



March 2013 Cover Story

Watch Your Waste

A closer look inside the recovery tank.

By [Doug Berjer](#)

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In many ways, the carpet cleaning industry as we know it began in the early 1950s.



After World War II, there was a pent-up demand for just about everything — cars, homes and families — and with those homes came carpet. Area rugs became passé. Instead, everyone wanted wall-to-wall carpeting, and as those who were around at the time will recall, this often included carpeting even in the bathroom.

Once installed, all that carpeting had to be cleaned. For most of the 1950s and 1960s, carpet was cleaned using a shampoo or bonnet cleaning method. While these methods are still popular today, especially for interim carpet cleaning, the early 1970s saw the introduction of the extraction carpet cleaning method, which soon became the most popular cleaning process.

This method helped technicians to clean carpet faster and, in most cases, far more thoroughly and effectively.

However, it has a drawback that has become a much greater concern over time. The extraction method uses a lot of water and discharges a lot of water.

Some portable extractors release about 1 to 1.5 gallons of water per minute. A one-hour job, which is typical for residential carpet cleaning, means as much as 90 gallons of water are used. Five or six such jobs in the day means about 500 gallons of water are used by this one technician to clean carpet. And much of that water becomes wastewater contaminated with chemicals, soils, carpet fibers, grease and organic waste.

It collects in the recovery tank where it must be emptied, and that's where the problem is found.

Inside the recovery tank

At the end of the job, many carpet cleaning technicians like to show their clients the wastewater collected in their machines. Typically, it is brown and nasty looking, which tells the customer all those nasty soils are gone thanks to the fine job of the technician.

What possibly the technician is unaware of is just how nasty that wastewater really *is*. We have already mentioned it contains soil, grease, and organic matter. It also may contain such things as:

- Highly alkaline chemicals, aggressive enzymes and chemicals with high VOCs (volatile organic compounds, which can be harmful to indoor air quality)
- Disinfectants (if used)
- High concentrations of sodium bicarbonate; lower concentrations of sodium citrate, sodium phosphate and/or sodium silicate
- In some cases, dyes (to help make carpet look brighter after cleaning), polymers, bleaches, a variety of solvents, esters and forms of butyl (see "What about green chemicals?" sidebar).

Without going into extensive detail, all of these ingredients can be harmful to humans and all living things, especially in large amounts. If they are released into waterways, they can negatively impact plants, insects, and aquatic life and may eventually get into the food chain.

Laws and regulations

Several communities now have their own regulations enforced with fines and penalties regarding the discharge of wastewater from a variety of sources, including carpet cleaning equipment.

However, the umbrella policy under which most of these laws were created is the Clean Water Act. Passed back in 1972, the act establishes guidelines and criteria for discharging wastewater and polluted water.

Under the Clean Water Act, a carpet cleaning technician cannot release wastewater into local waterways such as creeks, rivers or lakes, or into storm sewers that lead to waterways. And, if unsure where the water leads, the answer again is "no."

Additionally, in many communities wastewater cannot be discharged into a residential septic system. The problem is the high volume of untreated wastewater, along with all the soils it may contain, can potentially clog the system.

What's more, many communities now interpret sections of the Clean Water Act to address what is often called "indirect" discharge. This references the discharging of wastewater onto grounds where it may eventually soak into groundwater that leads to wetlands and waterways.

Earlier we mentioned that to enforce these regulations, many communities have established a variety of fines and penalties. These fines can be substantial, as high as \$50,000 for illegal discharging.

Further, if a repeat offender is involved, some jurisdictions can impose civil actions, essentially putting a carpet cleaning company out of business, or view it as a criminal offense, meaning jail time is also possible.

How to discharge wastewater legally

For better or worse, we should add that many illegal wastewater cases that come to the attention of legal and public health officials are the result of tips companies turned in by the competition.

As a result, the best way to avoid this problem and keep your competitors at bay is to simply follow legal and appropriate ways of discharging wastewater.

So how is this accomplished? The following are some suggestions:

- First and foremost, find out about the wastewater regulations in your community. This information may be provided by your local health department or wastewater management district; they also will likely suggest ways or list locations where wastewater can be properly disposed of.
- Put wastewater in a portable containment system or holding tank that can be hauled off and disposed of in a designated wastewater site at a later time.
- If local regulations allow for the disposal of wastewater on a customer's property (the ground), be sure you have the customer's written permission to do so.
- Some professional car washes will allow for wastewater disposal for a service fee; again, make sure to have written permission.

Another option that can prove very helpful is to simply limit the amount of wastewater generated. In some cases, the wastewater can be recycled so that it can be used again before it must be discharged.

The discharge future

As you might expect, the laws and regulations regarding wastewater discharge are often dictated by the political winds.

However, when it comes to wastewater, the growing trend is clear: More and more communities are likely to implement more and more regulations to keep their waterways clean.

Carpet cleaning technicians have no choice but to stay up-to-date of these regulations and abide by them accordingly.

View it as part of the cleaning profession in general. Our job is to keep people, facilities and the environment healthy. Properly discharging wastewater is just one more way in which we can do this.

Doug Berjer has been involved in the professional cleaning and carpet cleaning industry for more than a decade. He is a frequent author on carpet cleaning related topics, and is the sales director representing Tacony and CFR Corporation in the eastern portion of the United States. He may be reached via his company website at www.CFRCorp.com.