



# Southern Plains Climate Hub

*Building climate resilience on natural and working lands*

## ***HOW TO MAKE A SIMPLE RAIN BARREL***

Prepared by Jacob Shaffer

- 1) 1-food grade rain barrel
- 2) Drill a hole using a 15/16 inch paddle bit and cordless or corded drill. Hole should be 2 to 4 inches off the bottom of the barrel to ensure sediment does not clog the faucet
- 3) Place a bead of silicone around the hole
- 4) Thread the 3/4 inch faucet into the 15/16 inch hole, **this will require force as the threads will be a tight fit. Gloves may be required to prevent injury**

- 5) Unscrew the 2 bungs if present on the rain barrel, if already removed, go to step 6



- 6) Screw in the 2-2" PVC Sch 40 MPT x 5 Male Adapters into the 2 threaded holes on top of barrel



- 7) Insert the 2" Sch 40 PVC 90 Degree Street Elbow into one of the adapters as installed in step 6. This will be used as the overflow for the rain barrel



### Tools Needed



Drill



15/16 paddle bit



Tape



PVC Cable Saw



Caulking

- 8) Cut a 1.5 inch piece 2 inch PVC pipe from the 10 ft PVC pipe



- 9) Insert the cut piece from step 8 into the street elbow in step 7



- 10) Insert the 2 inch 90 degree S x S Elbow in to the cut PVC protruding from the street elbow in step 9



- 11) Cut 2 inch sch 40 PVC to length of barrel approximately 32 inches



- 12) Insert cut 32 inch pipe from step 16 in to the 2 inch 90 degree PVC S x S Elbow at top of barrel



- 13) Insert the second 2 inch 90 degree PVC DWV Elbow to the end of the PVC at bottom of barrel



- 14) Insert the remainder of 2 inch sch 40 PVC pipe in to the 90 degree elbow in step 13. This will ensure overflow water will be diverter away from the barrel to slow erosion around the tank
- 15) Place barrel under a downspout or other water runoff source
- 16) Place the window screen over the open 2" sch 40 PVC adaptor on top of the barrel
- 17) Install a 3 inch x 2 inch PVC adapter to a 2 inch x 3 inch downspout (this is most common, adjustments may be necessary for other sizes)
- 18) Connect the barrel to the adapter in step 17 utilizing 2 inch sch 40 PVC (length will vary depending on the height of roof and downspout)



## **How much water can be captured from a rooftop?**

To estimate the amount of roof runoff in gallons, take the square footage of a roof and divided by 2. Therefore, a 1,000- square-foot roof would yield approximately 500 gallons of water from a 1 inch of rain event. The actual number is 0.623, however, using 0.5 will help account for friction loss.

### Parts Checklist

Place check in box as appropriate if part is in stock or if part needs to be purchased from a hardware store.

| Part                                 | Quantity | In Stock | Need to Purchase |
|--------------------------------------|----------|----------|------------------|
| Rain barrel 55 gallon                | 1        |          |                  |
| ¾ Faucet                             | 1        |          |                  |
| Silicone                             | 1        |          |                  |
| 2" PVC Sch 40 MPT x S Male Adapters  | 2        |          |                  |
| 2" Sch 40 PVC 90 Degree Street Elbow | 1        |          |                  |
| 2 " 90 degree S x S Elbow            | 2        |          |                  |
| 3" x 2" PVC adapter                  | 1        |          |                  |
| 2" sch 40 PVC pipe                   | 1-10 ft  |          |                  |
| Window Screen                        | 1 roll   |          |                  |

| Tool             | Quantity | In Stock | Need to Purchase |
|------------------|----------|----------|------------------|
| 3/8 Drive Drill  | 1        |          |                  |
| 15/16 Paddle Bit | 1        |          |                  |
| Tape Measurer    | 1        |          |                  |
| PVC Cable Saw    | 1        |          |                  |

The information here is for educational purposes only and not an endorsement by the SPCH

For more information on water conservation and other climate initiatives please contact:

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