Types of Landscape Irrigation

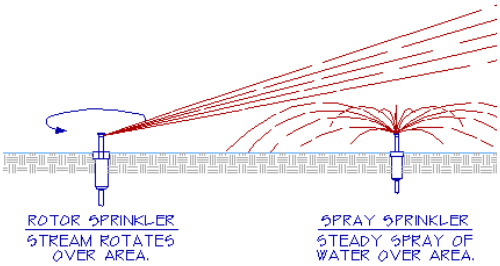
Hand-Held Garden Hose Traditional method of water delivery from hose bib at house to point where application is desired. Usually combined with nozzle or watering wand to provide spray or mist application with hose-end valve. Other attachments possible for landscape watering, such as single rotary or oscillating sprinklers for lawn areas.

Pros: Effective for spot watering and new plantings. Unlimited reach based on available hose length. Provides foliage wetting to increase humidity around plants.

Cons: Effort required to pull and wind hose. Need care in pulling hose to avoid plant damage. Automation limited to water-flow timer. Wet foliage (unless water is applied early in day or directed to plant base) can increase disease incidence. Need to match application rate to soil infiltration rate.

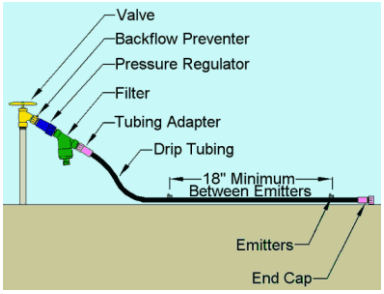
Sprinkler Irrigation Water is directed upward into air to fall as drops onto plants and soil, as with natural rain. System uses higher water pressure and flow rate and combines multiple sprinkler or spray heads together. Larger landscapes benefit from professional design and installation to match application areas and water delivery to plantings and to reduce water waste.

Pros: Most effective for larger turf areas and where spreading ground covers are planted. Underground, permanent, and out of the way of equipment. Sprinkler head choices available to adjust application near hardscapes (e.g., 90º) and shrub and flower beds (e.g., bubbler). Readily divided into irrigation zones to accommodate different plant-water needs and available water volume. Readily automated.



Cons: Upward water direction increases loss to evaporation (as much as 20-50%), so early morning application is recommended. Higher cost to install and needs regular maintenance, including winterizing.

Drip Irrigation Water is applied directly to soil over plant roots at low pressure and flow rate. Design may be with homeowner kit or professional for larger systems. Apply to surface with emitters placed as needed and bury in mulch.



Pros: Most effective for beds with annual and perennial plants. Reduces loss to evaporation (~5%) and runoff. No foliage wetting. Water directed to desired plant roots for less weed stimulation. Lower cost of installation. May be removed at end of season or winterized. Manual control or readily automated permanent installation.

Cons: Filtration (even with municipal water) and pressure reduction critical. Not as effective as sprinklers for large planting areas. Rodents may damage smaller polyethylene tubes.

Soaker (or Ooze) Hose Type of drip irrigation based on a porous rubber hose that leaks water over its entire length. Same concepts of lower pressure and flow rate apply. May join hoses end-to-end to increase irrigation area.

Pros: Same as for drip irrigation above with wider wetting area along length of hose. May be used with plants in groups or in rows, e.g., vegetable gardens. Not as sensitive to plugging as drip emitters.

Cons: More area watered than with drip emitters, resulting in more potential weed stimulation.