



World Water Day 2017: Why Waste Water?

By Joan B. Rose, Ph.D.

Every year on March 22, the world community celebrates [World Water Day](#) by highlighting a water-related theme. This year's theme, "Why Waste Water?" is linked to the [United Nations Sustainable Development Goal #6](#), to "Ensure availability and sustainable management of water and sanitation for all." With a clever play on words, "Why Waste Water?" encourages us to (a) question the wasteful use of clean, treated water and (b) give some thought to "wastewater."

Why a Focus on Wastewater?

In a circular economy, many resources are reused successfully, but wastewater remains a largely untapped resource. Does it seem odd to classify wastewater as a resource? Despite the fact that more than 80 percent of wastewater produced globally is discharged untreated into the environment, in a few places, especially where water is scarce, wastewater undergoes extensive treatment to produce high quality drinking water.

In addition to being a source of drinking water, wastewater is also a source of energy and nutrients. According to a 2015 [Water Online article](#), the organic constituents of wastewater can be converted into biogas or natural gas, generating energy to help *power* wastewater facilities. And wastewater nutrients, [rather than fueling algal blooms](#) in surface water bodies, can be recovered and reused.

There's another reason to focus on wastewater: Many of the microbial components of wastewater present a significant risk to human health, especially in areas where wastewater infrastructure is crude or nonexistent. The [Global Water Pathogen Project](#), which I co-founded, is contributing up-to-date knowledge of wastewater pathogens and their control. As part of this international effort, over 100 scientists around the world are organized into expert teams to characterize key fecal pathogen groups and the measures necessary to control them. The project features an online "[open access integration platform](#)" that will be updated regularly by the experts. Clearly, channeling wastewater to treatment and resource recovery has public health, environmental and economic benefits.

Why Waste Water in the First Place?



When the word “waste” in the theme, “Why Waste Water?” is considered a verb and not an adjective to describe “water” (or part of the compound word “wastewater”), this year’s World Water Day theme invokes water conservation. At the community level, keeping water distribution pipes in good repair is an important way to prevent waste through leakage. Consumers can play a significant role in saving water too. The text box below contains a list of practical tips from the [US Environmental Protection Agency’s Water Sense program](#) that can help consumers conserve water.

Conserving Water in and around Your Home

Indoors

- Fix Leaks in plumbing fixtures
- Turn off the tap when shaving or brushing teeth
- When washing dishes by hand, plug up the sink or use a wash basin
- Use a dishwasher, but only when it is fully loaded
- Scrape food off plates before putting them in the dishwasher
- Keep a pitcher of drinking water in the refrigerator instead of letting the faucet run until the water is cold
- Thaw frozen foods in the refrigerator overnight to avoid defrosting with hot water
- Add food wastes to a compost pile instead of using the garbage disposal
- Wash only full loads of laundry or use the appropriate water level or load size selection on the washing machine

Outdoors

- Tailor your landscaping to the average annual rainfall in your area (see EPA’s [Water-Smart Landscape Design](#) tips)
- Fix leaks and keep your irrigation system maintained to ensure it is watering at peak efficiency
- Sweep, don’t hose off, driveways, sidewalks and steps
- Wash the car with water from a bucket or consider taking it to a commercial car wash that recycles water
- If you have a pool, consider reducing evaporation with a pool cover when the pool is not being used

If water here on planet Earth is life, *water quality* is health. Clean, treated water should be used wisely. Once it has passed through our bodies, homes, institutions, and manufacturing and production processes, it becomes an available resource with the potential to be harnessed and streamed right back to us, contributing to the three “P’s” of sustainability: People, Planet and Prosperity.

Joan B. Rose, Ph.D., is the Homer Nowlin Chair in Water Research at Michigan State University and a member of the Water Quality and Health Council.