



Putting WaterSense® to Work

Restaurants Install Water-Efficient Commercial Kitchen Equipment

Sector: Restaurants and Other Commercial Kitchens; Focus: Commercial Kitchen Equipment

Project Summary

The water efficiency best management practices implemented at each of three restaurants—Uncommon Ground, The Grey Plume, and Founding Farmers—are described in this case study.

Uncommon Ground (Chicago, Illinois)

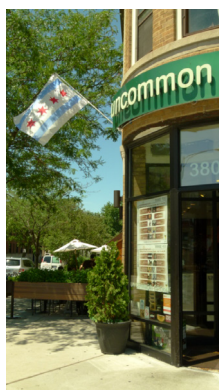
When Uncommon Ground first opened, it was a small café in a converted apartment in Chicago. Twenty years later, Uncommon Ground has two 4,000-square-foot restaurants that serve approximately 20,000 customers per month. As the restaurants' popularity began to grow, the owners sought ways to reduce their environmental impact.

In the first year of its plan to reduce water use, Uncommon Ground focused on the “low hanging fruit” and installed water-efficient faucet aerators in prep sinks, changed its pre-rinse spray valve to a high-efficiency model, and began serving water to customers only upon request. To take its water conservation efforts to the next level, Uncommon Ground replaced the dishwashers at both restaurants with ENERGY STAR® qualified models and the ice machines (water-cooled models) with air-cooled, ENERGY STAR qualified models. In addition, Uncommon Ground uses a self-contained steam kettle without an external boiler, which uses less water and energy than boiler-based steam kettles.

Because serving local food is one of Uncommon Ground's missions, management installed a rooftop organic farm watered by a drip irrigation system. The restaurant also has a rain barrel for rainwater collection, and the rainwater is used to water planters and wash down patio areas. Following these water-efficient retrofits, the two Uncommon Ground restaurants became the first restaurants in the country to obtain a four-star rating—the highest possible—from GRA.

The Grey Plume (Omaha, Nebraska)

The Grey Plume, located in a LEED® certified building, has embarked on many green initiatives as part of its focus on sustainable food sourcing and operations. In the kitchen, water-efficient aerators are



Uncommon Ground

Certified Green Restaurants®



With social and environmental responsibility becoming the norm among restaurateurs and consumers, restaurants across the country have begun to install water- and energy-efficient commercial kitchen equipment for food preparation, cooking, and cleaning.

Despite measures taken to reduce water use, a challenge faced by many restaurants is the inability to directly quantify the impact of their efforts. In many cases, restaurants might be billed a flat fee for water or, if the building is leased or the restaurant is part of a corporate franchise, utility bills may be directed to the building owner or corporate headquarters.

Although the restaurants highlighted in this case study cannot quantify specific savings, all three are Green Restaurant Association (GRA) Certified Green Restaurants® that have reduced their environmental impact from disposables, energy, food, furnishings, building materials, pollution, chemicals, waste, and water. Visit www.dinegreen.com for more information.

installed on all handwashing and prep sinks, and a high-efficiency pre-rinse spray valve is also used. Both the ice machine and dishwasher are ENERGY STAR qualified. Instead of utilizing a garbage disposal, which can flow between 2.0 and 15.0 gallons per minute (gpm) when in use, the restaurant composts food waste, saving water and reducing the waste that is discarded. Water efficiency, along with ongoing operations that facilitate recycling, waste minimization, green cleaning, and energy efficiency, enabled the Grey Plume to become GRA's Greenest Restaurant in America in December 2010 and March 2012.

Founding Farmers (Washington, D.C., Metropolitan Area)

As a restaurant that tries to mirror the family farmer's traditional protection of air, soil, water, and biodiversity, Founding Farmers developed a philosophy focused on efficient and environmentally-friendly operations for its two locations in Washington, D.C., and Potomac, Maryland. Both restaurants are approximately 9,000 square feet, serve between 20,000 and 30,000 customers per month, and have been recognized as Certified Green Restaurants[®] by GRA for their eco-friendly operations. The Washington, D.C., restaurant is located in a LEED Gold certified building.



Founding Farmers

In both restaurants, water-efficient products and equipment were installed during initial construction. The Washington, D.C., kitchen includes a high-efficiency pre-rinse spray valve, an ENERGY STAR qualified dishwasher, and an ENERGY STAR qualified steam cooker, which uses an average of 3 gallons of water per hour (standard models typically use 40 gallons of water per hour).

The Potomac, Maryland, location includes the same features; it also incorporated 0.5 gpm faucet aerators on prep sinks and does not use a garbage disposal for removing food waste from dishes. Both locations also use dipper wells for utensil cleaning, which are not flowing continuously but are operated with an on/off mechanism. These features, along with a focus on continuous improvement, enabled both locations to earn GRA's certification.

Savings Summary

Because they do not collect water data, these restaurants are not able to cite how many total gallons of water they have saved through their efforts. Table 1 provides a summary of the best management practices implemented at each restaurant and an indication of how much water the facilities may be saving compared to typical restaurant practices.

The restaurant owners noted that the water- and energy-efficient products and practices have not slowed down productivity in their busy operations, and they are all very satisfied with the products and equipment they have installed in and out of the kitchen.

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 to access *WaterSense at Work* best management practices, tools, case studies, and more.

Table 1. Best Management Practices Implemented at Certified Green Restaurants®

Best Management Practice	Percent Savings Compared to Standard Product/Practice	Uncommon Ground	The Grey Plume	Founding Farmers
Commercial Kitchen Best Management Practices				
High-Efficiency Faucet Aerators on Prep Sinks	30-75	X	X	X
Manually Operated Dipper Well	Significant			X
High-Efficiency Pre-Rinse Spray Valve	20-40	X	X	X
ENERGY STAR Qualified Commercial Dishwasher	25	X	X	X
ENERGY STAR Qualified Commercial Ice Machine	10	X	X	
ENERGY STAR Qualified Steam Cooker	90			X
Self-Contained Steam Kettle	Significant	X		
Food Composting (no garbage disposal)	100		X	
Other Best Management Practices				
High-Efficiency Aerators on Handwashing Sinks	30-75	X	X	X
Dual-Flush or 1.28 Gallons-per-Flush Toilets	20	X	X	X
High-Efficiency or Non-Water-Using Urinals	50-100	X		X
Drip Irrigation	20-50	X		
Rainwater Collection and Reuse	Significant	X		