

# How I Built My Bog Filter

First article I read about bog filters – started me down this path...

## Build an Active Gravel Bog Filter

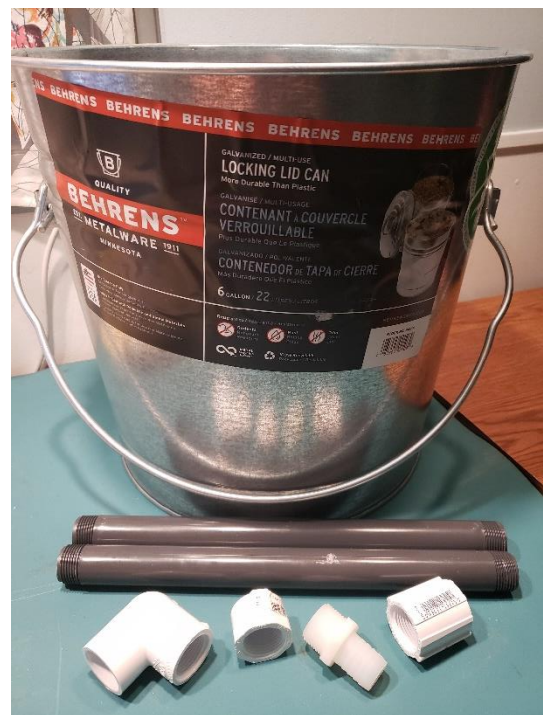
<https://nelsonwatergardens.com/gravel-bog-filter-construction/?fbclid=IwAROSVuMDxiPwHT7R7MXgBGvg6e1WFDndKIsI6WyAslo3PKYOb84IHWTTcpE>

First I have to state – your pond/pump/bog size may be different – this is what works in my specific situation, but at least you will see how I put mine together. It may give you some ideas...

The idea is that water will be piped into the bottom of the pail (bog filter) which is planted with plants in pea gravel (which will help filter the water), and then the water is dispersed back into the pond via the “waterfall” holes.

### Items I used (I found all at Home Depot):

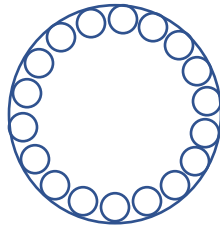
- 6 Gallon Galvanized Pail \$14.97
- $\frac{3}{4}$ " Barb x  $\frac{3}{4}$ " MIP Adapter \$3.56
- $\frac{3}{4}$ " PVC coupler (threaded both sides) \$1.11
- (2)  $\frac{3}{4}$ " x 12" risers (threaded both ends) 2 @ \$1.63  
(grey pipe-in irrigation section)
- $\frac{3}{4}$ " PVC 90 (threaded one side/slip fit other side) \$0.83
- $\frac{3}{4}$ " PVC cap (threaded) \$1.20



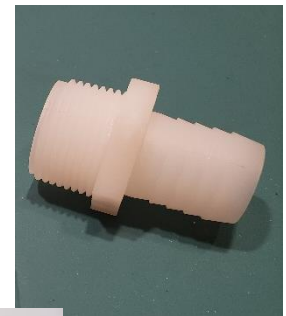
### Tools used:

Drill motor, 1" hole saw,  $\frac{1}{4}$ " drill bit,  $\frac{1}{2}$ " drill bit, PVC pipe cutter, crescent wrench, tape measure, sharpie pen, round metal file

1. I determined how I wanted the pail to sit in my pond, to determine where the hole for the in-flow will go, keep in mind that you will have a pipe cap showing at the top of the pail opposite of the location of the in-flow side. You will drill a hole in the lower side of the pail, using a 1" hole saw drill bit (or if you don't have one (like it did the 1<sup>st</sup> time) - I marked the hole I needed and using a smaller drill bit, drilled holes around that circle and punched out that circle), If you have to use this process, you may need to use a rounded file to clean up the edges.



2. The 3/4" Barb x 3/4" MIP Adapter is inserted from the outside – into the pail (the threaded end going into the pail) – I wasn't concerned about this being a water-tight seal, since it will be under water in the pond. But I did want it to be pretty tight.



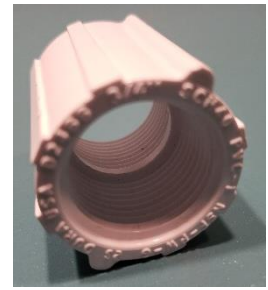
3. Measure the bottom of your container to determine how much length you have to work with.



4. Then I determined the length of the horizontal section of pipe, remember you will need to take into account the 3/4" PVC 90 in the total length



5. Then layout your pieces. The  $\frac{3}{4}$ " PVC coupler is threaded onto one of the 12 " risers and then laid out next to the 90 (you can slip the other end of the riser into the slip end of the ninety (mark the edge-so you can determine how far the pipe goes into the 90))

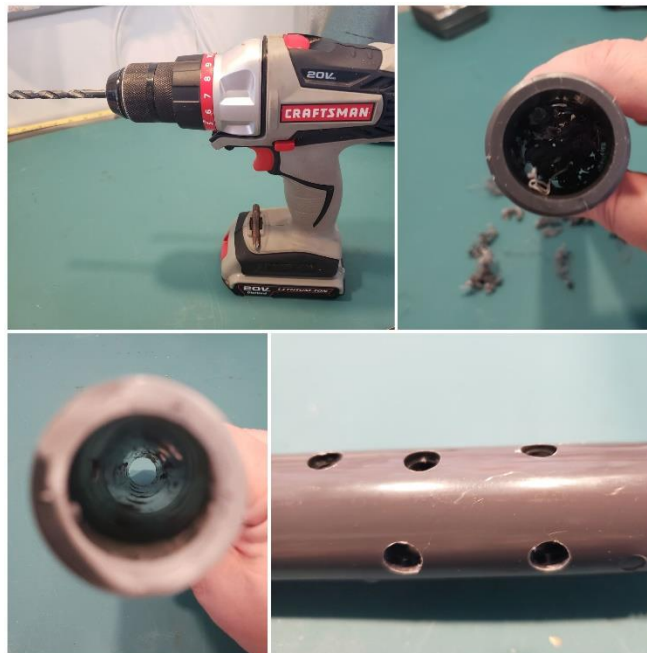


6. Make sure when you are calculating the length – you give yourself a little wiggle room, I made mine about  $\frac{1}{2}$ " shorter.



7. Then you cut your pipe to length

8. I then drilled holes in the lower pipe, I drilled horizontally thru both sides and also a row of holes on the bottom of the pipe. I also drilled holes up the upright pie about 3". I used a  $\frac{1}{4}$ " drill bit. You will need to make sure all the grindings are cleaned out of the pipe.





9. Then you put the pieces together. I didn't actually glue the slip fit together. Just put it in really tight, all of this is under water, so it doesn't need to be watertight.



10. Then you hold it in place in the bucket and begin to screw the lower fitting through the hole into the other end of the  $\frac{3}{4}$ " coupler, tighten as tight as possible, I used a crescent wrench. Again, I wasn't worried about this being a water tight fitting, it will be under water.



11. Screw the riser into the lower section.



12. Next you determine, where you want the holes for your outflow. It maybe trial and error to get the right amount of outflow holes. I originally only drilled 5 holes, but when I tested it. The bucket filled up faster than the holes would let out water. It's all a calculation of the inflow from your pump (the GPH) and the outflow area. I don't know the calculation, so I just kept adding holes. I ended up with 11 holes. Mark where you want your holes and start drilling. I used  $\frac{1}{2}$ " drill bit. You will probably need to clean up the rough edges using a round metal file.



13. Then test it – attaching  $\frac{3}{4}$ " flexible tubing to pump and then to outside barb fitting on bucket. If you are lucky you won't have to drill more holes 😊

