

# Resource Operations Licence

## Water Act 2000



### **Name of licence**

Cressbrook Creek Water Supply Scheme Resource Operations Licence

### **Holder**

Toowoomba Regional Council

### **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) The ponded area of Cressbrook Dam;
- (b) The part of Cressbrook Creek from the ponded area of Cressbrook Dam upstream to the confluence of Cressbrook Creek and Perseverance Creek;
- (c) The part of Perseverance Creek at the confluence with Cressbrook Creek upstream to and including the ponded area of Perseverance Dam; and
- (d) Sections of tributaries of the Cressbrook and Perseverance creeks 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.
- 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 Standards<sup>1</sup>.
- 4.4. The licence holder must ensure that the transfer of data and reporting are consistent with the Water Monitoring Data Reporting Standards<sup>2</sup>.

#### **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 7 December 2009.

**Granted on 7 December 2009**

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

**SIGNED**

**David Wiskar**  
**Executive Director, Water Policy**

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<sup>1</sup> 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](http://www.dnrm.qld.gov.au)>

<sup>2</sup> 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](http://www.dnrm.qld.gov.au)>

# Attachment 1 Infrastructure details for Cressbrook Creek Water Supply Scheme

**Table 1 – Cressbrook Dam, Cressbrook Creek**

<b>Description of water infrastructure</b>	
Description	Zoned earthfill.
Full supply level	EL 280 m AHD.
Minimum operating level	EL 246 m AHD.
<b>Storage capacity</b>	
Full supply volume	81 842 ML.
Minimum operating volume	1136 ML.
Storage curves	100950-01.
<b>Spillway arrangement</b>	
Description of works	Ogee spillway.
Spillway level	44.6 m.
Spillway width	20.3 m.
Spillway length	85 m.
Discharge characteristics	Ungated overflow leading to flip bucket and plunge pool.
<b>River inlet/outlet works</b>	
Description of works	500 mm diameter outlet.
Inlet	Cressbrook Creek and Little Oakey Creek.
Cease to flow levels	EL 247.4 m AHD.

**Table 2 – Perseverance Dam, Perseverance Creek**

<b>Description of water infrastructure</b>	
Description	Zoned earth and rockfill embankment.
Full supply level	RL 446.08 m AHD.
Minimum operating level	RL 423.0 m AHD.
<b>Storage capacity</b>	
Full supply volume	30 140 ML.
Minimum operating volume	3 472 ML.
Storage curves	100951-01.
<b>Spillway arrangement</b>	
Description of works	Ogee spillway 53.6 m high tapering to 36 m.
Spillway level	53.6 m tapering to 36 m.
Spillway width	54.9 m.
Spillway length	52 m.
Discharge characteristics	Ungated overflow leading to flip bucket and plunge pool.
<b>River inlet/outlet works</b>	
Description of works	600 mm diameter outlet.
Inlet	Perseverance Creek.
Cease to flow levels	RL 400.8 m AHD.

## **Attachment 2 Environmental management rules**

### **1 Quality of water released**

When releasing water from Perseverance and Cressbrook dams, 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
—	Perseverance Dam inflow
Perseverance Dam headwater level	—
—	Perseverance Dam tailwater
—	Cressbrook Dam inflow
Cressbrook Dam headwater level	—
—	Cressbrook Dam tailwater

#### 2 Releases from infrastructure

The licence holder must measure and record for each release of water from Perseverance and Cressbrook dams—

- (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 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.

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

### **Division 2 Impact of infrastructure operation on natural ecosystems**

#### **5 Water quality**

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

#### **6 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**

#### **7 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**

#### **8 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 9;
  - (b) details of the impact of infrastructure operation on natural ecosystems as required under attachment 3, section 10; and
  - (c) a discussion on any issues that arose as a result of operating in accordance with this licence.

## 9 **Water quantity monitoring**

The licence holder must include in the annual report made under section 8—

- (a) streamflow and infrastructure water levels—all records referred to in attachment 3, section 1;
- (b) 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 introduced water taken;
  - (iii) the total volume of supplemented water entitled to be taken; and
  - (iv) the basis for determining the volume entitled to be taken;
- (c) details of seasonal water assignments, namely—
  - (i) the total number of seasonal water assignments; and
  - (ii) the total volume of water seasonally assigned;
- (d) all details of changes to infrastructure or the operation of the infrastructure that may impact on compliance with rules in this licence;
- (e) details of any new monitoring devices used such as equipment to measure streamflow; and
- (f) the details and status of any programs implemented under condition 5.2.

## 10 **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 6; 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 5 and a discussion and assessment of water quality issues.

11 **Operational or emergency reporting**<sup>3</sup>

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; and
- (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.

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<sup>3</sup> 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 must—

- (a) 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.
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.
RL	Relative level.
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.
Waterhole	A part of a watercourse that contains water after the watercourse ceases to flow, other than a part of a watercourse that is within the ponded area of a dam, weir or barrage on the watercourse.