

Sprinkler to Drip Retrofit

Step-By-Step Instructions: See back for details.



Half a typical home's water usage is used to water the garden.

Converting sprinklers to drip uses 60% less water.

Sprinkler to Drip Retrofit

www.sustainable-sm.org/landscape

Tools/Parts:

- Flags
- Cutters
- Wrench
- Anti-Siphon Low Flow Valve
- Rain Bird Retro 1800 Kit
- 1/2 inch in-line Drip Tubing
- Rain Bird Easy Fit Compression Tee
- Rain Bird Easy Fit Adaptor (MDCF50FPT for 3/4")
- Elbow Compression Fittings
- Marlex Street Elbow
- Rain Bird PA 80 Adaptor
- White PVC Caps
- Galvanized Stainless Steel "U" Stakes
- "Figure 8" Drip Tubing Closure
- Mulch

Products can be found at Smith Pipe & Supply, Aqua-flo or Ewing Irrigation.



Before you retrofit...

Look at each sprinkler and write down the brand name and model number, i.e. Rain Bird 1800, Toro 570, etc. This will determine the parts you'll need in Steps 8 & 9.

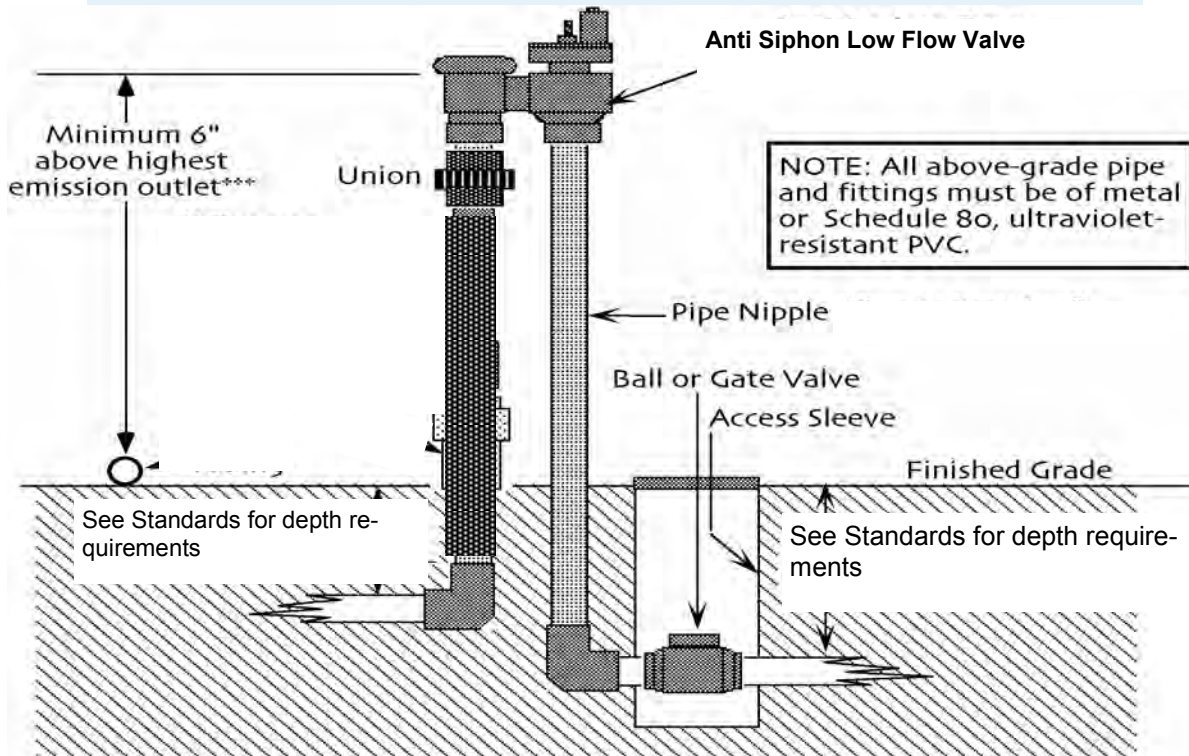
- 1** Drip tubing that has warmed in the sun is easier to handle. Use 1/2 inch drip tubing with the emitters built into the tubing. The flow should not exceed 2 gallons per hour.
- 2** Replace existing sprinkler valve with low flow anti-siphon valve and install. Anti-siphon not necessary if master backflow device currently exists. See Detail A; page 3.
- 3** Turn on system. Mark each sprinkler with a flag. Then identify which sprinkler is the last to receive water on the line. Place 2 additional flags at that one.
- 4** Choose a sprinkler conveniently located to install the drip retrofit kit. Place 1 additional flag at this one for a total of 3 flags. Often a drip grid is best run off a corner sprinkler.

- 5** Convert the last sprinkler on the line (3 flags) to a tattletale sprinkler. Unscrew the spray head, install a *Rain Bird PA 80 adaptor*, and screw on a white PVC cap onto the adapter. When your drip system is running, this fake sprinkler will pop-up letting you know that the system is working properly. See Detail B; page 3.
- 6** Unscrew the top of the sprinkler in Step 4. Remove the insides of the sprinkler.
- 7** Replace with the *Rain Bird Retro 1800 Kit*, *Marlex street elbow*, and a *Rain Bird Easy Fit Compression Tee and Adaptor*. Note, if you have Toro or Brass sprinklers, you need to replace the entire sprinkler head with a Rain Bird 1800 sprinkler that comes with the Rain Bird Retro 1800 kit.
- 8** Find the other sprinklers with the flags and cap them;
 - For Rain Bird and Hunter sprinklers -unscrew the tops and replace with the caps from the *Rain Bird Retro 1800 kit*.
 - For Toro sprinklers—use Toro caps.
 - For all other brands, you'll need to remove the sprinklers and install PVC caps on the riser.
- 9** Take the drip tubing & push into the compression tee on both sides. Maximum of 300 feet per valve.
- 10** Make a grid with the drip tubing. See Detail D; page 4. You may need elbow compression fittings to make the 90° turn in the tubing. For trees wrap a drip line around the entire tree but leave at least 12" from the trunk. See Detail C; page 4.
- 11** Stake down the drip line every 3 feet with the galvanized stainless steel U hooks.
- 12** Flush the system. Remove the cap of the tattletale then turn on system to let the water flow then replace cap. Then tie-off each end of the drip tubing with the "figure 8" part.
- 13** Add 2" of mulch to cover the tubing and exposed soil.
- 14** Change the automatic timer – use the Santa Monica Watering Schedule as a guide. Visit www.sustainable-sm.org/landscape.

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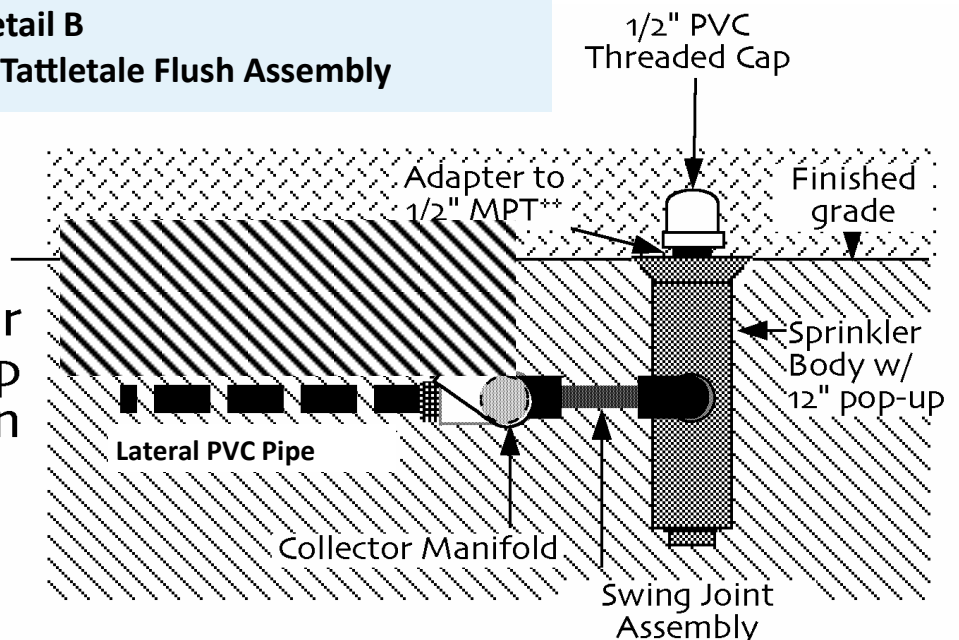
Detail A Valve Assembly for Residential Drip Irrigation System*



* The minimum flow rate of the valve must be equal to or less than the flow rate of the zone.
 ** Optional if Master Device installed at Point of Connection
 *** For container zones this dimension must be at least six inches above the rim of the highest container.

Detail B Drip Irrigation System Tattletale Flush Assembly

TFA Assembly for Linear or Grid Drip Installation



** Rain Bird PA-80 or equivalent

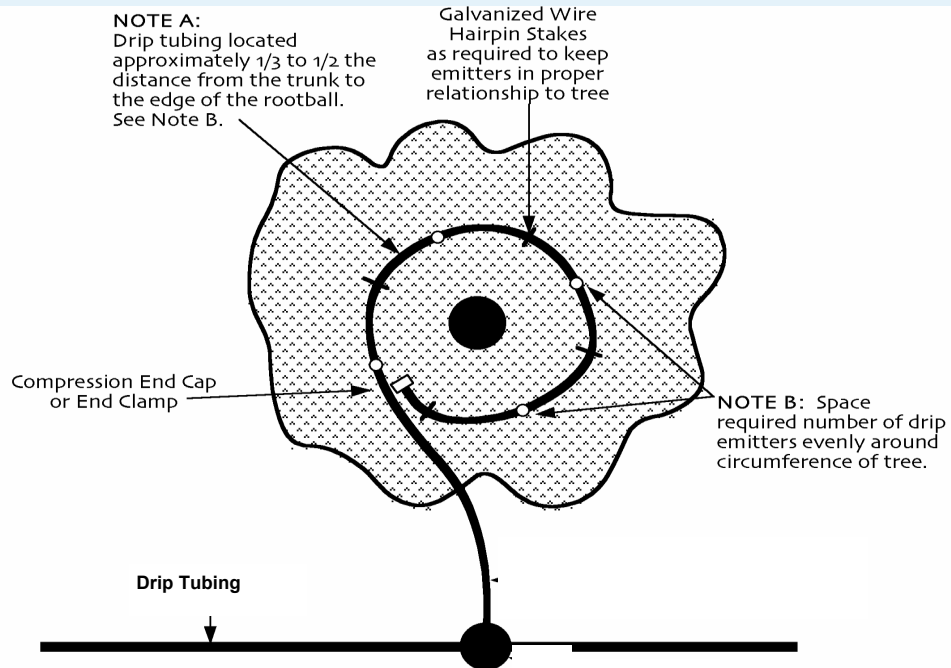
City of Santa Monica 2010
 These details are not to scale.

*Commercial and Multi-Family Properties should follow the recommendations at www.sustainable-sm.org/landscape

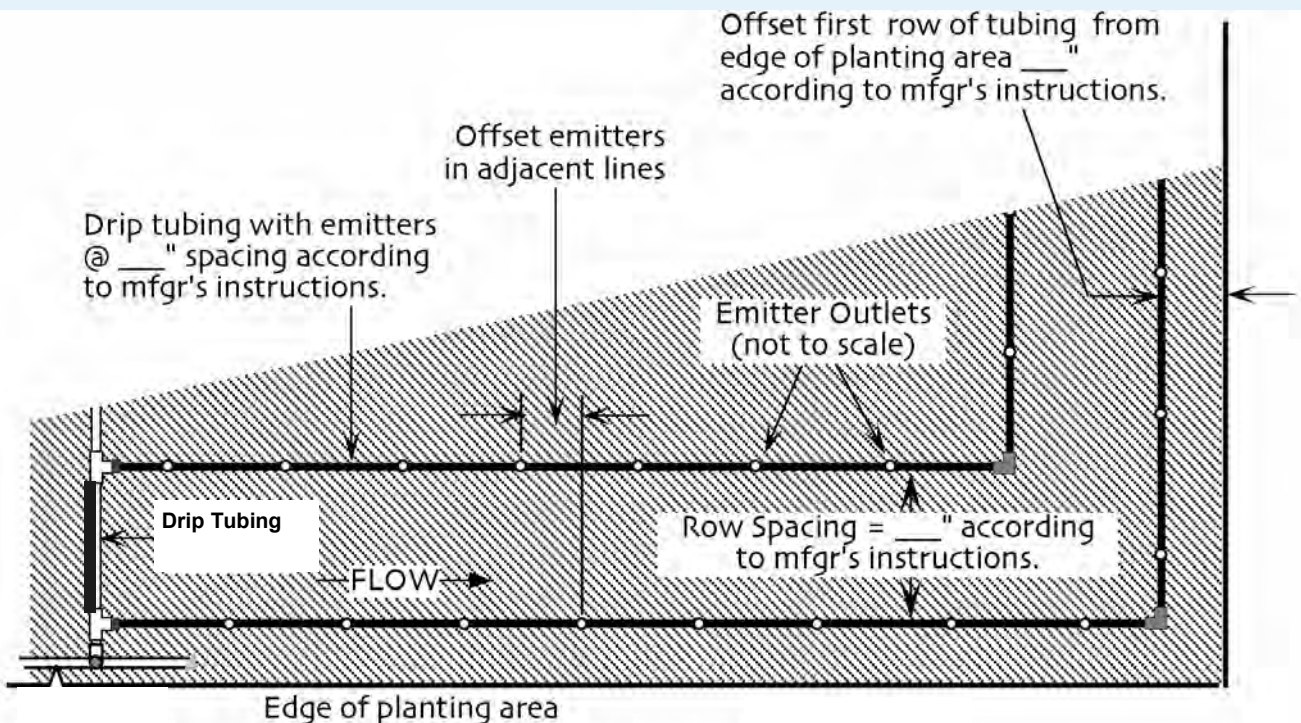
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Detail C Drip Tubing Around a Tree



Detail D Linear Grid for Drip Irrigation



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