

Making commercial buildings green by conserving water

With the above-average amount of precipitation the Upper Cumberland has received in the past few months, the subject of water usage and shortages is not something that concerns many residents. However, recent studies have shown that virtually every region in the U.S. will experience water shortages in the next 10 years. All we have to do is look back a few years when water shortages were a significant problem here in the Upper Cumberland.

So what can we do to help with water shortages and save ourselves money in our new and existing buildings?

Water usage for the exterior of your building is a major expense many commercial property owners do not consider in the early stages of design. From the irrigation system to heating and cooling units, more water is consumed for a commercial or residential building's exterior than is used for toilets, faucets and showers combined. In office buildings, approximately 20 percent of water is consumed by landscaping. Last year, approximately 53 percent of commercial property owners were over-irrigating.

One example of how to reduce over-watering is by using xeriscaping techniques. Xeriscaping is a process of landscaping and gardening that can reduce or eliminate the need for irrigation



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systems. The plants used in this process are appropriate to the local climate and are drought-resistant.

Another great way to cut down on



irrigation expenses is to use your building's gray water – wastewater from hand-washing sinks and showers – for outside irrigation. The requirements for gray water irrigation are a separate wastewater

drainage line for gray water, a filtration system and storage cisterns. Cisterns can also be used to capture rainwater runoff from buildings and parking areas that can be used for irrigation needs.

Water use in the interior areas of buildings accounts for less than half of a building's total water consumption. By making a few

simple changes, the amount of water usage can be reduced even further. High-efficiency lavatory faucets, sensor-activated faucets and sensor-activated flush valves are all considered the most common

techniques.

In many office buildings, the implementation of these technologies can cut water consumption by 30 percent or more, with a potential three-year return on investment.

Another way to cut water consumption is the reuse of gray water inside the building. The use of gray water to flush toilets and urinals could cut water consumption by 40 percent to 50 percent in a new office construction. This trend is catching on. As municipalities look at ways to cut water usage, these trends will be much-needed tools for reducing water usage.

Water consumption will be a major factor in the next few years as aging utility infrastructures are updated and replaced. The cost of water will continue to rise, and water saved will contribute directly to the bottom line for companies. ■

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