Go with the **Low Flow**: Drip Irrigation

places emitters into blank tubing.

This type of drip irrigation works best for random patterns that require snaking tubing around plants or avoiding hardscaped areas.

Be sure to keep all the emitters on one valve zone at the same GPH discharge rate. Emitters typically range between 0.5 GPH and 2.0 GPH.

If you have selected 0.5 GPH emitters and your plant requires 2.0 GPH, then you add three additional emitters for a total of 4 emitters to achieve the required flow rate.

If plants are spaced very far apart, and weeds are a concern, then use on-line emitters.

Image courtesy of Rain Bird Corporation

emitters are built into the tubing itself.

This type of drip irrigation works best for large groundcover areas, uniform planter areas, and when assembled into a grid pattern.

The technology keeps root intrusion from occurring into the line. All of the emitters in the tubing discharge at the same rate and are pressure compensating. Thus, the emitters do not irrigate until the entire line is filled with water, guaranteeing uniform distribution.

In the very early establishment of the garden, there may be more weeding to be done with this system because water is emitted throughout the line, regardless of whether or not there is a plant desiring the water.

Drip Irrigation delivers water directly to roots.

Installations of subsurface (or under at least 3 inches of mulch) systems may be the most efficient way to irrigate nearly every type of garden area. In order to qualify for the rebate, spray irrigation systems must be converted to water efficient mp rotors, micro-spray, drip irrigation, or eliminated completely. Since drip irrigation is covered with soil or mulch, water does not evaporate as quickly as it might if it were applied at the surface by spray. The tubing is flexible, so it can be made to accommodate a wide variety of irregularly shaped areas or rectangular areas when laid in a grid pattern.

Gallons Per Hour (GPH) Drip systems apply water in GPH. They need to run for longer periods of time than spray systems. However, the actual run time must always account for how fast water is applied (precipitation rate) and eliminating runoff (*see p. 66*).

Challenges include the possibility that drip systems could apply water too quickly for the soil to absorb, so careful consideration is required especially when dripline grids are installed (*see p. 35*). Drip irrigation operates most efficiently at low pressure (between 15 and 30 psi). Optimal performance requires the use of pressure regulation and a filtering system to keep the emitters from becoming clogged. Most low flow valves have pressure reduction and filtration included, so replace all valves that are not specified for low flow systems.

What is a Tattle-Tale?

Screw a white cap (replacing the nozzle) on to the pop-up riser of one sprinkler head on each line when converting to drip.

When the drip irrigation is running below the mulch, the tattle-tale will pop up and let you know that the irrigation is on.

What is a Low Flow Valve?

Irrigation valves are designed to work within a certain pressure range (pounds per square inch or psi) and flow range (gallons per minute or GPM). If you redesign your system and use drip irrigation, the flow through the valve may be so low that your existing valve will not operate effectively and may get stuck in the “open” position, wasting water. If you currently have flow lower than 5 GPM per valve, look for valves specifically marked as "Low Flow (Pressure) Valve" to replace them.