

FLUSHABLE WIPES

*Allen Slater & Tony Lopez
FRWA Wastewater Circuit Riders*

“Flushable Wipes” have become a very hot topic in recent years. They have also become a very sore subject. We as consumers see wipes as a modern-day convenience to improve personal comfort and sanitation. Those using wipes can be any age – babies, children, or adults. And it’s simply handy to discard them in the toilet and not think twice about it. The bottom line is they are being flushed and wreaking havoc on the sewer systems. And yes, this includes septic tanks.

Sales of wipes have soared to \$6 billion a year and are a problem that can’t be flushed away!¹

What was intended as a modern day convenience for quick easy cleanup has turned into a modern day money drain for utilities and some homeowners. What were labeled as flushable wipes are not truly “dispersible” and should not be disposed of in a toilet. They do not rapidly breakdown as toilet paper does, and they cost utilities and homeowners thousands of dollars due to the associated problems. In homes, they clog pipes and result in the need to call a plumber. They cause pump clogs in lift stations, and repeated occurrences can increase rates for customers because utilities have to pass along the cost of repairs.

For example, the New York Post reported, “The Washington Suburban Sanitary Commission, which serves Montgomery and Prince George’s counties in Maryland, has also spent more than \$1 million over five years installing heavy-duty grinders, while the Orange County, Calif., Sanitation District, in a single year recorded 971 ‘de-ragging’ maintenance calls on 10 pump stations at a cost of \$320,000.”²

The industry as whole is be taxed with this problem to the tune of millions and millions of dollars to cover maintenance costs, equipment costs, the cost of upgrades to the systems, and the cost of manpower. All these costs add up quickly.

I found out that I was not as informed as I thought when I started to research the subject myself. I thought I would just run out to my local grocery store and grab a few that claimed to be flushable on the labels, and conduct a bench test with bottles of tap water to see how well they broke down and how long it took them to do so. But, I was surprised when I went shopping at my local Publix and could not quickly find any products that claimed to be flushable. It was exactly the opposite - all the disinfectant wipes I found had warning labels telling you not to flush them. So I thought about it for a second and decided to check out what baby wipes had on their labels and found that they also had warnings not to flush them down a toilet. I decided to hit the World Wide Web and see what Bing and Google could find for me. While I was surfing the Web I decided to conduct a phone poll of Utilities and Service companies I knew and ask them how often they had to respond to calls due to the flushable wipes. The average response equated to 80% of the time they have to pull a pump, it is due to the flushable wipes. One owner of a service company who routinely services lift stations said

that he has two calls a day minimum that have clogged pumps that have to be pulled and cleaned due to the flushable wipes. He asked if it was a trick question and I informed him I was researching to help write an article on the subject. He responded that he had mentioned to one of his employees that the flushable wipes were going to put his two kids through college!

Ah...the amount of information you can locate on the internet. After a quick shopping query on Amazon I was overwhelmed with page upon page of products claiming to be flushable. So now I had my starting point and printed out a list of a few to try my experiment on. I even found some of the Manufacturers with videos on their websites stating how they test their products potential to disintegrate and that break-down starts after just 35 minutes in a slosh box, and after three hours in the slosh box they are completely dispersed into fibers.

The issue is, in a gravity collection system (to prevent solids from settling out) a velocity of two feet per second is maintained, and at that velocity the wipes do not have time to start breaking down before they are already at the lift station pumps. This was my first good find while researching. Also in a normal septic system there is no agitation to break them apart or make them disperse.

Here are just a few of the examples I found online: *Cottonelle Flushable Cleansing Cloths Fresh Care*, *Charmin Freshmates Flushable Wipes*, *Scott Tissue Naturals Moist Cleansing Cloths*, *Pampers Kandoo Flushable Wipes*, etc... I purchased four different brands, *Cottonelle*, *Scott*, *Charmin*, and *Great Value*. All said they were flushable right on the package. I took them straight home and took one out of each container and did a tear test by hand, just to see how physically tough they were and if they would easily pull apart. Three tore easily with very little effort; however the *Charmin* brand was not easily torn. Next I took some empty Nestle water bottles and put a wipe from each brand in and filled them a third of the way with tap water and vigorously shook them for 30 seconds. The *Charmin* brand resisted break down. The three other brands dispersed some, but left me unimpressed. So I left them to sit on the kitchen counter. None of the ones that had been agitated were broken down any further after four days.

So after my little experiment, I would not want any of these products flushed into my septic system, or into a gravity collection system either. They do not readily break down and in a septic system they will build up and take up the space that the organics (food particles, fecal matter etc.) should be occupying. Also on older collection systems that have roots and other problems like old clay pipes, they can create big problems with blockages and hang-ups.

I firmly believe a big part of the problem is that consumers have seen *some* products labeled as flushable, and now automatically assume (as I did) *all wipes* are flushable, which is far from the case. The wastewater industry needs to work with manufacturers to develop new tests and guidelines for what can truly be labeled a flushable wipe. Till a real flushable wipe can be developed and created we should stick to the three P's: Pee, Pooh, and (toilet) Paper. And we need to work on educating the general populace to not flush wipes, as they will be the ones who will ultimately foot the bill.

We as the operators, technicians, supervisors, and all other field personnel need to make this a top priority in addressing our communities. Public awareness is your number one weapon in combating this problem. Yes, there are many things you can do to make this problem easier for you, but it may cost money out of someone else's budget and in turn increase the cost to the consumer. They need to be aware of exactly what is happening when those "flushable wipes" are put into the collection system. If you stand back and do nothing, then those raises you were expecting may not happen. The new tools or equipment you were hoping to get this year won't happen. Instead those funds will be used to clear pump clogs and supply manpower to clean those lift stations 2-3 times a week. It's easy to say, "I don't mind, I get paid either way so it's ok." Wait, you're cutting back on employees? Why? Well, the budget has been exhausted and the cost of keeping up with this problem has increased to a level where we can't keep up unless we trim some fat. Do you want to be the employee that gets laid off and then know you could have helped do something about it?

In the last 5 years of my tenure with a municipality, the estimated cost spent on combating the wipes problem alone was in the neighborhood of \$20,000 per year just for labor. We replaced and repaired 2-4 pumps per year. This also took away from normal daily duties. A lot of valuable time was lost to handle just this one issue. The cost of installing equipment to chew these rags up was approximately \$30,000 apiece. Yes, it does the job, but it strained our small town's budget.

A good example of some headway being made in this arena was reported by Treatment Plant Operator Magazine:

The U.S. Federal Trade Commission has finalized a consent order that requires Nice-Pak Products to stop advertising that its moist tissue and cloth products are flushable or are safe for sewer and septic systems unless it can substantiate the claims. In a notice issued Nov. 2, the FTC said the company must show the products, sold under several different brand names, will "disperse in a sufficiently short amount of time after flushing to prevent clogging and/or damage to household plumbing, sewage lines, septic systems and other standard wastewater treatment equipment."³

So be that person who makes a "stink" about this problem. You are not only creating an awareness, but you could possibly be saving your job or that of another. If you really want to know more information on this matter, just google it. There are many links that will lead you in the right direction.

¹<http://nypost.com/2014/03/02/flushable-wipes-clogging-up-drains-citywide/>

²<http://washington.cbslocal.com/2013/09/23/popular-bathroom-wipes-blamed-for-sewer-clogs/>

³ http://www.tpomag.com/online_exclusives/2015/11/news_briefs_ftc_halts_nice_pak_flushable_wipes_advertising