



# COVID-19 Maintenance Challenges in NM Schools

MAINTENANCE ADVISORY GROUP (MAG)

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## Resources:

- [ASHRAE](#)
- [CDC](#)

# The effects of the Pandemic – COVID -19 – on Maintenance

**There is no tougher, more challenging time to be a facilities professional.**

- Maintenance and Janitorial functions have been thrust to the forefront of priorities.
- Districts are looking at many different ways to continue to provide ongoing and safe operations.
- Advanced cleaning and maintenance technologies are quickly being explored and implemented to continue to provide safe educational environments.
- The ASHRAE and CDC Guidelines are available to guide facility managers on efforts to re-open schools.

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## What's happening in NM:

### Districts are being asked to:

- Do more with much less & Time is of the Essence
- Improve the air quality in your schools
- Improve cleaning processes and increase frequencies
- Increase air flow and more air exchanges

### We know that

- resources are in high demand and limited
- costs have increased and product availability is low (out 3-6 months)

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## Goals:

- Outreach
- Collaboration
- Resources
- Informed Decisions

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- Switched about  $\frac{3}{4}$  of units to MERV 13 filters, having to replace them every quarter but also the ones they are using are not specific to the units. He is concerned he is burning up his units running them
- Switching to water bottle filler stations instead of water fountains, ongoing
- Have hand sanitizer stations being placed in schools but have only received 48 out of 200 ordered
- Making their own disinfectant wipes that are premixed by his staff for the teachers to use for their classrooms daily
- Orchard sprayers being used daily to disinfect schools with an EPA disinfectant
- Having challenges getting supplies if they are ordered, backordered or sold out
- Paper products, paper towels, are having to be purchased in town from Sam's Club or Home Depot because they cannot get them online

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## ARTESIA:

- Cleaning regular, sprayers for every school. Spray in the beginning and during groups, and deep clean on Wednesdays. Spraying for 3 years but now it is at every school and more routinely since the pandemic.
- Plexi-glass dividers. Social distancing 6 feet apart. Main-focus is disinfecting.
- Finances is the biggest challenge, spending money on more stuff that was not typical. Budgeting for added expenses is hard; it is not as if you can avoid it. Have to take away from other areas but students and staff safety will always be a priority. Maintenance is understaffed as usual.
- Comments: Cares act money goes quick when cleaning so much and spending a lot on the disinfectant. Main goal is getting kids back to school is the most important. Disinfectant is expensive because it has 1-minute kill time.

## AZTEC

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## BLOOMFIELD

So far, Bloomfield School District has placed several preventive and reactive procedures in place to safeguard our buildings to provide as much as a COVID-19 free environment as possible.

- High Touch Areas Scheduled Cleaning (see attached form)
- Dedicated day per week for deep cleaning
- Increased our arsenal of hand sanitizing stations
- Decorated buildings with COVID-19 safe practice posters
- Identified social distancing cues throughout the building with reflective tape and other creative methods
- Provided preventive barriers to protect office staff with visitor transactions.
- Procured and maintained adequate levels of PPE and CDC approved chemicals to safeguard against COVID-19 epidemic breakout
- Developed a response kit that can be deployed to disinfect an outbreak within a school site
- In the process of adapting all HVAC systems to improve air quality.
- Researched innovative techniques and products (UV lighting, electrostatic fogger systems, etc.) as a means to improve and meet the changing needs of current practices.

**DEMING** Provided cut sheets on new electrostatic device used to improve cleaning and frequencies.

## GADSDEN

- Extended their summer deep clean since very few staff are on site
- Purchased 37 electrostatic disinfectant sprayers, only 7 have arrived.
- Filter changes increases from quarterly to every 2 months
- Challenges are coming from backorder of supplies, mainly disinfectant refills and other sanitization products
- Took advantage of the Cares Act to purchase new cleaning equipment and supplies
- Looking into purchasing some Plasma Air Purification systems from Trane for high occupancy areas such as gyms, cafeterias and admin. Also to include nurses offices.
- Gadsden has some teachers working in their classrooms if they choose while others work from home. All staff are required to wear face coverings while on any school property.

## GALLUP

- We have changed all filters in all our schools and have another filter change for each school in stock.
- We are using MERV 8 and 9 currently and are securing pricing on MERV 13 for all of our low velocity air system. Delivery on MERV 13 per our vendor will be sometime between January and March 2021
- Most of our system do not have the capacity to run MERV 13, and we are looking at options.
- Leaning towards UV systems in all units. MERV 13 and HEPA will not stop a dry COVID 19 droplet as it is to fine.
- We have hired B&P to review all systems and make recommendations.

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- COVID-19 has dramatically changed the way we look at and operate our environments
- In the midst of the pandemic, NM School Districts are creating strategies to improve the environment
  - reducing touch points,
  - providing cleaner air,
  - maintaining social distancing,
  - isolating the infected,
  - increasing cleaning frequencies and improving processes on many fronts
  - Implementing new technologies

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Each NM School District has unique facility system characteristics that need to be considered as you progress towards reducing the spread of the virus, and maintaining healthy environments through Maintenance & Operations:

- age, system types, square footage, locations, physical condition, infrastructure and student populations
- classrooms, labs, restrooms, administration and office spaces, cafeterias, and wide corridors
- Many factors need to be taken into consideration



# The effects of the Pandemic – COVID -19 – on Maintenance

- There is no one “**Silver-Bullet**” solution to providing the perfect environment.
- The “Holistic” Approach
- **GOOD PREVENTIVE MAINTENANCE**
- **New Technologies and Best Practices** - through the pandemics challenges many new advances in technology from new and improved cleaning products and supplies to high efficiency air filters, that can improve the ability of HVAC systems to control airborne contaminants.
- **COLLABORATION**

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**Proactive efforts being implemented to improve facility conditions:**

## **Social Distancing**

- Face coverings (masks, N-95) – adult and child 3 ply masks.
- Face shields
- Plexi-glass barriers
- Floor Demarcation, decals & COVID signage
- Classroom separation - reduced classroom sizes
- Portable walls for triage
- Kiosk machines for facial recognition and temperature checks

## **Cleaner Air**

- Air Filtration: MERV ??? to MERV 13's or higher
- More Air Exchanges and outside air circulation
- Humidity Control
- Air Purification Systems

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## Cleaning and Disinfecting

- Higher cleaning frequencies and new technologies
- Approved chemicals / Hand-wipes / Gowns
- Alcohol based handwash stations – \$\$\$
- Touchless / Contactless restroom systems / orchard sprayers / aerosolizers
- Fogging machines

## Other Technologies:

- Ultraviolet radiation lighting devices
- Air Ionization systems (HVAC)
- Water bottle filler stations
- Electrostatic disinfectant sprayers
- Plasma air purification systems for high occupancy areas and nurses stations.
- Training, Training, Training

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**“Cares Act” to purchase new cleaning and equipment and supplies.** The Coronavirus Aid, Relief, and Economic Security Act, also known as the CARES Act, is a \$2.2 trillion economic stimulus bill passed by the 116th U.S. Congress and signed into law by President Donald Trump on March 27, 2020 in response to the economic fallout of the COVID-19 pandemic in the United States.

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- **What are the ongoing challenges???**
  - Higher frequency filter changes and cleaning protocols.
  - Backorder of supplies and having to go local to purchase supplies at a higher cost. Or go without.
  - Disinfectant and sanitization products are in high demand and higher costs.
  - Overall the availability of PPE and routine cleaning and maintenance items is challenging (including new technology).
  - Using MERV 8-9 filters as they are the most efficient for systems.
  - Unable to migrate to MERV 13's or higher as systems won't allow.
  - MERV-13's not available (until 1<sup>st</sup> qtr. 2021).
  - More capital money is needed for products, air purifiers etc.
  - Funding to support costs associated with re-opening.

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## Best Practices and Reliable Guidelines:

### References

- ASHRAE Guidelines 7-17-2020:  
[https://images.magnetmail.net/images/clients/ASHRAE/attach/ashrae\\_reopening\\_schools\\_and\\_universities\\_c19\\_guidance.pdf](https://images.magnetmail.net/images/clients/ASHRAE/attach/ashrae_reopening_schools_and_universities_c19_guidance.pdf)
- ASHRAE Guidance for the re-opening of schools:  
<https://www.ashrae.org/file%20library/technical%20resources/covid-19/guidance-for-the-re-opening-of-schools.pdf>
- <https://www.ashrae.org/technical-resources/filtration-disinfection>
- Centers for Disease Control (CDC) Operating schools during COVID-19: CDC's Considerations:  
<https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/schools.html>
- CDC: Considerations for Schools: General Readiness Assessment:  
<https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/School-Admin-K12-readiness-and-planning-tool.pdf>
- State of New Mexico: <https://www.newmexico.gov/>

# Open Forum

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