The Kitchen Fort Water System

The kitchen fort, delivered in 2023, is a marvel in camp automation, allowing us to bring a commercial-quality working kitchen to playa and start using it without any setup. However, we're still learning about the best way to hook it up to water.

Fresh Water

There are two separately plumbed fresh water systems: one for sinks and one for the ice maker.

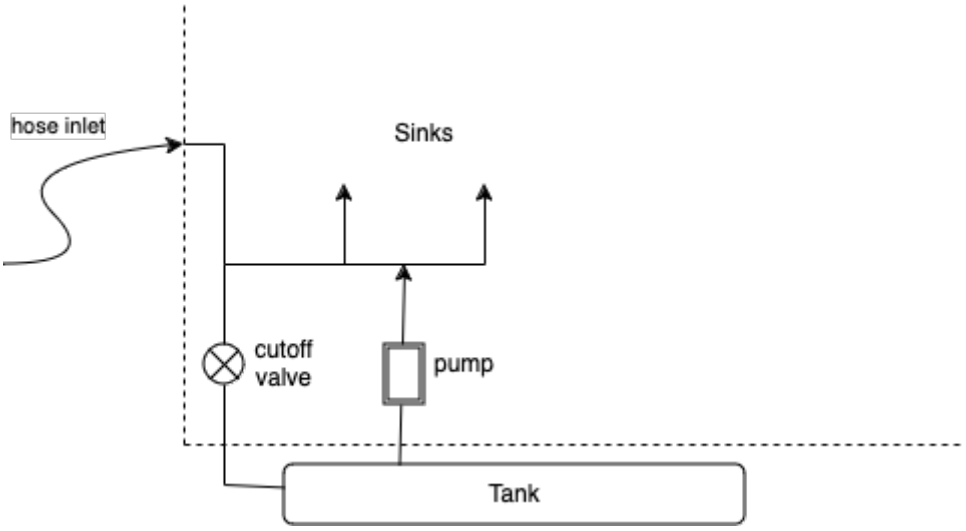
Each system has:

- a hose attachment outside for connecting water to the system
- two tanks per system under the bottom of the trailer to store water
- a little Shur-Flo pump inside the trailer that can pump water up from the tanks to pressurize the system
- a shut off valve inside the trailer that connects or disconnects the tanks and pump

In 2023 and 2024, our idea was to fill the water tanks every time they ran out of water. We thought this was a nice idea because it got the water team involved every once in a while and avoided the risk of the kitchen using up all of our camp water by mistake.

Besides the obvious inconvenience of filling the tanks again and again, the other problem with this system is that there is no way to see when the water tanks fill up, other than the fact that they just start spilling on the ground.

For 2025, I'd like to try disconnecting the food fort's water tanks and pumps, and just providing pressurized water to the kitchen at all times. This can be done by connecting hoses to both the sink and ice water inlets and turning off the shut off valves that let water get down into the tanks. We would also unplug the two fresh water pumps inside the kitchen.



Ice Maker

The ice maker system is just like the fresh water system, with its own tanks and pump and shut off valve. In 2023 and 2024 we were underwhelmed by the amount of ice this system could produce (it was nothing close to what it should have been able to produce based on specs) and overwhelmed by the amount of cleanish water that it dumped on the ground through an open spout under the trailer as a part of it's too-frequent "clean" cycle. In 2025 we want to give it one last chance by keeping it connected to pressurized water so it never runs out of water to see what it can produce.

Grey Water

There are grey water tanks under the kitchen which probably need to be emptied daily. The waste spout of these tanks is only a few inches above the ground so we still haven't figured out a great way to move this grey water into the Gayflower or into a Sierra tank, other than manually pumping it around.

One option to explore for 2025 is putting a Sierra tank right next to the kitchen and constructing a simple hose that goes from the kitchen grey tank to the Sierra grey tank inlet. We didn't have the right plumbing parts to attempt this in 2024. We probably need a Valterra T01-0094VP or Valterra T01-0091VP which can convert to the grey water outlet to a standard hose.

Revision #4
Created 9 September 2024 20:29:03 by Jetpack
Updated 19 December 2024 15:12:57 by Jetpack