

Groundwater Use in Hamilton North

Update for local residents

Key points

- Between March and August 2019, the NSW Environment Protection Authority (EPA) completed water use surveys and groundwater sampling in residential areas of Hamilton North. Thank you to those residents that participated in this program.
- Our sampling program found some chemicals in groundwater at concentrations unacceptable for domestic use.
- Based on the results of the sampling program, the NSW Government is recommending residents take a precautionary approach to using groundwater.

Recommended precautionary dietary advice

Residents should not use groundwater for drinking, cooking and personal hygiene (including cleaning teeth and bathing) without testing and appropriate treatment of the groundwater.

Residents should not consume home raised chicken eggs.

Residents should not use groundwater for domestic purposes, such as irrigation of fruit and vegetables, and for filling spas and swimming pools.

Groundwater remains suitable for watering lawns and ornamental gardens.

Why did the EPA conduct a sampling program?

The EPA regularly investigates and monitors chemicals in the environment, including lead, mercury and hydrocarbons. The EPA has also been undertaking a state-wide investigation into the legacy use of

per- and poly-fluoroalkyl substances (PFAS) which are used in some industrial practices and commonly found in firefighting foams.

The Hamilton area has a rich industrial history, which means there may be chemicals from former industrial activity in the environment, including in the groundwater.

The EPA has carried out water use surveys and groundwater sampling in your area to help us understand if, and how, residents in the Hamilton area use the local groundwater, and whether there is any way that people might be coming into contact with chemicals.

What did we do?

Between March and October 2019, the EPA:

- Doorknocked and letterbox dropped residential properties in Hamilton North to ask if residents access local groundwater and for what purpose.
- Collected groundwater samples from private residential bores and environmental monitoring bores across the area.
- Had these samples analysed for a range of chemicals commonly associated with industrial activity, including metals, hydrocarbons and PFAS.
- The sampling results were then used to identify potential risks to residents via ingestion of groundwater or consumption of home produce irrigated with groundwater including fruits, vegetables and chicken eggs.

What did we find?

The water use surveys found that there are several properties in the area which have a bore or spearpoint installed to access groundwater.

Residents with access to a bore, used the bore for watering lawns, gardens, fruit and/or vegetables.

Groundwater sampling found concentrations of metals, hydrocarbons and PFAS above relevant guidelines for drinking, cooking or personal hygiene, in some parts of the surveyed area.

What does this mean?

The EPA would like to remind Hamilton North residents that NSW Health recommends that people in any urban area use the public drinking water supply, rather than untreated groundwater, for

drinking, food preparation and personal hygiene (including cleaning teeth/oral hygiene and bathing). Additionally, the EPA would like to recommend that residents should not consume home raised chicken eggs.

Residents should also avoid using groundwater for other domestic purposes, such as irrigation of fruit and vegetables, and for filling spas and swimming pools.

Groundwater is considered suitable for watering lawns and ornamental gardens.

What are hydrocarbons?

Hydrocarbons are a large family of chemicals including petroleum-based substances like petrol, diesel and kerosene, as well as solvents like trichloroethylene (TCE) and perchloroethylene (PCE). TCE and PCE were used in many manufacturing and cleaning processes.

What is PFAS?

PFAS are a group of substances that include but are not limited to perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA) and perfluorohexane sulfonate (PFHxS).

PFAS are very stable chemicals that bioaccumulate, do not easily break down and can persist in the environment.

Due to their fire retardant, waterproofing and stain resistant qualities, these chemicals were widely used in industrial products and some types of fire-fighting foams worldwide. PFAS can also be found in low concentrations in many consumer products like food packaging, non-stick cookware, fabric, furniture and carpet stain protection applications, clothing and shampoo. Products containing PFAS are being phased out around the world.

Are PFAS a health risk?

Finding PFAS in the environment does not necessarily mean there is a human health risk. Expert advice released by the Australian Government in June 2019 states that PFAS has not

been shown to cause disease in humans and “probably has minimal impact on human health”¹.

However, the Australian Government’s PFAS Expert Health Panel recommends limiting exposure to PFAS as a precaution until further research into health effects is completed.

Typically, this approach means assessing and minimising human exposure pathways, such as limiting groundwater consumption (if used) or consumption of homegrown produce where threshold levels of PFAS are present.

What happens next?

The EPA will be meeting individually with residents who participated in the sampling program to provide them with the sampling results.

The sampling and survey results will also help the EPA determine whether further investigations or environmental management are required.

Where can I find more information?

If you have questions or concerns, please call the 24/7 NSW Environment Line on **131 555**.

Please use the Environment Line phone number if you have chickens and would like to discuss the recommendation.

More information on NSW Health’s advice on groundwater use can be found at www.health.nsw.gov.au/environment/water/pages/groundwater.aspx

¹ The 2019 enHealth Guidance Statements and a factsheet providing more information on PFAS and human health effects by the Department of Health is available at:

<https://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-pfas.htm#enHealth>