

Opinions

Sun Sailor Newspapers encourages the free and open expression of ideas and opinions. To that end, we welcome letters to the editor and guest columns from members of the community on issues of local importance. Commentaries should be sent to kristen.miller@ecm-inc.com.

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Enormous leaks detected in the water cycle

We learn in elementary school that the hydrologic cycle begins with the evaporation of water and as moist air is lifted, it cools and water vapor condenses to form clouds. Moisture is transported around the globe until it returns to the surface as precipitation. When water falls to the ground it can collect on the land becoming streams, rivers, lakes, or it can soak in to the ground to become groundwater. Plants soak up water from the soil, use it photosynthesis and nutrient transportation, and release it back to the atmosphere through transpiration. We learn the importance of maintaining life on Earth.

But perhaps it is time to start teaching that the water cycle has sprung some pretty big leaks. Not only is groundwater being withdrawn faster than it can be replenished, mostly due to electricity production and crop irrigation [see “Want to save water? Turn down the air conditioning,” July 3], but a significant amount of precipitation isn’t percolating into the ground.

As the world’s population grows, we continually convert more land and wetlands to impenetrable “people spaces,” such as



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Guest columnist

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homes, businesses, roads, parking lots, etc. These are often asphalt or concrete spaces that don’t allow water to soak into the Earth. Instead, every time it rains, massive amounts of water is sent to streams and rivers causing flooding and erosion and degrading water quality with the pollutants carried in the storm water.

Of course, where there’s a problem, there’s also a solution. Or, in this case, there are many solutions. Gardens that infiltrate rainwater, pavements that allow water to infiltrate, and rain barrels that capture roof water for reuse are just some examples of “best management practices” that anyone can put in place. These practices

help increase the amount of water percolating into the soil rather than running down the street and into the storm drain.

Another way to tackle the problem is with education. Next year, the Bassett Creek Watershed Management Commission and the City of St. Louis Park will create several water-related education pieces, including one of the water cycle, at the new Westwood Hills Nature Center. The hope is that visitors will be reminded that we are not separate from the water cycle and we need it to function well in order for our lives to function well. The water-related elements will include structures that capture storm water runoff from a majority of the building roof. Visitors will be able to view and use solar- and hand-powered pumps to pump the captured water from the storage area through a constructed stream behind the building. Signs describing the hydrologic cycle and how the system mimics that cycle will be developed to accompany the demonstration area. Nature center staff will also create curriculum about the hydrologic cycle and illustrate concepts like infiltration and evaporation with the new system.

Actually creating water on

a large scale might be feasible someday. Look how far science has come. Over a century ago, the thought of an internal combustion engine—with its repeated, but controlled explosions—seemed dangerous and crazy. Now, this type of engine is common in everything from cars to lawn mowers and helicopters. Perhaps water scarcity will be the impetus science needs to discover how to safely join explosive hydrogen and oxygen atoms. But for right now, the Bassett Creek Watershed Management Commission thinks the best solution is to take care of the water resources that we have and reconnect people with the fundamental water cycle that is often overlooked or taken for granted. It seems that as a society, we have become disconnected with the water cycle and think that no matter how much water we use, there will always be more whenever and wherever we need it.

Bassett Creek Watershed Management Commission is a local unit of government focused on protecting water comprised of the nine cities that drain to Bassett Creek. BCWMC is a member of the West Metro Water Alliance.