



Broken Hill-Menindee Groundwater Bore Drilling Project – Update 2

February 2015

What's happening and when?

The NSW Office of Water is undertaking a groundwater investigation as part of works to secure Broken Hill's water supply during periods when there is insufficient water available in the Menindee Lakes system to meet the city's requirements.

The investigation is being undertaken on the northern margin of Lake Menindee in the vicinity of the interconnecting channel between Lake Copi Hollow and Lake Menindee. This area has been selected due to its proximity to the Broken Hill pipeline, existing infrastructure, as well as the potential suitability of the groundwater aquifers to meet supply requirements.

The investigation is seeking to locate sand aquifers at a depth greater than 200m. These sand aquifers are located in the geological unit known as the 'Renmark Group'. This aquifer is being investigated due to the likely absence of a suitable shallower sand aquifer in the overlying geological unit known as the 'Calivil Formation'.

Drilling will be undertaken at a number of sites in the area over the coming months to assess the geology, water quality and available quantity from the deep aquifer. If a suitable supply is sourced, a bore field will then be constructed to meet Broken Hill's emergency water supply requirements.

What has happened so far?

The NSW Office of Water is conducting the groundwater investigation under the *State Environmental Planning Policy (Infrastructure)*. Prior to the commencement of drilling operations for the groundwater investigation, the potential environmental impacts are assessed via a Review of Environmental Factors (REF) - to fulfil the Office of Water's obligations as a Determining Authority under Part 5 of the *Environmental Planning and Assessment Act 1979*.

The REF addresses matters for consideration listed under Clause 228 of the *NSW Environmental Planning and Assessment Regulation 2000* and provides an assessment of environmental impacts and suggested mitigation measures to minimise impacts during construction and operation of the bores.

The first test production bore was drilled in late November and December 2014 at site 'MEN-2' to a depth of 215m and screened in a sand aquifer, see **Figure 1**. Prior to the commencement of drilling, members of the Aboriginal community and elders were consulted and visited the site.

Aboriginal monitors were present during site establishment and drilling operations to assess any potential artefacts found by the Office of Water or by the monitors.

Figure 1: Location of potential drilling sites included in the REF



What's next?

Five additional test production bores are proposed to be drilled and constructed over the next couple of months. The location of the sites will be selected from the sites shown in **Figure 1**. The site labelled 'Men-1' is expected to be complete by the end of this week.

Following construction, water quality analysis and pump testing will be undertaken to assess the available quantity of water from the deep aquifer.

What will happen?

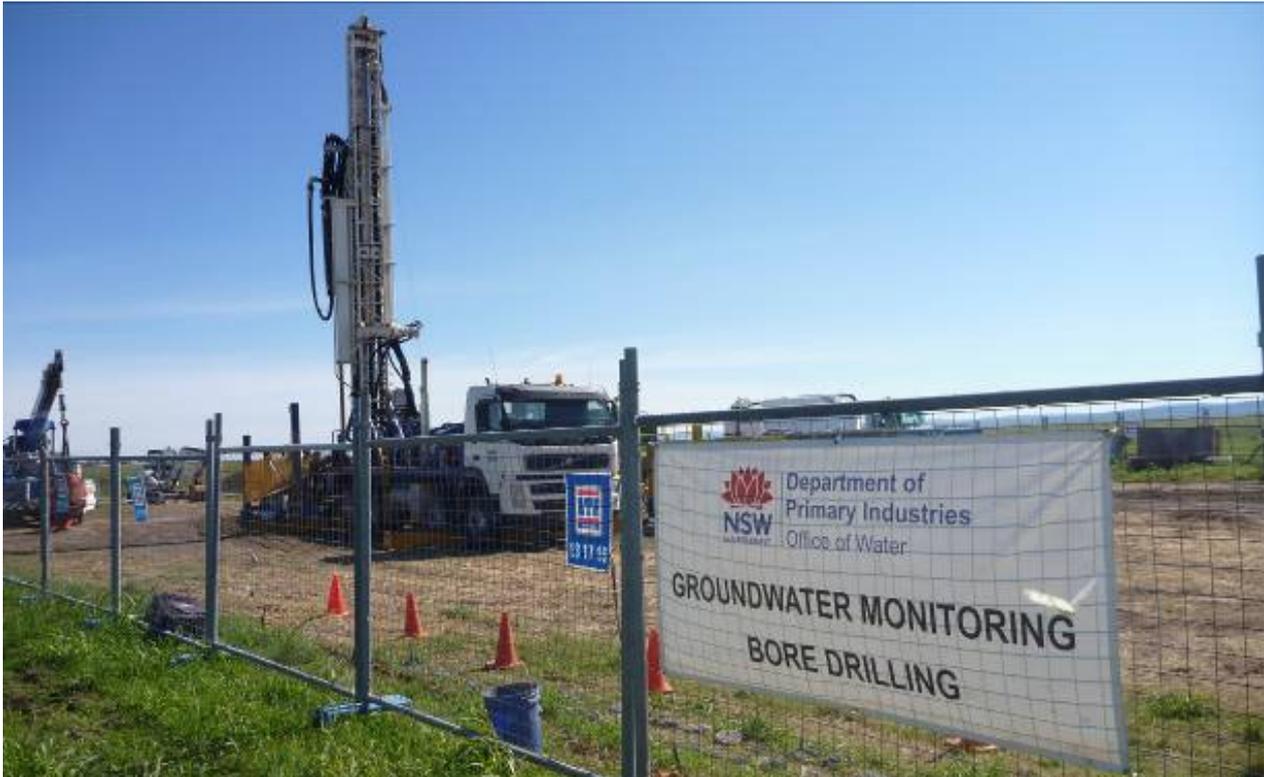
The process of drilling each bore will take about three weeks, depending on the ground conditions encountered at each site. The work will be carried out each day of the week - Monday to Sunday - from 7am to 7pm and will be supervised by the Office of Water's Groundwater Drilling Unit.

The installation of the groundwater bores will be completed using the drilling process known as 'rotary mud drilling'. Access to each site will be restricted by fencing. The footprint of the site will be based on the local setting and likely to be a fenced area of about 50m X 50m. All equipment will be located within the fenced area during bore installation. The site will be similar to the drilling site shown in **Figure 2**. The drill site will include equipment such as:

- drilling rig
- portable site office
- portable toilet
- mud recycling system
- rubbish skip

The production bores will be tested for a period of up to seven days to assess the water quality and quantity. The Office of Water is presently assessing options for the managing the water that discharges from the bores.

Figure 2 A drill rig similar to this will be used to install the monitoring bores



What can I expect during bore installation?

During the bore installation process, residents may see the drilling rig and associated equipment at each site, as well as vehicles entering and leaving the site. Mitigation measures to minimise noise are outlined in the '[Broken Hill emergency water supply groundwater investigation Review of Environmental Factors](#)'. Residents may also see the drill rig and associated equipment at each site.

Drill support trucks, service vehicles and other smaller support vehicles can be expected in the area. Dedicated parking areas will be established at each site for all vehicles. Temporary signage will be erected to alert traffic that trucks are entering and crossing.

Who can I contact for more information?

For further information regarding the groundwater investigation program, please call:

NSW Office of Water – Bunty Driver 0407 403 234

Water NSW – Tony Webber 0428 613 478

www.water.nsw.gov.au

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