

Facilitator — August/September 2015



Go with the Flow

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Part of the success of a restaurant lies in effective water flow

The restaurant industry is one that needs to flow properly in order to keep the customers happy and the reservations consistent. I'm not just talking about the flow of patrons, which is the source of revenue, but the constant flow of the drain lines in the building.

In today's demanding world, restaurants are required to be open not only seven days a week, but for the majority of the day. This sounds great for business, right? The more hours a restaurant is open for business, the more customers it can serve and the more revenue it can generate. This flow is what makes the restaurant industry both profitable and challenging.

Common Problems with Water Flow

In addition to a continual flow of customers, there's also the flow of water throughout the restaurant to consider. Restaurants use large amounts of water to operate on a daily basis: to make ice, drinks, clean dishes, cook food, clean floors and supply toilets. On the surface, this seems very simple, but where does the water go after it is used?

Under the floor of a building, there can be hundreds of feet of drainage piping, which is designed to carry the wastewater out to the septic or township sewer system. Usually the waste water is moved by gravity, flowing on its own, and one would think that if gravity is involved, it will never fail. Unfortunately, this is not the case.

For anyone involved in the restaurant business, clogged drains are extremely common and can often create havoc. A simple clog in a toilet can easily be fixed with a toilet auger with little or no disturbance to the customer. At times, a sink in the kitchen starts to drain slowly, meaning the trap needs to be cleared of debris—again, an easy fix with only a few experts needed and minimal customer impact.

But what happens when the main piping under the building starts to back up? The flow of wastewater starts to slow down and get stuck and will eventually find a way out. It could overflow from a floor drain onto the floor or even back up through a toilet. Regardless of the location of a main line clog, a waste water backup is a major issue for a restaurant and would most likely require shutting down the facility and calling in professionals for immediate repair. This obviously wouldn't be good for the restaurant owner or the customer.

So what could cause a backup in the main drain line? Consider how the drainage systems in most restaurants are designed and what goes into those drains. It's important to understand that typically, by code, there are two separate sets of drain lines within the building. The first type is the sanitary system, which is dedicated to carrying wastewater from toilets, urinals, hand wash sinks and other fixtures that are not related to any food preparation. The second system is designed for the removal of wastewater primarily from the kitchen area of the building. This area would include the wastewater from prep sinks, pot sinks, dishwashers, mop sinks and floor drains, to name a few. These are all fixtures subject to carrying fats, oils and grease (FOG) into the drain system, which can create severe blockages. For that reason, we design a separate drain system to contain and remove these culprits before they enter the public sewer system.

Getting Ahead of the Problem

Fortunately, we have devices and tools to deal with the grease before it becomes a problem. The best defense is a preventive maintenance program: a plan to maintain the drain lines in the kitchen. But the first defense is having and maintaining the grease traps that are installed on certain sinks and dishwasher equipment within the kitchen. These grease traps need to be cleaned out daily, weekly or bi-weekly, depending on how much FOG a restaurant generates. One thing is for sure: Do not wait until the grease trap is full, because then it's too late. There are also dosing systems that pump grease-eating bacteria into the grease trap. These dosing units can be used to degrade and digest the FOGs that collect in the trap.

All the other fixture drains in the kitchen, including the drains from the grease traps, will drain into a larger containment unit: a grease interceptor. This is a larger unit, typically located outside the building, into which the main drain line from the kitchen and all the connected fixtures drains. This unit will intercept all the other FOGs not collected into the grease traps. This could be FOGs washed down floor drains and dumped into other unprotected sinks. These large interceptors prevent the FOGs from entering the public sewers. They are usually maintained and emptied by commercial contractors who come on a pre-scheduled basis.

If the drain lines become blocked, it is necessary to bring in the proper clearing equipment. The first step is to run a cable through the affected fixture drain. The cable is only as effective as the amount of grease or debris in the drain line. Grease is the most difficult thing to remove because of its clinging nature to the inside of the pipe. If the cable is ineffective in cleaning the drain line, then you'll need to hydro-jet the line. Using a jetter is more expensive and can be messy, but it is very effective. The jetter will send high-pressure water through a specially designed head to power wash away the grease inside the pipe. It will literally scrub out the line. Once the jetter is used, it would be advisable to run a camera through the drain for a visual inspection, to be sure all the grease has been flushed through to the interceptor on site. A camera can show if there are any other issues inside the drain.

With a preventive maintenance plan, there are some things that can be done passively and actively to ensure that a blockage won't interrupt the flow of business. We use a "drain strainer" or "drain sock," which are simple devices that are installed into the inlet of a floor drain or drain sink just under the strainer of the fixture. They collect any unwanted items, like straws, food particles and paper, from getting into the trap or drain. They will need to be taken out and cleaned or replaced occasionally, but it's worth it. The other recommendation is to have the drains cleaned with a jetter on a quarterly or bi-annually basis, depending on what works best for the establishment.

During the course of operations, most structural functionality is exposed and management is aware of what is working and what isn't, so there isn't much of a surprise when, say, the employee door lock breaks, because the warning signs were evident. But when the drainage system below the floor starts to collect grease and debris, and the diameter of the pipe starts to minimize to the point of backup, easy fixes suddenly become extremely problematic.

There is no way to predict when a backup will occur, and unfortunately, there is usually no warning. The best thing a business owner can do is commit to being proactive when maintaining the drainage system. And the smartest thing they can do is to develop a strong, reliable partnership with a vendor who offers preventive maintenance programs, so business—and piping—can continue to flow smoothly.

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