

Groundwater contamination

Issued April 2016

EPA 1100/16: This information sheet provides general information on groundwater contamination, and is part of a suite of information sheets that come under the general title of 'Site contamination'.

What is groundwater or bore water?

Groundwater is the water found naturally underground in vast quantities filling the spaces between grains of soil or rock. It moves slowly through the ground in bodies of water called aquifers, connecting with the ocean, rivers, streams, lakes and wetlands. Groundwater may be a major source of water for some urban areas, agriculture and industry and is used throughout the country. For many regions, townships, farms and mines it is the only source of water available.

Bore water is groundwater that has been accessed by drilling a bore into the aquifer, in order to extract it for use on the surface. To use groundwater in this way, a person will need to have an electric pump or windmill that brings the water to the surface. The bore is sometimes referred to as a groundwater well. While some groundwater is fresh and can be used for drinking, some can be brackish or saltier than the sea.

What is groundwater contamination?

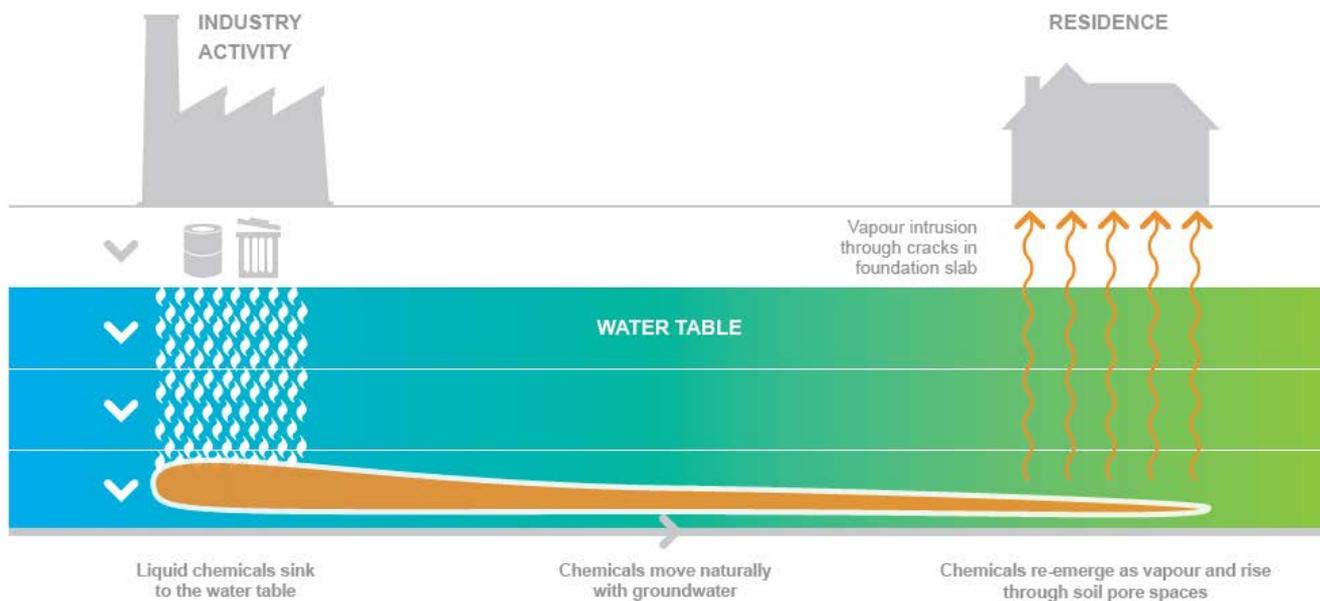
Groundwater contamination is an issue for industrialised countries around the world - in both urban and regional areas. Shallow groundwater can become broadly contaminated—usually as a result of past industrial activities and poor disposal techniques of waste and chemicals. Groundwater from Adelaide's residential bores and wells can sometimes be contaminated by:

- naturally occurring substances (eg arsenic)
- industrial or manufacturing activities
- agricultural chemicals, and
- waste.

If your bore water is contaminated, coming into contact with it can pose a serious risk to your health. This is especially the case if you use it to water your vegetables, fill a pool, top up a rainwater tank, wash or cook with, or pump through a sprinkler. The EPA and SA Health recommend all groundwater supplies are [tested before use](#).

Contamination can go unnoticed for decades and may only be detected when testing is carried out as part of approval processes for land subdivision or development. Some chemicals will sink through the soil to groundwater and move naturally with groundwater flow. Over time, the groundwater contamination plume can sometimes move hundreds of metres beyond the original contamination site. The *Environment Protection Act 1993* (EP Act), legally requires property owners, occupiers, consultants and auditors to advise the Environment Protection Authority (EPA) of any site contamination that affects or threatens underground water (section 83A).

Persons with a duty to notify are legally required to notify the EPA in writing about the existence of the contamination as soon as they become aware of it. The EPA records all notifications in its public register, which an index is available on the EPA website¹.



Groundwater Prohibition Area (GPA)

A Groundwater Prohibition Area allows the EPA to prohibit the taking of groundwater if the contamination presents a risk to human health².

Prior to the establishment of a GPA, the EPA will undertake a three month community information program. Once the EPA has established a GPA, it is required to place the details of the GPA on the public register. Current and future owners of properties within the GPA are made aware of the restriction or prohibition of taking of groundwater. Notice will be given to potential purchasers of land on the Form 1 via Section 7 of the *Land and Business (Sales and Conveyancing) Act 1994*, however this is not notated on the Certificate of Title. This provides a method of ensuring future owners and potential owners are made aware of the restriction and/or prohibition.

Further information

For further information on site contamination please contact:

Site Contamination Branch
Environment Protection Authority
GPO Box 2607
Adelaide SA 5001

Telephone: (08) 8204 2004
Freecall: 1800 729 175
Website: www.epa.sa.gov.au
Email: EPASiteContam@sa.gov.au

For health related information on site contamination please contact:

¹ http://www.epa.sa.gov.au/data_and_publications/site_contamination_index

² In accordance with section 103S of the EP Act

Scientific Services Branch,
Public Health Services, SA Health
11 Hindmarsh Square
Adelaide SA 5000
Telephone: (08) 8226 7100
Website: www.sahealth.sa.gov.au
Email: public.health@health.sa.gov.au
