

Water recycling explained



Water recycling, although new to the UK, is a tried and tested process that will make sure we can provide a reliable supply of high-quality drinking water to our customers into the future, while at the same time reducing the amount of water we need to take from the environment.

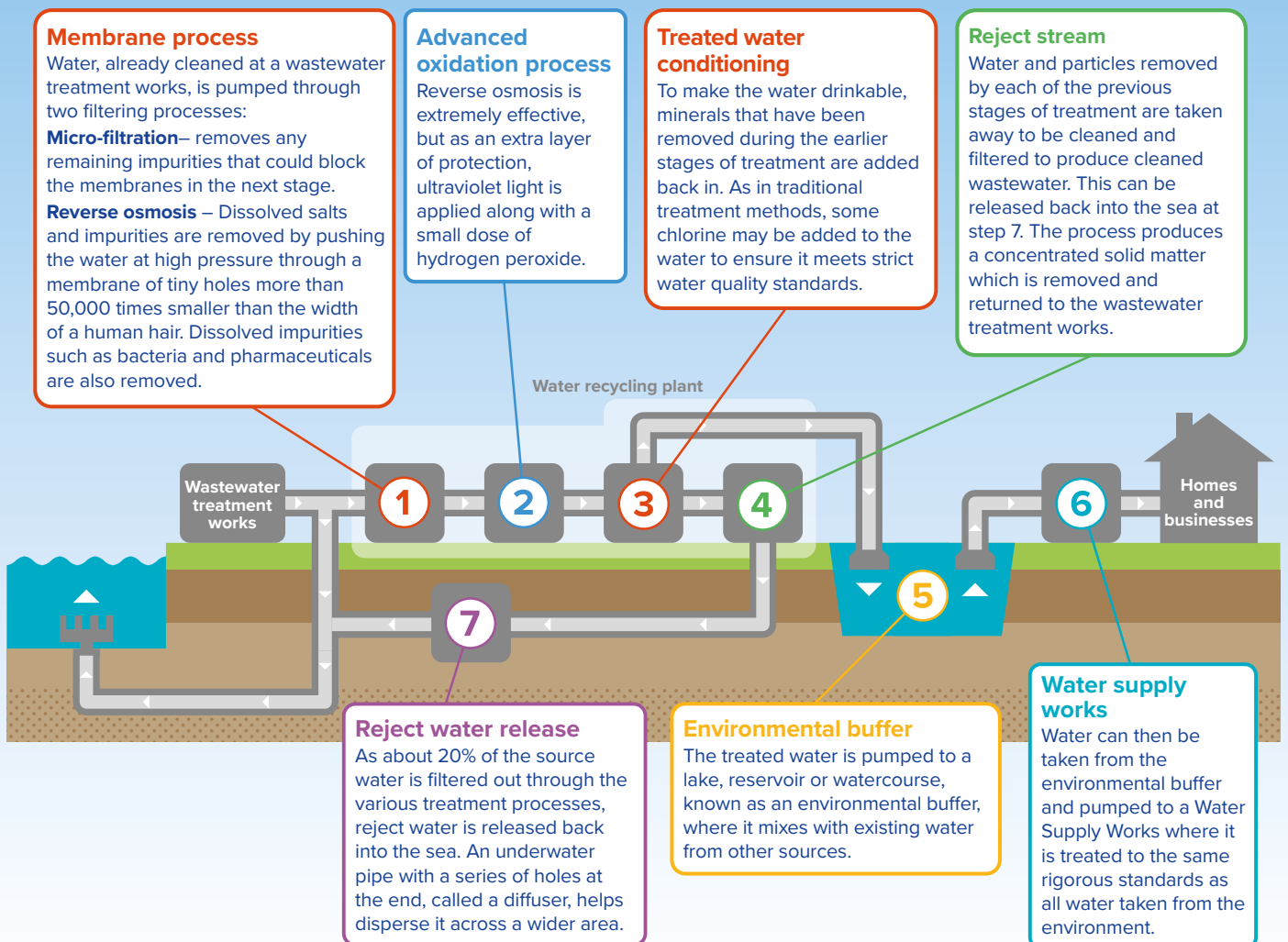
We will simply take treated wastewater, which is currently released back into the environment, and put it through a series of further treatment processes at a water recycling plant. The purified water produced is then typically released into

an underground storage reservoir, river, lake or reservoir where it would mix with water from other sources.

The water is then taken and treated as normal, to strict drinking water standards set by the Drinking Water Inspectorate (DWI), at one of our water supply works before being pumped to customers' homes.

It means that we can provide a reliable water supply even during periods of severe drought due to hot weather and a lack of rainfall.

Water recycling



We don't live in a hot, dry country so why do we need to recycle water?

We live in a water-stressed region with a rapidly increasing population.

Climate change means there is less available water to meet the growth in demand. Yes, it rains a lot but the heavy downpours that we so often experience these days mean that the water does not soak into the ground, filling up underground reserves. The water simply runs off already dry and compacted ground, created by longer periods of dry weather and increased temperatures, and so we're unable to capture and store it.

We can only take so much from rivers and reservoirs without impacting the quality of the water and the complex ecosystems they support.

As a result, we need to think about tapping into new sources of water, as we can't rely on existing rivers, reservoirs and aquifers (underground lakes). If we do nothing, we're looking at a 50% supply demand deficit by 2030, and the situation will only get worse.

We're already working with the Environment Agency, the Drinking Water Inspectorate (DWI) and international experts to develop water recycling schemes in Havant (Hampshire), Sandown (Isle of Wight), Ford (West Sussex), and Aylesford (Kent).

Is it safe to drink? Will it taste different?

Water recycling is safe and used around the world to supply drinking water to customers. The recycled water would be released into a river or reservoir, mixing with water from existing sources. We would then take it and treat it to strict quality standards put in place by our regulator, the DWI. Just like water across the country has its own distinct taste, the water taken from the water source after it's been through the recycling process may taste different from existing supplies due to the change in source. It will still have been through the same treatment process as the water that comes out of your tap today.

What's the environmental impact?

The recycled water that is returned to rivers and reservoirs will meet the standards set by our regulators, as will any water released to the environment following the process. We're working closely with our regulators to pilot the water recycling technology. Detailed water quality and environmental impact assessments

are under way to make sure that we're putting the right checks in place. The treated wastewater will go through several stages of screening, reverse osmosis and ultra-violet treatment at the recycling plant before it is remineralised and released into a river, lake or reservoir.

Will it require a lot of energy?

Water recycling is an energy-intensive process. However, it produces roughly twice as much water as desalination for one-tenth of the energy.

If you sorted out your network and reduced leakage, we wouldn't need to spend money on this.

Reducing how much water is lost from leaks on our pipes and the pipes and plumbing in our customers' homes and business will reduce how much water is wasted and will make our supplies more resilient. It could help to avoid the need to develop some new sources of water and will also help reduce carbon emissions. However, some activities like replacing old water mains can cause disruption for local communities and even if we fixed every single leak on our network, we would still need to boost supply to meet demand from other sources.

Can't you just ask people to use less or offer people discounts for saving water?

Reducing demand for water by working with our customers to help them become more water efficient will help us in the long run, making our water supplies more resilient and avoiding the need to develop some new sources of water. The reductions would need to be fast and significant to make up the shortfall we predict will happen and we cannot rely on people taking action and maintaining a lower level of water use over time.

Where in the world is water recycling already used?

Several countries already use recycled water for drinking water supplies, including Australia, the USA (California and Texas), Singapore, Namibia, South Africa, Kuwait and Belgium.

Is water recycling the same as stormwater releases?

Stormwater is wastewater that has been heavily diluted by rain and is sometimes released to the environment to reduce the risk of flooding to homes and businesses.

Recycled water is purified water that has been treated so it can be used as a sustainable source of drinking water.