Implementing Retrofits

Strategies to save water in existing properties can range from simply swapping out a faucet aerator to installing submeters for each unit in your building. Below are a few cost estimates for various water-saving retrofits.

Install low-flow faucet aerators	$2
Install low-flow showerheads	$5–$17
Install low-flow toilets (no utility rebate)	$110–$200
Install high-efficiency clothes washers	$600–$1,600
Detect & repair faucet leaks	$6
Detect & repair showerhead leaks	$6–$10
Detect & repair toilet leaks	$11–$29
Install submeters	$225–$500/unit
Install irrigation system rain sensors	$80–$120
Landscape with native plants	$3–$6/sq. foot

Costs are per retrofit and are based on assumptions including: device costs obtained from large manufacturer in the United States; labor costs of $36 per hour for laborer and $60 per hour for technician or plumber; time required to execute approximated from literature on the subject and/or professionals in the field.

Source: *Retrofitting Apartment Buildings to Conserve Water.* U.S. Department of Housing and Urban Development, May 2002

Who Will Pay?

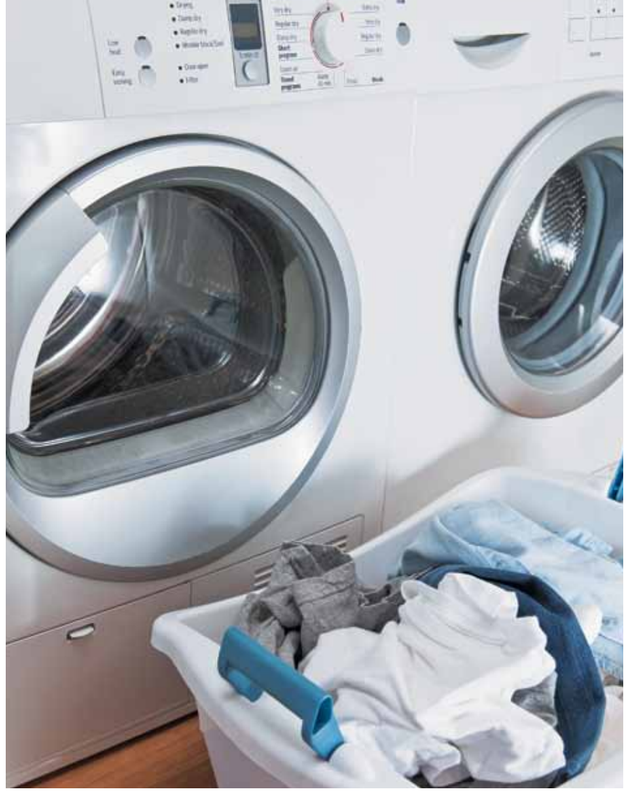
Shifting utility exposure to tenants adds instant value to multifamily properties, so some property managers are moving away from including water charges in rent.

Implementing a ratio utility billing system (RUBS) divides the costs for the property's water bill among your tenants based on either the number of occupants or the size of the apartments. RUBS is easier to execute than submetering in older buildings, and there are no capital expenses beyond setting up the program with a third-party provider.

300%

Landscapes are routinely over-watered by as much as 30% to 300% of what is needed.

(Source: *Multifamily Executive*, June 2008)



More Water-Saving Ideas to Consider.

- Install water-saving faucets and showerheads as well as ultra-low-flow toilets—rebate programs may be available in your area.
- For in-unit or common laundry areas, washing machines with an Energy Star® rating have a low water factor (gallons per cycle per cubic foot)—consult your local utility for rebates on these products.
- Seek out free or low-cost water-use audits and landscape evaluation services from local government agencies.
- To reduce outdoor water use on your property, eliminate lawn areas, landscape with native plants, switch from sprinklers to drip irrigation and install rain sensors.
- Use separate water meters for irrigation systems.

Strategies to Save.

CLEVELAND CFG FAUCET GROUP
A Moen Incorporated Brand

Leveraging a strong foundation of design, distribution and service, Cleveland Faucet Group® delivers real value in faucets and valves for the multifamily market. With CFG,® you'll have the confidence of working with a business partner committed to providing you with the best return on your faucet investment.

With solid construction and features engineered for efficiency, CFG products speed installation, simplify maintenance and last long—ensuring you benefit from lower economical lifecycle costs.

Reducing water use and associated costs for multifamily properties.

EPA WaterSense 2010 PARTNER OF THE YEAR

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CFG198 5M-7/11-WYCG

Highest Monthly Residential Rates: Combined Water and Sewer Costs	
Atlanta	$154.30
Seattle	$135.16
San Francisco	$107.98
San Diego	$93.13
Portland	$91.96
Boston	$87.88
Honolulu	$84.79
Austin	$77.96
Virginia Beach	$76.07
Colorado Springs	$68.22
Average	$59.46

Assumes 7,500 gallons (1,000 cubic feet) monthly usage. Rates effective June 30, 2009. Source: Black & Veatch 2009–2010 Water/Wastewater Rate Survey

A Growing Cost. A Growing Concern.

As the costs to treat and distribute water grow, so do the implications for multi-family properties. It's estimated that 85% of all apartment owners include water and sewer in the rent charged to tenants, so any increases in those costs will have a direct, negative impact on profitability.

Historical trends show average water and sewer costs rising at nearly twice the rate of the consumer price index since 2001.*

Though price increases will vary from region to region, growing costs are a certainty for the entire nation:

- Costs to supply water to arid regions with growing populations make cities like Phoenix, Las Vegas, Denver, Albuquerque and locations throughout Southern California susceptible to dramatic price increases.
- Even where fresh water is locally abundant in the Midwest and Northeast, aging infrastructure may force utilities in those areas to increase rates to cover repairs and improvements.

*Source: Black & Veatch 2009–2010 Water/Wastewater Rate Survey

Adding Value to New Construction.

Sustainability has a growing role in new construction projects.

Numerous sources of funding for green building are available at the national, state and local levels. Qualifications for securing these grants, tax credits and low-interest loans often include meeting specific efficiency standards such as demonstrating reduced water use.

CALGreen is likely to be the first of many acts of legislation to add mandatory environmental standards to the building code for new construction projects.

LEED® certification can translate to tax credits, zoning allowances and additional incentives. You can earn up to four certification points by reducing water use for your entire building. Switch to products that go beyond current federal mandates for water use, and watch your savings and LEED points add up—as shown in the following example:

FIXTURE	CURRENT MANDATE	WATER-EFFICIENT OPTION	SAVINGS
Lavatory	2.20 gpm	1.50 gpm	0.70 gpm
Shower	2.50 gpm	1.75 gpm	0.75 gpm
Kitchen	2.20 gpm	1.50 gpm	0.70 gpm
Toilet	1.60 gpm	1.10 gpm	0.50 gpm
Total	**8.50 gpm**	**5.85 gpm**	**2.65 gpm**

Total saving of more than 30% earns 2 LEED points

Consult your local government for similar incentives and programs in your area. Your Moen rep is a great resource for information and assistance as well.

Water-Efficient Products.

EPA WaterSense 2010 Partner of the Year

Multifamily property managers will find a host of water-saving solutions available from the Cleveland Faucet Group® (CFG®) and Moen® brands.

Saving water is just one way installing these products can improve your bottom line. Third-party research concluded that CFG faucets are on average 36.3% less expensive to maintain† over the life of the product. Lower maintenance costs boost NOI, which leads to increased property value.

Learn more about specific product options by visiting cfgonline.com/sustainability or moen.com/eco-performance. Or ask your Moen rep for additional details.

†Rabin Research Company, Multifamily Apartment Unit Faucet Study, 2008

Average daily indoor water use is 69.3 gallons per capita. Installing water-efficient products and eliminating leaks can cut that to about 45.2 gallons.

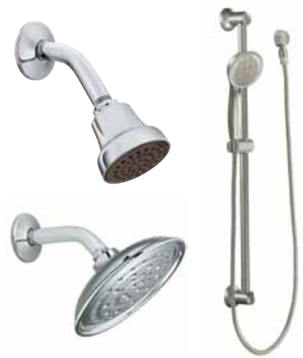
(Source: drinktap.org)

BATH FAUCETS

- All CFG and Moen faucets feature a 1.5 gpm flow rate.
- Designed to use up to 32% less water without sacrificing performance.
- Certified to meet WaterSense® criteria for water efficiency and performance.
- Contribute to maximizing LEED points.
- Choose from a wide variety of style and finish options.

SHOWERHEADS

- Both CFG and Moen offer options as low as 1.75 gpm flow rate, reducing water consumption with little to no difference in performance when compared to standard 2.5 gpm models.
- Several models are certified to meet WaterSense criteria. By modifying spray formers to increase velocity of the water stream, these flow-optimized showerheads use up to 30% less water than the industry standard while still offering invigorating, full-body coverage.
- Moen Eco-Performance showerheads meet ASSE1016 pressure and temperature requirements when used with Posi-Temp® or Moentrol® valves.
- Choose from fixed, rainshower and hand shower designs.



LOW-FLOW AERATORS

- A quick add-on that reduces flow by up to 30% while maintaining rinsing performance.
- Fits all CFG and Moen non-pullout kitchen faucets and lav faucets (except Icon™ and Rothbury™).

Water Savings Calculator

Use this formula to get a rough idea of how reducing water use can impact your bottom line. Then visit cfgonline.com for water-saving solutions.

SHOWERHEAD RETROFIT

	Number of residents
× 5 minutes	Duration of average shower*
× .75 gpm	Savings with low-flow product at normal usage rate (not full open)*
=	Daily reduction in gallons used

KITCHEN/LAV FAUCET RETROFIT

	Number of residents
× 10 minutes	Estimated use per day (units without dishwasher)*
× .70 gpm	Savings with low-flow product at normal usage rate (not full open)*
=	Daily reduction in gallons used

ANNUAL SAVINGS

	Total daily reduction (faucet + shower retrofit from above)
× 365 days	
=	Annual water savings in gallons
÷748	Convert gallons to cubic feet
=	ccf
× $	Rate charged per ccf (found on utility bill)
= $	Annual cost savings

*Based on calculations found in *Retrofitting Apartment Buildings to Conserve Water*, U.S. Department of Housing and Urban Development, May 2002.