

Don't Send Money Down the Drain!

Learn to water smart to save money this summer.



Most homeowners overwater their yard, unwittingly wasting money every time they take out the hose or turn on the sprinklers. Adopting water-savvy habits not only helps reduce this waste, it saves money while promoting a healthier lawn and landscape. To raise awareness of the benefits of smart irrigation practices, the Irrigation Association® has named July *Smart Irrigation Month*.

"Water use issues have become a big concern in communities across the United States," says Irrigation Association Executive Director Tom Kimmell. "A well-trained irrigation professional, working with today's technology can save homeowners time and money, and provide better results." One of the goals of *Smart Irrigation Month* is to provide homeowners with smart irrigation practices to help them get the best results when working with irrigation professionals whether installing, maintaining or improving their systems.

Right, From the Start

Create an efficient irrigation system.

Creating an efficient irrigation system requires specialized knowledge and understanding of irrigation design principles and local environmental conditions - something most weekend gardeners don't have. Complying with local installation codes is another consideration. Similarly, the best irrigation design won't perform well if the installation is done incorrectly or if inferior components are used. Something as simple as selecting the correct type of pipe can mean the difference between a system that lasts and one that suffers from ongoing repair problems.

Irrigation systems also need regular maintenance to keep them working efficiently year after year. Damage from lawn equipment or from improper winterization can cause leaks and failures. The best bet is to hire an Irrigation Association Certified Irrigation Designer or Contractor to design and install the new system for you. To make finding a qualified contractor easier, the Irrigation Association maintains a registry of trained, certified irrigation professionals. Always be sure to check the credentials of a prospective contractor and don't be afraid to ask questions. Hiring a well-trained contractor and insisting on high-quality components is the best start to ensure your system will operate at peak efficiency.

The Irrigation Association is offering these tips in conjunction with *Smart Irrigation Month* recognized in July, typically the month when the most water is used for irrigation, to draw attention to efficient irrigation technology and practices.

Design It Right

An efficient irrigation system is one that works properly all the time. Invest in a good designer or contractor at the start, one who takes into consideration the unique water requirements of your landscape and local weather conditions.

- **Plan your irrigation zones carefully.** Be sure that your system will have enough capacity to handle all the plant types you will be watering. The more irrigation zones you plan for, the more tailored the watering schedule can be.
- **Use the best components you can afford.** This will pay dividends in the end.
- **Check the water pressure.** Low or high water pressure can seriously affect sprinkler performance. Sprinklers should be selected to match the on-site pressure.

Contract It Right

A vital step in creating a high quality, efficient irrigation system is choosing the right irrigation contractor. Make sure the contractor is certified and, if required, licensed to install irrigation systems in your area. Check references.

- **Is the contractor properly insured?** Ask to review a copy of their policy.
- **Visit the Irrigation Association at: www.irrigation.org.** Review the *Tips for Hiring a Contractor* and the names of Certified Irrigation Contractors in your area.
- **Obtain several bids.** Understand the differences between them. The lowest bid may not be the best deal.

Install It Right

When installing a new system, use components that will provide the greatest flexibility in watering your landscape. Different types of plants have different watering needs that may change over time. Your system should allow you to apply the right amount of water for each type of plant by the most effective method.

- **Always install excess irrigation zone capacity.** Irrigation zones are areas of the yard that are watered by the same irrigation valve and plumbing. Installing extra connections now makes it easier and less expensive to expand your irrigation system later.
- **Install the required backflow prevention device.** A backflow prevention device is required by the National Plumbing Code for all irrigation systems. It keeps irrigation system water out of the main water supply, preventing contamination. Your contractor will know which type is specified for your area.
- **Install lines at the correct depth.** Irrigation lines should be installed at a depth where aeration and other lawn maintenance will not interfere with them.

Landscape It Right

A well-designed landscape and a well-designed irrigation system need to work well together to maximize savings.

- **Use turf or plant species appropriate to the climate** whenever possible.
- **Practice “hydro-zoning”** by grouping plants with similar water needs close together.
- **Confine non-turf plants to plant beds** to make it easier to water lawn areas.

Schedule It Right

Modern irrigation controllers allow the user to easily adjust their watering schedules to suit all sorts of landscape watering needs.

- **Schedule each individual zone** in your irrigation system to account for sun, shade and wind exposure.
- **Consider the soil type in each zone**, as it affects the how quickly water can be applied and infiltrate without runoff.
- **Adjust your watering schedules** at least seasonally to account for changing water needs. Monthly or weekly adjustments will save substantially more water and improve plant health.

Water It Right

Watering at the right time of day, when the sun is low, the winds are calm and temperatures are cool will save a lot of water - as much as 30% - by reducing evaporative losses. The best time to water is late afternoon, evening and just before sunrise.

- **Saturate the root zones.** Roots are generally within the top six inches of soil. Then let the soil dry. Watering too frequently results in shallow roots, weed growth, disease and fungus.
- **Don't water too long.** Water each zone several times for short periods rather than in one long session. For example, rather than watering for 15 minutes, water three times for 5 minutes, allowing time for the water to soak into the ground before watering again. This reduces run-off.
- **Take careful aim.** Be sure your sprinklers are not watering driveways, sidewalks, patios, or buildings. It's all water down the drain.

Finally, consider installing “smart” technology that automatically adjusts your system to apply water based on factors such as evaporation, precipitation, plant water use, or soil moisture. By replacing only the water that is needed, smart systems offer substantial savings - and convenience.

Another option is a rain sensor. This little device senses precipitation and, depending on the amount of rainfall, stops the system from irrigating. When the rain stops the system picks up right where it should. Soil moisture sensors are another innovation that can be added at any time. These long metal probes measure the soil's moisture content at the root zone. Basic sensors turn off the system when water is adequate; “smart” models turn on the system to maintain correct moisture levels.

Fine-Tune Your Irrigation System To Save Money and See Better Results



Residential irrigation systems offer convenience in protecting your landscape investment. Enjoy your yard, keep it healthy and beautiful while you water efficiently, save time *and* money.

With some simple practices and new technology, existing irrigation systems can be made more efficient, lowering your water bill, reducing run-off and eliminating waste. Waterwise habits will result in a *healthier* lawn and landscape, in addition to conserving water.

The Irrigation Association® offers these water-saving tips to maintain and update automatic irrigation systems:

- 1) **Adapt your watering schedule to the weather and the season.** Familiarize yourself with the settings on your irrigation controller. Adjust the watering schedule regularly to conform with current weather conditions.
- 2) **Schedule each individual zone in your irrigation system.** “Scheduling” accounts for the type of sprinkler, sun or shade exposure and the soil type for the specific area. The same watering schedule should almost never apply to all zones in the system.
- 3) **Inspect your system monthly.** Check for leaks, broken or clogged heads, and other problems, or engage an irrigation professional to regularly check your system. Clean micro-irrigation filters as needed.
- 4) **Adjust sprinkler heads.** Correct obstructions that prevent sprinklers from distributing water evenly. Keep water off pavement and structures.
- 5) **Get a professional system audit.** Hire a professional to conduct an irrigation audit and uniformity test to make sure areas are being watered evenly. This can be especially helpful if you have areas being under-watered or brown spots. The Irrigation Association maintains an online list of IA Certified Landscape Irrigation Auditors.
- 6) **Consider “smart” technology.** Climate- or soil moisture sensor-based controllers evaluate weather or soil moisture conditions and then calculate and automatically adjust the irrigation schedule to meet the specific needs of your landscape. Learn more at <http://www.irrigation.org/swat/homeowners/>.
- 7) **Install a rain shutoff switch...inexpensive and effective.** Required by law in many states, these money-saving sensors turn off your system in rainy weather and help to compensate for natural rainfall. The device can be retrofitted to almost any system.
- 8) **Consider low volume drip irrigation for plant beds.** Install micro irrigation for gardens, trees and shrubs. Micro irrigation includes drip (also known as trickle), micro spray jets, micro-sprinklers, or bubbler irrigation to irrigate slowly and minimize evaporation, runoff and overspray.
- 9) **Water at the optimum time.** Water when the sun is low or down, winds are calm and temperatures are cool - between the evening and early morning - to reduce evaporation. You can lose as much as 30% of water to evaporation by watering mid-day.
- 10) **Water only when needed.** Saturate root zones and let the soil dry. Watering too much and too frequently results in shallow roots, weed growth, disease and fungus.

Best advice for a healthy, drought- and stress-tolerant lawn and landscape: use less water. These tips will help keep more money in your wallet instead of sending it down the drain.

Keeping Up Appearances

A well-maintained irrigation system is an efficient irrigation system.

Whether you have a small urban yard using a simple irrigation system, or you are watering acres using the latest irrigation technology, proper maintenance is important. Without regular maintenance your water-stingy irrigation system could turn into a water guzzler. Irrigation systems are exposed to the elements year-round, as well as everything from lawn mower blades to the family dog. That means they need to be inspected and adjusted at least once a year.

The most convenient and effective way to verify your system is to have an Irrigation Association Certified Landscape Irrigation Auditor inspect it before the growing season begins. This Irrigation Association certified professional will inspect the entire system and adjust it for peak performance, replacing any damaged components. The auditor can conduct a uniformity test to make sure all areas are getting the proper amount of water and that your sprinklers are placed correctly. You may discover that a few sprinklers need adjustment to achieve proper “head-to-head” coverage in your yard. If needed, the auditor can even create a new watering schedule for an old system to make it more efficient.

Here are a few essential maintenance tips, offered by the Irrigation Association in recognition of the designation of July as *Smart Irrigation Month*, to ensure that your irrigation system is always operating at its best:

- **Learn how to program your irrigation controller.** Adjusting the run times (number of minutes) and the frequency of watering (daily, twice a week, etc.) based on current local weather conditions is the best way to give your plants the water they need. You should also adjust settings for seasonal changes in the plants’ water needs and the weather.
- **Inspect the irrigation system for leaks.** Leaks are a huge water waster. A good contractor can perform regular maintenance checks for leaks, broken or clogged spray heads, and other problems. Ask them to show you common problems to watch for between visits.
- **Clean the filter screens if clogged.** All sprinklers from the biggest to the smallest use filters to prevent spray nozzles and emitters from getting clogged and degrading the spray pattern.
- **Adjust sprinkler head height.** Stationary and rotary sprinkler heads need a certain amount of clearance over the plants to operate correctly. Over time plants grow and turf can build up around sprinklers interfering with the spray pattern. Periodically checking the sprinklers for proper clearance is very important. Taller risers may need to be added, or in-ground sprinklers reset so they can distribute water evenly.
- **Adjust spray patterns and positions.** Water that lands on sidewalks, patios, and decks, etc. is water wasted. Sprinklers can get whacked out of adjustment, so having their aim checked yearly is a must.
- **Winterize!** If you live in a climate where freezing can occur you need to have your system properly winterized in the fall. This is usually best left to an irrigation contractor, who has the equipment to ensure the system is clear of any water that could freeze and crack pipes, valve bodies, and sprinklers. A thorough winterization - and proper spring start up - is cheap insurance.

Finally, check the pressure. Just because the pressure was correct when the system was installed doesn’t mean it still is. Pressure that is too low or too high can seriously affect the efficiency of your irrigation system. So, have the pressure checked and adjusted every year.

Teaching an Old Irrigation System Some New Tricks

Update your irrigation system for greater efficiency.

Saving water is in every homeowner's best interest. You save money and help conserve the local water supply at the same time. Just because you have an old irrigation system installed in your yard doesn't mean that you can't update it to take advantage of the newest, most efficient technology. Your irrigation contractor can tell you what components are best suited to your system and offer the greatest benefit.

Here is a quick look at a few of the options offered by the Irrigation Association in recognition of *Smart Irrigation Month* in July:

- **Add “smart” technology.** Smart technology refers to irrigation devices that can adjust your watering schedule without direct input from you. Climate-based controllers that adjust watering schedules based on weather conditions and plant information can have a profound impact on your water usage. Find out more about smart technology at: www.irrigation.org/swat/homeowners.
- **Install a centralized irrigation controller.** Typically used on golf courses, these systems are finding their way into more residential and commercial applications, especially for large lawns where water is expensive. With just a few computer keystrokes or by remote control, the user can reprogram controllers in multiple locations. Plus, watering schedules can be saved and reused with ease.
- **Have a rain sensor installed...low-cost, excellent value!** This device can be added to almost any system and will automatically override the system settings to prevent watering when it rains. They are inexpensive, simple to install, and they save water and money.
- **Add a pressure regulator.** Incorrect water pressure can cause conditions such as “misting.” Misting occurs when water is turned to vapor rather than droplets at the sprinkler from too much water pressure. Most of the misted water just gets blown away. While a pressure regulator may not help your neighbor's lawn, having one installed by a qualified contractor could do wonders for yours.
- **Install micro-irrigation.** Some of your old sprinklers may be replaceable with micro or drip irrigation components. Your irrigation professional can tell you if micro irrigation is suitable for any of your existing irrigation zones. The water savings from switching may be substantial. Micro irrigation works well in gardens and around trees and shrubs and minimizes evaporative water loss and runoff.

Other relatively inexpensive upgrades include installing check valves on the sprinkler lines and adding matched precipitation rate nozzles. Check valves installed on slopes prevent water from draining downhill and flooding around the lower sprinklers. Installing matched precipitation rate nozzles can save water by ensuring uniform water application in every zone. These nozzles are engineered to deliver water at the same rate, no matter what the pattern. So a zone that has full-circle patterns mixed with partial-circle patterns will be watered evenly, reducing wasteful overwatering.

Plan Right and Plant Right To Save Water

Plan your landscape carefully to save water and money.

Conserving water doesn't have to involve a lot of trenching and plumbing. Whether you own an automatic irrigation system or not there are many ways to save water in a landscape. These tips can be implemented as part of your normal landscaping and gardening routine.

- **Aerate your lawn and around trees** at least once a year to ensure good water penetration. Turn and cultivate soil, adding compost, or fertilizer, when planting. This helps the soil hold moisture and produces healthier plants that require less water to remain strong.
- **Mulch well around plants, bushes and trees.** Using 2-4 inches of mulch reduces evaporation, moderates soil temperatures, improves water penetration, and helps to control weeds that compete for water.
- **Landscape to suit your lot.** Evaluate conditions like sun and shade, dry and damp areas, what size plants you want now and at maturity, and how you want to use each section of your yard.
- **Purchase turf or plant species that have low water requirements and are well suited to the environment and the area of the yard** where they will be planted.
- **Hydro-zone your yard.** That means grouping landscape plants with similar moisture needs in the same area. Separate them from turf areas, which have different water requirements.
- **Plant in spring or fall** when less water is needed to establish new plants. Smaller plants also need less water to become established.
- **Create functional turf areas,** for example, in play areas. Avoid using turf where it's difficult to irrigate properly, such as on steep slopes. Good alternatives for hard-to-irrigate areas are ground covers, perimeter plants and mulch.
- **Plant shade trees** to lower the air and soil temperatures. This will reduce soil moisture loss.
- **Maintain your yard** by mowing, weeding, pruning and irrigating as needed. A well-maintained yard requires less water.

Saved Water Is Money in the Bank

Whether getting ready to install an efficient new irrigation system, or simply looking for ways to save money using an existing system, there are many choices available. Consulting with a qualified irrigation specialist will make those decisions easier. Watering your landscape with a properly planned, maintained and operated irrigation system will save you money *and* you'll be doing your part to help extend the local water supply. Most importantly, whether during *Smart Irrigation Month* in July, or any other time of year, practice better water-saving habits everyday.

For more information on products, services and certified irrigation professionals across the country, visit the Irrigation Association at www.irrigation.org.

Smart Irrigation Systems: A “Greener” Idea



If you're a typical homeowner, you probably put your automatic sprinkler system into the same category as your home's heating and cooling system. You expect it to work reliably and efficiently with minimum fuss. The latest technology offers just that--and more.

A sprinkler system is one area of your home where a little knowledge can go a long way to conserve water while maintaining a healthy yard that's the envy of the neighborhood.

In conjunction with *Smart Irrigation Month* in July, the Irrigation Association® is offering information about efficient irrigation technology and tips. Since it's a peak month for water usage, July is a good time to learn more about making the most of water resources.

The new generation of “smart” sprinkler systems can be viewed as sophisticated communications systems that happen to dispense water, rather than a network of underground valves, pipes and pop-ups controlled by a wall-mounted timer.

Thanks to advances in electronics and communications, sprinkler systems can monitor data, such as climate, site conditions, or soil moisture, and automatically adjust your sprinkler's watering schedule. Smart systems keep your grass green while saving your “green.”

The secret to smart systems is the controller. Smart controllers use either weather and/or site data to automatically determine when and how long to water. Then your sprinklers apply just enough water at exactly the right time in each zone of your yard.

Here are highlights of the substantial benefits that smart controllers offer:

Saves Water

Environmentally friendly smart systems conserve water by watering only as much as needed. Smart sprinklers work with Mother Nature to automatically suspend watering during rain, freezing or high wind conditions or compensate for rainfall. Plus a smart system can keep your lawn and landscape healthier by avoiding the pitfalls of inadequate watering, too frequent watering, or the more common problem of overwatering, which often results in disease or poor root systems.

Saves Money

Because smart systems water only when needed, time the applications to allow water to soak-in, and avoid application when water might evaporate or blow away, you may reduce your annual water bill as much as 30 percent. On top of that, you may qualify for rebates from your local water board or utility for the purchase of specific smart controllers.

Saves Time

Once your irrigation installer has programmed the site data into the smart system, the controller adjusts the watering schedule based upon local conditions and/or soil moisture and by zone. This “set and forget” technology is perfect for frequent travelers and ideal for vacations or second homes used only part of the year.

Adds Convenience

Smart controllers require little direct access, so they provide an excellent solution for sites where it is difficult to access the controller. There's no need to reprogram the controller due to seasonal weather changes.

Upgrading your current controller may be an option. Some new components are designed as easy add-ons to an existing controller, eliminating the need to replace your system's “brains.”

So keep the green where it belongs--on your lawn and in your wallet--with a smart irrigation system. Learn more at www.irrigation.org/smartmonth.htm.

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Irrigation Association® • www.irrigation.org
6540 Arlington Blvd. Falls Church, VA 22042-6638 USA • Tel: 703-536-7080