



ASK THE EXPERTS: Cleaning Nevada Schools During COVID-19

A Panel Discussion

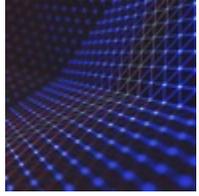


WELCOME!

- Connect
- Share best practices, experiences
- Provide information, resources and opportunity

As we move through closure to reopening during COVID-19





Housekeeping issues

Please keep your mics on mute.

BEP will monitor the chat box for questions. You can type questions in at any time. We will hold them until the end of the presentations.

UNR Business Environmental Program

Chris Lynch – Director

Eric Florio – Air Quality
Specialist

Nancy Crickman – Grants &
Admin Specialist

Liz Futch – Project Manager



BUSINESS
ENVIRONMENTAL
PROGRAM
NEVADA



PANELISTS

- Sarah Sullivant and John Katz, US EPA Region 9
 - Mark Bergholdt, Southern Nevada Health District (SNHD)
 - Mervin Brewer, Salt Lake City School District (SLSD) and Green Schools & Colleges Program
 - Bill Blumenthal, Douglas County School District (DCSD)
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Cleaning and Disinfecting Information

For School Districts,
Administrators,
Childcare Facilities and
Other Educational Professionals

*Sarah Sullivant – Children’s Environmental Health
Coordinator, US EPA Region 9*

*John Katz - Pollution Prevention Coordinator,
US EPA Region 9*

May 14, 2020

EPA Resources

- [Frequently Asked Questions Related to Coronavirus](#)
- Office of Chemical Safety and Pollution Prevention April 28, 2020
[Press Release](#)
 - [The Guidance for Cleaning and Disinfecting Public Spaces, Workplaces, Businesses, Schools, and Homes](#) from EPA and CDC
 - [Cleaning and Disinfecting Tool](#)
 - Approved [List of Disinfectant](#) Products for Use Against SARS-CoV-2
- [Safer Choice Labeled Products](#)
- [Design for the Environment Antimicrobials](#)

FAQ on Coronavirus

The screenshot shows the EPA website's 'Frequent Questions Related to Coronavirus (COVID-19)' page. The page header includes the EPA logo, navigation links for 'Environmental Topics', 'Laws & Regulations', and 'About EPA', a search bar for 'EPA.gov', and social media icons for Facebook, Twitter, and Email. Below the header, the page title is 'Frequent Questions Related to Coronavirus (COVID-19)' with a subtitle 'View frequently asked questions related to [Coronavirus \(COVID-19\)](#) and find key EPA resources.' The main content is organized into six columns, each with a category title and a list of frequently asked questions with links to detailed answers. The categories are: Disinfectants, Drinking Water, Grants, Indoor Air, Questions from State, Local and Tribal Leaders, Wastewater and Septic Systems, and Waste.

EPA United States Environmental Protection Agency

Environmental Topics Laws & Regulations About EPA

Related Topics: [Coronavirus](#) Search EPA.gov

CONTACT US SHARE

Frequent Questions Related to Coronavirus (COVID-19)

View frequently asked questions related to [Coronavirus \(COVID-19\)](#) and find key EPA resources.

Disinfectants

[I can't tell if the product I'm interested in is on the list or not. Can you help me?](#)

[I want to use a product to kill SARS-CoV-2 but it isn't on List N. Is it effective against SARS-CoV-2?](#)

[View all frequent questions about disinfectants and Coronavirus \(COVID-19\).](#)

Drinking Water

[Do I need to boil my drinking water?](#)

[Is tap water safe to use for hand washing?](#)

[Is drinking tap water safe?](#)

[View all frequent questions about drinking water and Coronavirus \(COVID-19\).](#)

Grants

[May EPA waive prior approval requirements specified at 2 CFR 200.407 if a waiver is necessary to address COVID-19 related concerns?](#)

[What documentation does EPA require for resumption of non-competitive awards?](#)

[View all frequent questions about grants and Coronavirus \(COVID-19\).](#)

Indoor Air

[Where can professionals who manage school, office, and commercial buildings get information on ventilation and filtration in those building types to respond to COVID-19?](#)

[Will an air purifier protect me and my family from COVID-19 in my home?](#)

[View all frequent questions about indoor air and Coronavirus \(COVID-19\).](#)

Questions from State, Local and Tribal Leaders

[Will there be flexibility with regard to public notice requirements for permits, etc.?](#)

Wastewater and Septic Systems

[Will my septic system treat COVID-19?](#)

[Do wastewater treatment plants treat COVID-19?](#)

Waste

[Does RCRA regulate wastes that may contain the virus that causes COVID-19, such as used medical equipment or personal protective equipment?](#)

[Where can I find information](#)

April 28, 2020 Guidance from EPA and CDC

- Includes additional linked resources throughout and in the conclusion
- Schools and Childcare Programs
 - [K-12 and Childcare Interim Guidance](#)
 - [Cleaning and Disinfecting your Facility](#)
 - [FAQ for Administrators](#)
 - [Parent and Teacher Checklist](#)
- Colleges and Universities
 - [Interim Guidance for Colleges & Universities](#)
 - [Cleaning and Disinfecting your Facility](#)
 - [Guidance for Student Foreign Travel](#)
 - [FAQ for Administrators](#)

GUIDANCE FOR CLEANING AND DISINFECTING

PUBLIC SPACES, WORKPLACES, BUSINESSES, SCHOOLS, AND HOMES



SCAN HERE
FOR MORE
INFORMATION

This guidance is intended for all Americans, whether you own a business, run a school, or want to ensure the cleanliness and safety of your home. Reopening America requires all of us to move forward together by practicing social distancing and other [daily habits](#) to reduce our risk of exposure to the virus that causes COVID-19. Reopening the country also strongly relies on public health strategies, including increased testing of people for the virus, social distancing, isolation, and keeping track of how someone infected might have infected other people. This plan is part of the larger [United States Government plan](#) and focuses on cleaning and disinfecting public spaces, workplaces, businesses, schools, and can also be applied to your home.

Cleaning and disinfecting public spaces including your workplace, school, home, and business will require you to:

- Develop your plan
- Implement your plan
- Maintain and revise your plan

Reducing the risk of exposure to COVID-19 by cleaning and disinfection is an important part of reopening public spaces that will require careful planning. Every American has been called upon to slow the spread of the virus through social distancing and prevention hygiene, such as frequently washing your hands and wearing face coverings. Everyone also has a role in making sure our communities are as safe as possible to reopen and remain open.

The virus that causes COVID-19 can be killed if you use the right products. EPA has compiled a list of disinfectant products that can be used against COVID-19, including ready-to-use sprays, concentrates, and wipes. Each product has been shown to be effective against viruses that are harder to kill than viruses like the one that causes COVID-19.



GUIDANCE FOR CLEANING & DISINFECTING

PUBLIC SPACES, WORKPLACES, BUSINESSES, SCHOOLS, AND HOMES



SCAN HERE FOR MORE INFORMATION

1 DEVELOP YOUR PLAN

DETERMINE WHAT NEEDS TO BE CLEANED.

Areas unoccupied for 7 or more days need only routine cleaning. Maintain existing cleaning practices for outdoor areas.

DETERMINE HOW AREAS WILL BE DISINFECTED. Consider the type of surface and how often the surface is touched. Prioritize disinfecting frequently touched surfaces.

CONSIDER THE RESOURCES AND EQUIPMENT NEEDED. Keep in mind the availability of cleaning products and personal protective equipment (PPE) appropriate for cleaners and disinfectants.

Follow guidance from state, tribal, local, and territorial authorities.

2 IMPLEMENT

CLEAN VISIBLY DIRTY SURFACES WITH SOAP AND WATER prior to disinfection.

USE THE APPROPRIATE CLEANING OR DISINFECTANT PRODUCT. Use an EPA-approved disinfectant against COVID-19, and read the label to make sure it meets your needs.

ALWAYS FOLLOW THE DIRECTIONS ON THE LABEL. The label will include safety information and application instructions. Keep disinfectants out of the reach of children.

3 MAINTAIN AND REVISE

CONTINUE ROUTINE CLEANING AND DISINFECTION. Continue or revise your plan based upon appropriate disinfectant and PPE availability. Dirty surfaces should be cleaned with soap and water prior to disinfection. Routinely disinfect frequently touched surfaces at least daily.

MAINTAIN SAFE PRACTICES such as frequent handwashing, using cloth face coverings, and staying home if you are sick.

CONTINUE PRACTICES THAT REDUCE THE POTENTIAL FOR EXPOSURE. Maintain social distancing, staying six feet away from others. Reduce sharing of common spaces and frequently touched objects.

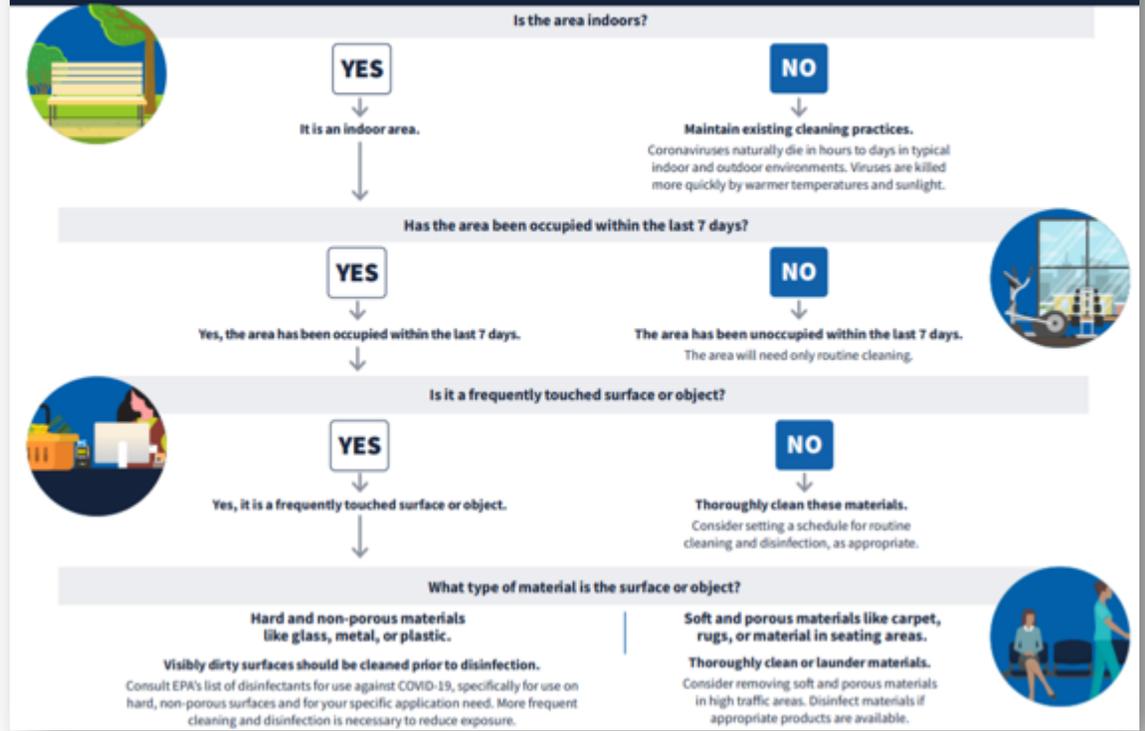
For more information, please visit [CORONAVIRUS.GOV](https://www.cdc.gov/coronavirus)



MAKING YOUR PLAN TO CLEAN AND DISINFECT

Cleaning with soap and water removes germs, dirt, and impurities from surfaces. It lowers the risk of spreading infection.

Disinfecting kills germs on surfaces. By killing germs on a surface after cleaning, it can further lower the risk of spreading infection.



Cleaning and Disinfecting Tool

Finding Products: Cleaning and Disinfecting

Look for the Label!



United States Environmental Protection Agency

Environmental Topics Laws & Regulations About EPA Search EPA.gov

Safer Choice

CONTACT US SHARE

Safer Choice Home

Learn About Safer Choice

Frequently Asked Questions

Resources for Manufacturers

Partner of the Year Awards

Search Safer Choice Products

For Use in Your Community

Safer Chemical Ingredients List

How to List on SCIL

Safer Choice Standard and Criteria

Related Programs

- DfE Alternatives Assessments
- DfE Life-Cycle Assessments
- DfE Workplace Best Practices
- DfE for Pesticides

Search Products that Meet the Safer Choice Standard

EN ESPAÑOL

Looking for safer cleaning and other products? Use the search box below to find products that meet the Safer Choice Standard.

Search Products

Product or Company Name (Optional)

Home or Business Use (Optional)

Show only:

- Fragrance-free products¹
- Products with outdoor uses²

Product Type (Optional)

Note: in the product listing, the notation ["I"] means that the partner company is overdue for their yearly partnership review with Safer Choice.

United States Environmental Protection Agency

Environmental Topics Laws & Regulations About EPA Search EPA.gov

Pesticide Registration

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Pesticide Registration Home

About Pesticide Registration

Electronic Submission of Applications

Pesticide Registration Manual

Fees and Waivers

Registration Information by Type of Pesticide

- Antimicrobial Registration
- Biopesticide Registration
- Conventional Registration
- Inert Ingredient Regulation

List N: Disinfectants for Use Against SARS-CoV-2

All products on this list meet [EPA's criteria](#) for use against SARS-CoV-2, the virus that causes COVID-19.

Finding a Product

To find a product, enter the **first two sets** of its EPA registration number into the search bar below. You can find this number by looking for the EPA Reg. No. on the product label.

For example, if EPA Reg. No. 12345-12 is on List N, you can buy

View List N's information in our new tool

- # EPA Registration Number
- Active Ingredient
- Use Site
- Contact Time
- Browse All
- Keyword Search

Other COVID-19 Resources

...Site

...nd

...ons for

...19 Virus

Design for the Environment Antimicrobials



What the DfE Logo Means on Antimicrobial Product Labels

If you see the DfE logo on an EPA-authorized antimicrobial pesticide label, you can be assured that the product:

- is in the least-hazardous classes (i.e., III and IV) of [EPA's acute toxicity category hierarchy](#);
- is unlikely to have [carcinogenic](#) or [endocrine disruptor properties](#);
- is unlikely to cause developmental, reproductive, mutagenic, or neurotoxicity issues;
- EPA has reviewed and accepted mixtures, including inert ingredients;
- does not require the use of [Agency-mandated personal protective equipment](#);
- has no unresolved or unreasonable [adverse effects reported](#);
- has no unresolved efficacy failures (associated with the [Antimicrobial Testing Program](#) or otherwise);
- has no unresolved compliance or enforcement actions associated with it; and
- has the identical formulation as the one identified in the DfE application approved by EPA.

Active Ingredients for Use in Antimicrobial Products that Qualify for the DfE Logo

Active Ingredients	Year Approved
Citric acid	2009
Hydrogen peroxide	2009
L-lactic acid	2009
Ethanol	2012
Isopropanol	2012
Peroxyacetic acid	2015
Sodium Bisulfate	2015

Important Considerations



Always follow the product label instructions and safety information, including leaving the product on the surface long enough to kill germs, rinsing off the product to avoid ingesting it, and putting the product out of reach of children right away. Follow these [“6 Steps for Safe and Effective Disinfectant Use.”](#)



Make sure children are not using disinfectants (including wipes!) and that teachers and staff have proper PPE, such as gloves, for using disinfectants.



Be especially careful using products with [bleach](#), and never mix disinfectant products with other disinfectants, detergents, or solutions. Try and avoid overuse of cleaners and sanitizers that are potential [asthma triggers](#).



Be vigilant of [counterfeit and ineffective products being sold on internet platforms](#).



Ventilation, adequate time before occupancy, social distancing, handwashing, and other practices are important for maintaining a healthy learning environment in addition to cleaning and disinfecting. Visit <https://www.coronavirus.gov/> for additional information.



Contact Information:

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Coordinator, US EPA Region 9**

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**John Katz - Pollution Prevention Coordinator,
US EPA Region 9**

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Phone: 415-972-3283

Additional EPA Resources

- Indoor Environments Division's [April 13, 2020 bulletin](#) provides additional resources for schools
- [Creating Healthy Indoor Air Quality in Schools](#)
 - Includes best practices, training, webinars, and other resources
 - [School IAQ Assessment Mobile App](#)

Additional Resources - WSPEHSU

- The Western States Pediatric Environmental Health Specialty Unit (WSPEHSU) created a fact sheet and infographic on "Safer Disinfectant Use During the COVID-19 Pandemic." This and other fact sheets (in English and Spanish) can be found at the top of the [Western States PEHSU webpage](#) on factsheets.
- The WSPEHSU also has a Green Cleaning Toolkit and other resources as a part of the [Environmental Health early Care and Education Project](#).
- Bleach is a commonly used disinfectant, but its use has potential health hazards for both children and adults. The Western States PEHSU developed an additional [fact sheet on bleach](#).

Environmental Health in Clark County Schools

Mark Bergtholdt, REHS, MPH
Environmental Health Supervisor
Southern Nevada Health District



Regulatory Authority

- Nevada Revised Statutes NRS 444.335 requires the health district to inspect schools once each semester.
- Nevada Revised Statutes NAC 444.568 et seq. sets the requirements that a school must meet.
- NAC 441A.190 also requires health authority to notify schools and notify the school to notify the health authority if there a communicable disease within the school.

Cause of illness in schools

- In pre-COVID-19 the most frequent cause of mass illness at a school was norovirus. Here is how a hypothetical case would be investigated:
 - A student vomits somewhere in the school
 - An attempt is made to clean it up
 - Three to four days later, a number of students and staff suffer the same illness.
 - The Nurse or FASA reports it to their supervisors who report it to the health district who conducts an investigation.
 - The investigation evaluates how the emetic event was addressed and provides guidance on how to mitigate future events.
 - The school will be deep cleaned and disinfected with approved products focusing on high touch areas.

How is norovirus prevented

- During routine inspections, environmental health staff interview the custodial and health office staff to determine how they address episodes where a student vomits
 - How is it being cleaned up
 - Is adequate PPE being used
 - Are adequate disinfectants being used (special disinfectants may need to be used)
 - Are things being disposed of properly
 - Are the instruments used in cleaning being properly cleaned and disinfected after use.
- If it is determined that the protocol being described does not adequately remove the virus and prevent further exposures, corrective instructions are given.

What about COVID-19

- What we know:
 - COVID-19 is a respiratory disease
 - There are over 400 disinfectants that can remove the virus from a surface and have varying contact times from 15 seconds to 15 minutes (May 12, 2020)
 - There is no vaccine or treatment for the disease as of today
 - Social distancing appears to slow the spread of the disease.
 - Wearing of face coverings appears to slow the spread of the disease

What we can do

- Things change fast!!! Stay up to date on the information.
- When schools re-open, procedures will need be in place to address the following:
 - What will be used to disinfect high touch surfaces?
 - How will buses be cleaned and disinfected?
 - How will social distancing be maintained on buses?
 - How will students be identified with COVID-19 symptoms and then sent home?
 - How will extracurricular activities take place?
 - How will social distancing be maintained in classrooms, during meals?

What can we do

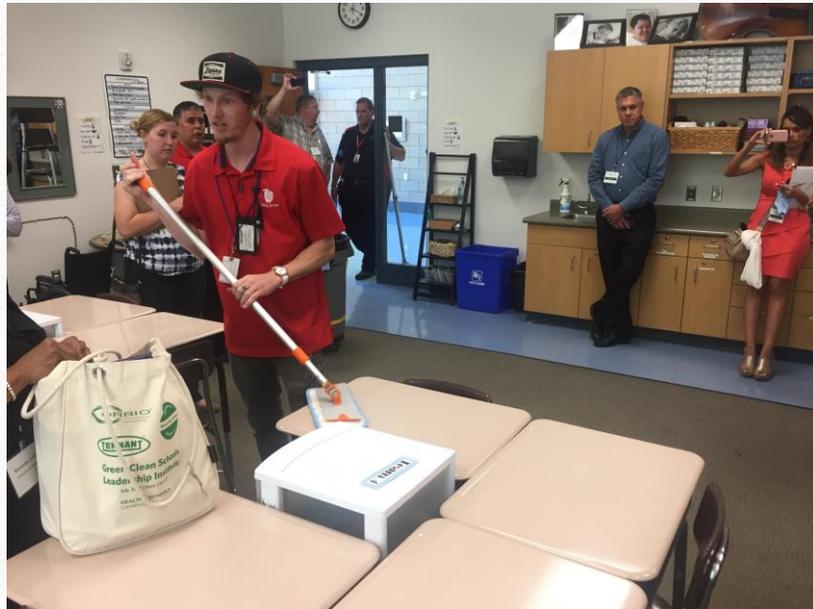
- What will happen after students with COVID-19 symptoms are sent home?
 - Immediate cleaning of area where student was prior to being identified?
 - Specialized cleaning of surfaces overnight?
 - Will parents of other students be notified of child who was ill?
- What will happen if a student or staff member is positive?
 - CDC recommends that the school be closed for two to five days
 - School is deep cleaned.
- <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/guidance-for-schools-h.pdf>

Overview: Salt Lake City School District

- **Students**
24,000 students
- **Staff**
4,200- educators, administrators, support personnel
- **Facilities**
36 schools - 3,800,000 Ft²
- **Custodial Budget**
\$5,700,000



Being proactive



Personal Protective Equipment

- Gloves, Mask and Eye Protection



Equipment (hand held)

- Equipment: Electrostatic sprayer, Pump up sprayer, Spray Bottle, and MicroFiber Rags.



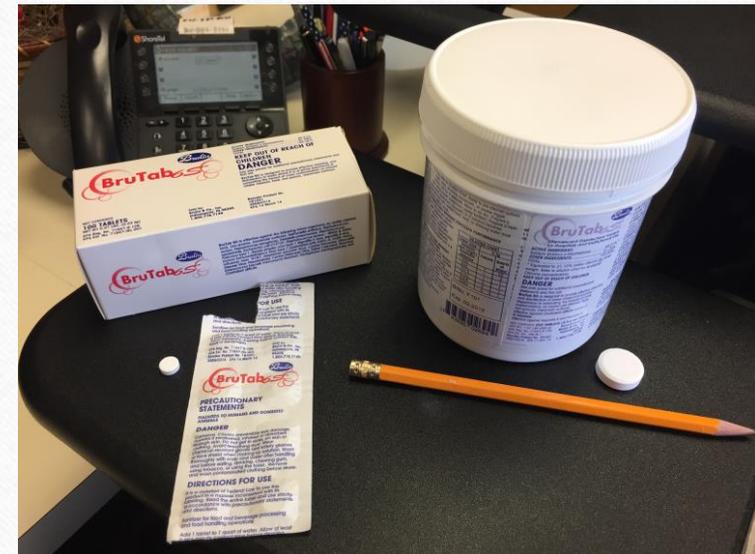
Equipment (portable)

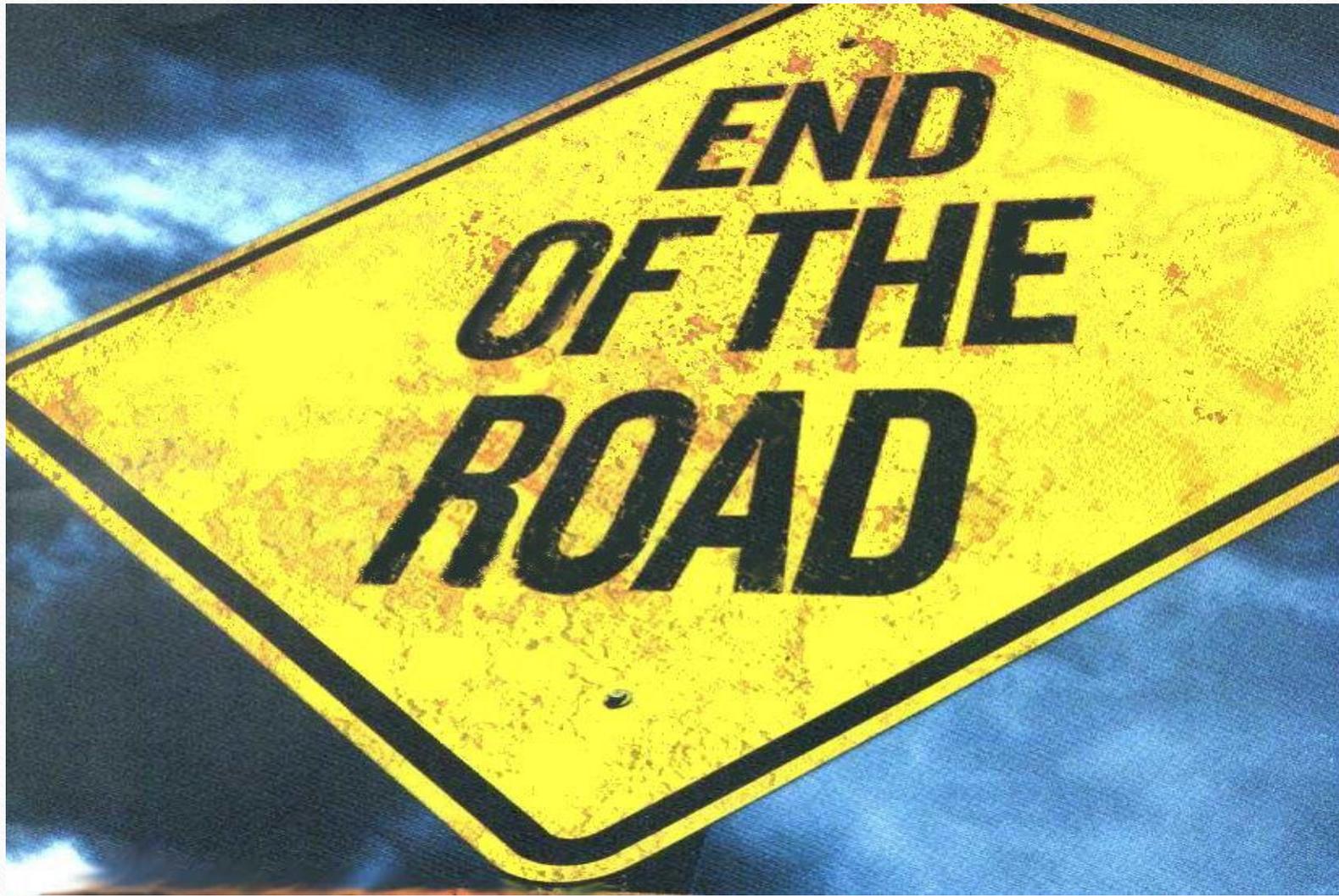
- Equipment: Micro Fiber pole mop, Aqueous Ozone machine (restroom caddy) and Carpet Extractors.



Chemical

- Chemicals: Hydrogen-peroxide products, On site generated water, Effervescent tablets.





Bill Blumenthal

Facilities Supervisor for Douglas County School District



Professional Experience

- **22 years experience in the cleaning industry**
- **ISSA (CMIS) Certified**
- **DCSD and Process Cleaning for Health**



COVID-19 Response for DCSD

- **Reviewing inventory of critical PPE and purchasing.**

Preparing for the next school year



Keeping Track

Sign in Sign out policy

Single point of entry

Flexibility



Moving Forward

**Cleaning
Technologies**



**DCSD to
reopen
in August**

**Precautions
we
are taking**

PANEL DISCUSSION

Question & Answers with moderator to
kick off discussion.

Send in your questions through the chat
function.



DISINFECTION



Buses and Transportation of Students





INDOOR AIR QUALITY

- Increased outdoor air ventilation / eliminate recirculation?
- EPA -Indoor Air Quality App
- Ventilation / Duct cleaning and tools



PARTICIPANT QUESTIONS

CLOSING

- Resources
- Ongoing Conversation
- Survey
- Additional questions for our experts or BEP



THANK YOU!



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