

# Resource Operations Licence

## Water Act 2000



### Name of licence

Macintyre Brook Water Supply Scheme Resource Operations Licence

### Holder

Sunwater Limited

### 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 watercourse listed in Table 1 below for the distribution of supplemented water.

**Table 1 - Watercourse to be used for distribution of supplemented water**

| Watercourse     | Description   |
|-----------------|---|
| Macintyre Brook | From the upstream extent of the ponded area of Coolmunda Dam (AMTD 82.0 km) downstream to the confluence with the Dumaresq River (AMTD 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 rules

- 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.

#### 3. Releases to provide for environmental flows

- 3.1. The first 100 megalitres per day of inflow into Coolmunda Dam must be released through the outlet works when the water level in Coolmunda Dam is—
  - 3.1.1. less than full supply level; and
  - 3.1.2. greater than 311.44 m AHD.
- 3.2. Notwithstanding subsection 3.1, where the capacity of the outlet works of Coolmunda Dam is insufficient to release both the volume required for water orders and the volume required under subsection 3.1, the amount to be released under subsection 3.1 may be reduced to the balance of the capacity of the outlet works after allowing for releases for water orders.
- 3.3. Where the licence holder acts under subsection 3.2, the balance of the volume required to be released under subsection 3.1 must be released as soon as practicable.
- 3.4. The total volume of releases made under subsection 3.1 for a water year must not exceed 6000 megalitres.

#### **4. Metering**

- 4.1. The licence holder must meter the taking of water under all water allocations and seasonal water assignments managed under this licence.
- 4.2. All new or replacement meter installations must comply with the non-urban metering standard as defined in the Water Regulation 2016.

#### **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 Standards<sup>1</sup>.
- 5.4. The licence holder must ensure that the transfer of data and reporting are consistent with the Water Monitoring Data Reporting Standards<sup>1</sup>.

#### **6. Inter-scheme trading agreement**

- 6.1. There must be an inter-scheme trading agreement between the licence holder for the Macintyre Brook Water Supply Scheme and the licence holder for the Border Rivers Water Supply Scheme to facilitate the transfer and change of location or seasonal assignment of a water allocation between the Macintyre Brook Water Supply Scheme and the Border Rivers Water Supply Scheme.
- 6.2. The inter-scheme trading agreement must address—
  - a) licence holder monitoring and reporting requirements as per condition 5; and
  - b) meter reading and water charges.
- 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 agreement<sup>2</sup> between the licence holder for the Macintyre Brook 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 Macintyre Brook 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.
- 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.
- 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 request<sup>1</sup>.

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<sup>1</sup> The Water Monitoring Data Collection Standards and the Water Monitoring Data Reporting Standards can be accessed online at [www.business.qld.gov.au](http://www.business.qld.gov.au).

<sup>2</sup> Interstate trading is administered in accordance with Appendix E1 of the New South Wales - Queensland Border Rivers Intergovernmental Agreement 2008.

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 10 January 2022.**

**Jarrold Cowley-Grimmond**

**Executive Director, Divisional Support**

# Attachment 1      Infrastructure details for Macintyre Brook Water Supply Scheme

**Table 1 – Coolmunda Dam — Macintyre Brook**

| <b>Description of infrastructure</b> |   |
|--------------------------------------|---|
| Description                          | Earth and rock fill dam, equipped with radial gates                       |
| Full supply level                    | EL 314.07 m AHD   |
| Minimum operating level              | EL 303.73 m AHD   |
| <b>Storage capacity</b>              |   |
| Full supply volume                   | 68 134 ML   |
| Minimum operating volume             | 210 ML  |
| Storage curves                       | Drawing no: 207900C   |
| <b>Spillway arrangement</b>          |   |
| Description of works                 | Spillway consisting of seven radial gates located centrally in embankment |
| Spillway level                       | EL 304.32 m AHD   |
| Spillway width                       | 107.0 metres  |
| Discharge characteristics            | Drawing no: 20696A  |
| <b>River inlet/outlet works</b>      |   |
| Discharge characteristics            | The estimated maximum discharge capacity of the outlet is 390 ML/day.     |

**Table 2 – Greenup Weir — Macintyre Brook**

| <b>Description of water infrastructure</b> |   |
|--|---|
| Description                                | Timber piled weir with timber crest                                 |
| Full supply level                          | EL 296.65 m AHD   |
| Minimum operating level                    | EL 293.03 m AHD   |
| <b>Storage volume and surface area</b>     |   |
| Full supply volume                         | 370 ML  |
| Minimum operating volume                   | 20 ML   |
| Storage curves                             | Drawing no: F37509  |
| <b>Spillway arrangement</b>                |   |
| Description of works                       | Timber crest  |
| Spillway level                             | EL 296.65 m AHD   |
| Spillway width                             | 48.5 metres   |
| <b>River inlet/outlet works</b>            |   |
| Discharge characteristics                  | The estimated maximum discharge capacity of the outlet is 30 ML/day |

**Table 3 – Whetstone Weir — Macintyre Brook**

| <b>Description of water infrastructure</b> |   |
|--|---|
| Description                                | Sheet piling with concrete cap                                      |
| Full supply level                          | EL 262.45 m AHD   |
| Minimum operating level                    | EL 257.44 m AHD   |
| <b>Storage capacity</b>                    |   |
| Full supply volume                         | 506 ML  |
| Minimum operating volume                   | 3 ML  |
| Storage curves                             | Drawing no: F43440  |
| <b>Spillway arrangement</b>                |   |
| Description of works                       | Concrete cap crest  |
| Spillway level                             | EL 262.45 m AHD   |
| Spillway width                             | 25.6 metres   |
| <b>River inlet/outlet works</b>            |   |
| Discharge characteristics                  | The estimated maximum discharge capacity of the outlet is 45 ML/day |

**Table 4 – Ben Dor Weir — Macintyre Brook**

| <b>Description of water infrastructure</b> |   |
|--|---|
| Description                                | Mass concrete gravity weir with central ogee spillway               |
| Full supply level                          | EL 250.05 m AHD   |
| Minimum operating level                    | EL 244.26 m AHD   |
| <b>Storage capacity</b>                    |   |
| Full supply volume                         | 700 ML  |
| Minimum operating volume                   | 20 ML   |
| Storage curves                             | Drawing no: F37504  |
| <b>Spillway arrangement</b>                |   |
| Description of works                       | Ogee crest  |
| Spillway level                             | EL 250.05 m AHD   |
| Spillway width                             | 63.7 metres   |
| <b>River inlet/outlet works</b>            |   |
| Discharge characteristics                  | The estimated maximum discharge capacity of the outlet is 40 ML/day |

# Attachment 2 Licence holder monitoring and reporting

## Part 1 Monitoring requirements

### Division 1 Water quantity

#### 1 Stream flow and storage water level data

- (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 are 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 water level data and daily flow data are required**

| Location                 | Water level data | Daily flow data |
|--------------------------|------------------|-----------------|
| Coolmunda Dam inflow     |                  | ✓               |
| Coolmunda Dam headwater  | ✓                |                 |
| Coolmunda Dam tailwater  |                  | ✓               |
| Whetstone Weir headwater | ✓                |                 |
| Ben Dor Weir headwater   | ✓                |                 |

#### 2 Storage inflow

- (1) The licence holder must record for Coolmunda Dam the daily inflow data.
- (2) The inflow data must be real time information upon which operational decisions were based.

#### 3 Releases from storage

- (1) This section applies to Coolmunda Dam.
- (2) The licence holder must measure and record for the 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;
    - (ii) the new release rate; and
  - (c) the reason for each release and the component volumes for each release.

#### **4 Continuous share water account reconciliations**

The licence holder must record details of each continuous share water account reconciliation determination, including all of the following—

- (a) the date of the reconciliation;
- (b) the reason for the reconciliation;
- (c) the value of each parameter applied for calculating the reconciliation;
- (d) how the water volume difference was applied to continuous share water accounts; and
- (e) the volume of water in each continuous share water account—
  - (i) immediately prior to the reconciliation; and
  - (ii) immediately after the reconciliation.

#### **5 Continuous share volume determinations**

The licence holder must record for each water allocation all the values of each parameter applied in determining the continuous share volume.

#### **6 Announced allocations for the bulk share**

The licence holder must record for the group of water allocations managed as the bulk share—

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

#### **7 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.

#### **8 Seasonal water assignment of a water allocation**

The licence holder must record details of seasonal water assignment arrangements, including—

- (a) the name of the assignee and 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 assignment; and
- (e) the sale price.

- 9 Limitation on the supply of medium priority water**  
The licence holder must record the date(s) where the supply of medium priority water allocations is—
- (a) ceased because the water level in Coolmunda Dam is below the level stated in section 5(2) of the operations manual; or
  - (b) recommenced because the water level in Coolmunda Dam has increased to a level equal to or above the level stated in section 5(3) of the operations manual.

- 10 Waterholes**
- (1) For any waterhole from which supplemented water is taken, the licence holder must establish a unique identifier.
  - (2) For each day that supplemented water is taken from a waterhole and where the water level is below cease to flow level, the licence holder must measure and record the level of water below cease to flow level.

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

- 11 Water quality**  
The licence holder must monitor and record water quality in relation to relevant infrastructure listed in Attachment 1.

- 12 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 change; 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.

- 13 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 is associated with the operation of that infrastructure.

## **Part 2 Reporting requirements**

- 14 Reporting requirements**  
The licence holder must provide the following reports in accordance with this part—
- (a) quarterly reports;
  - (b) annual reports for the previous water year; and
  - (c) operational and emergency reports;



## Division 1                      Quarterly reporting

### 15                      Quarterly reporting

- (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) stream flow and storage water level data—all records referred to in section 1;
  - (b) storage inflow data—all records referred to in section 2;
  - (c) releases from storage—all records referred to in section 3;
  - (d) the total quarterly volume of water taken under each water allocation—all records referred to in section 7;
  - (e) waterholes—all records referred to in section 10;
  - (f) water quality—all records referred to in section 11; and
  - (g) summary of bank condition monitoring and incidences of slumping carried out in accordance with section 12.

## Division 2                      Annual reporting

### 16                      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 17;
  - (b) details of the impact of storage operation on natural ecosystems as required under section 18;
  - (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 Attachment 2, Part 1, Division 1(8).

### 17                      Water quantity monitoring

The licence holder must include in the annual report—

- (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 each announced allocation;
- (b) water account reconciliation determinations, including—
  - (i) an evaluation of the water account reconciliation procedures and outcomes; and
  - (ii) the date and value for the 'water volume difference' for each reconciliation process;

- (c) instances where there was a limitation on the supply of medium priority water, including—
  - (i) an evaluation of the effectiveness of the arrangements and outcomes; and
  - (ii) the commencement date(s) and time period(s);
- (d) the total annual volume of water taken by each supplemented water user, specified by entitlement and zone, including—
  - (i) the total volume of water taken;
  - (ii) the total volume of water entitled to be taken; and
  - (iii) the basis for determining the total volume entitled to be taken;
- (e) details of seasonal water assignments within each zone, including—
  - (i) the total number of seasonal water assignments;
  - (ii) the total volume of water seasonally assigned; and
  - (iii) the total sale price;
- (f) details of seasonal water assignments between each zone, including—
  - (i) the total number of seasonal water assignments;
  - (ii) the total volume of water seasonally assigned; and
  - (iii) the total sale price;
- (g) details of inter-scheme seasonal water assignments from each zone, including—
  - (i) the total number of inter-scheme seasonal water assignments out of the scheme;
  - (ii) the total volume of inter-scheme seasonal water assignments out of the scheme; and
  - (iii) the total sale price;
- (h) all details of changes to the storage and delivery infrastructure or the operation of storage and delivery infrastructure that may impact on compliance with this licence; and
- (i) details of any new monitoring devices used, such as equipment to measure stream flow.

## **18 Impact of infrastructure operation on natural ecosystems**

The licence holder must include in the annual report—

- (a) a summary of the 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; and
- (c) a summary of bank condition and fish stranding monitoring and assessment, including—
  - (i) results of investigations of bank slumping and/or erosion identified in ponded areas and/or downstream of the storages;
  - (ii) results of any investigations of fish stranding downstream of the storages; and
  - (iii) changes to the operation of storages to reduce instances of bank slumping, erosion or fish stranding;
- (d) a discussion and assessment of the following water quality issues—

- (i) thermal and chemical stratification in each storage;
  - (ii) contribution of the storage and its management to 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; and
- (e) any proposed changes to the monitoring program as a result of evaluation of the data.

## Division 3                      Operational or emergency reporting<sup>3</sup>

### 19            Operational or emergency reporting

- (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;
    - (ii) instances of fish stranding, cyanobacterial growth or bank slumping within ponded areas associated or downstream of the 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.
- (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; and
  - (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.
- (3) The licence holder must—
- (a) notify the chief executive within one business day—
    - (i) upon setting an initial announced allocation or resetting an announced allocation during the water year;
    - (ii) with details of any arrangements for addressing circumstances where they are unable to supply water allocations;
    - (iii) upon determining a water volume difference;
    - (iv) with details of any restrictions on the supply of high priority water allocations;
    - (v) of ceasing the supply of medium priority water allocations because the water level in Coolmunda Dam is below the level stated section 5(2) of the operations manual; or

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<sup>3</sup> 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.

- (vi) of recommencing the supply of medium priority water allocations because the water level in Coolmunda Dam has increased to a level equal to or above the level stated in section 5(3) of the operations manual.

# 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.  |
| Discharge               | Discharge is 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 <sup>3</sup> /s) or in megalitres per day (ML/day).  |
| EL                      | Elevation  |
| 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.  |
| Quarter or quarterly    | Three-monthly intervals commencing at the start of the water year.   |
| Water year              | The period from 1 July to 30 June.   |