Whether you are doing this yourself or getting help from a professional, this guide will help you improve watering efficiency while creating a beautiful water-wise landscape.

**STEP ONE: LOCATE ZONE TO CONVERT**

- Run irrigation system to identify which heads are on the zone to convert. After heads are located, turn the zone off.

- Locate the existing underground line to be connected by carefully digging near the head closest to the supply valve.

- Make sure there are no other tees or heads between where the drip system will start and the supply valve before cutting into the existing buried pipe. This is where the pressure regulator and filter assembly will be installed.

- You may remove (or abandon in place) the existing pipe and heads from this zone as they are now non-functional.

**STEP 2: INSTALL PRESSURE REGULATOR, FILTER ASSEMBLY AND VALVE BOX**

- Attach pressure regulator and filter assembly to both the existing line and the drip pipe using adapters and pinch clamps.

- Make sure the pressure regulator is installed in the proper direction as indicated by the flow arrow on the regulator.

- Place the new valve box over the pressure regulator and filter assembly to allow for periodic cleaning.

- Replace soil around the valve box, allowing the drip pipe to gradually become shallower until it surfaces, making sure it does not kink.

- Use teflon tape for all threaded connections to prevent leaks.

**MATERIALS NEEDED**

- Pressure regulator and filter
- Teflon tape
- Small valve box
- Pipe cutter
- Solid drip pipe (1/2” or 1”)
- Pinch clamps and crimp tool
- 6” landscape fabric pins
- Flush caps
- 1/2, 1 and 2 gallon per hour emitters
- Emitter insertion tool
- 1/4” micro tubing (spaghetti line)
- 1/2” inline drip pipe which check valves (for inline drip irrigation)
**STEP 3: INSTALL DRIP PIPE AND EMITTERS**

Option 1: Point source drip irrigation (best for areas that are less densely planted).

- Uncoil the drip pipe and wind throughout the planting area, laying within three feet of plants.
- Secure the drip pipe to the soil surface with 6-inch landscape fabric pins.
- Connect the drip pipe back into itself with a tee to maintain uniform flow and pressure.
- Using the emitter insertion tool, insert the emitter into the drip pipe. Give it a tug to make sure it's well-seated. If the drip pipe is not situated over the edge of the root ball, a 1/4 inch micro tubing extension is needed. Keep micro tubing extensions to less than three feet.

Option 2: Inline drip irrigation which is used for densely planted areas.

- To maintain uniform flow, install solid drip pipe as a “supply header” that runs perpendicular to the inline drip pipe in the step below.
- Attach the inline drip pipe to the solid drip pipe with couplers and pinch clamps.
- Wind the inline drip pipe around the planting bed, placing the pipe close to the plants. Space between the pipes should be 12 inches for sandy soils and 18 inches for clay soils. Secure the inline drip pipe with 6-inch landscape fabric pins.

**STEP 4: CLEANING, TESTING & SCHEDULING**

- When all the drip emitters and inline drip pipe have been installed, add flush caps at the ends of the lines for cleaning and draining.
- Turn on the zone with the caps removed to let the water flush out any debris. Replace the caps and turn the system on to test. Fix leaks.
- After you test the system, apply 3 to 4 inches of mulch. Leave some soil uncovered around the base of each plant to avoid smothering.
- Program your controller to run the converted drip zone according to the Watering Guide for Drip Irrigation fact sheet.

Visit csu.org for more water-wise information, including irrigation rebates and instructional videos.