Consider the waterwise options

Access to potable water is a growing global problem. For Coloradans, it is also a local problem. We live in one of two states into which no water flows. All of the wonderful snow that falls on our mountains and plains flows out and away from us.

According to century-old agreements and dated water laws, the water in our rivers and streams is shared property of the other states through which it flows on its journey downstream. Because of downstream “ownership” of water, Colorado water laws forbid the detention of water by both residential and commercial users for any future application. Without the ability to legally store water for later use, we must find ways to conserve water daily through efficiency. One of the most effective methods is the process of retrofitting, or strategically replacing, plumbing fixtures in commercial buildings. Commercial fixtures are used much more than residential fixtures and, subsequently, have a much greater effect on the overall conservation of our limited water supply. The majority of fixtures in a building can be made more efficient, but one should first consider the implications and challenges of these waterwise renovations.

Older buildings were designed to provide more water to their fixtures (3.5 gallons per flush or greater), but this means that the building’s sewage system also relied on these large quantities of water for proper drainage. As such, when renovating fixtures in older buildings, it is prudent to enlist a mechanical/electric/plumbing engineer to evaluate existing systems and assess whether or not updated fixtures will still provide proper drainage (slope) and functionality.

Replacement of new fixtures can be an expensive project with relatively low return on investment due to the disproportionately low cost of water. Implementing a retrofit strategy provides a noticeable level of improvement while still being cost-effective. The replacement of the valve assembly in a flushometer toilet or urinal would be an example of a true “retrofit.” Replacing the diaphragm or entire valve will allow less water to flow into the bowl with every flush. Another cost-effective retrofit is the replacement of the aerator on all faucets, which are found in both lavatory and kitchen sinks. However, complete replacement of fixtures is times the only proper solution. In such cases, Denver Water offers excellent rebates that heavily offset the cost of new fixtures and valve assemblies. When coupled with the high usage rate of commercial fixtures, Denver Water’s rebates effectively bring down the “payback” period for these renovations to a five- to 10-year time horizon, which is more palatable for many owners and property managers to swallow.

A third challenge of any fixture overhaul is the actual implementation. With enough time and money on hand, these retrofits or replacements can happen quickly, and without any disruption to the building. A staged implementation is an excellent way to “test run” new fixtures, allowing building engineers to diagnose any potential problems prior to implementing the new setup throughout the entire building. Although a staged installation does require more coordination and time on the part of the property manager, building engineer and any other parties involved (suppliers, plumbers, architects, etc.), it is critical to a seamless retrofit. With proper planning and a determined project manager, full-building retrofits and replacements can be executed with great success and relatively little disturbance to the tenants.

So, is this all worth the time, money, and stress? The answer is “yes”! Environmentally and socially, these improvements to the plumbing fixtures help conserve a valuable and diminishing resource for our fellow citizens. Financially, efficient fixtures will save a considerable amount of money over the life of the product—especially as water rates continue to rise. Strategically, this capital improvement demonstrates to tenants that their owner is ready and willing to provide a modern and functional workspace for their business. Taking control over plumbing fixture improvements while rebates are available and the timing is right can create tenfold value to owners upon disposition, as it both addresses potential deferred maintenance and reduces operating expenses (thereby increasing the building’s net operating income).

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