



# THE SSE ELUCIDATOR

*"Elucidate: to give clarity through explanation and analysis."*

## HOW TO CLEAN GREEN



Earth Day is just around the corner (April 22nd), and as the day draws near, hopefully you've been thinking about

what you can do to make our world a greener, healthier place. Greening your cleaning products is one big change you might consider taking up this Earth Day.

Cleaning products are necessary for maintaining attractive and healthful conditions in the home and workplace. We use cleaning products everywhere in our homes and offices: on dishes, countertops, furniture, clothes, floors, windows, and floating through the air. In addition to the obvious aesthetic benefits of cleaning, the removal of dust, allergens, and infectious agents is crucial to maintaining a healthful indoor environment. However, in our war on dirt and germs we may often actually be making things worse. Most of the conventional cleaning products we all grew up with are petroleum-based and have dubious health and environmental implications. Cleaning products are released to the environment during normal use through evaporation of volatile components and rinsing down the drain of residual product from cleaned surfaces, sponges, etc. Additionally, they may contain chemicals associated with eye, skin, or respiratory irritation, or other human health issues.

Instead of opting for cleaning products that annihi-

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late everything in their path, there are plenty of natural products and methods that keep a house clean and fresh-smelling without the toxic side effects. Choosing less hazardous products that have positive environmental attributes and taking steps to reduce exposure can minimize harmful impacts at home and work, improve indoor air quality, and reduce water and ambient air pollution while also ensuring the effectiveness of cleaning in removing biological and other contaminants from your home or office.

*The average American home has 63 synthetic chemical products, translating to roughly 10 gallons of harmful chemicals.*

As the health and environmental impacts of conventional cleaning products become more thoroughly understood, more and more brands of healthy, green, and effective cleaning products have started hitting the market. Many of these products are non-toxic, biodegradable, and made from renewable resources (not petroleum). When shopping for green cleaners, consumers should consider both product content and packaging in addition to price and performance. Consider this list of attributes

## HOW TO CLEAN GREEN (CONT.)

when selecting environmentally preferable cleaning products.

### *Product Content:*

- ◆ Minimal presence of or exposure to potentially harmful chemicals, such as:
  - Corrosive or strongly irritating substances
  - Substances classified as known or likely human carcinogens or reproductive toxicants by authorities such as the National Toxicology Program, the U.S. EPA, or the International Agency for Research on Cancer
  - Ozone-depleting compounds as listed in Clean Air Act regulations
  - Regulated hazardous materials (e.g. products classified as hazardous waste or that trigger OSHA hazard communication requirements)

*Of the 17,000 petrochemicals available for home use, only 30% have been tested for exposure to human health and the environment.*

- ◆ Use of renewable resources, such as biobased solvents from citrus, seed, vegetable, and pine oils
- ◆ Low VOC content
- ◆ Biodegradable by standard methods and definitions, e.g. ready biodegradability as defined by the Organization for Economic Cooperation and Development (OECD). "Ready biodegradability" is a definition meant to ensure that a material degrades relatively quickly in an aquatic aerobic environment.
- ◆ Low toxicity in aquatic species such as fish or aquatic invertebrates, e.g. LC50 or EC50 > 10 mg/L (chronic) as reported on MSDS or other product literature
- ◆ Low flammability, e.g. flash point > 200 °F
- ◆ Designed for use in cold water in order to conserve energy

*According to USEPA estimates, indoor air pollution can be up to 100 times higher than outdoor air pollution levels.*

If you choose to use disinfectants, limit their use to areas where people are likely to come into contact with contaminated surfaces (e.g., bathroom fixtures, doorknobs, other high-touch surfaces). Many general purpose cleaning tasks do not typically require the use of disinfectants (e.g., walls, floors, other surfaces with minimal hand contact).

### *Product Packaging and Shipping:*

- ◆ Concentrated formulas with handling safeguards
- ◆ Efficient packaging (e.g., light weight, reduced volume)
- ◆ Recyclable packaging
- ◆ Recycled-content packaging
- ◆ Refillable bottles
- ◆ Pump sprays rather than aerosols
- ◆ Packaging and dilution systems designed to reduce exposure to the product
- ◆ Products shipped in bulk
- ◆ Clear labeling and information on use and disposal



If you wish to take green cleaning a step further, home-mixed cleaners can get the job done and then some. Vinegar and baking soda can be used to clean almost anything. Mix in a little warm water with either of these and you've got yourself a biodegradable, nontoxic all-purpose cleaner.

Finally, when replacing your cleaning products, don't just throw the old ones in the trash. If they're too toxic for your home, they won't be good for the drain or the landfill either. Many communities hold toxics & electronics recycling days and will take all of these off your hands. Throwing chemicals in the trash or down the drain means they might end up back in your water supply.

## MOTORCYCLE SAFETY COURSE REMINDER

With the beginning of spring, many motorcycle enthusiasts are tuning up their bikes and heading for the open roads. However, motorcycle accidents are currently the leading, non-combat related cause of death and injury to our service members. As a result of rising motorcycle fatalities the Department of the Army now requires motorcycle training for all Active Duty Military, dependents, government civilian employees, contractors, and retirees. In accordance with Army Regulation 385-10, prior to operating a motorcycle, motorized bicycle (moped), and/or motor scooter Army personnel must successfully complete an Army approved hands-on motorcycle rider course. Anyone registering a motorcycle on an Army installation must show proof of completing a Motorcycle Safety Foundation (MSF) Motorcycle Defensive Driving Course (MDDC). Active Duty Military must complete this course before operation of a motorcycle on or off the installation, on or off duty, regardless of whether the motorcycle is registered on post. Operators must have in their possession an MSF card when they ride to verify completion of training.

The required MSF training (MDDC) is provided at no cost to military personnel and DoD civilian personnel, but all others are responsible for their own fees. The Basic Rider Course (BRC) is a 17-hour course designed for the true beginning rider who has little or no riding experience. It includes classroom and riding instruction on the basic riding skills and strategies necessary for you to begin practicing street riding. Students are introduced to the types of motorcycles, risk management, motorcycle controls, and the correct personal protective gear to wear while riding a motorcycle. Riders learn to examine the bike's tires and wheels, controls, lights and electrics, oil and other fluids, the chassis, and both the side and center stands to assure they are in good working condition before venturing out on the road.

The Basic Rider Course II (BRC II) is an eight-hour course for individuals who have some riding experience and are seeking a Class 'M' license. The prerequisites for this course include the ability to:

- ◆ Use the clutch and throttle to get the motorcycle in motion
- ◆ Stop the motorcycle properly in a designated area
- ◆ Execute gradual and tight turns
- ◆ Up and downshift smoothly
- ◆ Achieve a speed of at least 25 mph

The Experienced Rider Course (ERC) is a six-hour course for the licensed motorcyclist who wants to improve or refresh their skills. This course requires a valid motorcycle license. The Class 'M' license is not offered as a part of this course.

In addition to the MSF card, AR 385-55 and Fort Detrick Policy Memorandum FD 34-05 require the following Personal Protective Equipment (PPE):

***Helmets*** – Certified to meet Department of Transportation (DOT) standards & properly fastened under the chin.

***Goggles and Face Shields*** – Impact or shatter resistant goggles or full-face shield properly attached to helmet. A windshield or eye glasses alone are not proper eye protection.

***Sturdy Footwear*** – e.g. leather boots

***Clothing*** – Long sleeved shirt or jacket, long trousers, and full-fingered gloves or mittens designed for use on a motorcycle.

***Garment Visibility*** – A brightly colored outer upper garment during the day and a reflective upper garment during the night. Outer upper garment shall be clearly visible and not covered. Reflective belts, vests, or PT bandoliers is also an option.

**For additional information, contact Fort Detrick's Installation Safety Management Office at 301-619-7318.**

## GREENSCAPING YOUR YARD

*Why GreenScape?* American homeowners spend hundreds of hours a year mowing, clipping, raking, and landscaping to keep our yards healthy and our property attractive. Our landscaping practices produce huge amounts of waste. So much in fact, that yard waste is second only to paper in the municipal solid waste stream. By following a few simple waste reduction practices, you can not only improve your lawn and garden, but also the environment. **Green-Scaping** encompasses a set of landscaping practices



that can improve the health and appearance of your lawn and garden while protecting and preserving natural resources. Benefits include: saving money by eliminating unnecessary water and chemical use, saving time by landscaping with plants that require less care, protecting the environment by conserving water supplies, using chemicals properly and only when necessary to keep waterways and drinking water clean, reducing yard waste by recycling yard trimmings into free fertilizer and mulch.

*Put nature to work in your yard* – In nature, soil recycles dead plants into nutrients for new plant growth. Plants are adapted to the water, sun, and soil available in their site. Maintaining a wide variety of healthy plants, soil organisms, beneficial insects, and animals can keep most pests and diseases in check. By working with nature, you can have a great-looking yard that's easier to care for, cheaper to maintain and healthier for families, pets, wildlife and the environment.

*Start with these steps* –

**1. Build and maintain healthy soil with compost and mulch.** Healthy plants grow in healthy soil. A soil test will tell you how much nitrogen, phosphorus, potassium, and lime your soil needs to grow healthy plants. Depending on the condition of the soil, you may not even need to apply these nutrients. Start by

mixing in 1 to 3 inches of compost into 6 to 12 inches of top soil of flowerbeds, gardens, and grass. Compost helps sandy soils hold nutrients and water, loosens clay soils, and feeds the soil life so it can feed and protect your plants. You can make your own compost at home using yard and food waste (visit [http://www.epa.gov/epaoswer/non-hw/composting/by\\_compost.htm](http://www.epa.gov/epaoswer/non-hw/composting/by_compost.htm) to learn how). Apply a top coat of 2 to 3 inches of mulch (organic material like leaves, aged wood chips, compost, or grass clippings) to flowerbeds and gardens. Mulch stabilizes soil temperature, prevents weeds, feeds the soil for healthier plants, and helps to conserve water. And it recycles itself! If fertilizer is still needed for annuals, vegetables, or lawns, use products that contain "natural organic" or "slow-release" ingredients. The result? Healthier plants with strong root systems, no excessive "top growth," and reduced nutrient runoff into ground and surface waters.

**2. Plant right for your site.** Select plants that grow well in your area of the country and fit the amount of sun, type of soil, and water available in your yard. Consider planting native trees and plants, especially ones with berries, fruits, and flowers that will attract birds, butterflies, and other wildlife into your yard. Don't plant invasive species. Plant in layers (ground cover, shrubs, and trees) so your landscape is like the forest. Leave wild "buffer" areas of native plants along ravines, streams, shorelines and fence lines.



**3. Practice smart watering for healthier plants.** You can have healthier plants, save money on water bills, and conserve precious water resources by learning to give your lawn and garden just what they need and no more. Most plants do best if the soil is allowed to partially dry out between waterings. A loss of shine or footprints remaining after



## GREENSCAPING YOUR YARD (CONT.)

you walk across the lawn indicates that it's time to water. Vegetables and other annuals should be watered at the first sign of wilting, but tougher perennials (plants that live several years) need water only if they stay droopy after it cools off in the evening. Trees and shrubs usually don't need any watering once their roots are fully established (2 to 5 years), except in very dry years. Some easy ways to get more water to plants include: building your soil with compost and mulch to hold water and reduce

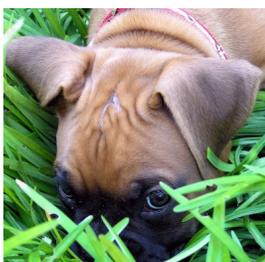


evaporation, choosing low-water-use plants that once established can thrive just on rainfall, using soaker hoses or drip irrigation on beds saving 50 percent or more compared with sprinklers, using an outdoor water timer to water just the right amount, frequency, and time of day, making sure sprinklers aren't watering the pavement, watering in the early morning when water is less likely to evaporate, avoiding watering at night to discourage the growth of mold or plant diseases. In a dry spell, you can allow an established lawn to go dormant. Water just once a month and brown areas of the lawn will bounce back in the fall.

### 4. Adopt a holistic system for pest management.

Only about 5–15 percent of the bugs in your yard are pests. "Good bugs," like the ground beetle and the green lacewing, help control pests. Pesticides (including weed and bug killers) can be effective tools for controlling pests such as insects, weeds and diseases. However, be sure you need a pesticide before you use it. On-going pest problems are often a sign that your lawn or garden is not getting what it needs to stay healthy. You

need to correct the underlying problem to reduce the chance of pests reappearing. Start with prevention by selecting pest-resistant plants. Clean out diseased plants so disease doesn't



spread, pull weeds before they go to seed and spread, and remove dead plants to reduce hiding places for insect pests. Monitor your landscape to spot signs of pests but don't spray at the first sign of damage—nature may control it for you or plants may outgrow the damage. If a pest or weed problem develops, use an integrated approach to solve the problem. Physical controls like traps, barriers, fabric row covers or plants that repel pests can work for some pests. Use a little "elbow grease." Long-handled weed pullers pop dandelions and other weeds out easily. Use "crop rotation" techniques by changing the planting location for annuals to minimize their susceptibility to pests and disease. If a pesticide is needed, avoid overuse by treating the problem area, not the entire yard.



**5. Consider shrinking your lawn.** Grass grows best on level, well-drained soil in full sun or part shade. Consider alternatives to grass on steep slopes, shady areas, or near streams and lakes. In these areas, it takes a lot of extra work (and sometimes chemicals) to maintain grass. Look for other plants, such as ground covers, better suited to soggy soil, slopes, or heavy shade. Leave or plant a "buffer" of dense native vegetation along streams and lakes to filter and slow run-off, shade and cool water, provide homes for wildlife, and prevent bank erosion.

**6. Practice proper mowing.** Mow more frequently when grass is actively growing so that you are only cutting no more than one-third of the height of the grass. This practice minimizes the amount of grass clippings. "Grasscycling," or leaving the clippings on the lawn, results in healthier soils. Soil organisms recycle the clippings into free fertilizer, and you save all the work of bagging. Modern mulching lawn mowers make "grasscycling" even easier and homeowners can reduce their mowing time by 30 to 40 percent by not having to bag clippings.

## SEVERE WEATHER SAFETY

Each year, many people are killed or seriously injured by tornadoes and severe thunderstorms despite advance warning. Some did not hear the warning, while others heard the warning but did not believe it would happen to them. The following preparedness information, combined with timely severe weather watches and warnings, could save your life.

### *What To Do Before Severe Weather Strikes*

- ◆ Develop a plan for you and your family at home, work, school, and when outdoors. The American Red Cross offers planning tips at: [www.redcross.org/services/disaster/keepsafe/](http://www.redcross.org/services/disaster/keepsafe/).
- ◆ Identify a safe place to take shelter. Information on how to build a Safe Room in your home is available from FEMA at [www.fema.gov/mit](http://www.fema.gov/mit).
- ◆ Have frequent drills.
- ◆ Keep a highway map nearby to follow storm movement from weather bulletins.
- ◆ Have a NOAA Weather Radio with a warning alarm tone and battery back-up to receive warnings.
- ◆ National Weather Service (NWS) watches and warnings are available through the radio, television, and internet. On the internet, select your local NWS office at [www.nws.noaa.gov/organization.html](http://www.nws.noaa.gov/organization.html) or go to the NWS Home Page at [www.nws.noaa.gov](http://www.nws.noaa.gov).
- ◆ Check the weather forecast before leaving for extended periods outdoors. Watch for signs of approaching storms.
- ◆ If severe weather threatens, check on people who are elderly, very young, or physically or mentally disabled.

### *What To Do When Threatening Weather Approaches*

#### Lightning Safety Rules

- ◆ Postpone outdoor activities if thunderstorms are imminent. This is your best way to avoid being caught in a dangerous situation.
- ◆ Move to a sturdy building or car. Do not take

*Remember, if you can hear thunder – you are close enough to be struck by lightning!*

shelter in small sheds, under isolated trees, or in convertible automobiles. Stay away from tall objects such as towers, fences, telephone poles, and power lines.

- ◆ If lightning is occurring and a sturdy shelter is not available, get inside a hard top automobile and keep the windows up. Avoid touching any metal.
- ◆ Utility lines and metal pipes can conduct electricity. Unplug appliances not necessary for obtaining weather information. Avoid using the telephone or any electrical appliances. Use phones ONLY in an emergency.
- ◆ Do not take a bath or shower during a thunderstorm.
- ◆ Turn off air conditioners. Power surges from lightning can cause serious damage.

#### If Caught Outdoors and No Shelter Is Nearby

- ◆ Find a low spot away from trees, fences, and poles. Make sure the place you pick is not subject to flooding.
- ◆ If you are in the woods, take shelter under the shorter trees.
- ◆ If you feel your skin tingle or your hair stand on end, squat low to the ground on the balls of your feet. Place your hands over your ears and your head between your knees. Make yourself the smallest target possible and minimize your contact with the ground. **DO NOT lie down.**
- ◆ If you are boating or swimming, get to land and find shelter immediately!



#### Tornado Safety Rules

- ◆ In a home or building, move to a designated shelter, such as a basement. If an underground shelter is not available, move to a small interior room or hallway on the lowest floor and get under a sturdy piece of furniture. Put as many walls as possible between you and the outside.

## SEVERE WEATHER SAFETY (CONT.)



- ◆ Stay away from windows.
- ◆ Get out of automobiles. Do not try to outrun a tornado in your car; instead, leave it immediately for safe shelter.

- ◆ If caught outside or in a vehicle, lie flat in a nearby ditch or depression and cover your head with your hands.
- ◆ Be aware of flying debris. Flying debris from tornadoes causes most fatalities and injuries.
- ◆ Mobile homes, even if tied down, offer little protection from tornadoes. You should leave a mobile home and go to the lowest floor of a

*Signs of an approaching tornado include a dark, often greenish sky, large hail, or a loud roar similar to a freight train.*

sturdy nearby building or a storm shelter.

### Flash Flood Safety Rules

- ◆ Avoid walking, swimming, or driving in flood waters.
- ◆ Stay away from high water, storm drains, ditches, ravines, or culverts. If it is moving swiftly, even water six inches deep can knock you off your feet.
- ◆ If you come upon flood waters, stop, turn around, and go another way. Climb to higher ground.
- ◆ Do not let children play near storm drains.

## CELEBRATE EARTH DAY



**Historical Video** – The history of EPA and why it was created, as told by all nine former administrators, will be available in two separate videos on EPA's multimedia portal ([epa.gov/multimedia](http://epa.gov/multimedia)).

**Special Events** – Multimedia coverage of the annual Presidential Environmental Youth Awards (PEYA) and People, Prosperity and the Planet (P3) Competition will be available for public viewing following the events ([epa.gov/multimedia](http://epa.gov/multimedia)).

**Photo Contest** – Help choose the winner. EPA will chose 30 finalists from nearly 750 photos (see contest: [epa.gov/earthday/photocontest](http://epa.gov/earthday/photocontest)).

**Ask EPA** – Molly O'Neill, EPA's Chief Information Officer and Assistant Administrator for Environmental Information will host an online discussion on April 24th at 2 p.m EDT. Molly will highlight the agency's National Dialogue on Access to Environmental Information and take ideas for improving access, including suggestions to improve EPA's homepage (for more information: [epa.gov/askepa](http://epa.gov/askepa)).

## EPA CELEBRATES EARTH DAY

How can you reduce your carbon footprint, make your home or business water efficient or make sure our nation's beaches stay clean this summer? April 22 is Earth Day and this year, EPA is launching several online initiatives throughout the month of April to help raise environmental awareness.

**Green Tips** – Sign up for daily environmental tips via e-mail ([epa.gov/earthday/tips.htm](http://epa.gov/earthday/tips.htm)). Also, download the Green Tip "widget" to use on your social networking site or blog.

**Audio Podcasts** – Twice per week during the month of April, listen to EPA's experts discuss ways you can reduce your environmental footprint. The podcasts will be available for download on EPA's homepage and also available for free subscription on iTunes.

**"Green Scene"** – EPA Administrator Stephen L. Johnson will host the latest edition of the agency's new online video series. The administrator discusses Earth Day 2008, the importance of environmental stewardship and the agency's accomplishments.

**THE ELUCIDATOR**

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*Visit us at:*

<http://mrmc-www.army.mil>

***Reminder***

*For all accidents, no matter how minor,  
specific forms documenting the incident must be submitted to your Safety Office.*

*Military: DA Form 285-AB-4*

*Civilian: DOL Claims Forms CA-1 or CA-2*

*All employees requiring medical attention must visit your local Occupation Health Clinic as soon as possible post mishap.*