

## ▶ THE PRACTITIONER'S TOOL KIT

# Effective Cleaning: Our Influence on Good Sanitation Practices

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**Editor's Note:** The National Environmental Health Association (NEHA) strives to provide relevant and useful information for environmental health practitioners. In a recent membership survey, we heard your request for information in the *Journal* that is more applicable to your daily work. We listened and are pleased to feature this column from a cadre of environmental health luminaries with over 300 years of combined experience in the environmental health field. This group will share their tricks of the trade to help you create a tool kit of resources for your daily work.

The conclusions of this column are those of the authors and do not necessarily represent the official position of NEHA, nor does it imply endorsement of any products, services, or resources mentioned.

For those of us who specialize in institutional environmental health or work in the food production industry, we focus primarily on what we affectionately refer to as the “service corridor.” This work sector includes the essential basic support operations such as food and laundry services, maintenance, warehouse, and sanitation (i.e., housekeeping, janitorial or environmental services), as well as a myriad of environmental health and safety-related activities that fall under these headings. Of these support operations, we probably spend most of our time with sanitation, secondary to maintenance. Our charge is to reduce the bioburden of critical areas to acceptable levels and minimize the risk of cross-contamination.

To accomplish this charge, we define “how clean is clean” in an objective, sustainable, economical, and effective manner by evaluating cleaning frequency, cleaning methods, chemicals, and equipment,

and then developing simple quality control systems. In addition, we are sensitive to the health, safety, functional, and aesthetic needs of the facility to reduce the risk of injury and illness and to minimize losses due to contamination of people, places, and things. We ensure that meeting these objectives does not result in any adverse effect on the public health of the community, such as destroying the local sewage disposal plant through the misuse of chemical cleaning, disinfecting, or sanitizing agents or that their use results in occupational health issues such as allergic reactions, respiratory problems, or contact dermatitis.

With that not-too-brief introduction, we are sometimes aghast when we see the poorly applied sanitation efforts in facilities that do not enjoy the oversight of an environmental health professional. These include store-front clinics, day care centers, group homes, motels, and particularly

some retail food establishments. We often find their custodial closets and cleaning equipment in an appallingly unclean condition. Gray mops stored in gray water that is starting to bubble due to septic fermentation, brooms and brushes that are worn and blackened from dirt and grease, cleaning cloths that can stand up on their own, and mop buckets that have not been cleaned since the turn of the millennium.

Worst of all, we find that the equipment used to clean food preparation and food service-related areas is the same that is used to clean toilets and waste rooms. We often find the widespread use of inappropriate household cleaning chemicals and incompatible cleaning chemical mixtures that either off-gas or are rendered completely ineffective. Often, we find excessive glug-pour (i.e., the idea that if a little is good, a lot is better) applications of toxic compounds regulated by the U.S. Environmental Protection Agency. It is not uncommon that odorants are used to cover the stench of rancidifying fats and putrefaction that result from the anaerobic bacterial digestion of proteins or used to cover foul-smelling, incompletely oxidized organic products. And if that was not enough, we see a total lack of adequate staff training and supervision, particularly in the use (proper or otherwise) of personal protective equipment.

All these conditions are rife for cross-contamination, not to mention seriously compromising the health and safety of everyone in the facility. Citing them as violations is justifiable.

Contrary to popular belief, effective cleaning is not intuitive. It is a skill like any other that must be learned and perfected.

And since soil accumulation is directly proportional to the presence of pestilence and precursors to disease and injury, it is our job to urge our clients in a positive and productive direction. But first, we strongly urge that you familiarize yourself with some of the tricks of the trade that are readily available through YouTube and other free online sources. At the least, become familiar with the basic steps of cleaning, cleaning chemistry, the dynamics of disinfection and sanitization (d-, z-, and f- values), and the various commercial methods available for the operator including the latest technologies (e.g., dry steam, electrolyzed water, dry ice blasting, ozone generation, microfiber mops and wipe cloths).

You may also want to share a few suggestions that would significantly help operators reach a higher level of sanitation in their facility.

- First, discourage the double-dipping of mops and cloths. Discourage the use of the single mop bucket. Rather have your client consider double-compartment buckets, or better yet, use an auto-scrubber or a no-touch spray or vacuum system for routine cleaning.
- Show your client the proper use of wipe cloths. Demonstrate how to fold cleaning cloths into quadrants and wipe in one direction instead of back and forth, and to change to a new quadrant when needed. To prevent cross-contamination, urge that the wipe cloths are laundered after use, rather than reusing them after rinsing in a single bucket sanitizer solution.
- Urge that all custodial equipment, including the custodial closet and janitorial area, is maintained in a clean and usable condition. Remember, you cannot sanitize anything that is soiled. Suggest that all mops, if they are to be stored between use, are stored in such a manner to prevent contamination of the handles (i.e., mop heads hanging down).
- Along with the cleaning of equipment, help set up a program that directs hand-washing between various cleaning tasks and encourages the proper selection and use of personal protective equipment, particularly gloves and eye protection.
- Promote the color coding of custodial tools. Since there is no universal standard for color coding, conventional wisdom suggests using green tools (including mop heads) that are exclusively reserved for food service. Red cloths, mops, and other equipment are for use on toilets, urinals, and restroom floors. There are yellow options for restroom sinks and mirrors, and blue for general low contamination risk areas. At the very minimum, we suggest the red/green separation.
- Ideally, if it were not for the survival of the planet, we would encourage the use of disposable mops and wipes. This suggestion, however, is neither practical nor economical. Therefore, if a facility does not use a commercial laundry service, we strongly suggest that they consider purchasing an appropriately sized commercial washer/dryer system and have it serviced by a commercial distributor of laundry products. This practice will ensure the proper wash temperature and the necessary wash cycle settings to match the materials that are being laundered. It will also ensure the proper titration of wash chemicals for optimum soil removal. Proper laundering will significantly extend the useful life of mops and wipes, particularly microfiber ones.
- Pay attention to the condition of the cleaning hardware and ancillary equipment such as mop frames and handles, backer plates, utility sinks, equipment hooks, and floor drains. These items see constant use and need to be replaced when they are no longer cleanable.

Encourage adequate lighting measured at the ground level of at least 20 ft-candles (215.2 lumens) in all custodial areas. Remember, it is difficult to clean what you cannot see.

Finally, suggest that your client direct sufficient ventilation to dry the area when not in use to prevent chronic septic conditions.

As a final note, whenever possible, we always try to describe the state of sanitation, or anything else for that matter, in an objective way. Subjective descriptions such as “the stove area is very dirty” relies on opinion and experiences for interpretation. Because cleaning must be targeted to the type of soiling and frequency of attention, describing the area objectively leaves little for interpretation. For instance, “The area behind the stove including the gas lines and wall is covered with grease and dust. The heaviest accumulation is immediately adjacent to the deep fryers. The stove burners have accumulated charred food spillage that partially blocks some of the burner orifices.” Yes, this type of comment requires a bit more writing, but it is far more descriptive and provides guidance about the expectations of cleanliness. Terms such as very, extreme, or dirt do not have meaning in the prevention of cross-contamination.

We encourage cleaning validation, which is using some procedure that includes field instrumentation to establish evidence that cleaning processes prevent product contamination. While cleaning validation is a testing and documentation process, let us first see what we can achieve through basic, regular, and good cleaning practices and leave the validation for another day. 🌸

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## Did You Know?

September is National Preparedness Month. This year’s theme is “Preparing for Older Adults.” The month aims to raise awareness about the importance of preparing for disasters and emergencies that could happen at any time. Visit [www.ready.gov/september](http://www.ready.gov/september) for more information. You can also check out our preparedness resources at [www.neha.org/preparedness](http://www.neha.org/preparedness), which includes our recently released Wildfire Response Guide for Environmental Public Health Professionals.