

## Drip Irrigation

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## Why Irrigate?

- Unless you landscape with the native plants that were on the site where your home was built before any disturbance, you will have to water.
- Planting native, edible, pollinator friendly, habitat encouraging is a wise use of irrigation.

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## Why Drip Irrigation?

- Drip is precise
- Efficient
- Direct
- Flexible
- User Friendly
- Easy to repair

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### Parts of the system

- Manual valve. This is the first part used to separate your irrigation system from from your potable water supply.
- Piping to zone valves. PVC is typically used here.
- Zone valves. These are the valves that control irrigation to various areas of the landscape.

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### Vacuum Breakers

- This is the part that “sticks up and goes through this brass angle thing with a hexagonal screw cap on top”.
- The vacuum breaker is what keeps the irrigation water from flowing backwards into your home supply.

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### Sand Filters

- The sand filter keeps particulates from entering your drip system with fine mesh screens.
- These screens may need periodic cleaning or replacement.
- For drip systems this part is often called a “Y” filter.

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## Pressure Regulators

- The pressure regulator's function is to reduce the static pressure from the source to a level that provides optimum function to a drip system without "blowing off" the emitters or the emitter flag caps.
- Generally, 20 and 30 psi (pounds per square inch) are the most commonly used.

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## Poly Supply Tubing

- Poly tubing is used to supply the water throughout the drip system. Most commonly used is a 3/4" or 1/2" size.
- Associated compression fittings are utilized to customize the layout of the supply line.
- Connectors, "T's", elbows, and end caps are the major fittings used.

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## "Spagetti"

- This is the term most use for the 1/4" tubing that is connected to the poly supply with couplings and ends in an emitter or emitters to each plant.
- It is best to "punch" into the 3/4" poly at a 45 degree angle for the insertion of the coupling. This reduces breakage from overhead pressure.

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## Emitters

- There are a large number and variety of emitters available, disc, flag, micro spray, adjustable, etc.
- Flag emitters in 1 gph (gallon per hour) and 2 gph are the most efficient and long lasting in my experience.
- By installing the appropriate gph on each individual plant, zoning is simplified.

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## Zoning

- Having more than one “zone” is usually required due to variables such as static water pressure, size of landscape, and types of plantings.
- These could be tree and shrub zones, perennial beds, an herb or vegetable garden, or a very xeric area.

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## Order of Installation

- The most practical order of installation of a landscape project is to first do the demolition, removals and grading.
- Planting follows grading.
- Irrigation follows planting. Drip supply tubing should be buried 4” - 6” deep.
- Mulch and fabric (if used) next, leaving holes large enough for mature plant.

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## Maintenance

- Emitters should show approximately 2" – 3" above mulch at base of plant to observe function.
- Plant will hide emitters as it matures, but it will still be accessible for maintenance and repair/replacement.
- Inspect system on a regular basis to ensure proper function.

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## Sources

- It is recommended that you purchase all of your irrigation system components from an irrigation supplier, not a hardware store or "Big Box".
- This is to assure consistent compatibility of all associated parts of the integrated system.

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## Issues

- Disc emitters clog easily and cannot be cleaned, so you must replace them.
- Micro sprays (adjustable or static) are not a good option except for limited shallow rooted ground cover areas (think iceplants).
- Incorrect gph can be fatal to plants, too much or too little.

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## Applications

- Any zone in your landscape can be effectively and efficiently watered with drip irrigation.
- There are products such as “Netifim” and “Turf Bubblers” for irrigation of some lawn type installations.
- It is easy to separate water use zones appropriately with drip.

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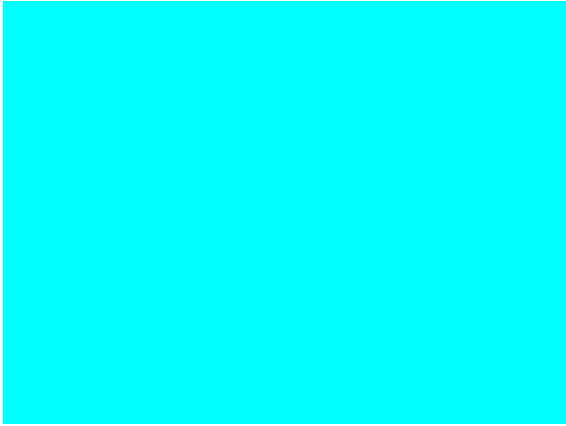
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