WT - Water Efficiency

Today more than ever, it is imperative that we begin to be conscious about our water use. Water tables around the world are being drained at an ever increasing rate and water shortages are heightening with global warming.

Reducing water usage also reduces energy use and the costs associated with building operation; transporting, treating or desalinating water are very energy intensive tasks that are necessary when water is not used carefully. As with energy, the most sustainable way to manage water usage in a building is to reduce the amount of water used. This can be done using more efficient washing machines, dishwashers, shower and water fixtures and toilets.

Along with reducing the amount of water needed for a building to run, supplementing the use of well water, grid water and other nonrenewable or only partially renewable sources of water is a good idea. In our projects we consider the two main ways of collecting water onsite: gray water collection and rainwater catchment. Gray water collection is essentially recycling water onsite. Gray water is water from sinks and showers and different from black water in that it does not contain a significant amount of pathogens (like that of toilet water) or harmful chemicals.

Collected gray water can be used for flushing toilets, watering plants, or can be bioremediated (“any process that uses microorganisms, fungi, green plants or their enzymes to return the environment altered by contaminants to its original condition”) on site for use as potable water again (“Bioremediation”).

Rainwater catchment is an excellent method towards meeting a building’s water needs. Depending on one’s location, there can plenty of water to last through the dry months if excess water is stored during wet months. Collecting the water is often simply done by connecting downspouts from a roof to a storage container.

There are several options for storing rainwater and many different materials. Together with gray water and roofs water collection systems we always plan a filtering system to remove unsafe chemicals and pathogens that may be part of the rain water or come from a composition roof for example.