

The water treatment process: How to make river water clean enough to drink

The River Thames is the source for much of London's water supply. The water is filtered and treated using a conventional process that has changed very little in over a century. Around 70% of London's water is treated using this method to provide safe, clean water that is fit to drink.



1. Abstract water from rivers

Most of London's water comes from rivers such as the River Thames and the River Lee.

2. Remove large debris

Large debris, such as tree branches and shopping trolleys, are caught in large screen cages as the water enters the filtration works site.


3. Store it in an open reservoir

The water is then stored in large, open reservoirs. Exposure to light and low temperatures kills off most of the bacteria and aquatic bugs.

How clean is the water?



Bacteria count per small glass of water (100ml)

Each  = 20 bacteria

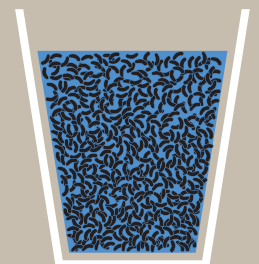
Bacteria count: **More than 1 million** (and big bits of rubbish)



Bacteria count: **More than 1 million**



Bacteria count: **10,000**

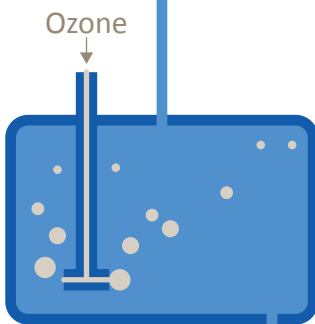




4. Filter it quickly

Water is forced through this rapid gravity filter to remove small particles, organic debris and many of the remaining bacteria.

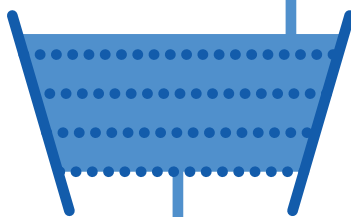
Bacteria count:
1,000



5. Add ozone

Ozone gas is added to neutralise industrial pollutants.

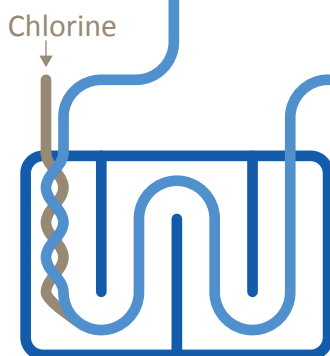
Bacteria count:
800



6. Filter it slowly

The sand filter bed traps aquatic bugs, pesticides and small organic particles. Good bacteria kill off bad bacteria. This part of the process can take several weeks.

Bacteria count:
20



7. Add a small amount of chlorine

Chlorine kills off the last traces of microscopic life and helps to keep the mains pipes clean.

Bacteria count:
Zero

Good enough to drink!

