Rotary Stream Irrigation Contraption (RSIC):

a simple tool for efficiently irrigating a "single" landscape tree

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What's the issue?

- Turf irrigation is turned off
- Trees in the turf compromised
- In-line drip is effective, but can be expensive
- Other solutions do not account for
  - water pressure
  - coverage
  - soil type
  - precipitation rate

Solution

- Use a multi-stream rotor nozzle
- Mount on an irrigation spike
- Use pressure regulated riser
- Low cost (~$15 - $20)
- Parts can be found locally or online
- Simple and easy to construct
  - Only 4 parts

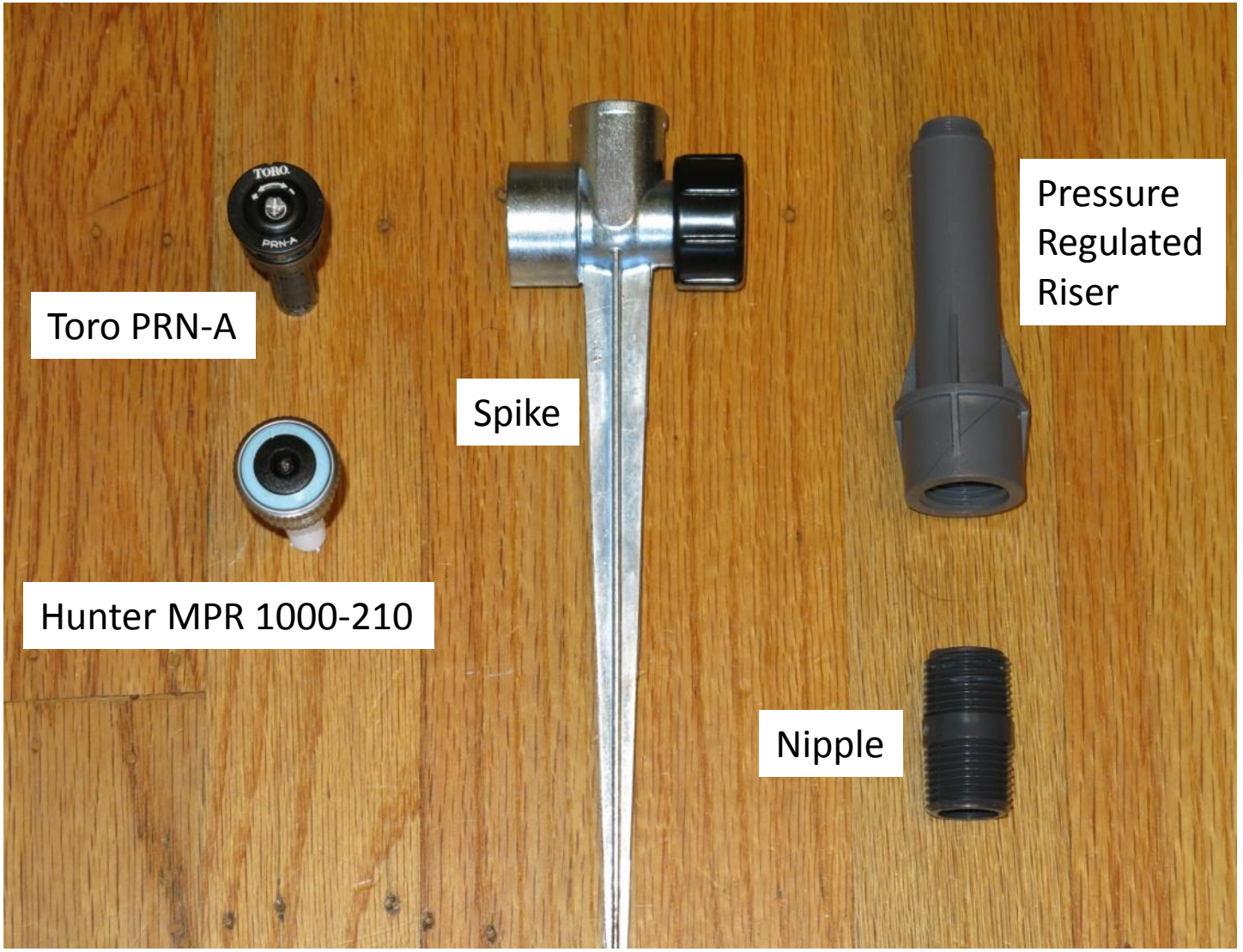
Why does this work?

- Multi-stream rotors have:
  - Low precipitation rates
    - but there is still a runoff potential
  - Precipitation rate doesn't change when the irrigation arc is adjusted
  - Precipitation rate doesn't change
    - Pressure is regulated by the riser
    - Need to have > 30 psi water pressure

Parts List (Est. cost = $15 - $20)

- **Sprinkler spike** **$4**
  *Aqualine SS-50Z ½ in.
- **Pressure regulated shrub riser** **$4**
  *Hunter PROS-00-PRS30
  *Rain Bird PA-8S-PRS
  *Toro 570S-PRX
- **Pipe nipple** **$1**
  ½ in. x 2 in. PVC
- **Multi-stream rotary sprinkler** **$6**
  *Hunter MP1000210-270
  *Rain Bird R-VAN1318
  *Toro PRN-A

*You need only one in each category


Toro PRN-A
Hunter MPR 1000-210
Spike
Pressure Regulated Riser
Nipple

Run times depend on soil type

- To wet down to 18”
- Pressure regulated to 30 PSI

Soil type	Run time (hr:min)*		
	Hunter	Rain Bird	Toro
sand / fine sand	2:15	1:30	1:30
loamy sand	3:00	2:00	2:00
sandy loam	4:45	3:00	3:15
loam	6:45	4:30	4:45
silt / silty loam	8:30	5:30	5:45
sandy clay loam	6:30	4:15	4:15
clay loam	6:45	4:30	4:45
silty clay loam	7:45	5:00	5:15
sandy clay	5:15	3:15	3:30
silty clay	6:00	4:00	4:00
clay	6:30	4:15	4:15

*Rounded to 15 minutes

Times in red denote runoff may occur

Assembled Tree Sprinkler

Set up

- Obtain the required parts
  - Spike
  - Pressure regulated shrub riser
  - ½” x 2” PVC nipple
  - Multi-stream rotary sprinkler
- Assemble
- Connect to hose, turn on
- Adjust to 270° arc
- Set near tree so water doesn’t hit trunk
- Set timer/alarm