	7709	69	201069	23	46
Wilcannia	29/12/1996	4029	45	71715	11	34
Wilcannia	11/02/1997	25535	131	1240705	62	69
Wilcannia	21/06/1997	810	80	37300	11	69
Wilcannia	8/09/1997	352	29	6411	7	22
Wilcannia	6/10/1997	301	12	2400	3	9
Wilcannia	17/10/1997	288	12	2767	7	5
Wilcannia	28/10/1997	350	18	5040	6	12
Wilcannia	14/11/1997	424	35	8118	11	24

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Wilcannia	18/12/1997	2082	27	18166	23	4
Wilcannia	13/01/1998	2722	50	32816	5	45
Wilcannia	3/03/1998	268	27	5056	12	15
Wilcannia	29/03/1998	234	30	4902	7	23
Wilcannia	27/04/1998	761	34	13404	10	24
Wilcannia	30/05/1998	502	22	8027	16	6
Wilcannia	20/06/1998	43449	234	4267894	124	110
Wilcannia	8/02/1999	2121	45	54548	36	9
Wilcannia	24/03/1999	16939	90	684519	31	59
Wilcannia	21/06/1999	1574	98	92260	9	89
Wilcannia	26/09/1999	625	36	15856	19	17
Wilcannia	31/10/1999	10800	111	386420	49	62
Wilcannia	18/02/2000	6476	23	62519	10	13
Wilcannia	11/03/2000	20469	43	519132	25	18
Wilcannia	22/04/2000	13456	197	1102152	23	174
Wilcannia	4/11/2000	30336	106	1518044	79	27
Wilcannia	17/02/2001	25855	53	735161	34	19
Wilcannia	10/04/2001	5704	132	234521	25	107
Wilcannia	19/08/2001	1155	91	63938	11	80
Wilcannia	17/11/2001	401	38	11334	11	27
Wilcannia	24/12/2001	478	75	18145	9	66
Wilcannia	8/03/2002	670	59	21806	26	33
Wilcannia	5/05/2002	381	35	7830	8	27
Wilcannia	8/06/2002	141	27	3096	9	18
Wilcannia	4/07/2002	112	97	4690	16	81
Wilcannia	22/12/2002	5	16	62	6	10
Wilcannia	6/01/2003	5	18	72	11	7

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Wilcannia	4/04/2003	3102	28	41675	3	25
Wilcannia	1/05/2003	1191	57	40119	6	51
Wilcannia	26/06/2003	378	46	8620	7	39
Wilcannia	10/08/2003	183	16	1966	6	10
Wilcannia	25/08/2003	191	30	3924	12	18
Wilcannia	23/09/2003	70	29	1134	10	19
Wilcannia	15/01/2004	1843	17	21438	3	14
Wilcannia	31/01/2004	15723	55	352535	28	27
Wilcannia	25/03/2004	9030	45	196191	22	23
Wilcannia	8/05/2004	1137	127	32760	7	120
Wilcannia	1/10/2004	7	5	22	3	2
Wilcannia	9/11/2004	103	18	932	3	15
Wilcannia	2/01/2005	17880	50	336767	17	33
Wilcannia	20/02/2005	569	99	11543	10	89
Wilcannia	29/05/2005	6	24	67	15	9
Wilcannia	21/06/2005	6	8	35	5	3
Wilcannia	28/06/2005	10	8	47	3	5
Wilcannia	5/07/2005	6	8	40	5	3
Wilcannia	12/07/2005	9468	90	180600	20	70
Wilcannia	9/10/2005	252	73	6564	10	63
Wilcannia	9/01/2006	621	49	9989	11	38
Wilcannia	7/03/2006	77	13	645	4	9
Wilcannia	19/03/2006	536	83	19218	13	70
Wilcannia	9/06/2006	29	21	275	3	18
Wilcannia	29/06/2006	9	11	64	3	8
Wilcannia	9/07/2006	346	76	4172	18	58
Wilcannia	21/08/2007	452	8	2845	4	4

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Wilcannia	28/08/2007	408	39	4723	2	37
Wilcannia	5/10/2007	549	53	9193	11	42
Wilcannia	26/11/2007	4	13	30	4	9
Wilcannia	16/12/2007	19620	59	546291	38	21
Wilcannia	12/02/2008	10321	118	339926	29	89
Wilcannia	8/06/2008	8	15	72	3	12
Wilcannia	22/06/2008	74	61	910	7	54
Wilcannia	20/01/2009	1476	25	26946	3	22
Wilcannia	13/02/2009	10095	78	227286	13	65
Wilcannia	1/05/2009	159	29	2140	7	22
Wilcannia	29/05/2009	437	11	2899	5	6
Wilcannia	8/06/2009	411	11	3682	6	5
Wilcannia	18/06/2009	1436	119	57936	17	102
Wilcannia	8/01/2010	27759	56	1112445	35	21
Wilcannia	4/03/2010	26669	147	1406072	59	88
Wilcannia	28/07/2010	2398	23	44406	10	13
Wilcannia	19/08/2010	35023	271	5264210	216	55
Wilcannia	16/05/2011	6688	134	284006	13	121
Wilcannia	26/09/2011	37446	277	4323141	202	75
Wilcannia	28/06/2012	13972	143	637957	52	91
Wilcannia	17/11/2012	811	97	44005	26	71
Wilcannia	21/02/2013	17959	35	343528	25	10
Wilcannia	27/03/2013	20570	113	683318	25	88
Wilcannia	17/07/2013	1090	139	78372	26	113
Wilcannia	2/12/2013	6	13	43	5	8
Wilcannia	26/03/2014	439	12	4050	6	6
Wilcannia	6/04/2014	613	14	6065	6	8

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Wilcannia	19/04/2014	1305	83	42187	17	66
Wilcannia	10/07/2014	297	37	5194	8	29
Wilcannia	15/08/2014	75	19	777	3	16
Wilcannia	2/09/2014	30	16	365	7	9
Wilcannia	17/09/2014	65	39	831	11	28
Wilcannia	5/03/2015	1979	45	24944	4	41
Wilcannia	18/04/2015	26	23	183	2	21
Wilcannia	10/05/2015	1075	25	16602	6	19
Wilcannia	3/06/2015	839	161	63928	23	138
Wilcannia	10/11/2015	406	58	7326	13	45
Wilcannia	14/03/2016	918	53	9262	2	51
Wilcannia	5/05/2016	6	15	64	5	10
Wilcannia	19/05/2016	334	29	3147	5	24
Wilcannia	16/06/2016	53	10	383	5	5
Wilcannia	25/06/2016	5698	48	127169	24	24
Wilcannia	11/08/2016	27978	172	1937453	103	69
Wilcannia	29/01/2017	301	62	6927	9	53
Wilcannia	31/03/2017	536	19	5493	8	11
Wilcannia	18/04/2017	2321	46	37369	23	23

Appendix D - Matched Flow Events per River Reach

Mungindi to Collarenebri

Table 7: Matched flow events at Mungindi and Collarenebri

Event Start Date	Mungindi Peak Flow (ML/d)	Event Start Date	Collarenebri Peak Flow (ML/d)
23/09/1990	1278	26/09/1990	1187
7/10/1990	377	13/10/1990	374
9/11/1990	58	13/11/1990	41
21/11/1990	55	19/11/1990	85
2/12/1990	204	2/12/1990	71
6/12/1990	297	13/12/1990	78
2/01/1991	150	27/12/1990	109
10/03/1991	359	14/03/1991	487
16/03/1991	269	19/03/1991	502
22/05/1991	126	30/05/1991	593
3/06/1991	172	7/06/1991	241
12/06/1991	144	18/06/1991	252
31/07/1991	118	5/08/1991	172
18/08/1991	78	25/08/1991	79
4/09/1991	108	9/09/1991	75
11/10/1991	27	15/10/1991	74
10/12/1991	516	6/12/1991	10426
1/01/1992	302	1/01/1992	488
21/03/1992	278	26/03/1992	273
26/04/1992	98	24/04/1992	157
6/05/1992	71	12/05/1992	136
25/05/1992	338	31/05/1992	323
14/06/1992	324	18/06/1992	274
9/07/1992	146	14/07/1992	170
3/08/1992	187	6/08/1992	176

Event Start Date	Mungindi Peak Flow (ML/d)	Event Start Date	Collarenebri Peak Flow (ML/d)
18/08/1992	688	21/08/1992	496
28/08/1992	202	2/09/1992	127
7/09/1992	1260	8/09/1992	1211
26/09/1992	872	29/09/1992	785
8/10/1992	284	14/10/1992	271
1/11/1992	42	27/10/1992	208
10/11/1992	56	16/11/1992	106
25/11/1992	433	1/12/1992	236
3/12/1992	514	6/12/1992	702
12/12/1992	1535	17/12/1992	1241
25/12/1992	204	29/12/1992	157
7/01/1993	117	9/01/1993	65
24/01/1993	20	25/01/1993	1146
20/02/1993	338	27/02/1993	123
24/02/1993	268	2/03/1993	128
8/03/1993	109	16/03/1993	22
1/06/1993	82	5/06/1993	258
7/06/1993	28	11/06/1993	333
8/07/1993	85	6/07/1993	729
1/08/1993	10	7/08/1993	144
13/09/1993	17	13/09/1993	180
29/09/1993	9	4/10/1993	2
4/10/1993	24	8/10/1993	15
10/10/1993	10	13/10/1993	174
3/11/1993	19	4/11/1993	10
5/11/1993	10	8/11/1993	17
11/11/1993	5	14/11/1993	85
3/12/1993	47	8/12/1993	19

Event Start Date	Mungindi Peak Flow (ML/d)	Event Start Date	Collarenebri Peak Flow (ML/d)
17/12/1993	135	13/12/1993	2361
5/03/1994	187	9/03/1994	445
19/03/1994	588	13/03/1994	1844
15/01/1995	376	19/01/1995	3825
18/01/1995	558	26/01/1995	3387
11/02/1995	260	14/02/1995	2275
24/02/1995	81	25/02/1995	4513
16/03/1995	119	23/03/1995	23
28/03/1995	73	30/03/1995	10
30/10/1995	336	9/11/1995	138
16/12/1995	381	21/12/1995	206
25/12/1995	312	26/12/1995	179
29/02/1996	834	4/03/1996	887
5/08/1996	1674	4/08/1996	1670
28/08/1996	478	28/08/1996	811
17/11/1996	903	20/11/1996	950
25/12/1996	1194	25/12/1996	930
7/01/1997	58	8/01/1997	191
30/03/1997	666	3/04/1997	678
26/04/1997	243	1/05/1997	240
8/05/1997	704	14/05/1997	780
17/06/1997	264	15/06/1997	346
28/06/1997	181	2/07/1997	260
17/08/1997	144	26/08/1997	94
29/08/1997	159	4/09/1997	96
8/09/1997	244	11/09/1997	213
19/09/1997	23	21/09/1997	159
30/09/1997	5	30/09/1997	148

Event Start Date	Mungindi Peak Flow (ML/d)	Event Start Date	Collarenebri Peak Flow (ML/d)
10/10/1997	123	12/10/1997	329
14/10/1997	883	19/10/1997	317
28/10/1997	241	31/10/1997	381
14/11/1997	375	18/11/1997	493
21/11/1997	904	24/11/1997	679
2/12/1997	161	7/12/1997	4992
15/12/1997	632	16/12/1997	3878
11/01/1998	97	10/01/1998	153
17/01/1998	180	18/01/1998	96
27/01/1998	100	26/01/1998	331
8/02/1998	114	6/02/1998	818
19/02/1998	832	18/02/1998	776
26/02/1998	129	27/02/1998	641
13/03/1998	163	21/03/1998	173
7/04/1998	320	8/05/1998	253
16/05/1998	540	21/05/1998	307
23/05/1998	139	28/05/1998	333
3/06/1998	242	8/06/1998	224
19/06/1998	117	26/06/1998	526
18/07/1998	1181	14/07/1998	1319
21/11/1998	1374	24/11/1998	2143
3/12/1998	482	7/12/1998	645
11/12/1998	332	16/12/1998	556
26/12/1998	593	31/12/1998	695
25/01/1999	357	23/01/1999	2762
13/02/1999	929	12/02/1999	3062
14/04/1999	1601	5/04/1999	3158
14/04/1999	1601	16/04/1999	2008

Event Start Date	Mungindi Peak Flow (ML/d)	Event Start Date	Collarenebri Peak Flow (ML/d)
26/05/1999	256	31/05/1999	366
9/06/1999	357	14/06/1999	790
25/06/1999	371	28/06/1999	634
12/07/1999	327	17/07/1999	443
10/08/1999	262	14/08/1999	274
21/08/1999	323	26/08/1999	302
5/09/1999	144	9/09/1999	420
15/09/1999	68	21/09/1999	311
27/09/1999	68	2/10/1999	925
18/12/1999	179	20/12/1999	460
28/12/1999	515	27/12/1999	624
3/01/2000	67	8/01/2000	1245
9/01/2000	1274	13/01/2000	1208
2/02/2000	169	31/01/2000	287
15/02/2000	345	11/02/2000	1517
27/02/2000	410	1/03/2000	13958
29/05/2000	374	31/05/2000	351
3/07/2000	143	25/07/2000	193
30/08/2000	168	23/08/2000	612
18/09/2000	201	23/09/2000	205
10/10/2000	32	3/10/2000	229
19/10/2000	318	21/10/2000	782
24/10/2000	411	30/10/2000	828
18/12/2000	763	24/12/2000	900
5/01/2001	150	2/01/2001	395
9/01/2001	254	14/01/2001	256
16/01/2001	159	21/01/2001	229
6/06/2001	468	8/06/2001	667

Event Start Date	Mungindi Peak Flow (ML/d)	Event Start Date	Collarenebri Peak Flow (ML/d)
24/07/2001	831	22/07/2001	3392
17/08/2001	345	21/08/2001	493
6/09/2001	307	8/09/2001	481
19/09/2001	272	24/09/2001	262
24/11/2001	168	15/11/2001	291
6/12/2001	1261	2/12/2001	1746
22/12/2001	139	24/12/2001	1040
27/12/2001	241	2/01/2002	381
31/01/2002	337	4/02/2002	798
26/02/2002	352	25/02/2002	875
10/03/2002	230	10/03/2002	711
14/03/2002	141	20/03/2002	329
29/03/2002	1867	3/04/2002	1037
15/04/2002	257	27/04/2002	349
1/06/2002	106	25/05/2002	181
29/08/2002	62	26/08/2002	40
17/09/2002	98	15/09/2002	175
22/09/2002	91	27/09/2002	131
1/10/2002	125	2/10/2002	255
14/10/2002	57	19/10/2002	95
19/10/2002	156	19/10/2002	95
19/11/2002	97	24/11/2002	21
2/12/2002	70	4/12/2002	61
6/12/2002	76	16/12/2002	31
12/12/2002	232	20/12/2002	315
18/01/2003	43	22/01/2003	24
27/01/2003	236	3/02/2003	34
9/02/2003	157	7/02/2003	138

Event Start Date	Mungindi Peak Flow (ML/d)	Event Start Date	Collarenebri Peak Flow (ML/d)
20/02/2003	212	17/02/2003	381
2/03/2003	1653	27/02/2003	5262
28/03/2003	656	28/03/2003	1053
5/04/2003	694	9/04/2003	1190
24/04/2003	1053	22/04/2003	1300
18/06/2003	219	26/06/2003	305
10/08/2003	218	14/08/2003	220
28/09/2003	75	5/10/2003	76
7/10/2003	1614	15/10/2003	1549
13/11/2003	241	18/11/2003	257
28/11/2003	125	4/12/2003	108
11/02/2004	1431	15/02/2004	1159
11/03/2004	799	29/02/2004	11406
4/05/2004	160	8/05/2004	172
21/05/2004	117	25/05/2004	174
26/07/2004	16	26/07/2004	57
18/08/2004	41	7/09/2004	77
12/09/2004	1302	18/09/2004	1160
29/10/2004	48	10/11/2004	48
12/11/2004	1361	20/11/2004	1527
24/01/2005	1192	23/01/2005	1865
17/02/2005	61	23/02/2005	54
1/03/2005	120	28/02/2005	262
27/03/2005	18	30/03/2005	60
12/06/2005	19	11/06/2005	84
28/06/2005	1010	5/07/2005	7041
1/08/2005	265	16/08/2005	377
11/09/2005	65	14/09/2005	131

Event Start Date	Mungindi Peak Flow (ML/d)	Event Start Date	Collarenebri Peak Flow (ML/d)
20/09/2005	237	30/09/2005	183
15/10/2005	81	19/10/2005	114
22/10/2005	90	25/10/2005	167
14/11/2005	118	19/11/2005	254
23/11/2005	1275	27/11/2005	1150
14/12/2005	936	14/12/2005	1189
25/12/2005	1070	29/12/2005	849
6/01/2006	121	6/01/2006	379
25/01/2006	1588	17/01/2006	2034
16/02/2006	1725	15/02/2006	3052
25/04/2006	131	2/05/2006	130
11/06/2006	14	21/06/2006	40
25/07/2006	65	28/07/2006	85
10/09/2006	30	12/09/2006	6
22/09/2006	145	22/09/2006	61
28/09/2006	137	30/09/2006	32
4/10/2006	128	6/10/2006	54
16/10/2006	139	20/10/2006	48
27/10/2006	48	3/11/2006	194
7/11/2006	139	10/11/2006	159
11/11/2006	581	19/11/2006	408
5/12/2006	219	7/12/2006	197
11/12/2006	655	17/12/2006	575
23/12/2006	454	27/12/2006	422
31/12/2006	201	6/01/2007	167
15/01/2007	161	15/01/2007	110
26/01/2007	150	27/01/2007	127
4/02/2007	19	6/02/2007	104

Event Start Date	Mungindi Peak Flow (ML/d)	Event Start Date	Collarenebri Peak Flow (ML/d)
7/02/2007	78	12/02/2007	98
20/02/2007	101	22/02/2007	1633
14/03/2007	342	20/03/2007	271
6/06/2007	49	2/06/2007	115
3/07/2007	1363	25/06/2007	1299
31/08/2007	1338	4/09/2007	1252
15/10/2007	56	24/10/2007	193
25/10/2007	68	3/11/2007	55
1/11/2007	175	7/11/2007	134
8/11/2007	858	14/11/2007	701
29/11/2007	169	28/11/2007	590
9/12/2007	132	11/12/2007	488
11/01/2008	1066	17/01/2008	726
26/02/2008	1055	1/03/2008	1255
6/04/2008	113	5/04/2008	75
19/04/2008	30	18/04/2008	78
26/04/2008	48	2/05/2008	95
12/06/2008	84	5/06/2008	130
25/06/2008	53	2/07/2008	80
24/07/2008	54	2/08/2008	67
5/09/2008	38	27/08/2008	176
10/09/2008	202	11/09/2008	255
22/09/2008	230	27/09/2008	264
30/10/2008	36	2/11/2008	168
1/12/2008	1464	30/11/2008	1241
17/12/2008	1379	20/12/2008	1494
8/01/2009	1210	7/01/2009	1128
1/02/2009	83	5/02/2009	453

Event Start Date	Mungindi Peak Flow (ML/d)	Event Start Date	Collarenebri Peak Flow (ML/d)
11/04/2009	48	12/04/2009	86
20/05/2009	57	18/05/2009	454
2/06/2009	1390	28/05/2009	6223
1/09/2009	54	4/09/2009	26
30/12/2009	285	6/01/2010	887
4/01/2010	1399	16/01/2010	857
22/01/2010	1351	26/01/2010	992
6/02/2010	231	9/02/2010	1498
15/02/2010	86	15/02/2010	882
21/06/2010	345	28/06/2010	234
15/02/2011	1405	18/02/2011	1634
12/03/2011	426	8/03/2011	5668
25/03/2011	1312	28/03/2011	4120
26/04/2011	1008	30/04/2011	1006
6/05/2011	466	10/05/2011	495
26/05/2011	424	1/06/2011	295
10/06/2011	236	13/06/2011	153
23/06/2011	1066	26/06/2011	1164
12/07/2011	695	15/07/2011	707
25/08/2011	1820	30/08/2011	1557
19/09/2011	1311	22/09/2011	1534
5/10/2011	1322	10/10/2011	1574
25/10/2011	1444	29/10/2011	1565
5/11/2011	1414	9/11/2011	1392
8/04/2012	265	8/04/2012	329
16/04/2012	201	20/04/2012	331
19/05/2012	258	2/05/2012	547
28/05/2012	98	2/06/2012	347

Event Start Date	Mungindi Peak Flow (ML/d)	Event Start Date	Collarenebri Peak Flow (ML/d)
6/07/2012	1656	20/06/2012	4233
31/08/2012	239	9/09/2012	407
30/09/2012	127	1/10/2012	366
24/10/2012	139	26/10/2012	65
10/11/2012	56	30/10/2012	201
24/11/2012	76	28/11/2012	379
15/12/2012	453	13/12/2012	959
22/12/2012	821	28/12/2012	439
4/01/2013	449	8/01/2013	339
22/01/2013	511	21/01/2013	516
7/06/2013	922	6/06/2013	1210
3/07/2013	1103	7/07/2013	1522
29/07/2013	1431	1/08/2013	1965
28/08/2013	613	1/09/2013	637
7/10/2013	113	10/10/2013	65
29/11/2013	139	29/11/2013	106
4/12/2013	161	5/12/2013	139
15/12/2013	245	21/12/2013	71
23/12/2013	268	30/12/2013	113
22/01/2014	30	23/01/2014	205
27/01/2014	396	2/02/2014	285
26/02/2014	136	18/02/2014	207
23/03/2014	261	21/03/2014	6286
31/03/2014	797	5/04/2014	3268
13/06/2014	12	28/05/2014	57
21/12/2014	608	1/01/2015	227
7/01/2015	1357	10/01/2015	1325
3/02/2015	1840	31/01/2015	1587

Event Start Date	Mungindi Peak Flow (ML/d)	Event Start Date	Collarenebri Peak Flow (ML/d)
7/06/2015	604	11/06/2015	410
27/06/2015	745	27/06/2015	912
1/08/2015	1200	22/07/2015	1008
14/08/2015	622	17/08/2015	659
5/09/2015	918	4/09/2015	649
27/10/2015	38	1/11/2015	64
8/11/2015	363	17/11/2015	374
30/11/2015	159	2/12/2015	92
3/01/2016	243	31/12/2015	543
7/01/2016	686	12/01/2016	512
14/01/2016	653	18/01/2016	375
26/01/2016	909	26/01/2016	904
6/02/2016	1039	10/02/2016	897
21/03/2016	87	27/03/2016	50
29/03/2016	105	4/04/2016	63
4/06/2016	29	4/06/2016	471
20/06/2016	39	18/06/2016	338
6/07/2016	842	11/07/2016	521
17/07/2016	1296	18/07/2016	1061
15/08/2016	864	19/08/2016	1030
8/09/2016	1797	8/09/2016	4887
10/12/2016	171	16/12/2016	116
19/12/2016	302	27/12/2016	513
11/01/2017	664	16/01/2017	364
24/01/2017	588	21/01/2017	307
9/02/2017	293	13/02/2017	272
19/02/2017	287	24/02/2017	369
8/03/2017	51	13/03/2017	343

Event Start Date	Mungindi Peak Flow (ML/d)	Event Start Date	Collarenebri Peak Flow (ML/d)
16/03/2017	16	18/03/2017	345
19/03/2017	500	23/03/2017	1172
20/04/2017	1711	29/04/2017	1725

Collarenebri to Walgett

Table 8: Matched flow events at Collarenebri and Walgett

Event Start Date	Collarenebri Peak Flow (ML/d)	Event Start Date	Walgett Peak Flow (ML/d)
13/10/1990	374	15/10/1990	2103
27/10/1990	232	31/10/1990	1450
19/11/1990	85	26/11/1990	326
2/12/1990	71	5/12/1990	266
13/12/1990	78	14/12/1990	194
27/12/1990	109	2/01/1991	1482
14/03/1991	487	17/03/1991	625
19/03/1991	502	24/03/1991	613
30/05/1991	593	20/05/1991	16108
18/06/1991	252	12/06/1991	18876
30/06/1991	249	13/07/1991	11153
5/08/1991	172	11/08/1991	1544
9/09/1991	75	9/09/1991	483
15/10/1991	74	19/10/1991	292
5/11/1991	78	11/11/1991	520
12/01/1992	1973	9/01/1992	1675
19/01/1992	1900	22/01/1992	1667
26/03/1992	273	29/03/1992	555
18/06/1992	274	6/06/1992	312
21/08/1992	496	11/07/1992	634
8/09/1992	1211	15/09/1992	1183

Event Start Date	Collarenebri Peak Flow (ML/d)	Event Start Date	Walgett Peak Flow (ML/d)
29/09/1992	785	2/10/1992	690
14/10/1992	271	19/10/1992	255
27/10/1992	208	1/11/1992	1825
6/11/1992	245	18/11/1992	1125
6/12/1992	702	6/12/1992	611
17/12/1992	1241	19/12/1992	1269
9/01/1993	65	19/01/1993	123
25/01/1993	1146	29/01/1993	975
27/02/1993	123	24/02/1993	254
26/03/1993	269	30/03/1993	163
5/06/1993	258	8/06/1993	2459
11/06/1993	333	19/06/1993	329
6/07/1993	729	7/07/1993	5207
7/08/1993	144	7/08/1993	756
20/08/1993	57	17/08/1993	494
13/09/1993	180	7/09/1993	2054
13/10/1993	174	19/10/1993	3705
14/11/1993	85	17/11/1993	173
8/12/1993	19	28/11/1993	238
13/03/1994	1092	15/03/1994	1598
13/03/1994	1844	24/03/1994	1616
11/06/1994	11	19/06/1994	133
24/12/1994	31	6/01/1995	18
18/05/1995	176	16/05/1995	911
21/12/1995	206	24/12/1995	172
10/03/1996	1650	8/03/1996	1204
23/03/1996	525	26/03/1996	460
4/08/1996	1670	12/08/1996	1347

Event Start Date	Collarenebri Peak Flow (ML/d)	Event Start Date	Walgett Peak Flow (ML/d)
20/11/1996	950	24/11/1996	816
14/05/1997	780	19/05/1997	639
26/08/1997	94	1/09/1997	276
21/09/1997	159	14/09/1997	281
30/09/1997	148	6/10/1997	268
12/10/1997	329	13/10/1997	1753
22/10/1997	730	25/10/1997	629
24/11/1997	679	22/11/1997	521
10/01/1998	153	15/01/1998	160
26/01/1998	331	24/01/1998	298
6/02/1998	818	10/02/1998	3702
27/02/1998	641	3/03/1998	662
21/03/1998	173	28/03/1998	140
14/04/1998	360	20/04/1998	2608
26/06/1998	526	22/06/1998	7387
16/12/1998	556	20/12/1998	794
31/12/1998	695	1/01/1999	809
14/06/1999	790	4/06/1999	913
28/06/1999	634	30/06/1999	1225
26/08/1999	302	30/08/1999	317
9/09/1999	420	12/09/1999	432
2/10/1999	925	26/09/1999	2528
27/12/1999	624	31/12/1999	1218
13/01/2000	1208	17/01/2000	893
31/01/2000	287	5/02/2000	299
11/02/2000	1517	13/02/2000	1126
4/05/2000	282	3/05/2000	575
31/05/2000	351	11/06/2000	375

Event Start Date	Collarenebri Peak Flow (ML/d)	Event Start Date	Walgett Peak Flow (ML/d)
4/07/2000	266	9/07/2000	323
25/07/2000	193	1/08/2000	270
23/08/2000	612	3/09/2000	570
21/10/2000	782	7/10/2000	1573
29/04/2001	1262	27/04/2001	1524
8/06/2001	667	14/06/2001	1002
21/08/2001	493	26/08/2001	545
8/09/2001	481	14/09/2001	553
9/10/2001	218	14/10/2001	228
17/10/2001	289	22/10/2001	438
15/11/2001	291	24/11/2001	2059
2/12/2001	1746	14/12/2001	1931
24/12/2001	1040	27/12/2001	822
4/02/2002	798	1/02/2002	619
25/02/2002	875	26/02/2002	714
3/04/2002	1037	8/04/2002	648
2/05/2002	250	6/05/2002	214
25/05/2002	181	28/05/2002	173
27/06/2002	118	1/07/2002	104
26/08/2002	40	31/08/2002	38
15/09/2002	175	19/09/2002	111
2/10/2002	255	3/10/2002	204
19/10/2002	95	25/10/2002	90
20/12/2002	315	28/12/2002	303
17/02/2003	381	18/02/2003	2496
9/04/2003	1190	29/03/2003	1454
26/06/2003	305	3/07/2003	264
23/08/2003	277	20/08/2003	251

Event Start Date	Collarenebri Peak Flow (ML/d)	Event Start Date	Walgett Peak Flow (ML/d)
30/09/2003	40	3/10/2003	4
15/10/2003	1549	16/10/2003	1315
18/11/2003	257	22/11/2003	224
4/12/2003	108	4/12/2003	106
22/02/2004	909	25/02/2004	2305
8/05/2004	172	14/05/2004	172
23/06/2004	80	28/06/2004	92
26/07/2004	57	26/07/2004	55
26/08/2004	32	30/08/2004	12
7/09/2004	77	7/09/2004	67
18/09/2004	1160	23/09/2004	1034
5/11/2004	121	3/11/2004	388
23/01/2005	1865	27/01/2005	1698
28/02/2005	262	10/03/2005	199
30/03/2005	60	2/04/2005	81
16/08/2005	377	20/08/2005	461
30/09/2005	183	3/10/2005	370
19/10/2005	114	18/10/2005	334
10/11/2005	314	30/10/2005	368
27/11/2005	1150	22/11/2005	1354
14/12/2005	1189	18/12/2005	1192
13/04/2006	401	14/04/2006	368
2/05/2006	130	8/05/2006	115
30/05/2006	19	8/06/2006	138
21/06/2006	40	1/07/2006	50
13/07/2006	69	14/07/2006	45
28/07/2006	85	20/07/2006	195
20/10/2006	48	4/11/2006	13

Event Start Date	Collarenebri Peak Flow (ML/d)	Event Start Date	Walgett Peak Flow (ML/d)
3/11/2006	194	8/11/2006	115
19/11/2006	408	17/11/2006	263
17/12/2006	575	18/12/2006	452
6/01/2007	167	11/01/2007	109
15/01/2007	110	22/01/2007	58
27/01/2007	127	2/02/2007	65
6/02/2007	104	11/02/2007	190
22/02/2007	1633	24/02/2007	1031
12/03/2007	450	13/03/2007	384
19/05/2007	3	19/05/2007	1
24/05/2007	32	30/05/2007	3
2/06/2007	115	5/06/2007	10
25/06/2007	1299	15/07/2007	1108
4/09/2007	1252	8/09/2007	1507
9/10/2007	152	14/10/2007	98
24/10/2007	193	28/10/2007	105
14/11/2007	701	13/11/2007	404
28/11/2007	590	2/12/2007	400
18/04/2008	78	24/04/2008	54
2/05/2008	95	8/05/2008	79
5/06/2008	130	16/06/2008	156
2/08/2008	67	10/08/2008	46
27/08/2008	176	29/08/2008	167
11/09/2008	255	18/09/2008	184
9/10/2008	128	1/10/2008	539
2/11/2008	168	2/11/2008	147
12/11/2008	356	18/11/2008	196
30/11/2008	1241	5/12/2008	3478

Event Start Date	Collarenebri Peak Flow (ML/d)	Event Start Date	Walgett Peak Flow (ML/d)
20/12/2008	1494	20/12/2008	4413
7/01/2009	1128	11/01/2009	1328
12/04/2009	86	20/04/2009	57
6/05/2009	15	20/05/2009	2
4/09/2009	26	24/09/2009	2
6/01/2010	887	27/12/2009	18276
26/01/2010	992	29/01/2010	712
9/02/2010	1498	11/02/2010	1813
28/06/2010	234	2/07/2010	198
30/04/2011	1006	2/05/2011	886
1/06/2011	295	28/05/2011	388
26/06/2011	1164	17/06/2011	1446
15/07/2011	707	19/07/2011	942
30/08/2011	1557	3/09/2011	1752
10/10/2011	1574	19/10/2011	3822
29/10/2011	1565	1/11/2011	2009
20/04/2012	331	25/04/2012	890
2/06/2012	347	2/06/2012	1101
1/10/2012	366	7/10/2012	317
30/10/2012	201	3/11/2012	147
13/12/2012	959	24/12/2012	176
28/12/2012	439	1/01/2013	251
21/01/2013	516	30/01/2013	283
6/06/2013	1210	11/06/2013	1063
7/07/2013	1522	10/07/2013	1407
1/08/2013	1965	27/07/2013	1814
1/09/2013	637	4/09/2013	503
14/10/2013	80	19/10/2013	76

Event Start Date	Collarenebri Peak Flow (ML/d)	Event Start Date	Walgett Peak Flow (ML/d)
30/10/2013	834	8/11/2013	400
29/11/2013	106	29/11/2013	195
5/12/2013	139	11/12/2013	145
21/12/2013	71	24/12/2013	149
30/12/2013	113	1/01/2014	51
23/01/2014	205	27/01/2014	218
2/02/2014	285	6/02/2014	279
12/10/2014	916	18/10/2014	582
10/01/2015	1325	5/01/2015	858
23/01/2015	320	28/01/2015	274
31/01/2015	1587	5/02/2015	1629
11/06/2015	410	14/06/2015	373
27/06/2015	912	1/07/2015	607
22/07/2015	1008	2/08/2015	792
17/08/2015	659	16/08/2015	711
4/09/2015	649	8/09/2015	653
1/11/2015	64	2/11/2015	298
17/11/2015	374	22/11/2015	183
2/12/2015	92	13/12/2015	21
12/01/2016	512	16/01/2016	388
26/01/2016	904	27/01/2016	2371
10/02/2016	897	14/02/2016	634
4/06/2016	471	6/06/2016	1171
18/06/2016	338	19/06/2016	1457
11/07/2016	521	14/07/2016	989
19/08/2016	1030	9/08/2016	3658
27/12/2016	513	22/12/2016	484
16/01/2017	364	19/01/2017	206

Event Start Date	Collarenebri Peak Flow (ML/d)	Event Start Date	Walgett Peak Flow (ML/d)
21/01/2017	307	26/01/2017	215
9/02/2017	263	14/02/2017	143
24/02/2017	369	19/02/2017	432
18/03/2017	345	17/03/2017	678
23/03/2017	1172	29/03/2017	756
29/04/2017	1725	2/05/2017	1717

Walgett to Brewarrina

Table 9: Matched flow events at Walgett and Brewarrina

Event Start Date	Walgett Peak Flow (ML/d)	Event Start Date	Brewarrina Peak Flow (ML/d)
9/09/1991	483	27/09/1991	512
11/11/1991	520	26/10/1991	570
22/01/1992	1667	14/01/1992	1118
6/06/1992	312	13/06/1992	376
11/07/1992	634	31/07/1992	507
15/09/1992	1183	17/09/1992	759
2/10/1992	690	8/10/1992	517
1/11/1992	1825	7/11/1992	1216
18/11/1992	1125	28/11/1992	1019
6/12/1992	611	17/12/1992	1334
19/12/1992	1269	24/12/1992	920
29/01/1993	975	30/01/1993	642
24/02/1993	254	21/07/1992	171
30/03/1993	163	21/07/1992	171
1/06/1993	41	29/05/1993	125
7/08/1993	756	14/08/1993	590
17/08/1993	494	30/08/1993	555
28/11/1993	238	4/12/1993	908

Event Start Date	Walgett Peak Flow (ML/d)	Event Start Date	Brewarrina Peak Flow (ML/d)
17/12/1993	1947	23/12/1993	1071
24/03/1994	1616	19/03/1994	1138
19/06/1994	133	26/06/1994	68
16/05/1995	911	18/05/1995	965
24/12/1995	172	31/12/1995	512
8/03/1996	1204	18/03/1996	1273
12/08/1996	1347	17/08/1996	1357
24/11/1996	816	30/11/1996	924
19/05/1997	639	26/05/1997	898
1/09/1997	276	9/09/1997	288
14/09/1997	281	23/09/1997	1000
13/10/1997	1753	18/10/1997	1339
22/11/1997	521	29/11/1997	704
28/03/1998	140	6/04/1998	95
1/01/1999	809	12/01/1999	846
30/06/1999	1225	24/06/1999	1174
12/09/1999	432	6/09/1999	495
5/02/2000	299	11/02/2000	277
13/02/2000	1126	28/02/2000	1010
14/06/2001	1002	21/06/2001	1114
8/09/2001	798	13/09/2001	817
14/09/2001	553	20/09/2001	922
22/10/2001	438	28/10/2001	634
27/12/2001	822	3/01/2002	609
26/02/2002	714	9/02/2002	833
8/04/2002	648	15/04/2002	548
6/05/2002	214	15/05/2002	287
28/05/2002	173	7/06/2002	235

Event Start Date	Walgett Peak Flow (ML/d)	Event Start Date	Brewarrina Peak Flow (ML/d)
31/08/2002	38	12/09/2002	178
3/10/2002	204	10/10/2002	143
1/11/2002	90	7/11/2002	27
28/12/2002	303	13/01/2003	9
14/01/2003	74	23/01/2003	0
29/03/2003	1454	6/04/2003	1673
3/07/2003	264	8/07/2003	322
20/08/2003	251	27/08/2003	212
3/10/2003	4	6/10/2003	33
16/10/2003	1315	27/10/2003	915
22/11/2003	224	1/12/2003	300
14/05/2004	172	24/05/2004	258
26/07/2004	55	15/08/2004	45
23/09/2004	1034	24/09/2004	738
3/11/2004	388	20/11/2004	276
27/01/2005	1698	3/02/2005	1046
10/03/2005	199	23/03/2005	201
2/04/2005	81	15/04/2005	37
13/09/2005	640	20/09/2005	565
18/10/2005	334	27/10/2005	306
30/10/2005	368	9/11/2005	538
22/11/2005	1354	7/12/2005	921
18/12/2005	1192	27/12/2005	861
10/01/2006	1308	24/01/2006	831
8/05/2006	115	20/05/2006	173
8/06/2006	138	19/06/2006	222
1/07/2006	50	12/07/2006	151
20/07/2006	195	1/08/2006	155

Event Start Date	Walgett Peak Flow (ML/d)	Event Start Date	Brewarrina Peak Flow (ML/d)
17/11/2006	263	26/11/2006	0
18/12/2006	452	5/01/2007	225
22/01/2007	58	1/02/2007	18
11/02/2007	190	20/02/2007	0
24/02/2007	1031	5/03/2007	431
13/03/2007	384	22/03/2007	279
2/05/2007	1	27/04/2007	52
19/05/2007	1	18/05/2007	138
9/06/2007	609	15/06/2007	557
2/07/2007	182	11/07/2007	314
15/07/2007	1108	21/07/2007	1001
31/08/2007	1527	5/09/2007	864
8/09/2007	1507	13/09/2007	1281
14/10/2007	98	24/10/2007	138
13/11/2007	404	15/11/2007	207
8/05/2008	79	18/05/2008	60
16/06/2008	156	18/06/2008	110
10/08/2008	46	19/08/2008	21
24/08/2008	35	22/08/2008	48
29/08/2008	167	7/09/2008	94
18/09/2008	184	28/09/2008	277
1/10/2008	539	13/10/2008	290
2/11/2008	147	13/11/2008	191
18/11/2008	196	28/11/2008	105
20/04/2009	57	24/04/2009	125
20/05/2009	2	18/05/2009	288
29/09/2009	39	8/10/2009	0
6/11/2009	272	15/11/2009	0

Event Start Date	Walgett Peak Flow (ML/d)	Event Start Date	Brewarrina Peak Flow (ML/d)
29/01/2010	712	4/02/2010	1371
2/07/2010	198	6/07/2010	184
28/05/2011	388	7/06/2011	570
17/06/2011	1446	5/07/2011	1086
12/08/2011	713	18/08/2011	740
14/06/2012	1491	14/06/2012	1986
14/12/2012	48	20/12/2012	412
1/01/2013	251	11/01/2013	238
11/06/2013	1063	19/06/2013	922
27/07/2013	1814	18/07/2013	1282
4/09/2013	503	11/09/2013	467
19/10/2013	76	30/10/2013	48
8/11/2013	400	17/11/2013	334
29/11/2013	195	10/12/2013	164
11/12/2013	145	24/12/2013	99
1/01/2014	51	4/01/2014	158
27/01/2014	218	10/02/2014	104
6/02/2014	279	16/02/2014	327
23/02/2014	211	4/03/2014	311
1/06/2014	95	3/06/2014	119
18/10/2014	582	28/10/2014	362
5/01/2015	858	27/01/2015	249
28/01/2015	274	7/02/2015	103
5/02/2015	1629	13/02/2015	1036
16/05/2015	1294	22/05/2015	941
14/06/2015	373	18/06/2015	673
2/08/2015	792	11/08/2015	710
8/09/2015	653	21/10/2015	173

Event Start Date	Walgett Peak Flow (ML/d)	Event Start Date	Brewarrina Peak Flow (ML/d)
2/11/2015	298	1/11/2015	93
13/11/2015	308	23/11/2015	173
22/11/2015	183	2/12/2015	79
22/12/2016	484	7/01/2017	485
19/01/2017	206	27/01/2017	281
26/01/2017	215	5/02/2017	293
19/02/2017	432	28/02/2017	623
29/03/2017	756	26/03/2017	603

Brewarrina to Bourke

Table 10: Matched flow events at Brewarrina and Bourke

Event Start Date	Brewarrina Peak Flow (ML/d)	Event Start Date	Bourke Peak Flow (ML/d)
14/01/1992	1118	29/01/1992	1149
13/06/1992	376	21/06/1992	494
21/07/1992	171	27/07/1992	345
31/07/1992	507	24/08/1992	486
17/09/1992	759	24/09/1992	845
8/10/1992	517	10/10/1992	470
7/11/1992	1216	16/11/1992	796
28/11/1992	1019	7/12/1992	793
17/12/1992	1334	18/12/1992	3481
3/01/1993	637	1/01/1993	2608
30/01/1993	642	9/02/1993	496
29/05/1993	125	4/06/1993	180
12/06/1993	1360	12/06/1993	979
14/08/1993	590	16/08/1993	776
30/08/1993	555	4/09/1993	499
4/12/1993	908	7/12/1993	2788

Event Start Date	Brewarrina Peak Flow (ML/d)	Event Start Date	Bourke Peak Flow (ML/d)
23/12/1993	1071	16/12/1993	5670
19/03/1994	1138	26/02/1994	5904
26/06/1994	68	11/07/1994	27
12/04/1995	145	17/04/1995	494
13/05/1995	337	7/05/1995	1517
18/05/1995	965	31/05/1995	991
4/01/1996	384	31/12/1995	3964
18/03/1996	1273	20/03/1996	999
30/11/1996	924	5/12/1996	775
26/05/1997	898	8/06/1997	789
15/07/1997	303	18/07/1997	379
9/09/1997	288	17/09/1997	238
23/09/1997	1000	15/10/1997	771
18/10/1997	1339	22/10/1997	982
29/11/1997	704	6/12/1997	398
25/04/1998	454	20/04/1998	1923
12/05/1998	1811	24/05/1998	1293
12/01/1999	846	15/01/1999	1012
2/02/1999	1669	8/02/1999	1639
22/02/1999	1813	24/02/1999	4088
9/06/1999	1280	11/06/1999	1467
24/06/1999	1174	28/06/1999	1312
6/09/1999	495	24/09/1999	608
2/10/1999	1295	15/10/1999	1014
28/02/2000	1010	27/02/2000	1627
29/05/2001	1387	29/05/2001	1294
20/09/2001	922	17/09/2001	788
28/10/2001	634	1/11/2001	507

Event Start Date	Brewarrina Peak Flow (ML/d)	Event Start Date	Bourke Peak Flow (ML/d)
1/12/2001	1059	8/12/2001	749
9/02/2002	833	6/03/2002	1114
15/04/2002	548	19/04/2002	664
15/05/2002	287	19/05/2002	244
7/06/2002	235	13/06/2002	205
12/09/2002	178	17/09/2002	109
10/10/2002	143	15/10/2002	68
6/04/2003	1673	10/04/2003	1452
22/06/2003	189	11/06/2003	346
8/07/2003	322	23/07/2003	186
23/08/2003	191	19/08/2003	167
27/08/2003	212	31/08/2003	206
27/10/2003	915	3/11/2003	621
1/12/2003	300	9/12/2003	64
29/04/2004	737	29/04/2004	1722
24/05/2004	258	30/05/2004	414
27/08/2003	212	31/08/2003	206
27/10/2003	915	3/11/2003	621
1/12/2003	300	9/12/2003	64
29/04/2004	737	29/04/2004	1722
24/05/2004	258	30/05/2004	414
15/08/2004	45	28/08/2004	52
24/09/2004	738	30/09/2004	597
20/11/2004	276	28/11/2004	187
3/02/2005	1046	7/02/2005	963
23/03/2005	201	29/03/2005	68
22/06/2005	80	23/06/2005	252
20/09/2005	565	25/09/2005	493

Event Start Date	Brewarrina Peak Flow (ML/d)	Event Start Date	Bourke Peak Flow (ML/d)
9/11/2005	538	16/11/2005	346
7/12/2005	921	13/12/2005	805
27/12/2005	861	28/12/2005	1292
24/01/2006	831	31/01/2006	652
25/02/2006	1191	1/03/2006	909
20/05/2006	173	29/05/2006	112
19/06/2006	222	25/06/2006	129
12/07/2006	151	14/07/2006	110
1/08/2006	155	30/07/2006	107
22/03/2007	279	5/04/2007	114
27/04/2007	52	27/04/2007	37
18/05/2007	138	12/05/2007	1593
15/06/2007	557	6/07/2007	310
21/07/2007	1001	19/07/2007	799
13/09/2007	1281	12/09/2007	1094
24/10/2007	138	24/10/2007	318
15/11/2007	207	25/11/2007	765
27/11/2007	631	4/12/2007	2052
21/03/2008	1343	24/03/2008	1416
18/06/2008	110	27/06/2008	87
28/09/2008	277	5/10/2008	483
13/10/2008	290	21/10/2008	175
13/11/2008	191	23/11/2008	56
13/02/2009	679	13/02/2009	13093
11/04/2009	100	16/04/2009	510
24/04/2009	125	4/05/2009	86
18/05/2009	288	4/05/2009	303
4/02/2010	1371	14/02/2010	3397

Event Start Date	Brewarrina Peak Flow (ML/d)	Event Start Date	Bourke Peak Flow (ML/d)
6/07/2010	184	12/07/2010	292
7/06/2011	570	29/06/2011	1371
18/08/2011	740	23/08/2011	1011
17/10/2012	647	23/10/2012	813
20/12/2012	412	26/12/2012	418
11/01/2013	238	17/01/2013	242
19/06/2013	922	23/06/2013	1116
18/07/2013	1282	23/06/2013	1116
11/09/2013	467	15/09/2013	520
17/11/2013	334	24/11/2013	183
24/12/2013	99	4/01/2014	28
4/01/2014	158	4/01/2014	28
16/02/2014	327	29/01/2014	416
4/03/2014	311	10/03/2014	419
3/06/2014	119	16/06/2014	528
13/08/2014	108	12/08/2014	197
28/10/2014	362	10/11/2014	156
27/01/2015	249	26/01/2015	342
13/02/2015	1036	5/02/2015	2886
27/07/2015	796	1/08/2015	729
11/08/2015	710	16/08/2015	646
4/11/2015	914	4/11/2015	946
23/11/2015	173	16/11/2015	458
14/01/2016	929	30/01/2016	648
27/01/2017	281	2/02/2017	287
28/02/2017	623	8/03/2017	1218
26/03/2017	603	29/03/2017	628

Bourke to Wilcannia

Table 11: Matched flow events at Bourke and Wilcannia

Event Start Date	Bourke Peak Flow (ML/d)	Event Start Date	Wilcannia Peak Flow (ML/d)
4/02/1990	1741	16/02/1990	1000
16/01/1991	538	30/01/1991	644
21/06/1992	494	5/07/1992	463
27/07/1992	345	13/08/1992	394
24/08/1992	486	7/09/1992	395
24/09/1992	845	10/10/1992	638
16/11/1992	796	24/11/1992	1922
31/03/1993	248	3/04/1993	187
12/06/1993	979	21/06/1993	526
16/08/1993	776	6/09/1993	490
14/02/1994	102	18/02/1994	1989
11/07/1994	27	9/08/1994	21
5/03/1995	1561	19/03/1995	1038
17/04/1995	494	2/05/1995	419
7/05/1995	1517	27/05/1995	1330
8/06/1997	789	21/06/1997	810
31/08/1997	196	8/09/1997	352
15/10/1997	771	28/10/1997	350
22/10/1997	982	14/11/1997	424
5/01/1998	1446	13/01/1998	2722
14/02/1998	923	3/03/1998	268
15/03/1998	845	29/03/1998	234
20/04/1998	1923	27/04/1998	761
24/05/1998	1293	30/05/1998	502
11/06/1999	1467	21/06/1999	1574
24/09/1999	608	26/09/1999	625

Event Start Date	Bourke Peak Flow (ML/d)	Event Start Date	Wilcannia Peak Flow (ML/d)
21/01/2000	1430	18/02/2000	3014
1/11/2001	507	17/11/2001	401
8/12/2001	749	24/12/2001	478
6/03/2002	1114	8/03/2002	670
19/04/2002	664	5/05/2002	381
19/05/2002	244	8/06/2002	141
13/06/2002	205	4/07/2002	112
10/04/2003	1452	1/05/2003	1191
11/06/2003	346	26/06/2003	378
19/08/2003	167	25/08/2003	191
31/08/2003	206	23/09/2003	70
29/04/2004	1722	8/05/2004	1137
28/08/2004	52	1/10/2004	7
30/09/2004	597	9/11/2004	103
7/02/2005	963	20/02/2005	569
1/05/2005	21	29/05/2005	6
1/06/2005	42	28/06/2005	10
23/06/2005	252	5/07/2005	6
25/09/2005	493	9/10/2005	252
28/12/2005	1292	9/01/2006	621
31/01/2006	652	7/03/2006	77
1/03/2006	909	19/03/2006	536
29/05/2006	112	29/06/2006	9
25/06/2006	129	9/07/2006	346
19/07/2007	799	21/08/2007	452
12/09/2007	1094	5/10/2007	549
7/11/2007	111	26/11/2007	4
9/06/2008	101	22/06/2008	74

Event Start Date	Bourke Peak Flow (ML/d)	Event Start Date	Wilcannia Peak Flow (ML/d)
30/12/2008	1598	20/01/2009	1476
16/04/2009	510	1/05/2009	159
4/05/2009	303	29/05/2009	437
23/05/2009	368	8/06/2009	411
12/07/2010	292	28/07/2010	2398
23/10/2012	813	17/11/2012	811
23/06/2013	1116	17/07/2013	1090
24/11/2013	183	2/12/2013	6
10/03/2014	419	26/03/2014	439
23/03/2014	770	6/04/2014	613
16/06/2014	528	10/07/2014	297
12/08/2014	197	17/09/2014	65
26/04/2015	1878	10/05/2015	1075
8/06/2015	595	3/06/2015	839
4/11/2015	946	10/11/2015	406
25/02/2016	1354	14/03/2016	918
15/01/2017	466	29/01/2017	301
8/03/2017	1218	31/03/2017	536
15/05/2017	1074	3/06/2017	716

Appendix E – Analysis of the Walgett to Brewarrina Reach Extension to 1980

Catalogue of Gauged Flow Events 1980 – 1989

Table 12: Catalogue of flow events including the start date, peak flow, event duration, event volume and rate of rise and fall of the event for Walgett and Brewarrina.

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Walgett	1/01/1980	1293	35	25183	16	19
Walgett	4/02/1980	1143	33	18048	13	20
Walgett	7/03/1980	741	22	10847	15	7
Walgett	28/03/1980	527	34	11219	5	29
Walgett	30/04/1980	1088	23	11885	18	5
Walgett	22/05/1980	1325	21	20346	8	13
Walgett	11/06/1980	1454	32	27020	7	25
Walgett	12/07/1980	709	46	22164	12	34
Walgett	26/08/1980	335	38	6560	5	33
Walgett	2/10/1980	276	19	3178	5	14
Walgett	20/10/1980	1053	38	19045	13	25
Walgett	26/11/1980	3277	27	32433	14	13
Walgett	22/12/1980	589	11	4829	4	7
Walgett	1/01/1981	387	10	3064	5	5
Walgett	10/01/1981	2033	20	19249	8	12
Walgett	29/01/1981	536	9	3997	5	4
Walgett	6/02/1981	5695	45	70774	15	30
Walgett	22/03/1981	303	9	2066	6	3
Walgett	30/03/1981	366	10	2762	4	6
Walgett	8/04/1981	487	52	11736	18	34
Walgett	29/05/1981	8442	43	179736	26	17
Walgett	10/07/1981	7647	22	103349	14	8
Walgett	31/07/1981	11680	79	275818	11	68

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Walgett	17/10/1981	646	23	10818	9	14
Walgett	8/11/1981	890	9	5398	6	3
Walgett	16/11/1981	2381	36	31408	7	29
Walgett	21/12/1981	572	10	4059	6	4
Walgett	30/12/1981	891	15	9851	8	7
Walgett	13/01/1982	8780	42	139081	19	23
Walgett	23/02/1982	31707	113	868971	31	82
Walgett	15/06/1982	875	32	14475	12	20
Walgett	16/07/1982	350	18	4375	7	11
Walgett	2/08/1982	278	52	6275	5	47
Walgett	22/09/1982	41	19	411	16	3
Walgett	10/10/1982	213	19	2238	7	12
Walgett	28/10/1982	167	64	1426	6	58
Walgett	30/12/1982	3	9	23	4	5
Walgett	7/01/1983	3396	8	15708	4	4
Walgett	14/01/1983	3934	26	44367	8	18
Walgett	8/02/1983	499	17	3507	4	13
Walgett	24/02/1983	27	8	141	3	5
Walgett	3/03/1983	222	17	1216	4	13
Walgett	19/03/1983	437	14	2897	9	5
Walgett	1/04/1983	256	21	4030	4	17
Walgett	21/04/1983	96244	73	2341150	46	27
Walgett	2/07/1983	49686	33	939666	14	19
Walgett	3/08/1983	11484	28	259866	19	9
Walgett	30/08/1983	29332	50	893509	36	14
Walgett	18/10/1983	19067	42	559198	30	12
Walgett	28/11/1983	17079	45	417795	16	29

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Walgett	11/01/1984	49507	88	1885287	39	49
Walgett	7/04/1984	13550	80	521933	8	72
Walgett	25/06/1984	4044	10	28716	8	2
Walgett	26/07/1984	139782	54	2971820	27	27
Walgett	17/09/1984	13932	43	330557	16	27
Walgett	29/10/1984	1802	15	19328	10	5
Walgett	12/11/1984	14969	40	222469	18	22
Walgett	21/12/1984	4884	26	54585	10	16
Walgett	15/01/1985	782	22	10430	5	17
Walgett	5/02/1985	1395	80	55600	46	34
Walgett	25/04/1985	333	18	4519	8	10
Walgett	12/05/1985	319	23	5509	5	18
Walgett	3/06/1985	344	28	6132	22	6
Walgett	30/06/1985	3862	48	60622	28	20
Walgett	16/08/1985	3324	10	18027	4	6
Walgett	25/08/1985	7698	52	162453	12	40
Walgett	15/10/1985	1607	18	17244	11	7
Walgett	1/11/1985	4675	23	52802	7	16
Walgett	23/11/1985	15090	51	235267	34	17
Walgett	12/01/1986	1026	15	9707	10	5
Walgett	26/01/1986	1080	28	20573	7	21
Walgett	22/02/1986	990	28	15200	7	21
Walgett	21/03/1986	455	40	10639	16	24
Walgett	29/04/1986	355	58	11614	22	36
Walgett	25/06/1986	2465	38	15913	34	4
Walgett	1/08/1986	5149	14	42339	8	6
Walgett	14/08/1986	2714	30	45833	6	24

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Walgett	12/09/1986	849	14	9155	4	10
Walgett	25/09/1986	1565	10	10863	4	6
Walgett	4/10/1986	4149	45	55487	8	37
Walgett	17/11/1986	2000	28	21946	13	15
Walgett	14/12/1986	905	17	8415	6	11
Walgett	30/12/1986	4481	20	29987	15	5
Walgett	18/01/1987	2035	22	25766	7	15
Walgett	8/02/1987	3242	35	38505	7	28
Walgett	14/03/1987	1130	51	23960	9	42
Walgett	3/05/1987	599	14	4876	10	4
Walgett	16/05/1987	473	29	8535	4	25
Walgett	13/06/1987	269	22	4089	14	8
Walgett	4/07/1987	245	35	7318	19	16
Walgett	7/08/1987	5913	33	69562	25	8
Walgett	8/09/1987	3462	8	22180	5	3
Walgett	15/09/1987	3011	24	37920	4	20
Walgett	8/10/1987	370	10	1882	2	8
Walgett	17/10/1987	400	14	2807	9	5
Walgett	30/10/1987	852	14	7055	4	10
Walgett	12/11/1987	521	26	9782	8	18
Walgett	7/12/1987	631	11	3890	4	7
Walgett	17/12/1987	1938	18	11331	5	13
Walgett	3/01/1988	327	20	2686	5	15
Walgett	22/01/1988	5547	27	71006	20	7
Walgett	17/02/1988	8232	44	169768	22	22
Walgett	31/03/1988	161457	73	3045100	26	47
Walgett	11/06/1988	5723	24	94556	6	18

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Walgett	4/07/1988	16155	59	454836	28	31
Walgett	31/08/1988	15171	78	448809	31	47
Walgett	16/11/1988	709	16	7907	8	8
Walgett	1/12/1988	428	18	5158	5	13
Walgett	18/12/1988	618	15	5513	5	10
Walgett	1/01/1989	1721	8	8463	4	4
Walgett	8/01/1989	1263	16	9082	5	11
Walgett	23/01/1989	271	7	1436	4	3
Walgett	29/01/1989	290	18	3683	3	15
Walgett	15/02/1989	287	11	2354	6	5
Walgett	25/02/1989	275	11	1911	5	6
Walgett	7/03/1989	206	10	1523	6	4
Walgett	16/03/1989	26286	56	458443	45	11
Walgett	10/05/1989	24476	30	409333	20	10
Walgett	8/06/1989	34223	41	622974	16	25
Walgett	18/07/1989	21017	75	453015	32	43
Walgett	30/09/1989	506	17	4980	5	12
Walgett	16/10/1989	276	18	3401	13	5
Walgett	2/11/1989	1064	25	14323	20	5
Walgett	26/11/1989	3513	23	38749	11	12
Walgett	18/12/1989	1346	14	19351	5	9
Brewarrina	1/01/1980	1214	43	34941	22	21
Brewarrina	12/02/1980	1139	31	24217	11	20
Brewarrina	13/03/1980	819	48	31117	11	37
Brewarrina	29/04/1980	2570	49	54777	37	12
Brewarrina	16/06/1980	1783	65	58990	6	59
Brewarrina	19/08/1980	536	48	13010	6	42

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Brewarrina	5/10/1980	206	19	3049	10	9
Brewarrina	23/10/1980	967	39	20747	16	23
Brewarrina	30/11/1980	2814	39	37541	15	24
Brewarrina	7/01/1981	1900	29	21236	16	13
Brewarrina	4/02/1981	4520	52	80932	20	32
Brewarrina	27/03/1981	1050	53	27407	14	39
Brewarrina	18/05/1981	370	7	1300	5	2
Brewarrina	24/05/1981	1493	9	4397	8	1
Brewarrina	1/06/1981	8062	44	185883	26	18
Brewarrina	14/07/1981	7630	20	105903	13	7
Brewarrina	2/08/1981	12128	71	323552	12	59
Brewarrina	11/10/1981	2282	77	59236	47	30
Brewarrina	26/12/1981	9041	65	155065	37	28
Brewarrina	28/02/1982	20180	115	669854	43	72
Brewarrina	22/06/1982	815	43	18773	10	33
Brewarrina	3/08/1982	366	67	11680	11	56
Brewarrina	8/10/1982	202	89	6739	18	71
Brewarrina	4/01/1983	3323	40	54063	20	20
Brewarrina	12/02/1983	283	10	1779	8	2
Brewarrina	21/02/1983	612	16	2800	4	12
Brewarrina	8/03/1983	206	21	2414	15	6
Brewarrina	28/03/1983	206	31	5131	17	14
Brewarrina	27/04/1983	61705	75	1723070	49	26
Brewarrina	10/07/1983	30313	55	952242	14	41
Brewarrina	2/09/1983	19988	53	758451	40	13
Brewarrina	24/10/1983	14206	41	446977	32	9
Brewarrina	3/12/1983	12558	42	343914	18	24

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Brewarrina	13/01/1984	28257	85	1410875	48	37
Brewarrina	6/04/1984	12409	84	521952	11	73
Brewarrina	28/06/1984	3610	23	64098	11	12
Brewarrina	20/07/1984	65938	72	1909838	42	30
Brewarrina	29/09/1984	12998	39	257420	2	37
Brewarrina	6/11/1984	11007	51	219623	28	23
Brewarrina	26/12/1984	3989	36	59073	10	26
Brewarrina	30/01/1985	735	27	14976	22	5
Brewarrina	25/02/1985	1430	50	46980	30	20
Brewarrina	15/04/1985	3322	127	88497	107	20
Brewarrina	19/08/1985	2387	12	19938	5	7
Brewarrina	30/08/1985	6267	51	153001	11	40
Brewarrina	19/10/1985	1727	18	21876	13	5
Brewarrina	5/11/1985	4008	25	55050	7	18
Brewarrina	29/11/1985	10234	51	197499	32	19
Brewarrina	18/01/1986	670	12	6137	8	4
Brewarrina	29/01/1986	825	29	16782	8	21
Brewarrina	26/02/1986	664	16	7620	8	8
Brewarrina	13/03/1986	517	14	5522	6	8
Brewarrina	26/03/1986	441	35	11202	12	23
Brewarrina	29/04/1986	446	54	15783	30	24
Brewarrina	21/06/1986	3737	60	54476	52	8
Brewarrina	19/08/1986	6281	99	251243	55	44
Brewarrina	25/11/1986	2077	44	46042	10	34
Brewarrina	7/01/1987	2998	17	25680	10	7
Brewarrina	23/01/1987	1665	13	17164	7	6
Brewarrina	4/02/1987	2429	44	49801	16	28

Site	Event Start Date	Peak Flow (ML/d)	Event Duration (days)	Event Volume (ML)	Rate of Rise (days)	Rate of Fall (days)
Brewarrina	19/03/1987	1040	51	28967	12	39
Brewarrina	8/05/1987	517	42	15870	11	31
Brewarrina	18/06/1987	414	7	1974	5	2
Brewarrina	24/06/1987	585	38	15793	8	30
Brewarrina	31/07/1987	4520	88	123509	35	53
Brewarrina	26/10/1987	648	23	9533	15	8
Brewarrina	17/11/1987	750	25	12226	17	8
Brewarrina	11/12/1987	436	12	3988	5	7
Brewarrina	22/12/1987	849	18	8746	7	11
Brewarrina	8/01/1988	235	21	2004	6	15
Brewarrina	28/01/1988	3910	26	54134	17	9
Brewarrina	22/02/1988	6241	38	132477	19	19
Brewarrina	30/03/1988	72770	92	1876457	37	55
Brewarrina	29/06/1988	13470	64	471320	38	26
Brewarrina	31/08/1988	10985	76	435938	35	41
Brewarrina	14/11/1988	950	39	22300	4	35
Brewarrina	22/12/1988	1430	38	26825	19	19
Brewarrina	28/01/1989	18038	106	408653	99	7
Brewarrina	13/05/1989	24856	69	1200059	50	19
Brewarrina	20/07/1989	19382	93	845567	36	57
Brewarrina	20/10/1989	3396	73	85399	53	20

Matched Flow Events

Table 13: Matched flow events at Walgett and Brewarrina

Event Start Date	Walgett Peak Flow (ML/d)	Event Start Date	Brewarrina Peak Flow (ML/d)
1/01/1980	1293	1/01/1980	1214
4/02/1980	1143	12/02/1980	1139

Event Start Date	Walgett Peak Flow (ML/d)	Event Start Date	Brewarrina Peak Flow (ML/d)
7/03/1980	741	13/03/1980	819
30/04/1980	1325	29/04/1980	2570
11/06/1980	1454	16/06/1980	1783
12/07/1980	709	19/08/1980	854
2/10/1980	276	5/10/1980	206
20/10/1980	1053	23/10/1980	967
1/01/1981	2021	7/01/1981	1900
29/01/1981	536	4/02/1981	563
22/03/1981	303	27/03/1981	1050
8/04/1981	487	18/05/1981	620
30/12/1981	891	26/12/1981	739
15/06/1982	875	22/06/1982	815
16/07/1982	350	3/08/1982	366
10/10/1982	213	8/10/1982	202
8/02/1983	499	12/02/1983	283
3/03/1983	222	8/03/1983	206
1/04/1983	437	28/03/1983	206
29/10/1984	1802	6/11/1984	2188
15/01/1985	782	30/01/1985	735
5/02/1985	1395	25/02/1985	1430
15/10/1985	1607	19/10/1985	1727
12/01/1986	1026	18/01/1986	670
26/01/1986	1080	29/01/1986	825
22/02/1986	990	26/02/1986	664
21/03/1986	455	26/03/1986	441
29/04/1986	355	29/04/1986	446
17/11/1986	2000	25/11/1986	2077
14/03/1987	1130	19/03/1987	1040

Event Start Date	Walgett Peak Flow (ML/d)	Event Start Date	Brewarrina Peak Flow (ML/d)
3/05/1987	599	8/05/1987	517
13/06/1987	269	24/06/1987	585
17/10/1987	852	26/10/1987	648
12/11/1987	521	17/11/1987	750
7/12/1987	631	11/12/1987	436
17/12/1987	1938	22/12/1987	849
3/01/1988	327	8/01/1988	235
16/11/1988	709	14/11/1988	950
18/12/1988	1721	22/12/1988	1430