OUTDOOR FEATURES

Spray Irrigation

Optional Water Efficiency Measure: May contribute to the 30 percent water efficiency requirement, depending on the chosen WaterSense® Approved Certification Method (WACM).

UNDERSTAND

- Different landscape types can be watered most efficiently with various types of irrigation equipment. Spray irrigation is best suited for turfgrass, as it can be designed to distribute water evenly over uniform turfgrass areas. It is not optimal for planted beds, since the varied heights of shrubs and trees can obstruct the spray from sprinklers. Spray sprinklers consist of a body and a nozzle.
- Spray sprinklers with excessive incoming pressure can waste water due to misting, overspray, and uneven coverage. This could also result in product failure.
- Pressure can be regulated by WaterSense labeled spray sprinkler bodies, which have integral pressure regulation, or with a pressure-regulating valve on the irrigation system. These solutions provide for consistent flow of water and ensure a more uniform distribution of water on the landscape.
- WaterSense labeled spray sprinkler bodies are certified to provide pressure regulation, resulting in a consistent flow rate, in accordance with the *WaterSense Specification for Spray Sprinkler Bodies*.
- To maximize water efficiency, ensure the irrigation system has matched precipitation nozzles. A spray sprinkler nozzle's precipitation rate is the speed at which water is applied to a specific area of the surrounding landscape.

What Is Matched Precipitation?

When all spray sprinkler nozzles within the zone/system have the same precipitation rates, they are said to have "matched precipitation." Designing a system with matched precipitation rate heads/nozzles can save water by ensuring that all areas of the landscape are watered at the same rate. This limits brown spots and prevents the homeowner from applying extra water to alleviate those brown spots.

Other Water-Saving Features

In addition to integral pressure regulation, sprinkler bodies may have optional features such as flow reduction capabilities, integral check valves, and attributes to indicate reclaimed water use. Flow reduction prevents water from flowing when a sprinkler is broken or damaged. An integral check valve prevents water from flowing out of the system at lower elevations. Both are beneficial for operating an efficient irrigation system.

BUILD

- **SPECIFY** models of spray sprinkler bodies that have earned the WaterSense label, using the WaterSense Product Search Tool at www.epa.gov/watersense/product-search for reference.
- **WORK** with an irrigation professional certified by a WaterSense labeled program (found at www.epa.gov/watersense/findapro) to design and install the irrigation system.
- **INSTALL** either WaterSense labeled spray sprinkler bodies or a pressure-regulating valve to maintain recommended operating pressure.

- **SPECIFY** and **INSTALL** spray sprinkler nozzles with matched precipitation to deliver enough water to cover the entire area of the landscape. This is especially important when a landscape has sprinklers with varying coverage (e.g., half- and quarter-arc sprinklers).
    - Ensure matched precipitation throughout each spray irrigation zone by installing nozzles from the same model family produced by the same manufacturer. For matched precipitation, sprinkler spacing must be consistent, flow rates must be based on coverage, and the pipes need to deliver water at a uniform pressure to each sprinkler.
    - See "What Is Matched Precipitation?" on the previous page for more details.

- **ENSURE** that spray sprinkler bodies have a four-inch or greater pop-up height, as they need a certain amount of clearance over the turfgrass surface to operate correctly.
- **AVOID** using turfgrass and spray irrigation on strips less than four feet wide, because it is difficult to irrigate narrow strips efficiently without creating overspray.
- **RESTRICT** installation of spray irrigation on slopes in excess of four feet of horizontal run per one foot vertical rise (4:1 or 25 percent), because the flow rates associated with sprinklers are often a source of runoff on steep slopes.

VERIFY

- **CONFIRM** that spray sprinkler bodies are WaterSense labeled. Use the WaterSense Product Search Tool at www.epa.gov/watersense/product-search to search for the makes and model numbers for all spray sprinkler bodies installed in the landscape.
- **VERIFY** that pressure-regulating valves are regulating to the appropriate operating pressure recommended for the spray sprinkler nozzles, if applicable.
- **IDENTIFY** whether spray sprinkler nozzles have matched precipitation using manufacturer specification sheets or other literature. Verifiers can suggest changes that can help achieve matched precipitation.
- **CHECK** that the station or zone pressure is within plus or minus 10 percent of manufacturer-recommended operating pressure for the installed product (e.g., spray sprinkler body and nozzle). Verifiers can test a representative zone of the irrigation system.

Learn More

Visit WaterSense's Spray Sprinkler Bodies web page at www.epa.gov/watersense/spray-sprinkler-bodies to learn more.

**NOTE: Consult with the Home Certification Organization for specific verification protocols.*