



**WATER SERVICES  
ASSOCIATION OF AUSTRALIA**

**All Options on the Table**

Downstream

Video and slide series





After San Diego rejected reuse in the 1990s, a demonstration project was set up and existing office spaces converted to a visitor experience. San Diego is now proceeding with reuse.

## *Downstream*

A series of education materials used extensively in the US and elsewhere, as part of visitor experiences for communities considering adopting purified recycled water for drinking.

These slides can also be seen as a [7-minute video](#).



# DOWNSTREAM

**WATERREUSE**  
RESEARCH



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**A  
true  
simple  
story about  
the need for  
WATER REUSE  
technology for  
a sustainable  
future**



**DID YOU KNOW**



**All Earth life  
is water-life.**



**Whether you're a goldfish,  
a butterfly, a potato,  
or a person...**



**you need water  
to survive.**



**While you can go almost  
a month without food**



**your body  
can't survive  
one week  
without water.**

One Week						
S	M	T	W	T	F	S
28	29	30	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1
2	3	4	5	6	7	8

**It's *easy* to see why.**





**Seen from space, the Earth is  
a beautiful aqueous ball.**

**Deep blue oceans cover  
most of the surface.**

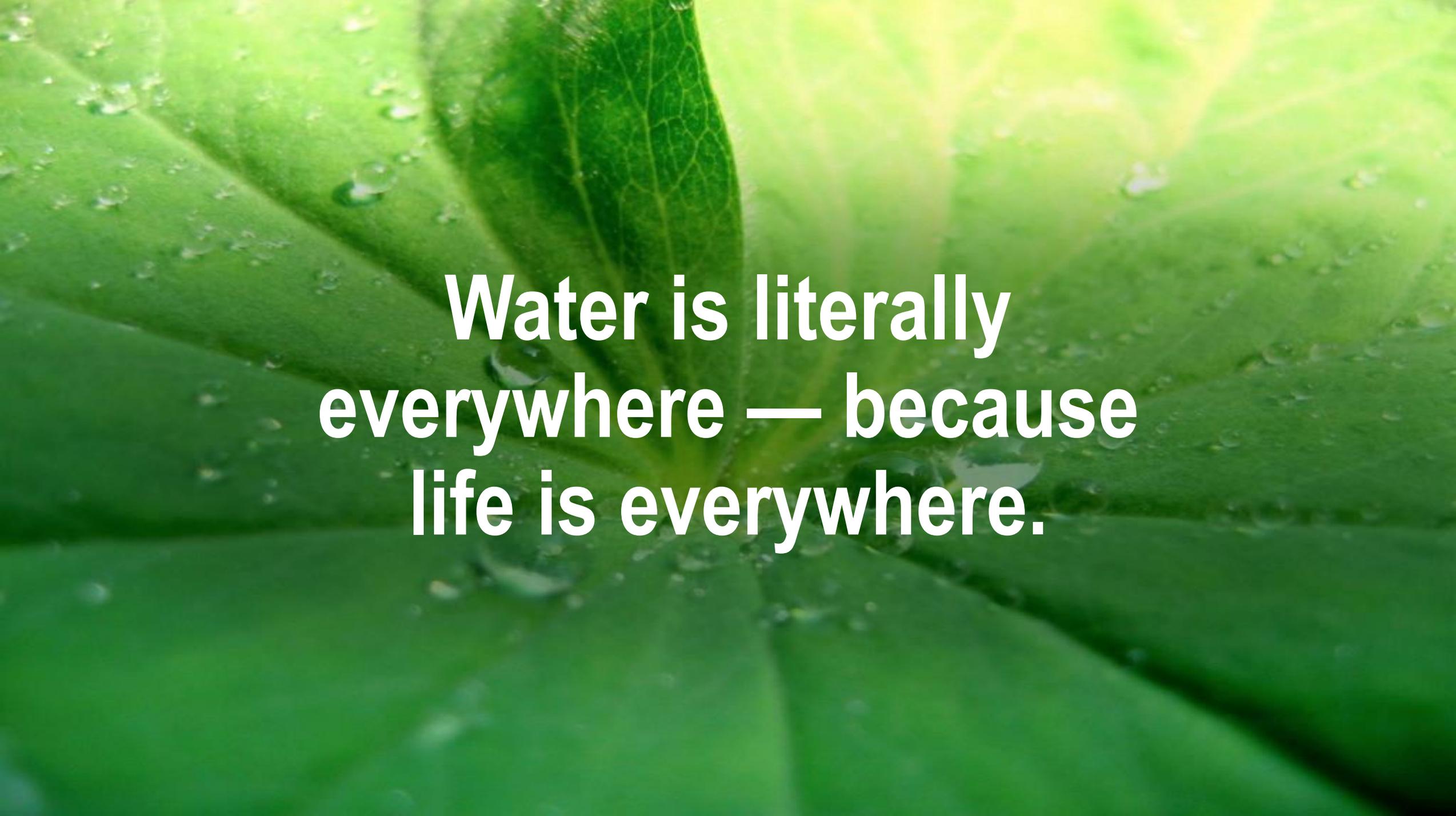


**Radiant clouds float  
through the atmosphere.**

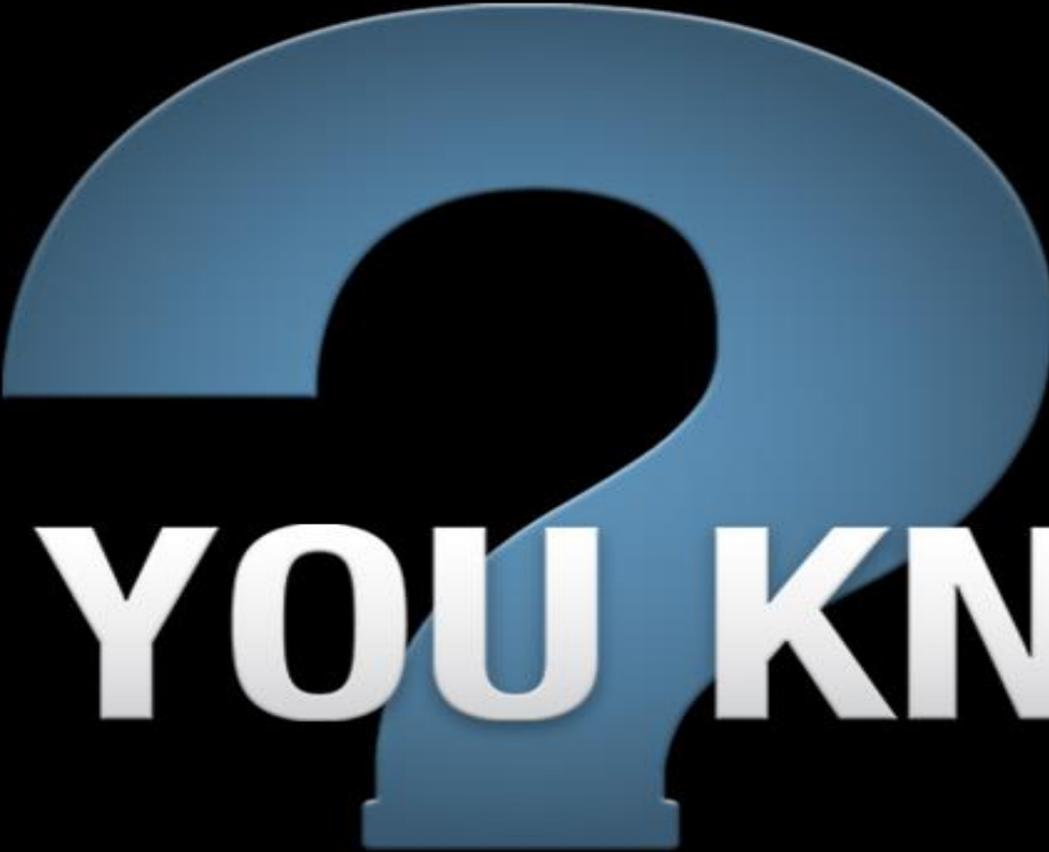


**Massive blankets of frozen  
ice hug the poles.**



A close-up photograph of several vibrant green leaves. The leaves are covered in numerous small, clear water droplets of varying sizes. The lighting is bright, creating a soft glow and highlighting the texture of the leaf surfaces and the individual droplets. The background is a blurred, bright green, suggesting a lush, sunlit environment.

**Water is literally  
everywhere — because  
life is everywhere.**



**DID YOU KNOW**

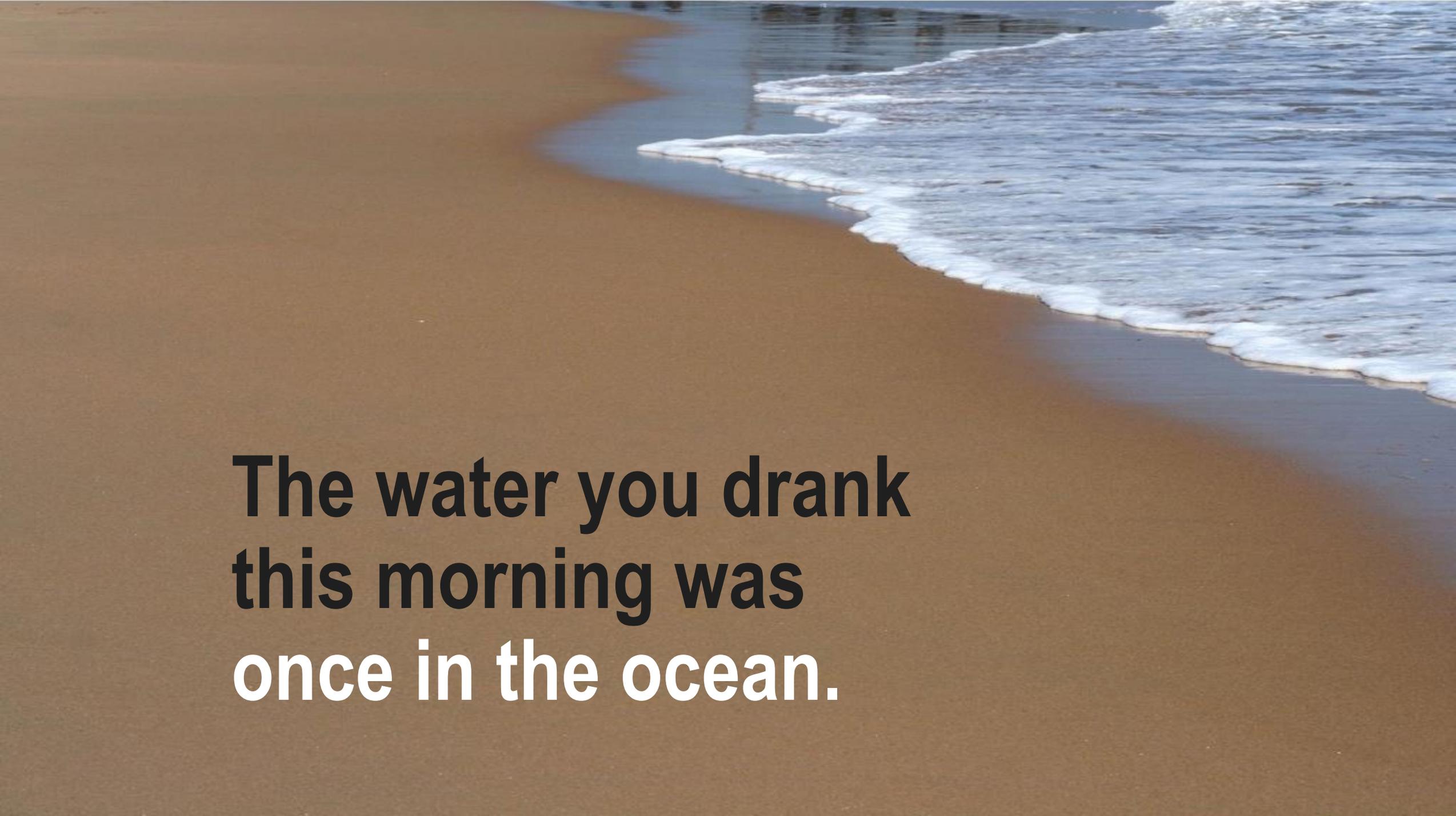


**The amount of water on  
Earth doesn't change.**

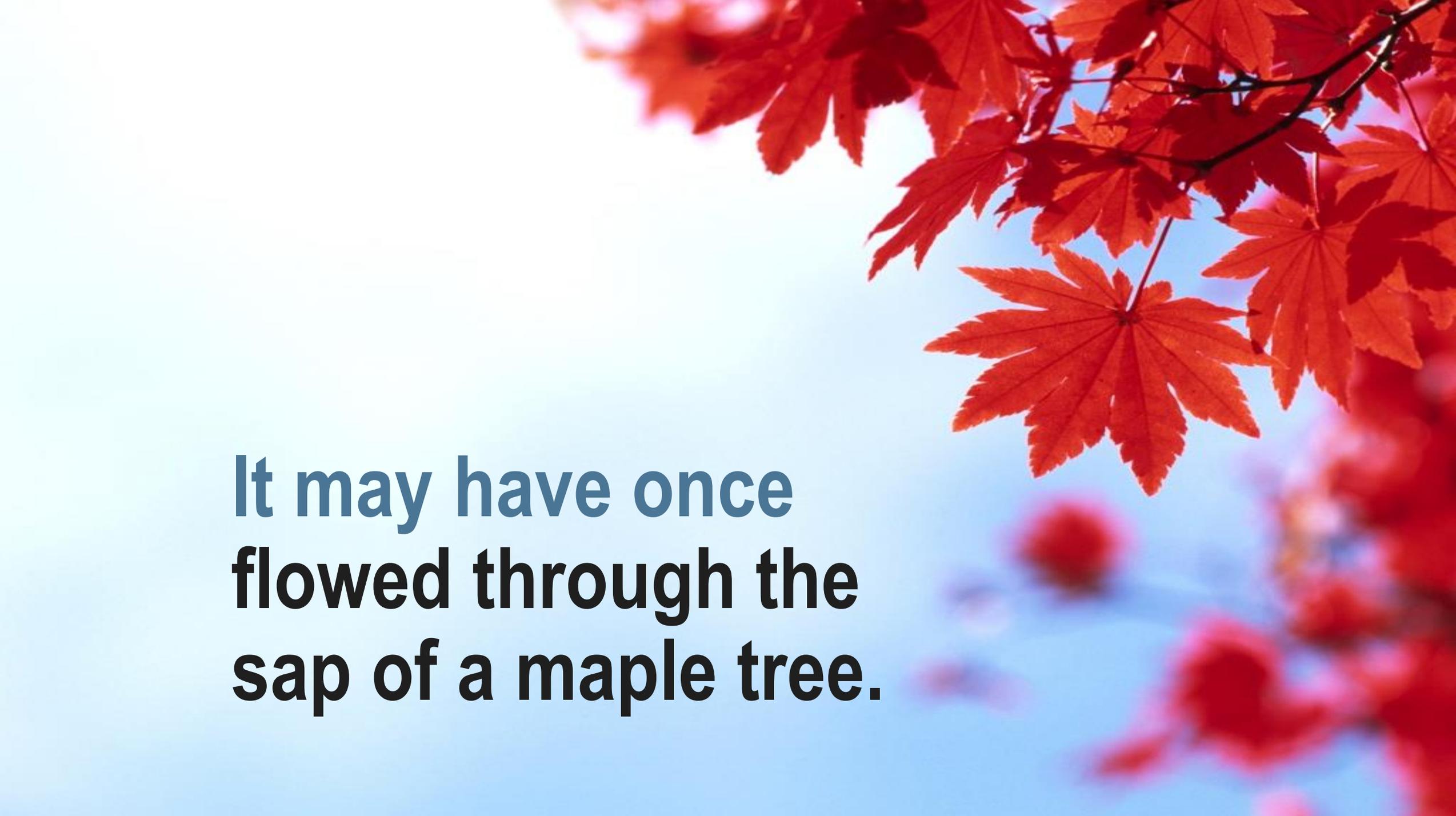


**The same water  
that existed on Earth  
billions of years ago  
still exists today.**



A photograph of a sandy beach with waves crashing onto the shore. The sand is a warm, golden-brown color, and the water is a deep blue with white foam from the waves. The waves are breaking from the right side of the frame towards the left. The text is overlaid on the lower-left portion of the image.

**The water you drank  
this morning was  
once in the ocean.**



**It may have once  
flowed through the  
sap of a maple tree.**



**Or been drunk by the  
builders of the pyramids.**

**Your body is 62% water, so  
even the molecules inside you  
have been around the world.**



**The water that flows down  
your drain may connect to  
the source of drinking water  
for another community.**



**We are all living  
downstream.**



An aerial, high-angle photograph of a densely populated city, likely San Francisco, showing a vast expanse of multi-story buildings and residential structures. The image is slightly hazy, suggesting a clear but bright day. The text is centered over the middle of the image.

**As our population grows,  
demand for clean, drinkable  
water grows too.**



**The planet can  
never run out  
of water...**

**but it can run  
out of water  
we can drink.**





**DID YOU KNOW**



**More than 50 billion  
bottles of water  
are sold every year.**



**Many of the bottled  
water brands are sourced  
from municipal tap water.**



All water is reused water.





**Fortunately,  
the H<sub>2</sub>O molecule  
can't be polluted.**



**It can only be  
mixed with things  
that make it unsafe  
for certain uses.**



**Purification, by  
technology or  
nature, removes  
what was added.**



**DID YOU KNOW**



**We can produce water that's  
more pure than your tap water.**



# We can remove:

✓ **Plasticizers**

✓ **Viruses**

✓ **Pathogens**

✓ **Bacteria**

✓ **Salts**

✓ **Pharmaceuticals**

✓ **Contaminants**

✓ **Mineral Deposits**

**We have the technology, but  
people still misunderstand  
the reality of the use and  
reuse of water.**



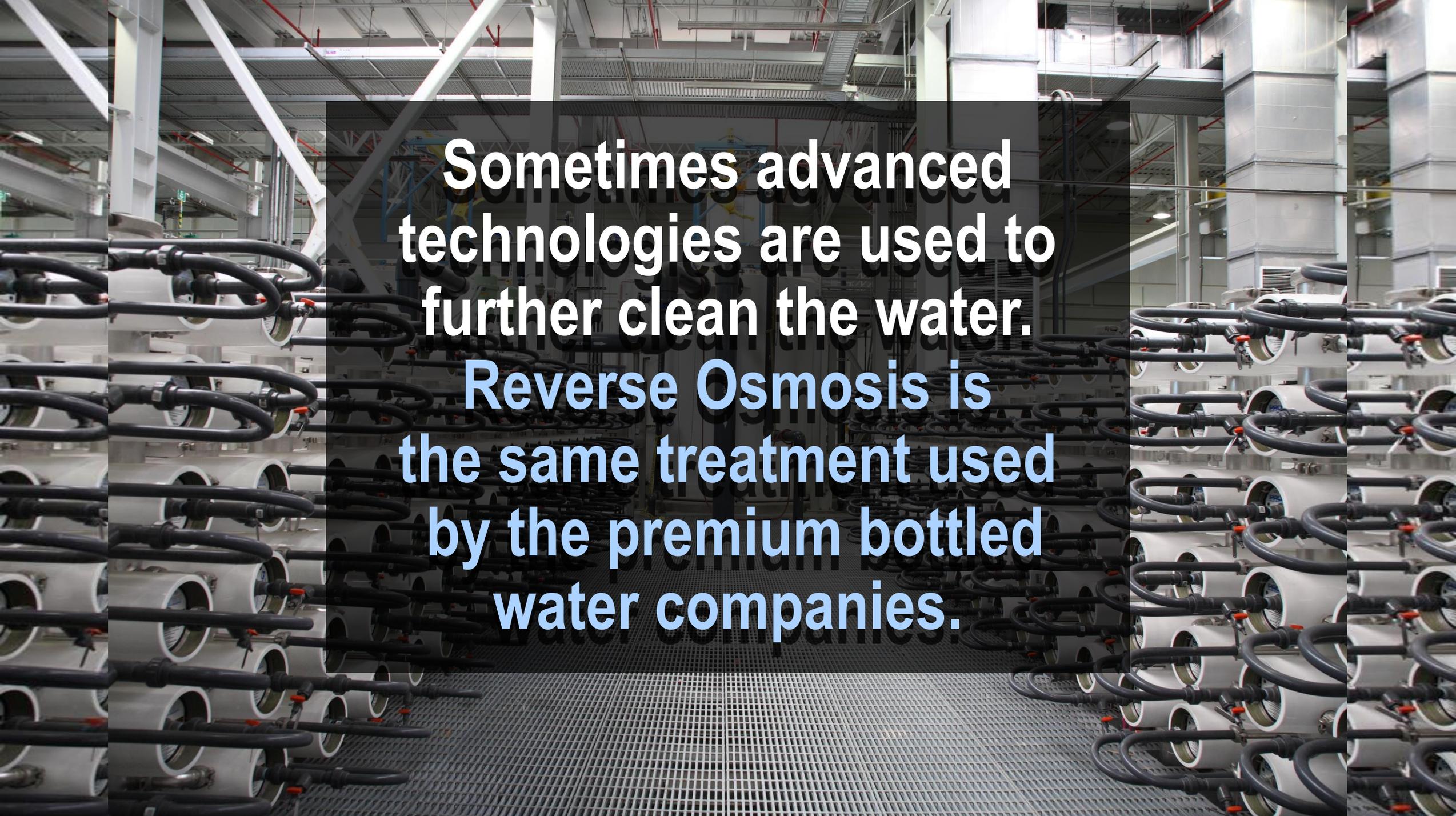
**Water reuse does NOT  
involve drinking water  
directly from the toilet.**



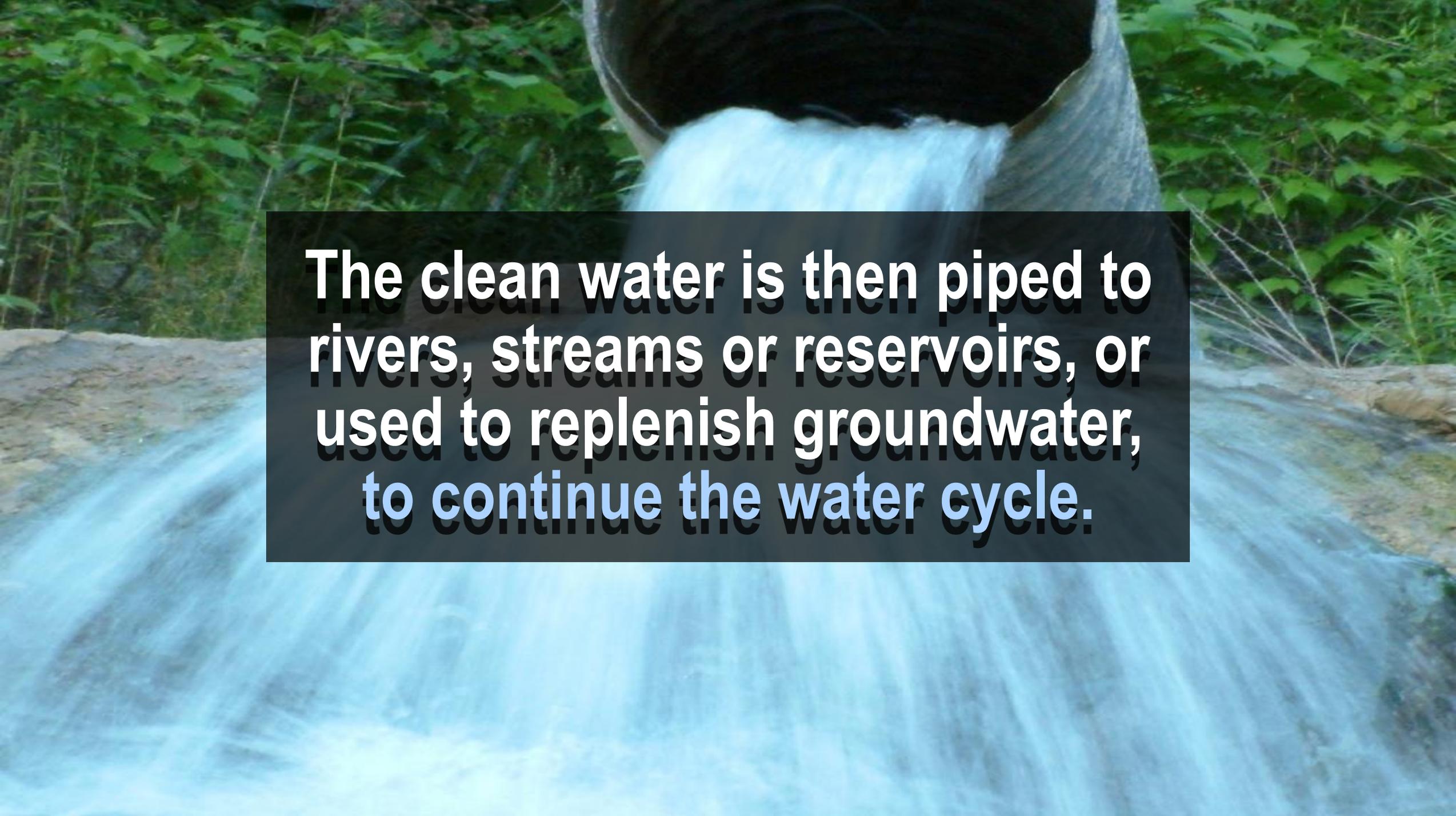
**Here's how it *actually* works:**



**First urban waste water is treated to remove harmful contaminants through a number of steps.**

A large industrial facility, likely a water treatment plant, featuring rows of reverse osmosis membranes and associated piping. The floor is covered in a grey metal grating. The background shows a complex network of pipes, valves, and structural elements under a high ceiling with industrial lighting.

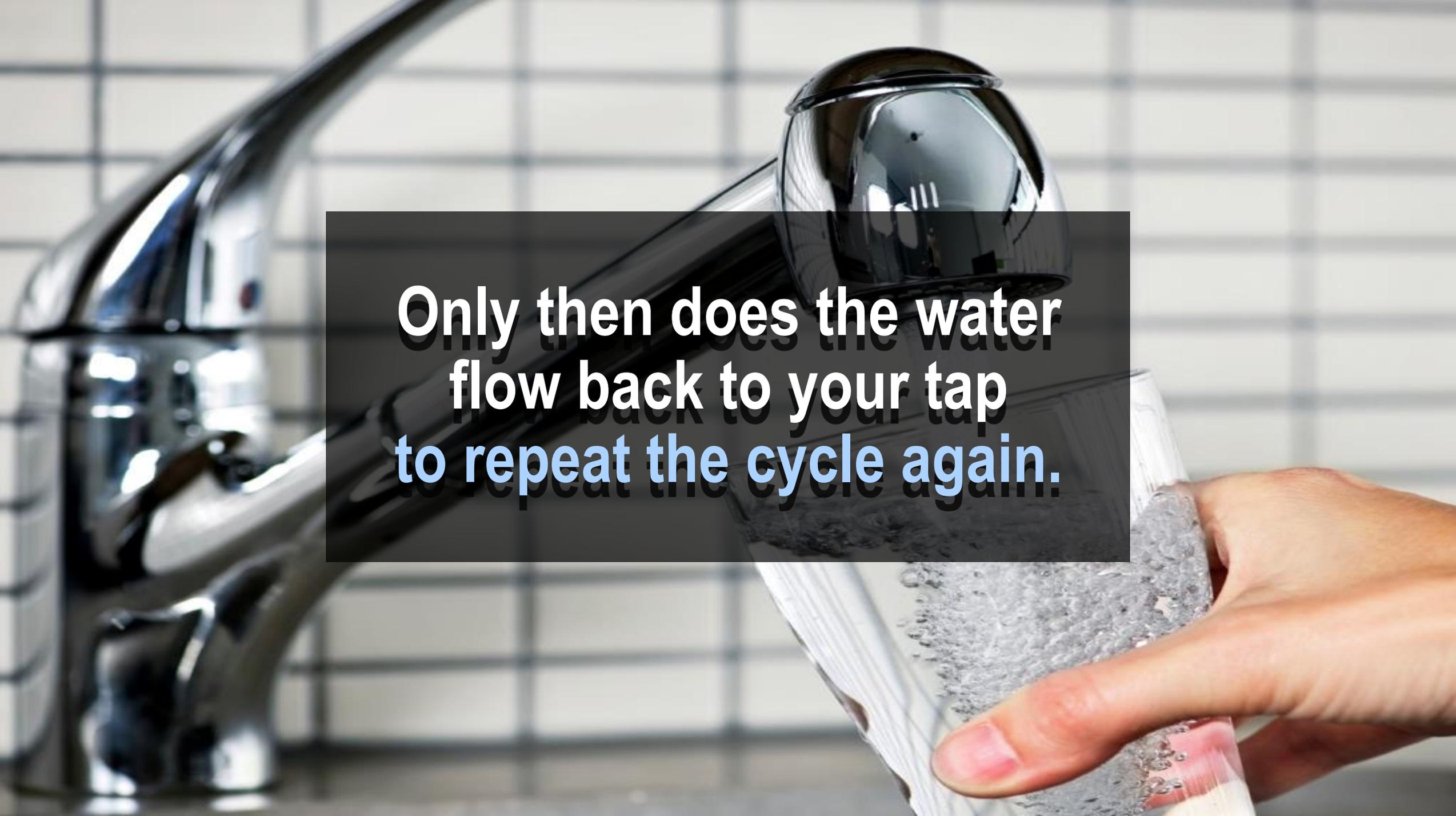
**Sometimes advanced technologies are used to further clean the water. Reverse Osmosis is the same treatment used by the premium bottled water companies.**

A photograph showing a large concrete pipe discharging water into a stream. The water is clear and turbulent as it falls from the pipe. The surrounding area is lush with green vegetation. A dark semi-transparent box is overlaid on the center of the image, containing white text.

**The clean water is then piped to rivers, streams or reservoirs, or used to replenish groundwater, to continue the water cycle.**

A wide-angle, high-angle photograph of a large industrial water treatment facility. The scene is dominated by a complex network of pipes and machinery. In the foreground, two large, dark brown pipes run diagonally from the bottom corners towards the center. Above them, a series of bright green pipes run parallel to the ceiling. To the right, a series of blue pipes and machinery are visible, including what appears to be a large blue cylindrical tank. The facility has a high ceiling with a white metal railing running along the top edge. The floor is a mix of brick and metal grates. The overall lighting is bright and even, highlighting the industrial nature of the environment.

**Eventually it reenters the urban water system where it is treated at a water treatment plant again.**

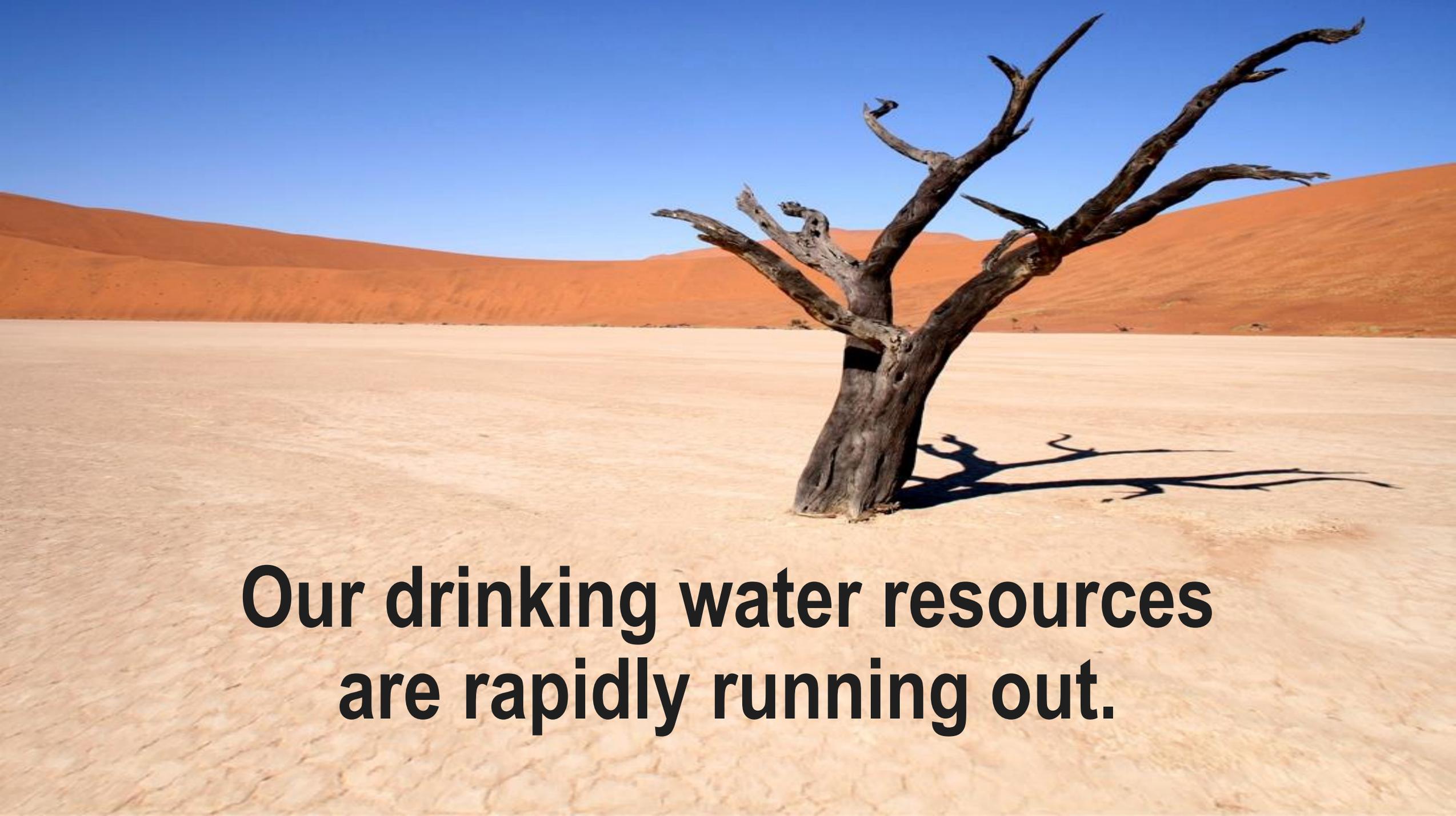
A close-up photograph of a hand holding a clear glass under a chrome faucet. Water is flowing from the faucet into the glass. The background is a white tiled wall. A semi-transparent black box is overlaid on the center of the image, containing white text.

**Only then does the water  
flow back to your tap  
to repeat the cycle again.**

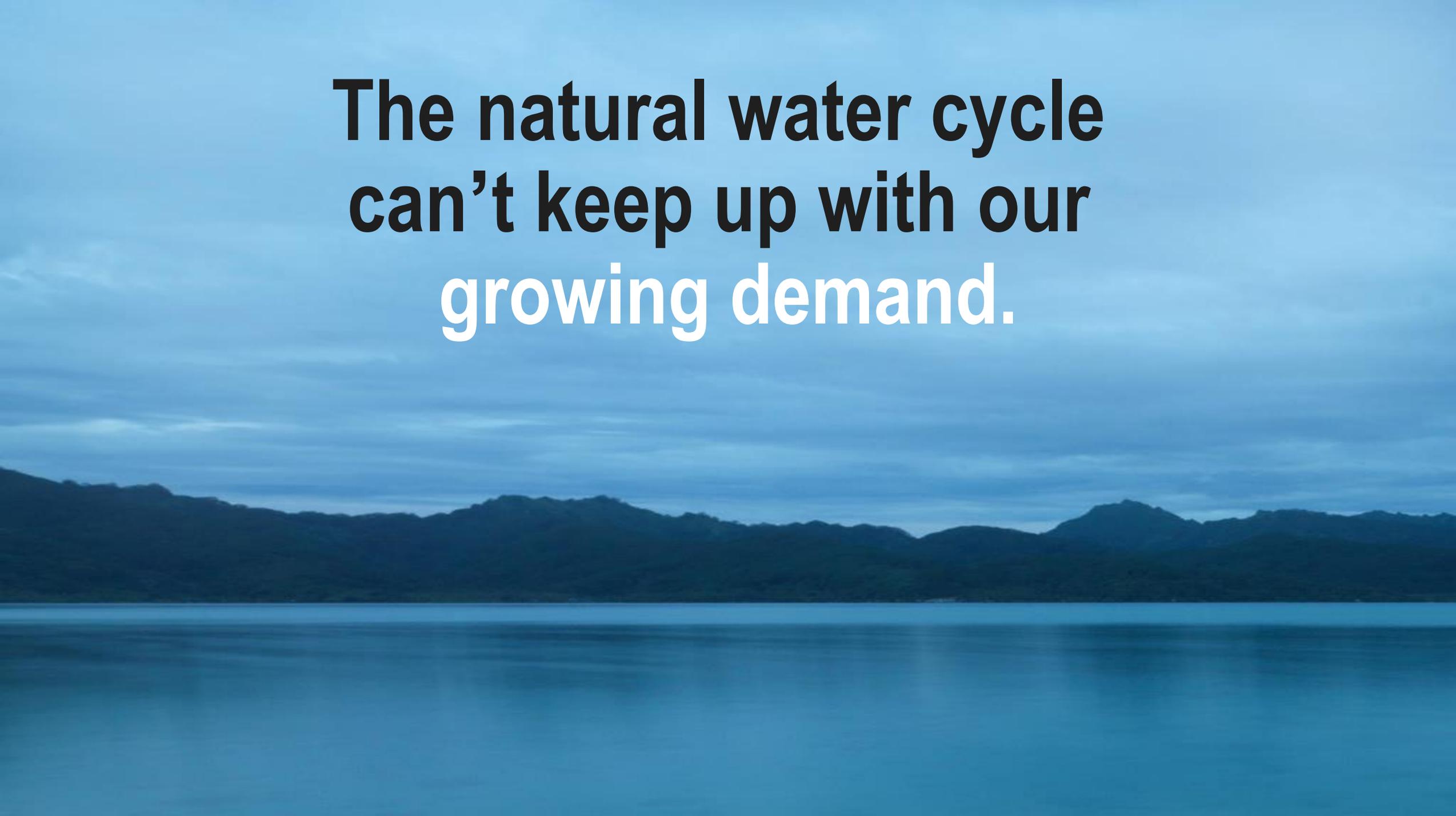


**So what does it all mean?**





**Our drinking water resources  
are rapidly running out.**

A blue-tinted landscape featuring a calm body of water in the foreground, a range of dark mountains in the middle ground, and a cloudy sky above. The overall mood is serene and somewhat somber due to the monochromatic color palette.

**The natural water cycle  
can't keep up with our  
growing demand.**

**Water reuse is  
often misunderstood.**



**The truth is all water  
is reused, always.**



**The water you drank this morning was used a week ago, a year ago, a century ago, and it will be used again tomorrow.**



**Modern technology  
allows us to get  
more mileage out  
of our water.**



**Properly treated water  
is the safest water  
on the planet.**



**We can waste less.**



**We can save more.**



**We can create  
a sustainable  
future for  
generations  
to come.**



**Now you know.**

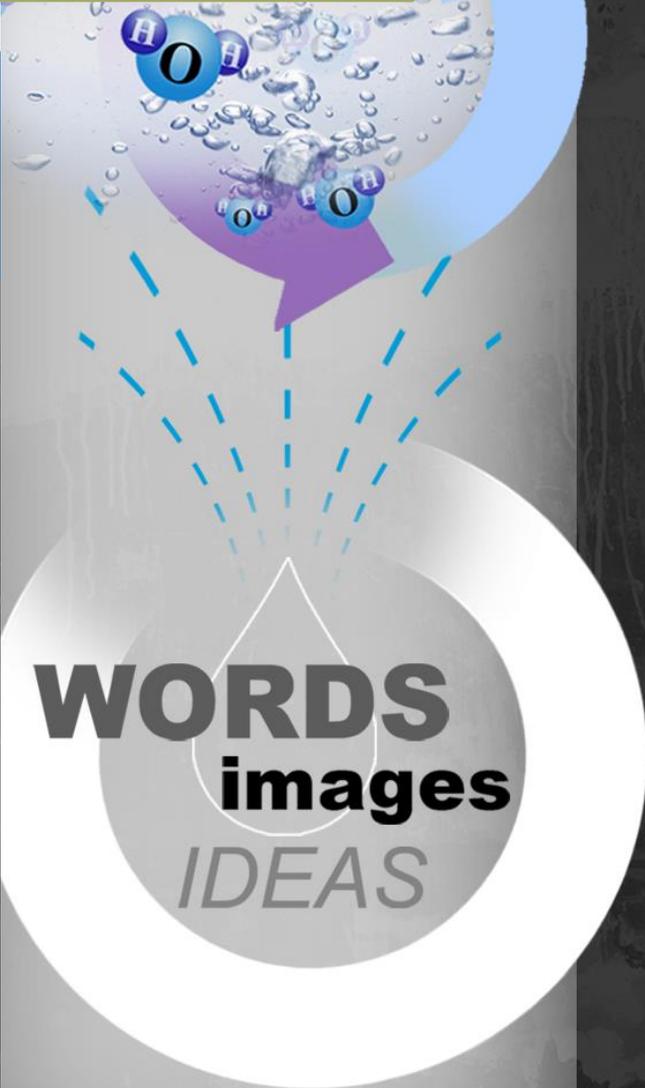
# DOWNSTREAM



**It can be done.**

Taken from:

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From WASTEwater to Resource

# New Language New Thinking New Possibilities

Presented to IWA's World Water Congress, Busan, Korea

Wednesday, September 19, 2012

Linda Macpherson | CH2M HILL