Cabin Clear Water Pump… (It's cheap too)

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URL : http://www.small-cabin.com/forum/6_136_0.html

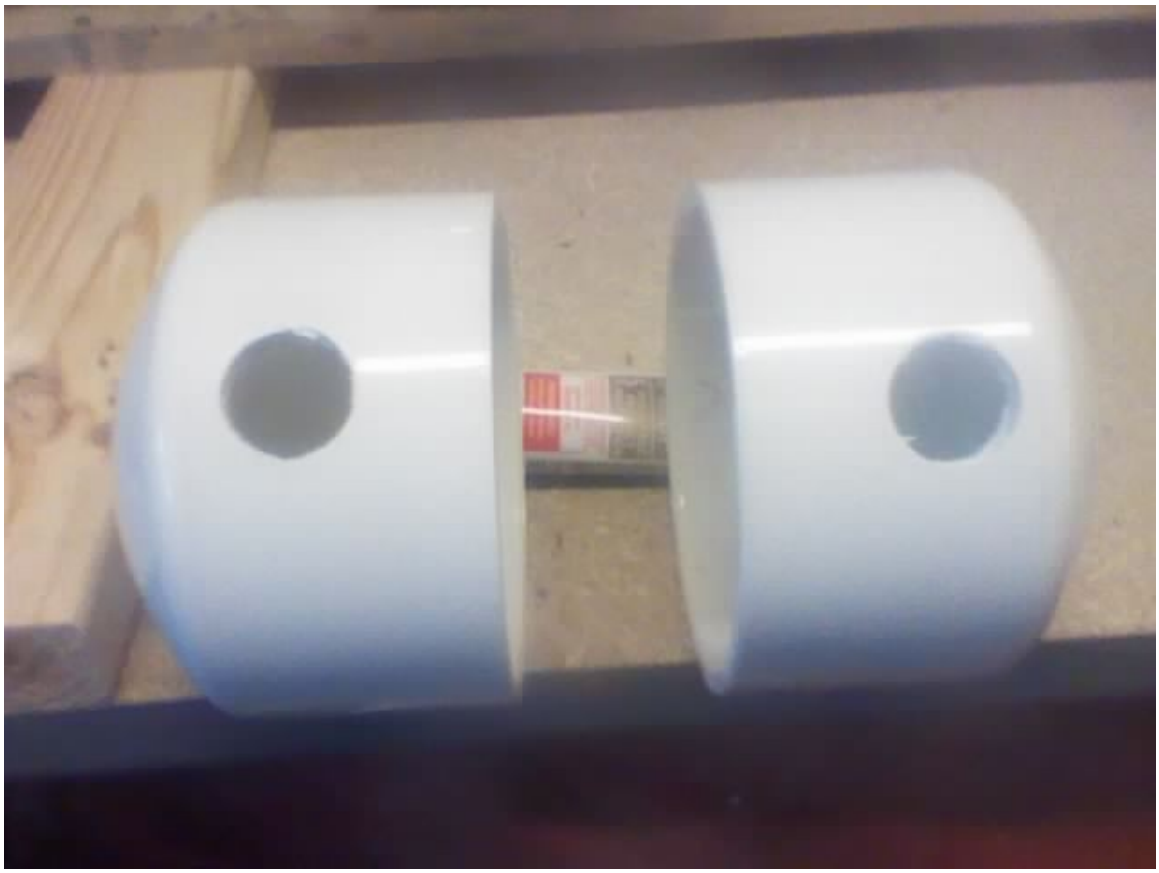
Bill of Materials

2	4" PVC End Caps		$ 8.00
1	4" PVC Coupler		$ 2.00
2	3" PVC Male Threaded Couplers		$ 0.50
1	Total Pond 300gph Fountain Pump		$39.00
1	Can of PVC Cement		$ 4.00
1	Tube Silicon		$ 3.00
		Tax	$ 4.52
		Total	$61.02

The goal here was to make a simple inline clear water pump for under $105.00. That would have been the total cost to buy an inline pump with fittings to install at the cabin. I came in well under that. The total price was $44.00 less than expected. All prices are US dollars and all items were purchased at Home Depot.

I had to drill 3 holes, and cut 2 slots in PVC. Even with taking all the pictures and gluing and being patient, this whole project took 32 minutes.

Drill a ¼” hole centered on the side of the coupler. Cut a ¼” slot to the hole. This will be for the power cord that is attached to the fountain pump.



Drill 1” holes towards the end of both 4” end caps. These are what will become the inlet and the outlets of our in-line pump.

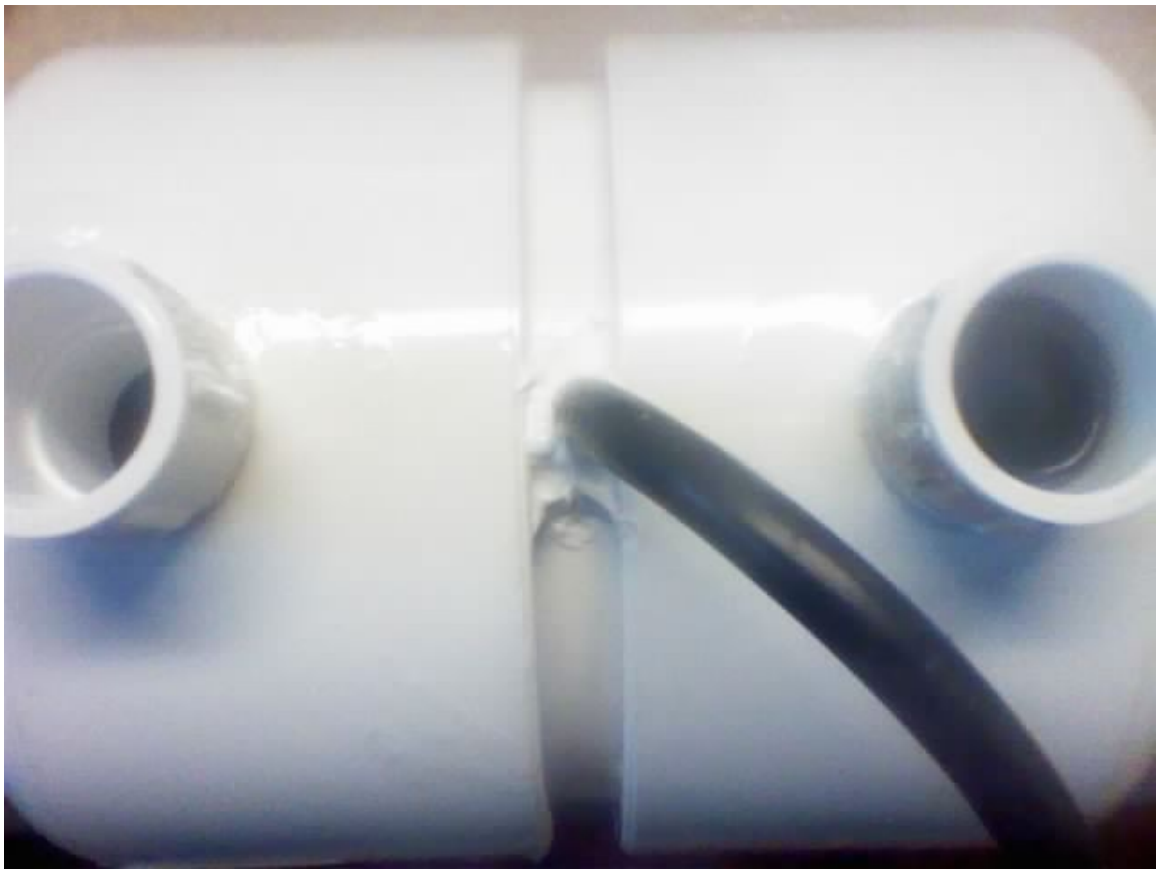
Feed the power cord into the slot in the coupler and seat the fountain pump.

Slop up the inside of the PVC end cap with PVC Cement as well as the coupler that now holds the fountain pump. Slip the end cap over the fountain pump and turn slightly back and forth to bond the PVC Cement and the two PVC pieces together.

Apply PVC Cement to the outside of the fountain pump outlet. Apply PVC Cement to the threads of the male coupler. Thread in the ¾" male coupler into the hole over the fountain pump outlet. This will join the fountain pump to the coupler as well as join the "outlet" to the housing so that our pump is now hard mounted.

Apply PVC Cement to the threads of the male coupler. Thread in the ¾” male coupler the hole on the inlet. This will provide a hard mounted inlet.

Slop up the inside of the PVC end cap with PVC Cement as well as the coupler that now holds the other half with the pump. Slip the end cap over the coupler and turn slightly back and forth to bond the PVC Cement and the two PVC pieces together.



Seal the hole around the electrical cable with silicon. I chose white silicone to try to keep everything white. Once this was completed I went over all the exteriors of the PVC joints with PVC Cement. This will ensure there is a good seal.

The end result is a US$61.05 in-line pump that will connect to the existing lines. This will have a down force of 5 gallons per minute which will be more than enough to provide water to the 1.2 GPM toilet and the 1.8GPM shower. I will still have 2GPM to spare to provide plenty of water to my kitchen sink. This all comes in at a whopping 8.5 watts of electricity. I can't complain.