

WATER AND COAL SEAM GAS | FACT SHEET 6

Monitoring groundwater levels

April 2013

One concern associated with the extraction of coal seam gas is that groundwater levels may drop and that current supply will be affected.

The NSW Office of Water has an extensive groundwater database with data from around 135,000 water supply and monitoring bores across NSW. This includes data from private bores drilled from the late 1800s through to the present day. The database includes information on the depth of each bore, the rock types that have been drilled, the depth of aquifers intersected by the bore, the depth to water in the completed bore and the estimated bore yield. The bore's casing details are also supplied.

This information is available to the public at the NSW Office of Water website and provides an insight into the groundwater conditions in an area.

The monitoring bore sites are mainly located in areas where significant volumes of groundwater are extracted, such as from shallow alluvial aquifers where groundwater is primarily used for irrigation, as well as in areas where there may be other groundwater management issues, such as highly saline watertables.

The deep sedimentary basins in which coal and coal seam gas resources are located are not generally areas where groundwater has typically been monitored by the NSW Office of Water. There is limited monitoring data available for these groundwater sources. This is changing, and three deep monitoring sites are to be drilled in 2013, two in the Hunter Valley and one in the Liverpool Plains areas. Each site will consist of a nest of bores monitoring the groundwater at varying depths. Further sites are also proposed on the Far North Coast.

How do I see what the groundwater in my area is doing?

Most of the Office of Water's bores are manually monitored on a 6 or 12 weekly basis. Approximately 1,200 bores have data loggers installed that provide continuous groundwater level monitoring.

While all groundwater data held by the NSW Office of Water is publicly available, not all of it can yet be directly accessed through the website.

The water level data from 360 of the groundwater monitoring sites can be accessed by following the prompts to *Real Time Data* from www.water.nsw.gov.au

Other groundwater data can be obtained by requesting a copy of Pinneena GW, a DVD containing a copy of the complete groundwater archive or by emailing a request for data extraction from specific datasets to waterinfo@water.nsw.gov.au. There will be a fee charged to meet the costs for supply of the Pinneena Groundwater DVD and there may be a fee charged for the data extraction, depending on the request, for approximately \$100-\$195.

The Office of Water is expanding the real time data base to include sites in areas where coal seam gas will be extracted.

This will mean that information on groundwater levels in both the alluvial and sedimentary aquifers will be available via the Office of Water website.

3. Select a river basin by clicking on **Groundwater** and choosing a river basin from the drop down menu, or use the Google map on the page to navigate to the location of your choice by selecting the green marker.

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Office of Water

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Real Time Data - Bores

Bellinger River Basin
Hunter River Basin
Bega River Basin
Murrumbidgee River Basin
Lachlan River Basin
Gwydir River Basin
Namoi River Basin
Macquarie River Basin
Darling River Basin
CAR Bores

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Daily River Reports

Groundwater
Real Time Data - Bores

All data times are Eastern Standard Time

Map Info

Map Satellite Hybrid Terrain

Proposed new monitoring bores will be located at Casino, Kyogle and Grafton

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4. Then select a bore site. This example shows **Kanoona Lane** bore site in the **Hunter River Basin**.

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open
Daily River Reports

Groundwater > Real Time Data - Bores > Hunter River Basin

Kanoona Lane

All data times are Eastern Standard Time

Latest Values Details Custom Outputs

Latest instantaneous values

Parameter	Value	Time
Bore level below MP	9.743	08:51 04/04/2013
GW Level - m AHD	25.567	08:51 04/04/2013
Water Temp(C)	19.8	08:51 04/04/2013

data since 2013-03-05
Please click on an image to enlarge

last updated 2013/04/04 11:08:43

Refresh

Map Satellite Hybrid Terrain

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How do I interpret the results for Kanoona Lane

The basic information is located in the middle of the page, along with a Google map to help locate the bore.

For this site, the **latest instantaneous values** are saying that the groundwater is 9.743 metres below the measuring point (MP), that is the surface of the ground.

This measurement was taken on 8:51am on 04 April 2013 and the trend indicates this groundwater is rising, as show by the arrow.

If you want more information, you can click on the graphical image and see the levels in groundwater over the past month.

More information

www.water.nsw.gov.au

www.resources.nsw.gov.au

www.environment.nsw.gov.au

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Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (April 2013). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of the Department of Primary Industries or the user's independent adviser.

Published by the Department of Primary Industries.

Reference number 11919