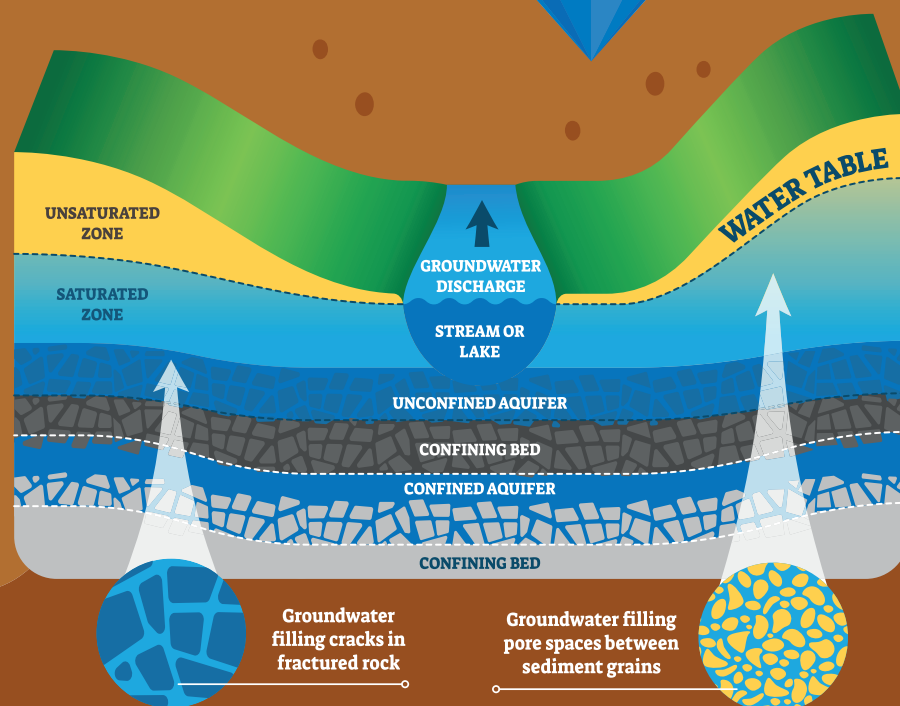


# GROUNDWATER: OUR HIDDEN TREASURE



**GROUNDWATER IS WATER FROM RAIN, RIVERS AND SNOWMELT WHICH HAS COLLECTED UNDERGROUND – SOMETIMES OVER THOUSANDS OF YEARS!** This water soaks through the earth and gathers in the cracks and spaces in soil, sand and rock. These spaces where the groundwater is stored in and can move slowly through, are called aquifers. The water table is an underground boundary between the soil surface and the area where groundwater saturates (soaks!) spaces between sediments and cracks in rock.

Groundwater is our largest source of accessible freshwater on the planet, accounting for 97% of liquid freshwater (while there is a lot more freshwater in the ice-caps and glaciers, this is frozen so we cannot use it!). Only 3% of our accessible freshwater comes from rivers, lakes and wetlands. Groundwater plays a hugely important role in the water cycle and helps to keep rivers flowing and plants growing during dry seasons, especially in more arid parts of the world. It is also vital for our supplies of drinking water, water for industry and agriculture – groundwater truly is our hidden treasure!



## DID YOU KNOW?

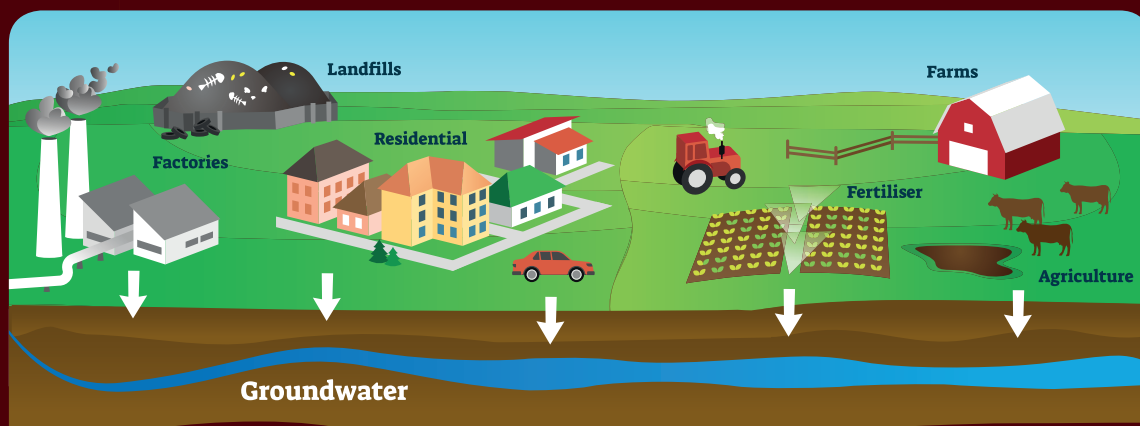
**20%** of Irish drinking water comes from springs and groundwater.

It takes **3 - 4 days** to treat this water, making it safe to drink.

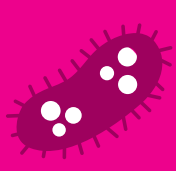
Approximately **11%** of people in Ireland get their water from private groundwater wells.

## GROUNDWATER POLLUTION

While groundwater is not as easy to pollute as rivers and lakes are (because it's hidden underground), once it becomes polluted it can take decades for the pollution to flow out of the water table. Groundwater moves very slowly, and it's not immediately visible to us – so sometimes it can take a long time before we are even aware that it has been polluted. Polluted groundwater can affect drinking water, as well as the rivers, lakes and ecosystems it flows into. Here are some ways that groundwater can become polluted:



**Household contamination** – cleaning products, shampoos, medicines, grease, oils etc. can contain toxic chemicals that get washed down our drains and into the environment.



**Bacteria** – *E. coli* is a bacteria found in human or animal faeces which can get into water through spreading slurry, pasturing livestock and through faulty septic systems.



**Chemicals from human activity** – chemicals seeping from landfill, pesticides and fertilisers from farmlands, and leaks from petroleum tanks can all wash into our soils and water systems.



**Natural elements** – groundwater can also be affected by naturally occurring elements such as calcium, iron and sulphur.

## WHAT CAN YOU DO?

**Why not carry out a school project to find out more about groundwater – are there any wells nearby?**

**Do an investigation and check for potential sources of pollution in your area:**

- ☒ Septic tanks
- ☒ Slurry land-spreading
- ☒ Chemical storage
- ☒ Fuel storage tanks
- ☒ Leaking wastewater pipes
- ☒ Cleaning and personal care products in your school and at home (go eco-friendly!)



**Raise awareness about the importance of protecting groundwater – our hidden treasure!**

