



**WATER
EFFICIENCY
GUIDEBOOK
FOR
MULTI-FAMILY
PROPERTIES**



WATER EFFICIENCY GUIDEBOOK FOR MULTI-FAMILY PROPERTIES



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Introduction

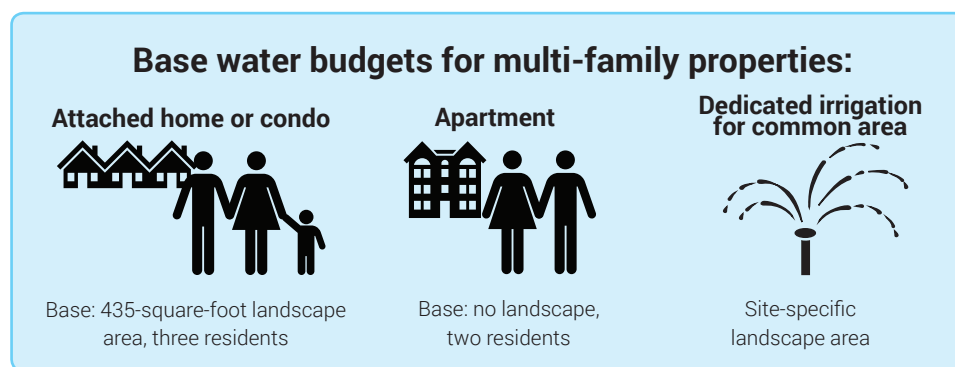
Established in 1961, Irvine Ranch Water District provides high-quality drinking water, reliable sewage collection and treatment, drought-proof recycled water, and environmentally sound urban runoff treatment. IRWD is committed to helping customers save water and money by providing cutting-edge efficiency programs to encourage customers to use water wisely. This guidebook is provided by IRWD to offer practical ways to increase water use efficiency in multi-family properties.

Best Management Practices for multi-family properties are described throughout this guidebook to increase and sustain water use efficiency. The Best Management Practices checklist on page 19 will help implement a preventative maintenance program for early detection of indoor and outdoor leaks.

Water budgets

IRWD uses a budget-based rate structure to encourage customers to use water wisely.

Multi-family condominium and apartment properties are assigned a monthly water budget, which is based on several factors, including the number of residents. For condominiums and dedicated landscape irrigation accounts, the water budget considers the square footage of outdoor landscaped area and evapotranspiration. Evapotranspiration (ET) is the sum of water evaporated through soil and plant surfaces and transpired through plant tissues. It is measure of the water lost that needs to be replaced by irrigation.



Rate tiers for residential multi-family accounts are listed at irwd.com/services/residential-water-rates. Charges in the Inefficient and/or Wasteful tiers indicate water usage that is not within the budget. These charges may happen for the following reasons:

- A leak on the property
- The landscape is being overwatered
- A temporary situation for extraordinary water use, such as filling a swimming pool
- A variance for an increased water budget is needed

Variances

IRWD encourages customers who need more water than their basic water budget provides to apply for a variance. Variances are offered for additional permanent residents, special medical needs, and larger irrigated landscaped areas, among other things. The variance is effective the date the request is approved by the District. Most variances must be renewed annually. Approved variances will extend each tier of the residential rate structure by a percentage.

The variance request form can be found in the back pocket of this guidebook, or online at irwd.com/request-a-variance. Contact a Water Efficiency Specialist at **949-453-5581** to obtain a customized variance request form for large properties with multiple accounts.

Submeters

Consult with a plumber to determine if submetering is feasible for the property. Providing each tenant with his or her own meter and/or submetering the master meter improves water efficiency and the ability to locate leaks. For most multi-family properties, IRWD provides one master meter for a group of dwelling units. Property management determines how the water bill is divided among the units.

If a plumber is hired to submeter each unit, tenants can be billed and held accountable for exactly the amount of water they use. With submetering, property managers no longer need to divide water bills equally among units. Submetering also makes it easier to locate leaks, potentially reducing leak-related property damage.



The use of submeters improves water efficiency and the ability to locate leaks.

Leak detection

High water usage results in high water bills and could be the first sign of a leak.

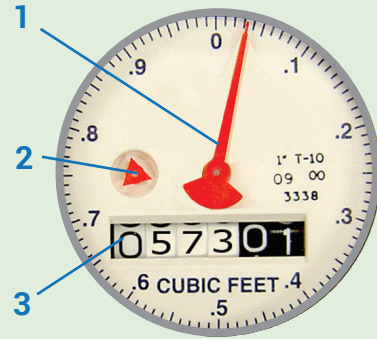
Conduct a two-minute leak detection test (page 4) to determine if the meter registers a leak. To help determine if a leak exists, consider the following questions:

- Has the bill suddenly increased?
- Have there been reports of water running or pooling in places it should not?
- Have you read the meter to check for leaks? (page 4)

How to read a water meter

Three indicators to consider when reading the meter:

1. **Sweep hand:** One rotation of the sweep hand equals 1 cubic foot (CF) or 7.48 gallons.
2. **Leak dial:** If this dial keeps spinning after you have shut off all water-using devices, both indoor and outdoor, you have a leak.
3. **Counter:** The black on white numbers record your water consumption in 100 cubic feet (CCF). This example meter currently reads 573 CCF. (Note: 1 billing unit = 1 CCF = 748 gallons).



Two-minute leak detection test

Performing a meter read and two-minute leak detection test is one of the most important exercises for detecting a plumbing leak. Conduct this test when no water is being used on the property. This may require sending a notice to tenants and landscapers to request no water usage during a scheduled time.

How to conduct the two-minute leak detection test:

- Step 1:** Write down the current read on the meter paying close attention to the location of the sweep hand and units to the right on the counter, shown as white on black numbers.
- Step 2:** After two minutes, write down the meter read again and observe the leak dial on the meter to see if it is moving.
- Step 3:** If the two numbers are the same and the leak dial is not moving, there is no leak. If the second meter read **increased or if the leak dial is moving** (even though the meter read has not increased), there is a leak.
- Step 4:** To avoid high water bills, fix the leak immediately.
- Step 5:** If a high bill results from the leak and it is repaired, call IRWD's Customer Service department at **949-453-5300** to inquire about processing a leak adjustment.

Locating a detected leak

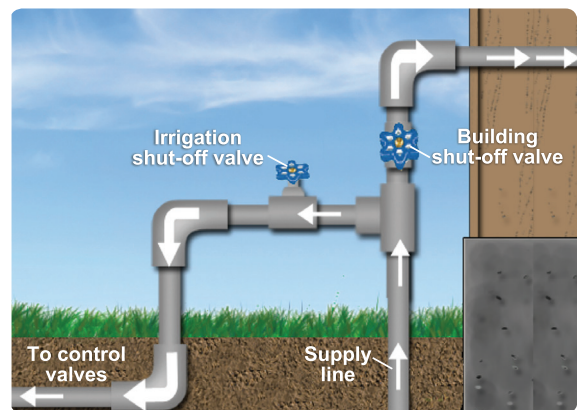
Once a leak is detected it needs to be located. Leaks may occur in the water pipes between the meter and the building (the main line), in a pipe inside the building, or in the outdoor pipes.

If the meter is on a water line that feeds both indoor and outdoor uses, follow these steps to isolate the source of the leak:

Step 1: Turn off the main water valve for water going inside the building. If the meter's leak dial stops moving, the leak is inside.

Step 2: Turn off the main water valve for water going outside the building. If the meter's leak dial stops moving, there is a leak or inefficiency in the irrigation system.

Step 3: If both the indoor and the outdoor shut-off valves are closed and the flow dial moves, the leak is in the main line, the pipe between the meter and the water valve. If the leak is in the main line, contact a leak detection specialist to locate the water leak.



Example of water shut-off valves.

Indoor leaks

Implement a water management program.

Finding and preventing leaks in multi-family properties requires everyone's input. Ask tenants to report toilet, faucet, pipe or other plumbing leaks when they see them. If the leak originates indoors, check the following areas where leaks typically occur:

- **Connection points:** Check all connection points where water lines enter fixtures (sinks, tubs, showers, toilets, water filters and water softeners) and appliances (water heaters, clothes washers, dish washers and refrigerators). Check for damp or wet areas and musty odors underneath sinks and water heaters.
- **Faucets and bathtub diverters:** Check for dripping faucets, missing aerators and worn out aerator washers. Check for bathtub diverter leaks. A tub diverter is commonly used in bath/shower units to direct flow either to the bathtub spout or to the showerhead.

Indoor leaks (continued)

- **Toilets:** A leaking toilet can waste up to 200 gallons of water per day and may be leaking even if you don't hear it. Observe the water surface in the toilet bowl for any movement not caused by flushing. Perform a dye tab/food coloring test on all toilets by following the "Take the Leaky Toilet Test" instructions below. Toilet leak detection cards, with peel-off blue dye strips on the back of each card, can be found in the back pocket of this guidebook's folder. To obtain more toilet leak detection cards, contact a Water Efficiency Specialist at **949-453-5581**.

How to use blue dye tablets or food coloring to...

Take the Leaky Toilet test!



1. Remove the toilet tank lid carefully. Drop one dye tablet or a few drops of food coloring in toilet tank (not bowl).
2. Wait 20 to 30 minutes without flushing toilet.
3. Check water in toilet bowl. If blue dye shows up in toilet, you have a leak.
4. Repair leak by replacing flapper, or call a licensed plumber.

Does your toilet have a leak?
Check your toilet flapper first.

1. Rub the bottom of the flapper with your finger. If the rubber is peeling, the flapper should be replaced.
2. Take the old flapper with you to the store when purchasing a replacement. This ensures you get the right part for the job.
3. Install the new flapper and take the Leaky Toilet Test or call a licensed plumber to ensure that you've stopped the leak.



flapper valve

The flapper is the number one cause of most toilet leaks. Replace your toilet flapper every two years.

For more leak detection tips, visit: irwd.com/services/water-leaks

- **Slab leaks:** The sound of water running when all water-using devices are turned off may indicate a slab leak. Check for mildew or excessive moisture under carpeting, lumpy flooring areas, or cracks in walls or flooring. A hot spot on the floor may indicate a hot water line leak.

Irrigation system maintenance

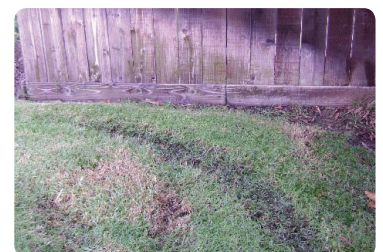
Avoid hidden costs by specifying water management in the landscaping maintenance contract.

Proactive property managers can keep water bills down by identifying the signs of water waste and mitigating the destructive effects. Outdoor leaks can result in costly repairs, property damage and high water bills. However, leaks aren't the only water waste that can occur outdoors.

Inefficient irrigation systems can have hidden costs such as asphalt and fence damage due to run-off and overspray, and can cause more frequent plant replacement due to overwatering.



Asphalt erosion caused by runoff.



Fence damage caused by misaligned spray patterns.

Irrigation system maintenance (continued)

Establish water management goals in the landscape maintenance contract.

The landscape maintenance contract is an agreement between the property manager and the landscape contractor to perform the activities outlined in the scope of work. Consider a comprehensive landscaping services contract that clearly spells out what is expected of the contractor. For example:

- Require the contractor draw an irrigation system site plan that describes each station zone. Keep this plan handy in the event there is a system break. Use the site plan to identify which station zone should be turned off to avoid any further water waste before a repair can be made.
- Require the contractor use the Meter and Budget Log (pages 11-13) as a tool for monitoring water usage for dedicated landscape meters. If the water usage is over the weekly budget, the contractor should investigate and fix the problem before the property incurs high water bill charges.
- Accompany the landscape superintendent while he or she performs monthly system walk-throughs to identify sprinkler system inefficiencies like those described on pages 8-9. If an irrigation system leak or break is identified, fix the problem promptly.
- Require the contractor adjust the irrigation system to adequately irrigate for plants' seasonal watering needs. IRWD's Suggested Watering Schedule for spray head or drip can be found online at wateringguide.com or in the back pocket of this guidebook.
- IRWD offers many types of incentive programs and landscaper training. Suggest that the contractor contact a Water Efficiency Specialist at [949-453-5581](tel:949-453-5581) to learn about current programs.



Consider a comprehensive landscape maintenance contract that clearly spells out water management requirements.



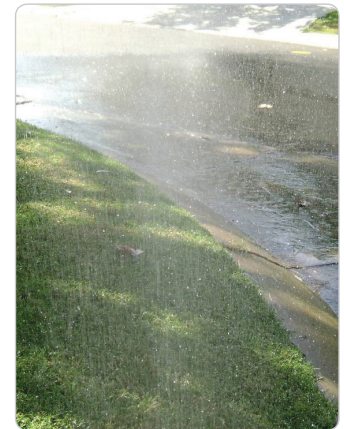
Irrigation system maintenance (continued)

Irrigation spray system problems:

- **Water pressure:** Most sprinkler systems work at an optimal pressure of 30-50 pounds per square inch. Water pressure that is too high can cause sprinklers to mist or fog. Install a pressure regulator to reduce the water pressure. Water pressure that is too low may result in a sprinkler head not popping up. Install a boost pump to increase your water pressure. Low water pressure can also be a sign of an underground leak.
- **Clogged nozzles:** Debris can lodge in the nozzle or filter of the spray head resulting in uneven distribution of water and dry spots. Clear the emitter and then flush the spray head with running water.
- **Spray patterns:** Check the arc and radius of spray heads for proper adjustment. Water spraying outside of the intended area, often at fences, concrete, asphalt and buildings, can be corrected by adjusting the spray head.
- **Broken, tilted, sunken, or raised spray heads:** Spray heads damaged from foot traffic and lawn maintenance may result in misting, overspray, dry spots and runoff. Make repairs or replace spray heads as necessary. Ensure the precipitation rates of replacement spray heads match those of the broken heads being replaced.
- **Wiper seals and springs:** Wiper seals can wear out, causing excessive leaking around the seal while the spray head is in operation. In addition, internal springs can wear out, causing risers to stay elevated after the operation has ceased. Replace wiper seals and springs as necessary.
- **Spray head obstruction:** Plant material that blocks the spray head can result in uneven spray patterns or runoff. Trim back plants blocking spray, or consider installing drip irrigation.



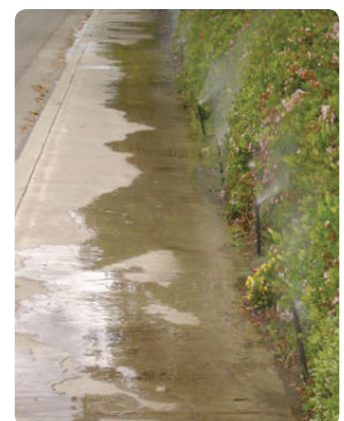
Misting spray heads.



Misaligned spray pattern watering asphalt.



Broken spray head.



Obstructed spray heads.

Irrigation system maintenance (continued)

Irrigation drip system problems:

- **Water pressure:** Optimal pressure for drip systems is in the range of 15-60 pounds per square inch, or as recommended by the manufacturer. Water pressure that is too high may cause fittings to pop off and/or drippers to gush rather than drip water. Install a pressure regulator to reduce water pressure.
- **Clogged drip emitters:** Clogged emitters can affect irrigation uniformity. To avoid clogging, install 150 or 200 mesh strainers after the master valve to keep debris from entering the system. Replace clogged emitters with new ones as necessary.
- **Broken drip line:** Periodically observe your sprinklers to make sure there are no leaks. Replace broken drip line with new tubing as necessary.
- **Scrubber valves:** To prevent clogging when irrigating with recycled water, consider installing a scrubber valve designed to handle constituents found in recycled water.



Broken drip line.



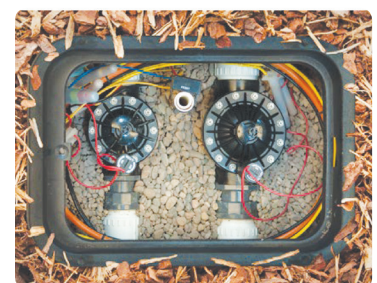
Irrigation controller.

Other areas where irrigation system malfunctions may occur:

- **Irrigation controller:** The primary function of the irrigation controller is to send a signal to open the sprinkler control valves, sending water through the underground water lines and to the sprinkler heads. It is important for property managers to know the location of the irrigation controller(s), and be familiar with how and when to adjust the settings. The irrigation controller(s) should be programmed with an accurate time and date, and programmed to water appropriately for the season. The back-up battery should be replaced every other year.
- **Sprinkler control valves:** If a valve does not open as programmed on the irrigation controller, the malfunction can be electrical, hydraulic, or mechanical. If the valve opens after manually turning the solenoid (left to open, right to close), the issue is electrical. If the valve does not open after attempting to use the flush/external bleed, the issue is hydraulic (an impaired water flow), or mechanical (something physical stopping the valve from operating).



Anti-siphon sprinkler control valves – above ground.



Inline sprinkler control valves – below ground.

Landscape water needs

Modifying existing landscape from a traditional landscape into a water-efficient landscape can save hundreds, if not thousands, of gallons of water per year.

Traditional turf landscapes require the highest water use.



Every 1,000 square feet of turf uses approximately 25,000 - 35,000 gallons of water per year.



Monthly summer demand

Convert to drought tolerant plants.



Every 1,000 square feet of drought-tolerant plants uses approximately 15,000 - 20,000 gallons of water per year, a water savings of 30% - 50% over turf.

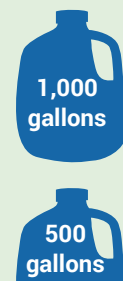


Monthly summer demand

Convert to native or low-water-use plants.



Every 1,000 square feet of California native plants uses approximately 4,000 - 12,000 gallons of water per year, a water savings of 60% - 80% over turf.



Monthly summer demand

Using the Meter and Water Budget Log for dedicated irrigation meters

Photocopy the Meter and Water Budget Log template sheet (in back pocket) to use as a tool for tracking a dedicated landscape account's water usage. Visit RightScapeNow.com/large-landscape for an electronic copy. Adjust usage to meet your landscape plants' seasonal water needs.

Scheduling sprinkler run times

Adjusting the irrigation controller seasonally is crucial to efficient water use. In September, October and November, plants' evapotranspiration (ET)* drops as days get shorter and the sun is less intense. Irrigation controllers should be turned off when it's raining.

ET gradually increases in April, May, June and July. IRWD recommends adequately irrigating during the spring and early summer to ensure that plants develop healthy root structures during the growing season. ET starts to decrease in August, and even though it can still be hot, plant water requirements begin to drop.

Calculating landscape water budgets

Data collected from three weather stations measures different climate zones in the IRWD service area:

- **Coastal** (Newport Coast and Santa Ana Heights)
- **Central** (Irvine, UC Irvine, Tustin Ranch, and Lake Forest)
- **Foothill** (Portola Hills and Foothill Ranch)

Each weather station monitors solar radiation, air temperature, wind speed, humidity and other evapotranspiration factors, 24 hours a day, seven days a week. This data is used to determine daily ET. Each property in IRWD's service area is assigned to one of these weather stations. The amount of water budgeted for each property will increase or decrease in response to weather factors in specific climate zones. A map of ET zones in IRWD's service area can be found in the back pocket of this guidebook's folder. To inquire about which climate zone a property is located in, please call IRWD at [949-453-5300](tel:949-453-5300).

How water budgets are determined

Landscape water budgets are determined by the square footage of irrigated landscape and the ET for exactly those days that occurred during the billing cycle. Because ET changes daily, the budget will change with every bill.

Water budgets have several assumptions built in, so water usage should not exceed the budget. An inefficiency factor is built into the formula because customers are not expected to adjust controllers daily nor have a perfect irrigation system. If the site has more acreage than indicated on the water bill, contact the IRWD Water Efficiency department at [949-453-5581](tel:949-453-5581) to discuss a variance.

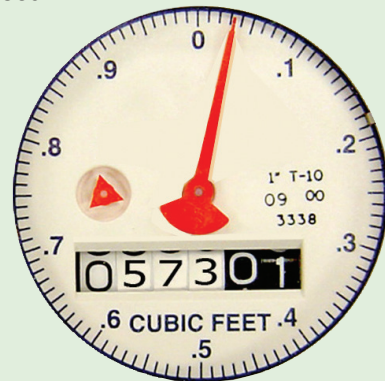
*ET is the amount of plant water loss based on weather conditions as measured by IRWD's weather stations.

Using the Meter and Water Budget Log for dedicated irrigation meters (continued)

Reading the meter

Meters measure water use in cubic feet (CF), but budgets are based on hundred cubic feet (CCF). One CCF is equal to 748 gallons. To use IRWD's Meter and Water Budget Log, read the CCFs, which are the black on white numbers on the odometer portion of the dial.

In this example, the meter shows **0573.01 CCFs**. Record the **573 CCFs** for sites larger than $\frac{1}{4}$ acre. However, for smaller sites (less than $\frac{1}{4}$ acre) you may also want to include the first white on black number as a decimal.



How to use the log sheet

1. Read the meter weekly and always on the same day of the week.
2. Read the black on white numbers on the meter, which are in CCFs (hundred cubic feet). Note the date in column **A** and the meter reading in column **B**.
3. The following week read the meter again. Record the date in column **A** and the meter read in column **B**. Write down last week's meter read in column **C**. Subtract to calculate and record the difference in column **D**.
4. Call the ET Hotline* at **949-453-5451** to get the budget per acre for the site's climate zone and record it in column **E**. (If uncertain about climate zone, call IRWD Customer Service at **949-453-5300**.)
5. Record the acreage for this meter in column **F** (acreage can be found on the water bill).
6. Multiply the number in column **E** by the number in column **F** to calculate the budgeted water needs for this meter for last week. Record this number in column **G**.
7. Subtract column **D** from column **G**. Record this number in column **H**. If the number is positive, the water usage is over budget. Make adjustments to the irrigation schedule or check for leaks.

***Note:** Irvine Ranch Water District updates the ET Hotline each Monday. Weekly ET updates are also posted on [RightScapeNow.com/landscape-resources/et-weather-center](https://www.rightscapenow.com/landscape-resources/et-weather-center). If you have any questions or concerns regarding water usage on the property, please call IRWD at **949-453-5324**.

Pool and spa leaks

Pool and spa leaks can develop in fittings, plumbing or in the shell. It is important to repair pool and spa leaks promptly, to not only save water, heat, and chemicals, but also to prevent undermining pool structural components.

How to check for pool or spa leaks*:

- Step 1:** Bring the pool water to a normal level.
- Step 2:** Fill a 5-gallon bucket with water, from the pool, to about one inch from the top.
- Step 3:** Place the bucket on the first or second step of the pool.
- Step 4:** Mark the bucket's water level on the inside of the bucket.
- Step 5:** Shut off the pool pump to ensure the pool water level is stable, then mark the pool water level on the outside of bucket.
- Step 6:** Turn the pump on to normal operation.
- Step 7:** After 24 hours, compare the two water levels. Measure the water level drop both inside and outside the bucket. If the difference of water level drop is greater outside the bucket, there is probably a leak. If the water level drop is the same, only evaporation has occurred.

Swimming pools should not lose more than $\frac{1}{4}$ inch of water per day due to evaporation. Losing more than $\frac{1}{4}$ inch per day in a pool without water features or heaters is considered a leak.

Tips for HOA pool areas

The common area around the pool may hold potential for water efficiency, especially if the area includes a clubhouse with a kitchen, bathrooms, showers and landscape.

- Create a preventative maintenance schedule for maintenance staff and/or pool service professionals to check for indoor and outdoor leaks in kitchen faucets, toilets, showers, irrigation and pool and spa.
- Replace pool-adjacent landscaping with water-efficient plants, and install drip or micro-spray irrigation and a weather-based irrigation controller.
- An individually metered HOA pool area with an average community-sized pool generally uses no more than 15 ccf/month during the summer. If the pool area water usage is greater than 15 ccf/month during the summer, please contact IRWD's Water Efficiency Department at **949-453-5581** to request a site evaluation.

*For instructional videos on conducting leak tests, visit RightScapeNow.com/how-do-i/save-water-on-my-pool

Water-saving pool and spa maintenance tips for multi-family properties



Consider using a sensor-based auto-fill device to reduce unnecessary refilling of pools. Forgetting to shut off fill water can make for a costly waste of water.



Splashing and water fights in the pool and spa can cause excessive water loss. To avoid water splashing out, reduce the water level.



Use a pool cover to avoid evaporation and save energy on heating. Solid pool covers can reduce evaporation by up to 95%.



Maintain proper pool chemistry year round to avoid the need to drain and refill the pool. Avoid draining the pool, unless needed for health and safety, to fix leaks, or for other major repairs.



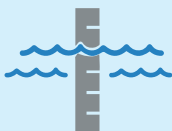
Sweep instead of hosing down hard surfaces.



If heated, reduce the pool and spa water temperature, especially while not in use. Warmer water evaporates more quickly.



The average backwash uses between 250 and 1,000 gallons of water per backwash, depending on pool and equipment size. Manually clean the filter to use less water and do a more thorough job.



The swimming pool should lose no more than $\frac{1}{4}$ inch of water per day due to evaporation. Losing more than $\frac{1}{4}$ inch per day in a pool running with no water features or heaters is considered a leak. Check the pool skimmer for cracks and perform a bucket or dye test*, or seek assistance from a pool technician or leak detection expert.

*For instructional videos on conducting leak tests, visit [RightScapeNow.com/how-do-i/save-water-on-my-pool](https://www.RightScapeNow.com/how-do-i/save-water-on-my-pool)

Community programs

Engage your tenants in water use efficiency by:

Sharing information

- Provide contact information for reporting leaks.
- Post the *Water-saving tips for tenants* notice (page 17 or back pocket) on a community bulletin board or website.
- Compare water use history. One way to do this is to post water consumption by month compared to the same month of the prior year.
- Share information about water efficiency upgrades, such as the installation of new shower heads, toilets or water-efficient appliances, irrigation system improvements, etc.

Getting together with your tenants

- Hold monthly meetings at the clubhouse or other gathering location and share water efficiency tips like reporting leaks promptly. Provide refreshments and door prizes to encourage tenant participation.
- Invite a speaker from IRWD to present about water efficiency.

Celebrating water savings

- Share financial savings from water efficiency by holding a family fun night or picnic, or by purchasing new common-area equipment (i.e., ping pong table, pool table, gym equipment, community center television or DVD player) and make sure tenants know their efficiency efforts made the purchase possible.
- Award free pizza or movie tickets if water use decreases by a preset goal from the prior year, same month (i.e., 10% reduction per occupant comparing October of 2018 with October 2019).
- Recognize tenants who report leaks and advertise their efforts.

Water-saving tips for tenants



Report indoor faucets and toilet leaks* to management immediately. Toilet leaks can waste up to 200 gallons per day.



Report outdoor sprinkler leaks*, over-spray and runoff immediately.



Turn off water when brushing teeth or shaving.



Run dishwasher and washing machine only when full. Consider purchasing ENERGY STAR and WaterSense-labeled models.



Every minute you shorten your shower saves water (and energy).



Install a low-flow WaterSense-labeled showerhead, or check with management about installing one.



Capture water in your sink when washing vegetables and use this water for plants.



Capture water in a bucket when warming up a shower and use this water for plants.

***Report leaks to _____ at _____.**

Name

Phone number or email address

look for



IRWD participates in WaterSense, a partnership sponsored by the U.S. Environmental Protection Agency (EPA). Looking for the WaterSense label is a simple way to find products and services that are certified to use at least 20% less water, save energy and perform as well as or better than noncertified models.

Water Score for multi-family housing

EPA's Water Score for multi-family buildings is generated by the ENERGY STAR® Portfolio Manager® tool and supported by WaterSense. The tool provides a 1-100 rating of how your building uses water compared to similar properties nationwide. After knowing your building's score, EPA's tools and resource guide can provide information on how to make changes or upgrades to save water, energy and operating costs.

Visit epa.gov/watersense/water-score-multifamily-housing to sign up and learn more.

Rebates

IRWD offers a variety of financial incentives to help multi-family property managers save water and money. Available rebates are listed on our website at RightScapeNow.com/rebates/commercial-rebates. Rebate amounts fluctuate and are subject to funding availability.

Customers must apply for the rebate **before** making any purchase. Applications and specific information on each rebate is available at RightScapeNow.com/rebates/commercial-rebates.

Best Management Practices

Best Management Practices (BMPs) can increase and sustain water use efficiency. BMPs are cost-effective measures to help property managers and owners manage water use and identify projects and practices to reduce water use.

Actively monitoring water use and educating staff and tenants about water efficiency are key components of properly managing and reducing water use. The BMP checklist on the following page provides information on how to implement a water management program.

Multi-family property Best Management Practices checklist

Perform weekly:

- Use the Meter and Water Budget Log to record budget and meter reads (pages 11 -13). Review purchasing and maintenance records for new installations, devices or valve repairs to see if they correspond with increases or decreases in water use.

Perform monthly:

- Review water usage and share with facility managers. If water usage has increased, identify the source and determine if there is a leak on the property.
- Review and adjust the watering times on your irrigation controller. Check IRWD's website, RightScapeNow.com, for the recommended watering schedule for your irrigation system and plant types.
- Perform a complete irrigation system walk-through with your landscaper. Check for broken lines, stuck valves, and broken sprinkler heads.

Perform quarterly:

- Remind tenants to report leaks or malfunctioning water-using devices.
- Send an e-mail blast or post a flier informing tenants how to identify leaks in their dwelling unit and common areas, and how to report a leak or malfunctioning water-using device.
- Conduct leak tests.
 - Request that all tenants refrain from using water while conducting a two-minute leak detection test, when there are no water-using appliances operating, to determine if there is a leak (page 4).
 - Conduct routine leak detection and maintenance on toilets (page 6).
- Inspect water-using fixtures in bathrooms, laundry rooms, kitchens, etc.
 - Make sure to check rooftops, ceilings, floors, walls and behind equipment for signs of water damage. Wet, warped or discolored stains can be an indication of a leak.
- Inspect pool area for malfunctioning or leaking equipment.
- Check for pool leaks by performing the bucket test (page 14).

Perform annually:

- Renew your variance by providing IRWD with an update of the number of permanent residents for each account number.
- Every July, notify tenants that the latest annual water quality report is available for review at irwd.com/water-report.
- Perform a cross-connection inspection. Call IRWD's Cross Connection Control department, [949-453-5761](tel:949-453-5761), for details.

—Notes—

