SIMPSON
PLUMBING & FILTRATION
WATER TALK
Understanding Our Water

Welcome & Thank you

Restrooms
Take Notes
Q/A Time
Presentation

Congrats
GRAD

Five Things to Think About Tonight

1. Water is essential to our everyday well-being. We use it every day, often without giving it a second thought.

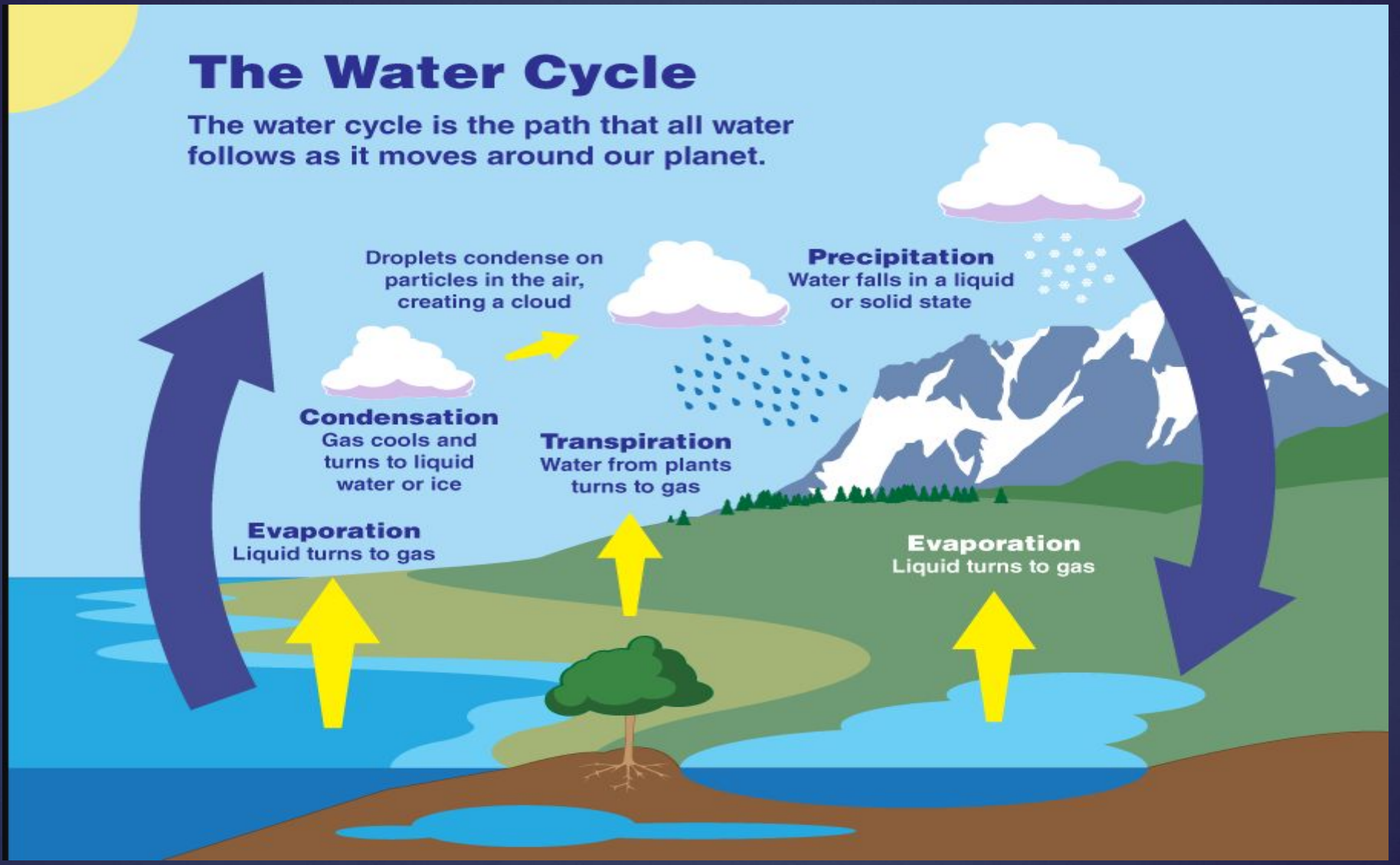
2. Not all water is the same. Where our water comes from and the journey it takes can influence its quality.

3. What's in our water matters. Understanding what may be present is the first step toward making informed choices.

4. Awareness leads to understanding. Learning how water is treated, tested, and regulated helps us become better-informed consumers.

5. Knowledge gives us choices. Small steps toward understanding our water can support healthier homes and everyday wellness.

Water: The Big Picture


The Water Cycle
The water cycle is the path that all water follows as it moves around our planet.
Droplets condense on particles in the air, creating a cloud
Precipitation
Water falls in a liquid or solid state
Condensation
Gas cools and turns to liquid water or ice
Transpiration
Water from plants turns to gas
Evaporation
Liquid turns to gas
Evaporation
Liquid turns to gas

Where Is Earth's Water?

~96.5% is in the oceans

~1.7% is in lakes, rivers, streams and soil

~1.7% is in polar ice caps, glaciers and permanent snow

~0.1% is in water vapor, precipitation, and other sources

Surface Water vs. Groundwater

Surface Water – Water found above ground

- Rivers
- Lakes
- Reservoirs
- Streams
- Springs

Ground Water - Water stored below the ground in spaces within

- Soil
- Sand
- Gravel
- Rock

Groundwater is commonly accessed through **wells** and moves through underground formations called **aquifers**.

Where Our Water Comes From

Camas

Uses a blend of groundwater and surface water

Washougal

Relies entirely on a system of municipal groundwater wells

Vancouver

Draws 100% of its supply from underground groundwater sources

The Journey from Source to Faucet

Rain and snow → watershed or groundwater → source/well → treatment → storage → distribution pipes → property line → home plumbing → faucet

What Does "Contaminant" Mean?

A **contaminant is any physical, chemical, biological, or radiological substance or matter found in water.**

Importantly, **the word "contaminant" does not automatically mean something is harmful or that the water is unsafe.**

Some contaminants occur **naturally**, while others can enter water through **human activity, water treatment, distribution systems, or home plumbing**.

What Can Be in Our Water?

Category	Examples
Natural minerals	Calcium, magnesium, iron, manganese
Agricultural contaminants	Nitrates, nitrites, pesticides, herbicides
Industrial / synthetic chemicals chemicals	PFAS, solvents, VOCs and other industrial
Disinfection byproducts	Trihalomethanes (TTHMs), haloacetic acids (HAAs)
Treatment-related substances	Chlorine or chloramine; fluoride where added

What Can Be in Our Water?

Category	Examples
Microorganisms	Bacteria, viruses, parasites
Metals	Lead, copper, arsenic, mercury, and chromium
Radioactive contaminants	Radium, uranium and other radionuclides
Sediment / particulates	Sand, rust, dirt and other suspended particles
Emerging contaminants	Pharmaceuticals, personal-care chemicals, microplastics and other substances still being studied

Water Treatment Processes

- **Disinfection:** All three cities use chlorine injection for basic pathogen disinfection.
- **Corrosion Control:** All three add sodium hydroxide to raise water pH and reduce the breakdown or corrosion of home copper plumbing.
- **Fluoridation:** Camas and Vancouver actively add fluoride compounds to promote dental health, whereas Washougal does not add supplemental fluoride.

Camas
Slow Sand Filtration Treatment Plant

Uses a blend of groundwater and surface water

- Seasonal surface water from Jones Creek and Boulder Creek (Larch Mountain watershed area)
- Nine groundwater wells near the Washougal River and one in Grass Valley

Washougal
Groundwater Wells

Relies entirely on municipal groundwater wells

- Operates about six wells in areas near Hathaway Park and adjacent to Camas' Goot Park
- Draws from local aquifer systems

Vancouver
Groundwater Wells

Draws 100% of its supply from groundwater sources

- Utilizes around 40 municipal wells across major local aquifers
- Provides water for the City of Vancouver

CAMAS WATER TREATMENT

Treatment	Surface water (Jones and Boulder Creeks)	Groundwater (city wells)
Source	Creeks near Larch Mountain	Underground aquifers
Filtration	Slow sand filtration	Generally no filtration
Chlorine	Yes, for disinfection	Yes, for disinfection
Fluoride	Yes, for dental health	Yes, for dental health
Sodium hydroxide	Yes, for pH/corrosion control	Most wells, for corrosion control
PFAS removal	Not part of the standard process described	Special treatment planned for Well 13

Challenges in Modern Water Treatment

1. Pollution and Emerging Contaminants
2. Aging Infrastructure
3. Energy Consumption
4. Supply Demand (Population Growth)

Water Quality Reporting

Municipal Water Reports
for Consumers

Released Annually on July 1

Water Quality Reporting

Water Source: Identifies where your tap water originates from

Testing Results: Lists detected contaminants, chemical levels, and how they compare to legal limits set by the Environmental Protection Agency (EPA) and the Washington Department of Health.

Health Information: Explains potential health risks for sensitive populations regarding specific detected substances.

Water Use Efficiency (WUE): Details total water production, consumption, and distribution system leak loss percentages required by the state.

Understanding the Units

- **mg/L:** roughly parts per million
- **µg/L:** roughly parts per billion
- **ng/L:** roughly parts per trillion

- 1 part per million ≈ 1 drop in about 13 gallons
- 1 part per billion ≈ 1 drop in a large swimming pool
- 1 part per trillion ≈ 1 drop spread across roughly 20 Olympic-size pools

Resources for Water Management

Organization	Primary Role	What It Means
EPA – Environmental Protective Agency	Federal Regulation	Establishes national drinking-water standards under the Safe Drinking Water Act.
DOH - Washington State Department of Health	Oversees Washington Public Water Systems	Regulates Washington public water systems and implements the Federal Safe Drinking Water Act.
Your Local Water Utility/City	Your Actual Water	Tests and treats your municipal water and provides notices and Consumer Confidence Reports (CCR) showing detected contaminants and compliance information.
EWG - Environmental Working Group	Consumer information / health-based perspective	A nonprofit, nonpartisan organization dedicated to helping you live your healthiest life.
WQA – Water Quality Association	Treatment Education and Certification	Provides its Tap Water Database and a perspective that goes beyond federal regulatory limits.

What Residents & Homeowners Can Do

1. Know what's in your water
2. Look beyond the required reporting
3. Identify your concerns
4. Match the solution to the concern
5. Use what you've learned to make informed decisions

Five Takeaways

1. Know where your water comes from.
2. “Detected” does not automatically mean “dangerous.”
3. The numbers matter.
4. Use more than one trusted source.
5. Understand your water before choosing a solution.

Community Questions

Thank you for joining our Water Talk

Website & Resources