

# Camp Sink

by Gregor and Genoveva

We take everything AND the kitchen sink when we camp at Pennsic! And our sink has “running” water. These plans explain how to make a relatively simple wooden stand that holds a “sink” with “running water” when you don’t have direct access to water.



## HOW OUR CAMP SINK WORKS:

Fresh water is kept in a 5-gallon pail, which is then transferred up (with a foot pump) to a simple spigot from which the water flows. The waste water falls into the bowl, down a simple drain, and into a gray (waste) water pail. Very little water is used with this method. We only had to re-fill our fresh water bucket every 4-5 days. Yet thanks to the foot pump, we had a hands-free faucet to get water whenever we needed it. And the nice thing is that our modern pails were hidden by our wooden basin stand – the enclosed stand part is optional, as the wood will definitely add to your cargo load, but it made for a prettier camp.

## WHAT YOU NEED:

Two 5-gallon pails with lids (available at home improvement stores, such as Lowe's or Harbor Freight for about \$5)

Fluid siphon pump (available at Harbor Freight for \$5-\$7)

10 ft of 3/8" clear, vinyl tubing (available at Lowe's for \$1.22)

3/8" brass fittings (available at Lowe's)

Rubber O-ring (available at Lowe's)

Hose clamps (available at Lowe's)

Various pipes and fittings (to suit your needs for the faucet)

Hinge (available at Lowe's)

Tennis ball, cut in half

Spare wood and dowels (or just buy a 4" x 1/2" x 2' whitewood board and a 3/8" dowel at Lowe's)

Metal bowl to serve as your basin (available at IKEA for \$15).

Simple kitchen sink drain (available at Lowe's for about \$9)

### Optional:

One 4'x8' sheet of 3/4" plywood (Lowe's)

Wood stain and polyurethane (Lowe's)

Metallic copper spray paint to make the pipes look nicer (Lowe's)

Cotton or linen material for the curtains to cover the buckets

Mirror to hang (old mirror I already had)

Little pails to keep toothbrushes and soap in (IKEA)

Glass bottles to keep dishwashing soap in (IKEA)

All told, the camp sink cost us about \$100 in materials. If you choose not to make one of the wood stands, it's only about \$60-\$65 and your metal bowl rests right in the top of your gray water pail (without the pail's lid on).

Tools: Power drill, Saw, Router (optional), CNC Router (optional)

## THE SINK PLANS:

First, you need to put together the sink and get the water to flow up through the tube.

1. Drill a 3/8" diameter hole about 1" from the bottom of what will be the Fresh Water Bucket.
21. From the inside of the bucket, feed the male end of a 3/8" 90 degree brass fitting through the hole in the bucket. Place an O-ring on the inside of the bucket at the base of the 90 degree fitting before pushing it through the bucket wall. When the fittings are tightened the O-ring will seal the hole in the bucket.
3. From the outside of the bucket, thread on a female 3/8" barbed hose fitting.
4. Thread a second male barbed hose fitting into the 90 degree fitting inside the bucket.
5. Angle the open end of the barbed fitting downward until it touches the bottom of the bucket. This will help to pull water from the very bottom of the bucket allowing it to almost completely empty the bucket before it needs refilling.
6. Drill a hole in the bottom of your metal bowl to fit the kitchen sink drain, and then insert the drain.

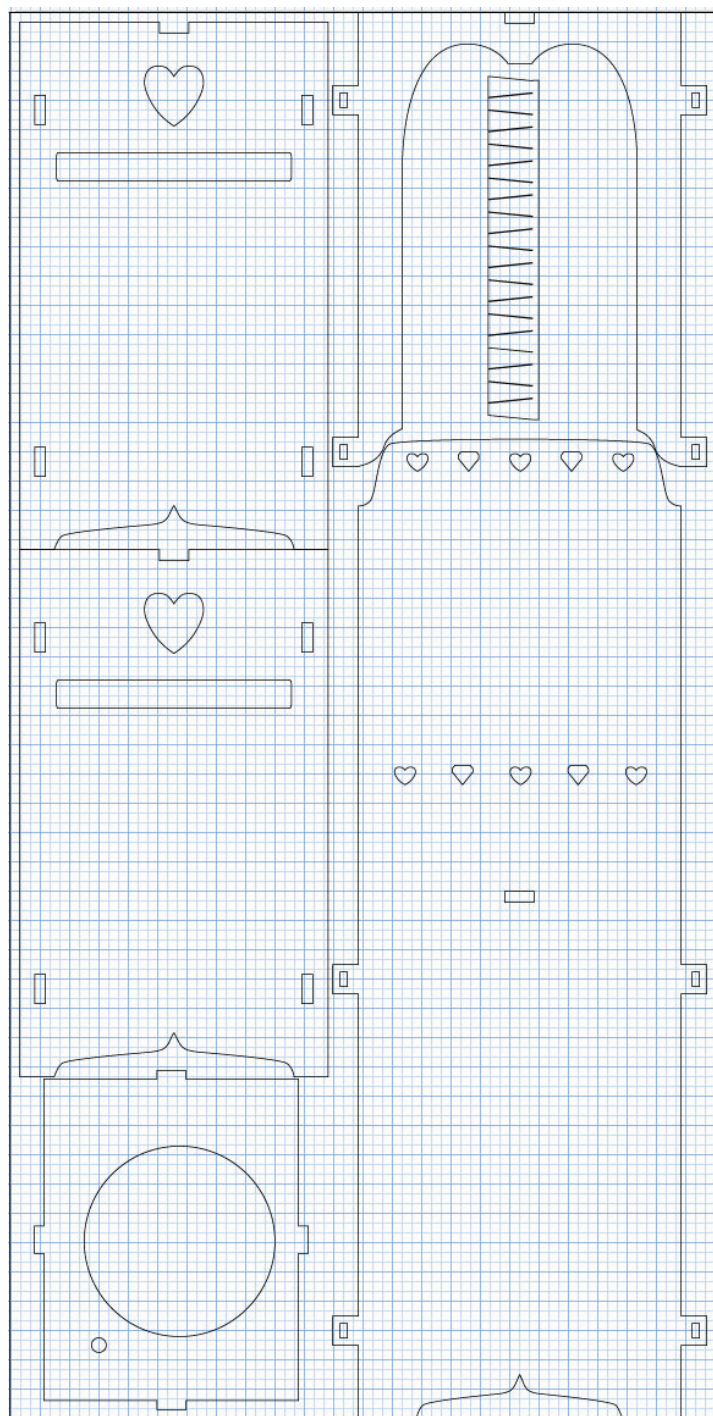
7. Assemble the foot pump and pedal. The pump is made from a fluid siphon pump with squeeze bulb. The pedal assembly is made from the wood, a door hinge, and wood dowels. The dowels (glued into holes in the wood base) allow the bulb to move up and down freely when pumped. The open top of the dowels make for easy installation and removal of the bulb for storage.

9. Attach the spout: We created our spout from some pipe pieces attached in an L shape and attached it to our stand (more on that later). We then slid the plastic tubing onto the spout. Now connect the tubing to the squeeze bulb pump, securing it in place with a hose clamp.

## THE STAND PLANS:

We made the wood stand to disguise all the modern bits. It packs flat (with the exception of the pipes, pails, and bowl) and is assembled with mortise and tenon keys. Here is the cutting plan for one 4'x8' sheet of 3/4" plywood (you can download the PDF at <http://honorbeforevictory.com/build-your-own-camp-sink-with-running-water-materials-and-plans/> ).

The pieces go together quite simply. Use the tenon keys in the mortise holes to keep it all together securely. It is very stable — the sink actually went through a huge storm with 60+ mph winds and suffered no harm at all (it didn't even tip over). The holes cut into it probably helped with this.





Here we are trying our camp sink for the first time at Baron Wars:



And here's the pails and pump underneath:

Blue pail is freshwater;  
gray pail is dirty water

And here is our camp sink as set up at Pennsic 42, after about a week or so of use.



## ALTERNATE DESIGN:

Wood is heavy. This is probably obvious, but when you've got a lot of wood furniture as we do, it adds up. I LOVED having the sink with us at Pennsic, but it definitely adds to the weight of what we bring. We have made an alternate, lighter version of our sink which is simple a wood circle with three legs—the bowl sits in the hole of the wood, the spout feeds up through a hole drilled in the back, and the buckets sit underneath it all. We cover up the buckets with a tablecloth or sheet. You lose the spot for a mirror and places to hold things, but it takes a bit less room and weighs a lot less.



## THINGS TO CONSIDER:

The pump needs to be primed (step down on it a few times to get it going), and then the water must be pumped for each squirt. This wasn't a problem, and it certainly saved water, but it's good to know if you want to make this. So the water doesn't run so much as squirt out, unless you're pumping quickly.

Your rubber o-rings will wear out with time and temperature. (Ours took about two years.) Be sure you test it before an event to avoid disappointment (yes, I'm speaking from experience). You may want to keep some spare o-rings with your sink just in case.

Keep an eye on your gray water pail if you put any extra water in it. If, on the other hand, you only use your sink when you're siphoning water from the fresh water pail, then you know it's time to dump out the gray water when you run out of fresh water. Be sure to dispose of the gray water in a safe, approved location, such as a designated drainage ditch.

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## About the Authors, Contact Details, and Copyright Notice



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