

Yardwork Rainwater Preservation

(1) Rainwater to Pond



Rain Gutter Cut out



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



Rain Flows in Rain Gutter, Water Tank (Buffer), & 1" PVC Pipe



Plenty of Rainwater Flowing down to Pond (Working as Rainwater Reservoir)

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



Rain Gutter



Flexible Downspout Extension to Tank Inlet



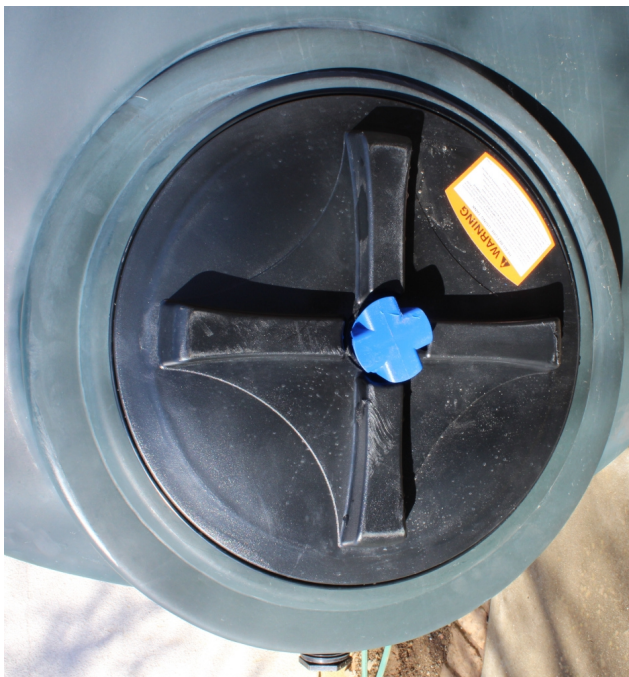
Three Tanks Serially Connected (Total 468 Gallon)

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 Rainwater 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 Rainwater

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 350 Gallon Rainwater Tank



I picked up this 350 gallon tank at local Home Depot store and towed by Mercury Sable Wagon 3.8 liter V6 with an U-HAUL 5' x 8' open utility trailer.



Brought into backyard



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



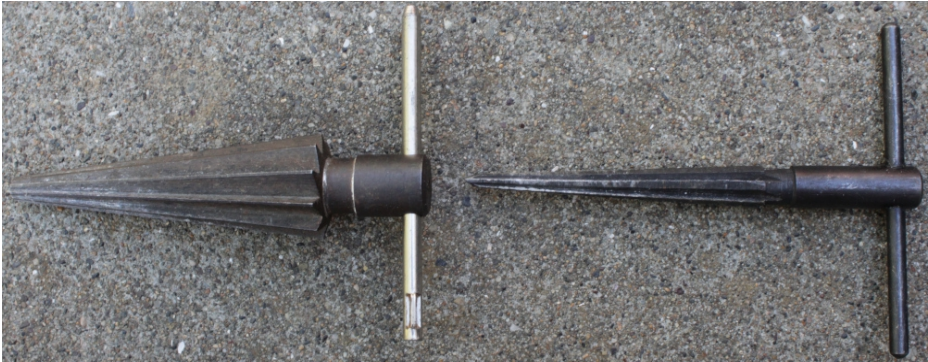
Done



Two floating air bents built in inlet lid



Rain water inlet pipe connection



Old-fashioned reamers I have used long time ago



550 gallon rainwater tank gets overflowed water from 350 gallon rainwater tank



Water pipe connection of 550 gallon rainwater tank (Left) and 350 gallon rainwater tank (Right)



Overflow outlet



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

350 gallon rainwater tank



Overflow outlet
with garden hose nipple



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

550 gallon rainwater tank



Pipe connection of overflowed rainwater inlet (550 gallon rainwater tank)

(5) Submersible Water Pump

Rain water stored in rainwater 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 rainwater tank through the inlet.



Submersible water pump, PVC pipe & power code routing



Installed



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



Pump & PVC pipe routing (A same pump, Common PVC pipes + Extension PVC pipes for 350 gallon water tank)
For low profile 550 gallon water tank



For high profile 350 gallon water tank

(6) Clean up Water Tank

Rainwater 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

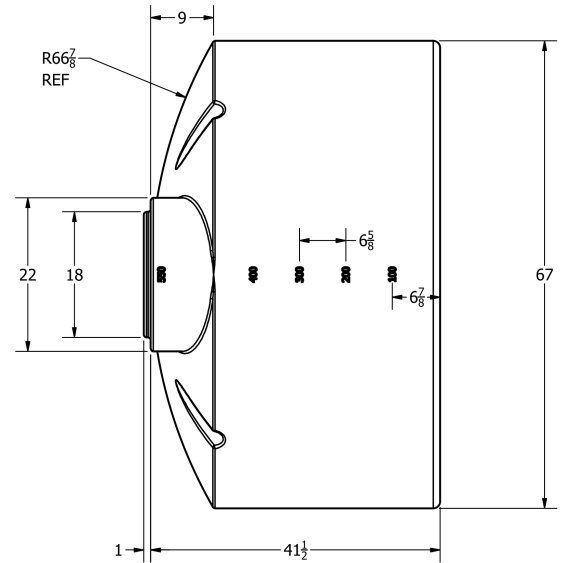
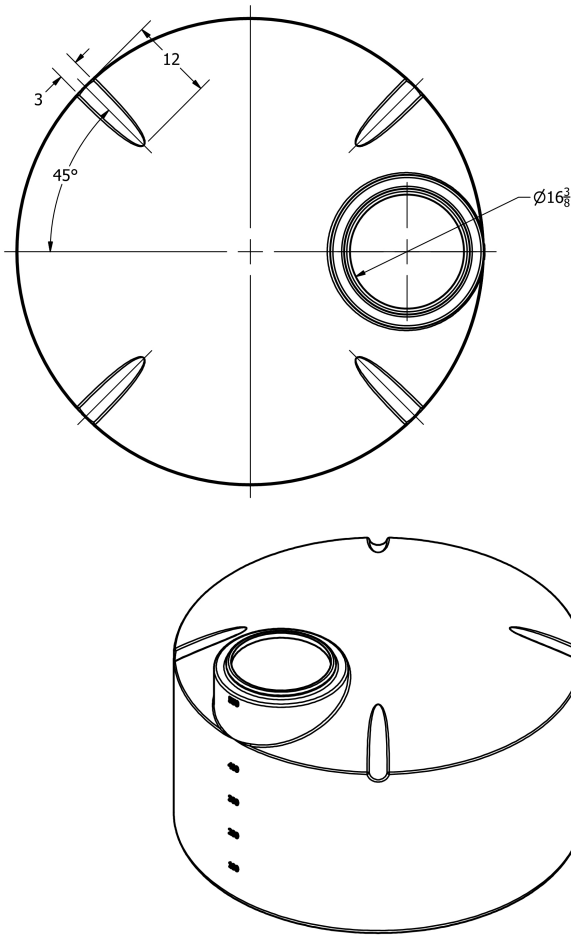


Cleaned

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

(8) Additional 550 Gallon Rainwater Tank

In 2024, I newly installed an additional 550 gallon rainwater tank in backyard. The grand total of the rainwater storage capacity reached 1,450 (550 + 350 + 550) gallons.



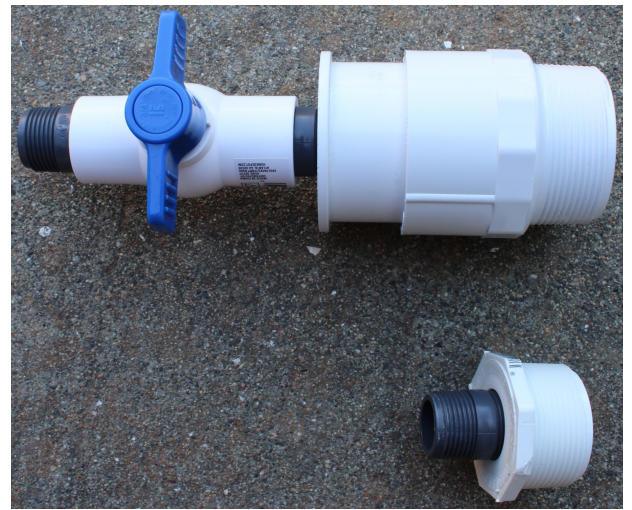
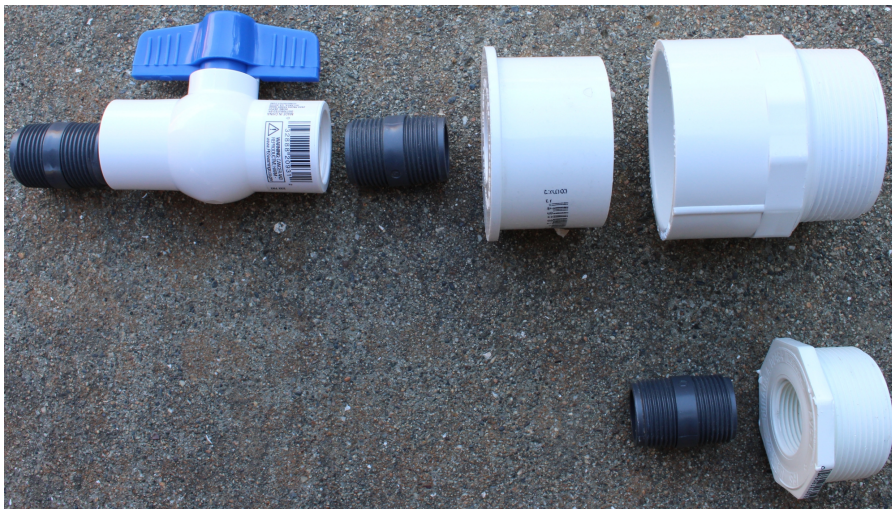
I picked up this 550 gallon tank at Norwesco (tank manufacturer) at "13241 11th Avenue, Hanford, CA" and towed by legendary 1993 Mercury Sable Wagon 3.8 liter V6 renting an U-HAUL 5' x 8' open utility trailer.



Brought into backyard



Additional 550 gallon tank newly placed (Left)
Old 550 gallon tank in actual use (Right)



Couplings and shut off valve for lower drain (upper) & overflow drain (lower) exploded view (Left)
Tentative connection (Right)



Couplings of lower drain to connect garden hose
(Tentative connection)



Couplings for overflow drain to connect garden hose
(Tentative connection)



<1 1/2" MPTx3/4" FPT>+<3/4" MPTx3/4" MPT> (Upper), Teflon tape, Primer, PVC cement
 <2" MPTx2" F>+<2" Mx3/4" FPT>+<3/4" MPTx3/4" MPT>+<3/4" FPT valve>+<3/4" MPTx3/4" MPT> (Lower)
 MPT; Male Pipe Thread, FPT; Female Pipe Thread



Convenient AC power switch for submerged pump in a tank



Newly installed 550 gallon tank (Left) ready to store rain water bypassing old 550 gallon tank (Right)