

# The twin bucket system for sanitation    How to make and use it

## What do you need?

- 2 to 4 plastic buckets (5 or 6 gal. size)
- Lids for buckets
- A toilet seat
- Carbon material: 1 or 2 gal. plastic bags of sawdust, shredded paper, or peat moss.

Supermarkets and bakeries often will give you used buckets for free, although they may lack lids. Lids and buckets are sold at hardware stores and online. At least one lid should have a good seal. Buckets are useful for storing other emergency supplies. Toilet seats that fit buckets are available at camping stores or on line. You can also adapt smaller ordinary seats to fit buckets. Your emergency supplies should also include hygiene items: toilet paper, hand sanitizer, soap, sanitary napkins, plastic collection bags of various sizes and this instruction sheet.

## How do you use the toilet?

1. Mark the twin buckets “pee” and “poo” (or #1 and #2 or urine and feces, or yellow and brown, etc).
2. Set them up in a private space. The seat can be moved from one to the other.
3. Scratch your head and decide if you need to use the pee bucket or the poo bucket.
4. Try not to pee in the poo bucket. This is really important but it is understandable that this isn’t always possible. The pee is the component that produces the bad smell in toilets that mix.
5. After using the pee bucket, collect toilet paper separately in a plastic bag. Then remove the seat and cover with a lid that closes well.
6. After using the poo bucket, sprinkle about a half cup of the carbon material so that it completely covers the surface of the poo. This will eliminate odors and ensure flies don’t make themselves at home. If you collect toilet paper separately in a plastic bag, it’s easier to be sure the poo is completely covered.
7. Put the toilet seat back down, ensuring it’s not airtight. Give your poo some air and it will dry out and reduce in volume.
8. Remember that in an emergency people are vulnerable and scared. If your flush toilet doesn’t work and the sewers are down, folks in your household will appreciate the comfort, hygiene and safety that come with this simple twin toilet.

## What do you do when buckets fill up?

The really great feature of the Christchurch Twin is that it is No-Mix. It separates pee and poo, makes each of them easier to handle and almost completely eliminates odor. A day’s worth of pee has almost 10 times the volume of poo. So the pee bucket will fill up a lot faster. The volume of pee is why a single bucket camp toilet fills up quickly and mixing pee and poo makes it a mess to deal with. The great thing about pee is that it’s clean (unless someone is sick) and getting rid of it is not difficult. If you have extra buckets and lids, you can store pee until it can be put in the soil (6 to 8 inches below the surface) or added to a compost pile.

In a real emergency you can pour it in a street drain or the river, although a wooded area is preferable. What’s special about the Twin, it that it works even for high-rise apartment dwellers.

It’s the poo bucket that contains most of the pathogens. But the great thing about poo is that it doesn’t take up much space. Left to dry in a bucket with some carbon material, poo simply decomposes into compost. In a small household it will take a couple of weeks for the poo bucket to fill so just leave it be and give it some air. Poo is manageable, although there will still be pathogens.

Note: Compost that is safe to reuse as fertilizer on gardens requires extra work. At [www.composttoilets.co.nz](http://www.composttoilets.co.nz) (link is external) the New Zealand team explains how to do this. For more information, on ecological and emergency sanitation, including where you can purchase supplies, see [www.phlush.org](http://www.phlush.org)

## Liquid Waste (Pee):

- Pee in the pee bucket, but always put your toilet paper in the poo bucket.
- Dilute pee with water (if possible), and spread it on a permeable surface, such as your lawn, garden, or the ground. Local governments may develop alternative urine collection sites in order to avoid water table contamination.
- **Stay informed! Watch for instructions from public agencies on how to get rid of waste.**

## Frequently Asked Questions

### If I pour it in my garden, will the pee kill my plants?

Urine (pee) is generally sterile unless you have a kidney disease or other illness that causes your body to expel toxins in large quantities. Urine is mostly made up of water and nitrogen, which is a key component of fertilizer. If you dilute urine with water and pour it in a different place each time, your plants won't mind a bit. This article explains ways you can use urine in your garden:

[www.lifehack.org/articles/lifestyle/8-reasons-why-you-should-pee-your-garden.html](http://www.lifehack.org/articles/lifestyle/8-reasons-why-you-should-pee-your-garden.html)

### Solid Waste (Poo):

- Line your poo bucket with a sturdy trash bag.
- When using the poo bucket, it's okay to put toilet paper in the bucket.
- After each use, cover the surface of the poo with a carbon-based material (see the materials list above). This will help reduce odors and minimize the attraction of flies.
  - Do **not** put an airtight lid on the bucket. Allowing some air flow will help the poo dry out and reduce in volume.
  - Do **not** fill the bucket more than halfway full.
- Once you've tied the top of the bag, double-bag it to ensure the contents don't leak.
- Store your poo bags in a safe location away from food and water, kids, pets, flies, rats, etc.
  - Do keep poo bags, animal waste, and soiled diapers together and separate from other garbage.
  - Do **not** put poo bags in your regular garbage, yard debris, or recycling bins.
  - Do **not** dig a hole and bury your poo bags.
- Take care when using the poo bucket and bagging the contents. Afterwards, always wash your hands with soap and water or hand sanitizer.
- Consider talking with neighbors about shared collection sites.
- **Stay tuned to emergency radio broadcasts for further info from local agencies about what to do with your poo bags, and always handle them with extreme care.**

## Frequently Asked Questions

### **Why put poo in bags and not just store it in lidded buckets?**

After a major quake, we could be without running water and flushing toilets for weeks - maybe even months. Our buckets will fill up quickly. Using plastic bags means we don't need to store dozens of buckets.

### **Why not compost poo?**

Poo can be composted, but it takes knowledge and time (1-2 years) to do it safely. It's not as straightforward as composting kitchen scraps. If done incorrectly, it could create a major public health issue. Since most people don't know how to safely compost poo, and most people likely won't have access to the internet to learn how, our recommendation is to store poo in bags (or dig a latrine, when appropriate).

### **Where should I store my poo bags?**

There's no one answer that works for everyone, as circumstances will vary. What's most important is that you store poo bags away from food and water, kids, pets, flies, rats, etc. but not in the regular garbage, yard debris, or recycling carts that will eventually be emptied by garbage haulers (see below). However, if you have another garbage can that won't be picked up by haulers, you could use that. Or you could find a spot in your shed, garage, or home. Keeping bags of poo in your home may sound strange, but it's better than creating a public health hazard. And if it's double bagged, it shouldn't smell.

### **Why shouldn't I put my poo bags in my garbage, yard debris, or recycling cart?**

We don't currently have a way to collect poo bags from these carts. Garbage and recycling systems aren't designed to collect human waste. Garbage is compacted when it's transferred to the truck, at the transfer station, and at the landfill. At all these points, the bags will tear and the contents will get smeared around, creating hazardous situations for all workers involved with moving garbage. Plus, trucks are not designed for liquid, so when a poo bag tears in a truck, it would leak onto city streets and potentially spread disease.

### **Why shouldn't I bury my poo bags?**

It is fine to bury your poo without plastic bags! in a pit latrine. However, burying the plastic bags causes a problem. The bags take a very long time to degrade, and this will prevent the poo from breaking down safely.

### **Where should I put used feminine hygiene products?**

Put them in the poo bucket if you're using the Twin Bucket system. Otherwise, dispose of feminine products as usual.