

Three Keys of Becoming a Sustainable Water Consumer

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“My interest sprouted as I entered college, as a Biology major, and learned that I am in fact predominantly made of...WATER!”

I have always been fascinated with water. This fascination isn't based on the characteristically bland taste of water, or the reality that it makes up the vast majority of the Earth's surface. My interest sprouted as I entered college, as a Biology major, and learned that I am in fact predominantly made of...WATER! The human body is mainly made of this fascinating liquid! Water, quite

literally, is the foundation and source of all life. The search for life beyond Earth has centered on the ability of another planet to support and maintain water. Think about that: we send rocket ships into space, partially in search of water, because finding a planet that possesses this substance has the potential to support life.

However, here on Earth water scarcity and contamination has spread like a wildfire. Humans have drastically altered the landscape of the earth for agriculture, transportation, and for the development of urban cities. Humans and certainly myself rely on deforested lands for food production, we insist on the ability to use vehicles and public transport in order to move around, and here in the Land of 10,000 lakes we spend the summer months exploiting every piece of our water sources. This pressure has changed the natural state of water and human industrialization has contaminated the very water reserves we rely on for every-day life. In the 21st century, flourishing urban areas and rural agriculture's chemical use has placed unprecedented stresses on our water quality. As we as a global population become more conscious of our actions and the effects on the environment, the need for resilient and educated management of our water sources is crucial for preserving this vital natural resource.



The Master Water Stewards program established in the Twin Cities area of Minnesota operates as educators, leaders, and engaged citizens. They do so in a way that prioritizes taking action and doing our part to help alleviate the man-made problems facing water quality today. As I learned in my discussions with Peggy Knapp, the Fresh Water Society began with a few worried citizens opting to take the quality of their lake (Lake Minnetonka) into their own hands. Their “boot-leather” investigation of the lake through sampling yielded a comprehensive organization that still today

focuses on communicating scientific research to the hands of everyday citizens. The Fresh Water Society is the parent organization of the MWS program and this “hands-on” approach is evident in all that MWS does. As I learned more and more about the philosophy of MWS, I began to see just how effective this citizen expert model is at enabling the community to act. Through my understanding of MWS, I have established what I believe to be the fundamental aspects underpinning how we as a community can become sustainable stewards of water.

1. **If you choose to consume it, you're obligated to protect it.**

Although many of the projects implemented by the MWS are large-scale city projects or homeowner-centered, the fundamentals of what they believe as stated by their Director of Programs

"If you pour it on the ground, you're drinking it." -Peggy Knapp

Peggy Knapp, is that "if you pour it on the ground, you're drinking it." All other factors aside, you and I have the means necessary to produce a positive impact on water quality simply by the fact we are consumers of it.

At my first visit with members of the MWS program, this idea that everyone has the ability to make change was the main point the MWS coordinators talked about. The Stewards operate under this idea that each person can play a part in changing how we deal with water. The Stewards become an expert on water pollution, water behavior, and how we can use the natural behavior of water in order to alleviate the invasion of pollutants from our water sources. By educating the public on these practices the MWS program is able to supply every community member with the tools necessary to inspire change in the water that they rely on.

Water travels a vast cycle, from deep in the ground seeping up to fill a lake, and from that lake into the clouds with the rising temperature. However, people have created new reservoirs of water and thus we should be stewards of such a resource. When I look outside, it is evident that urban cities have created highways for water to travel. Storm water systems and vast amounts of impermeable concrete allow water to flow from city blocks much faster than it should. When water is able to bypass its natural route of soaking into the ground, it is much more contaminated when it reaches our lakes and rivers. The way we care for water in our possession, and within our ability to care for, drastically affects the way that water behaves in the natural environment.

2. **Be conscientious. It matters.**

You see, the thing about water quality issues, as I learned from up and coming MWS John Bly, is that people are not simply intentionally pumping pollutants and chemicals into lakes where the problem of doing so would be easy to see. Due to this, much of what people hear about water sustainability and environmental issues puts them in a state of paralysis. If I see someone pouring harmful chemicals into a lake, the need to stop that action would be easy to see. However, if someone spills a bit of oil on their driveway and lets it clear away with the rain, it doesn't seem to be as big of a problem. These two actions are both causing harm to the environment and being conscientious of how water systems works allows you to see that. Although I still struggle with seeing many of these negative effects, I have learned that merely thinking about the situation gives you valuable insight.

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As I used to think and certainly have heard from others, *"These issues haven't affected me personally. Sure water is important but this is the land of 10,000 lakes! Surely we have plenty of clean water."*

The thing about improving water quality, much like many other environmental issues, is to be conscientious! Be aware that nearly everything you and I do have an effect on the environment, and consequently the water that you drink or your children will drink in the future. When you do laundry simply to clean your favorite shirt for the night, you have essentially taken clean water and added it the waste water reservoir with little benefit. When you throw out your cigarette bud on the street, you have taken all the harmful chemicals in the cigarette and potentially transferred them to the groundwater-fed well of your neighbors. When you apply salt to your driveway in the winter, those chemicals undoubtedly make their way to lakes and rivers and harm the natural ecosystems and all animals that rely on it.

All of the things that you and I do on a daily basis interact with the water around us. When we begin to manage water in a way that reflects this understanding, we all become contributors to improving water quality.

3. Homeowner's have a tremendous capacity to protect water.

At the heart of creating sustainable water systems within the city is the ability of residents to allow water to naturally filter. When a city works to replace conventional measures of water management, everyone benefits. Things like stopping water from immediately running into storm drains allows it to take a more natural path. Implementing ways of retaining water on your property and allowing the water to soak into the ground makes use of water's own natural filtration system.



Conventional city layouts opt for quick removal of water from city yards, blocks, and streets in general. This was instantly evident when I attended the MWS watershed tour and had various MWS point out how our whole city system is built in order to get water into storm drains as quickly as possible. Systems like downspouts, center elevated housing layouts, and impermeable concrete allow water a speedy route out of sight. With this flow of water, vast amounts of debris including leaves/grass, chemicals, and waste such as garbage, travel beneath the city into our rivers and lakes. Although I had long appreciated this system for its benefits, the reality is that water quite literally isn't supposed to do that; water is supposed to filter into the ground on which it lands and naturally reenter the ground water stores.

When a homeowner installs a raingarden on their property, it does more than just make their home look better. Rain gardens of native plant species are especially good at helping water soak into the soil. When this process is successful, water is allowed back into its natural cycle in which it can soak into the ground soil and effectively filter itself back into circulation.

Likewise, when a homeowner decides to install a rain barrel or cistern to capture falling rain water, that person receives a two-fold benefit. The water that is captured is diverted from the typical path of collecting debris and running off the property into storm drains. The homeowner is also supplied with clean and renewable water supplies to water their landscaping. For example, one of the homes we visited on the watershed tour contained an underground cistern that had been installed in the member's back yard. The homeowner then

installed a small pond base and a waterfall that is fed by the retained rain water that falls during rain events.

These manageable installment exemplifies how protecting water as a homeowner, when done correctly, produces numerous benefits for water quality and the homeowner alike. Likewise, the power of the individual is fundamental to creating and sustaining a positive change in the way we manage water. When we as a community are able to come together in order to protect this vital resource, we grow in stewardship and secure quality water for the future.