



IDEA COVID-19 Working Group

April 8, 2020

Agenda

- Welcome & Introductions
- Caring for Your Utility Water Systems – Best Practices Guidance
- Campus – Repurposing Your Facilities for the Community
- Other Issues & Open Discussion
 - Downtown Systems – Security & Access
 - Personnel Safety and Strategies
 - Other Issues

Welcome & Introductions

- **Rob Thornton**, CEO, IDEA, Moderator
- **Patrick Guccione**, Vice President, Special Projects, ChemAqua
- **Dariusz Raczkowski**, Director of Engineering, Tufts University

Objectives of Working Group

- Peer exchange and open communications among industry operations professionals
- Voluntarily sharing information (i.e. written preparedness plans; HR policies, communications templates, etc.)
- Identifying resources or possible inventory transfer/sharing
- Enable IDEA as “repository” of best practices, practical information

Caring for Your Utility Water Systems – Best Practices Guidance

Campus – Repurposing Your Facilities for the Community

The View from Campuses

- Many campuses and campus-like communities are strictly enforcing COVID 19 orders/restrictions to help “flatten the curve”
- Campus facilities and utility operations leadership are working closely with human resources to re-define leave, sick time advances, and interim paid time off policies.
- Cashflows for many institutions are dramatically impacted reducing or shutting down all capital construction, deferred maintenance work, and major maintenance projects that are not considered essential.
- Consolidating various types of operations, re-defining union agreements, staggering shifts, rotating front line managers, and freezing or modifying service contracts are some examples of strategies being used to mitigate impacts to cashflow and “keeping the doors open”.

The View from Campuses

- As the volume of ad hoc work orders reduce, backlogs are being prioritized to address modified business continuity needs, mission-critical facilities, including facilities that may be re-purposed for healthcare staff or patient overflow/patient recovery.
- Almost daily changes to federal, state and local requirements create new business continuity issues that create checks and balances needed to support ongoing essential work, maintenance, and services
 - Including job safety analyses (JSAs), site safety plans, self-temperature testing, check-out/check in procedures
 - Remote and virtual team oversight focusing on communications becomes important, trust the team to ensure the conversations establish what needs to be done and do not micromanage every show with the state of limited resources (exceptions to this in some cases).
 - Prepare employees for potential reassignments or the possibility of furloughs and layoffs to help employees financially prepare (organizational policies or leadership may mandate a different approach)
- Assess strength of internal procurement teams to monitor supply chains for key components, materials, supplies to create bandwidth. Consider utilizing construction manager and general contractor estimators to fill in on the non-construction procurement efforts, where internal procurement teams may not be strong in sourcing certain equipment or services. Weekly review of supply chains; need close coordination with campus procurement officials
- If cashflow allows, consider virtual 3rd party energy or self-audits to determine where virtual corrective work can be implemented in the de-densified state. Consider 14 day quarantine if using out of state onsite auditors in unoccupied buildings.

The View from Campuses

For building where operations must continue here are some examples of measures campus facilities, engineering and utilities operations are implementing as prescribed by [ASHRAE](#) & [REHVA](#) (note these are not “surefire” guarantees):

1. Increase outdoor air ventilation (use caution in highly polluted areas); with a lower population in the building, this increases the effective dilution ventilation per person. Understand implications to heating, cooling, dehumidification capacities.
2. Disable demand-controlled ventilation where practical.
3. Further open minimum outdoor air dampers, as high as 100%, thus eliminating recirculation (in the mild weather season, this need not affect thermal comfort or humidity, but clearly becomes more difficult in extreme weather).
4. Improve central air filtration to the MERV-13 or the highest compatible with the filter rack, and seal edges of the filter to limit bypass. Consider portable room air cleaners with HEPA filters where HEPA cannot be deployed centrally or if more air changes per hour are required.
5. Check fan curves when upgrading to higher grade filtration to prevent premature failure or trips due to increased resistance on fan motors. If using VFD's, program safety lockouts to keep system running reliably at a reduced airflow if needed (give and take here).
6. Remove/Disconnect recirculation potential where commercial grade heat recovery wheels are deployed (for occupied buildings).
7. Keep systems outside air ventilation systems running longer hours, if possible 24/7
8. If pursuing ultraviolet germicidal irradiation inside HVAC systems, understand the design of the energy field, require it is testing/commissioning. If you're spending the money, use quartz glass and not plastic. Check warranties/guarantees, you do not want to be replacing these as frequently as you are the air filters. Also consider UV wall packs in waiting rooms, prisons and shelters.

Facility De-Densification vs. Ramp Up/Repurposing

- “Most” spaces on a college/university campus were never intended to house or treat patients with respiratory infectious disease.
- If any of your space is being re-purposed to support healthcare operations, please consult with CDC guidelines (and other applicable agencies for your particular case) and a qualified medical planner/architect/engineer to review your needs. Each space is unique and often requires a custom solution using industry best practices and technology that is “off the shelf”.
- Like all hazards, risk can be reduced but not eliminated, so be sure to take inventory of the MEP systems in buildings that may be ramping up to support COVID-19 efforts.
- Effectively communicate (or find someone who can) the capacities and limitations of these MEP systems being considered to support what your team would consider atypical operations.
- Be prepared to share MEP system/building automation/energy management/district control system alarm responsibilities if your space is being leased/licensed/turned over to 3rd party operations and establish simple alarm messages that help facilities operators, command center operators, technicians and engineers effectively communicate how the alarms dictate dispatch of your internal resources vs. dispatch of the 3rd party resources. Each case will be unique based on your agreements with these 3rd parties.

University Healthcare Buildings: Dental Facilities

Hyperlink for Dental Building Operations

- https://success.ada.org/en/practice-management/patients/infectious-diseases-2019-novel-coronavirus?utm_source=adaorg&utm_medium=VanityURL
- https://www.ada.org/~media/CPS/Files/COVID/ADA_COVID_Int_Guidance_Treat_Pts.pdf?utm_source=cpsorg&utm_medium=covid-cps=virus-lp&utm_content=cv-pm-ebd-interim-response&utm_campaign=covid-19
- https://success.ada.org/~media/CPS/Files/COVID/COVID-19_Int_Guidance_Summary.pdf?utm_source=adaorg&utm_medium=covid-resources-lp&utm_content=cv-pm-summary-guidance&utm_campaign=covid-19&_ga=2.114588167.1430565240.1586277258-2029356833.1586277258

Other Issues & Open Discussion

Other Issues/Open Discussion

- Downtown Systems – Security & Access
- Personnel Safety and Strategies
- Additional Items

Emergency Preparedness Plans

- <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/summary.html>
- Sharing written emergency preparedness plans?
- Sharing “shelter in place” protocols
- Inventory/PPE
- HR and/or other business best practices
- Please provide redacted documents or in form to be edited

Email to Jason.idea@districtenergy.org for posting;

IDEA Resources and Information Sharing

- **IDEA COVID19 Emergency Operations Survey** – If you haven't already, please take 3-4 minutes to complete this quick survey: <https://www.surveymonkey.com/r/IDEA-covidwg-survey>
- IDEA Connect (Member Forum) – Q&A posting, information sharing
- COVID19 Emergency Preparedness site
- Industry blog – headlines and updates

Thank you

Questions? Contact IDEA at idea@districtenergy.org
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REMINDER

Next IDEA COVID-19 Working Group –
Wednesday, April 22, 1:30 pm ET