

- ◆ Switch to drip irrigation for watering shrubs. Drip irrigation is about 20% more water efficient.
- ◆ Automated emergency shut-off devices save water by automatically shutting off the water when something in the irrigation system breaks. They are often used on irrigation systems where a break or valve failure could cause serious damage. They also are used often in locations where a leak might go undetected for days, such as a vacation home or remote location.
- ◆ Separate plants into hydro-zones. A hydro-zone is where all the plants use about the same amount of water and have the same sun and wind exposure. For example, lawn in the sun would be one hydro-zone, the lawn in shaded areas would be another hydro-zone. The irrigation is separated so that each hydro-zone is watered by a different valve. This allows each hydro-zone individually for just the right time needed by the plants without over-watering.



Sprinkler System Tune-up Steps:

- ◆ Check for problems. Turn on each valve, one at a time, and carefully inspect your irrigation system. Look for wet spots that indicate there might be a leaking irrigation pipe. Repair any leaks.
- ◆ Replace controller battery. Most systems have a back-up battery that maintains the time and program during power failures.
- ◆ Straighten any sprinkler heads that are leaning to the side. In most situations sprinkler heads need to be installed so that they are perpendicular to the ground to work correctly. If they lean to one side they may create dry spots and also waste water.
- ◆ Replace any broken or malfunctioning heads. Be sure to replace broken heads with the same brand/model on the same valve circuit.

- ◆ Clean spray-type sprinklers by removing the nozzle from each head and cleaning the screen. The screen will be under the nozzle.
- ◆ Adjust spray-type sprinklers. On top of each spray-type nozzle is a small radius adjustment screw. Turn the adjustment screw to adjust each of your spray-type sprinklers so that they don't spray onto sidewalks or walls. If spray-type heads are creating a lot of mist, try partially closing the adjustment screws by turning the screw clockwise to reduce the misting. Partially closing the adjustment screw will reduce the water pressure inside the nozzle, which will cut down on how much mist is created. After adjusting, make sure that the spray from the nozzle still goes all the way to the next sprinkler. When sprinklers are properly spaced and adjusted, the water from each sprinkler should spray all the way to the next sprinkler in each direction.
- ◆ Adjust the rotor-type sprinklers. The most common adjustment error is to try to create even coverage by breaking up the water stream using the radius adjustment screw. On a typical rotor the radius adjustment screw is located on top of the sprinkler, just in front of the nozzle. When turned the screw drops down into the water stream causing the stream to deform. This deflects the water stream and reduces the distance it shoots from the sprinkler. Turn the adjustment screw clockwise until it is touching the water stream which will change shape when the screw contacts it. Now turn the screw counter-clockwise just enough that it is not touching the stream. This is the proper default position, unless the sprinkler is spraying too far you should leave it in this default position.

Additional information can be found on our website www.harwichwater.com.



IRRIGATION SYSTEMS

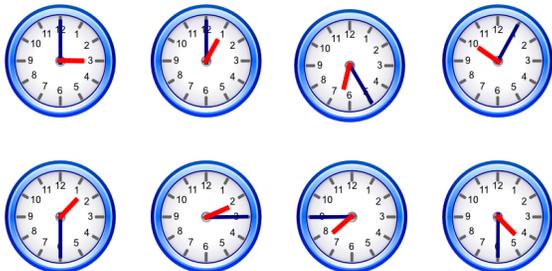


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How to Save Water with your Irrigation System

- ◆ Have your irrigation system audited each season. The auditor should carefully examine and test your irrigation system and provide you with a report detailing the condition of the system and a list of recommendations for repairs and improvements. Some auditors also will provide you with an irrigation schedule showing how often and how long you should water during the year.
- ◆ Adjust your irrigation controller (timer) run time for seasonal changes in weather. Simply making a monthly change can save water and money. Most controllers even have a % key that makes changing the time quick and reasonably painless. Even greater savings come with weekly time adjustments. Run your irrigation system during the early morning Hours. Less water is lost to evaporation when the temperature is cooler. Watering in the evenings can lead to turf and plant disease problems because the water sits on the plants all night.
- ◆ If you irrigate with automatic sprinklers, program your irrigation timer so that it waters in 2-3 short cycles rather than a single long period of time. Even with the reduced total watering time, chances are you will see a significant improvement in how good your lawn looks. Cycling the irrigation gives the water time to soak into the ground and reduces water runoff, it also will help reduce the wet spots in the lawn where lawn diseases get started.



- ◆ Make sure tall grass, groundcovers, or shrubs are not blocking or deflecting the water spraying out of the sprinklers. When the water pattern is deflected by tall grass or leaves it results in uneven watering and water waste. The industry standard for lawns is to use sprinkler heads with a pop-up height of 4 inches or more. Shrubs and groundcover that have grown since the sprinkler system was installed may also block the spray of sprinklers. If you don't want to replace or raise the sprinkler heads, trim the shrubs around the heads so that the spray is not blocked. In shrub areas it is not always necessary for the spray to go over the top of the shrubs. In many cases it is OK for the water to spray into the side of the shrubs, especially if the shrubs are 6 feet or more away from the sprinkler. Shrub roots will often grow out to where the water is. If the shrubs are not wilting and are healthy, then there is no need to change the sprinklers. Consider changing the sprinklers in shrub areas to a drip system, which will use even less water
- ◆ Relocate sprinklers so that they are 4 to 6 inches from the edge of sidewalks, curbs, and patios. In shrub areas they can often be 12 inches from the edge, especially with a mature landscape. This will reduce the amount of spray onto the paved surface and will not create a dry area along the edge of the lawn. It will also reduce the amount of damage that trimmers cause to the sprinkler heads. Almost all stores that sell irrigation equipment will have flexible riser pipes made for relocating sprinklers. Using the flexible riser pipe makes relocating the sprinklers much easier, and the flexible pipe allows the sprinklers to move if a car or heavy lawn mower hits them without breaking a pipe or the sprinkler.
- ◆ Fix leaking valves. Look for water running onto sidewalks or over curbs after the sprinkler system is turned off. If water flows constantly when the sprinkler system is off (often there will be mold or algae growing on the cement or ground) that indicates that a valve is not fully closing. A valve that doesn't close usually is caused by a small grain of sand stuck inside the valve. Clean, or simply replace the valve.

- ◆ Fix low head drainage. Do your sprinklers spit and spew air mixed with water for a short period each time they are turned on? This is caused by a phenomena called "low head drainage". Low-head drainage occurs when the sprinkler system has been installed on a sloped area. After the sprinklers are turned off, the water in the pipes drains out through the lowest sprinkler heads and is replaced by air. The water that drains out is wasted, and often flows into the gutter or creates a muddy area around the lowest sprinkler head or drip emitter. The air is then forced out the next time the sprinklers run. This puts a lot of stress on the sprinklers and pipes. If the heads spit and spew air when the valve is turned on, then you have low head drainage
- ◆ Install a Smart controller. A Smart controller does the work of periodically adjusting the sprinkler operating times for you. It changes the run times to reflect the current water needs of the plants.
- ◆ Install a rain sensor. When it detects measurable rainfall, it turns off the automatic irrigation valves. You can buy a rain sensor almost anywhere irrigation products are sold, most will work with any brand of irrigation controller or timer and any brand of valve.
- ◆ Make sure the irrigation system is properly winterized each year before the cold weather sets in.

