

Resource Operations Licence

Water Act 2000



Name of licence

Border Rivers Water Supply Scheme Resource Operations Licence

Name of holder

The State of Queensland represented by the Department of Regional Development, Manufacturing and Water

Water plan

The licence relates to the Water Plan (Border Rivers and Moonie) 2019.

Water infrastructure

The water infrastructure to which the licence relates is detailed in Attachment 1.

Authority to interfere with the flow of water

The licence holder is authorised to interfere with the flow of water to the extent necessary to operate the water infrastructure to which the licence relates.

Authority to use watercourses to distribute water

The licence holder is authorised to use the watercourses listed in Table 1 for the distribution of supplemented water.

Table 1 – Use of watercourses for distribution

Watercourse	Description
Pike Creek	From the upstream extent of the ponded area downstream to Glenlyon Dam (AMTD 6.4 km)
Pike Creek	From Glenlyon Dam downstream to the confluence with Pike Creek (AMTD 6.4 km – 0.0 km)
Dumaresq River	From the confluence with Pike Creek downstream to the confluence the Macintyre River (AMTD 186.3 km – 0.0 km)
Macintyre River	From the confluence with the Dumaresq River downstream to the confluence with the Weir River at Mascot (Macintyre River: AMTD 305.1 km to 35.2 km).
Barwon River	From the confluence with the Weir River at Mascot downstream to the Queensland-New South Wales border where the 29 parallel crosses the Barwon River (Barwon River: AMTD 35.2 km to 0.0 km).

Conditions

1. Requirement for operations manual

- 1.1. The licence holder must operate in accordance with an approved operations manual.
- 1.2. The approved operations manual must include—
 - 1.2.1 operating rules for water infrastructure
 - 1.2.2 water sharing rules; and
 - 1.2.3 seasonal water assignment rules.

2. Environmental management rule

- 2.1. The licence holder must maintain and operate the infrastructure in Attachment 1 so that there is minimal adverse impact on water quality, bed and bank stability and fish.
- 2.2. The licence holder must monitor the impacts on aquatic ecosystems in accordance with Attachment 2, part 1, division 2 of this licence.

3. Operating and supply arrangements

- 3.1. The licence holder must operate the infrastructure detailed in Attachment 1, Tables 1, 2 and 9, in accordance with:
 - 3.1.1 water sharing arrangements agreed to by the State and New South Wales;
 - 3.1.2 operating procedures established by the Dumaresq-Barwon Border Rivers Commission.

- 3.2. The licence holder must provide for essential supplies allowance for the Callandoon Water Supply Scheme and the Yambocully Water Supply Scheme.
- 3.3. In this section—
essential supplies allowance means an annual supply to each water board for the purposes of improved stock and domestic supply in the creeks that the boards use for reticulation. The essential supplies allowance is—
- a) 201 megalitres for the Callandoon Water Supply Board; and
 - b) 200 megalitres for the Yambocully Water Board.

4. Metering

- 4.1. The licence holder must meter the volume of water taken under all water allocations and seasonal water assignments managed under this licence unless an alternative method of measuring the volume of water taken is approved in writing by the chief executive.

5. Monitoring and reporting requirements

- 5.1. The licence holder must carry out and report on the monitoring requirements as set out in Attachment 2.
- 5.2. The licence holder must provide any monitoring data required under condition 5.1 to the chief executive within a stated time upon request.
- 5.3. The licence holder must ensure that the monitoring, including the measurement, collection, analysis and storage of data, is consistent with the Water Monitoring Data Collection Standards¹.
- 5.4. The licence holder must ensure that the transfer of data and reporting are consistent with the Water Monitoring Data Reporting Standards¹.

6. Inter-scheme trading agreement

- 6.1. There must be an inter-scheme trading agreement between the licence holder for the Border Rivers Water Supply Scheme and the licence holder for the Macintyre Brook Water Supply Scheme to facilitate the transfer or seasonal assignment of a water allocation between the Border Rivers Water Supply Scheme and the Macintyre Brook Water Supply Scheme.
- 6.2. The inter-scheme trading agreement must address—
- 6.2.1 licence holder monitoring and reporting requirements as per condition 5; and
 - 6.2.2 meter reading and water charges as per condition 4.
- 6.3. Subsection 6.2 does not limit matters that may be dealt with by the inter- scheme trading agreement.

7. Interstate trading agreement for supplemented water

- 7.1. For an interstate trade of supplemented water to occur, there must be an interstate trading agreement² between the licence holder for the Border Rivers Water Supply Scheme and the scheme operator (or equivalent) in New South Wales to facilitate the transfer or seasonal assignment of a water allocation between the Border Rivers Water Supply Scheme and the scheme (or equivalent) in New South Wales.
- 7.2. The interstate trading agreement dealing with supplemented water must address the administrative arrangements for metering and collection of water use information for water accounting purposes (see Attachment 2).
- 7.3. Subsection 7.2 does not limit matters that may be dealt with by the interstate trading agreement.

8. Other conditions

- 8.1. Where there is inconsistency between the provisions in this licence and the provisions of any water sharing agreement between the State and New South Wales, then to the extent of the inconsistency, the water sharing agreement prevails.
- 8.2. The operating and supply arrangements and the monitoring required under this licence do not apply in situations where implementing the rules or meeting the requirements would be unsafe to a person or persons. In these circumstances the licence holder must comply with the operational or emergency reporting requirements prescribed in Attachment 2.

¹ The Water Monitoring Data Collection Standards and the Water Monitoring Data Reporting Standards can be accessed online at www.business.qld.gov.au

² Interstate trading is currently administered in accordance with Appendix E1 of the New South Wales and Queensland Intergovernmental Agreement 2008

- 8.3. The licence holder is required to collect and make publicly available through an industry accepted digital channel, updated at least monthly, details of each seasonal water assignment managed under this licence, including the sale price, the volume of water assigned and the location of where the water was assigned to and from.
- 8.4. The licence holder must provide the chief executive information about seasonal water assignments as directed by the chief executive within the stated time upon request¹.

This Resource Operations Licence is subject to the conditions attached.

Commencement of licence

The licence took effect on 17 March 2008.

Granted on 14 March 2008.

Amended under section 186 of the *Water Act 2000* on 14 March 2022.

Ian Gordon

Director, Water Operations, Divisional Support

Attachment 1 Infrastructure details for Border Rivers Water Supply Scheme

Table 1 – Glenlyon Dam – Pike Creek

Description of infrastructure	
Description	Earth and rock fill dam
Full supply level	EL 412 m SD
Minimum operating level	EL 375.52 m SD
Saddle dam(s)	Not applicable
Storage capacity	
Full supply volume	254 000 ML
Minimum operating volume	1740 ML
Storage curves	Drawing No.S37278
Spillway arrangement	
Description of works	Concrete ogee crest spillway
Spillway level	EL 412.00 m SD
Spillway width	69.0 metres
Discharge characteristics	Drawing no: IB1398 and 118284
River inlet/outlet works	
Discharge characteristics	The estimated maximum discharge capacity of the river outlet is 3300 ML/day. Estimated maximum additional discharge capacity through the bypass outlet is 240 ML/day

Table 2 – Boggabilla Weir – Macintyre River

Description of water infrastructure	
Description	Reinforced concrete and earth fill
Full supply level	EL 216.00 m AHD
Minimum operating level	EL 210.50 m AHD
Bed level	EL 206.00 m AHD
Saddle dam(s)	Block dam, earth fill
Storage volume and surface area	
Full supply volume	5850 ML
Dead storage level	EL 210.50 m AHD
Storage curves	Drawing no: A3-101516 and A3-102870
Spillway arrangement	
Description of works	Five fixed wheel vertical lift steel gates, 13.6 m wide
Spillway level	EL 210.50 m AHD
Spillway width	74.0 m
River inlet/outlet works	
Discharge characteristics	Approximately 24 600 ML/day with 5 gates at 1 m high
Fishway	
Description	Vertical slot
Fishway invert	208.16 m AHD (entrance) and EL 212.19 m AHD (exit)

Table 3 – Bonshaw Weir — Dumaresq River

Description of infrastructure	
Description	Steel sheet piling
Full supply level	EL 293.92 m AHD
Bed level	EL 291.00 m AHD
Storage capacity	
Full supply volume	617 ML
Dead storage level	EL 292.36 m AHD
Storage Curves	Drawing No.S37891
Spillway arrangement	
Description of works	Steel sheet crest
Spillway level	EL 293.92 m AHD
Spillway width	115.0 m
River inlet/outlet works	
Discharge characteristics	The estimated maximum discharge capacity of the left bank outlet is 85 ML/day and right bank outlet is 53 ML/day

Table 4 – Cunningham Weir — Dumaresq River

Description of infrastructure	
Description	Timber piled
Full supply level	EL 253.90 m SD
Bed level	EL 249.20 m SD
Storage capacity	
Full supply volume	543 ML (Based on original construction drawings. Height of weir has been reduced by approximately 0.9 m due to deterioration and therefore a corresponding reduction must be assumed.)
Dead storage level	EL 249.20 m SD
Storage curves	Drawing No.S42641
Spillway arrangement	
Description of works	Timber crest
Spillway level	EL 253.90 m SD
Spillway width	79.00 m
River inlet/outlet works	
Discharge characteristics	The estimated maximum discharge capacity of the two right bank outlets is 26 ML/day and 72 ML/day

Table 5 – Glenarvon Weir – Dumaresq River

Description of infrastructure	
Description	Steel sheet piling
Full supply level	EL 246.89 m SD
Bed level	EL 244.20 m SD
Storage capacity	
Full supply volume	353 ML
Dead storage level	EL 245.36 m SD
Storage curves	Drawing no: F42637
Spillway arrangement	
Description of works	Steel sheet crest
Spillway level	EL 246.89 m SD
Spillway width	51.21 m
River inlet/outlet works	
Discharge characteristics	The estimated maximum discharge capacity of the right bank outlet is 77 ML/day and for the two left bank outlets 54 ML/day and 35 ML/day
Fishway	
Description	Pool and weir
Fishway invert	EL 246.89 m SD (exit) and EL 246.51 m SD (entrance)

Table 6 – Goondiwindi Weir – Macintyre River

Description of infrastructure	
Description	Timber crib
Full supply level	EL 209.05 m AHD
Bed level	EL 205.90 m AHD
Storage capacity	
Full supply volume	1800 ML
Dead storage level	Not applicable
Storage curves	Drawing no: A3-39484 and 47/2039
Spillway arrangement	
Description of works	Timber crest
Spillway level	EL 209.05 m AHD
Spillway width	57.0 m
River inlet/outlet works	
	Nil
Fishway	
Description	Rock ramp
Fishway invert	EL 209.05 m AHD

Table 7 – Boomi Weir – Macintyre River

Description of infrastructure	
Description	Steel sheet piling
Full supply level	EL 184.29 m AHD
Bed level	EL 180.20 m AHD
Storage capacity	
Full supply volume	150 ML
Dead storage level	EL 181.24 m AHD (cease to flow)
Storage curves	Drawing no: A3-74955
Spillway arrangement	
Description of works	Steel sheet crest
Spillway level	EL 184.29 m AHD
Spillway width	35.0 m
River inlet/outlet works	
Discharge characteristics	The estimated maximum discharge capacity of the outlet is 71 ML/day

Table 8 – Mungindi Weir – Barwon River

Description of infrastructure	
Description	Steel sheet piling
Full supply level	EL 156.20 m AHD
Bed level	EL 152.60 m AHD
Storage capacity	
Full supply volume	730 ML
Dead storage level	Not applicable
Storage curves	Not applicable
Spillway arrangement	
Description of works	Steel sheet crest
Spillway level	EL 156.20 m AHD
Spillway width	35.0 m
River inlet/outlet works	
	Nil

Table 9 – Newinga Regulator

Description of infrastructure	
Description	Reinforced concrete with aluminium drop boards
Bed level	EL 175.40 m AHD
Regulator arrangement	
Number of drop board bays	5
Width of drop board bays	2 m
Height of drop board bays	2.6 m

Attachment 2 Licence holder monitoring and reporting

Part 1 Monitoring requirements

Division 1 Water quantity

1 Stream flow and storage water level

- (1) The licence holder must record water level and flow data in accordance with Attachment 2, Table 1.
- (2) Notwithstanding subsection (1), where continuous time series data is not available, daily water level data may be recorded.
- (3) Storage inflow may be determined based upon a storage inflow derivation technique supplied by the licence holder and approved by the chief executive.
- (4) Tailwater flows may be estimated using the release curve developed for the discharge works by the licence holder and approved by the chief executive.

Table 1 Locations where continuous time series height and volume data and daily flow data are required

Location	Water level data	Daily flow data
Glenlyon Dam headwater	✓	
Glenlyon Dam tailwater		✓
Boggabilla Weir headwater	✓	
Boggabilla Weir tailwater		✓

2 Releases from storages

- (1) This section applies to the following storages—
 - (a) Glenlyon Dam; and
 - (b) Boggabilla Weir.
- (2) The licence holder must measure and record for each storage outlet—
 - (a) the daily volume released;
 - (b) the release rate, and for any change in release rate—
 - (i) the date and time of the change; and
 - (ii) the new release rate;
 - (c) the reason for each release and the component volumes for each release.

3 Distributions to bulk storage accounts

- The licence holder must record details of the distribution of water—
- (a) to each bulk storage account; and
 - (b) the date that each distribution occurred.

4 Distributions to individual storage accounts

The licence holder must record details of the distribution of water—

- (a) to each individual storage account; and
- (b) the date that each distribution occurred.

5 Water taken by water users

The licence holder must measure and record for each water allocation and for each zone—

- (a) the total volume of water taken;
- (b) the total volume of water entitled to be taken; and
- (c) the basis for determining the total volume of water entitled to be taken.

6 Seasonal water assignments

The licence holder must record details of each seasonal water assignment, including the following—

- (a) name of the assignee and assignor;
- (b) volume of the assignment;
- (c) location—
 - (i) from which it was assigned;
 - (ii) to which it was assigned;
- (d) the effective date of the assignment; and
- (e) the sale price.

Division 2 Impact of infrastructure operation on aquatic ecosystems

7 Water quality

In accordance with condition 5.3, the licence holder must monitor and record water quality in relation to relevant infrastructure listed in Attachment 1.

8 Bank condition

- (1) The licence holder must inspect banks for evidence of collapse and/or erosion identified within the ponded areas and downstream of each storage listed in Attachment 1, following instances of—
 - (a) rapid water level changes; or
 - (b) large flows through storages; or
 - (c) other occasions when collapse and/or erosion of banks may be likely.
- (2) For subsection (1), downstream of the relevant infrastructure means the distance of influence of infrastructure operations.

9 Fish stranding

The licence holder must record and assess reported instances of fish stranding in watercourses and ponded areas associated with the operation of the infrastructure in Attachment 1, to determine if any instance of fish stranding is associated with the operation of that infrastructure.

Part 2 Reporting requirements

10 Reporting requirements

The licence holder must provide the following reports in accordance with this part—

- (a) quarterly report;
- (b) annual report for the previous water year;
- (c) operational or emergency report; and
- (d) other reporting.

Division 1 Quarterly reporting

11 Quarterly report

- (1) The licence holder must submit a quarterly report to the chief executive within 8 weeks after the end of the reporting quarter.
- (2) The report must contain—
 - (a) water level data—all records referred to under section 1;
 - (b) water quality—all records referred to under section 7; and
 - (c) summary of bank condition monitoring and incidences of slumping carried out in accordance with section 8.

Division 2 Annual reporting

12 Annual report

- (1) The licence holder must submit an annual report to the chief executive within three months after the end of the water year.
- (2) The annual report must include—
 - (a) water quantity as described in section 13;
 - (b) details of the impact of storage operation on natural ecosystems as required under section 14;
 - (c) a discussion on any issues that arose as a result of the implementation and application of the rules and requirements in this licence; and
 - (d) a summary of sale price disclosure information and other seasonal water assignment information as per section 6.

13 Water quantity monitoring—annual report

The licence holder must include in the annual report under section 12—

- (a) the total annual volume of water taken by each supplemented water user, specified by zone, including—
 - (i) the total volume of water taken under water entitlements;
 - (ii) the total volume of water entitled to be taken under water entitlements; and
 - (iii) the basis for determining the total volume entitled to be taken;
- (b) the total number and volume of seasonal water assignments into and out of each zone;

- (c) all details of changes to storages and delivery infrastructure, or the operation of storage and delivery infrastructure that may impact on compliance with this licence;
- (d) details of any new monitoring devices used such as equipment to measure stream flow.

14 Impact of water infrastructure operation on natural ecosystems—annual report

The licence holder must include in the annual report under section 12—

- (a) a summary of bank condition and fish stranding monitoring and assessment, including—
 - (i) results of investigations of bank slumping or erosion identified in ponded areas and/or downstream of storages;
 - (ii) results of any investigations of fish stranding downstream of storages;
 - (iii) changes to operation of storages to reduce instances of bank slumping, erosion or fish stranding;
- (b) provide a summary of operational release decisions made including an evaluation of the effectiveness of those decisions in preventing or mitigating any adverse impacts on the aquatic ecosystems;
- (c) a discussion and assessment of the following water quality issues—
 - (i) thermal and chemical stratification in each storage;
 - (ii) the impact of the storage and its management on the quality of water released;
 - (iii) cumulative effect of successive storages on water quality; and
 - (iv) cyanobacteria population changes in response to stratification in each storage;
- (d) any proposed changes to the monitoring program as a result of evaluation of the data.

Division 3 Operational or emergency reporting

15 Operational or emergency reporting³

- (1) The licence holder must notify the chief executive—
 - (a) within one business day of becoming aware of any of the following operational incidents—
 - (i) non-compliance by the licence holder with this licence or with the operating and supply arrangements in the approved operations manual for this licence;
 - (ii) instances of fish stranding and kills, cyanobacterial growth or bank slumping within ponded areas or downstream of water infrastructure to which this licence relates; and
 - (iii) a decision being made to introduce a reduced full supply level under section 399B of the *Water Supply (Safety and Reliability) Act 2008*.
 - (b) of an emergency where, as a result of the emergency, the licence holder cannot comply with the conditions of the licence.

³ This does not preclude requirements for dam safety under the *Water Supply (Safety and Reliability) Act 2008*, *Water Act 2000* and any other applicable legislation.

- (2) The licence holder must provide to the chief executive upon request, and within the timeframe requested, a report which includes details of—
- (a) the incident or emergency;
 - (b) the conditions under which the incident or emergency occurred;
 - (c) any responses or activities carried out as a result of the incident or emergency;
 - (d) in relation to an emergency only, any requirements under this licence that the licence holder is either permanently or temporarily unable to comply with due to the emergency; and
 - (e) relevant supporting information used in making a decision relating to any restrictions on the supply of high priority water allocations.

Division 4 Other reporting

16 Reporting to the Dumaresq–Barwon Border Rivers Commission

The licence holder must provide data on water use and other information as required by the Dumaresq–Barwon Border Rivers Commission to undertake regular resource assessments.

Glossary

Term	Definition
AMTD	Adopted middle thread distance: the distance in kilometres, measured along the middle of a watercourse, from a specific point in the watercourse to the watercourse's mouth, the watercourse's junction with the main watercourse or the border between the State and New South Wales.
Assignee	The person or entity to whom an interest or right to water is being transferred (e.g. seasonally assigned).
Assignor	The person or entity who transfers an interest or right in water to an assignee (e.g. a seasonal assignment).
Cease to flow level	For a waterhole, the level at which water stops flowing from a waterhole over its downstream control.
Component volumes	The volume of water associated with a particular release.
Dead storage level	The volume of water within the ponded area of a storage that cannot be released or taken from the storage under normal operating conditions.
Discharge	The rate at which a volume of water passes a point in a stream or pipeline per unit of time. This could be measured in litres per second (L/s), cubic metres per second (m ³ /s) or in megalitres per day (ML/day).
EL	Elevation
Essential supplies allowance	An annual supply to each water supply scheme for the purposes of improved stock and domestic supply in the creeks that the distribution operations licence holders for the schemes use for reticulation. The essential supplies allowance is— 201 megalitres for the Callandoon Water Supply Scheme; and 200 megalitres for the Yambocully Water Supply Scheme.
Headwater level	The level (or elevation) of the water immediately upstream of a dam, weir, or other hydraulic structure.
Inlet	Infrastructure comprised of an entrance channel, intake structure, and gate or valve which allows for water to be taken from the storage and discharged into the watercourse downstream of the storage.
Interstate trade	A trade of a water allocation made between States in accordance with this plan.
m AHD	The Australian height datum, which references a level or height to a standard base level in metres.
Minimum operating level	For a dam or weir, is the volume of water within the ponded area of the storage that cannot be released or used from the storage under normal operating conditions.
Ponded area	Area of inundation at full supply level of a storage.
Priority distribution	A distribution of water to each medium priority water allocation holder, following the start of each water year, to provide for up to a maximum balance of 60 megalitres in each individual storage account irrespective of the size of the individual storage account.
Quarter or quarterly	Three-monthly intervals commencing at the start of the water year.
Resource assessment	An assessment undertaken by the Dumaresq–Barwon Border Rivers Commission to determine availability of uncommitted water resources to be shared between states. Refer to water sharing agreement under the <i>New South Wales–Queensland Border Rivers Act 1946</i> .
SD	State datum
Tailwater level	The level (or elevation) of the water immediately downstream of a dam, weir or other hydraulic structure.
Water year	The period from 1 July to 30 June.