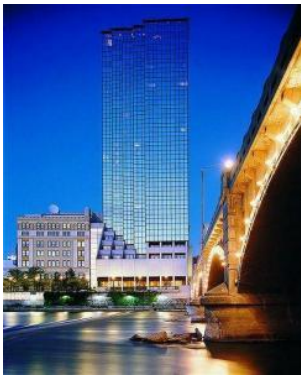


A Water Conversion Case Study

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The Amway Grand Plaza Grand Rapids, MI

“The Amway Grand Plaza has always been interested in ways to reduce water use, but because of the hotel’s commitment to luxury, these savings must never affect functionality.”



Description:

The Amway Grand Plaza is a 645 room Hotel located in the heart of downtown Grand Rapids and overlooks the Grand River. The Hotel features nine different on-site restaurants and lounges, and its location also positions guests within walking distance of local night life and entertainment venues including Gerald R Ford Museum and Grand Rapids Van Andel Arena.

History:

The Amway Grand Plaza has been making history since the original hotel - The Pantlind -

opened in 1913. Fashioned after English Adams architecture by designers Warren & Wetmore, the hotel’s special details included one of the world’s largest gold-leaf ceilings in the Pantlind lobby.

By 1925, The Pantlind was rightfully ranked “One of the Ten Finest Hotels in America.”

Amway Corporation acquired the historic Pantlind and carefully refurbished the original building. The Amway Grand Plaza reopened in 1981 and now combines the graceful heritage of the Pantlind with the modern amenities of the new Glass Tower. In the more than 20 years since that renovation, the Amway Grand Plaza has played a major role in the renaissance of downtown Grand Rapids and continues to draw thousands of visitors each year to Western Michigan. The Hotel’s Mission Statement is *To provide excellence in hospitality through absolute dedication and care toward the guest and their associate experiences.*

Goals:

The primary goal of this project was to find ways to reduce the Hotel’s use of water within its 645 bathrooms without affecting the functionality of the hotel’s plumbing systems.

After careful testing, three areas provided the best alternatives for renovations, while still meeting the hotel’s

high standards of performance and meeting guest satisfaction. The first of these items were the sink faucets within the 645 bathrooms. These fixtures were utilizing 2 gallons of water per minute (gpm).

The second item was the Hotel’s 645 showerheads. These fixtures were using 2.5 gpm, the maximum water allowed by government standards.

The third item was the Sloan or Zurn valves on the toilets and urinals. The 645 toilets were using 3.5 gallons per flush (gpm) and the urinals were using 1.5 gpf.

Solutions:

Special *moderators* installed on the bathroom sink faucets reduced the water use from 2 GPM down to 1 GPM, resulting in a 50% savings with great functionality.

The *showerheads* were converted to a very high quality fixture, which afforded a strong wet shower, while at the same time reducing the water use from 2.5 GPM down to 2 GPM resulting in 20% savings

The *showerhead* used in this renovation is definitely considered a luxury item. The special design provides 5 self-cleaning jets, which in turn provides 50 powerful full-body sprays. Despite it using a half gallon less water per minute, the before and after effects of

the new unit was amazing and approved by management.

CONSERVACAPS were used to retrofit the *Sloan or Zurn valves* on toilets and urinals. CONSERVACAP (blue) and a Sloan A-38-A diaphragm kit will reduce the *toilet* 3.5 gallons per flush (gpf) to 2.75 (gpf) resulting in a 22% water and sewer savings. CONSERVACAP (red) and a Sloan A-37-A diaphragm kit will reduce the *urinal* 1.5 gpf to 1.0 gpf resulting in a 33% water and sewer savings.

Results:

As a result of the faucet, shower and toilet renovations the hotel will conservatively save almost 272,000 gallons of water per month combined. These three fixture renovations will save the hotel over 1,632,000 gallons of water annually. Based on the current water/sewer cost of \$6.19 per 1,000 gallons, the project should save the hotel over \$10,000 annually.

Also, because 50% of the faucet/shower water is heated, an additional yearly energy savings of \$1,850 is expected.

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