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Folsom Saves
IT'S OUR NATURE

An Irrigation Primer

Understanding your Sprinkler System



Replacing an Irrigation Controller



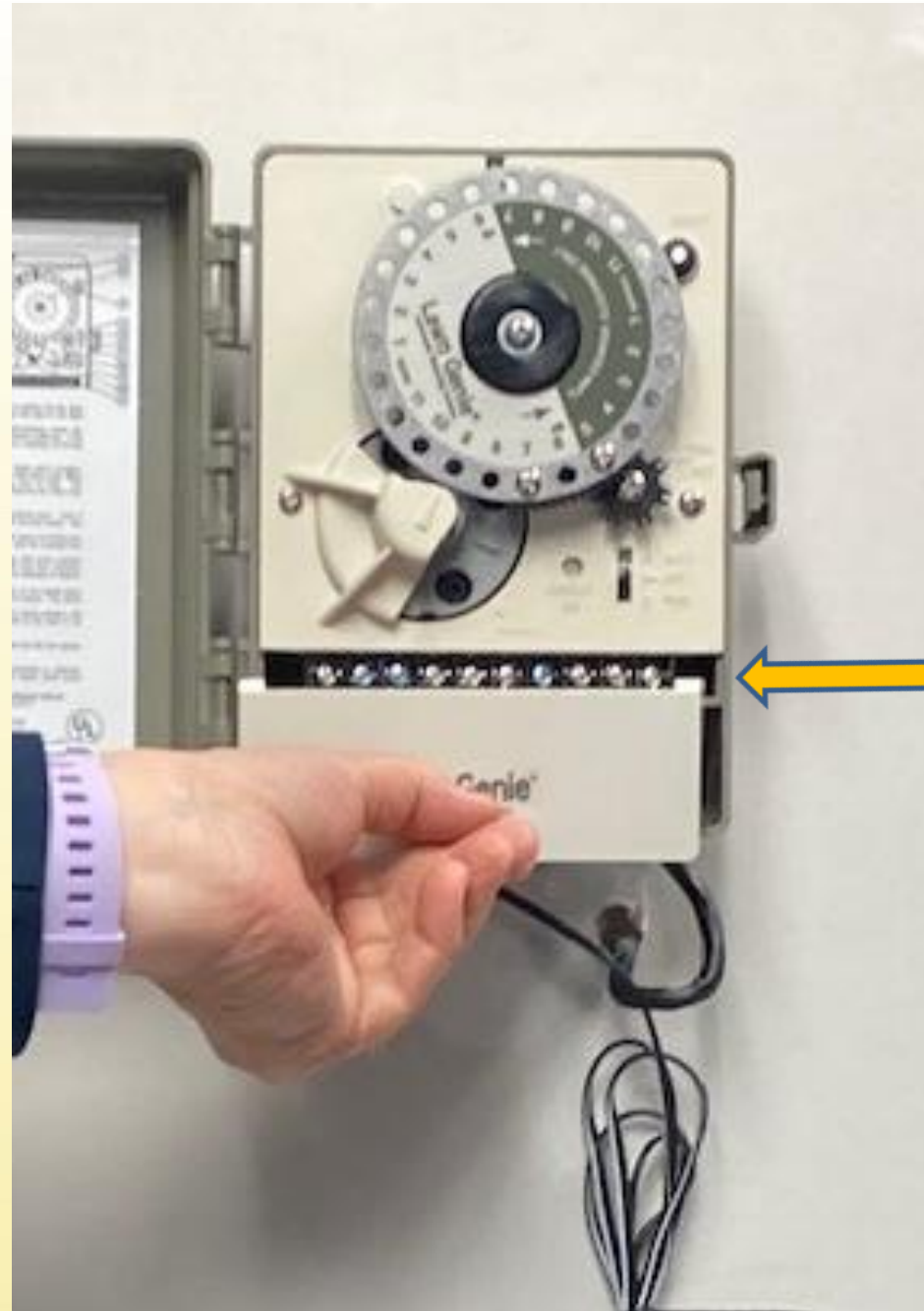
First things first
Unplug the
Controller



Open the controller

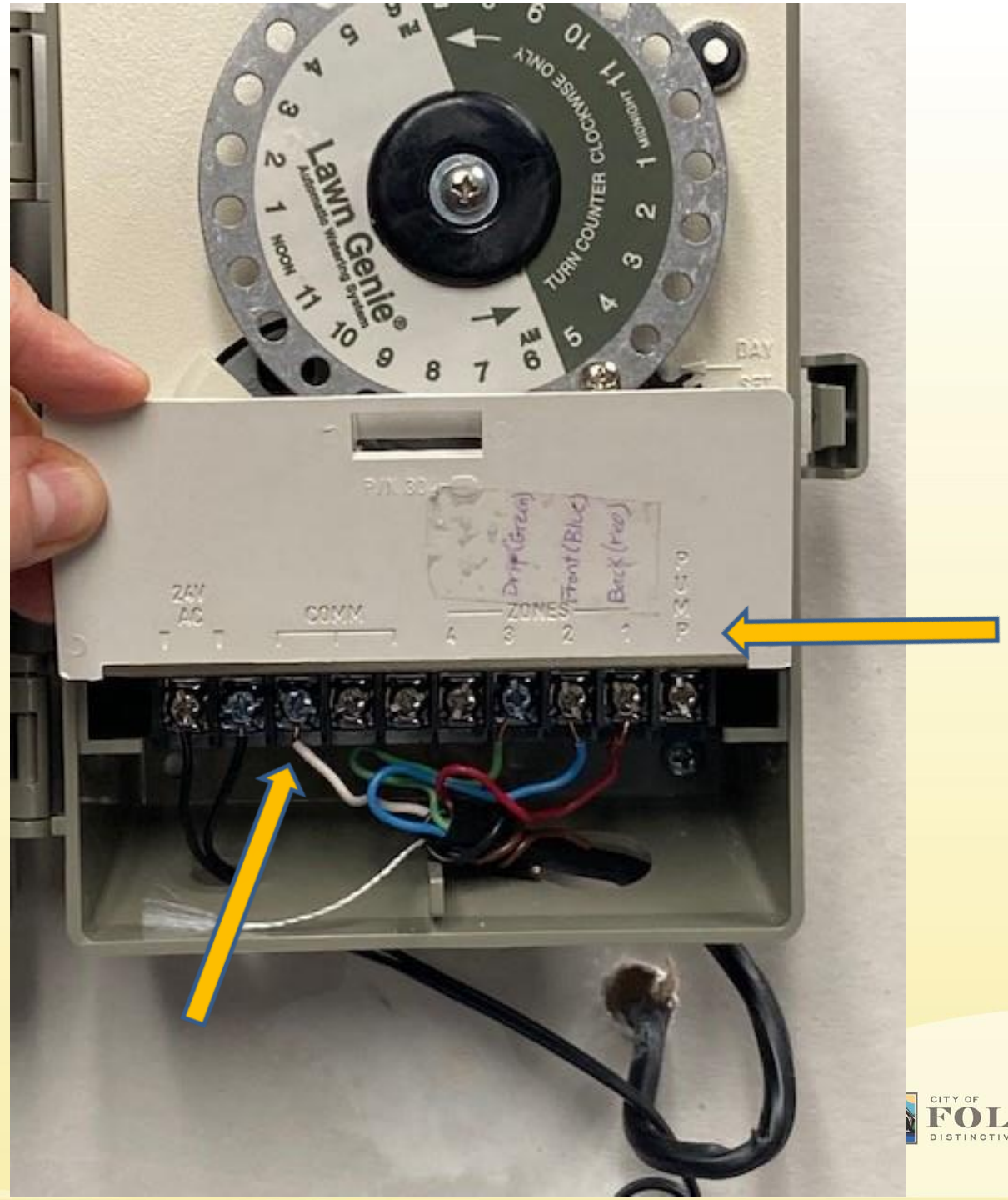


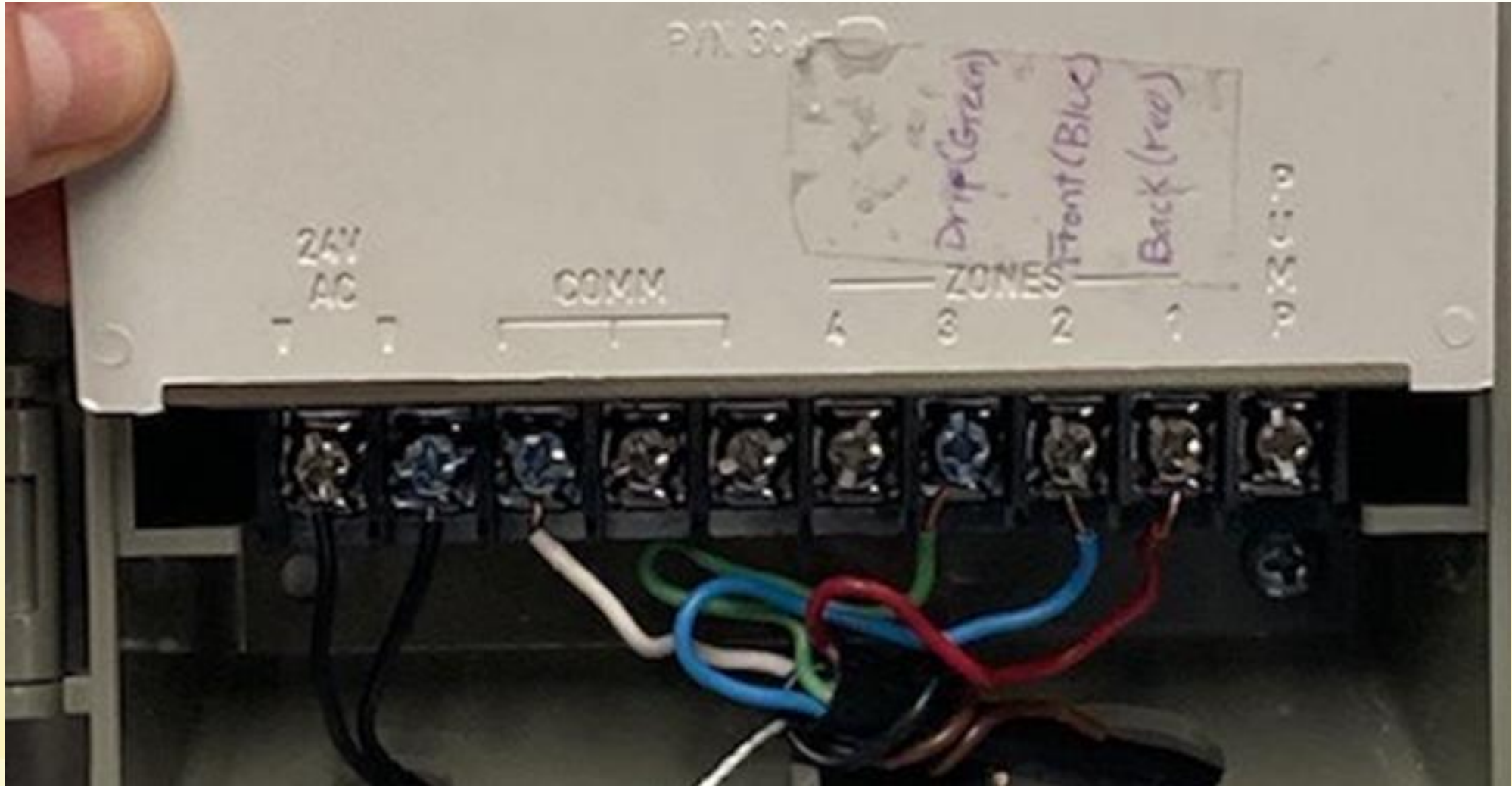
Remove or open the faceplate to expose the connections



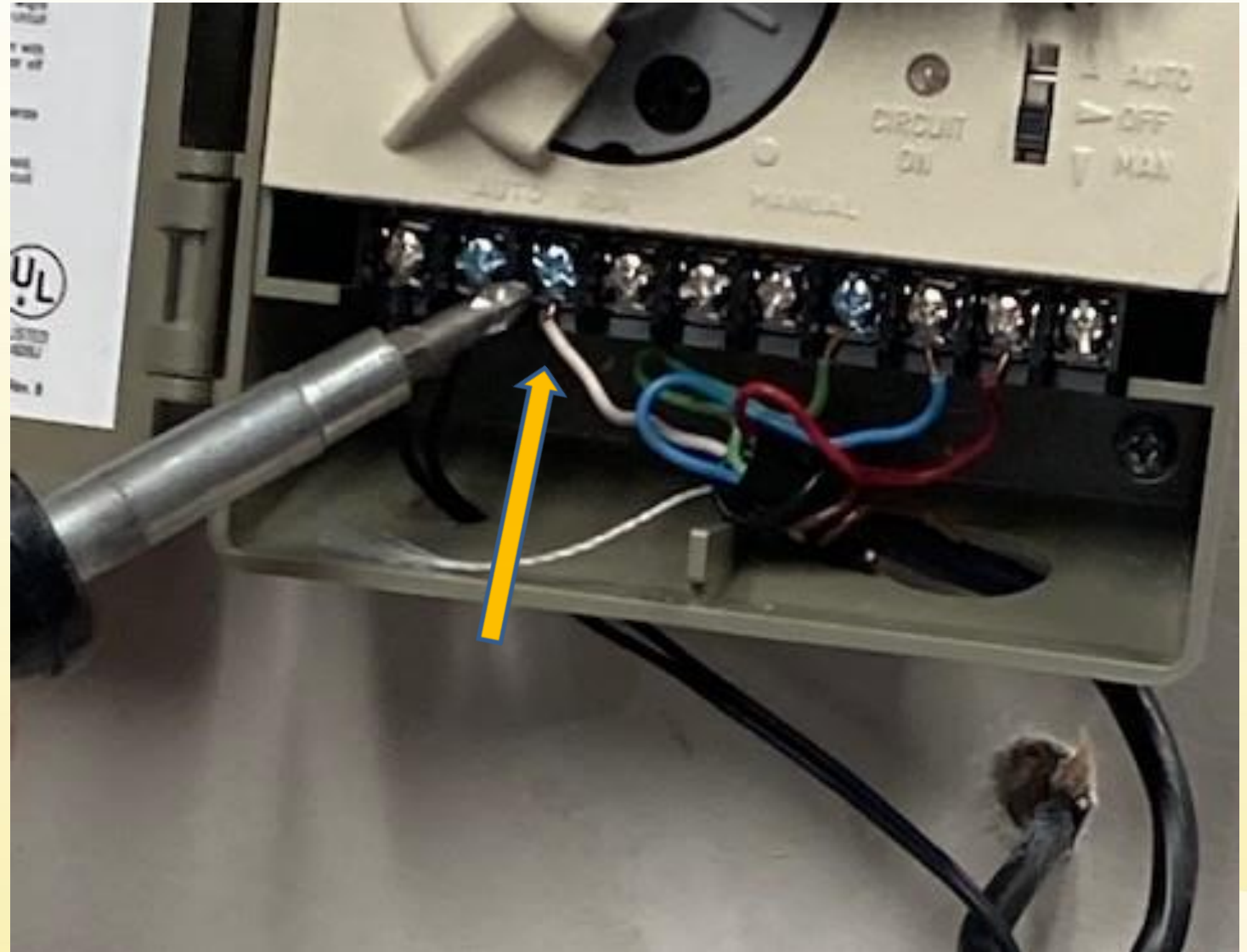
Check the wiring labels. Make note of the colors and which post they are attached to

*The common wire is the most important





Disconnect the wires.

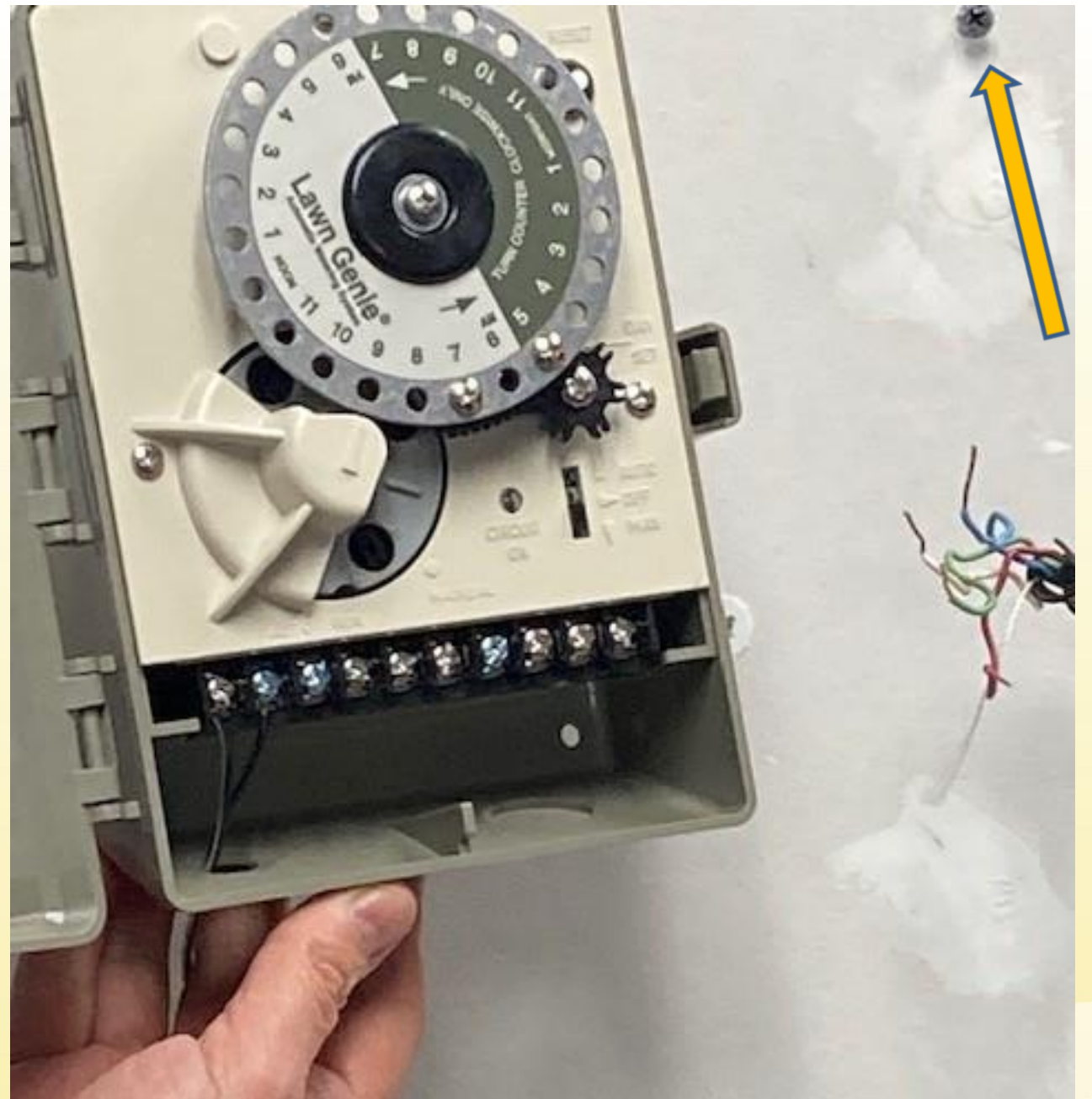


Remove the screw
securing the
controller to the
wall

*After disconnecting the
wires



Remove the controller by lifting it off the hanging screw

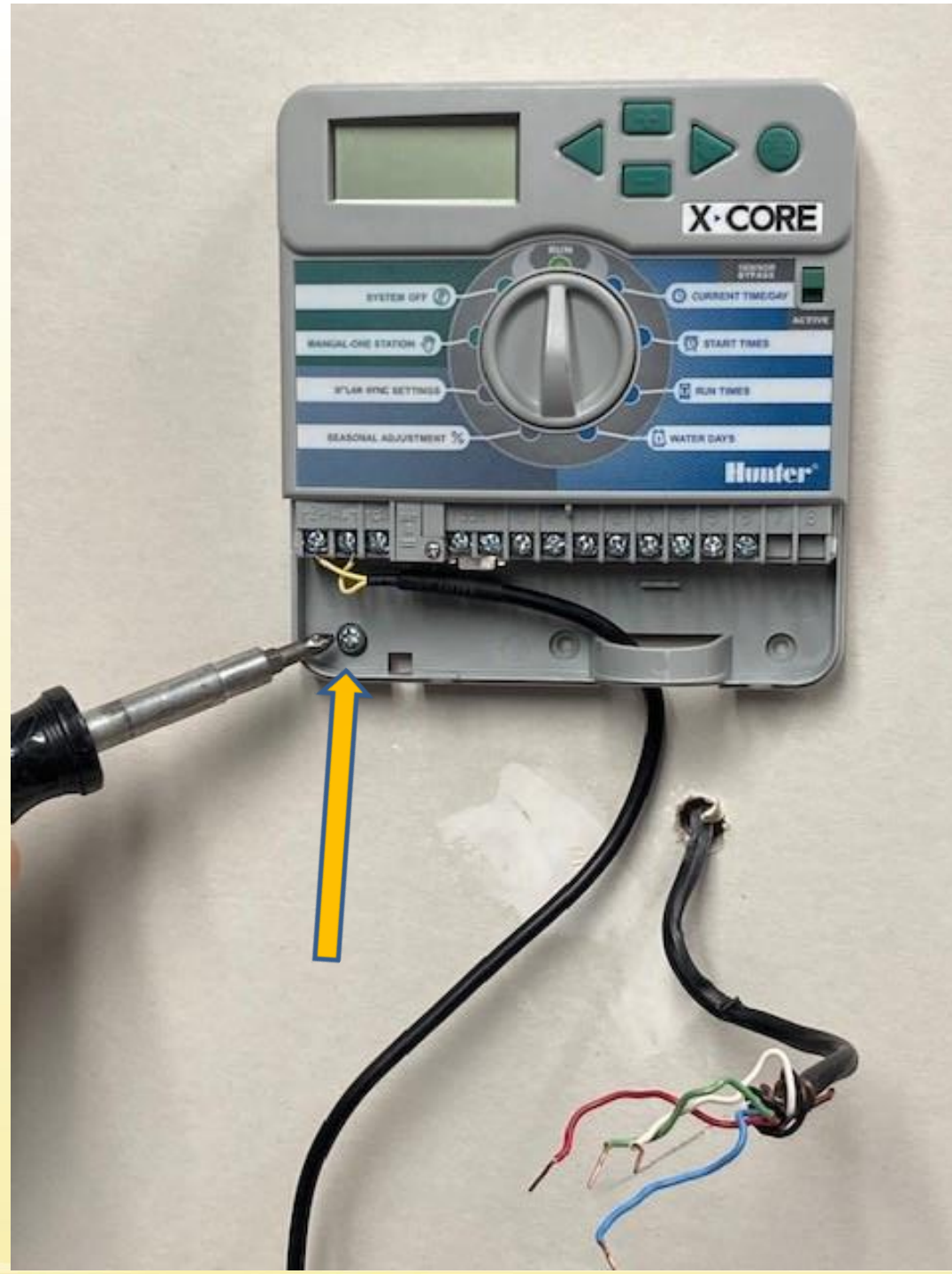


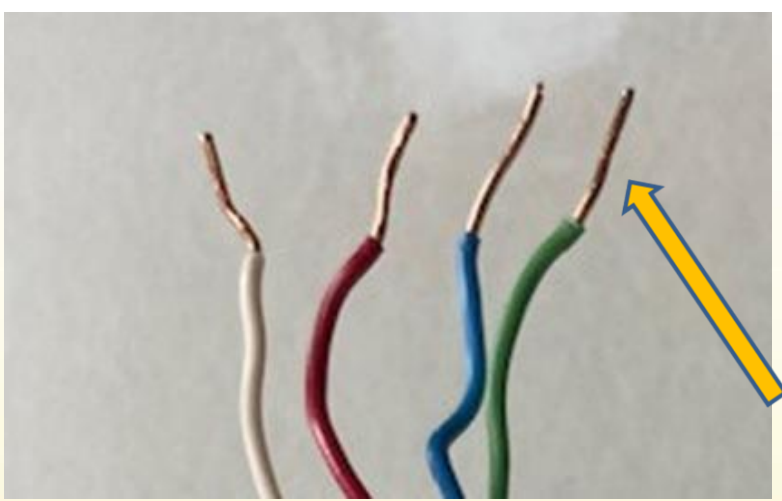
Hang the new controller

*Note how the controller will slide over the hanging screw

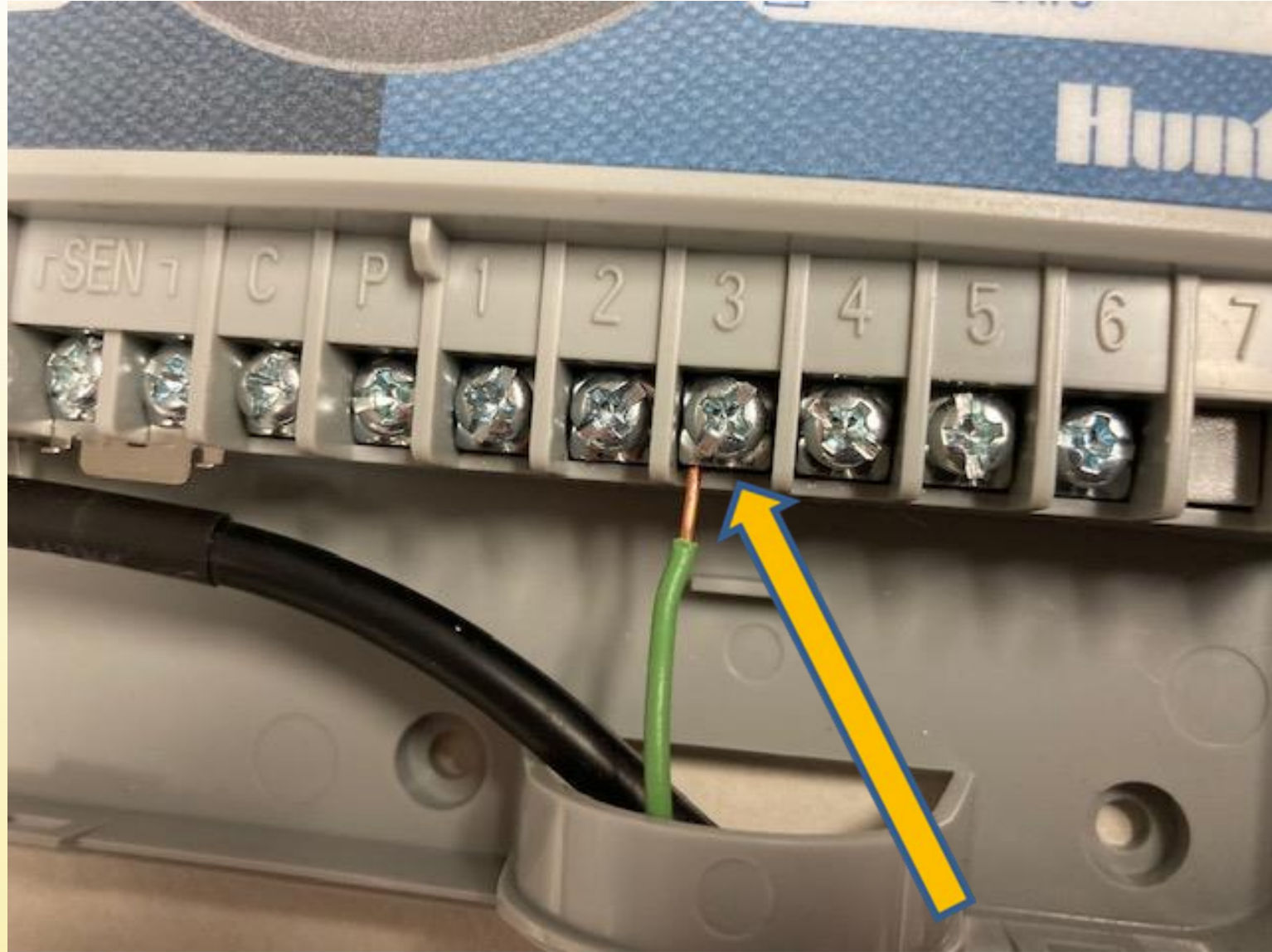


Remove the face plate and install the securing screw





- Bare wire should remain straight
- Install behind the square washer behind the screw head



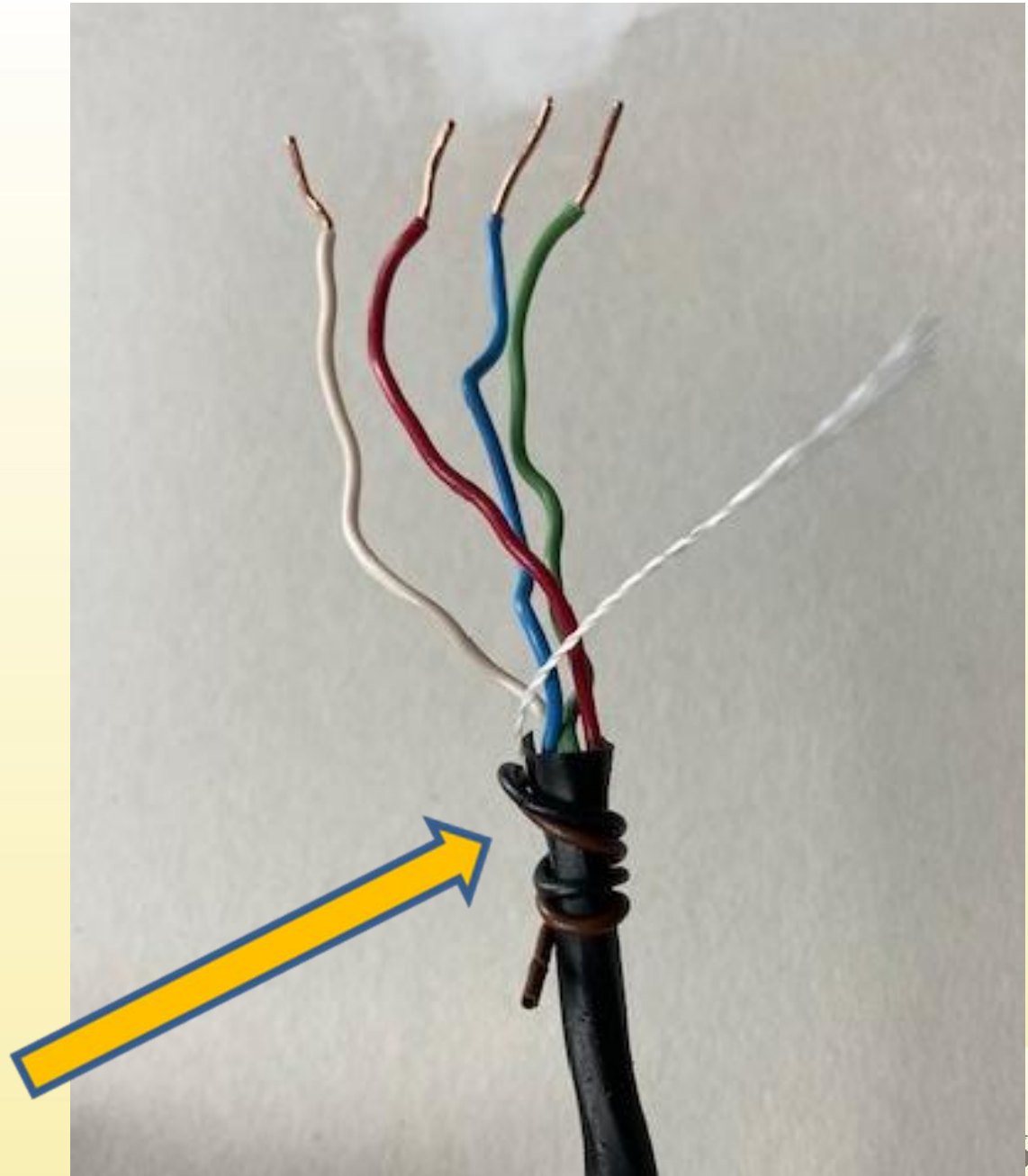
Pull the wires into the controller and reconnect according to the original pattern.

*Be sure the common wire is in the proper place. The white one in this example





- Residential irrigation wire normally comes in a bundle with multiple wires in one housing
- There may be more wires than you need
- Do not strip unused wires
- Do not install wires into unused posts
- Secure unused wire by wrapping around bundle

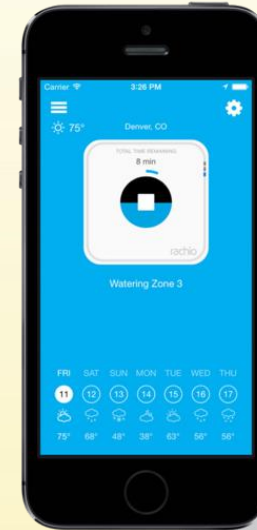




Close it up, plug it in
and you're good to
go!



The Evolution of Irrigation Controllers

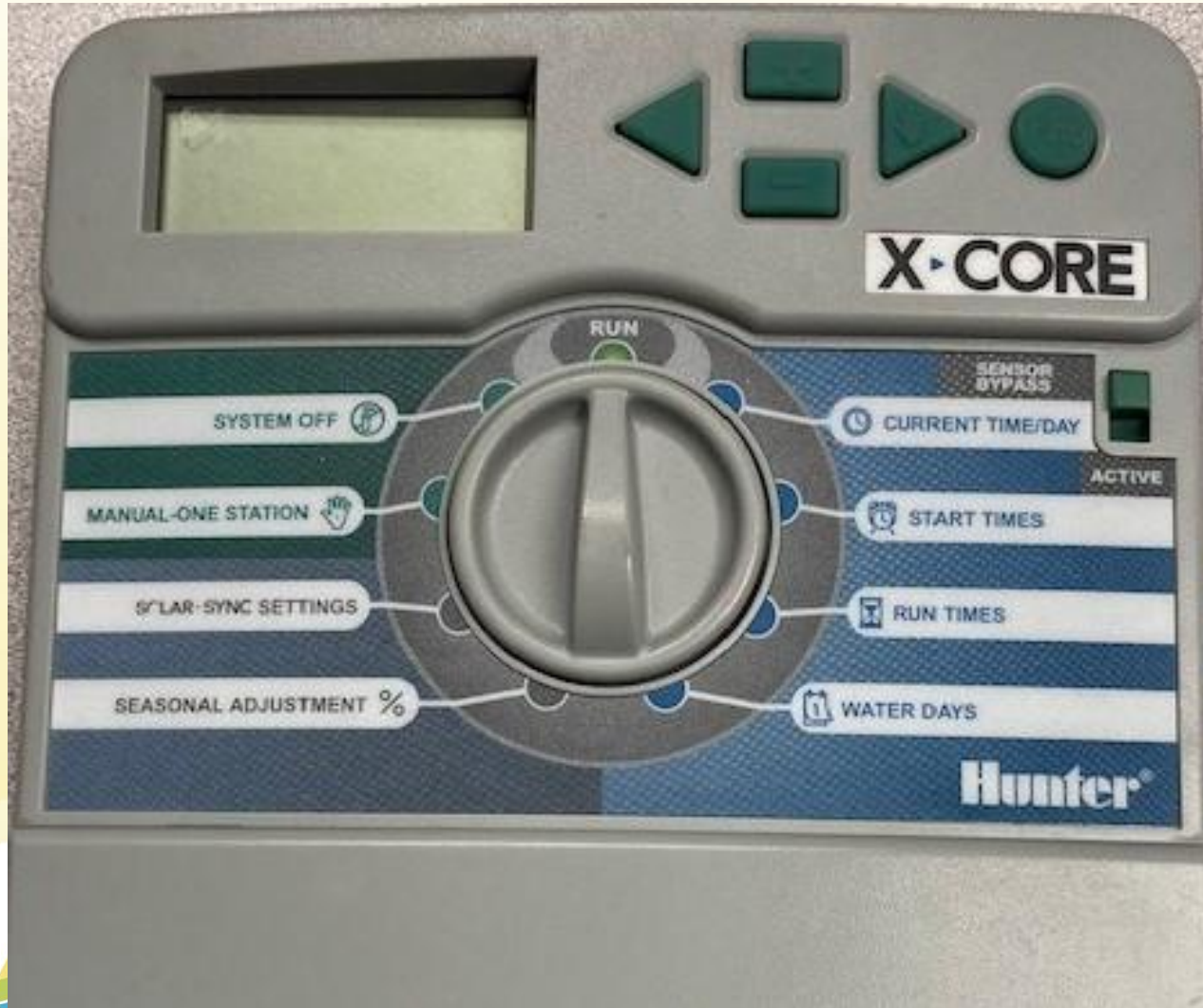


Controller Functions

- On or off
- Clock – set time and date
- Days – on or off
- Skip Days or Interval Watering
- Run times
- Start times
- Seasonal adjust
- Programs – A, B, C, ...



Controller Functions



Scheduling

- Identify zones
- Assign zones to programs
- Run times
- Start times
- Days on

Sprinkler Scheduling Worksheet

Station Run Times

Station No.	Location	Station Run Time			
		PGM A	PGM B	PGM C	PGM D
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

Start Times

	Start Time 1	Start Time 2	Start Time 3	Start Time 4	Start Time 5	Start Time 6	Start Time 7	Start Time 8
PGM A								
PGM B								
PGM C								
PGM D								

Watering Days

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Skip Days
PGM A								
PGM B								
PGM C								
PGM D								

Station No.	Location	Station Run Time			
		PGM A	PGM B	PGM C	PGM D
1	Front yard turf, Pop-up	3 min	0	0	0
2	Back yard turf, Impact rotors	10 min	0	0	0
3	Back patio shrubs, Drip	0	45 min	0	0
4	Back fenceline shrubs, Drip	0	45 min	0	0
5	Front/side yard/driveway turf, Pop-up	3 min	0	0	0
6	Back yard trees, Drip	0	0	1.5 hrs	0
7	Vegetable garden, Drip	0	0	0	45 min
8					
9					
10					
11					
12					

	Start Time 1	Start Time 2	Start Time 3	Start Time 4	Start Time 5	Start Time 6	Start Time 7	Start Time 8
PGM A	3 am	4 am	5 am					
PGM B	7 am							
PGM C	9 am							
PGM D	11 am							

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Skip Days
PGM A			On		On		On	
PGM B								5
PGM C								7
PGM D								2

Drip Systems

Converting spray to drip

Must have a filter and pressure reducer



Drip Systems

In-line Drip Emitters



Drip Systems

Point Source Drip Emitters

“Poke & Plug”



Drip Tips

Don't Overload the system

Flow rate calculation

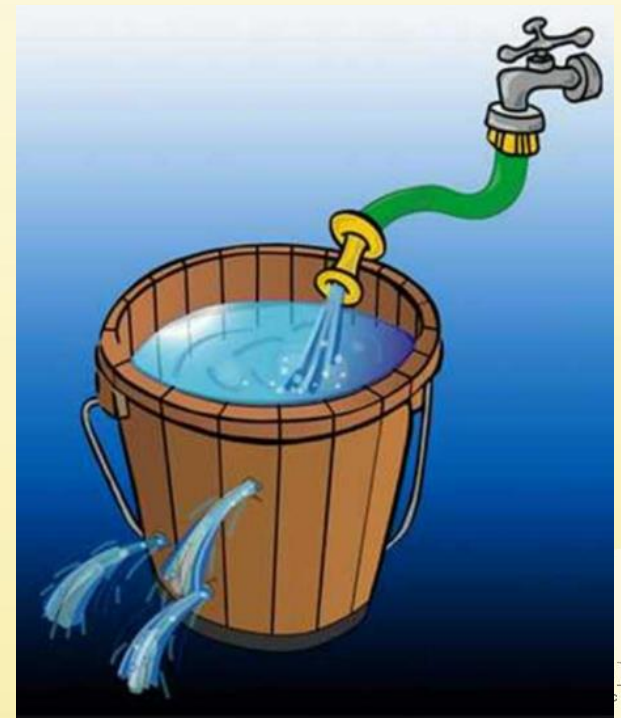
Time how long to fill a bucket - 2 minutes for a 5 gallon bucket

Calculate gallons per hour (gph)

$$\frac{5 \text{ gal}}{\cancel{2 \text{ min}}} \times \frac{\cancel{60 \text{ min}}}{1 \text{ hr}} = 150 \text{ gph}$$

How many 1 gph emitters? 150

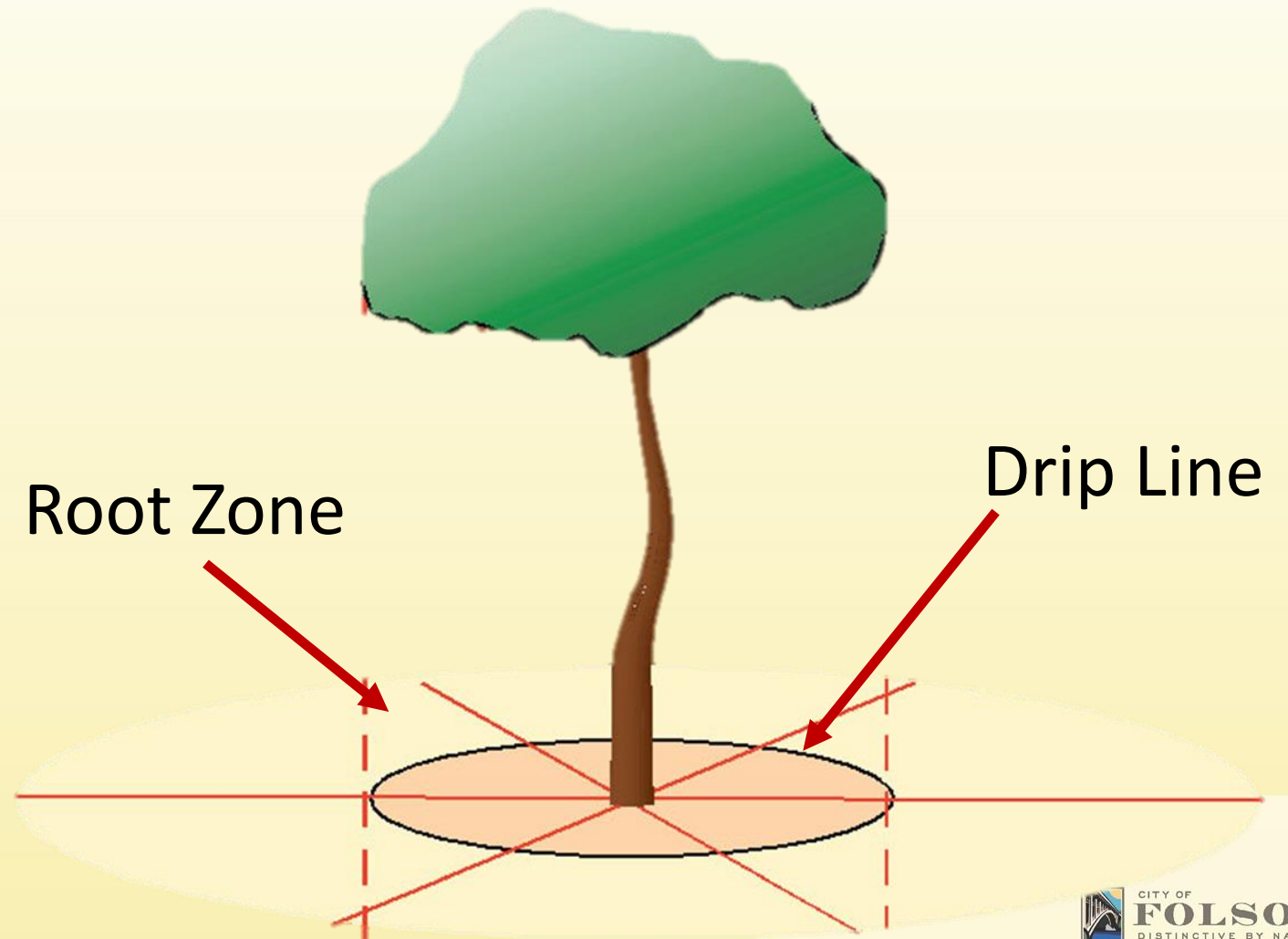
How many 1/2 gph emitters? 300



Drip Tips

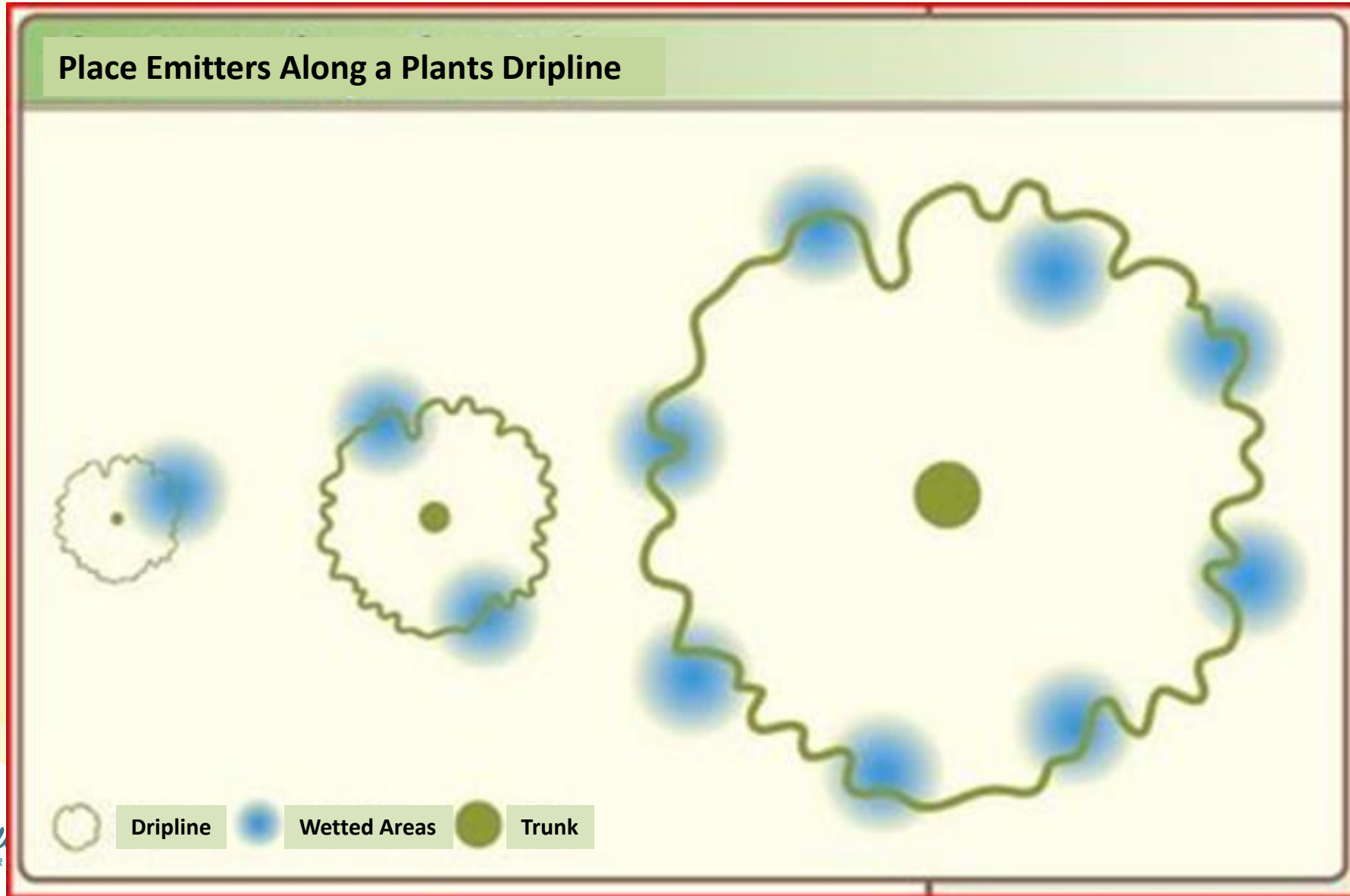
Trees / Shrubs

Water the roots
NOT
the trunk



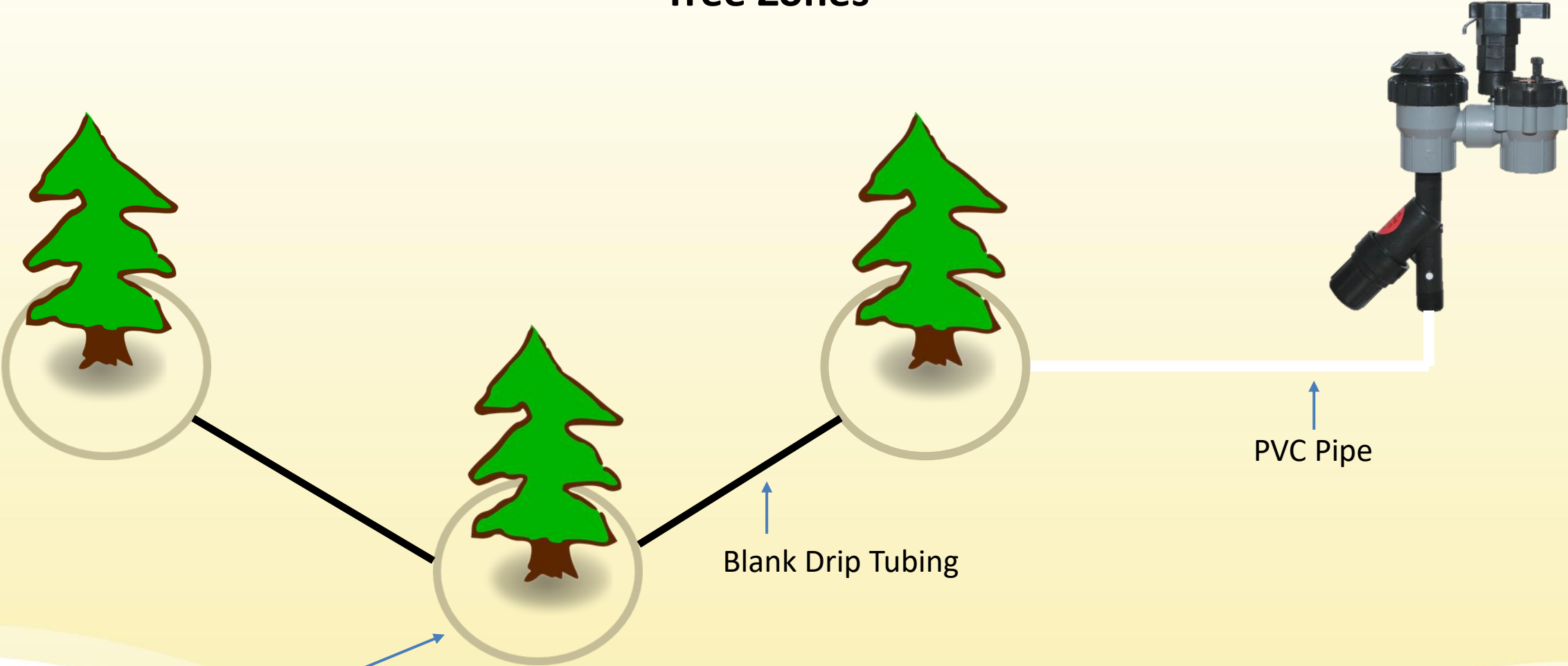
Drip Tips

Emitter Placement



Drip Tips

Tree Zones



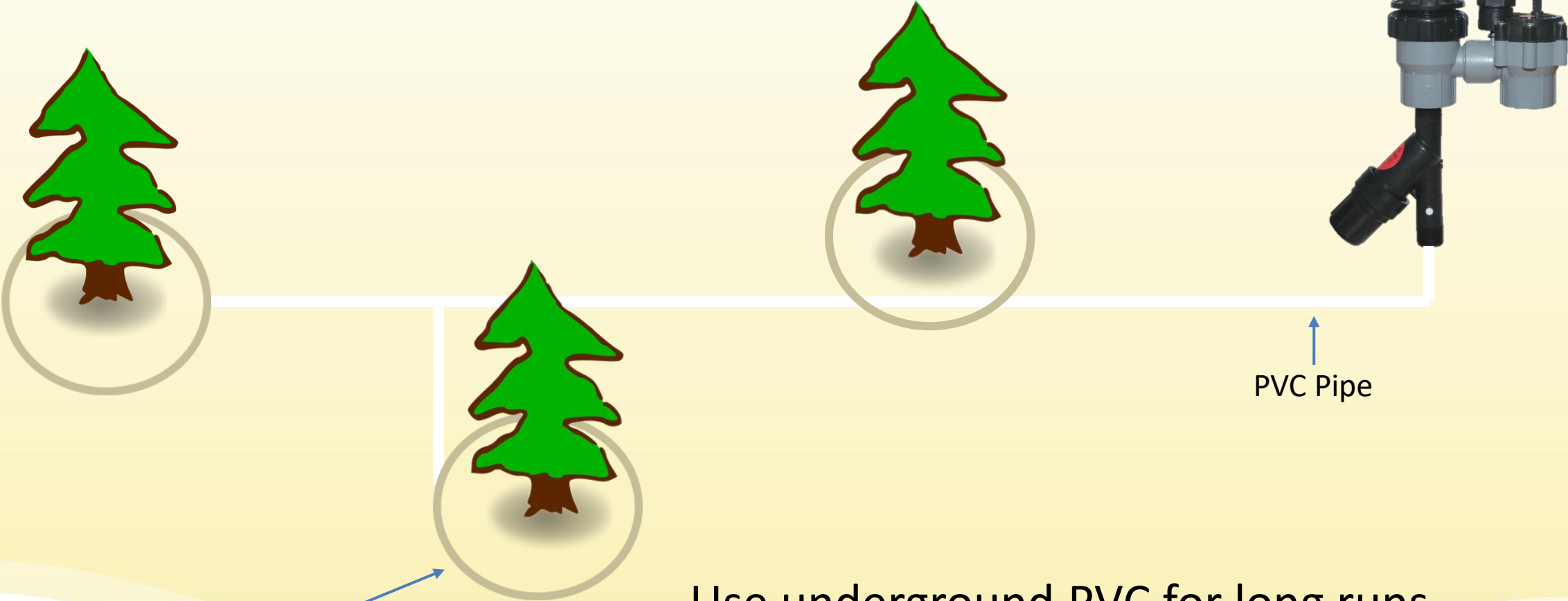
Inline Emitter Tubing

Blank Drip Tubing

PVC Pipe

Drip Tips

Tree Zones



PVC Pipe

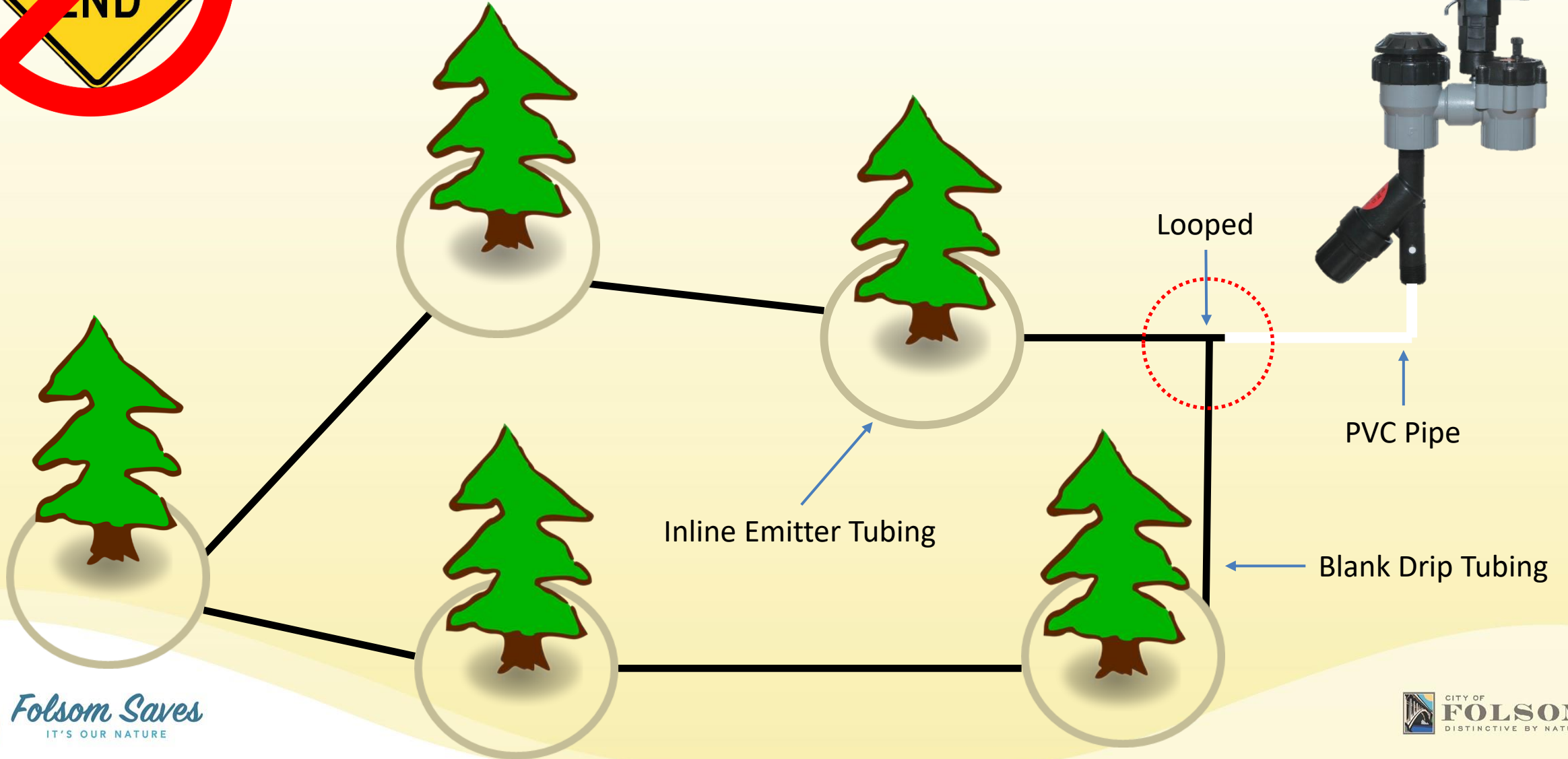
Inline Emitter Tubing

Use underground PVC for long runs



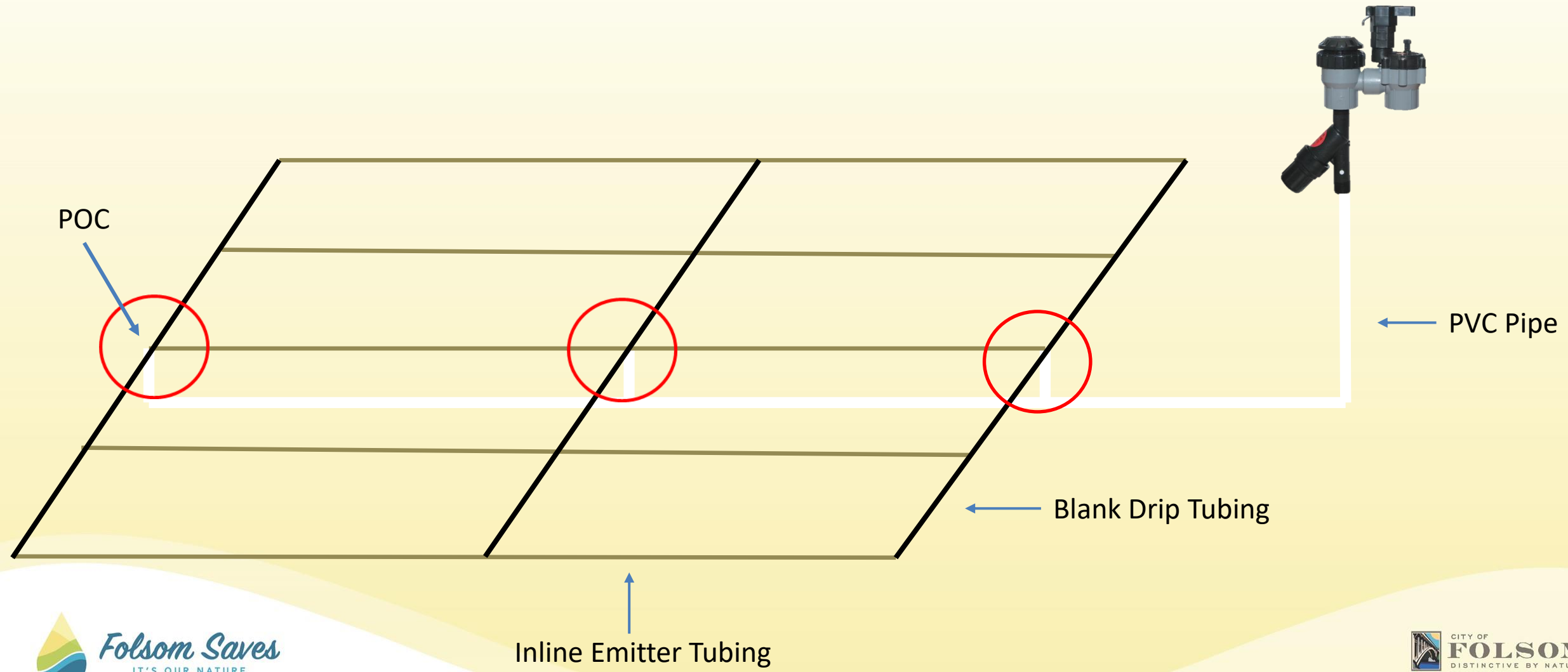
Drip Tips

Avoid Dead Ends



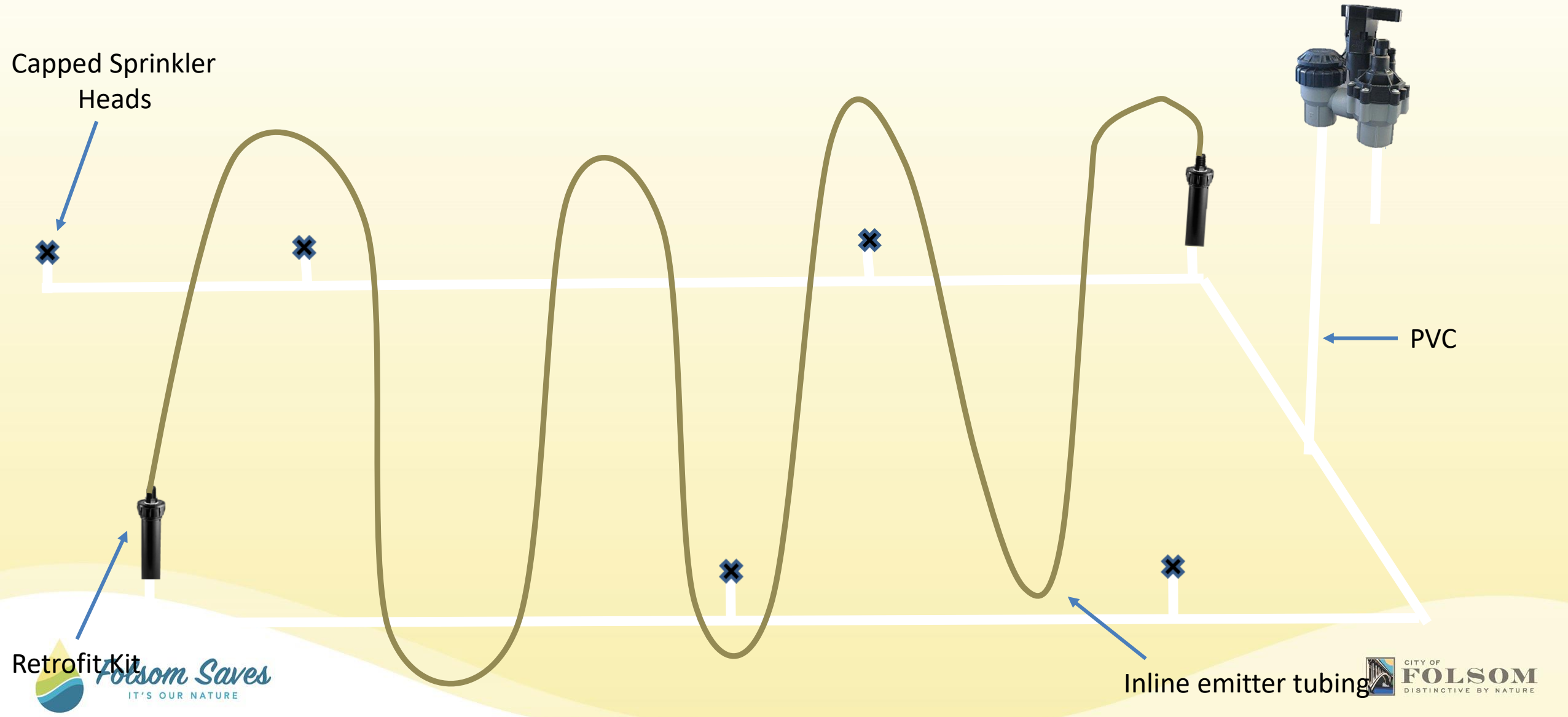
Drip Tips

Densely Planted Areas



Drip Tips

Retrofitting an existing spray system





06/01/2012



06/01/2012



06/02/2012



06/02/2012

Second Growing Season



Q&A

You have

Questions

We have

Answers

Don Smith
Water Conservation Coordinator (Almost Ret.)
City of Folsom
Landscape and Irrigation Contractor (Ret.)
Irrigation and Conservation Educator
(916) 461-6171
dsmith@folsom.ca.us