



July 28th, 2011

Black Water Recycling

The University of Ottawa is the proud home of an innovative water reuse program whereby water from our Aquariums is used to help cool down buildings on campus. We feel that this program is innovative because it not only helps reduce our water consumption, but also plays an important role in reducing our campus cooling load.

The concept of the program is quite simple. The University of Ottawa employs cooling towers in order to evaporate water from the campus cooling system. Rather than simply using fresh water from the City, the University decided to recover water from another system and use that water (water recycling). This provides for 30% of the needs of the system.

The innovation for this program came with the idea that the water to be used should be “black water” (instead of grey water). By doing this, the University would be able to utilize a water source that normally has very little potential for reuse. The “black water” is harvested from our Aquatic Care labs (the aquariums require a constant flow of fresh water to ensure ideal research conditions). This water is sent through filters to remove any sediments and pollutants that might contaminant the system.

The black water, which is cold, travels through a series of pipes collecting heat from the chillers. The water is then disposed into the cooling towers where the water is evaporated away, taking the heat with it. The system processes on average 33,000 Litres a day (3.2 Million US gallons every year). This “free cooling” Again, this simple solutions helps us reduce our water consumption, reduce our cooling load, presents a wonderfully opportunity to reuse black water, and contributes to the research mission of the university.

Sincerely,

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