

Resource Operations Licence

Water Act 2000

Name of licence

Central Brisbane River Water Supply Scheme Resource Operations Licence

Holder

Queensland Bulk Water Supply Authority

Water plan

The licence relates to the Water Plan (Moreton) 2007.

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 Brisbane River from Mount Crosby Weir (AMTD 90.8 km) upstream to, and including the ponded area of, Wivenhoe Dam, including sections of tributaries of the Brisbane River, which contain water ponded behind the infrastructure.

Conditions

1. Requirement for operations manual

- 1.1. The licence holder must operate in accordance with an approved operations manual, except in the circumstances set out in condition 5.1.
- 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 rules

- 2.1. The licence holder must comply with the requirements as detailed in attachment 2.

3. Metering

- 3.1. The licence holder must meter the taking of water under all water allocations and seasonal water assignments managed under this licence.

4. Monitoring and reporting requirements

- 4.1. The licence holder must carry out and report on the monitoring requirements as set out in attachment 3.
- 4.2. The licence holder must provide any monitoring data required under condition 4.1 to the chief executive within a stated time upon request.

- 4.3. 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.
- 4.4. The licence holder must ensure that the transfer of data and reporting are consistent with the Water Monitoring Data Reporting Standards².

5. Other conditions

- 5.1. The operating and supply arrangements, and the monitoring required under this licence do not apply in situations where:

5.1.1 implementing the rules or meeting the requirements would be unsafe to a person or persons;

5.1.2 releases are necessary to attain a reduced full supply level notified under section 399B of the *Water Supply (Safety and Reliability) Act 2008*. This condition applies until the end of the period determined under section 399B or section 399C of the *Water Supply (Safety and Reliability) Act 2008*;

5.1.3 the licence holder is operating in accordance with the Wivenhoe Dam and Somerset Dam Manual of Operational Procedures for Flood Mitigation (**Flood Manual**) during a flood event. The commencement and cessation of the flood event is determined by a responsible person in accordance with section 370 of the *Water Supply (Safety and Reliability) Act 2008*.

- 5.2. Conditions 5.1.2 and 5.1.3 will cease to have effect on 30 September 2021.

- 5.3. In the circumstances identified in 5.1.1, 5.1.2 or 5.1.3, the licence holder must comply with the requirements for operational or emergency reporting prescribed in attachment 3.

- 5.4. The licence holder may at any time submit an interim program or an amendment to an existing program to the chief executive for approval in accordance with attachment 4, if the holder proposes to operate in a way that does not meet the requirements of this licence.

- 5.5. Where there is conflict between the requirements of this licence and an approved program, the program prevails for the time it is in place.

Commencement of licence

The licence took effect on 7 December 2009.

Granted on 7 December 2009

Amended under section 184 of the *Water Act 2000* on 4 December 2019

Jarrod Cowley-Grimmond
Executive Director, Divisional Support

¹ The Water Monitoring Data Collection Standards can be inspected at any of the department's offices or accessed online at: <www.business.qld.gov.au>

² The Water Monitoring Data Reporting Standards can be inspected at any of the department's offices or accessed online at: <www.business.qld.gov.au>

Attachment 1 Infrastructure details for Central Brisbane River Water Supply Scheme

Table 1 – Wivenhoe Dam, Brisbane River—AMTD 150.2 km

Description of water infrastructure	
Description	Zoned earth fill and rock fill saddle dam.
Full supply level	EL 67.0 m AHD.
Minimum operating level	EL 35.0 m AHD.
Storage capacity	
Full supply volume	1 165 200 ML.
Minimum operating volume	4886 ML.
Storage curves	Drawing number: A3-110404.
Spillway arrangement	
Description of works	Primary spillway is 72 m wide and consists of 5 radial gates (12 m wide by 16 m high) with a flip bucket dissipater. Secondary spillway consists of a 164 m wide spillway chute with 3 m ogee crest and three fuse plug embankments.
Spillway level	Primary spillway fixed at EL 57.0 m AHD. Secondary spillway fixed at EL 67.0 m AHD.
Spillway width	Primary spillway – 72 m wide, secondary spillway – 164 m wide.
Spillway length	Nil.
Discharge characteristics	Refer to flood manual.
River inlet/outlet works	
Description of works	1.8 m and 3.6 m diameter penstocks located through the left hand wall of the concrete gravity spillway structure terminating with a 4.5 MW mini hydro station and a 1.5 m diameter FDC bypass regulator valve. 1.5 m FDC valve max discharge 36 m ³ /s at EL 67 m AHD. Hydro has a maximum discharge of 18 m ³ /s at EL 67 m AHD.
Inlet	Inlet well has six baulks to facilitate selective withdrawal.
Cease to flow levels	River outlet: EL 31.0 m AHD.

Table 2 – Mount Crosby Weir, Brisbane River—AMTD 90.8 km

Description of water infrastructure	
Description	Concrete weir.
Full supply level	6.9 m AHD.
Minimum operating level	6.2 m AHD.
Storage capacity	
Full supply volume	2200 ML.
Minimum operating volume	1800 ML.
Storage curves	Nil.
Spillway arrangement	
Description of works	Ogee spillway.
Spillway level	EL 6.9 m.
Spillway width	EL 91.08 m.
Spillway length	Nil.
Discharge characteristics	0.7 m wide x 0.305 m high fishway slot.
River inlet/outlet works	
Description of works	Fishway slot: 0.7 m wide x 0.305 m high.
Inlet	Nil.
Cease to flow levels	EL 6.7 m AHD

Attachment 2 Environmental management rules

1 Quality of water released

When releasing water from Wivenhoe Dam, the licence holder must draw water from the inlet level that optimises the quality of water released.

2 Change in rate of release from infrastructure

The licence holder must minimise the occurrence of adverse environmental impacts by ensuring that any change in the rate of release of water occurs incrementally.

3 Daily flows past Mount Crosby Weir

When the combined percentage of useable volume in storage of Wivenhoe and Somerset dams is greater than or equal to 15 per cent, daily flows past Mount Crosby Weir are required.

Attachment 3 Licence holder monitoring and reporting

Part 1 Monitoring requirements

Division 1 Water quantity

1 Streamflow and infrastructure water level data

- (1) The licence holder must record water level and volume and streamflow data in accordance with attachment 3, table 1.
- (2) Infrastructure inflows may be determined based upon an infrastructure inflow derivation technique supplied by the licence holder and approved by the chief executive.

Table 1 – Locations where continuous water data recording required

Continuous time series storage water level data	Continuous time series flow data
—	Wivenhoe Dam inflow
Wivenhoe Dam headwater level	—
—	Wivenhoe Dam tailwater
—	Mount Crosby Weir inflow
Mount Crosby Weir headwater level	—
—	Mount Crosby Weir tailwater

2 Releases from infrastructure

The licence holder must measure and record for each release of water from Wivenhoe Dam—

- (a) the daily volume released; and
- (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; and
- (c) the reason for each release; and
- (d) the inlet level used for each release of water; and
- (e) the reason for taking water via a particular inlet level.

3 Record of flows passing Mount Crosby Weir

The licence holder must record, for flows passing Mount Crosby Weir—

- (a) the start and end dates of each passing flow event; and
- (b) the estimated daily volume overflowing the weir for each day of each passing flow event.

4 Announced allocations

The licence holder must record details of announced allocation determinations including—

- (a) the announced allocations for medium and high priority water allocations;
- (b) the date announced allocations are determined; and
- (c) the value of each parameter applied for calculating the announced allocation.

5 Water taken by water users

The licence holder must record the total volume of water taken, by each water user for each zone as follows—

- (a) the total volume of water taken in each quarter of the water year;
- (b) the total volume of water entitled to be taken at any time; and
- (c) the basis for determining the total volume of water entitlement to be taken at any time.

6 Seasonal water assignment of a water allocation

The licence holder upon consent to a seasonal water assignment must record details of seasonal water assignment arrangements, including—

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

Division 2 Impact of infrastructure operation on natural ecosystems

7 Water quality

The licence holder must monitor and record water quality data in relation to relevant infrastructure listed in attachment 1.

8 Bank condition

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

Part 2 Reporting requirements

9 Reporting requirements

The licence holder must provide—

- (a) annual reports for the previous water year; and
- (b) operational or emergency reports.

Division 1 Annual reporting

10 Annual report

- (1) The licence holder must submit an annual report to the chief executive after the end of the water year.
- (2) The annual report must include—
 - (a) water quantity monitoring results required under attachment 3, section 11;
 - (b) details of the impact of infrastructure operation on natural ecosystems as required under attachment 3, section 12; and
 - (c) a discussion on any issues that arose as a result of operating in accordance with this licence.

11 Water quantity monitoring

The licence holder must include in the annual report made under section

- 10— (a) a summary of announced allocation determinations, including—
 - (i) an evaluation of the announced allocation procedures and outcomes; and
 - (ii) the date and value for the initial announced allocation and for each change made to an announced allocation;
- (b) streamflow and infrastructure water levels—all records referred to in attachment 3, section 1;
- (c) the total annual volume of water taken by each water user, specified by zone, namely—
 - (i) the total volume of supplemented water taken;
 - (ii) the total volume of supplemented water entitled to be taken; and
 - (iii) the basis for determining the volume entitled to be taken;
- (d) details of seasonal water assignments, namely—
 - (i) the total number of seasonal water assignments; and
 - (ii) the total volume of water seasonally assigned;
- (e) all details of changes to infrastructure or the operation of the infrastructure that may impact on compliance with rules in this licence;
- (f) details of any new monitoring devices used such as equipment to measure streamflow; and
- (g) the details and status of any programs implemented under condition 5.2.

12 Impact of infrastructure operation on natural ecosystems

The licence holder must include in their annual report—

- (a) a summary of environmental considerations made by the licence holder in making operational and release decisions;
- (b) a summary of the environmental outcomes of the decision including any adverse environmental impacts;
- (c) a summary of bank condition assessment, including—
 - (i) results of investigations of bank slumping or erosion identified in ponded areas or downstream of infrastructure undertaken in accordance with attachment 3, section 8; and
 - (ii) changes to the operation of infrastructure to reduce instances of bank slumping and erosion; and
- (d) water quality—all records referred to in attachment 3, section 7 and a discussion and assessment of water quality issues.

Division 2 Operational or emergency reporting

13 Operational or emergency reporting³

The licence holder must—

- (a) notify the chief executive within one business day of becoming aware of—
 - (i) any of the following operational incidents—
 - (A) a non-compliance by the licence holder with the operating and supply arrangements in the approved operations manual for this licence;
 - (B) instances of bank slumping within the impounded areas or downstream of the water infrastructure to which this licence relates;
 - (C) a decision being made to introduce a reduced full supply level for Wivenhoe Dam under section 399B of the *Water Supply (Safety and Reliability) Act 2008*; or
 - (D) a responsible person defined under section 370 of the *Water Supply (Safety and Reliability) Act 2008* determining that a flood event has commenced under the Flood Manual.
 - (ii) an emergency where, as a result of the emergency, the licence holder cannot comply with the conditions of this licence.
- (b) provide to the chief executive a report which includes details of—
 - (i) the incident or emergency;
 - (ii) conditions under which the incident or emergency occurred;
 - (iii) any responses or activities carried out as a result of the incident or emergency; and
 - (iv) 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.

³ This does not preclude requirements for dam safety under the *Water Act 2000* and any other applicable legislation

Attachment 4 Interim programs

1 Submission of interim program

The licence holder may, at any time, submit an interim program to the chief executive for approval, including a timetable for returning to full compliance with the licence and interim arrangements.

2 Requirement for additional information

The chief executive, in considering any submitted interim program, may request additional information.

3 Approving an interim program

- (1) The chief executive, in dealing with a submitted interim program, may either—
 - (a) approve the interim program with or without conditions;
 - (b) amend and approve the amended program; or
 - (c) require the licence holder to submit a revised interim program.
- (2) In making a decision under subsection (1), the chief executive must consider the public interest.
- (3) Within 10 business days of making a decision on an interim program submitted under this section, the chief executive must notify the licence holder of the decision.

4 Implementing and publishing interim program

Following approval of the program by the chief executive, the licence holder—

- (a) must implement and operate in accordance with the approved interim program; and
- (b) make public details of the approved interim program on its internet site.

5 Relationship between interim program and licence

- (1) Where there is conflict between the provisions of this licence and the provisions of an approved interim program, the approved interim program prevails for the time that the interim program is in place.
- (2) Where an interim program has been submitted under attachment 4, section 1, but not dealt with under attachment 4, section 3, the licence holder may operate under the interim program despite the conditions of this licence until a decision is made under attachment 4, section 3.

Attachment 5 Glossary

Term	Definition
AHD	Australian Height Datum, which references a level or height to a standard base level.
AMTD	Adopted middle thread distance
Announced allocation	For a water allocation managed under a water resource operations licence, means a number, expressed as a percentage, which is used to determine the maximum volume of water that may be taken in a water year under the authority of a water allocation.
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 that transfers an interest or right in water to an assignee (e.g. a seasonal assignment).
EL	Elevation
Full supply volume	The specified maximum volume of water within the ponded area of a dam, weir or barrage, which corresponds to the full supply level.
Headwater level	The level (or elevation) of the water immediately upstream of a dam, weir, or other hydraulic structure.
Infrastructure	A dam, weir or other water storage and any associated works for taking or interfering with water in a watercourse, lake or spring.
Inlet	Infrastructure comprised of an entrance channel, intake structure, and gate or valve, which allow for water to be taken from the storage and discharged into the watercourse downstream of the storage.
Limitation	Limiting the amount of water that may be taken during a water year.
Location	For a water allocation, means the zone and/or place from which water under the water allocation can be taken. For a water licence, means the section of the watercourse, lake or spring abutting or contained by the land described on the water licence at which water may be taken.
Megalitre (ML)	One million litres
Minimum operating level	For a dam or weir, is the volume of water within the ponded area of a dam, weir or barrage below which water cannot be released or taken from the infrastructure under normal operating conditions.
Minimum operating volume	The specified minimum volume of water within the ponded area of a dam weir or barrage below which water cannot be released or taken from the infrastructure under normal operating conditions.
Outlet	Means an arrangement on a dam or weir that allows stored water to be released downstream.
Ponded area	Area of inundation at full supply level of a dam, weir or barrage.
Release	Water from a dam or weir that passes downstream from the dam or weir either through the dam or weir outlet works or over the dam spillway.
Release rate	Rate of release of water from a storage facility, for example, a dam or weir.
Streamflow	Includes flow of water resulting from tributary inflows, and does not include releases of supplemented water.
Tailwater	The flow of water immediately downstream of a dam, weir or barrage. Tailwater includes all water passing the infrastructure, for example controlled releases and uncontrolled overflows.