Appendix 6

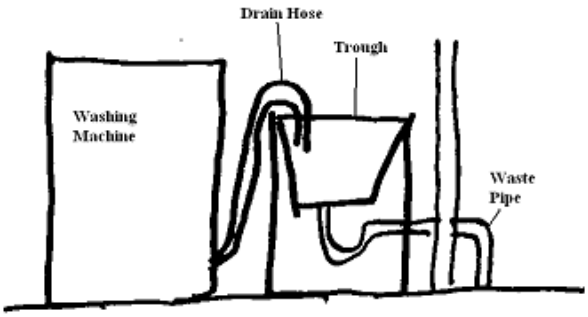
Grey Water Use and Your Washing Machine.

With the drought people are using water from there washing machines to water there gardens. Barwon water (Geelong) (www.barwonwater.vic.gov.au) and EPA (www.epa.vic.vic.gov.au/water/reuse) has guidelines in the use of grey water. Other water authorities and state EPA have there own guidelines.

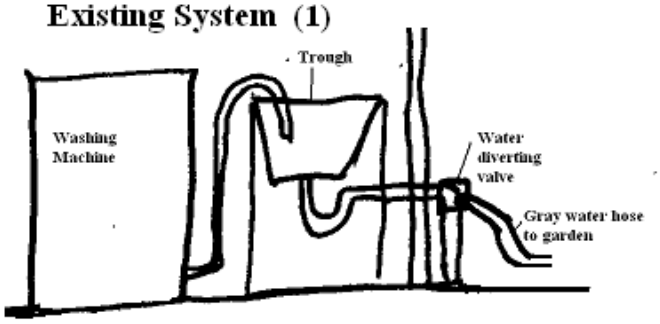
This is some suggestion on how to do it without shortening the life of your washing machine. I do not recommend connecting a longer hose to your existing washing machine drain hose as in #3. Pumping water through a hose or pipe requires considerable effort to overcome the "liquid flow friction" in the hose. The friction is large even with a large diameter hose and when a reasonable flow rate is required. Doubling the length of the hose will double the friction. Increasing the diameter will reduce the friction. The drain pumps in washing machines are only a small pump and are only just capable of pumping the water out of the machine into the trough. **This will shorten the life of the drain pump** and may cause other problems, see below. The drain pump is one of the first components to fail in a washing machine.

A simple method is to pass the drain hose out the window to a drum or a large hose (#4,5). The advantage of a drum is the ability to use a smaller hose to the garden. With the large hose the top is left open (vented) and the water flows under gravity.

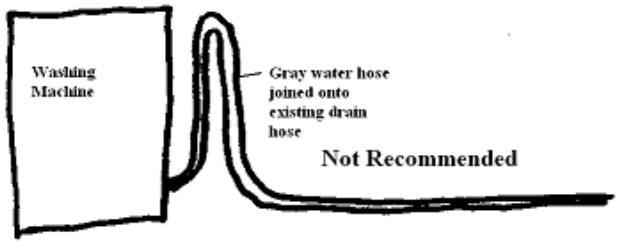
Another method is to divert the water at the waste pipe (#2). This has the advantage of collecting all the water from the laundry. The diversion can be done by using a rubber funnel through the inspection hole. Special plastic valves can be installed into the waste



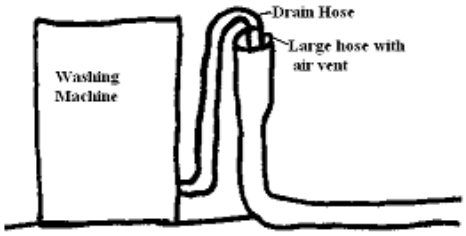
Existing System (1)



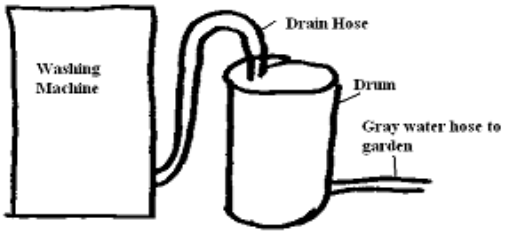
Waste Pipe Diverting (2)



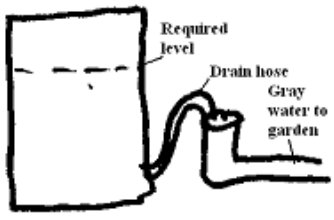
A Longer Drain Hose (3)



A Larger Hose (4)



Using a Drum (5)



A Problem (6)

pipe. See your hardware store for available fittings. Make sure that the water flow rate through the grey water system keeps up and the trough does not overflow.

Some Problems

- The drain hose has to rise higher than the water level in the washing machine. If it does not water will flow out before the machine fills.
- The grey water may not drain away quick enough and the water may over in the trough etc. **Watch carefully the first time the system is tested**.
- The system restrict the pump out from the washing machine and the washing machine does not empty before going onto the next part of the cycle. Most washing machines only allow a fix time to pump the water out. They only have a sensor to determine when it is full, not when it is empty.
- The water may siphon back into the washing machine after it has finished it cycle. Keep the drain hose above the maximum level of the grey water.
- The water is still siphoning out when the washing machine starts filling for the next rinse and the washing machine fails to fill. Keep the end of the drain hose above the level in the washing machine.

My system: Workshop: this consists of a 200L plastic drum with a 18mm diameter plastic garden hose 14metre long fitted at the bottom. In testing large washing machines the drum can become very full. Laundry: this consists of a 40mm plastic pipe which goes out through the wall to the water recycling system. These pages will be on my web site: washfix.com.au

