

Moving Water in Camp (updated 2026)

Every year we've been getting better and better at figuring out how to easily move water, clean and dirty, around in the camp.

Fresh Water Well Pumps

We use the [Harbor Freight 1HP Well Pumps](#). ([Manual](#)).

In 2026 we are expecting two 500-gallon fresh water tanks from Sierra Site Services, and they will bring two of these pumps, one for each tank.

We also own a spare.

These pumps seem to work really well, and they have their own bladder so that the pump doesn't have to flip on and off frequently. Basically, they will maintain pressure in a pressurized water system, supplying water to the food fort, shower, and sinks.



Pro Tip: When delivered, our pump was not primed. To prime it, you have to open a little nut and pour in some water until it overflows. We did this using a plastic bag with the corner cut off.

Pro Tip: Do not run this kind of pump dry for more than 10 seconds.

Pro Tip: The tank must be pressurized to 23 psi which can be done with a bicycle pump.

Pro Tip: Use backflow preventers both before and after the pump so that the pump stays primed.

NEVER use this tank for anything other than potable water.

Fresh Water Connections

The fresh water tanks (from Sierra Site Services) will be located close to the service road (fire lane). From there a hose will bring fresh water over to the hub between the food fort and the shower. We will set up a Y-adapter, with one side supplying water to the food fort, and the other side supplying water to the shower/sinks.

The [Shower](#) has a five-way manifold which splits up the water for two handheld showers, two sinks, and a canteen filler.

Grey Water Plan

m USS) are located by the service road, too.



The new shower system comes with a black tote which serves as a grey

water "hub". All the grey water in camp drains into it via gravity, and it has a pump which pushes that grey water out to the USS tank.



There are two inputs on the top of the black tote (through the yellow lid) which are connected to the sink drains above it.

There are also three garden hose attachments at the bottom. Two are connected to the shower drains and one can be connected to the food fort grey water output.

Inside the tote is a yellow water bug pump that goes on and off automatically to pump water across the camp to the USS grey water tanks.

Previous Years (no longer relevant)

... .. [bor Freight 3/4 HP Submersible Sump Pumps \(Manual\)](#)



These were intended to move grey water around camp quickly, say, from

the kitchen to the davflower. They pump water into a thick red 2" hose that looks like this:



We have about 50' of this hose.

There are two problems with this method of pumping grey water. The first is that the sump pump is meant to sit in a bucket that fills up with grey water causing the ball to float which turns on the pump. That means it never pumps the bottom n inches of water which can be a lot depending on the size of the bucket you put it in. The second is that those 2" hoses fill up with grey water and once the bucket is empty, they stay filled up with grey water... there is no way to cause the pump to push out the remaining contents all the way to wherever you're going. This means there is a manual step, after pumping grey water, involving walking the red hose from the source to the destination to gravity-force out all the water.

The grey water tank provided by Sierra is low-slung and looks like this:



With this tank, it's not a big problem to hand-caress the grey water from the hose into the tank. However, if you are trying to move grey water up to the Gayflower, where the tanks are probably 5' off the ground, it's not so easy.

For the last mile, we have these little Water Bug Style Pumps:



That can be completely submersed in water and it will suck up virtually everything and pump it up through a narrow hose, which gets the last little bits of water up and out. It's slow, though, compared to the big sewer pumps.

New For 2025, we bought a new [Milwaukee cordless pump](#):



This is a hand-sized pump that runs off the same chargers and batteries as our impact drivers. It uses garden hose fittings. We used this in 2025 to pump grey water from the food fort to the SSS grey water tank whenever the food fort fills up and it worked really well! Because it was so portable it was easy to move it to the Gayflower and move some grey water there, too.

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