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BLOG



TO FLUSH OR NOT TO FLUSH: GRINDER PUMPS IN LOW-PRESSURE SYSTEMS

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Low-pressure systems operate like normal sewer systems. They take in the normal waste from a home and/or commercial building, but before transferring it straight to the treatment plant, it makes a stop through a grinder pump. A grinder pump is kind of like your garbage disposal. This high-powered pump can run by an “on/off” sensor level switch or a float system. Once the pump kicks on, it grinds up solids before pumping waste out through the discharge line. Toilets, baths, showers, household sinks, dishwashers, and washing machines are all examples of WASTE that the grinder pump needs to handle—it has a big and important job to do.

A grinder pump station/unit consists of a basin that houses the pump, where an inlet from the home/building enters. This pressure system consists of a pumping station “grinder pump unit” on each property (could be shared), which is connected to a discharge line that is connected to a network of force mains. Those lines then transfer the wastewater to lift stations and/or treatment plant.

Like a Garbage Disposal Except...

Now, most manufacturers will tell you that their grinder pump is made to grind up a beer can. However, in my experience working with grinder pumps as an operator in the field, I learned that was just a sales pitch—these pumps are powerful, but not that powerful.

A grinder pump station/unit is kind of like your garbage disposal, but stronger. Grinder pumps are 1-2 Horsepower (HP) or more and garbage disposal are about ½ HP. They are also designed very similarly – a grinder pump is facing downwards and the garbage disposal is upwards. Consider the times you turned on your garbage disposal to find something was down in there that wasn't supposed to be! We've all seen what our garbage disposal has chewed up, whether we wanted it to or not! The main difference between them is that our garbage disposals are eating up and discharging the waste as we control the running water, whereas the waste from our homes are filling (settling/floating) into a basin where the grinder pump sits quietly until the level of the waste triggers the pump to kick on. We try to manage what we put into the garbage disposal, because we know what can happen, and we operate it manually. But many homeowners may not even be aware they have a grinder pump and how it needs to be cared for until it needs to be fixed. With a grinder pump, what we flush is out of sight, out of mind and *when* the grinder pump clicks on is beyond our control!

The Problem with Floating

When items have time to settle, they have a better chance of being chewed up and pumped out by the grinder pump without issue. Since the grinder pumps operate on levels, anything that stays afloat will continue to collect. That means that if you then add grease, powder detergents, etc. to what is already floating, you are forming a solid which may create challenges in the grinding process. Most problems that occur with grinder pumps are due to unwanted items being placed, thrown, flushed, etc. into the sewer system.

To avoid and prevent problems to the grinder pump including blockage and damage to the system itself, it's important to help educate our communities on what can't be flushed down the drain.

A DO NOT Flush List

Below is a basic list of common items you SHOULD NOT put and/or place down/into the sewer. Please note that this list can also apply to those served by a public sewer with or without a grinder pump, as well as to individual septic systems:

- Diapers (children or adult)
- Disposable Wipes (even if they say "FLUSHABLE")
- Baby Wipes
- Paper Towels or Rags
- Feminine Hygiene Products (even if they say "FLUSHABLE")
- Condoms
- Grease
- Paint
- Lubricating Oils
- Dental Floss
- Cotton Balls
- Q-Tips
- Band-Aids
- Abrasive Materials including Gravel, Sand, Aquarium Rocks

- Coffee Grounds
- Plastic
- Kitty Litter
- Seafood Shells
- Socks/Cloths
- Rags
- Glass
- Metals
- Explosives
- Flammable Materials
- Strong Chemicals
- Gasoline or Diesel
- Gutter Connection
- Sump Pump Connection
- Storm Water Runoff

A Few Helpful Additional Notes for Technical Assistance Providers (TAPs), Operators and Property Owners on Grinder Pump Stations:

- Allow access to grinder pump station/unit at all times.
- Do NOT cover vent to pump station/unit.
- Do NOT cover pump station/unit lid.
- Do NOT turn off the power to the pump station/unit.
- Always call Digsafe at 811 before digging!
- If you lose power, notify your utility ASAP!

If you do go on vacation or this is a vacation home: Flush the system before you leave to prevent clogs in the pump when you return!

- Run water into the grinder unit until the pump kicks on.
- Turn off the water going into the grinder unit, allowing the pump to run until it shuts off automatically.
- If you disconnect power, please notify all your utilities.

Teaching, educating, and simply knowing your system can make a huge difference for everyone.

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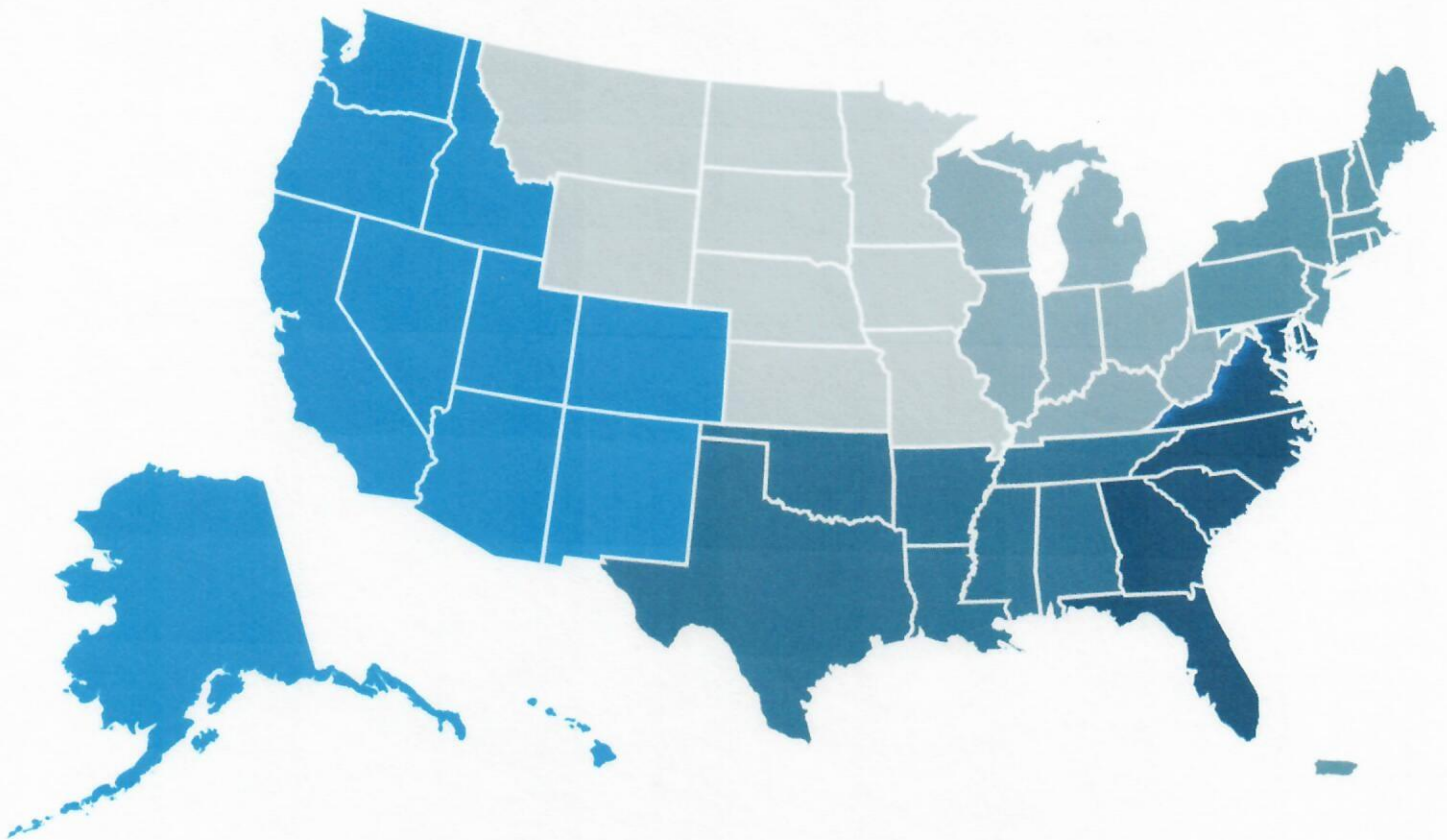
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