

# BUILD YOUR OWN OYSTER SHELL BARREL STORMWATER TREATMENT SYSTEM

Oyster shells are a great natural resource to remove heavy metals from roof outflows. Here 's how to build your own treatment system like the ones we use at the Port of Seattle.



**1 STEP**  
Drill a 5-inch hole in barrel in the side of the barrel for a drain. Approximately 18 inches from the top of the barrel.



**2 STEP**  
Drill a hole in the barrel's lid. Make sure it is offset so it doesn't flow directly into the interior pipes.



**3 STEP**  
Install 4-inch schedule 80 PVC bulkhead fitting in the hole drilled in step one.



**4 STEP**  
Install 4-inch schedule 80 PVC threaded nipple on to bulkhead fitting.



**5 STEP**  
Build interior piping with 4-inch schedule 40 PVC Tee and pipe.



**6 STEP**  
Install interior piping to the bulkhead fitting.



**7 STEP**  
Install 4-inch schedule 40 PVC 90-degree elbow downspout to the threaded nipple.



**8 STEP**  
Optional: used only if the overflow part of the tee inside drum is not going to be utilized.



**9 STEP**  
Fill with 25-30 gallons of cleaned crushed oyster shells, about 2-3 inches below the interior overflow pipe.

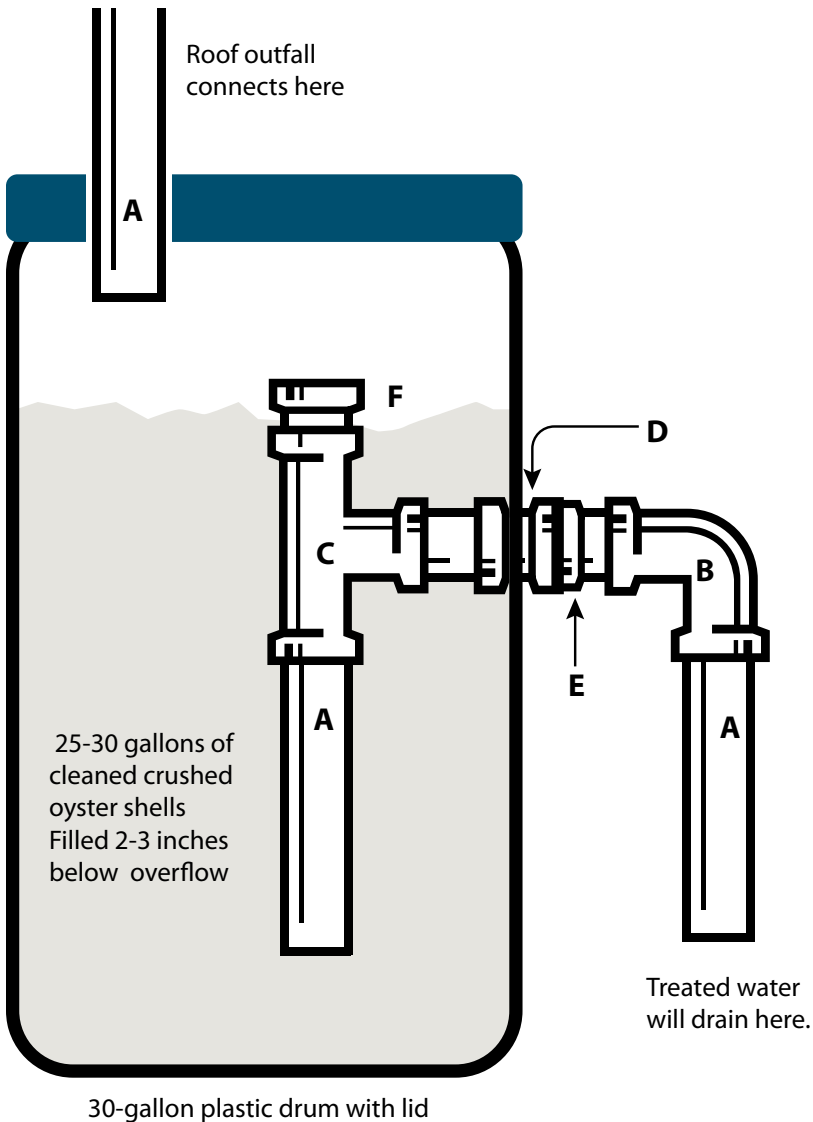
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## PVC Pipes and Fittings

- 4-inch schedule 80 PVC bulkhead fitting
- 4-inch schedule 40 PVC san. Tee
- 4-inch schedule 80 PVC threaded nipple 8 inches long (one of these will cover two drums)
- 4-inch schedule 40 DWV or PVC pipe (estimated length: 4 feet)
- 4-inch schedule 40 PVC 90-degree elbow
- 4-inch rubber cap (JIM cap) (optional, used only if the overflow part of the tee inside drum is not going to be utilized)

## Other Materials

- 30-gallon plastic drum with lid
- 25-30 gallons of cleaned crushed oyster shells ( about 10-12 5-gallon buckets)
- Christy's Pro-lube (pipe joint lubricant, all purpose)
- Oatey Heavy Duty Clear PVC Cement
- Oatey Clear Primer (for CPVC, PVC)



- A.** 4-inch schedule 40 DWV or PVC pipe (about 4 feet will be needed)
- B.** 4-inch schedule 40 PVC 90-degree elbow
- C.** 4-inch schedule 40 PVC san. Tee
- D.** 4-inch schedule 80 PVC bulkhead fitting
- E.** 4-inch schedule 80 PVC threaded nipple 8 inches long
- F.** 4-inch rubber cap (JIM cap) - Optional



Oyster barrel in place at Terminal 102

## QUESTIONS?

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