

New Arrangements to Protect Groundwater Resources in Coal Seam Gas Extraction Areas

Coal seam gas (CSG) producers have the right to take underground water under the *Petroleum and Gas (Production and Safety) Act 2004* as a necessary activity in the process of extracting methane gas from coal seams. However, CSG producers have an obligation to manage the impacts of their water extraction on other water users and on springs.

On 1 December 2010 amendments to the *Water Act 2000* commenced. These amendments:

- protect landholders' existing and new water supply bores from the impact of petroleum tenure holders extracting underground water, by establishing make good obligations for tenure holders, including the requirement for bore assessments
- introduce the requirement for petroleum tenure holders to undertake baseline assessments of water bores
- require tenure holders to manage their impact on natural springs through the development of a spring impact management strategy;
- provide for the management of cumulative impacts on underground water extraction by petroleum tenure holders by providing for the declaration of cumulative management areas (CMA)
- expand the requirements for underground water impact reports (UWIR)
- expand the role of the Queensland Water Commission (QWC) as an independent management body to oversee the groundwater impacts of the petroleum industry
- provide a dispute resolution process for the negotiation of make good agreements.

Managing impacts of CSG water extraction on water supply bores

If a water supply bore is likely to have an impaired capacity because of underground water extraction by petroleum tenure holders, the tenure holder must negotiate a make good agreement with the bore owner.

The agreement could, for example, involve deepening the bore, constructing a new bore or establishing an alternative supply.

If the bore owner is dissatisfied with the outcomes of the negotiations with the CSG producer in relation to impacts on bore supply, the bore owner will be able to apply to the Department of Environment and Resource Management (DERM) to call a conference to assist in negotiating an outcome or attend Alternative Dispute Resolution. If these processes are unsuccessful the bore owner may appeal to the Land Court.

Managing impacts of CSG water extraction on springs

Underground water impact reports

CSG producers must prepare underground water impact reports on a periodic basis. The reports must contain:

- a program for undertaking monitoring for the upcoming period
- the current projections of the extent of water level impacts on the coal seam beds and adjacent aquifers (this will include maps of the areas where water levels are expected to be affected, in the upcoming period, by more than the trigger threshold value for bores)
- an inventory of springs where impacts on water levels in underlying aquifers are projected to exceed the trigger threshold value for springs, and an assessment of the risk to those springs having regard to matters such as the connectivity of the springs to the underlying aquifers
- a proposal for managing impacts on aquifers supporting springs. This could include measures such as reinjection of suitably treated water into aquifers near springs, or offsetting measures.
 - A trigger threshold has been established to manage impacts on springs, including watercourses connected to springs.
 - The trigger threshold value for impacts on springs is a drop of 0.2 m. If the projected impact at a spring location exceeds the trigger threshold value, the CSG producer must investigate the risk to the spring and develop a strategy to manage and mitigate the risks. The strategy could include measures such as injection of water or offset arrangements.

A draft underground water impact report will be released for public comment before being submitted to DERM for approval.

Following approval the report will be available to the public.



Managing cumulative impacts

Where there are CSG producers in an area and the groundwater level impacts from those producers overlap, a cumulative management area will be established by DERM.

Within a cumulative management area, the QWC will be responsible for relevant activities including groundwater modelling and preparation of an underground water impact report for the area.

Inside these areas, the underground water impact report will assign responsibilities to petroleum tenure holders in the area including for negotiating make good agreements with bore owners and the implementation of water monitoring strategies.

Until the report for a CMA is finalised, DERM may direct an individual tenure holder to undertake a bore assessment; resulting in a make good agreement.

The QWC will also advise government in relation to the need for any additional CMAs in Queensland.

CSG producers will meet the costs incurred by the QWC through an industry levy.

More information

- Call the CSG/LNG Hotline 13 25 23
- Visit www.lng.industry.qld.gov.au