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WATER SAVING TIPS: MULTIFAMILY HOUSING PROPERTIES

Water use is one of the biggest operating costs that impacts Net Operating Income (NOI) for multifamily property owners. Outdoor use is especially important since it cannot be billed to residents.

Water rates continue to rise, up in major U.S. cities by a staggering 48% since 2010 according to reports from Circle of Blue. Experts anticipate continued rate increases as populations grow and aging water infrastructures require upgrades.

It is crucial for REITS and other multifamily property owners to find ways to reduce their water use in order to save money and, in some areas, to be in compliance with water restrictions.

This report offers strategies for understanding your property's water use, determining where you can most easily save water, and identifying how to conserve both indoors and outdoors.

UNDERSTAND YOUR PROPERTY'S WATER USE

Understand how and where water is being used and you will know where to start cutting. Gather intelligence through the following means.

Bill Analysis

You may be surprised how much you learn by reviewing two years of water bills. Your utility provider has your billing data and should be able to provide it.

First, map gallons used against the total bill for the last two years. This reveals when rates have changed and what your current usage trends look like.

> **Simple Ways To Calculate Your Irrigation Water Use**
>
> If you don't have a separate meter or sub-meter for irrigation, compare your water use during summer months to a time when you're irrigating lightly or not irrigating. The difference between your summer and winter water bills provides a pretty good estimate of the amount of irrigation water used on property.

Next, identify your billing structure. Are you on a simple per-gallon

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structure? Do you get charged more per gallon if you use more than a set amount of water? Does your utility have tiers of water pricing? A primer on different billing structures is available here:

Average Water Bills

In summary, answer these questions as you review your bills:

- What is my average monthly water use (in gallons)?
- What is my average monthly water cost?
- How much of that water is being used for irrigation?
- Have there been any unusual spikes in use or major changes to my water use that I can't explain?

Water Tracking Software

Do you want a more detailed understanding of water on your property? Sub-meters and other on-site devices provide specifics about where your water is going. Software like Banyan Water Intelligence analyzes your past water use and provides actionable insights.

Water Audits

To get objective information and advice about how to save water on your property, you can contract a company that provides water audits for commercial properties. Some cities even offer rebates to help with the costs of these audits. Check with your water provider to see if your area has such rebates.

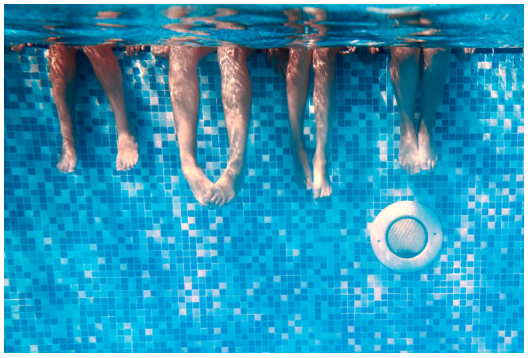
Current Systems and Fixtures Inventory

Knowing the components of your system is the first step to identifying potential savings. For example, many multifamily properties have some or all of the following, depending on when they were built:

- Low-flow shower heads
- High-efficiency toilets
- WaterSense labeled faucets and aerators
- A smart irrigation system

OUTDOOR WATER USE: LANDSCAPING, FOUNTAINS, POOLS

One of the fastest ways to increase NOI is reducing outdoor water use. Water used for landscaping, fountains, and pools represents a large cost every month, and is generally not something that you can bill back to residents.



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Banyan Water has found that most properties can maintain their landscapes while reducing irrigation water use by 50-70%. For some properties this easily adds up to millions of gallons of water and thousands of dollars per year.

Pools and fountains usually lose water through leaks or broken float valves. Meter water use and you will quickly identify changes that point to leaks, broken valves and waste.

Irrigation Water

How Much is Too Much?

Once you know how much water you are using for irrigation, you need to determine if that is the right amount of water for your property. The EPA has developed a very helpful Water Budget Calculator that takes a number of factors into consideration and calculates the amount of water that you should be planning to use.

Changing Weather & Changing Needs

Managing landscape health is both an art and a science. When it rains, naturally you can irrigate less. But how much less depends on several factors, such as how much of that rain is likely to evaporate quickly.

It is critical to have a system that measures and reacts to the weather conditions on your property because rain in your region doesn't mean rain on your property. Many modern irrigation systems have devices that track the amount of rain that falls on the property and suspends all watering for a given period after a rainstorm. Actively managed systems, like Banyan Water's smart irrigation systems, take even more complex factors such as humidity, wind, soil saturation, and temperature into consideration. These help put a finer point on determining when to water after rain and exactly how much water is needed.

Basic Steps to Reducing Irrigation Water Use

Most properties can reduce irrigation water use even with their existing equipment. Here are some quick tips:

- Stop watering in the rain! This one is a quick win. Add a rain sensor to an existing irrigation system for a relatively small investment or assign someone to turn off the system any day that rain is expected.
- Inspect your system for leaks. A broken sprinkler head or leaking mainline can waste a lot of water and make the rest of your system less effective. Leaks reduce pressure, which often also results in coverage issues.
- Walk your property monthly to catch leaks before they've wasted too much water. A leak detection system helps with this issue as well.

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- Look for dry spots. Dry spots in your landscape could indicate greater issues such as leaks in the system.
- Test your assumptions. If you think that your grass needs water every day (or every other day), it's worth it to test to see if that belief is true. Try watering more deeply one day, then skipping your watering schedule for one or two days longer than usual. Go walk on the grass. If it pops back up after being stepped on, then it doesn't need more water.
- Upgrade your irrigation system with a smart controller or, to maximize your water savings, consider a managed service. You may quickly save enough on your water bills to make up for that initial investment.

Banyan Water's actively managed smart irrigation solutions typically reduce irrigation water use by 50% - 70%, especially for large properties.

Pools & Fountains

Pools and fountains are great features to improve the aesthetics and lifestyle appeal of a property, but these systems can have hidden leaks that make them much more expensive than property owners realize.

For example, one property had a leaking fountain losing 5.6 million gallons of water per year, costing the property over $2000 in water bills every month. Though the managers knew there was a leak, they had no idea how much it was costing them. Repairing the leak increased their NOI and saved significant amounts of water on the property.

Tips for Saving Water in Water Features

- Leaks are the biggest water wasters for most pools and fountains. Actively monitor water use to identify sudden changes. If you suspect you have a leak, then invest in a reputable leak detection service to investigate.
- Check equipment and joints to see if water is coming out anywhere. above-ground leaks are usually the easiest to fix.
- Make sure your float valve is working properly. If it's broken, it will automatically "refill" the pool or fountain with unnecessary extra water. This is very similar to the valve in your toilet that tells the toilet tank when to refill with water.
- Turn off waterfalls and other water features when they're not in use. If the pool is closed or it's late at night, you might not need those features running. Waterfalls and fountains naturally create a lot of water surface area, which increases evaporation -- so even a few hours not

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running can reduce the amount of water you lose from evaporation.

- Create shade around the pool. Sun shades and pergolas can decrease the pool's temperature, which can significantly decrease evaporation, especially during the hot days of summer. The good news is that adding shade is also valuable for residents and the aesthetics of the property.

Indoor Water Use

You can decrease indoor water use on a multifamily property by changing residents' behaviors and/or changing fixtures.

Behavior Change Programs

Find a good way to track residents' water use and share that information with them. With submeters, you can invoice residents based on their actual water usage. This is often effective at reducing usage. Some utilities will offer programs like DropCountr to track and report on water use. Remember, it's difficult to maintain a conservation program if you can't see how much you are or are not saving.

- Circulate water-saving tips throughout your community. Put up posters in common areas, print flyers, or have a speaker from your local water utility give a talk about how and why to save water.
- Run a competition or property-wide effort to reduce water use with a reward, such as a resident event, to encourage water savings.

System and Fixture Upgrades

- As with outdoor water use, the biggest water-wasters are leaks. Install water tracking software or work with your team to determine whether your buildings have hidden leaks that are costing you money.
- If you don't already have upgraded fixtures, making the investment in EPA WaterSense certified faucets, toilets and shower heads may make a big difference in your property's water use.
  - Water-efficient toilets can save the average family 13,000 gallons of water per year, according to the EPA. Multiply that by the number of units on your property to determine the savings potential.
  - Showering accounts for about 17% of residential indoor water use, usually about 40 gallons per day for a typical family. While conventional showerheads use about 2.5 gallons of water per minute, WaterSense labeled showerheads use 2.0 gallons or less per minute. Replacing showerheads with more efficient ones can make a dent in water use and save money.

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• Whether you are looking to save water on your property to reduce operating costs, contribute to your community's water-saving programs, or because of larger conservation concerns, there are a variety of solutions that will work for different properties.

Some solutions require up-front investment but may pay for themselves in water savings. Other solutions are simply a matter of gathering information and taking action.

Start saving water and saving money on your property today.

RIATA
RESORT APARTMENT LIVING

See how Banyan Water has reduced water use at RIATA, one of the largest multifamily housing properties in Texas.

LIVCOR
MULTI-FAMILY ASSET MANAGEMENT

Learn why LivCor says:

"Water efficiency is a great way to simultaneously add value for our investors and our residents, and Banyan Water's solutions accomplish that and more"

Download the case studies

Find more water-related news and information at www.banyanwater.com