STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

Deidre S. Gifford, MD, MPH
Acting Commissioner

Ned Lamont
Governor

Susan Bysiewicz
Lt. Governor

Guidance for the Cleaning and Disinfection of Schools during the COVID-19 Pandemic

Consistent and proper cleaning and disinfection of surfaces inside school buildings is just one part of a system of procedures that will safeguard the health and safety of students, teachers, and school staff during the COVID-19 pandemic. Other important components of this system include physical distancing, face coverings, and efficient identification and isolation of sick students and staff. While contaminated surfaces are not thought to be a very effective mode of transmission for the virus that causes COVID-19 (especially when compared to direct face-to-face transmission of respiratory droplets), there is still believed to be some risk of transferring virus from one individual to another this way, so careful attention to proper cleaning and disinfection schedules and procedures can reduce the viable virus load in indoor spaces like schools. In addition, having in place enhanced protocols for the cleaning and disinfection of surfaces within each school, and the visible implementation of those procedures, will help to alleviate some of the fear that students, parents, teachers, and staff may be feeling about re-entering the school building this fall.

This guidance provides a framework for cleaning and disinfection practices that will allow schools to plan appropriately for fall reopening, including scheduling of cleaning tasks, equipment/product procurement, necessary staffing levels, procedural training, securing personal protective equipment (PPE), and the process of closing, cleaning, and reopening schools in the event of an outbreak. Links to additional sources of information are provided at the end of this guidance.

Before School Opens:

1. Perform routine cleaning. Any areas in school buildings that have been unoccupied for seven (7) or more days need only routine cleaning, not disinfection. The virus that causes COVID-19 cannot survive outside of the body for long periods and after seven (7) days, it is unlikely that any viable virus will have survived on any type of surface, even under ideal conditions.
2. Develop a Plan. Using the checklist below as a guide, develop a cleaning and disinfecting plan for your school buildings that identifies what areas need cleaning, what areas need cleaning and disinfection, a schedule for cleaning and disinfection, what cleaning and disinfection products are

needed, what personal protective equipment (PPE) is needed, and the person responsible for the cleaning and disinfection.

After School Opens:

1. Identify which areas need only cleaning and which need cleaning, followed by disinfection.

   - Areas needing only routine cleaning include:
     - Outdoor areas such as benches, tables, railings, and playground equipment. Do not spray disinfectants on these surfaces, as it is a waste of disinfection products, unnecessarily exposes children using equipment to disinfectants, and is not shown to provide any additional protection above routine cleaning alone. Cleaning of wooden surfaces outdoors is not recommended.
     - Areas or items located indoors that are not touched or used frequently, such as floors, walls, windows, carpeting, light fixtures, and air vents.

   - Areas needing cleaning, followed by disinfection include:
     - "High-touch areas", which refers to hard surfaces indoors that are routinely touched by different individuals. Examples may include (but not limited to) desks and chairs, doorknobs, countertops, bathroom surfaces, copiers/scanners/fax machines, computer equipment, shared laptops, Chromebooks, or tablets, physical education equipment, locker rooms (benches, showers, and toileting areas), shared break room appliances, hand rails, door knobs, and light switches.
     - Any soft or porous materials that are shared by many individuals (such as blankets, towels, oven mitts, jerseys, etc.) need to be laundered frequently to properly disinfect them. Porous materials are not as easy to disinfect as hard surfaces, so it is recommended that porous surfaces that may be contacted by many different individuals throughout the school day but are not easily laundered (such as upholstered chairs, soft balls and other soft physical education items, etc.) be removed from shared use areas or programs.

2. Develop schedules for cleaning and disinfection

   - Daily
     - Routine cleaning of all areas of the school used during that day.
     - Cleaning and disinfection of "high-touch" areas that you have targeted in your plan.

- Twice Daily
  - Plan to clean and disinfect bathroom surfaces twice per day, especially during times of full occupancy in the school and in high-traffic bathrooms that are in areas where they are more commonly used.

3. Identify and procure appropriate cleaning and disinfection products for your facilities.

- Cleaning Products:
  - Detergent products (soap) and water are effective for surface cleaning and are very effective at removing the virus that causes COVID-19 from surfaces.
  - Instead of soap and water, commercially prepared cleaning products may also be used.
  - All cleaning products purchased by schools must comply with the Connecticut School Green Cleaning Law.
  - Consult the Connecticut Department of Administrative Services Environmentally Preferred Purchasing Program for cleaning products that comply with the Green Cleaning Law.

- Disinfection Products:
  - Select products listed on the Environmental Protection Agency's List N. These products are approved for use against the virus that causes COVID-19.
  - If you use an EPA List N Product stating that it is both a cleaner *and* disinfectant, you must use the product twice. First, use the product to clean the surface. Let air dry then use product again, allowing it to remain on the surface for the contact time stated on the label.
  - Most products are for use on hard surfaces but there are a limited number of products approved for use on soft and porous surfaces.
  - Be sure to double-check products being sold that claim that they are on the EPA List N. EPA recently disseminated a Compliance Advisory related to fraudulent claims by product sellers about their ability to kill the virus that causes COVID-19.
  - To reduce the risk of asthma attacks triggered by disinfecting, aim to select disinfectant products from the EPA List N with "asthma-safer" ingredients (hydrogen peroxide, citric acid, or lactic acid), whenever possible.
  - Avoid products that can trigger asthma attacks, such as those containing sodium hypochlorite (bleach), quaternary ammonium compounds (quats), or peroxyacetic (peracetic) acid, whenever possible.

- The Connecticut Department of Public Health recently released a circular letter (#2020-48) strongly advising against the use "Foggers" or tank sprayers for disinfection in schools. They are potentially dangerous to the custodial staff responsible for disinfecting areas and surfaces, as well as the other occupants of the building. Spraying or fogging of disinfectants in large quantities in school settings may lead to increased adverse respiratory and dermal issues for students and staff, unnecessarily wastes disinfectant products, negatively impacts school budgets, and does not replace the need for regular manual cleaning.

4. Train staff about how to use cleaning and disinfection products safely.

- Opening windows and/or ensuring ventilation system fans are running during cleaning and disinfecting will reduce exposure to the chemicals in these products.
- Custodial or other staff performing cleaning and disinfecting activities must receive appropriate training on how to properly use, store, label, transfer, and dilute (if appropriate) the specific products being used at each facility.
- Cleaning staff must be equipped with proper personal protective equipment (PPE), including gloves, eye protection, respiratory protection, and other protective equipment, as required by the product manufacturer. See the product label and SDS (Safety Data Sheet) for each product used for specific PPE recommendations.
- Follow the manufacturer's instructions about how to apply disinfectant products, including dilution instructions (if product is not "ready to use").
- In order to be effective at killing viruses, the disinfectant must be left on the surface for the amount of time stated on the label (also known as the "contact time").
- Allow disinfected surfaces to air dry. Do not use fans or other mechanical means to shorten product drying times.
- If custodial or other staff who will be assigned cleaning and disinfecting tasks has asthma or other underlying respiratory problems, they should be given safety data sheets for the products that the school intends to use and receive medical clearance from their health provider before using any industrial or commercially-available cleaning or disinfection products.

Additional resources:

- Centers for Disease Control and Prevention, Cleaning and Disinfecting Your Facility: https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility.html

- Connecticut Green Cleaning Law: https://www.cga.ct.gov/current/pub/chap_170.htm#sec_10-231g

- Connecticut Department of Administrative Services, Environmentally Preferred Purchasing Program: https://portal.ct.gov/DAS/Procurement/Contracting/DAS-Procurement-Environmentally-Preferable-Purchasing-EPP-Program-Information

- Environmental Protection Agency, List N: https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2-covid-19

- Environmental Protection Agency, Compliance Advisory for fraudulent products: https://www.epa.gov/compliance/compliance-advisory-what-you-need-know-regarding-products-making-claims-kill-coronavirus

- University of Washington, Safer Cleaning, Sanitizing and Disinfecting Strategies to Reduce and Prevent COVID-19 Transmission: https://osha.washington.edu/sites/default/files/documents/FactSheet_Cleaning_Final_UWDEOHS_0.pdf

- CT Department of Public Health Environmental Health and Drinking Water Branch information about COVID-19: https://portal.ct.gov/DPH/Environmental-Health/COVID-19

Connecticut Department of Public Health

Phone: (860) 509-7740 • Fax: (860) 509-7785
Telecommunications Relay Service 7-1-1
410 Capitol Avenue, P.O. Box 340308
Hartford, Connecticut 06134-0308
www.ct.gov/dph
Affirmative Action/Equal Opportunity Employer

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Guidance for School Systems for the Operation of Central and non-Central Ventilation Systems during the COVID-19 Pandemic

Improving ventilation in school buildings is just one part of system of procedures that will safeguard the health and safety of students, teachers, and school staff during the COVID-19 pandemic. Other parts of this system of procedures include physical distancing, face coverings, and efficient identification and isolation of sick students and staff. While improving ventilation is not necessarily the most effective tool for reducing transmission of the virus that causes COVID-19 (maintaining social distancing and wearing face coverings are far more effective), some studies suggest that adjustments and attention to proper ventilation can reduce the viable virus load in indoor spaces. In addition, we know that providing good ventilation in schools is important even outside of the COVID-19 pandemic, because it has been shown to improve student and staff performance in educational settings.

This guidance provides actions schools should take to ensure that their ventilation systems are performing optimally. The goal is not for schools to invest in costly upgrades and add-ons to existing mechanical systems. Rather, schools should understand what their current mechanical systems are capable of and how they can adjust the function of those systems to optimize their capabilities.

Before School Opens:

1. Commission building mechanical systems for full occupancy (see details below for tips about how and why to commission mechanical systems for fall start-up).
2. Operate all ventilation systems at full capacity for one (1) week prior to the reopening of school buildings.
3. Discuss with the entire facilities team and school administrators the general principles about what changes are planned to the usual ventilation system operation for the coming year. It will be important to communicate with school staff the importance of not making any adjustments to the mechanical systems inside school buildings (thermostats, fan speeds, etc.) without input from the facilities team.

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After School Opens:

1. Flush the air inside the building for a minimum of two (2) hours prior to occupancy and one (1) hour after occupancy (after the night-shift custodians leave), with the dampers open as fully as possible (i.e. to maximize fresh air intake) during this flushing period.

2. Program and lock fan schedules to align with the building occupancy schedule (i.e. provide flushing ventilation starting two (2) hours before building occupancy and one (1) hour post occupancy).

3. Develop a system for building users to notify the facilities department if the building needs to be open longer than usual so that the fan schedule can be altered for that day.

4. Keep the ventilation system running during all hours that the building is occupied.

5. Do not allow teachers or other staff to make changes to ventilation system controls in their respective rooms. Explain to them the importance of keeping fans running all day. If temperature, noise, or other issues exist in certain areas, encourage staff to discuss the problem with the facilities department to try to identify a suitable fix that does not negatively impact ventilation.

6. Keep bathroom exhaust systems running all day, every day (24 hours a day/7 days a week).

7. For isolation rooms to be used for holding sick students prior to dismissal, consider adding supplemental filtration, such as a portable air cleaner. This is particularly important if the ventilation serving those rooms cannot be run at 100% exhaust at all times. If a portable air cleaner is used, it should:

    - Contain HEPA filters only <u>without</u> ionizers, ozone generators, UV light, or other add-ons.
    - Be correctly sized for the space, with an appropriate CADR (clean air delivery rate).
    - Be located for greatest efficiency within the space.
    - Be turned on at all times that the space is occupied.

8. Develop a specific plan for performing routine inspections and maintenance of mechanical systems, as specified in the commissioning process.

9. For buildings without central ventilation systems or with certain areas not served by the central ventilation system, there are other important design considerations facility managers should be aware of, and in control of, in order to maximize available dilution ventilation and minimize the spread of virus particles inside their facilities.

- At a minimum, where temperature allows and no other means of ventilation is available, windows should be opened to allow for some minimum level of fresh air exchange into occupied spaces.
- Window air conditioning units should be adjusted to maximize fresh air intake into the system. Air conditioner blower fans should be set on low speed and pointed away from room occupants to the extent possible.
- Ceiling fans should be adjusted so that fins are rotating in a direction that draws air up toward the ceiling rather than down onto occupants.
- Window fans should be turned to exhaust air out of the window in the direction of the outdoors. Ensure that fans are not blowing out of windows directly into walking paths or areas where individuals may congregate.
- Window fans that blow air into a room or free-standing fans that only serve to circulate existing air around a room should not be used.
- In addition, we do not recommend separate, free-standing air cleaner or HEPA filter units for individual classrooms. These units are highly variable in their effectiveness in larger open spaces such as classrooms and in general, any effect on indoor air quality is likely insignificant and greatly outweighed by the additional costs to school systems.

How to Commission Building Mechanical Systems for fall school reopening

1. If your school system does not already have one that it routinely works with, hire a mechanical engineering firm with a proven track record in evaluating, adjusting, and balancing ventilation systems, particularly ventilation systems in school buildings, to commission all of the buildings' mechanical systems for full occupancy. The school facilities manager should be part of the discussion team talking with the engineering firm and the commissioning agent.

   Consider asking your Commissioning Agent the following questions:

   - How many and what types of systems serve your buildings, and which area of the building does each separate system serve?
   - What are the capabilities of the systems present in your school buildings?
   - Are the systems currently working to their full capabilities?
   - Are the current systems' capabilities enough to satisfy full capacity for how the buildings need to operate now?
   - Can demand-based systems be converted to constant volume until cooling season is over (if systems provide central cooling)? During heating season? Longer-term?

- Can recirculation of air be suspended (economizers disabled)?
- Can they provide a summary of performance expectations for mechanical systems in the building?

2. Include the following items in the commissioning process:

   - A complete set of measurements to understand total air distribution throughout the building.
   - Inspection and evaluation of all building ventilation systems, both automated and manual.
   - Air balancing and appropriate retesting to ensure parameters that satisfy the conditions of full occupancy of the buildings.
   - Inspections:
     - Filter frames - Decide what kind of filter thickness and type you will be using if you decide to upgrade to a higher-rated filter. Discuss this with your ventilation engineering firm. Either way, all filter frames will need to be inspected. Replace or fix all bent, broken, misshapen frames to prevent air from by-passing the filter.
     - Dampers and all associated controllers and actuators need to be visually inspected. Do not rely only on looking at a computer screen if you have an automated building system.
     - Inspect, verify, and modify automated set points, if needed. Discuss both temperature and CO_2 set points in newer buildings that utilize these variables for automated decision-making.
     - Locations of supply and return diffusers. Look at ventilation effectiveness and whether short-circuiting is occurring. This happens frequently when supply and return diffusers are too close to each other. Discuss the possibility of moving them farther apart if this is occurring. If supplies and returns are ducted using flex duct and the room has a suspended ceiling, relocating can be performed more easily.

   - Air balancing, inspections, and other work should be performed in accordance with one of these certification bodies: NEBB (https://www.nebb.org/); TABB (https://www.tabbcertified.org/); AABC (https://www.aabc.com/)

3. Strive toward the following ventilation goals.

   - Increase outdoor air ventilation as much as possible by disabling demand-controlled ventilation systems and opening outdoor air dampers to 100%, as indoor and outdoor conditions permit. Disabling demand-based systems will allow fans to run continuously.
   - Tune ventilation systems to enable them to perform to the maximum capacity consistent with full occupancy conditions for the building.

- Bypass energy recovery ventilation systems that leak or recirculate potentially contaminated exhaust air back into the outdoor air supply.
- Once fans are running continuously, provide increased particle capture by increasing air filtering capacity through repair/upgrades to current system, where needed. This includes filter frames, filter configuration, and filter rating (ASHRAE recommends striving for filters with a MERV-13 rating where possible).

Why it is Important to Commission Building Mechanical Systems

1. Commissioning verifies that existing equipment is working properly. Adjustments can then be made to allow current systems to operate to the best of their ability.
2. Adjusting mechanical systems to satisfy full building occupancy, even if buildings will have reduced occupancy in the fall, will result in increased ventilation per person without over-taxing the equipment and potentially causing premature equipment failure.
3. Commissioning reduces the likelihood of unintended consequences of making changes to how systems operate.
4. If one or more of the systems are deemed to be inadequate, commissioning will provide the basis for making informed and intelligent decisions about next steps to improve those systems.
5. The cost for commissioning is money well spent because it will prevent building operators from spending money on things that add little value and instead, help them focus attention on things that will make a real difference.

Additional resources:

- AICARR- Decision Tree: Protocol for risk reduction of SARS-CoV2-19 Diffusion With the Aid of Existing Air Conditioning and Ventilation Systems
- Air filtration and COVID-19: Indoor air quality expert explains how to keep you and your building safe: Interview with Professor Jeffrey Seigel, University of Toronto
- The Path to COVID-19 Recovery: How To Improve Indoor Air Quality When Re- Opening K-12 Schools. Univ Calif Davis.

Connecticut Department of Public Health

Phone: (860) 509-7740 • Fax: (860) 509-7785
Telecommunications Relay Service 7-1-1
410 Capitol Avenue, P.O. Box 340308
Hartford, Connecticut 06134-0308
www.ct.gov/dph
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Connecticut Department of Public Health

Building Water System

Return to Service

Guidance

This guidance document is intended for building water systems which have not been utilized for a prolonged period of time resulting in stagnation of potable water. Stagnation of potable water in building plumbing may cause changes in temperature, loss of chlorine residual, biofilm/*Legionella* growth, biofilm disruption, and plumbing corrosion resulting in discolored water, odor, lead and/or copper release, and disinfection byproduct formation. If not properly managed, stagnant potable water could pose a health risk. Further, mechanical equipment such as cooling towers, boilers and pumps may not have received any routine maintenance and backflow preventers may have missed annual test cycles. Therefore, the Department of Public Health (DPH) recommends that owners of building water systems that have not been used for a prolonged period of time follow the following protocols before the building is reopened for use and occupancy. Flushing your building water lines includes flushing interior and exterior faucets, showers, water and ice dispensers, and water treatment units, as well as any other building water lines. Prior to any flushing, the building owner should contact the public water system that supplies water to the building to ensure a coordinated effort. Additionally, to maintain high quality water in a building at all times, building owners and operators should implement a water management program (WMP) that follows industry recommendations, such as ASHRAE 188 (2018) or similar to continually reduce the risk of infections due to water quality degradation. It is important to note that each building is different so flushing may need to be tailored accordingly.

Building water systems should follow the following protocols prior to reopening the building :

1. FLUSH WATER

A single flush most likely will not bring the building water system back to normal operation and re-establish good water quality. Flushing requires an initial flush to get out low quality water and contaminants and then follow-up flushes that may bring the building back to normal water quality. Ongoing flushing draws particles through and out of the system and brings in disinfectant from the municipal system that can help control biological growth. The longer service is interrupted, the more the required level of effort for restoration.

Initial Flush

- Contact the public water system that supplies water to your building for assistance. The public water supplier may be able to provide water quality information from the area near the building so that a general comparison can be made between the water quality inside the building and outside the building.

- The building water system begins at the meter where water enters the building and includes all plumbing, storage and fixtures to each distal tap.
- Calculate the water volume in the building to determine how long to flush water.
- Flushing should proceed uni-directionally, that is from the service entrance to the periphery of the plumbing system (distal points).
- Remove aerators prior to flushing faucets.
- Clean fixtures including showerheads.
- Flush zone-by-zone. Zones are branches of the building water system with a common source or parts of the building water system served by a common riser.
- The first zone to flush is the one nearest the building supply. Flush zones progressively outward from the supply.
- In each zone, flush the cold water plumbing first and hot water second.
- Flush continuously for at least 10 minutes, or based on water volume calculations, to flush pipes.
- Flush drinking fountains. Run water continuously for at least 10 minutes, or based on water volume calculations, to flush pipes.
- Flush each area in the building individually (e.g. every patient room, restroom, food service area) through to the distal ends.
- Flush all equipment with water line connections according to manufacturers' instructions.
- Inventory filters on equipment to determine if new filters are needed or need to be ordered and replaced.

Extreme care should be taken when flushing stagnant water systems as stagnant water may contain higher levels of Legionella and other pathogens. Personnel doing this work should be advised to open outlets slowly to avoid splashing and the creation of aerosols. Disinfecting buildings water systems with concentrated chlorine should be considered when there is a strong reason to believe the building is contaminated with pathogens like *Legionella pneumophila*, the bacterium that causes Legionnaires' disease, and/or the people who use the building are particularly susceptible to infections like Legionnaires' disease. Disinfectants (chlorine) are dangerous to handle and can cause serious damage to plumbing system components if used improperly. In most cases, flushing buildings with water that has normal amounts of chlorine (the chlorine already in the building water supply) is sufficient for cleaning the water system.

Hot Water Tanks/Boilers

To clear hot water pipes and water heaters of untreated water:

- Run hot water only at all faucets and flush until water runs cool or typically for a minimum of:
    - 15 minutes for a typical household 40 gallon hot water tank.
    - 30 minutes for a hot water tank greater than 40 gallons.
    - Consult water system professionals regarding the draining, flushing, or treatment for large capacity hot water tanks/boilers designed to deliver hot water.

Water Reservoirs & Storage Tanks

Large buildings with water-holding reservoirs:

- Consult with the building facility engineer about draining the reservoir.
- Drain, disinfect, flush, and refill water storage tanks according to your water management plan or professional consultant recommendations.

Ongoing Flushes

Ongoing flushing can repair destabilized scale and control biofilms. Re-stabilizing scale and controlling biofilms is an ongoing process. In the best case, ongoing flushing is conducted for about 12 weeks – the duration needed for protective scale to re-stabilize and for lead borne on particles to be thoroughly washed from the plumbing system as recommended in an industry standard (AWWA) on flushing related to lead.

Recommendations for ongoing flushing include:

- Make sure each point of use (POU) tap is opened at least once per day. Some POUs are used frequently during normal building operation. Others might be used less frequently and might need to be opened intentionally.
- Flush the full building once per week during ongoing flushing. Full building ongoing flushes proceed the same as the initial flush except water tanks do not need to be drained and hot water flushing times are the same as cold water flushing times. Still flush the cold and hot water systems separately – cold first and hot second.

During ongoing flushing, it is a good idea to measure the water quality of water coming into the building and at some taps in the building. Many building operators will not have the equipment or the ability to make measurements. Even if operators cannot measure water quality, they should still flush the building.

2. CHECK EQUIPMENT/DEVICES

Water Softeners

- Run water softeners through a regeneration (flush) cycle.

Water Filters

Water filters that are commonly used in refrigerators, faucets, and under the sink, etc. are not designed to remove the specific bacteria commonly present in stagnant water lines. If you ran stagnant water through your filter, the filter could be contaminated.

- Remove and discard water filters.
- Replace with a new filter following flushing.

Note: If you cannot flush or run water when filter is removed, replace with new filter after flushing. Always follow manufacturer's directions for filter replacement.

Steam Systems

Check steam system if clean steam is used for autoclaves.

- Check water quality used for steam generation
  (See Association for the Advancement of Medical Instrumentation
  http://www.aami.org/productspublications/ProductDetail.aspx?ItemNumber=920).
- Check with manufacturer for instructions to bring system back.

Ice Machines

- Clean and sanitize per manufacturer's instructions.
- Flush ice machines by following the manufacturer's instructions, including:

  - Flush the water line to the machine inlet.
  - Close the valve on the water line behind the machine.
  - Disconnect the water line from the machine inlet.
  - Open the valve and run 5 gallons of water through the valve. Dispose of this water.
  - Close the valve.
  - Reconnect the water line to the machine inlet.
  - Open the valve.
  - Replace any filters and sanitize filter holders.
  - Flush the water lines in the machine.
  - Turn on the machine.
  - Make ice for 1 hour and dispose of this ice.
  - Clean and sanitize all parts and surfaces that come in contact with water and ice per the manufacturer's instructions.

Drinking Fountains / Water Coolers

- Run drinking fountains continuously for 5 minutes to flush the system.
- Replace filter if applicable.

3. OTHER BUILDING WATER SYSTEMS

It's important to also remember all other water systems in a building, such as water reuse systems, decorative water features such as fountains, and landscape irrigation systems. Follow manufacturer recommendations for disinfecting all water systems after periods of non-use.

4. ADDITIONAL CONSIDERATIONS

Another best practice is the removal and cleaning of end-point devices such as faucet aerators and drinking fountain filters. This is particularly important if any disruption of supply pressure occurred or is suspected while the building was shut down. Pressure disruptions can dislodge particulates, including lead, which can get trapped in aerators and filters, spiking lead levels and reducing water quality.

5. WATER QUALITY MONITORING AND AT-RISK POPULATIONS

At a minimum, the water should be tested for total coliform and deemed satisfactory before consuming the water. Buildings serving high-risk populations such as nursing homes and health care facilities should consider testing for *Legionella* using a laboratory certified by the CT DPH Environment Lab

Certification Program for *Legionella* analysis at least 14 days prior to re-opening the building. Water samples for testing should be collected after taking the remedial steps recommended above. For more information please review the DPH Legionella Building Owner Information page at https://portal.ct.gov/DPH/Epidemiology-and-Emerging-Infections/Legionnaires-Building-Owner-Info

6. PROTECT WATER SYSTEM REHABILITATION PERSONNEL

As mentioned above, personnel that will work to rehabilitate stagnant building water systems will be at some risk and should be advised to take precautions. As such, wearing of personal protection equipment (PPE) including safety goggles, rubber gloves and NIOSH approved N95 facemasks, if available, are recommend best practices. In addition to the precautions concerning exposure to infectious agents from the water system, buildings that are being reopened after being closed and unoccupied for an extended period of time may present other hazards to workers. Extended time periods of deferred maintenance may present hazards related to electrical systems, HVAC systems, water intrusion, structural components, and other physical hazards during the period of reopening and reoccupation. Workers and building owners/operators should proceed with caution and carry a heightened awareness of these and other potential risks.