

Resource Operations Licence

Water Act 2000



Name of licence

Lower Lockyer Valley 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 following watercourses for the distribution of water—

- (a) Seven Mile Lagoon to Atkinsons Dam;
- (b) Blind Gully from the confluence of Brightview Channel to the confluence of Lockyer Creek;
- (c) Buaraba Creek from the Buaraba Creek Pipeline at AMTD 15.8 km to the confluence of Buaraba Creek and Lockyer Creek;
- (d) Lockyer Creek from AMTD 43.5 km to O'Reillys Weir at AMTD 1.4 km;
- (e) Atkinsons Dam from the ponded area upstream to and including the diversion channel from Buaraba Creek;
- (f) Sections of tributaries of Lockyer Creek which contain water ponded behind the infrastructure in the water supply scheme; and
- (g) Sections of Buaraba Creek which contain water ponded behind the infrastructure in the water supply scheme.

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 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 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 requirements for operational or emergency reporting prescribed in attachment 3.
- 5.2. 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.
- 5.3. 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 2 June 2014.

Granted on 2 June 2014

Amended under section 1259 of the *Water Act 2000* on 16 January 2018

SIGNED

David Wiskar
Executive Director, Water Policy

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

Attachment 1 Infrastructure details for Lower Lockyer Valley Water Supply Scheme

Table 1 – Atkinsons Dam, Atkinsons Lagoon Offstream Storage

Description of water infrastructure	
Description	Modified homogenous zoned earth fill embankment, 2082 m in total length, maximum height 12.0 m.
Full supply level	EL 65.72 m AHD.
Total storage capacity level	EL 65.72 m AHD.
Minimum operating level	Buaraba Creek outlet level EL 57.34 m AHD. Brightview Channel outlet level EL 57.84 m AHD.
Storage capacity	
Full supply volume	30 401 ML.
Minimum operating volume	2 168 ML.
Storage curves	A3-107326-7.
Spillway arrangement	
Description of works	60.96 m wide open channel topping an ogee crest weir, with concreted chute, and discharging to Buaraba Creek.
Spillway level	Approach channel bed EL 64.20 m AHD. Top of crest EL 65.72 m AHD. Discharge channel bed EL 60.84 m AHD.
Spillway width	68.5 m.
Discharge characteristics	Spillway capacity 571 m ³ /s.
River inlet/outlet works	
Description of works	Buaraba Creek outlet: 900 mm diameter conduit from intake tower under embankment to guard valve on downstream end near offtake of Atkinsons Dam' pump station. Brightview Channel outlet: check structure into two 1200 mm diameter pipelines.
Inlet	Single inlet 2159 mm wide x 5563 mm high.
Cease to flow levels	Buaraba Creek: below outlet level EL 57.34 m AHD. Brightview Channel: below outlet level EL 57.84 m AHD.

Table 2 – Brightview Weir, Lockyer Creek—AMTD 36.4 km

Description of water infrastructure	
Description	Mass concrete weir with an ogee crest and fishway. Maximum height 7.4 m.
Full supply level	EL 60.13 m AHD.
Minimum operating level	EL 54.37 m AHD (level of outlet works).
Storage capacity	
Full supply volume	393 ML.
Minimum operating volume	6 ML.
Storage curves	A3-110879-80.
Spillway arrangement	
Description of works	Ogee type concrete crest.
Spillway level	Crest level- EL 60.13 m AHD.
Spillway width	25 m.
Discharge characteristics	Spillway capacity 121 m ³ /s (theoretical).
River inlet/outlet works	
Description of works	From the inlet box 28.5 m upstream of the embankment, the outlet is by way of a 600 mm diameter conduit through the embankment located approximately midstream and controlled on the downstream end by a 600 mm diameter gate valve.
Inlet	Reinforced concrete box 1524 mm x 1524 mm x 2743 mm, with the entrance through trash racks on the wall facing the left bank.
Cease to flow levels	EL 54.37 m AHD (level of outlet works).

Table 3 – O'Reillys Weir, Lockyer Creek—AMTD 1.4 km

Description of water infrastructure	
Description	Concrete encased steel sheet piling weir with abutments on both sides and an ogee crest. Maximum height 7.6 m.
Full supply level	EL 31.24 m AHD.
Minimum operating level	26 m AHD.
Storage capacity	
Full supply volume	611 ML.
Total supply capacity	611 ML.
Minimum operating volume	44 ML.
Storage curves	F37348.
Spillway arrangement	
Description of works	Spillway is weir crest (ogee).
Spillway level	EL 31.24 m AHD.
Spillway width	26.15 m.
Discharge characteristics	Spillway capacity 149 m ³ /s (theoretical).
River inlet/outlet works	
Description of works	Outlet is a single 225 mm diameter pipe, regulated on the downstream end by a 225 mm diameter gate valve.
Inlet	Valve is not used.

Table 3A – Additional infrastructure in the Lower Lockyer Water Supply Scheme

Description of water infrastructure	
Buaraba Creek Supply Channel	
BR1 Supply Channel	
Brightview Channel	
Buaraba Creek Diversion Channel	

Table 3B – Sippels Weir, Lockyer Creek—AMTD 23.8 km

Description of water infrastructure	
Description	Cantilevered gravity concrete weir.
Full supply level	44.15 m AHD.
Minimum operating level	Not applicable.
Storage capacity	
Full supply volume	25 ML.
Minimum operating volume	0 ML.
Spillway arrangement	
Description of works	Spillway is weir crest.
Spillway width	7.1 m.
Discharge characteristics	Spillway capacity 103m ³ /s (theoretical).
River inlet/outlet works	
Description of works	Outlet consists of a 300 mm diameter pipeline fitted with a 300 mm butterfly valve.
Inlet	No inlet structure.

Table 3C – Potters Weir, Lockyer Creek—AMTD 17.0 km

Description of water infrastructure	
Description	Cantilevered gravity concrete. Maximum height 2.35 m.
Full supply level	39.06 m AHD.
Minimum operating level	Not applicable.
Storage capacity	
Full supply volume	30 ML.
Minimum operating volume	0 ML.
Spillway arrangement	
Description of works	Spillway is weir crest.
Spillway level	39.06 m AHD.
Spillway width	10.2 m.
Discharge characteristics	143 m ³ /s (theoretical).
River inlet/outlet works	
Description of works	Outlet consists of a 300 mm butterfly valve housed in the main embankment with the upstream side protected by a galvanised screen.
Inlet	No inlet structure.

Table 3D – Buaraba Creek Diversion Weir, Buaraba Creek—AMTD 15.8km

Description of water infrastructure	
Description	Sheet steel piling weir.
Full supply level	67.23 m AHD.
Minimum operating level	Not applicable.
Storage capacity	
Full supply volume	74 ML.
Minimum operating volume	10 ML.
Spillway arrangement	
Description of works	Spillway is weir crest.
Spillway level	67.23 m AHD.

Attachment 2 Environmental management rules

1 Quality of water released

When releasing water from Atkinsons 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.

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
—	Atkinsons Dam inflow
Atkinsons Dam headwater level	—
O'Reillys Weir headwater level	—

2 Releases from infrastructure

The licence holder must measure and record for each release of water from Atkinsons 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.

3 Water diversions

The licence holder must estimate and record the daily total volumes of water delivered between the licence holder's major diversion points and watercourses the licence holder is authorised to use for the distribution of water.

4 Announced allocations

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

- (a) the announced allocations for medium 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

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

- (a) the name of the assignee and the assignor;
- (b) the volume of the assignment;
- (c) the location—
 - (i) from which it was assigned; and
 - (ii) to which it was assigned;
- (d) the 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 each 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 about 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; and
 - (B) instances of bank slumping within the impounded areas or downstream of the water infrastructure to which this licence relates;
 - (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; or
 - (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.
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).
Cease to flow level	For a waterhole, the level at which water stops flowing from a waterhole over its downstream control.
EL	Elevation level.
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.
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.
Quarter or quarterly	Three monthly intervals commencing at the start of the water year.
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.