

SHOWCASE PROJECT: LOEWS SANTA MONICA BEACH HOTEL

SOLUTION OVERVIEW

Loews Santa Monica Beach Hotel, located just blocks from the Santa Monica Pier, is a 260,000 square foot ocean-front resort. The hotel features 347 guest rooms, 17,000 square feet of meeting space, a full service spa, heated pool, and fitness center. Due to its high average occupancy rate of 84 percent, Loews Santa Monica utilizes an on-premise laundry (OPL) that provides a more economic and environmentally friendly laundry service option than outsourcing, and can process up to 6,500 pounds of laundry a day. Loews Santa Monica felt the need to take a proactive approach to the California drought issue by significantly cutting water usage while maintaining a premier guest experience.

It is estimated that the hotel and lodging industry accounts for 15 percent of U.S. commercial and institutional water expenditure. According to WaterSense at the EPA, the common greatest end-users of water consumption in hotels are bathrooms, laundry, landscaping, and kitchens. The team at Loews Santa Monica decided to partner with the hotel's water utility, the Metropolitan Water District of Southern California, and take advantage of free submetering to more accurately understand their water consumption.

SECTOR TYPE

Commercial

LOCATION

Santa Monica, California

PROJECT SIZE

260,000 Square Feet

SOLUTIONS

The submetering effort pinpointed the OPL as the largest water consumption source. After researching several water saving solutions, Loews identified the AquaRecycle system as the most cost effective upgrade with the greatest potential savings.

The AquaRecycle system works by disinfecting laundry water through a filtration system that allows it to be reused. The system is able to recycle 70-85 percent of laundry water, saving a significant amount of water consumption as well as water and sewer costs. The monthly backwash required for maintenance (5 percent of water intake) is minimal compared to the gallons saved. Loews partially financed the AquaRecycle project through water and gas rebates from Metropolitan Water District

(\$20,000) and SoCalGas utilities (\$24,000) and expected a payback of less than 17 months for the remaining \$96,000 of project costs. The AquaRecycle water system alone is calculated to save the Santa Monica hotel over 4.3 million gallons of water a year.

Loews Santa Monica's water saving measures go beyond the AquaRecycle system. In 2015, the team implemented water efficient upgrades in the hotel's bathrooms, often the most significant end user of water in hotels. Almost 350 toilets were installed that use an average of one gallon of water less per flush than the previous toilets. Additionally, low-flow faucets and 1.75 gallons per minute (GPM) showerhead fixtures were installed in all 347 guestrooms. These toilet and showerhead guestroom renovations are projected to yield a 30 percent water savings with no negative impact on guest experience. In the kitchen, the dish washing system was replaced in August 2016, with an expected 50 percent water savings.

Since implementing the AquaRecycle's water recycle system in January 2015, as well as the various water fixture upgrades in guestrooms, the hotel has saved more than 6.27 million gallons of water as of April 2016.

OTHER BENEFITS

The AquaRecycle's capability to retain the temperature of heated stored water has a secondary effect of energy savings. By maintaining the water's temperature, the water-recycle system saves 55 percent of energy used to heat water in the laundry cycle. In 2015 alone, Loews Santa Monica saved 15 percent - \$35,000 - on their natural gas bill due to a reduced demand for heated water. As of mid-year 2016, Loews Santa Monica is seeing more than 20 percent savings on natural gas consumption.

Beyond the energy savings experienced from the water-recycle system, the following energy efficiency measures were implemented to achieve a 13 percent energy reduction since December 2014, for over \$200,000 in energy cost savings:

- LED lighting retrofit upgrades
- Energy management system upgrades, including computer control features
- Chiller optimizations
- Variable frequency drive (VFD) installation in pool pumps and HVAC systems at no-cost by utilizing rebates
- Guestroom upgrades including lighting, televisions, and HVAC systems

Loews Santa Monica has been recognized in the media as an environmental leader for their water-recycle project and cumulative water and energy savings. The hotel's green recognitions include:

- [Santa Monica Certified Green Business](#)
- [TripAdvisor Green Leader Gold Status certification](#)
- Awarded the [2016 Sustainable Quality Award Grand Prize](#) and the [2015 Sustainable Quality Award Excellence in Stewardship of the Natural Environment](#) from the city of Santa Monica
- Robert Lipinski was recognized by California Hotel & Lodging Association as the [2015 Stars of the Industry: Outstanding Manager of the Year](#)

Guest satisfaction ratings have only increased since the implementation of the AquaRecycle water system.

Annual Energy Use

Baseline(2014)



Actual(2016)



Energy Savings

13%

Annual Energy Cost

Baseline(2014)



Actual(2016)



Cost Savings

\$213,000



Pool and Guestrooms at the Loews Santa Monica Beach Hotel



Loews Santa Monica Beach Hotel AquaRecycle on-premise laundry system