Resource Operations Licence

Water Act 2000

Name of licence
Lower Fitzroy Water Supply Scheme Resource Operations Licence

Holder
SunWater Limited

Water plan
The licence relates to the Water Plan (Fitzroy Basin) 2011.

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 Fitzroy River from the upstream limit of Eden Bann Weir (AMTD 183.4 km) to the Fitzroy Barrage (AMTD 59.6 km) for the distribution of supplemented water, including sections of tributaries where supplemented water is accessible.

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\(^1\).

4.4. The licence holder must ensure that the transfer of data and reporting are consistent with the Water Monitoring Data Reporting Standards\(^2\).

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 18 May 2006.

Granted on 18 May 2006
Amended under section 1259 of the Water Act 2000 on 29 June 2018

SIGNED

David Wiskar
Executive Director, Water Policy

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\(^1\) 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>
## Description of water infrastructure

<table>
<thead>
<tr>
<th>Description of works</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main embankment</td>
<td>Mass concrete gravity weir.</td>
</tr>
<tr>
<td>Full supply level</td>
<td>EL 14.5 m AHD.</td>
</tr>
<tr>
<td>Fixed crest level</td>
<td>EL 14.5 m AHD.</td>
</tr>
<tr>
<td>Saddle dam(s)</td>
<td>Nil.</td>
</tr>
<tr>
<td>Fabridams</td>
<td>Nil.</td>
</tr>
<tr>
<td>Gates</td>
<td>Nil.</td>
</tr>
</tbody>
</table>

## Storage volume and surface area

<table>
<thead>
<tr>
<th>Description of works</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full supply volume</td>
<td>35 900 ML.</td>
</tr>
<tr>
<td>Dead storage volume</td>
<td>9650 ML.</td>
</tr>
<tr>
<td>Surface area/elevation and storage volume/elevation relationship</td>
<td>Department of Primary Industries (Water Resources) Drawing No’s. A3-110383 and A3-110384.</td>
</tr>
</tbody>
</table>

## Spillway arrangement

<table>
<thead>
<tr>
<th>Description of works</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spillway level</td>
<td>High level crest EL 14.8 m AHD. Low level crest EL 14.5 m AHD.</td>
</tr>
<tr>
<td>Spillway width</td>
<td>High level crest: 180 metres on right abutment. Low level crest: 90 metres on left abutment.</td>
</tr>
<tr>
<td>Discharge characteristics</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

## River inlet/outlet works

<table>
<thead>
<tr>
<th>Description of works</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inlet structure through 1200 mm by 1200 mm sluice gate to 1500 mm by 1500 mm box culvert.</td>
<td></td>
</tr>
<tr>
<td>Multi-level inlet</td>
<td>Works can accommodate selective withdrawal.</td>
</tr>
<tr>
<td>Cease to flow level</td>
<td>EL 7.25 metres AHD.</td>
</tr>
<tr>
<td>Discharge characteristics</td>
<td>Water Resources Drawing No. A3-101635.</td>
</tr>
</tbody>
</table>

## Fish transfer system

<table>
<thead>
<tr>
<th>Description of works</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fishlock located near the left bank adjacent to the outlet works.</td>
<td></td>
</tr>
</tbody>
</table>

## Local supply area/level

<table>
<thead>
<tr>
<th>Description of works</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Supply Level</td>
<td>EL 9.55 m AHD.</td>
</tr>
<tr>
<td>Local Supply Area</td>
<td>Eden Bann Weir pond and downstream, but excluding, Fitzroy Barrage pond.</td>
</tr>
</tbody>
</table>
Attachment 2  Environmental management rules

1  Quality of water released
Where a storage is fitted with multi-level inlet works, 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 from a storage into a watercourse occurs incrementally.
Attachment 3  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 volume data, and stream flow 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

<table>
<thead>
<tr>
<th>Water level and volume data</th>
<th>Daily flow data</th>
</tr>
</thead>
<tbody>
<tr>
<td>—</td>
<td>Eden Bann Weir inflow*</td>
</tr>
<tr>
<td>Eden Bann Weir headwater (AMTD 141.2 km)</td>
<td>—</td>
</tr>
<tr>
<td>—</td>
<td>Eden Bann Weir tailwater</td>
</tr>
</tbody>
</table>

*Methodology already approved by the chief executive.

2  Releases from storages
   (1) The licence holder must measure and record for each release of water from Eden Bann Weir—
       (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.
   (2) In addition to the requirements under subsection (1), for storage outlets with selective withdrawal capabilities, the licence holder must record—
       (a) the inlet level used for each release of water; and
       (b) the reason for deciding to release from that particular inlet level.

3  Use of waterholes
   For each day that supplemented water is taken from a waterhole, the licence holder must measure and record the level of the water in the waterhole when the waterhole is drawn down more than 0.5 metres below its cease to flow level.
4 Water diversions

(1) The licence holder must measure and record the daily total volumes of water delivered to the Stanwell pipeline.

(2) The methodology for determining the volume delivered must be approved by the chief executive.

5 Restrictions

The licence holder must record details of any restriction on volumes for each priority group that may be supplied, including—

(a) the start and end date; and

(b) the volume of water to be supplied.

6 Water taken by water users

The licence holder must, on an annual basis, measure and record the total volume of water taken by each water user for each zone.

7 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;

(b) the volume of the assignment;

(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

8 Water quality

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

9 Bank condition

(1) The licence holder must inspect banks for evidence of collapse and/or erosion identified within ponded areas of each storage listed in attachment 1 and downstream reaches, following instances of—

(a) rapid water level changes; or

(b) large flows through storage, 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.
10 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 listed in attachment 1 to determine if any instance is associated with the operation of that infrastructure.

Part 2 Reporting requirements

11 Reporting requirements
The licence holder must provide—

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

Division 3 Annual reporting

12 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 13;
(b) details of the impact of storage operation on natural ecosystems as required under attachment 3, section 14; and
(c) a discussion on any issues that arose as a result of the implementation and application of the rules and requirements of this licence.

13 Water quantity monitoring
The licence holder must include in the annual report—

(a) instances where any restrictions have been implemented, including—

(i) an evaluation of the effectiveness of the limitation or restriction procedures and outcomes; and
(ii) the date and value for each restriction;

(b) details of seasonal water assignments, including—

(i) the total number of seasonal water assignments; and
(ii) the total volume of water seasonally assigned;

(c) the total annual volume of water taken by all water users, specified by zone, including—

(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 total volume entitled to be taken;

(d) details of waterhole monitoring, which has been undertaken under attachment 3, section 3;

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

(g) the details and status of any interim programs implemented under condition 5.2.

14 Impact of infrastructure operation on natural ecosystems
The licence holder must include in their 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;

(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 the 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 the storage to reduce instances of bank slumping and/or erosion or fish stranding; and

(d) a discussion and assessment of the following water quality issues—

(i) thermal and chemical stratification in the storage;

(ii) contribution of the storage and its management to the quality of water released;

(iii) cyano-bacterial population changes in response to stratification in the storage; and

(iv) any proposed changes to the monitoring program as a result of evaluation of the data.

Division 4 Operational or emergency reporting

15 Operational or emergency reporting

(1) The licence holder must notify the chief executive within one business day of becoming aware of—

(a) any of the following operational incidents—

(i) a non-compliance by the licence holder with the conditions of this licence; and

(ii) instances of fish stranding or bank slumping downstream of the storages listed in attachment 1;

(b) an emergency where, as a result of the emergency, the licence holder cannot comply with the conditions of this licence.

(2) The licence holder must provide to the chief executive upon request, and within the timeframe requested, a report which includes details of—

(i) the incident or emergency;

(ii) the conditions under which the incident or emergency occurred;

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

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHD</td>
<td>The Australian Height Datum, which references a level or height to a standard base level.</td>
</tr>
<tr>
<td>AMTD</td>
<td>Adopted middle thread distance is the distance in kilometres, measured along the middle of the watercourse, that a specific point in the watercourse is from the watercourse’s mouth; or—if the watercourse is not a main watercourse—the watercourse’s confluence with its main watercourse.</td>
</tr>
<tr>
<td>Assignee</td>
<td>The person or entity to whom an interest or right to water is being transferred – for example, seasonally assigned.</td>
</tr>
<tr>
<td>Assignor</td>
<td>The person or entity who transfers an interest or right in water to an assignee – for example, a seasonal assignment.</td>
</tr>
<tr>
<td>Barrage</td>
<td>A barrier constructed across a watercourse to prevent the inflow of tidal water.</td>
</tr>
<tr>
<td>Cease to flow level</td>
<td>For a waterhole, the level at which water stops flowing from a waterhole over its downstream control.</td>
</tr>
<tr>
<td>Dead storage</td>
<td>For a dam or weir, the specified minimum volume of water within the ponded area of the storage that cannot be released or used from the storage under normal operating conditions.</td>
</tr>
<tr>
<td>EL</td>
<td>Elevation level.</td>
</tr>
<tr>
<td>Fish stranding</td>
<td>When fish are stranded or left out of the water on the bed or banks of a watercourse, on infrastructure such as spillways and causeways or left isolated in small and/or shallow pools, from which they cannot return to deeper water. This also applies to other aquatic species such as platypus and turtles.</td>
</tr>
<tr>
<td>Full supply level</td>
<td>The specified maximum volume of water within the ponded area of a dam, weir or barrage, which corresponds to the full supply level.</td>
</tr>
<tr>
<td>Inlet</td>
<td>Infrastructure comprised of an entrance channel, intake structure, and gate or valve which allow for water to be taken from the ponded area of a dam, weir or barrage and discharged via an outlet into the watercourse downstream of the storage.</td>
</tr>
<tr>
<td>Location</td>
<td>For a water allocation, means—&lt;br&gt;(a) the zone from which water under the water allocation can be taken; or&lt;br&gt;(b) an AMTD within a zone, from which water under the water allocation can be taken. For a water licence, means the section of the watercourse, lake, spring or aquifer abutting or contained by the land described on the water licence at which water may be taken. For a water licence to take overland flow water, means land described on the water licence at which water may be taken.</td>
</tr>
<tr>
<td>Megalitre (ML)</td>
<td>One million litres.</td>
</tr>
<tr>
<td>Outlet</td>
<td>An arrangement on a dam or weir that allows stored water to be released downstream.</td>
</tr>
<tr>
<td>Ponded area</td>
<td>Area of inundation at full supply level of a storage.</td>
</tr>
<tr>
<td>Priority group</td>
<td>A grouping of water allocations for taking supplemented water from a water supply scheme with the same Water Allocation Security Objective (WASO).</td>
</tr>
<tr>
<td>Release</td>
<td>Water from a dam or weir that passes downstream from the dam or weir through the dam or weir outlet works.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Tailwater</td>
<td>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.</td>
</tr>
<tr>
<td>Water user</td>
<td>The holder of a valid water entitlement.</td>
</tr>
</tbody>
</table>