

Irrigation System Water Saving Tips

City of Olympia, Public Works

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Simple changes to your sprinkler system can save a lot of water and also improve landscape health and appearance!

Moving one sprinkler or changing a single nozzle often allows watering to be reduced over a large irrigation zone. The repairs and adjustments described below can often be made without help from a professional.

Follow our tips below for repairing and adjusting your system:

Turn Off Unneeded Sprinklers

As plantings become established or changed, some sprinklers may no longer be needed.

- **Shut off nozzles or install “blanks.”** Blank nozzles are available for many brands (e.g., Rain Bird pop-up sprays, Rain Bird 5000+, Hunter PGPs, and PGJs rotary sprinklers). You can plug other sprinklers by filling standard nozzles with a bit of silicone caulk.
- **Use spray nozzle adjustment screws to shut off flow.** Many newer spray nozzles (e.g., Hunter and Toro) can be shut down by tightening the small screw on top. Older Toro nozzles can be replaced with newer ones with this feature. Variable arc nozzles on sprays can be shut off using the adjustment ring.
- **Remove and cap sprinklers.** Any sprinkler can be removed by excavating the soil around it, unscrewing the sprinkler body, and replacing it with a screw-on plug or cap. Removal prevents lingering drips or damage to shutoff heads that still pop up when the system is running.



Convert Sprinklers to Drip Irrigation

- **Most planting beds can be irrigated more efficiently using drip irrigation.** Drip applies water directly to the soil, eliminating waste from evaporation, spray on unplanted areas, and blockage by foliage. There are many types of drip; the most durable and easy to install is one-half inch flexible tubing with emitters factory-installed at 12-inch intervals or popped in only at plants where needed.
- **To convert in-ground sprinklers to drip:** Turn off or remove and cap all sprinklers except one for every 300 to 400 square feet of planting area. Remove and replace the remaining operating heads with short “risers” and connections for plastic tubing, as illustrated at right. All of the parts needed to convert sprays to drip are available at local hardware and home improvement centers, or through drip irrigation parts catalogs.



Spray to drip conversion; elbow piece (left) screws onto top of riser (right) which can be used to replace sprinkler. Plastic irrigation tube is then inserted into the open end of the elbow.

NOTE: For more information about how to design and install simple drip irrigation systems in home gardens, see the “Drip Irrigation for Home Landscapes” fact sheet.

Replace Sprinkler Nozzles to Match the Area Watered

Installing sprinkler nozzles with a spray radius and pattern (half circle, quarter circle, etc.) that match the area watered can eliminate dry or over watered spots caused by improper nozzles, or stop spraying areas where water is not needed.

- **Always use Matched Precipitation Rate (MPR) nozzles that are designed for your sprinkler brand.** MPR nozzles provide even watering rates between sprinklers with different spray patterns. (Figure 1)
- **Variable Adjustment Nozzles (VANs) for spray heads** can be set to water 0 to 320 degrees of a circle, automatically adjusting water flow to match the area covered. VANs with a radius under 10 feet apply water faster than standard nozzles, so should only be used in zones that are all VANs.
- **New “MP Rotators”** from Hunter (also sold as Rain Bird “Rotary Nozzles”) can replace standard spray nozzles to improve watering uniformity in areas 13 to 24 feet wide; they help fix low pressure problems and heads spaced too far apart. Replace all nozzles in a zone for even coverage.
- **Nozzles on rotary sprinklers** should be changed so that heads that only rotate a half circle only spray half as many gallons per minute as those that cover a full circle (and quarter circle heads should apply only one-fourth what a full circle head applies, etc). (Figure 2)



Figure 1.
Matched Precipitation
Nozzles



Figure 2.
Rotary sprinkler and
changeable nozzles.

Move or Raise Blocked Spray Heads



Figure 3.

Sprinklers that become blocked by plant foliage or thatch buildup create dry spots that can kill plants and runoff that erodes soil. Moving heads to a place where the spray can spread freely is often a simple solution.

- **Put sprinklers or spray nozzles on risers.** Threaded ½-inch PVC risers or Orbit™ adjustable height risers can be screwed into the sockets of existing sprinklers to spray over plants (Figure 3). Spray nozzles or sprinklers can be screwed directly onto the risers. Plastic threaded risers can be purchased in appropriate lengths to raise sprinklers above thatch layers.
- **Move sprinklers from behind shrubs.** Most sprinklers are attached to pipe using flexible tubing and adjustable fittings, allowing them to be moved or raised small distances fairly easily (Figure 4). Moving heads screwed directly to solid pipe requires cutting pipe and installing new fittings.



Figure 4.

Want More Information?

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