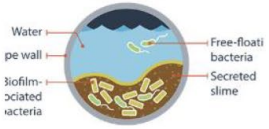
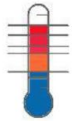
FACTORS THAT CAN LEAD TO *LEGIONELLA* GROWTH

OKLAHOMA
State Department of Health

Aerosolization



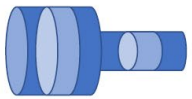
Biofilm and sediments



Ideal growth temperatures

Stagnant water

Cross connections/Deadlegs

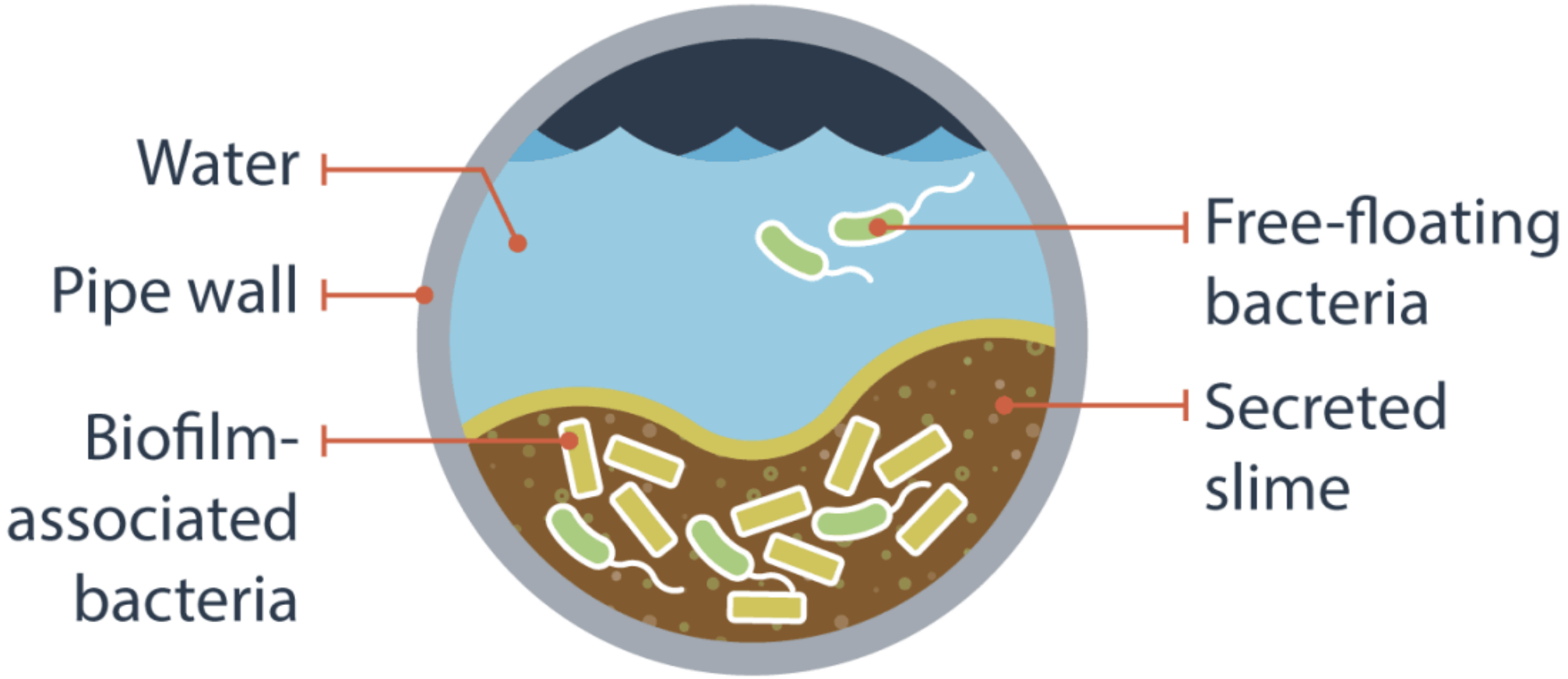


High surface area to volume ratios

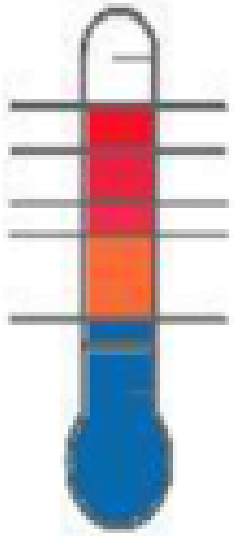
Low or absent residuals

Photo source: Centers for Disease Control and Prevention

Internal Factors



Cross section of pipe



Ideal growth temperatures

77° F -113° F

Stagnant water

Cross connections/Deadlegs


Aerosolization

pH

Low or absent residuals

External factors

Additional Hazardous Factors

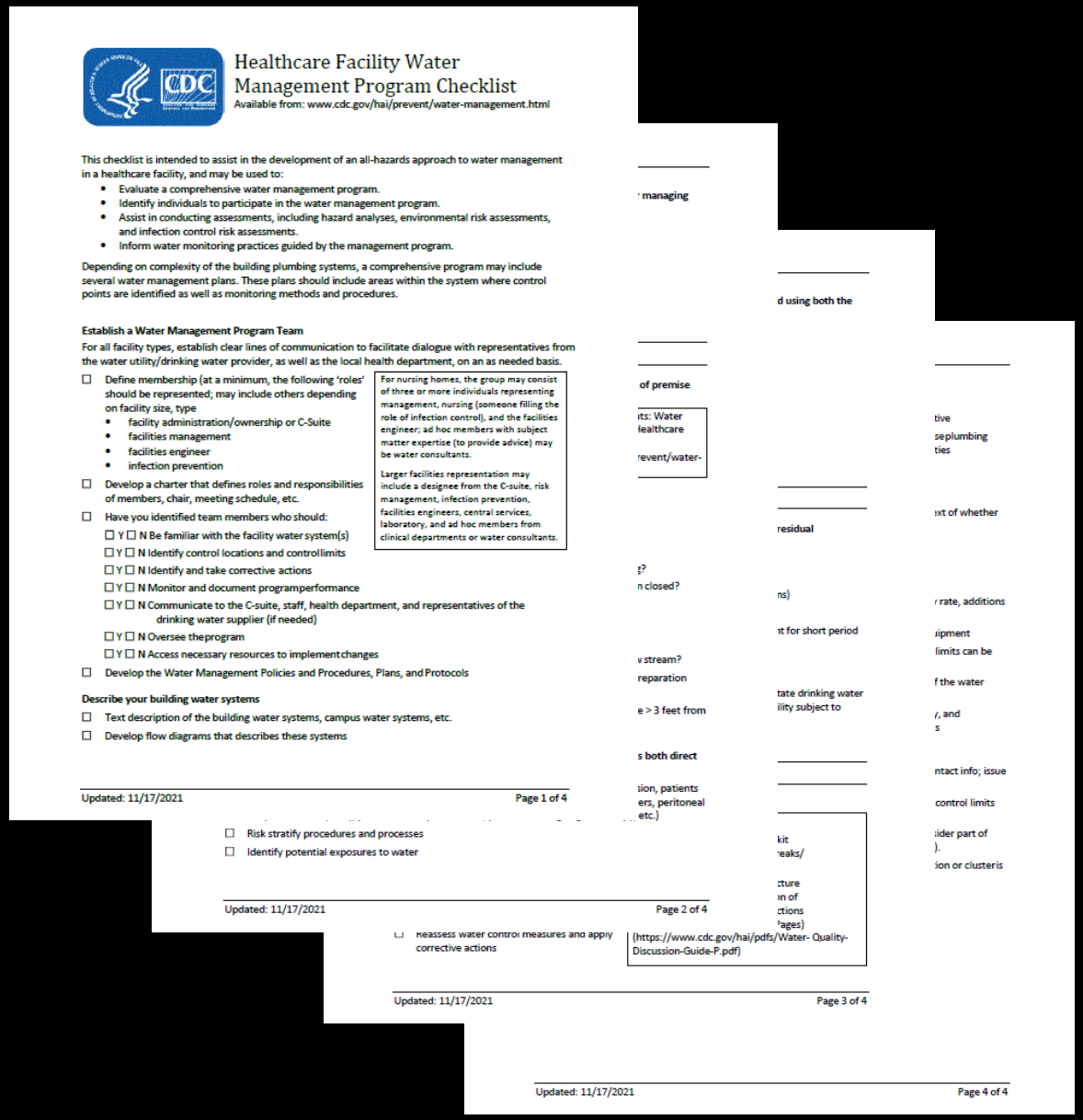
It’s a good idea to anticipate additional hazardous conditions that could be associated with scheduled or unanticipated changes in water quality, such as:

- System start ups or shutdowns
- Regularly scheduled maintenance
- Renovations, construction, and installation of new equipment on your property
- Equipment failure
- Water main break or other service interruptions

Looking ahead

Healthcare Facility Water Management Program Checklist

Intended to assist in the development of an all-hazards approach to water management in a healthcare facility.



Healthcare Facility Water Management Program Checklist

Available from: www.cdc.gov/hai/prevent/water-management.html

This checklist is intended to assist in the development of an all-hazards approach to water management in a healthcare facility, and may be used to:

- Evaluate a comprehensive water management program.
- Identify individuals to participate in the water management program.
- Assist in conducting assessments, including hazard analyses, environmental risk assessments, and infection control risk assessments.
- Inform water monitoring practices guided by the management program.

Depending on complexity of the building plumbing systems, a comprehensive program may include several water management plans. These plans should include areas within the system where control points are identified as well as monitoring methods and procedures.

Establish a Water Management Program Team

For all facility types, establish clear lines of communication to facilitate dialogue with representatives from the water utility/drinking water provider, as well as the local health department, on an as needed basis.

☐ Define membership (at a minimum, the following 'roles' should be represented; may include others depending on facility size, type
- facility administration/ownership or C-Suite
- facilities management
- facilities engineer
- infection prevention

For nursing homes, the group may consist of three or more individuals representing management, nursing (someone filling the role of infection control), and the facilities engineer; ad hoc members with subject matter expertise (to provide advice) may be water consultants.

Larger facilities representation may include a designee from the C-suite, risk management, infection prevention, facilities engineers, central services, laboratory, and ad hoc members from clinical departments or water consultants.

☐ Develop a charter that defines roles and responsibilities of members, chair, meeting schedule, etc.

☐ Have you identified team members who should:

☐ Y ☐ N Be familiar with the facility water system(s)

☐ Y ☐ N Identify control locations and control limits

☐ Y ☐ N Identify and take corrective actions

☐ Y ☐ N Monitor and document program performance

☐ Y ☐ N Communicate to the C-suite, staff, health department, and representatives of the drinking water supplier (if needed)

☐ Y ☐ N Oversee the program

☐ Y ☐ N Access necessary resources to implement changes

☐ Develop the Water Management Policies and Procedures, Plans, and Protocols

Describe your building water systems

☐ Text description of the building water systems, campus water systems, etc.

☐ Develop flow diagrams that describes these systems

Updated: 11/17/2021 Page 1 of 4

☐ Risk stratify procedures and processes

☐ Identify potential exposures to water

Updated: 11/17/2021 Page 2 of 4

☐ Reassess water control measures and apply corrective actions

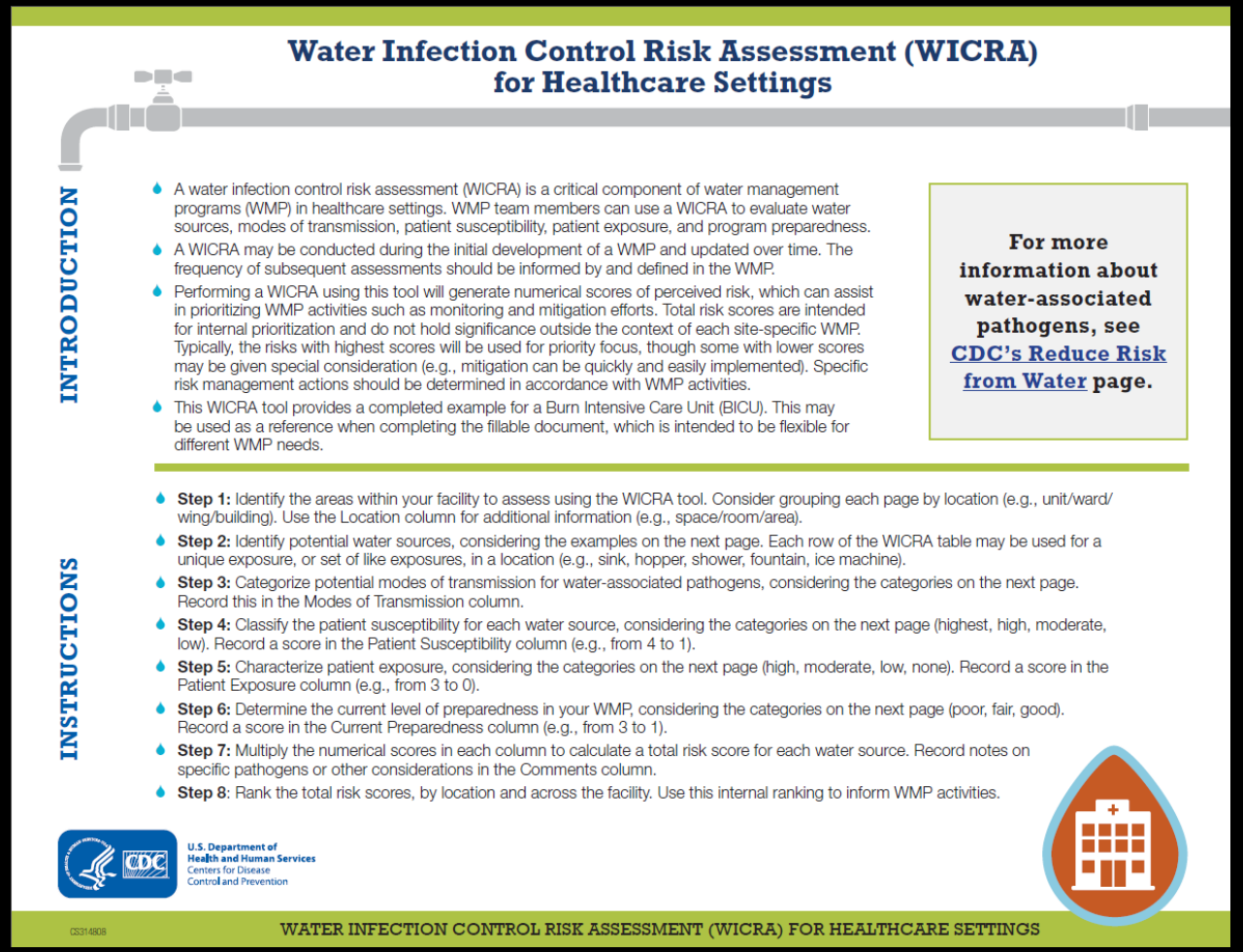
(https://www.cdc.gov/hai/pdfs/Water- Quality-Discussion-Guide-P.pdf)

Updated: 11/17/2021 Page 3 of 4

Updated: 11/17/2021 Page 4 of 4

WICRA

A water infection control risk assessment (WICRA) is a critical component of water management programs (WMP) in healthcare settings.



Water Infection Control Risk Assessment (WICRA) for Healthcare Settings

INTRODUCTION

- A water infection control risk assessment (WICRA) is a critical component of water management programs (WMP) in healthcare settings. WMP team members can use a WICRA to evaluate water sources, modes of transmission, patient susceptibility, patient exposure, and program preparedness.
- A WICRA may be conducted during the initial development of a WMP and updated over time. The frequency of subsequent assessments should be informed by and defined in the WMP.
- Performing a WICRA using this tool will generate numerical scores of perceived risk, which can assist in prioritizing WMP activities such as monitoring and mitigation efforts. Total risk scores are intended for internal prioritization and do not hold significance outside the context of each site-specific WMP. Typically, the risks with highest scores will be used for priority focus, though some with lower scores may be given special consideration (e.g., mitigation can be quickly and easily implemented). Specific risk management actions should be determined in accordance with WMP activities.
- This WICRA tool provides a completed example for a Burn Intensive Care Unit (BICU). This may be used as a reference when completing the fillable document, which is intended to be flexible for different WMP needs.

For more information about water-associated pathogens, see CDC's Reduce Risk from Water page.

INSTRUCTIONS

- **Step 1:** Identify the areas within your facility to assess using the WICRA tool. Consider grouping each page by location (e.g., unit/ward/wing/building). Use the Location column for additional information (e.g., space/room/area).
- **Step 2:** Identify potential water sources, considering the examples on the next page. Each row of the WICRA table may be used for a unique exposure, or set of like exposures, in a location (e.g., sink, hopper, shower, fountain, ice machine).
- **Step 3:** Categorize potential modes of transmission for water-associated pathogens, considering the categories on the next page. Record this in the Modes of Transmission column.
- **Step 4:** Classify the patient susceptibility for each water source, considering the categories on the next page (highest, high, moderate, low). Record a score in the Patient Susceptibility column (e.g., from 4 to 1).
- **Step 5:** Characterize patient exposure, considering the categories on the next page (high, moderate, low, none). Record a score in the Patient Exposure column (e.g., from 3 to 0).
- **Step 6:** Determine the current level of preparedness in your WMP, considering the categories on the next page (poor, fair, good). Record a score in the Current Preparedness column (e.g., from 3 to 1).
- **Step 7:** Multiply the numerical scores in each column to calculate a total risk score for each water source. Record notes on specific pathogens or other considerations in the Comments column.
- **Step 8**: Rank the total risk scores, by location and across the facility. Use this internal ranking to inform WMP activities.

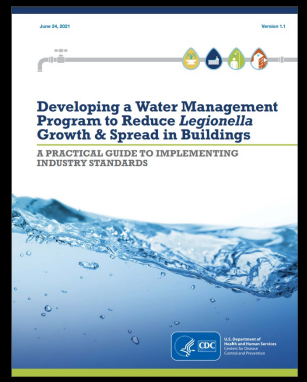
U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

CS314808

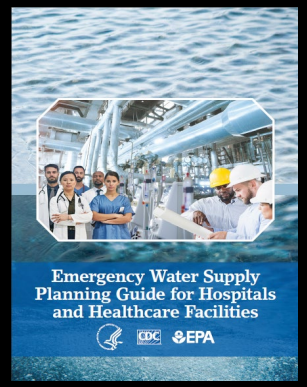
WATER INFECTION CONTROL RISK ASSESSMENT (WICRA) FOR HEALTHCARE SETTINGS

Photo source: Centers for Disease Control and Prevention

Learn more from CDC's toolkit:



www.cdc.gov/control-legionella/media/pdfs/toolkit.pdf



Emergency Water Supply Planning Guide for Hospitals and Healthcare Facilities | Water, Sanitation, and Hygiene (WASH)-related Emergencies and Outbreaks | CDC

Resources

CDC Legionella Toolkit:
www.cdc.gov/control-legionella/media/pdfs/toolkit.pdf

ASHRE Standard:
ANSI/ASHRAE Standard 188-2021, Legionellosis: Risk Management for Building Water Systems

Healthcare Facility Water Management Program Checklist:
www.cdc.gov/healthcare-associated-infections/media/pdfs/water-management-checklist-p.pdf

WICRA:
www.cdc.gov/healthcare-associated-infections/media/pdfs/water-assessment-tool-508.pdf

Questions?

Email : HAI@health.ok.gov
Phone: 405-426-8710

Thank You!