

Notes on Composting toilet investigation.

Suzanne McGinn. 4/23/15

Notes from Chewonki Foundation, Carob Arnold, Facilities director, Geoff Goodhue from Clivus and Bob Pourier from American Concrete

Chewonki installed 3 Clivus tanks, with 4 toilets per tank, 3-4 years ago.

They have had less than optimal experience with the system that they maintain themselves in conjunction with Clivus rep Geoff Goodhue.

Chewonki has a surging nature in its use of the system (boys summer camp). Heavy use in the summer and less use in the winter with the high school programs.

Piles have to be maintained. Raked down piles weekly. Add wood chips and a special bacterial solution weekly (solution is about \$300 per tank per season). He encourages access to water (lack of water would be an issue).

They have had to take the material away at the end of every year, 3-4 front end bucket loaders out of the tank because it was not fully decomposing. People drop all sorts of things into the tanks, feminine products, clothing, non waste, etc.

Temperature is an issue. If material freezes, then there is no bacterial action happening breaking down the material.

They do not use this material as compost because it is human material. We could not use this material for a children's garden.

Chewonki is moving to a different system to help with decomposition. It is a system that Farm & Wilderness School uses in VT. They will plan to gather material in bushel baskets and remove it periodically during the summer, bring it to a remote compost basin, similar to a farm, and have a more controlled decomposition process. So basically they are changing the process from a cold to hot process by being able to add hay and grass clipping to the material, turn it, etc...After the decomposition is complete, they will spread it into the woods away from human traffic.

Chewonki also has compost toilets at the Big Eddy campground, and currently they have to empty the material from the tank in 5 gallon buckets and bring it to a local farm where they add the material to the animal material. VERY labor intensive

Carob worked with Juniper Hill school in Alna to install a Privy Vault system outdoors. He suggested this system for us since we do not have water access. I spoke to Bob Pourier at American Concrete who installed this system. 784-1388

Privy vault system uses a 1000 gallon single piece construction with 2 stainless steel risers and a vent opening made with PVC pipe up through the roof. Tank is 5'4" w x 8' l x 5'4" tall. delivered to the site. We'd need to hire excavators since tank sits 6" above grade and hire someone to make the house structure. Maintenance would be to hire a septic truck to clean vault 2xyear (appx \$250 per clean). Their customers include State of Maine, Baxter State park, and often used at boat launches.

I also spoke to the Clivus NE maintenance rep Geoff Goodhue. 802-751-9757. I filled out a Clivus public facility site profile questionnaire on line and hopefully someone will be in touch, since no one returned my phone calls to date.

Clivus costs about \$12k for 2 toilettes plus tank. He told me to add another 8k for the building, which we would have to manage and install. So say \$20k for a 2 toilet system. Geoff maintains the systems and visits them about 3 times a year for about \$300/visit. We would still need to find someone to clean the stalls, rake the material weekly, add the woodchips and bacterial solution weekly. He could come out and speak with us about it for \$300 and use that bill towards a system. I'm hoping a rep would do it for free (Joe Ducharme),but Geoff's the maintenance guy, so he knows the most. Clivus has installed systems at AMC, Rachel Carlson center, Maine hut and trails, Audubon falmouth inside, hermit island.

FYI - Sun-Mar does not make an outdoor system to accomodate such heavy usage, at leas that is what i found out on line. No one has returned my call as Sun Mar. I did speak to a local Sun Mar rep at Shelter Insititute. Jennifer 442-7938. Small Point in Phippsburg has an outdoor Sun Mar toilet build with a wooden structure building, with a solar fan unit. It has a sun-mar Excel model \$1645, non-electric composting. I have not heard back from them with an estimate. Not sure I will, but I'll call again...Also, they do not provide service, so we would need to find someone willing to clean and service system.