



“Green” Cleaning for Carpet Cleaners

This fact sheet discusses environmental concerns related to the carpet cleaning industry. Information presented in this fact sheet is intended to provide a general understanding of the statutory and regulatory requirements governing the carpet cleaning industry. This information is not intended to replace, limit, or expand upon the complete statutory and regulatory requirements presented in the Illinois Environmental Protection Act and Title 35 of the Illinois Administrative Code. These requirements can be found online at www.ipcb.state.il.us.



Because carpet cleaning generates wastewater, it is your responsibility to properly manage and dispose of this by-product. This fact sheet discusses how the carpet cleaning industry operates, why wastewater is a concern, ways to properly dispose of wastewater, and offers suggestions on environmentally friendly carpet cleaning processes. Contact information is presented at the end of this fact sheet.

? How Does the Carpet Cleaning Industry Operate?

Depending on the location of the carpet or the type of treatment required for the carpet, two different carpet cleaning processes may be used.

- “Dry” cleaning uses a minimal amount of liquid and a blend of compounds for restorative cleaning, regular scheduled maintenance, and emergency cleanup. This process uses a homogenized blend of solvents, including a cleaning agent, rinsing agent, and neutralizing agent, heated to about 200 degrees Fahrenheit and applied to the carpet.
- Steam extraction is commonly used for restoration jobs. This truck-mounted system uses antimicrobial, urine and odor treatment chemicals. This process uses the same chemicals used in “dry” cleaning, but the rinsing agent is blended in the truck-mount, and more water is used in rinsing.

Industry standards exist for upholstery, carpet and other cleaning procedures. Carpet cleaning requires the following procedures: vacuuming, pretreatment and conditioning, extraction, nap setting, and drying. Vacuuming

removes most particulate soil, pretreatment and conditioning loosen soil with a mild solvent cleaner, extraction rinses away the cleaning solvent, and nap setting and drying allow the remaining solvent to vaporize and dry. If these procedures are not followed, indoor air quality could pose a health concern both for the cleaner and those at the residence or business.

? Why Is Discharging Wastewater from Carpet Cleaning a Concern?

Carpet cleaning creates wastewater that includes chemicals from the cleaning formula as well as waste products such as grease and organic matter from the carpet itself. Many chemicals currently used are highly alkaline and aggressive enzymes and disinfectants which if used or managed improperly can cause harm to humans and the environment. A standard cleaning formula may contain a high concentration of sodium bicarbonate and lower concentrations of sodium citrate, sodium phosphate, sodium silicate, anionic surfactant, and nonionic surfactant. Formulas can also contain dyes, polymers, enzymes, bleaches, and solvents of alcohols, esters, and glycol ethers. Some specialized cleaners also contain various forms of butyl, such as butyloxy ethanol (also known as butyl cellusolve) used in the “dry” cleaning method of carpet cleaning. This chemical can damage the central nervous system, kidneys, liver and blood.

? What Should I Do with My Carpet Cleaning Wastewater Discharge?

Some storm drain systems discharge untreated water directly to water bodies. When untreated wastewater is discharged to a storm drain of this sort, chemicals from the cleaning formula and products in the wastewater could contaminate water bodies. The suggestions listed below for carpet cleaning can reduce the amount of pollutants discharged to water bodies through storm sewers.

- ✓ **Use a portable containment system.** Wastewater can be kept in a holding tank to be hauled off-site and properly disposed of. Wastewater should not be discharged onto the ground or into any surface water body.



Find out if area storm and sanitary sewers are combined or separate. Many storm and sanitary sewers in the Metropolitan Water Reclamation District of Great Chicago (MWRDGC) are combined before their final discharge point; therefore, most wastewater is treated before it is discharged to water bodies. Newer areas and other Illinois cities may have separate systems; therefore, wastewater discharged to storm sewers can contaminate water bodies. Contact your local publicly owned treatment works (POTW) to find out if the storm and sanitary sewer systems are combined or separate.

- ✓ Discharge wastewater to the sanitary sewer of the property where the cleaning is conducted with permission of the property owner. The on-site sanitary sewer can be accessed through a building drain, building sewer, industrial sink, private sewer cleanout, private sampling manhole, or any other privately owned sanitary sewer access point. Discharges to the sewer should not contain grease, grit, or any material that could clog piping. A specific pH range may also be required of the discharge. For example, under the jurisdiction of the MWRDGC, discharges to the sanitary sewer must have a pH of 5.0 to 10.0. Call the local POTW in the area where you are working for information on storm sewers and associated discharge requirements.

TIP

Wastewater can be filtered before discharge to a sanitary sewer. Residue on the filter can be disposed of along with your general waste when the filter is completely dry. The MWRDGC requires that particles of 0.5 inch or more in diameter be filtered out of wastewater before discharge to the sanitary sewer.

? Do I Need a Permit for my Carpet Cleaning Wastewater Discharge?

Carpet cleaning wastewater can be discharged to the sanitary sewer system with permission from the local publicly owned treatment works (POTW). Contact your local POTW to find out their requirements. We recommend you do not discharge your carpet cleaning wastewater to a septic system; however, if you plan to, you

must contact the Illinois Department of Public Health and Illinois EPA. Because regulations on carpet cleaning wastewater vary from city to city, it is wise to contact the city storm water program or department to determine exact permit requirements.

TIP

Wastewater is attributed to the facility or residence where it is generated; therefore, if the wastewater is not being collected and hauled off site for proper disposal, the carpet cleaner must obtain permission from the facility or residence owner to dispose of the water at the cleaning site.

? How Can I Clean Carpets Using a More Environmentally Friendly Process?

Practical, nontoxic alternatives to standard carpet cleaning products are labeled as “green” cleaning agents. Some “green” carpet cleaning products do not contain butyl cellulose. By using environmentally safe chemicals to clean carpets, the cleaner and others at the business or residence are not exposed to toxic chemicals. The “green” cleaning agents are also safe for the cleaner to handle. It is important for the cleaners to follow the Institute of Inspection, Cleaning and Restoration Certification standards when using “green” products. These standards can be ordered online at www.iicrc.org. Also, carpets can be thoroughly cleaned using high temperatures (up to 260 degrees Fahrenheit) and mild chemical agents.



TIP

By using “green” carpet cleaning products, carpet cleaners limit their exposure to toxins and can market their environmentally responsible services.

? Where Do I Get More Information?

For additional information on the carpet cleaning industry, call the Illinois EPA Office of Small Business Help Line toll-free at 1-888-EPA-1996. All calls are considered confidential, and the caller can remain anonymous. You can also visit the Illinois EPA website at www.epa.state.il.us. In Chicago, call the Department of Environment permit desk at 1-312-744-8026 for more information.

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