

Coastal Burnett groundwater management area dewatering rules

WAM/2007/3303 – Version 1

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Version history

Version	Date	Comment
1	17/12/2007	Dewatering rules procedure separated from water sharing rules
1.1	29/02/2008	Update to ensure text is in line with approval signed 17 December 2007
1.1	11/03/2008	Coastal Burnett groundwater management area dewatering rules -under heading 'Piezometer installation' - remove word 'that' from first sentence.
1.2	29/05/2008	Document previously marked as Under Development and for NRW only. Document was approved 17 December 2007 and is to be published both on internal and external policy register
1.3	30/11/2010	Reference to NRW updated to the department administering the Water Act 2000 (Qld). Phone number in contact details updated.

Purpose

These dewatering rules establish a framework for holders of particular licences, and the department administering the Water Act 2000 (Qld).

These rules apply to water licences authorising the take of groundwater within the Coastal Burnett groundwater management area which replaces the Bundaberg groundwater management area. They were taken from the previous water sharing rules for the Bundaberg groundwater management and separated to become its own procedure.

Rationale

This policy defines the dewatering rules for the Coastal Burnett groundwater management Area.

Procedure

Dewatering definition and purpose

Dewatering of 'wet areas' by the pumping of a subartesian bore within the Coastal Burnett Groundwater Management Area to lower the water table is allowed in order to work the soil, harvest crop, and prevent water logging of crops or other activities needed for the management of land.

Under the *Water Resource (Burnett Basin) Plan 2000* dewatering purposes means:

- a. draining, either permanently or temporarily, overland flow water from land or
- b. removing groundwater from soils or sediments that are waterlogged.

Under section 6 of the Water Resource Plan outcomes for the sustainable management of water include that water is to be managed and allocated to allow water to be taken for a number of purposes including for dewatering.

'Wet areas' occur when groundwater seeps (under pressure) through a 'window' in a confining clay layer in an aquifer and reaches the surface causing isolated wet areas. Other sources of water contributing to these wet areas may be rainfall, irrigation, and sideways seepage.

The purpose of dewatering is to prevent continued wet areas by preventing or slowing the movement of water upwards through the confining clay layer. This may be achieved by creating a cone of depression that intersects the window in the clay layer by pumping from a bore near to the wet area. Some water may drain from the wet surface area back through the window thus lowering the water table.

Dewatering entitlement

Dewatering is subject to approval by the department. A person may only apply to dewater if they hold an entitlement that authorises the take of water for dewatering purposes.

Piezometer installation

The piezometer is used to measure water levels associated with dewatering arrangements, including for test pumping. Licensees are responsible for purchasing and installing the piezometer in accordance with the department's procedures and it must be installed according to the following specifications:

- the auger hole must be 100mm and drilled to a depth of 1.5m
- a length of 50mm slotted PVC pipe with top and bottom caps must be placed the full length of the hole, with the top of the pipe at least 150mm above ground level
- the hole annulus must be backfilled with 5mm gravel to within 300mm of ground level, with the remainder backfilled with compacted clay.

Dewatering application

An application is required to dewater and the application must:

- be made on the application form provided in Appendix 1 (and also available from the Department's Bundaberg office)
- state the applicant's reasons for wanting to dewater
- provide evidence that a 'wet area' exists by demonstrating that water levels are consistently within 0.7metres of ground level that results in water logging of crops or prevention of farming operations
- be accompanied by a plan that shows crop areas, 'wet areas' and subartesian facilities

- detail the proposed disposal method of pumped water. If the proposed disposal method is irrigation, the application must detail the irrigation location, the area to be irrigated and the pump rate.

In deciding the application to dewater the chief executive must:

- if the application is in accordance with the dewatering rules:
 - approve the application, with or without conditions
 - return the application form to the applicant, indicating that dewatering is approved
- if the application is not in accordance with the dewatering rules:
 - refuse the application
 - return the application form to the applicant, indicating that dewatering is not approved.

Dewatering rules

Particular rules for dewatering that apply in the Coastal Burnett groundwater management area are that dewatering is:

- allowed only if the applicant holds a water licence authorising the take of water for dewatering purposes
- allowed only if the applicant has provided evidence that a 'wet area' exists
- allowed only if the applicant has provided sufficient reason for wanting to dewater
- allowed only if the applicant has an authorised subartesian bore that has a water meter and piezometer installed
- allowed if a piezometer is located in the 'wet area' at or more than 30 metres from the subartesian bore that will be used for dewatering
- allowed if the test pumping results show a drop of at least 100 mm in the piezometer over the duration of the test
- not allowed if the chief executive considers that saltwater intrusion to the aquifer might potentially be caused or exacerbated by approving dewatering
- not allowed if the chief executive considers that there is potential for substantial declines in water levels by approving dewatering.

Dewatering approval

A person may commence dewatering from the start date specified on the written notification.

It is noted that approval to dewater in one instance does not imply that a similar approval to dewater will be granted in subsequent instances due to changing hydrological conditions.

Note : approval for dewatering may be cancelled by the department at any time. This may occur due to unforeseen, or more severe than predicted, impacts of dewatering.

Dewatering conditions

Dewatering may only occur during the period that the applicant is approved to dewater. This period is specified on the application form that has been signed by a departmental officer and returned to the applicant.

Water taken under dewatering arrangements must be taken through an authorised subartesian bore that has a water meter installed.

The applicant must undertake daily meter readings and piezometer readings during the dewatering period. These readings must be recorded on the application form that has been returned, signed by a departmental officer, to Bundaberg within five business days of the end of the dewatering period.

Dewatering must cease when the water level in the piezometer falls below the level indicated on the water licence under which the dewatering is authorised.

Note : Departmental staff appointed as authorised officers under the *Water Act 2000* may undertake spot audits of water levels of areas that are being dewatered. Water levels will be measured using the piezometers that are associated with current dewatering facilities. Power to enter private property to collect this information is given under the authorised officer provisions of the Water Act.

Contact details

For enquiries relating to any aspect of water management within the Coastal Burnett groundwater management area, please contact:

Position: Administration Officer

Street Address: 16-32 Enterprise Street, Bundaberg QLD 4670

Postal Address: PO Box 1167, Bundaberg QLD 4670

Telephone: (07) 4131 5818

Facsimile: (07) 4131 5896

Responsibilities

Licence holders within the Coastal Burnett groundwater management area must ensure that water taken in accordance with the conditions of the licence are consistent with the dewatering rules.

The department is to decide the application in accordance with the dewatering rules.

Legislation

Water Act 2000

Water Resource (Burnett Basin) Plan 2000

Appendix

Appendix 1 - Application for dewatering from subartesian bore <attachments/application_dewater.pdf>