DIY Hydroponics Ebb & Flow

Materials Needed

Most of this can be found at home depot

1 Plastic Storage tub.

This will be your reservoir (As you can see we stored blankets in it). I don't know how many gallons but its measurements are 24"x18"x15" tall. The reservoir should be large enough, to hold two, to three times the volume of the flood tray or table.

1 Plastic storage tray - 22"x16"x 7" tall.

This will be your flood tray. I used this because it was lying around in my garage, but I would recommend a black mixing tub, found in the concrete/masonry section of home depot.

Ebb& Flow Fittings.

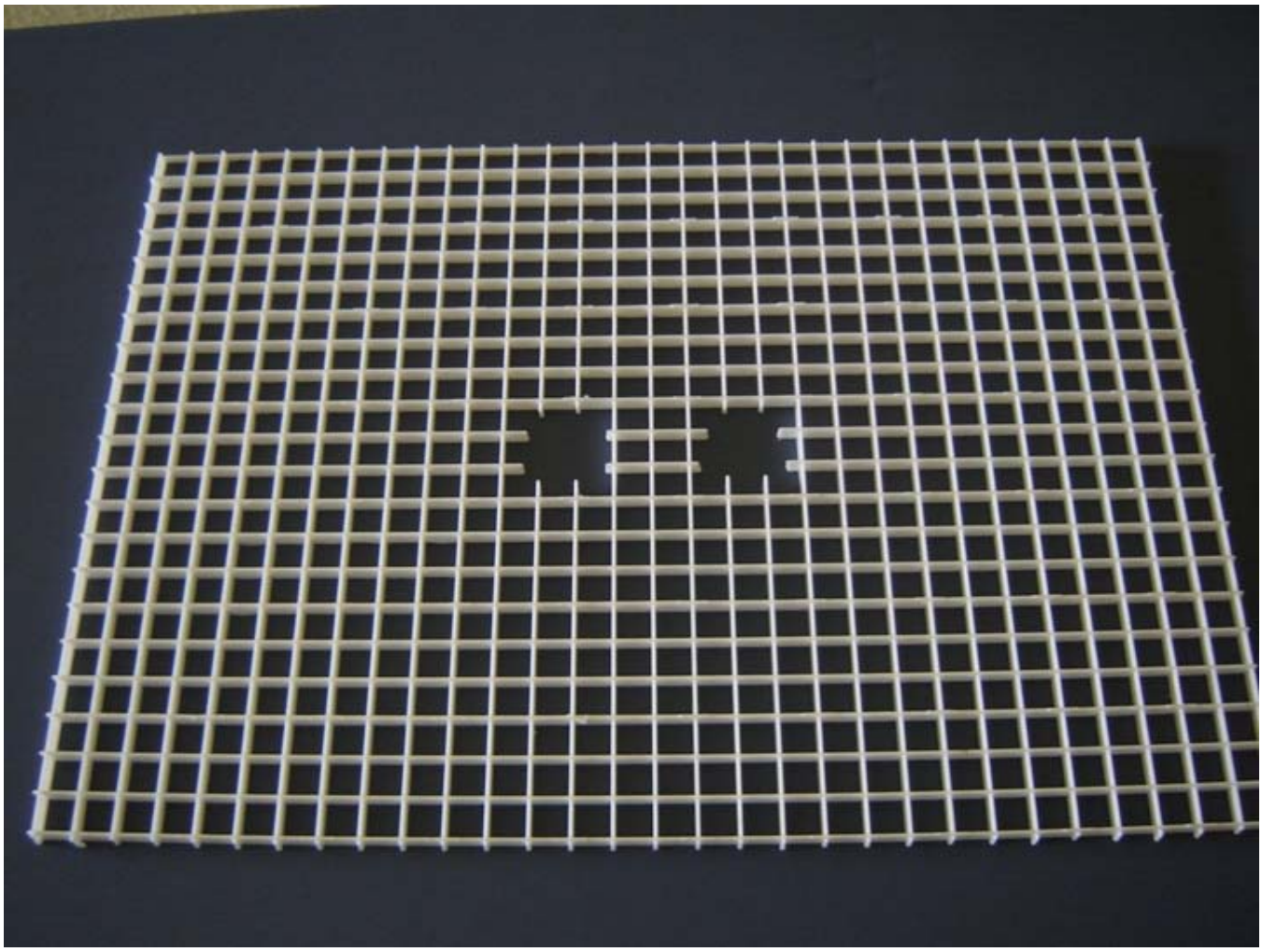
The only thing I would recommend getting from a hydro store (You can use 1/2" fittings found in the plumbing supply section of home depot, but that requires aquarium glue to keep it waterproof) Overflow fitting on the left. Once the water reaches the level of the overflow fitting it drains back to the reservoir preventing an overflow. The other fitting is where you pump the water through and where it drains back down once the pump turns off.

1/2" rubber hose

Submersible pump (70 GPH) and Timer.
The pump should be sized to flood the tray in 10 min. or less.

Plastic ceiling tiles.

They come in big 4'x4' sheets. Cut to fit in your flood tray. this is used to keep the roots off of standing water. If you find a tray that drains completely, you might not need this



Power drill and drill bit.

size bit according to fittings.

Construction Instructions

First thing that you want to do is drill the holes for the fittings in the center of the flood tray and the reservoirs' lid.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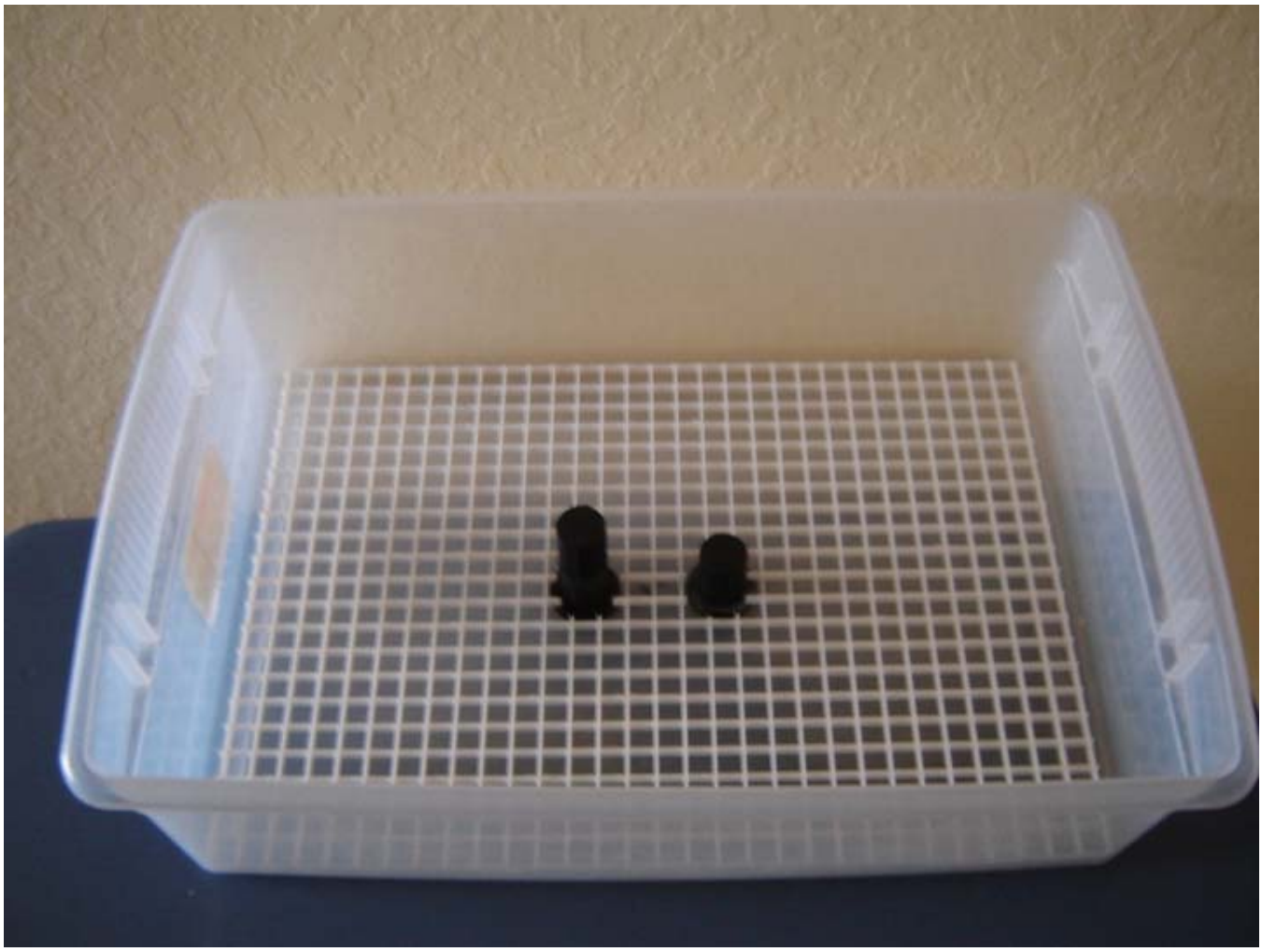
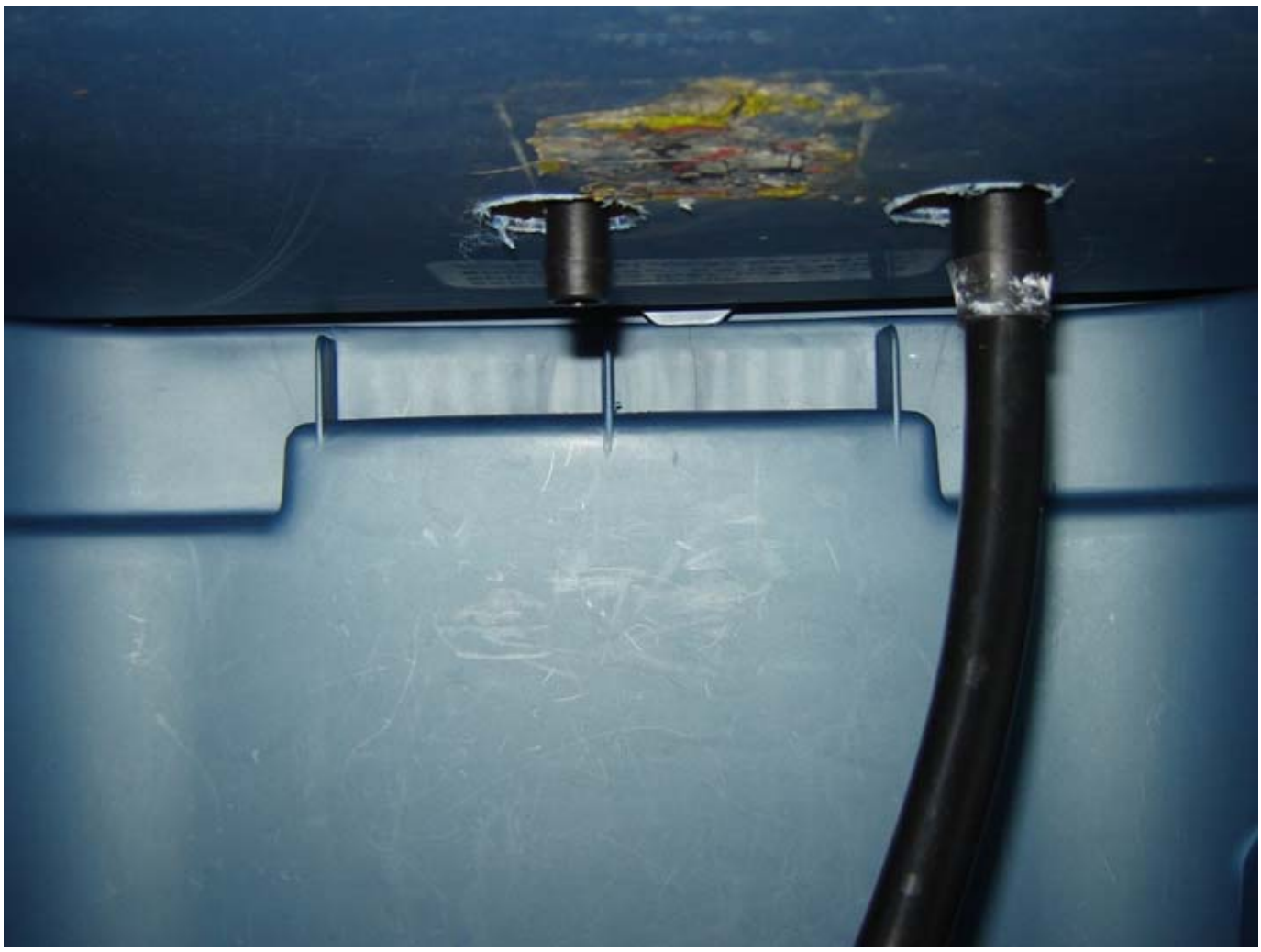
Attach fittings to flood tray

Then cut holes in ceiling tiles where the fittings would be so you can drop it in the tray as shown.



Place tray on top of lid with fittings through the holes

Connect rubber hose from the drain fitting to the sub pump.



The last thing to do is to fill the reservoir with your nutrient solution and plug the pump into the timer. You should run the pump just long enough to flood the tray, then drain. Do not flood so high as to wet the stem , if using cubes with grow rocks flood till the nutrients reach the bottom of the cube but not any higher. Start flooding once every 6 hours and work your way up to once every 2 hours. It all depends on the medium you use. Rockwool holds a lot of water so less flooding will be required as opposed to grow rocks which drain very fast. I personally like the grow rocks over Rockwool for this system. Have fun!


Extra Blankets