

Putting WaterSense® to Work

Car Wash Chain Drives Down Water Use With Efficiency Upgrades

Sector: Vehicle Washing; Focus: Outdoor Water Use



Project Summary

With a city design that makes residents heavily dependent upon personal vehicles, San Antonio, Texas, has more than 1,305,000 cars on the road. If each of these cars visited a car wash nine times per year (the national average per the International Car Wash Association), San Antonio car washes would use approximately 880 million gallons of water annually. H.E.B., a San Antonio grocery provider that also owns commercial car washes, approached this issue as an opportunity to increase efficiency and save both water and money at its car wash facilities.

While a typical touchless car wash can use more than 100 gallons of water per car, a water reclaim system and an effective reverse osmosis (RO) unit can significantly decrease this amount. H.E.B. updated 24 of its car wash facilities to include high-efficiency RO units and reclaim systems. Through participation in the San Antonio Water System (SAWS) Commercial Custom Rebate program, H.E.B. turned these upgrades into permanent water savings, resulting in more than 24 million gallons of water saved annually.

Getting With the Program

In 2012, H.E.B. attempted to certify its car wash facilities as part of SAWS' WaterSaver Car Wash Program. At that time, however, H.E.B.'s facilities did not qualify for the program. This encouraged H.E.B. to identify ways to improve water efficiency at its car wash facilities. Through its partnership with SAWS' Commercial Custom Rebate program, H.E.B. received rebate incentives to help make the water-saving projects more economically feasible in the short term. In addition, once water-saving technologies were installed, there were also operational cost savings associated with less water use, decreasing the facilities' overhead cost of providing car washes to customers. To date, following upgrades made through the rebate program, 15 H.E.B. car wash locations have become Certified WaterSaver Car Washes.

Reclaiming Water Efficiency

Reclaim systems take water used in the washing process, remove dirt in the water, and reuse the filtered water in the next wash or in a subsequent rinse. San Antonio city ordinance requires that 50 percent of water used in previous wash rinses be used in a following rinse. The Commercial Custom Rebate program rewards car wash owners who take saving water to the next level by providing rebates on new technologies that save water beyond the minimum required by city ordinance. Working with the program, H.E.B. installed new reclaim systems at 13 of its

Highlights



- **Facility name:** H.E.B. Car Wash Facilities
- **Location:** San Antonio, Texas
- **Facilities upgraded:** 24 commercial car wash facilities
- **Water savings:** Permanent water savings of more than 24,000,000 gallons of water annually
- **Cost savings:** More than \$144,000 in annual water and



car wash facilities. The new systems saved an average of 30 gallons of water per car, or more than 11 million gallons of water savings annually.

Revamping RO Units

RO units are another significant source of water use for car washes, with high-efficiency upgrades having the potential for major savings. RO units produce the water used in the final rinse to create a “spot-free” finish. To produce this spot-free water, the RO units take municipal water and use reverse osmosis technology to remove particulates and minerals that leave a blotchy finish when the water dries. As RO units age, they become less effective, requiring additional gallons of water to generate a single gallon of spot-free water. While measuring water consumption at their car wash facilities, H.E.B. found that the RO units at some locations were no longer functioning efficiently. In 2014, H.E.B. again worked with the SAWS Commercial Custom Rebate program to replace RO units in 11 facilities. In addition to upgrading the RO units, one facility also installed a new reclaim system, and at a new car wash facility, a friction wash, reclaim system, and new RO unit were installed. Overall, these upgrades saved 34 gallons of water for each car washed, resulting in annual savings of nearly 13 million gallons of water.



Program Success

In addition to H.E.B., SAWS has worked with many other car washes within their service area as part of the Commercial Custom Rebate program. To achieve water and costs savings, car wash facilities have switched from touchless to friction car washes, installed new reclaim systems, installed new RO units, or combined all three upgrades. These upgrades have resulted in annual water savings of more than 76 million gallons of water that can be used to serve other customers in San Antonio.

Acknowledgements

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Learn More

To learn more about water efficiency in commercial and institutional buildings, visit the WaterSense website at www.epa.gov/watersense/commercial-buildings to access *WaterSense at Work* best management practices, tools, case studies, and more. Best management practices related to SAWS’ WaterSaver Car Washes Program can be found at www.saws.org/Conservation/commercial/carwash/bmp.cfm.