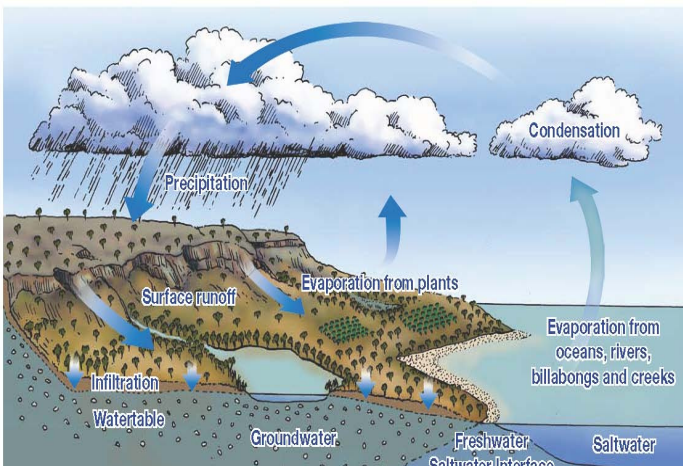




Preventing Groundwater Pollution

Groundwater is a precious resource which supplies 90% of the NT's water supply. It is not just important for supply purposes, it also plays an important role in the water cycle.



Water Cycle

Just because groundwater is underground does not mean it is immune from pollution. Like surface water, groundwater quality can change over time, although generally these changes are much slower, taking years before contamination from a distant source reaches water supply bores. Land use changes and unsustainable extraction of groundwater can have a significant impact on groundwater quality as minerals and salts become more concentrated. Contaminated groundwater can cause serious health problems in people and animals that come into contact with it. Groundwater pollution is very serious due to the great difficulty and costs involved in cleaning up polluted aquifers. Prevention is the best defence.

How Is Groundwater Contaminated?

Pollutants can soak into the groundwater from leaks in fuel storage tanks, poorly constructed

landfills and septic systems. It can also be polluted by runoff from fertilised fields, livestock areas, abandoned mines and industrial areas. Home owners too can be the cause of contributing to groundwater pollution when dumping household chemicals inappropriately. Contamination of groundwater can also occur directly at bore heads if they are not adequately sealed.

How Can you tell if Groundwater is Contaminated?

Carry out regular water quality tests (bacteria and nitrates) or more detailed tests to detect chemicals and pesticides. This is particularly important if you use groundwater for drinking purposes.

Everyone Can Help Prevent Groundwater Contamination

Appropriate Chemical Storage and Disposal.

You can prevent groundwater contamination by using and disposing of chemicals properly. Also avoid spraying agricultural chemicals near your bore head.

Backflow Prevention

When using a fertigation or chemigation unit without proper safety and control measures irrigation water containing these fertilisers and pesticides can unintentionally flow backward, from the pumping system into the groundwater

supply, contaminating the supply for future use.

This flow of water backward is called *backflow*.

To prevent *backflow* install a backflow prevention device on irrigation piping – such as a single or double check valve. However to decide on the best option for you, we recommend that you talk to a plumber or your local irrigation supply store.

▪ **Appropriate Bore Construction**

Ensure the top of your bore is sealed to prevent access by vermin, insects, snakes and various reptiles which can potentially enter the bore and contaminate the groundwater.

Ensure a one meter concrete block around the bore and sealed to the casing. If you have stock or poultry a five meter perimeter fence should be erected around the bore.

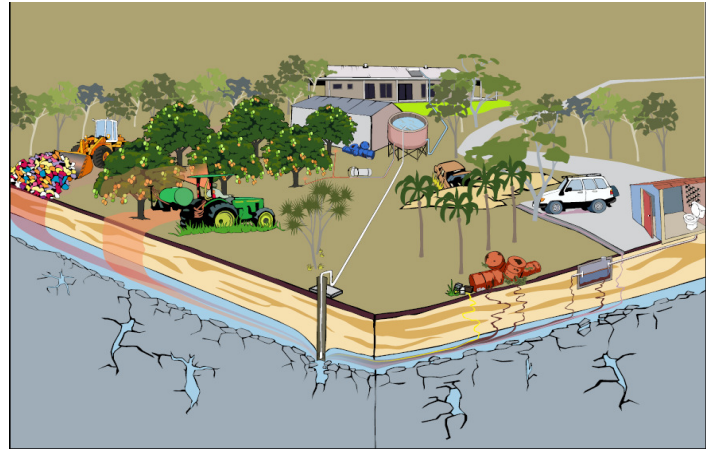
▪ **Preventing Sewage Contamination**

Ensure septic tanks are located 100m+ away from your bore. Locate septic tanks and waste areas downward from your bore.

<http://www.nt.gov.au/nreta/publications/natres/pdf/SeparationDistances.pdf>

What Are The Effects Of Groundwater Contamination?

Groundwater contaminated with bacteria, chemicals, pesticides, fuel or oil can result in serious human health problems. As groundwater systems are connected contamination occurring on your block can also impact groundwater supply on neighbouring blocks.



For more information check out our Health Departments website below:

<http://www.health.nt.gov.au/library/scripts/objectifyMedia.aspx?file=pdf/20/05.pdf&siteID=1&str title=Code%20of%20Practice%20for%20Small%20On-Site%20Sewage%20and%20Sullage%20Treatment%20Systems%20and%20the%20Disposal%20or%20Reuse%20of%20Sewage%20Effluent.pdf>

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