

## Yardwork Rain Water Preservation

### (1) Rain Water to Pond



Rain Gutter Cut out



Water Tank (Buffer) Raised by 8" (H) Concrete Blocks



Rain Flows in Rain Gutter, Water Tank (Buffer), & PVC Pipe



Plenty of Rain Water Flowing down to Pond (Working as Water Reservoir)

**(2) 156 Gallon Collapsible Rain Barrel (Old approach)**



Rain Gutter



Flexible Downspout Extension to Tank Inlet



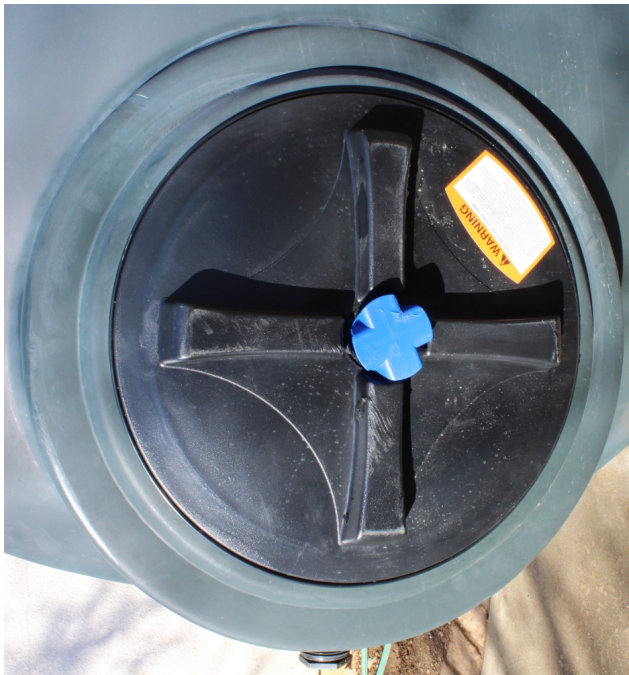
Three Tanks Serially Connected (Total 468 Gallon)

Durable life-time was two to three years at best (easily got leaked due to vinyl). I don't recommend this way.

### (3) 550 Gallon Rain Water Tank



Rolling Movable (Flexible Bottom Seating)



Man Accessible Lid (16" Diameter)  
with Inlet Hole (2" Diameter for PCV Pipe)



Overflow Outlet  
(1 1/2" Diameter Female NPT)



Lower Outlet  
(2" Diameter Female NPT)



Flatten Foundation with Sand Bed



Placement Done



Ready Storing & Distributing Rain Water

550 gallon vertical tank is light but sturdy and reliable. The durable life-time seems to be several decades (10 times longer than vinyl collapsible tank which is like a cumbersome toy in my experience).

#### (4) Additional 300 Gallon Rain Water Tank



300 gallon water tank securely tied on U-Haul 5x9 utility trailer towed by my 1993 Mercury Sable Wagon



Brought into backyard



Making a hole on water inlet lid by two reamers & Drill)



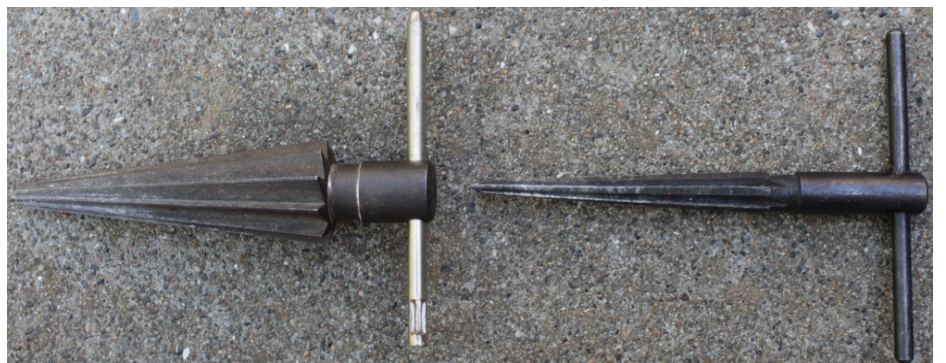
Done



Two floating air bents built in inlet lid



Rain water inlet pipe connection



Old-fashioned reamers I have used long time ago



550 gallon rain water tank gets overflowed water from 300 gallon rain water tank



Water pipe connection of 550 gallon rain water tank (Left) and 300 gallon rain water tank (Right)



Overflow outlet



Drain outlet connected to shut-off valve & flexible garden hose

300 gallon rain water tank



Overflow outlet  
with garden hose nipple



Drain outlet connected to shut-off valve & flexible garden hose nipple

550 gallon rain water tank



Pipe connection of overflowed rain water inlet (550 gallon rain water tank)



## (5) Submersible Water Pump

Rain water stored in rain water tank is normally drained through drain outlet to garden hose. Lower the stored water level in tank, fewer the drained water. To drain the stored water efficiently and sufficiently to the bottom, a submersible water pump is submerged into water tank through the inlet.



Submersible water pump, PVC pipe & power code routing



Installed



Ready to pump water in 550 gallon rain water tank shrinking the PVC pipe length



Pump & PVC pipe routing (A same pump, Common PVC pipes + Extension PVC pipes for 300 gallon water tank)  
For low profile 550 gallon water tank



For high profile 300 gallon water tank

## (6) Clean up Water Tank

Rain water pouring into water tank naturally contains dust and ash caused by wild fire accumulated on both the roof and gutter. Every year, clean up the inside of water tank is a must.



Stretched

Ready to clean



Sufficient rod length (4' 10")



Landed on bottom of water tank

Under stretched condition, dirty water absorbed into strings can be easily drained by rotating rod.

## (7) Clean up 1" PVC Pipes

Inside of 1" PVC pipes which stream rain water also accumulates dust and ash.



Tools



Dust & ash stuck



wet paint roller passing in pipe



Cleaned

- Bamboo rod which is longer than 1" PVC pipe to be cleaned
- 4" x 1/4" woven paint roller