

Border Rivers Water Management Area
Announced period guide
February 2019

This publication has been compiled by Water Policy, Department of Natural Resources, Mines and Energy.

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Introduction

The purpose of this paper is to describe the methods used by the department in making determinations for announced periods of take of unsupplemented water in the Border Rivers Water Management Area (Attachment 1). The announced period requirements are stated in section 37 of the Border Rivers and Moonie water management protocol (2019). Given that the Border Rivers include the Queensland and New South Wales shared streams of the Dumaresq, Macintyre and Barwon River from Mingoola downstream to Mungindi, the States jointly monitor and assess unsupplemented flows and make determinations in accordance with the water sharing and access arrangements of the New South Wales – Queensland Border Rivers Intergovernmental Agreement 2008 (IGA) and in particular Sections 31-34 and Schedule D.

Conditions during unregulated events occur in real-time and can be unpredictable. As such this guideline may not capture all possible considerations under every circumstance, and is intended to be descriptive rather than prescriptive.

Definitions

Available volume means the volume of the flow available in an event or part of an event after subtracting water orders in the system, losses to meet those orders and losses in the event though to Mungindi. Losses include “in-stream” losses and outflows to effluents and overbank flows.

Border Rivers means the parts of the Dumaresq, Macintyre and Barwon Rivers which constitute part of the boundary between New South Wales and Queensland.

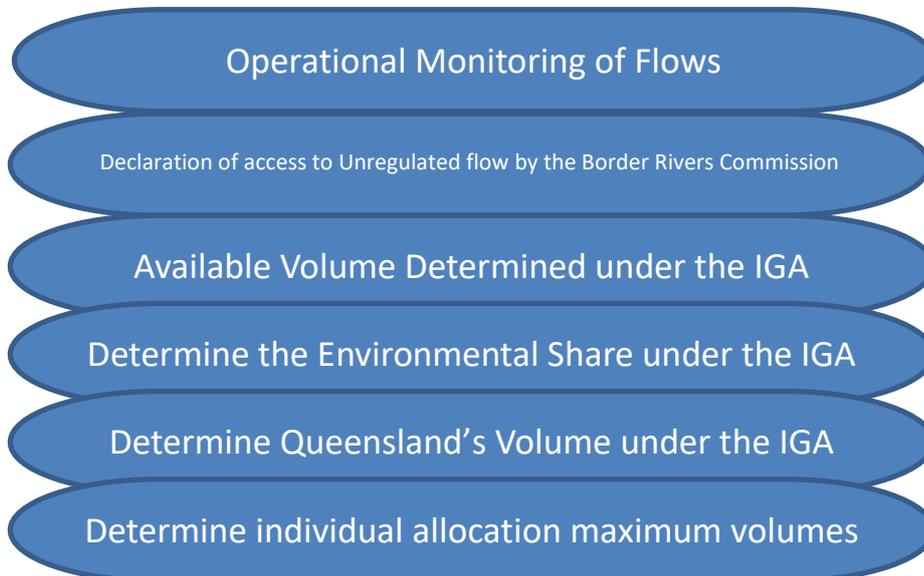
Regulated flow means, in the Border Rivers, the flow that comprises, either wholly or partly, water released from a dam or weir, water re-regulated by a weir or unregulated inflow from one or more of the tributary streams and is used by the states to satisfy water orders, essential requirements, losses or for filling of re-regulating weirs.

Unregulated flow means, in the Border Rivers, a flow that results from unregulated inflows from one or more tributary streams, including dam and weir spills, and exceeds the requirements of the states to satisfy water orders, essential requirements and losses.

Water available for distribution means the volume of water in an event or part of an event that is available for extraction according to the access arrangements of the IGA (see Schedule D).

Overview of steps in making an announcement:

Figure 1 (below) provides an overview of the steps involved in managing unregulated events from identification through to announcement.



Method for determining water available for distribution.

It is a joint New South Wales and Queensland state agency responsibility to manage and share unregulated flow once the Border Rivers Commission has declared access to unregulated flows in the Border.Rivers. The IGA sets out the requirements for declaring access depending on the originating upstream water source (See Schedule D Access arrangements for unregulated flows). This includes flow conditions for commencement and cessation of take by announcement and is summarised in Attachment 2. The following method is based on an unregulated flow originating upstream of Goondiwindi and being shared downstream of the point of take. The method used for the management flows originating from the Weir River and for combined flows is an extension of the following method.

The state agencies have jointly developed the following method for determining the water available for distribution based on the requirements of the IGA:

Water available for distribution = Available volume – 25% environmental share

Where -

Available volume is determined as follows:

Step 1—Through monitoring and assessment, determine the volume of the flow passing or expected to pass the stream gauging stations immediately downstream of the point/s of inflow (i.e. For a flow originating upstream of Goondiwindi, the volume of the flow passing Booba Sands, Glenarbon and Holdfast gauging station).

Step 2—Adjust the volume of the flow determined under Step 1 to provide for regulated water requirements (i.e. to satisfy water orders, essential requirements and losses or for filling of re-regulating weirs).

Step 3—Where the adjusted volume of flow meets the access arrangements under Schedule D of the IGA, further reduce the adjusted volume of flow by the estimated Losses in the event through to Mungindi (including “in-stream” losses and outflows to effluents and overbank flows). This is determined to be the available volume.

And -

25% environmental share is determined as follows:

25% environmental share is equal to 25% of the resultant volume of the flow determined under Step 3 above.

For the purposes of this section -

Losses are based on estimates provided by the local area river manager, taking into account historical assessments of losses along the river. These estimates also consider the expected size and duration of the upstream flow (based on monitoring of upstream stream gauging stations), the prevailing antecedent conditions of the river system and floodplain and the prevailing climatic conditions. Delivery loss allowance is the proportion of the flow that is lost to the system through naturally occurring processes (i.e. bed and bank seepage, evapotranspiration, effluent flow, floodplain inundation infiltration, etc). Delivery loss allowance can range from 5-10% of the flow volume in wetter times to 40-50% of the flow volume in drier times.

25% environmental share is the proportion of the unregulated flow volume that is set aside for environmental benefit and not available for consumptive use. The 25% environmental share was agreed to by the states of Queensland and New South Wales and is embedded in section 33 of the IGA.

Method for sharing water available for distribution

The method for sharing water available for distribution as determined above, is as follows:

Sharing water to the States:

Queensland Share = 50% water available for distribution

The volume of water determined under the above method for determining water available for distribution is shared equally between the states in accordance with the water sharing arrangements of the IGA

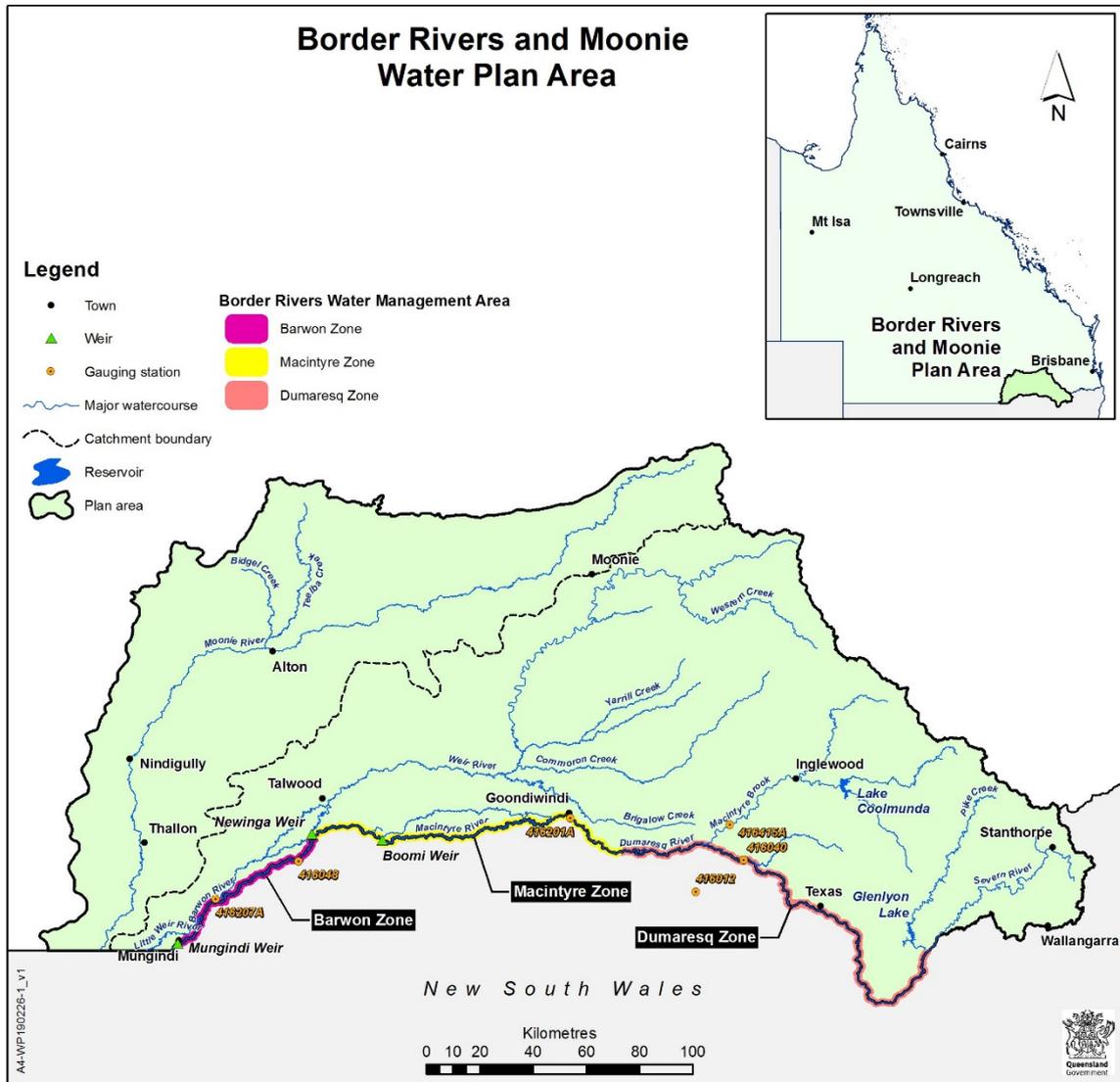
Sharing Queensland water to water allocation holders:

The volume of water shared to Queensland is then made available to water allocation holders through an announcement process. The announcement will be made for all water allocation holders and seasonal water assignment notice holders downstream of the point of inflow (see Step 1 above). The announcement includes the following details:

- a) the water allocations that the announcement relates to
- b) the maximum volume that may be taken under a water allocation during the announced period in proportion to the rate of take authorised by the water allocation
- c) The period of take (hours) to access the announced allocation of water.

This process includes an 'opt out' provision that may increase that volume available to be distributed to the remaining users. There may be one or more announced periods during flow event as the flow develops and further information comes available. These announced periods are determined using the method described above. At the cessation of the event operational flow monitoring resumes.

Attachment 1—Map of the Border Rivers Water Management Area



Attachment 2—Access arrangements for unregulated water

| Source | Commence Flow Condition | Cease Flow Condition |
|---|---|--|
| Flows originating upstream of Goondiwindi | Commence based on a minimum 10,000 ML flow volume entering or predicted to enter the system over a two day period past the Goondiwindi Gauging Station | Cease when the flow volume past the Goondiwindi Gauging Station falls below 3,650 ML over a two day period |
| Flows originating from the Weir River | Commence based on a minimum 2,000 ML combined flow volume entering or predicted to enter the system over a two day period past the Kanowna and Mascot Gauging Stations | Cease when the combined flow volume past the Kanowna and Mascot Gauging Stations falls below 1,550 ML over a two day period |
| Combined inflows | Commence based on: <ul style="list-style-type: none"> (a) a minimum 10,000 ML combined flow volume entering or predicted to enter the system over a two day period past the Goondiwindi, Kanowna and Mascot Gauging Stations; and (b) a minimum 8,000 ML flow volume entering or predicted to enter the system over a two day period past the Goondiwindi Gauging Station | For the upstream section - cease when the flow volume past Goondiwindi Gauging Station falls below 1,825 ML over a two day period For the downstream section - cease when the flow volume past Kanowna and Mascot Gauging Stations falls below 775 ML over a two day period |