

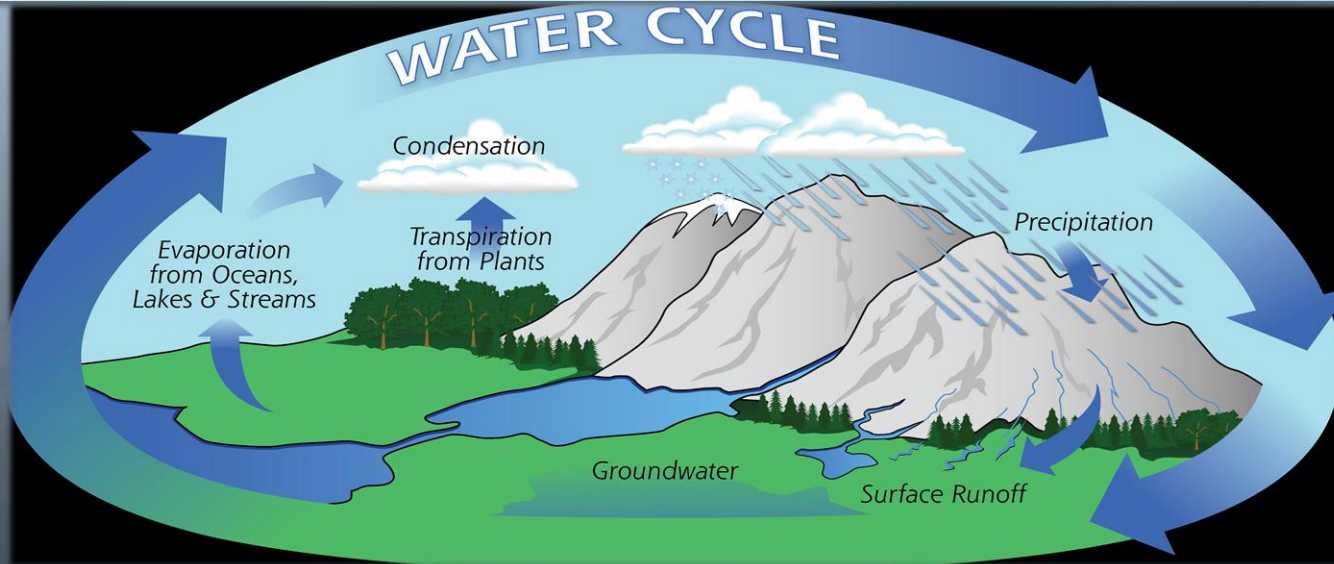


Water Water Everywhere!

but not a drop to drink ?

Dr. Ruthanne “Rudi” Thompson
UNT Associate Professor
Biology & Environmental Science
Principal Investigator: Dallas EEI

Water and Life



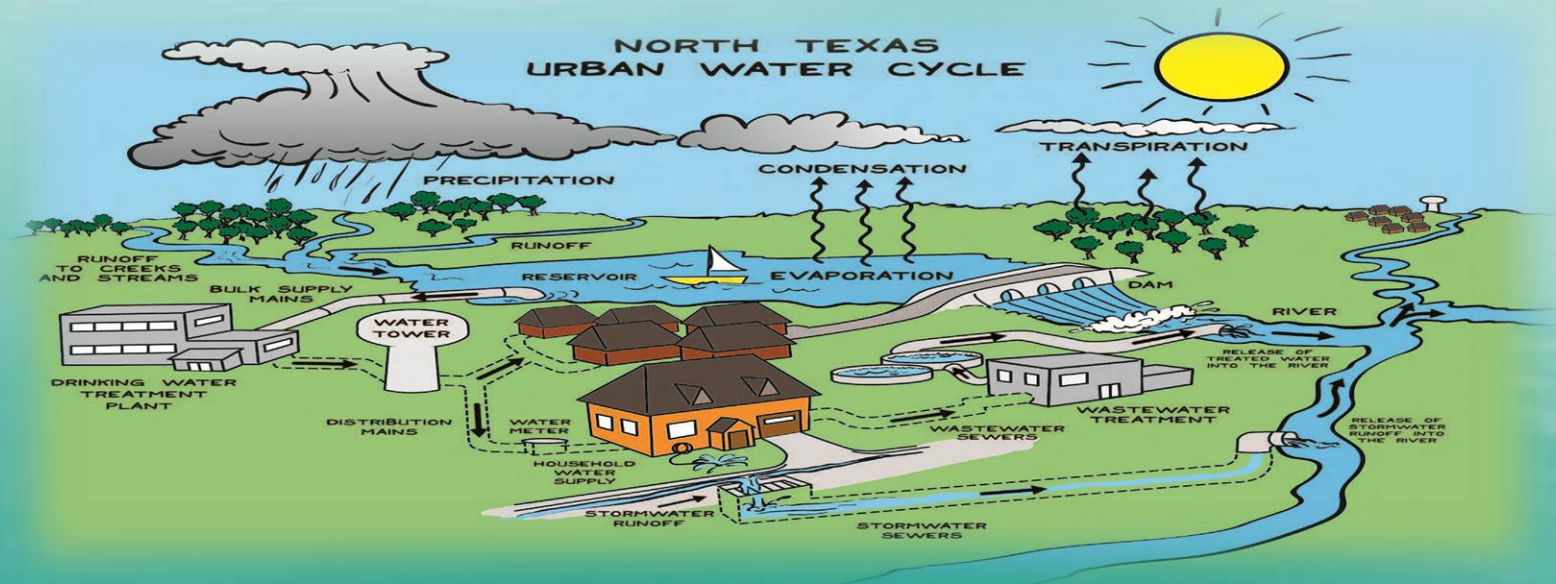
- The amount of water is stable.
- It is found in different forms.
- It is necessary to sustain all forms of life.

What does this mean?



- There are approximately 326 million trillion gallons of water on Earth
 - 98% is in the oceans
 - 1.6% is in polar ice caps and glaciers
 - .36% is groundwater
 - .036% is in lakes and rivers
 - remaining .004% is in clouds, living things, in our foods, bottled water, etc.

Life and Water

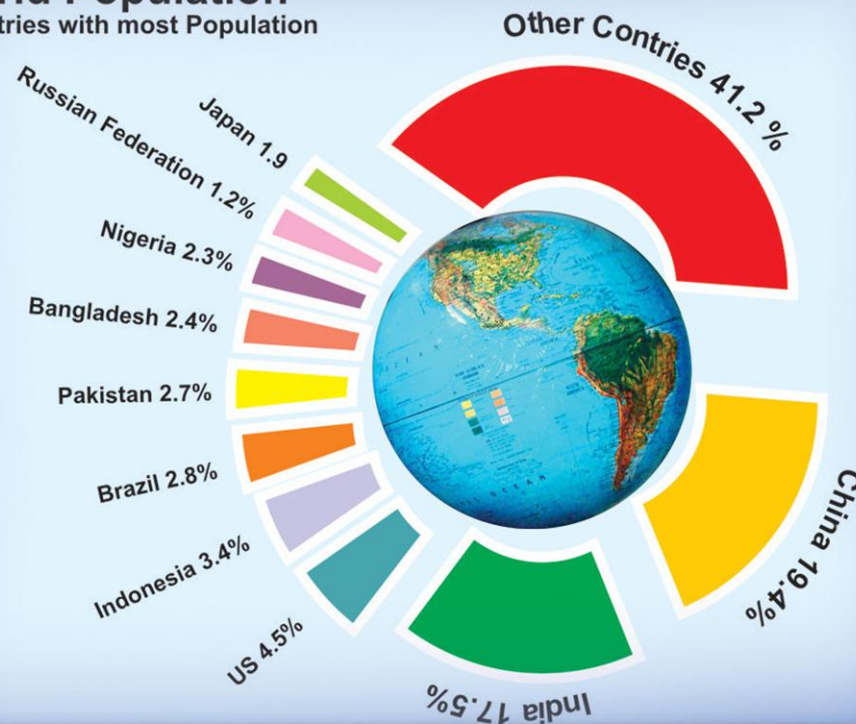


- Population is NOT stable.
- Urbanization alters the natural water cycle.
- It is possible to run out.

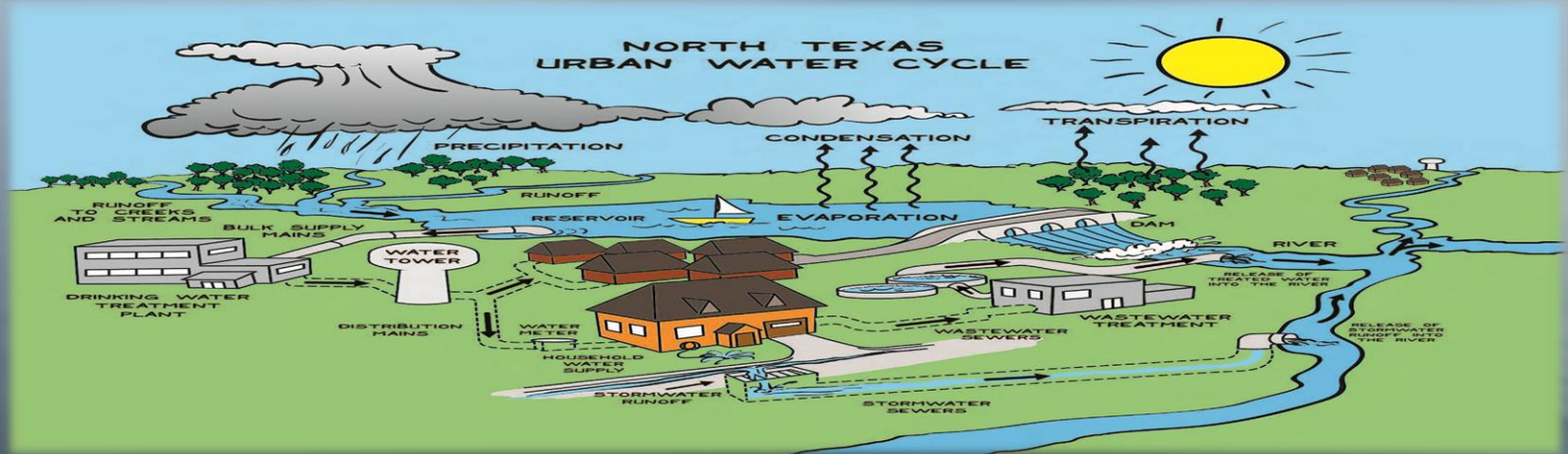
What the Data Tells Us

- Average Population growth rate = 1.17%
 - average of 82 million people per year
- Current world population 7+ billion
- Expected Population of 9+ billion by 2050

World Population
Countries with most Population

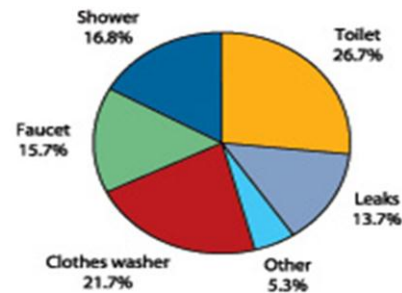


A Growing Gap



- Average family of 4 = 400 gallons a day of which 70% is used indoors

How Much Water Do We Use?



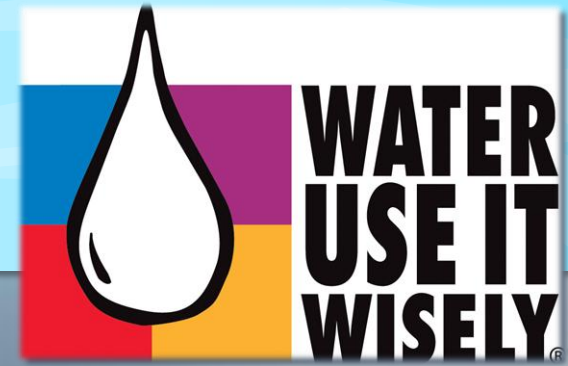
Source: American Water Works Association Research Foundation, "Residential End Uses of Water", 1999

Remediation



- "In the end, we will conserve only what we love, we will love only what we understand, and we will understand only what we are taught."
 - Baba Dioum
- Dallas **E**nvironmental **E**ducation Initiative
 - www.dallaseei.org
 - Beginning 2006
 - In class hands-on, inquiry-based water conservation lessons
 - 45,000+ students
 - 98.7% commitment to water conservation

Results



- 2008-2010 - largest decrease in water use occurred in Zip Codes that received education ($p < .001$, ANOVA)
- 2011 - Education zip codes used statistically significantly less water when compared to control zip codes ($p < .001$, t-test)
- Twice is nice but thrice??
 - Ongoing research



**Thank you to the Science Education
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**Alice Coe; Victoria Faubion; Christina
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