

GREEN TECH THE SERIES COLUMN FOR FEBRUARY 10, 2016  
HEADLINE: HEADING OFF A WATER LEAK!

The advent of home systems for security have been around for a while and with iPhone technology the explosion in home monitoring for everything from lighting to HVAC controls has made it both simple and comforting to know you have a 24/7 overview of your home when you are away.

Probably one of the most costly and certainly the most inconvenient is a major water leak, especially this time of year. While hot water tanks do fail, a major burst from a pipe in the home can be an issue to, causing thousands of dollars of damage. Early detection is critical to reducing the damage, obviously. As well, a condition that many people forget, mold from water damage is often the most costly retrofit. This is where wireless water leak detectors have come of age. These systems have dropped considerably in price and there are a number of very good detectors on the market today with a large percentage DIY friendly.

Starting with the basic units, the Insteion Water Leak Detector comes in around \$58.00 (\$34.99 USD on line). They require no wiring or setup. One simply sets on it the floor near the hot water tank or water supply line coming into the home. This little unit will send an e-mail if it detects water. Daily monitoring ensures that the sensor is working. The compatible software/hub is needed for operation.

Next up the ladder is the Fibaro Flood Sensor, which sells for just under \$100.00. In addition to water censoring, this unit lets you know if it's been moved accidentally. The manufacturer says they can be wired in or wireless and are compatible for most alarm systems. Again, you must buy their hub for operation. Yet another detector that has some interesting features is the "Wally" water detector. It uses its own wireless system by utilizing the copper wiring and treats them like antennas for your system. Wally is a step up; it can monitor moisture, temperature and humidity, thereby reducing the possibility of long term moisture, something related to mold here. Like with the other detectors noted, the Wally requires its own hub and a pack of six, with the hub, costs around \$400.00 CDN.

All of these detectors need a hub of some kind and the folks at Delta Faucet saw this as a deterrent. They also noted limitations with the small battery powered detectors that usually rely on a low power wireless system to operate and came up with what is called the Delta Detector. Thanks to a new low power Wi-Fi design from IDevices, Delta Faucet saw the opportunity to run their new

detector on 3-AAA batteries. They do not require a proprietary hub, making their app capable of monitoring this new leak detector.

Nearly all leak detectors activate when there is water touching them or, in most makes, when it's pooled underneath them. They sense the temperature change caused by the water. Of course, by then it's often quite a leak. The Delta team developed a detector that senses water when it hits the outer ring on the bottom of the detector, sending out an alert to an Android or IOS device. If water drips on the Delta Detector, it's designed so that the water will roll down the device and set it off; neat feature. This detector is new. So new, in fact, that's it's not expected to hit the market until the middle of the year. If the reports are any indication, these will be the simplest of the DIY detectors on the market and, at the anticipated price of around \$75.00 to \$90.00 CDN, they may be worth waiting for.

The other option and the one that I would give serious thought to is an actual water leak detection system that shuts your household municipal supply off remotely. Commercially, these types of controls have been around for a while. The limiting factor is cost and the need for a professional plumber to install them. A small start-up company in the US has developed a product called the "Water Hero." This monitor is designed to detect small leaks or a burst pipe and will shut your main city supply valve off.

Water Hero consists of two modules; the flow sensor that is attached to the water meter and the shutoff motor which is installed over the manual water shutoff. It must be the ball valve kind. The first sensor detects the pulses in the meter and monitors the flow of water. This detector can differentiate between a major leak and something as slow as a toilet that is running constantly. These changes in water flow trigger a text message to the owner that the system is about to be shut down. Water Hero has an app that allows the homeowner the ability to see real time data on their system right from their smartphone.

One of the information sheets I have on this new product says that, during development, they found out some interesting things about home water consumption. They determined that an advertised 1.6 gallon toilet was actually using 2.8 gallons and a leaking toilet can waste 50 gallons of water a day.

The main reasons I like the Water Hero is that it is DIY friendly and the current cost is around \$200.00 USD. It is a new product, vetted by Dragon Innovation, a world recognized product evaluation organization, it came out with flying colors. This product deserves a serious look. I would not be surprised, based upon some conversations I have had with home insurance companies recently, that this type

of installation may be worth a bit of a home insurance discount, not unlike some outside monitored security systems. Even if there is no break in insurance rates, given the reasonable cost vs the cost of repair and cleanup, this new product deserves a long hard look for every homeowner.

Questions or comments; Cam Allen L.I.W NHI ACI LEED Green Assoc  
E-mail: [cam@alltechconsultinggroup.com](mailto:cam@alltechconsultinggroup.com)