## SUPPLEMENT S2: WMC-ICRA PRE-CONSTRUCTION RISK ASSESSMENT CHECKLIST (page 1 of 2)

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|---|---|
| Project Number: | Facility: |
| Project Name: | Department/Location: |
| Date: | Project Scope of Work Description: |

Use this document in conjunction with Water Management for Construction (WMC) Infection Control Risk Assessment (ICRA) tool for improving water quality and safety associated with construction activities. The objective is to reduce risk of waterborne pathogen growth and spread in building water distribution systems from construction activities (i.e., any new building, or any renovation, alteration, and demolition). Please identify all risk factors within the construction project scope. The WMC PRCA checklist should be reviewed by an infection prevention and control practitioner and facility construction project manager to determine WMC-ICRA Construction Project Category, Building Occupant Risk Groups, and Risk Mitigation Level. Describe additional information in the Note(s) Section to clarify extent of construction project scope.

| YES | NO | SITE WMC RISK FACTORS | NOTES SECTION |
|---|---|---|---|
| | | **Excavation** | |
| | | Potential for soil and sediment invasion | |
| | | Describe location(s) | |
| | | **Underground utility connections** | |
| | | Potential for soil and sediment invasion | |
| | | **Repressurization of building main / point-of-entry water system** | |
| | | Will the building main entry be shut-down or experience re-pressurization? | |
| | | **Site/Civil Water service disruption** | |
| | | New construction tie-ins | |
| | | Replacement valves | |
| | | Hydrants | |
| | | Meters | |
| | | Pumping failures | |
| | | Pipeline breaks | |
| | | Other system repairs | |
| | | Emergency conditions | |
| | | **Lengthy underground piping connections** | |
| | | Site routing of water utility piping | |
| | | Fire hydrant locations and piping routing with dead-ends | |
| | | Distance from building main connection to the street connection/invert | |
| | | **Vibration activities** | |
| | | Pile Driving/structural foundation | |
| | | Jackhammering | |
| | | Saw cutting | |
| | | What buildings are these activities adjacent to? | |
| | | **Demolition Activities** | |
| | | Creates air plumes of dust or water aerosoles toward patient care areas | |
| | | Drift of debris toward cooling towers | |
| | | Drift of debris toward HVAC intake vents | |
| | | **Demolishing building water system components** | |
| | | Impacting other building water supply connection points | |
| | | Other Site/Civil utiity demolition activities | |
| | | **Demolishing underground tunnels** | |
| | | Utility | |
| | | Walking/ passage / transportation | |
| | | **Construction equip with water reservoirs (i.e,. typically spray activities)** | |
| | | Water tankers | |
| | | Paving equipment | |
| | | Spray nozzles | |
| | | Misters | |
| | | Other | |
| | | **Water main disruptions** | |
| | | Opportunity for water main breakage | |
| | | Length of shut down in hours/days | |
| | | Off-site construction of municipal water delivery system | |
| | | **Central Utility Plant Modifications/Alterations** | |
| | | Underground utility connections | |
| | | **Cooling Towers** | |
| | | Replacement | |
| | | Addition | |
| | | **Disinfection of underground utility connections or building** | |
| | | Does the project call for building water main disinfection? | |
| | | When during the project is this activity scheduled to be performed? | |

| SUPPLEMENT S2 - WMC-ICRA PRECONSTRUCTION RISK ASSESSMENT CHECKLIST (page 2 of 2) | | | |
|---|---|---|---|
| YES | NO | BUILDING WMC RISK FACTORS | NOTES SECTION |
| | | **High Water Age / Stagnation Challenges (Circle One)** | |
| | | How long will building water system experience dormancy or shut-downs? | |
| | | < 24 hours \| ≤ 7 calendar days \| ≤ 30 calendar days \| > 30 calendar days | |
| | | **Inadequate residual disinfectant** | |
| | | Is disinfectant residual measurement between TRO > 0.5 ppm or < 4.0 ppm / or / FRO > | |
| | | .02 ppm or < 4.0 ppm? | |
| | | **Provide verification of existing residual disinfectant measurements** | |
| | | Incoming municipal water main | |
| | | Pre - Post water softener | |
| | | Pre - Post RO or other central filtration system | |
| | | Return hot water loop system | |
| | | Distal distribution points on each floor of construction | |
| | | **Confirm existing temperature control ranges** | |
| | | Hot water storage temperature | |
| | | Hot water range (per WMP at fixture delivery) | |
| | | Cold water range (per WMP) | |
| | | Does the project utilize point-of-use mixing values? | |
| | | **Unoccupied areas or low or no use areas pre or post occupancy** | |
| | | Shell areas with water in piping system | |
| | | Unoccupied areas with water in piping system | |
| | | Low use areas with water in piping system | |
| | | **Vibration activities** | |
| | | Demolition | |
| | | Jackhammering | |
| | | Saw cutting | |
| | | What departments are above, below, or downstream/near vibration activities? | |
| | | **Efficiency design challenges** | |
| | | Water system design for conservation measures | |
| | | Participating in LEED, WELL, or FitWEL building rating systems | |
| | | Auto-fixtures (electronic, sensor, or push button - ex. surgical scrub sinks) | |
| | | Aerators | |
| | | Ligature-resistant fixtures (i.e., behavioral health, security fixtures) | |
| | | Other - mixed temperature fixtures, etc. | |
| | | **Repressurization (start-up and shut-down)** | |
| | | Will any part of the building water system experience re-pressurization? | |
| | | **Building/Plumbing Water service disruption** | |
| | | New construction tie-ins | |
| | | Replacement valves | |
| | | Meters | |
| | | Pumping failures | |
| | | Other system repairs or component replacement | |
| | | Emergency conditions | |
| | | **Construction equipment with water reservoirs typically with spray activities** | |
| | | Showers | |
| | | Spray nozzles | |
| | | Misters | |
| | | Other | |
| | | **Disinfection of building water distribution system** | |
| | | Does the project call for building water distribution system disinfection? | |
| | | Have ports and isolation valves been installed for this section of the building? | |
| | | When during the project is this activity scheduled to be performed? | |
| | | **Central Utility System Modifications/Alterations** | |
| | | Water heaters | |
| | | Heat exchangers | |
| | | Water storage | |
| | | Hot water loop system | |
| | | Boiler system | |
| | | Other central building water system components | |

**Citation:** Scanlon MM, Gordon JL, Tonozzi AA, and Griffin SC (2022). Reducing the Risk of Healthcare Associated Infections from *Legionella* and Other Waterborne Pathogens Using a Water Management for Construction (WMC) Infection Control Risk Assessment (ICRA) Tool. *Infectious Disease Reports* , 14 (3) Supplement S2.