

Guide to Having a Bore Drilled

Water bore drilling must be undertaken by a NT licensed driller (licensed under the *1992 Water Act*) who meets the qualifications set by the Northern Territory Government. A bore construction permit is required for any bore drilled within a Water Control District. Water Control Districts cover the Darwin Rural Area, Gove Peninsula, Katherine, Tennant Creek, Ti Tree and Alice Springs Regions. Contact the department for a list of licenced drillers and a bore permit.

There should be at least a minimum of 70 metres between your bore and the nearest bore (eg. your neighbours). All bores **must** be at least 100 metres from any septic trench for traditional systems and 50 metres for an approved Alternative Waste Treatment System.

How do I decide on a site for my bore?

1. Undertake a property check for existing or previously drilled bores. Bore reports for existing registered bores can be obtained from the department or alternatively, our internet site www.nt.gov.au/nreta/nretamaps
2. Ask your neighbours how successful they have been in drilling their bores, the quality of the water and its yield. Bore drilling can be costly, so having an understanding of the groundwater quality in the region is essential.
3. Ensure that the bore is located on higher ground and not at a site that may be subject to seasonal inundation.
4. When considering your bore site take into account the location of your neighbour's bore (must be at least 70 metres away), any septic trenches (which must have a separation distance of 100 metres radius) or Alternative Waste Treatment Systems (which must have separation distance of 50 metres radius and be approved by the Department of Health and Community Services).
5. Seek advice from a licensed driller and/or the Department of Natural Resources, Environment and the Arts.
6. If you are not located within a Water Control District you will need to contact the Department of Health and Community Services for health requirements related to drilling a bore.



- AN EXAMPLE OF A BORE THAT HAS NOT BEEN CONSTRUCTED AND EQUIPED TO STANDARD

No seal on the casing, no cap or concrete slab, power supply not installed to standard, bore area not maintained



- AN EXAMPLE OF A BORE THAT HAS BEEN CONSTRUCTED AND EQUIPED TO STANDARD
Casing sealed and concrete slab erected at base to prevent contamination from foreign substances, power supply correctly installed and site maintained.

What if I am unsuccessful in my first drilling attempt for a bore?

If you drill and are unsuccessful in striking adequate water reserves you must apply to attempt to drill a second time. These "dry" bores are called "dud bores" and these bores have to be backfilled and sealed. Dud bores are quite common so it is important when planning for a new bore that you consider alternative locations, ensuring that the separation distances are adequate. Also ask the driller about costs involved if a Dud Bore is drilled.

Why is it important for the construction and equipment of bores to be to standard?

Poor construction and equipment standards are major contributors to pollution of groundwater supplies causing the water to be unfit for human and livestock consumption. Inefficient or damaged pumps and bore casing can be very costly and can restrict water use.

Specific requirements to your bore will be outlined on your Bore Permit and these requirements must be adhered to by the driller. During and after completion, the bore will be inspected by our staff to ensure that it meets health and construction standards. For further technical information, refer to the *Minimum Construction Requirements For Water Bores in Australia*, Edition 2, September 2003 published by the Land and Water Biodiversity Committee, Queensland Department of Natural Resources, Mines and Energy, www.iah.org.au/pdfs/mcrwba.pdf or contact us.

How do we know if our bore and water quality is to standard?

The bore may be inspected by NRETA before and/or after the drilling to ensure the bore and siting of the bore meets the permit requirements. The top of the bore should be encased by a concrete block at least one metre square wide, and sealed to the casing. The top of the casing should be 300mm above the slab and/or any potential flood water level and sealed so that dirt, insects, reptiles, small animals and birds cannot get in. If you have stock or poultry, a five metre perimeter fence should be erected around the bore. Pumps and drives should be kept in good condition so that water leakage cannot carry contaminants (grease/oil etc) into the groundwater.

The driller is required to collect a water sample and submit it to the department for analysis but not every sample is tested. It has been found that contaminants from the drilling process can produce false results. It is preferred that a water sample be taken after approximately one month of pumping so that any possible risk of contamination is reduced. Private laboratories can be found in the Yellow Pages. Government Laboratories are located at Department of Primary Industry, Fisheries and Mines, Berrimah Farm, phone: 89 992346 or the Tom Hare Building, Alice Springs, phone: 89 518233. Government charge fees for water testing depending upon the type of test undertaken. Water sampling methodologies and expected outcomes can be discussed with the Technician.

What is a 'Bore Yield'?

Bore yield is determined initially by the driller conducting an airlift. At the end of drilling, the driller will pump compressed air down the bore to displace water. They then measure the rate of water that flows from the bore. This provides an estimate of the expected pumping capacity of the bore and will be adequate for most stock and domestic purposes. A better estimate of the pumping capacity of the bore and the required pump setting may be determined by conducting a bore test. Testing involves pumping the bore at various rates, measuring the response of the water level and then calculating a suitable pump setting for the pumping rate required.

For assistance, contact the Water Management Branch:

- **Palmerston**
4th Floor Goyder Building, PO Box 496 Palmerston NT 0831 Ph: 89 993678
- **Katherine**
Randazzo Arcade, 16 Katherine Terrace, Katherine NT 0850, Ph: 89 738100
- **Alice Springs**
1st Floor Alice Plaza, Todd Mall, PO Box 1120 Alice Springs NT 0871, Ph: 89 519215

Internet Site: www.nt.gov.au/nreta/naturalresources