

OUTDOOR WATER USE EFFICIENCY

SPRINKLER SYSTEMS

A sprinkler system can be a convenient and valuable tool when irrigating your landscape. However, if used improperly, it results in substantial amounts of water waste.



Plan your landscaping before you put the pipe in the ground. Where are your lawn areas going to be? Where will your shrubs, trees and flowers be? Make sure you place plants with similar watering needs together--this is called "hydrozoning". When you turn on a valve to water your grass, you don't want your low water-use shrubs to receive the same amount of water.

Not only do you need the same plant types in each watering zone, but you also need to have the same sprinkler heads. Never install a spray head and a rotor head on the same valve. Different head types put out very different amounts of water in the same time period. If you have mixed heads in the same zone, you will need to over-water certain areas to get sufficient water to the entire zone. Talk to certified professionals in the landscaping and irrigation businesses. Sprinkler manufacturers' websites are a great resource when designing your system.



SPRAY HEADS

There are many varieties of sprinkler heads, but three general categories are: spray, rotor, and drip.

Spray heads either pop-up out of the ground or have a stationary fixed head. Spray heads are most commonly used on small areas; turf, shrubs or flower beds. There are heads designed to spray in all different patterns – depending on the area to be watered. The most common spray patterns are full, half and quarter circles. Some heads are adjustable to a wide variety of angles. In addition to circle patterns, spray heads can also spray rectangle and square patterns.

Spray heads put out a lot of water in a short amount of time. This means they have a high application rate. There is a large range of precipitation rates for different types and brands, but the average output is 1.5 to 1.7 inches per hour. Spray heads work well on flat surfaces and with soils that can absorb the water quickly, such as sand. If spray heads are used on steep slopes or with a clay soil, the watering times should be cycled to allow the water to infiltrate into the soil instead of running off onto the street.

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ROTOR HEADS

Rotor heads come in two main styles: stream (driven by a gear) or impact. They are useful in covering large areas, and typically apply water more uniformly than spray heads. Rotors can spray in full or part circle patterns, and some brands are adjustable to a wide variety of angles.

The application rate of a rotor is usually lower than that of a spray head. Typical values are 0.6 to 0.8 inches per hour. This slower output allows them to be used on all soil types with less cycling.



DRIP SYSTEMS

Drip systems have become popular for irrigating non-turf areas. A drip system usually consists of a special tube or hose with holes or emitters along it. These emitters may be spaced with a fixed distance to cover uniform, closely spaced beds, or randomly to only water certain plants.

Drip irrigation can save time and money when installed properly. It applies water directly to the soil, eliminating over-spray onto roads and driveways. The output of drip systems can vary significantly, anywhere from 0.5 to 24 gallons per hour.

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SPRINKLER MAINTENANCE

It is important to do a regular maintenance check on your sprinklers. If sprinklers are not kept in good working condition, they can waste water as well as have detrimental effects on your landscape. Turn on your sprinklers during daylight hours to inspect the system for broken, clogged or misaligned heads.

A common problem with sprinkler systems is pressure. Without correct pressure, your sprinklers will not be able to perform as designed. You may notice large brown areas of lawn where the sprinkler is not reaching, or shooting over.

High pressures can also damage nozzles and heads—sometimes even causing them to break off.

Spray heads should be operating at about 25 to 30 PSI, rotor heads 30 to 50 PSI. You may need a landscape or sprinkler professional to check the pressure at your sprinkler heads.

If your pressure is too high, pressure-reducing valves and heads may be installed, or you may be able to retrofit your existing heads with new nozzles instead of replacing them. Also, consult your manufacturer's instructions and specifications to ensure proper pressure.

