Demystifying Cleaning in the Age of COVID-19

Best Management Practices for Business and Industry

May 5, 2020
10:30 – 12:00 pm EST
Demystifying Cleaning in the Age of COVID-19

Event Hosted by:
Today’s Agenda

• Welcome, Logistics, Polls
• Panel Presentations
  o NCDOL – Cleaning vs. Disinfecting and PPE choices
  o NCDEQ – Waste Considerations
  o NCDHHS – Cleaning for Health
• Q&A Session & Discussion
• Wrap-up and Survey
Webinar Housekeeping & Questions

• Technical Difficulties – call Terry A.
• Audio Issues? Use your Phone
  o United States: +1 (631) 992-3221
  o Access Code: 574-071-494
  o Webinar ID: 488-672-923
• To Ask Questions
  o Use the Questions Tool on your GoToWebinar
• Questions will be addressed during the Q&A Session
Demystifying Cleaning in the Age of COVID19

Presented by: ETTA, OSH Division, 919-707-7876
What is a Coronavirus?

Protein Spikes

Genetic Material

Envelope

NCDOL Photo Library
COVID19 specifics
Contaminated

- Presence or the reasonably anticipated presence of blood or other potentially infectious material on an item or surface

1910.1030(b)
Exposure Determination

- Employer required to identify job classifications where occupational exposure can occur:
  - Job classification in which **ALL** have occupational exposure
  - Job classification in which **SOME** have occupational exposure
  - List of all tasks and procedures in which occupational exposure occurs

- Must be made without regard to the use of personal protective equipment (PPE)
Methods of Compliance

1910.1030(d)

- General - universal precautions
- Engineering and work practice controls
- Personal protective equipment
- Housekeeping
Universal Precautions

- An approach to infection control

- Originated by the Centers for Disease Control and Prevention (CDC)

- Concept:
  - All human blood and certain human body fluids are to be treated as if known to be infectious for HIV, HBV, or other bloodborne pathogens
Engineering

Employer must:

- Evaluate available engineering controls

- Implement use of appropriate engineering controls/devices
Work Practice Controls

- Altering behaviors

- Function
  - Protection is based on employer and employee behavior
  - Protection not dependent on installation of a physical device such as protective shield
Work Practice Controls

1910.1030(d)(2)

- Washing hands
  - Employers shall provide readily accessible hand-washing facilities
  - When not feasible, appropriate antiseptic hand cleansers shall be provided
  - When gloves are removed
  - ASAP after contact with body fluids
Work Practice Controls (cont.)

- Washing hands
PPE Provisions

- Employer must provide appropriate PPE at no cost to the employee
- Employer must ensure that PPE is worn by employees
- Must be accessible and in appropriate sizes for employees at the worksite
PPE Provisions

- PPE must be cleaned, repaired, replaced, and disposed of by employer
- PPE must be removed before leaving work area and when becomes contaminated
  - Cannot wash PPE at home!

This presentation was created by the N.C. Department of Labor for safety and health training.
PPE - Gloves

- Disposable (single use) gloves must be replaced when contaminated, torn or punctured

- Disposable (single use) gloves shall not be washed or decontaminated for reuse

- Utility gloves may be cleaned and re-used as long as they continue to provide a barrier for employee
Housekeeping - General

- Employer shall develop and implement a written schedule for cleaning and decontamination at the worksite

- Schedule is based on the:
  - Location within the facility
  - Type of surface to be cleaned
  - Type of soil present
  - Tasks or procedures being performed
Housekeeping Requirements  1910.1030(d)(4)(ii)[A]

- Contaminated work surfaces shall be decontaminated:
  - After completion of procedures
  - After contact with blood or OPIM and
  - At end of work shift
Housekeeping Requirements 1910.1030(d)(4)(ii)

- All reusable receptacles such as bins, pails, and cans that are likely to be contaminated must be inspected and decontaminated:
  - On a regular basis, or
  - When visibly contaminated
Appropriate Disinfectants

- **Household bleach (5% NaOCl)**
  - 1 part bleach and 5 parts water

- **EPA registered disinfectants**
  - List N: Disinfectants for Use Against SARS-CoV-2: https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2
  - U.S. EPA’s Safer Choice: https://www.epa.gov/saferchoice
Contaminated Laundry

Contaminated laundry must be handled as little as possible with a minimum of agitation

- Bagged or containerized at its location of use
  » It cannot be sorted or rinsed there
- Placed and transported in bags or containers that are labeled or color-coded
- Placed in a container that will prevent soak-through to the exterior

1910.1030(d)(4)(iv)
Information and Training

Training shall be provided:

- At the time of initial assignment to tasks where occupational exposure may occur, and
- At least annually thereafter
Thank You For Attending!

We’ll have a Q&A at the end of this program.

Please contact us at:

1-800-NC-LABOR
(1-800-625-2267)

www.labor.nc.gov
Waste Management for Covid-19

Department of Environmental Quality
Solid Waste Section

May 5, 2020
• Household trash generated by people who are suspected or confirmed as having COVID-19 should be placed in a tightly sealed trash bag.

• Once bagged, the household waste can be disposed of with other household waste in a municipal solid waste landfill.

• Personal protective equipment such as gloves, masks, eye protection, face shields, gowns, aprons, head coverings and shoe coverings used in a household with someone either suspected or confirmed as having COVID-19 should be placed in a tightly sealed trash bag. Once bagged, these items can be disposed of with other household waste in a municipal solid waste landfill.

• Single-use gloves and masks should be disposed of with other household waste. These items **DO NOT GO** in the recycle bin.
• This guidance is for the disposal of waste that was used in the diagnosis, treatment, or immunization or for the handling or preparation of suspected or confirmed COVID-19 individuals or animals.

• It does not replace specific guidance provided by the facility, the Centers for Disease Control and Prevention, or the N.C. Department of Health and Human Services.

• A generating facility as defined per 15A NCAC 13B .1201(2) includes any business, medical or dental facility, laboratory, veterinary hospital, and mortuary.
• Personal protective equipment from a generating facility used in the diagnosis, treatment or immunization, or for the handling or preparation of suspected or confirmed COVID-19 individuals or animals should be disposed of by either being:

  • Placed in a tightly sealed trash bag and disposed of in a municipal solid waste landfill; or
  • Treated at a medical waste treatment facility prior to disposal.

• Sharps used in the diagnosis, treatment or immunization or for the preparation of suspected or confirmed COVID-19 individuals or animals needs to be packaged per 15A NCAC 13B .1202(b). Once packaged, it can be disposed of in a municipal solid waste landfill or treated at a medical waste treatment facility prior to disposal.
Resources

- NCDHHS COVID-19 Guidance
- NCDHHS COVID-19 Home Care Guidance
- NC Medical Waste Management Rules – 15A NCAC 13B .1201 - .1204
When in Doubt......

THROW IT OUT!!

https://deq.nc.gov/about/divisions/waste-management/solid-waste-section
Jenny Patterson
Environmental Program Consultant

Hazardous Waste Section
Division of Waste Management

Want to receive NC Hazardous Waste Regulatory Updates? Email me!

Jenny.Patterson@ncdenr.gov
336-767-0031
Hazardous Waste Generator Guidance

NC Hazardous Waste Section Guidance Documents:

https://deq.nc.gov/about/divisions/waste-management/hw/technical-assistance-education-guidance/documents

"Hazardous Waste Generator"
"Solvent Contaminated Wipes"
"Hazardous Waste Pharmaceuticals"
"Aerosol Cans"
"Universal Waste"
Disclaimer

• This presentation was created to be an overview and is not all inclusive of all of the hazardous waste rules and requirements.
• This presentation should only be used as guidance.
**Frequent Questions**

**Question:** When disposing of a disinfectant/cleaning chemical, how do I know if it is a hazardous waste?

**Question:** The cleaner I am using is considered a pesticide (or has a pesticide component), when disposed, is it a hazardous waste?

**Question:** The waste I generated from cleaning is contaminated (or suspected to be contaminated) with COVID-19, is it a hazardous waste?
Frequent Questions - Answer

Answer:

- There is no single list of disinfectants/cleaning chemicals that may be considered hazardous waste.
- Just because it is a pesticide waste or a waste contaminated with COVID-19 does not automatically make it a hazardous waste.
- A waste determination must be performed on any chemical waste.
- It is the generator's responsibility to make a hazardous waste determination.
How to Make a Hazardous Waste Determination
A Very Brief Overview
Hazardous Waste Determination

- Is it a solid waste? Yes → Does it meet a listing description? No → Not subject to RCRA Subtitle C
- Is it a solid waste? No → Not subject to RCRA Subtitle C
- Is it an excluded waste? Yes → Does it exhibit a characteristic? No
- Is it an excluded waste? No → Does it meet a listing description? Yes
- Does it meet a listing description? No
- Does it exhibit a characteristic? No
- Waste is hazardous and subject to Subtitle C regulation
Hazardous Waste Determination

Is the material:
1) Solid waste?
2) Excluded/exempt?
3) "Characteristic" hazardous waste?
4) "Listed" hazardous waste?
Examples of Materials Excluded from Regulation

• Materials that are not solid wastes:
  • Industrial wastewater when subject to CWA

• Materials that are not hazardous waste:
  • Household hazardous wastes

• Other
  • Solvent Contaminated Wipes
  • Residues from RCRA Empty Containers
  • Used Oil to be recycled 40 CFR 261.6(a)(4)
What is a "Characteristic" Hazardous Waste?

Very Brief Summary of Characteristics

• **Ignitability** – liquid with flash point <140° F; not a liquid and capable of causing a fire through friction, absorption of moisture or spontaneous chemical changes; compressed gases; oxidizers

• **Corrosivity** – liquid with pH ≤ 2.0 or ≥ 12.5

• **Reactivity** - spontaneously reacts with air / water

• **Toxicity** - Measured by performing Toxicity Characteristic Leaching Procedure (TCLP) and comparing to 40 parameters with concentration limits listed in 40 CFR 261.24
Hazardous Waste Characteristics Examples

- Ignitable (D001) – Flash point less than 140F, compressed gases, oxidizers
  - Examples: Cleaning solvents, paint thinner, alcohols, acetylene tanks (welding gas), parts washer fluids
- Corrosive (D002) – pH $< 2$ or $> 12.5$
  - Examples: Battery acid, corrosive cleaners (such as caustic radiator cleaner)
- Reactive (D003) – Explode or react violently with air or water
  - Examples: dynamite, sodium metal, cyanides, peroxide forming chemicals
- Toxic (D004-D043) – Harmful to living things
  - Examples: May include waste paint thinners, antifreeze, lead dust and sand blasting grit -- (Lead, mercury, cadmium, chromium, benzene, methyl ethyl ketone, perchlorethylene)
Pesticides that are Hazardous Waste due to Toxicity

- D012: Endrin
- D013: Lindane
- D014: Methoxychlor
- D015: Toxaphene
- D016: 2,4-D

- D020: Chlordane
- D021: Chlorobenzene
- D031: Heptachlor
- D037: Pentachlorophenol
Using an SDS when Making a Waste Determination

• Often the SDS Disposal Considerations section will state "Dispose of in accordance with all applicable federal, state, and local regulations."

• OSHA regs do not require manufacturers to identify constituents present in material at concentrations below:
  
  • For noncarcinogen: 1% (10,000 ppm)
  
  • For carcinogen: 0.1% (1000 ppm)

• The product may contain toxicity characteristic constituents above RCRA regulatory levels even when not identified on the MSDS.
What is "Listed" Hazardous Waste?

Listed Hazardous Waste

F - Non-specific sources
K - Specific sources
P - Discarded products, off-specification species, container residues, spill residues
U - Discarded products, off-specification species, spill residues
EPA List of Pesticides that are P or U listed

A list of P and U listed pesticides can be found at this EPA website link: https://www.epa.gov/sites/production/files/2014-09/documents/pr83-3-appendix-b.pdf

The image to the left is an excerpt of the list and is not all inclusive.
## Hazardous Waste Generator Category Guidance

<table>
<thead>
<tr>
<th>Category of Generator</th>
<th>Quantity of non-acute HW generated in a calendar month</th>
<th>Quantity of acute HW generated in a calendar month</th>
<th>Quantity of residues from a clean-up of acute HW generated in a calendar month</th>
<th>Maximum Accumulation Time</th>
<th>Maximum On-Site Waste Accumulation Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Small Quantity Generator (VSQG)</td>
<td>≤ 220 lbs. (100 kg)</td>
<td>≤ 2.2 lbs. (1 kg)</td>
<td>≤ 220 lbs. (100 kg)</td>
<td>No time limit</td>
<td>• 2,200 lbs. (1000 kg) non-acute HW at any time (approximately equal to five 55-gallon containers)</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>• ≤ 2.2 lbs. (1 kg) acute HW at any time</td>
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<td></td>
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<td></td>
<td></td>
<td>• ≤ 220 lbs. (100 kg) acute HW from a clean-up at any time</td>
</tr>
<tr>
<td>Small Quantity Generator (SQG)</td>
<td>&gt; 220 lbs. (100 kg) but ≤ 2200 lbs. (1000 kg)</td>
<td>≤ 2.2 lbs. (1 kg)</td>
<td>≤ 220 lbs. (100 kg)</td>
<td>180 days; 270 days if TSDF is 200 miles or more from the facility</td>
<td>• 13,200 lbs. (6000 kg) non-acute HW at any time (approximately equal to thirty 55-gallon containers)</td>
</tr>
<tr>
<td>Large Quantity Generator (LQG)</td>
<td>≥ 2,200 lbs. (1000 kg)</td>
<td>&gt; 2.2 lbs. (1 kg)</td>
<td>&gt; 220 lbs. (100 kg)</td>
<td>90 days</td>
<td>No quantity limit</td>
</tr>
</tbody>
</table>
What is not considered Hazardous Waste?

These are not hazardous waste unless they have been mixed with hazardous waste:

- Medical Waste
- Biohazards
- Radioactive Material/Waste
- Household Hazardous Waste
- Asbestos
- PCBs
**Frequent Question**

**Question:** What do I do with empty containers that held cleaning products?

**Answer:** If it meets the standard for empty containers under 40 CFR 261.7 it can be placed in the trash.
Empty Containers

Very basic overview of 40 CFR 261.7:

• If container held an acute hazardous waste, the container must be triple rinsed to be considered empty.

Otherwise, for a container that is less than or equal to 119 gallons:

• All wastes have been removed that can be removed using common practices to remove materials, (e.g., pouring, pumping, and aspirating) and

• No more than 2.5 cm (1 inch) of residue remains on the bottom of the container or inner liner

• For a compressed gas: When the pressure in the container approaches atmospheric
North Carolina Landfill Prohibitions

Among other items, the following are prohibited from disposal in a North Carolina solid waste landfills:

- Hazardous Waste
- Liquids
**Frequent Question**

**Question:** If I have extra cleaning products or they are expired, what do I do with them?

**Answer:**

- If you cannot use it for its intended purpose, try to find someone else who can use it legitimately for its intended purpose.
- If it is an unused commercial chemical product, there may be reclamation outlets that would keep the material from having to be managed as a hazardous waste.
**Frequent Questions**

**Question:** If I am using disinfecting wipes for cleaning at my facility, can I manage them under the solvent- contaminated wipe exclusion?

**Answer:**
- Maybe. More on next slides
- If the wipe is contaminated only with an ignitable solvent (e.g. isopropyl alcohol) that is not listed, consider performing a waste determination and managing as a non-hazardous waste.
- If the wipe is contaminated with a corrosive cleaner, the exclusion will not apply.
Do Not Flush Any Wipes

Regardless of whether the wipe is hazardous, non-hazardous, or otherwise **do not flush** any wipes down the toilet!
Solvent Contaminated Wipes
Solvent Contaminated Wipes Overview

- Provisions of this federal rule effective in North Carolina on January 31, 2014
- Modifies RCRA hazardous waste regulations for solvent-contaminated wipes
- Updates made to 40 CFR 261.4, adopted by reference at 15A NCAC 13A .0106(a)
  - 40 CFR 261.4(a)(26) **reusable wipes**: conditional exclusion from the definition of solid waste
  - 40 CFR 261.4(b)(18) **disposable wipes**: conditional exclusion from the definition of hazardous waste
Solvent Contaminated Wipes Scope

- **Reusable** industrial shop towels and rags that are contaminated with hazardous solvents and are sent for **laundering** are not solid waste.

- **Disposable** industrial wipes that are contaminated with hazardous solvents and are going to **disposal** are not hazardous waste.
Definitions

The rule provides a definition for "wipe" and "solvent-contaminated wipe" in 40 CFR 260.10

- **Wipe** means a woven or non-woven shop towel, rag, pad, or swab made of wood pulp, fabric, cotton, polyester blends, or other material

- **Solvent Contaminated Wipe** defined on next slide
A solvent-contaminated wipe is a wipe that, after use or after cleaning up a spill, either:

• Contains one or more of the F001 through F005 solvents;

• Exhibits a hazardous characteristic when that characteristic results from a listed solvent; or

• Exhibits only the hazardous waste characteristic of ignitability due to the presence of solvents that are not listed.
Solvent Contaminated Wipes

Includes (for reusable and disposable wipes): Wipes containing one or more F001-F005 listed solvents or corresponding P- or U-listed solvents

- Acetone
- Benzene
- N-Butanol
- Chlorobenzene
- Creosols
- Cyclohexanone
- 1,2-Dichlorobenzene
- Ethyl acetate
- Ethyl benzene
- 2-Ethoxyethanol
- Trichloroethylene (For reusable only)

- Isobutyl alcohol
- Methanol
- Methyl ethyl ketone
- Methyl isobutyl ketone
- Methylene chloride
- Tetrachloroethylene
- Toluene
- 1,1,2-Trichloroethane
- Xylenes
Wipes that Do Not Qualify Exclusion

• Wipes that contain listed hazardous waste other than solvents
• Wipes that exhibit the characteristic of toxicity, corrosivity, or reactivity due to non-listed solvents or contaminants other than solvents
• Wipes do not qualify for exclusion if contaminated with:
  - Corrosives
  - Reactives
  - Non-solvent TCLP materials
    ▪ Examples: Cr, Cd, Pb, Hg, Ag
• Disposable Wipes only: cannot contain TCE
### Disposal/Laundry Requirements

**Disposable Wipes**

As long as no TCE; and all conditions are met can go to:

- Regulated municipal solid waste landfill or
- Hazardous waste combustor, boiler, or industrial furnace or combustor regulated under section 129 CAA

**Reusable Wipes**

As long as all conditions are met can go to:

- Laundry or dry-cleaning facility.
  - Any wastewater discharge must be CWA-regulated
- Rule is more stringent than DEQs previous laundered wipe policy
  - Reusable wipes not covered by exclusion must be non-hazardous if laundered/dry-cleaned

**Disposal/Laundry Requirements**

- Regulated municipal solid waste landfill or
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**Reusable Wipes**

As long as all conditions are met can go to:

- Laundry or dry-cleaning facility.
  - Any wastewater discharge must be CWA-regulated
- Rule is more stringent than DEQs previous laundered wipe policy
  - Reusable wipes not covered by exclusion must be non-hazardous if laundered/dry-cleaned
Accumulation Requirements for Exclusion

Solvent-contaminated wipes must be:

• Accumulated for no more than 180 days prior to being sent for cleaning or disposal

• Placed in a non-leaking closed container, that can contain free liquids, should they occur

• Marked “Excluded Solvent-Contaminated Wipes”
**Solvent Contaminated Wipes – Free Liquids**

- There must be no free liquids in container prior to being sent for cleaning or disposal.
- Free liquids removed from the wipes or from the wipes container must be managed according to applicable hazardous waste regulations in 40 CFR parts 260 through 273.
Records Required for Exclusion

Must maintain documentation that includes:

• Name and address of the laundry, dry cleaner, landfill, or combustor

• Documentation that the 180-day accumulation time limit is being met

• Description of the process the generator is using to meet the “no free liquids” condition

• Documentation of claims that materials are not a solid waste or are conditionally exempt per 40 CFR 261.2(f)
Solvent Contaminated Wipes

- Does my facility generate solvent contaminated wipes?
- Do the solvent contaminated wipes meet the definition for the exclusion?
  - How are the wipes used?
  - What is the source of the contamination?
    - Is the solvent characteristic for ignitability only? (consider a waste determination instead of exclusion)
Solvent Contaminated Wipes

• Does my facility launder any items on site?

• Does my facility send any items to a laundry?
  - Items laundered on site or sent to be laundered/dry cleaned must be non-hazardous or meet the conditional exclusion
  - Hazardous waste must not be laundered on-site or off site unless laundry is permitted as a hazardous waste treatment, storage, disposal facility
    - Excluded solvent-contaminated wipes may be laundered/dry-cleaned on site or off-site but there must be an appropriate and valid CWA permit associated with the operation/activity
Where is the Solvent Contaminated Wipe Rule in Effect?
Solvent Contaminated Wipes

For More Information (Federal Rule, FAQ, History):

EPA Summary Chart for Solvent-Contaminated Wipes:
Your facility uses MEK on wipes to clean parts. In the process of using the wipe, it becomes contaminated with chrome (high enough to exceed the TCLP concentrations).

**Question:** If the facility wanted to launder the wipes, can the wipes be managed under the solvent contaminated wipe exclusion?

**Answer:** If the solvent contaminated wipe is also characteristic for toxicity, it cannot be managed under the solvent contaminated wipe exclusion. Additionally, unless the laundry facility is a permitted TSD, only non-hazardous or excluded solvent contaminated wipes may be sent to a laundry facility.
A facility uses isopropyl alcohol (IPA) on wipes. When personnel are done using the wipe, it has no free liquids on the wipe.

**Question:** If these wipes are laundered or incinerated, can the facility manage the wipes by the solvent contaminated wipe exclusion?

**Answer:** The wipes could be managed by the exclusion. However, since the solvent is not F-listed, the facility may just want to make a waste determination on the wipes. If the wipes are not listed and are not characteristic, they could be managed as non-hazardous waste.
Adding Aerosol Cans to the Universal Waste Regulations
Adding Aerosol Cans to the Universal Waste Regulations

- Effective in North Carolina on February 7, 2020
- Adds aerosol cans to 40 CFR 273 Universal Waste Regulations
- For More Information (Federal Rule, FAQ, History):
  https://www.epa.gov/hw/increasing-recycling-adding-aerosol-cans-universal-waste-regulations
- For North Carolina Guidance Documents:
  https://deq.nc.gov/about/divisions/waste-management/hw/technical-assistance-education-guidance/documents
  Go to "Aerosol Cans" and "Universal Waste"
Episodic Generation Provision
Episodic Generation
40 CFR 262 Subpart L

Allows SQG and VSQGs to maintain their generator category if temporarily generating more HW due to an episodic event provided that:

• Planned/unplanned episodic event is limited to one per calendar year
  - Or two events if petition is approved by HWS

• Generator must notify:
  - At least 30 calendar days prior to initiating a planned episodic event (electronically using RCRAInfo) or
  - Within 72 hours after an unplanned episodic event (by phone, fax, email, and then provide notification electronically using RCRAInfo by the end to the event)

• Episodic event must be initiated and completed within 60 days

• Must meet conditions specified in 40 CFR 262 Subpart L
Episodic Generation
40 CFR 262 Subpart L

- Generator (including VSQGs) must obtain an EPA ID number if they do not have one already
- Pay the fee associated with the amount of hazardous waste generated per N.C.G.S. 130A-294.1
Briefly stated, SQGs need to comply with existing SQG regulations and maintain records associated with the episodic event

• Label episodic waste containers with "episodic hazardous waste," an indication of the hazards, and the date the event began

• Maintain records associated with the episodic event
Episodic Generation
40 CFR 262 Subpart L

Requirements for VSQGs:

• Obtain a RCRA identification number (if the site does not have one already)

• Use a hazardous waste manifest and transporter to send episodic waste to a TSDF or recycler

• Manage the episodic hazardous waste in a manner that minimizes the possibility of an accident or release

• Label episodic waste containers with "episodic hazardous waste," an indication of the hazards, and the date the event began

• Identify an emergency coordinator

• Maintain records associated with the episodic event
Medical Waste Resources

Division of Waste Management – Medical Waste webpage: https://deq.nc.gov/about/divisions/waste-management/medical-waste


Reference for Medical Waste Management Rules: https://edocs.deq.nc.gov/WasteManagement/edoc/1377114/Medical%20Waste%20Management%20Rules%20Adopted%20November%201,%202019.pdf?dbid=0&repo=WasteManagement&searchid=94effb81-b6b6-4710-bf6f-7bd06ebff6b1

Cleaning for Health

David Lipton, CIH
Occupational and Environmental Epidemiology Branch
North Carolina Division of Public Health
Cleaning for health

An environmental management process to
• Identify,
• Capture,
• Contain,
• Remove and,
• Dispose of contaminants (pollutants),
while leaving minimal residues of contaminants, cleaning agents, and moisture

(Michael Berry, Ph.D. Cleaning for Health. Protecting the Built Environment, 1994)

Reopening Guidance for Cleaning Disinfecting Public Spaces, Workplaces, Businesses, Schools and Homes

Reopening America, Cleaning and Disinfecting Decision Tool
Scott Fister - Q&A Moderator
NC Department of Environmental Quality
Division of Environmental Assistance and Customer Services

Angela Barger – Q&A Assistance
NC Department of Environmental Quality
Division of Environmental Assistance and Customer Services
Q&A | Participants

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Thanks for Attending!

Please complete the survey as you leave the webinar.

Watch for a follow-up e-mail with a link to the event recording and a copy of the presentation.
The following slides describe **no-cost technical assistance** provided by DEQ’s Division of Environmental Assistance and Customer Service

Environmental Stewardship Initiative (ESI)

Waste Reduction Partners (WRP)
DEACS helps its customers:

• Navigate regulatory and permitting challenges
• Become more environmentally efficient and make the most of available resources
• Achieve and be recognized for environmental excellence
• Contribute to economic growth

Program website
DEQ ESI Program Highlights

• Free and voluntary leadership, assistance and recognition program
• Promotes and encourages outstanding environmental performance
• Gain access to DEQ training, webinars, technical & compliance assistance, and an ESI coach
• Networking highlights member sustainability initiatives and compliance strategies
• Peer mentorship provided by ESI Stewards
• Provides opportunities to interact with DEQ senior leadership
**ESI Membership Levels***

- **Stewards**
  - Set aggressive environmental goals
  - Integrate EMS into core business functions
  - Communicate with local community
  - Agree to mentor other ESI members

- **Rising Stewards**
  - Demonstrate mature EMS
  - Commit to go beyond compliance
  - Set long-term environmental goals

- **Partners**
  - Not be under criminal indictment/conviction
  - Establish environmental goals
  - Report annually on goals & compliance

*Membership requirements are additive as you move up the hierarchy, e.g. Stewards must also meet the member requirements at the Partner and Rising Steward levels*
Since 2004 ESI members have:

- Realized $84.3 million in cost savings related to their established environmental performance goals
- Reduced their energy usage by more than 77.6 mmBtu
- Reduced their water usage by 13 billion gallons and avoided the discharge of 2.8 billion gallons of wastewater
- Diverted 4.2 million tons of waste from landfills

<table>
<thead>
<tr>
<th>Reductions</th>
<th>2018 ESI Members Reported Results</th>
<th>2018 ESI Members Reported Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Emissions</td>
<td>2,595 Tons</td>
<td></td>
</tr>
<tr>
<td>Greenhouse Gas Emissions*</td>
<td>30,616 Metric Tons CO2e</td>
<td></td>
</tr>
<tr>
<td>Hazardous waste</td>
<td>30 Tons</td>
<td></td>
</tr>
<tr>
<td>Landfilled waste</td>
<td>3,430,522 Tons</td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td>3,060,474 mmBtu</td>
<td></td>
</tr>
<tr>
<td>Water Use</td>
<td>2,091,856,088 Gallons</td>
<td></td>
</tr>
<tr>
<td>Material Consumption</td>
<td>515 Tons</td>
<td></td>
</tr>
<tr>
<td>Wastewater Pollutants</td>
<td>109,134 Tons</td>
<td></td>
</tr>
<tr>
<td>Wastewater Volume</td>
<td>1,840,602,313 Gallons</td>
<td></td>
</tr>
<tr>
<td>Biomass Recovery**</td>
<td>89,607 Tons</td>
<td></td>
</tr>
<tr>
<td>Total Recycled Volume</td>
<td>329,229 Tons</td>
<td></td>
</tr>
</tbody>
</table>

**Total Cost Savings $ 6,717,739**

Additional member goal data and program information available at [ncesi.org](http://ncesi.org)

Contact:
Angela Barger (919.707.8126) or Don Burke (919.707.8131)
Waste Reduction Partners

- Provides on-site consulting services using a team of 40 retired engineers and scientists
- Assists NC businesses and institutions to improve environmental and energy management
- Identifies efficiency techniques that save money
- Non-regulatory
- Typically no cost
- Innovative partnership between NCDEQ and the Land of Sky Regional Council
- Client cost savings since 2015: $22.6 Million
- Client energy savings since 2015: 1.1 Trillion BTUs

For services contact: Terry Albrecht, (828) 251-7475 Talbrecht@wrpnc.org
Or “initiate a project” at www.wastereductionpartners.org