

## Financial Health

### How Medical Facilities Can Scale Back Water Usage

By

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(HealthNewsDigest.com) - It is pretty obvious to both lay people and building professionals that large city hospitals require a huge amount of energy to light, heat, cool, and operate all the equipment used in their facilities. But what's not quite as obvious is how much water hospitals use. The American Hospital Association (AHA) reports that there are nearly 11,000 registered\* and community hospitals in the United States. And it is estimated that each of these hospitals uses more than 140,000 gallons of water on average per day - about 1,540,000,000 gallons of water daily and a staggering 562,100,000,000 annually. Not only is this a huge volume of water, it can be very costly as well. And these costs are going up and are expected to rise even further as water

demands increase and water shortages occur more frequently throughout the United States. Fortunately, many medical facilities are taking steps to reduce their water consumption. One reason for this is because of the growing interest in becoming Greener and more sustainable. But the biggest motivator has been concerns surrounding water shortages. Although Atlanta, GA, has recently experienced record waterfall, about two years ago its water system was almost completely dry and in dire straits. Many of the water-conserving strategies implemented during that crisis are now the modus operandi in many medical facilities. So how can hospitals and medical facilities conserve water? Following are several steps they can take along with case studies illustrating the specific measures and the water savings achieved in hospitals across the country. The amount of time it took to realize the return on the water-conserving investment (the "payback") is sometimes noted as well: X-Ray Equipment: Medical facilities typically have film processors operating 24/7, every day of the year. These machines may use as little as .2 to more than 2.5 gallons of water per minute (gpm). New technologies have been developed that recycle the water, reducing water consumption significantly. Further, automatic valves can be installed so that water flow to the machines is stopped when the equipment is not in use. Installing automatic valves on x-ray machines allowed one hospital to reduce water consumption by 17,600 gallons annually. The system cost about \$1,400 to install on all machines, and the payback was about two months. Reduced Flow Toilets: Hospital administrators now have a variety of low-flow, water reducing toilets to select from including dual-flush, gravity flush, and pressure assisted systems. For instance, the dual flush toilet uses about .8 gpf to remove liquid waste and 1.25 gpf for solid waste. One hospital saved more than five million gallons of water annually with these systems, resulting in an annual savings of more than \$45,000. Water-Saving Urinals: A number of hospitals have installed sensor systems so that urinals flush automatically after use. Many of these systems allow administrators to adjust how much water is released per flush. However, many medical facilities are taking this a step further and installing no-flush urinal systems, which use no water at all. These systems have proven their value in all kinds of facilities and are relatively inexpensive to install because they do not require valves or flush connections. One small Northern California hospital calculated that by removing 14 conventional urinals, which used on average

3 gpf, and replacing them with waterless systems, the savings totaled more than 280,000 gallons of water annually. Based on current rates (2005), the hospital estimates they are saving more than \$2,100 annually.

**Laundry Systems:** Some hospitals are installing rinse water re-use systems. Installed in one hospital, the system saved nearly two million gallons of water annually. According to at least one manufacturer of these systems, the average re-use water usage in healthcare-related facilities is about 25 percent.

**Heating and Cooling Equipment:** Medical facilities can also save water by modifying their refrigeration systems so that the water used for cooling is “looped” and recirculated. When this system was incorporated in one U.S. hospital, the facility was able to reduce water consumption by about three million gallons per year and save over \$20,000 in annual water and sewer costs. Initial cost of this project was \$29,000, and the payback was less than 18 months. It should not be forgotten that one of the best ways to reduce water usage in a medical facility is to remind everyone—doctors, nurses, staff, and patients—of how important water conservation is. Often those working in the medical facility will have firsthand and useful knowledge of ways to conserve water. With coming water shortages a very real possibility, any and all suggestions should be investigated. Klaus Reichardt is founder and managing partner of Waterless Co. LLC, Vista, Calif. Reichardt founded the company in 1991 with the goal to establish a new market segment in the plumbing fixture industry with water conservation in mind. The company’s product, the Waterless No-Flush urinal, works completely without water. \*Registered hospitals are those hospitals that meet AHA's criteria for registration as a hospital facility. Subscribe to our FREE Ezine and be eligible for Health News, discounted products/services and coupons related to your Health. We publish 24/7. [HealthNewsDigest.com](http://HealthNewsDigest.com) We videotape Press Conferences, produce SMT's, VNR's, B-rolls, PSA's, - all with distribution: [HealthyTelevisionProductions](http://HealthyTelevisionProductions)

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