



WATER SERVICES
ASSOCIATION OF AUSTRALIA

Unacknowledged reuse

What is it, and where does it happen?



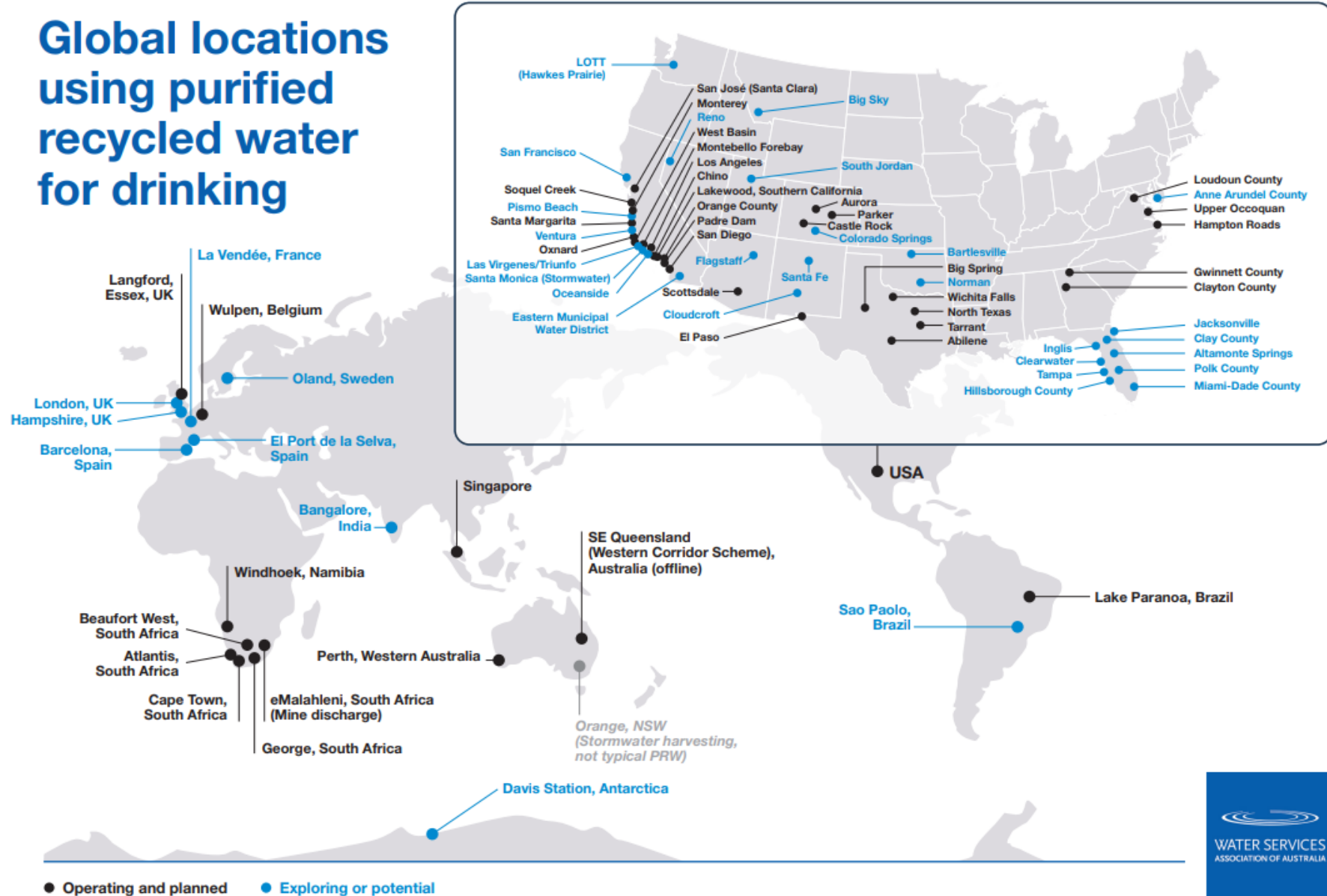
Places with formal PRW schemes

35+ cities have adopted purified recycled water as part of their drinking water supply.

So does that mean they're the only ones doing it?

Actually, no...

Global locations using purified recycled water for drinking



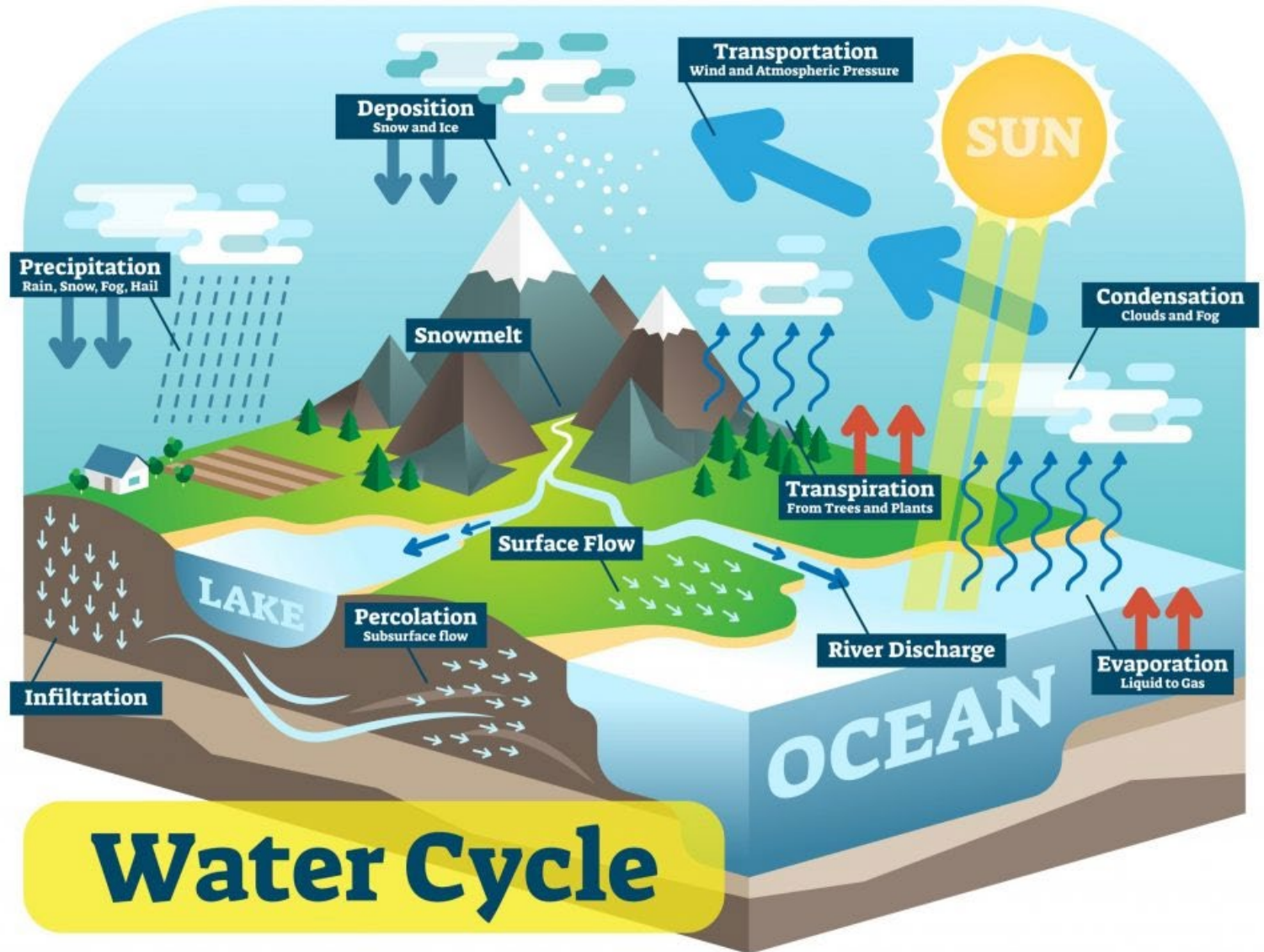
All water is recycled....

In nature, all water is recycled in an endless cycle. There is no new water on earth – we all drink the same water as the dinosaurs.

In the natural water cycle, water falls from the sky, flows across land and into rivers.

It eventually reaches the ocean, then it evaporates, forms clouds..... And when it rains, the whole cycle starts all over again.

With man-made recycling, technology just speeds up what nature intended.



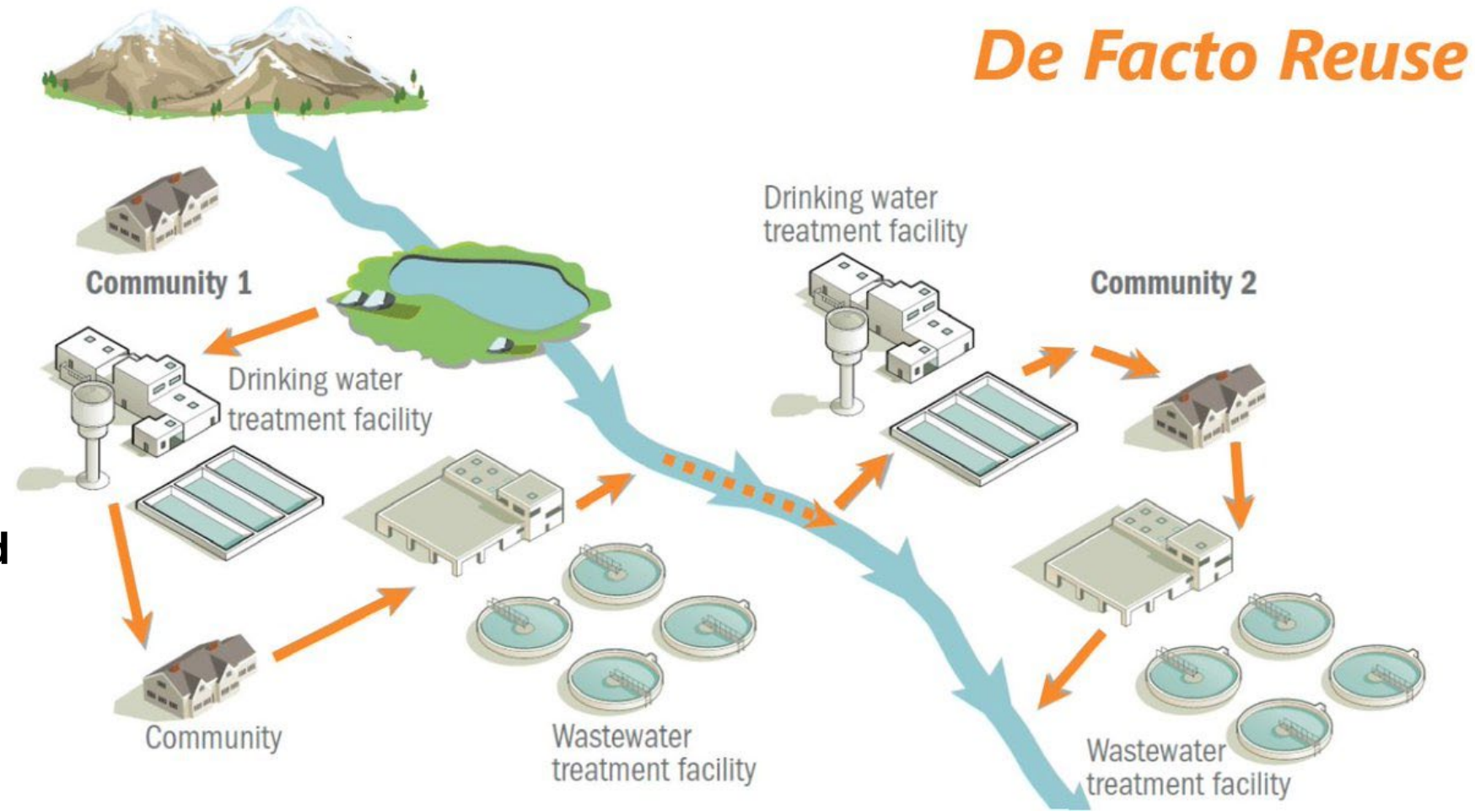
What about cities?

If you live in a city or town, chances are you're drinking recycled water too.

It happens wherever an upstream town discharges treated used water into a river....

....then a downstream town takes up river water, treats and drinks it...

...which is as old as civilisation.



It's often called unacknowledged reuse, or de facto, incidental, informal or unplanned reuse.

How many towns are in this situation?

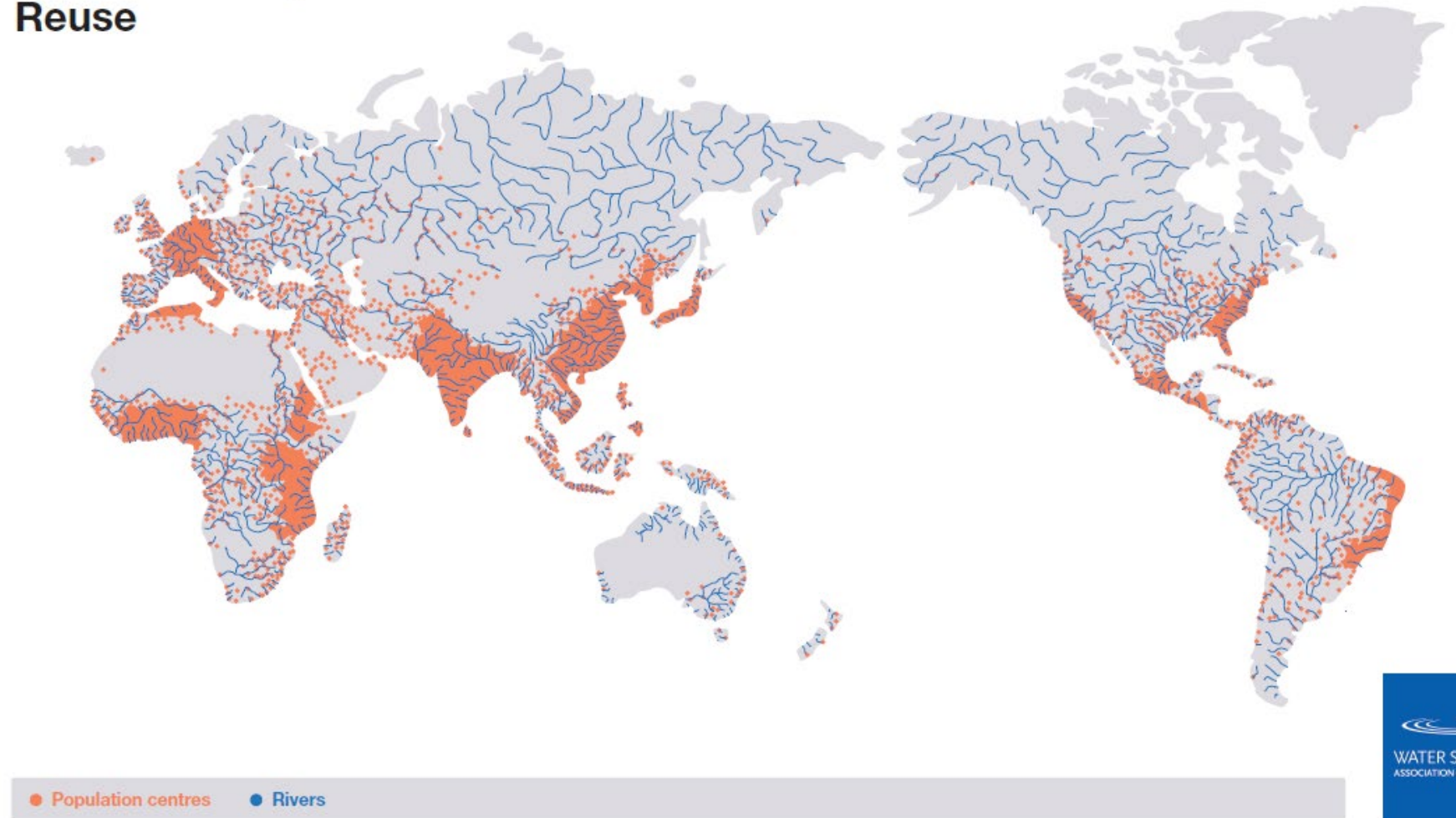
A map of unacknowledged reuse might look something like this – ie just about everywhere.

(The top third are largely uninhabited areas.)

The important thing is, the treated wastewater we discharge into rivers is already well cared for at our treatment plants.

The water industry has long known how to take water from a range of sources – river water, groundwater, and even sea water, and turn it into high quality, safe drinking water.

Unacknowledged Reuse



How does water become drinking water?

When rain water travels across land and into rivers, it picks up impurities along the way; from the natural environment (flora and fauna), agriculture, stormwater, and urban runoff.

The water industry knows how to treat water from different sources, to remove those impurities, and meet drinking water guidelines.

What we call 'drinking water', that comes out of our tap, doesn't come to us perfectly clean and pure from nature.

Whatever source it comes from – it's just water.

It becomes 'drinking water' after our treatment processes manage those impurities.

Water should be judged by its quality, not by its history.

This famous quote is by Lucas Van Vuuren, the founder of the Windhoek scheme which has been operating since 1968.

It means that we should judge water not by what source it comes from or where it's been on its journey, but by the quality level we treat it to.

Some well-known examples

Global locations using purified recycled water for drinking

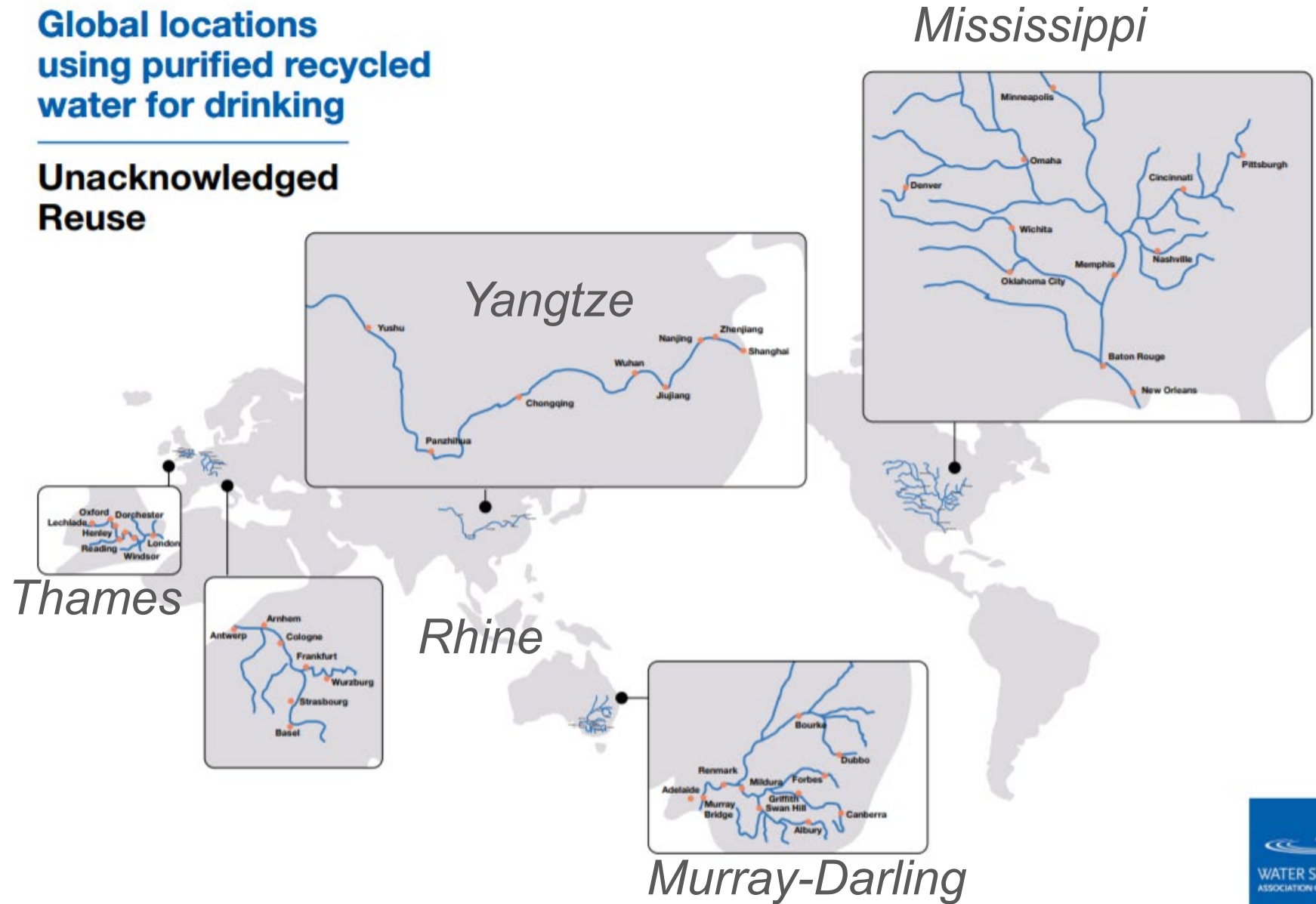
Unacknowledged Reuse

Here are some often used examples – you can see how the water from rivers gets used by one town and then another, on its journey.

This is what is meant by the saying that the water in London has already been through 7 sets of kidneys when you drink it.

There is a saying in the US:

In the world of water, we are all downstream.



Communicating reuse in California

In San Diego's second (successful) attempt to introduce purified recycled water for drinking, they displayed this map as part of the demonstration plant tour.

San Diego is now building the Pure Water San Diego scheme which will supply from a third to a half of the city's water by 2035. Public support has risen from 26% in 2004, to 73% in 2012, to 79% in 2019.

