Resource Operations Licence
Water Act 2000

Queensland Government

Name of licence
Wide Bay Water Supply Scheme Resource Operations Licence

Holder
Fraser Coast Regional Council

Water plan
The licence relates to the Water Plan (Mary Basin) 2006.

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 Burrum River from AMTD 23.3 km to the upstream limit of the ponded area of Lenthalls Dam for the distribution of supplemented water.

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
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.

3.2. All new or replacement meter installations must comply with the non-urban metering standard as defined in the Water Regulation 2016.

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.

© The State of Queensland 2021

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[1].

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.

Commencement of licence

The licence took effect on 5 September 2011.

Granted on 5 September 2011
Amended under section 184 of the *Water Act 2000* on 20 October 2021

Ian Gordon

Director, Divisional Support

[1] The Water Monitoring Data Collection Standards and Water Monitoring Data Reporting Standards can be accessed online at www.business.qld.gov.au.

© The State of Queensland 2021

Attachment 1 Infrastructure details for Wide Bay Water Supply Scheme

Table 1 – Lenthalls Dam—Burrum River AMTD 34.2 km

Description of water infrastructure	
Description	An existing zoned earthfill dam with concrete spillway and automatic crest gates
Full supply level	EL 25.86 m AHD
Gates	Five 2 m high automatic gates—top of crest gates at EL 25.86 m AHD
Storage capacity	
Full supply volume	28 400 ML
Minimum operating volume	500 ML
Storage curves/tables	Table provided by Wide Bay Water on 25 June 2010
Spillway arrangement	
Description of works	Concrete spillway with lined open channel and flip bucket energy dissipater
Levels	Spillway crest level EL 23.86 m AHD. Five 2 m high automatic crest gates—top of crest gates at EL 25.86 m AHD
Spillway width	75 m
Discharge characteristics	Water can be released through the gates down to the lower operating levels of the gates at EL 23.86 m AHD
River inlet/outlet works	
Description of works	Two concrete-encased 1060 mm outlet pipes through the dam embankment. The left side outlet is blanked off. The right side outlet includes a 500 mm diameter cone valve with a baffed dissipater
Inlet	Not available at the time of publication
Cease to flow levels	Not available at the time of publication
Discharge characteristics	2.58 m^3/sec (222 megalitres/day) through 500 mm diameter cone valve. Additional water can be released through the gates down to the lower operating level of the gates at EL 23.86 m AHD
Fish transfer system	
Description of works	None installed

© The State of Queensland 2021

Table 2 – Burrum Weir 2—Burrum River AMTD 28.2 km

Description of water infrastructure	
Description	Concrete gravity weir
Full supply level	EL 10.97 m AHD
Storage capacity	
Full supply volume	2242 ML
Minimum operating volume	220 ML
Storage curves/tables	Not available at the time of publication
Spillway arrangement	
Description of works	No separate spillway. Water spills over the width of the weir crest. Energy dissipation via roller bucket
Levels	EL 10.97 m AHD
Spillway width	105 m
Discharge characteristics	Water spills over the length of the weir crest
River inlet/outlet works	
Description of works	Two outlet pipes, one with a diameter of 300 mm and the other with a diameter of 375 mm. Each outlet pipe is equipped with a 150 mm diameter bypass
Inlet	Nil
Cease to flow levels	3.05 m AHD
Discharge characteristics	Not available at the time of publication
Fish transfer system	
Description of works	None installed

© The State of Queensland 2021

Table 3 – Burrum Weir 1—Burrum River AMTD 23.1 km

Description of water infrastructure	
Description	Concrete gravity weir (and tidal barrage)
Full supply level	EL 4.87 m AHD
Storage capacity	
Full supply volume	1715 ML
Minimum operating volume	638 ML
Storage curves/tables	Not available at the time of publication
Spillway arrangement	
Description of works	No separate spillway. Water spills over the length of the weir crest
Levels	EL 4.87 m AHD
Spillway width	111 m
Discharge characteristics	Water spills over the length of the weir crest
River inlet/outlet works	
Description of works	150 mm discharge valve at the base of the weir. Reinforced concrete structure housing town water supply pumps (Howard Pump Station)
Inlet	Not available at the time of publication
Cease to flow levels	Not available at the time of publication
Discharge characteristics	Not available at the time of publication
Fish transfer system	
Description of works	Fish ladder (not operational) Note: Fishway proposed

© The State of Queensland 2021

Attachment 2 Environmental management rules

1 Quality of water released

When releasing water from Lenthalls 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 reduction or increase in the rate of release of water from storages in the Wide Bay Water Supply Scheme occurs incrementally.

3 Low flow release strategy for Lenthalls Dam

(1) The licence holder must make daily releases from Lenthalls Dam between 1 October and 30 April (inclusive), when—

(a) the storage level in Lenthalls Dam is at or above EL 23.86 metres AHD; and

(b) the dam is not overtopping.

(2) The volume of water released under subsection (1) must be equal to the volume of inflow into Lenthalls Dam up to the maximum volume that is capable of being released in a 24 hour period from the downstream pipe outlet works as specified in attachment 1, table 1.

4 High flow release strategy for Lenthalls Dam

(1) The licence holder must make daily releases from Lenthalls Dam between 1 October to 30 April (inclusive), when—

(a) the storage level in Lenthalls Dam is at or above EL 23.86 metres AHD; and

(b) the first inflow of at least 8000 ML per day enters Lenthalls Dam between 1 October and 30 April (inclusive).

(2) The volume of water released under subsection (1) must be equal to the volume of inflow into Lenthalls Dam up to the maximum volume that is capable of being released in a 24-hour period from the gates as specified in attachment 1, table 1.

(3) Releases under subsection (1) must be made for a maximum of 14 days whilst daily inflows exceed 8000 ML per day.

(4) Releases under subsection (1) are not required when daily inflows to Lenthalls Dam are below 8000 ML per day.

© The State of Queensland 2021

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 storage water level and volume 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.

(3) Tailwater flows may be estimated using the release curve developed for the discharge works that has been supplied by the licence holder and approved by the chief executive.

Table 1 – Locations where continuous time series water data recording required

Location	Water level and volume data	Daily flow data
Lenthalls Dam inflow		✓
Lenthalls Dam headwater	✓	
Lenthalls Dam tailwater		✓
Burrum Weir 2 inflow		✓
Burrum Weir 2 headwater	✓	
Burrum Weir 2 tailwater		✓
Burrum Weir 1 inflow		✓
Burrum Weir 1 headwater	✓	
Burrum Weir 1 tailwater		✓

2 Releases from storages

(1) This section applies to infrastructure to which this licence applies.

(2) The licence holder must measure and record for each storage outlet—

(a) the daily volume released and component volumes for each release;

(b) the release rate, and for each change in release rate—

(i) the date and time of the change; and

(ii) the new release rate;

(c) the device used for each release;

© The State of Queensland 2021

(d) for storages with a multi-level off-take, the inlet level used for each release; and

(e) the reason for each release.

3 Announced allocations

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

(a) the announced allocations for medium water allocations;

(b) the date announced allocations are determined; and

(c) the value of each parameter applied when calculating the announced allocation.

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;

(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.

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 volumes of high priority water taken each quarter; and

(b) the total volume of medium priority water taken each water year.

6 Monitoring requirements for the management of Wongi Waterholes

The licence holder must record—

(a) the dates and times that the infrastructure, as specified in tables 2 and 3, takes flood water from Wongi Waterholes as part of flood mitigation management commenced and ceased operation;

(b) the daily water level in Wongi Waterholes while above 25.1 metres; and

(c) the instantaneous rate of take whenever the infrastructure that takes floodwater from Wongi Waterholes is in operation.

Table 2 – Wongi Waterholes at Loop Road

Description of water infrastructure	
1. Embankment ('Loop Road' formation)	Construction: compacted earth (road surface crest) Crest length: approximately 110 m Crest width: varies between 3.5 m and 8.5 m Crest elevation: EL 26.2 m AHD (minimum formation elevation)
2. Outlet	Type: reinforced concrete

© The State of Queensland 2021

(drainage pipe beneath 'Loop Road')	Diameter: 375 mm Length: approximately 10 m Invert elevation: approximately EL 24.7 m AHD Outlet fittings: non return (flap) valve
3. Pump station details	Type: cast in-situ reinforced concrete pump well Horizontal surface dimensions: 1.5m x 1.0 m Base elevation: EL 24.2 m AHD (approximately 0.5 m below the outlet pipe invert level)
4. Pump equipment details	Type: multiple transportable centrifugal pumps

Table 3 – Wongi Waterholes at Upstream Access Road

Description of water infrastructure	
1. Embankment (local access road formation)	Construction: compacted earth (road surface crest) Crest length: approximately 90 m Crest width: varies between 3.0 m and 3.5 m Crest elevation: EL 26.5 m AHD (minimum formation elevation)

Division 2 Impact of storage operation on natural ecosystems

7 Water quality

The licence holder must monitor and record water quality data in relation to infrastructure to which this licence applies.

8 Bank condition

(1) The licence holder must inspect banks for evidence of collapse and/or erosion within the ponded area and downstream of the infrastructure to which this licence applies following instances of—

(a) rapid water level changes; or

(b) large flows through infrastructure; or

(c) other occasions when collapse and/or erosion of banks may be likely.

(2) The distance downstream is the distance of influence of storage operations.

(3) Any instances of bank slumping or erosion observed must be investigated to determine if the instability was associated with the nature or operation of the infrastructure.

9 Fish stranding

The licence holder must record and assess reported instances of fish stranding in watercourses and ponded areas associated with the operation of infrastructure to which this licence applies to determine if any instance of fish stranding is associated with the operation of that infrastructure.

© The State of Queensland 2021

Part 2 Reporting requirements

10 Reporting requirements

The licence holder must provide the following reports in accordance with this part—

(a) quarterly reports;

(b) annual reports;

(c) operational or emergency reports.

Division 1 Quarterly reporting

11 Quarterly reporting by the licence holder

(1) The licence holder must submit a quarterly report to the chief executive after the end of each quarter of every water year.

(2) The report must contain the following data—

(a) stream flow and storage water level—all records referred to in section 1;

(b) daily volumes released from storages referred to in section 2;

(c) water quality—all records referred to in section 7;

(d) a summary of bank condition monitoring and incidences of slumping carried out in accordance with section 8;

(e) for each quarter, the total volume of high priority water taken; and

(f) for Wongi Waterholes—all records referred to in section 6.

Division 2 Annual reporting

12 Annual reporting

(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 section 13;

(b) details of the impact of storage operation on water quality required under 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 under section 12—

(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) for the water year, the total annual volume of water taken by each water user, specified by zone, namely—

© The State of Queensland 2021

(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;

(c) for the water year, the total volume of medium priority water taken;

(d) details of seasonal water assignments, namely—

(i) the total number of seasonal water assignment arrangements; and

(ii) the total volume of water seasonally assigned;

(e) all details of changes to infrastructure or the operation of infrastructure that may impact on compliance with the rules in this licence; and

(f) details of any new monitoring devices used, such as equipment to measure stream flow.

14 Impact of storage operation on natural ecosystems

The licence holder must include in the annual report under attachment 3, section 12—

(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 and fish stranding monitoring and assessment, including—

(i) results of investigations of bank slumping or erosion identified in ponded areas or downstream of infrastructure;

(ii) results of investigations of fish stranding downstream of infrastructure; and

(iii) changes to the operation of infrastructure 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 water storage associated with infrastructure;

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

(iii) cumulative effect of successive water storages associated with infrastructure on water quality;

(iv) cyanobacteria population changes in response to stratification in each water storage; and

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

© The State of Queensland 2021

Division 3 Operational or emergency reporting

15 Operational or emergency reporting[2]

(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) a non-compliance by the licence holder with the rules given in this licence; and

(ii) instances of fish stranding or bank slumping within the ponded areas or downstream of storages listed in attachment 1 or watercourses associated with the operation of this water supply scheme;

(b) upon making a decision relating to—

(i) an initial announced allocation and/or its revision; and

(ii) any restrictions on the taking of medium priority water; and

(iii) details of any arrangements for addressing circumstances where they are unable to supply water allocations;

(2) The licence holder must provide the chief executive with a report which includes details of—

(a) the incident or emergency;

(b) the conditions under which the incident or emergency occurred' and

(c) responses or activities carried out as a result of the incident or emergency; and

(d) in relation to an emergency only—

(i) notify the chief executive on discovery of the emergency; and
(ii) report 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 provide the chief executive with a summary of any other non-compliances by the licence holder with the rules given in this licence.

(4) The licence holder must provide the chief executive with relevant supporting information used in making a decision relating to—

(i) an initial announced allocation and/or its revision; and

(ii) any restrictions on the taking of medium priority water.

[2] 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.

© The State of Queensland 2021

Attachment 4 Glossary

Term	Definition
AHD	The Australian height datum which references a level or height to a standard base level.
AMTD	Adopted Middle Thread Distance. The distance in kilometres, measured along the middle of a watercourse, from the mouth or junction.
Announced allocation	For a water allocation managed under a resource operations licence, this means a number, expressed as a percentage, 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 who transfers an interest or right in water to an assignee (e.g. a seasonal assignment).
Component volumes	The volume of water associated with a particular release. For example, a component volume may be released via a fish way or valve.
EL	Elevation level.
Fish stranding	Refers to fish that are stranded or left out of water on the bed or banks of a watercourse, on infrastructure such as spillways and causeways, or isolated in small and or shallow pools, from which they cannot return to deeper water. This also applies to other aquatic species.
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 water allocation, means the zone 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.
Megalitres (ML)	One million litres.
Minimum operating volume	The specified minimum volume of water within the ponded area of a storage, dam, or weir below which water cannot be released or taken from the infrastructure under normal operating conditions.
Multi-level inlet	An inlet arrangement on a dam or weir that allows stored water to be released downstream from selected levels below the stored water surface.
Ponded area	Area of inundation at full supply level of storage.
Tailwater	The flow of water immediately downstream of a dam or weir. Tailwater includes all water passing the water storage, 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 storage area of a dam on the watercourse.

© The State of Queensland 2021