Evolutionary Water Systems

700 BCE — Rome

The first aqueducts were invented to transport water

1400 CE — Mediterranean

People could get clean water out of public wells

1236 — London

Intricate piping for plumbing system was installed

Late 1800s — United States

Filtration and disinfection revolutionized urban water

Mid 1900s — California

Sewage treatment plants were constructed

1919 — Irrigation

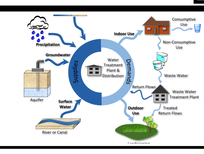
Irrigation is now more commonly used in attempts to save ground water

1960s — Germany

Membrane bioreactors were created and it wasn't until the early 1990s when they were utilized for sewage treatment

2018 — South Africa

Severe droughts in the Spring where Cape Town nearly ran out of water



Getting to the 'Right' Water

Water Pollution Control Act

1948
Established the basic structure for regulating pollutant discharges into the waters of the United States. Gave EPA the authority to implement pollution control programs such as setting wastewater standards for industry.

Safe Drinking Water Act

1969
The principal federal law in the United States intended to ensure safe drinking water for the public.

Clean Water Act

1972
Established the basic structure for regulating pollutant discharges into the waters of the United States.

Environmental Protection Agency

1970
An agency of the federal government of the United States which was created for the purpose of protecting human health and the environment by writing and enforcing regulations based on laws passed by Congress.

Toilet-to-Tap

"As the world became more crowded and we started to recognize the problems associated with our consumptive ways, we began to close the loop on materials and started to conserve energy by embracing the 'Three R's' of reduce, reuse and recycle."

Reduce

"When we think about water, the first of the Three R's is reduce... grow drought-tolerant plants and to install low-flow plumbing fixtures"

Reuse

"Water reuse" involves finding an appropriate use for wastewater that has received little or no treatment beyond what is usually done when it is discharged to a river or the ocean.

Recycle

"Water recycling," by contrast, employs wastewater after it has undergone additional high-tech treatment processes for the purpose of getting the water ready to be used for a specific application."

Irrigation & Recycling Go hand-in-hand

Many cities can reuse their wastewater effluent for irrigation of agricultural crops. Israel, Florida, and California have embraced this approach and are active practioners of agricultural water reuse.

CONSERVE