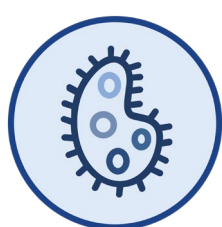


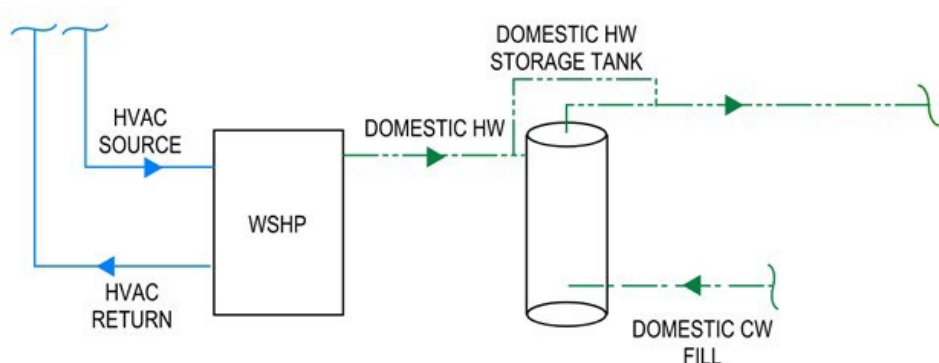
# JB&B CELEBRATES NATIONAL HEALTH CARE FACILITIES AND ENGINEERING WEEK



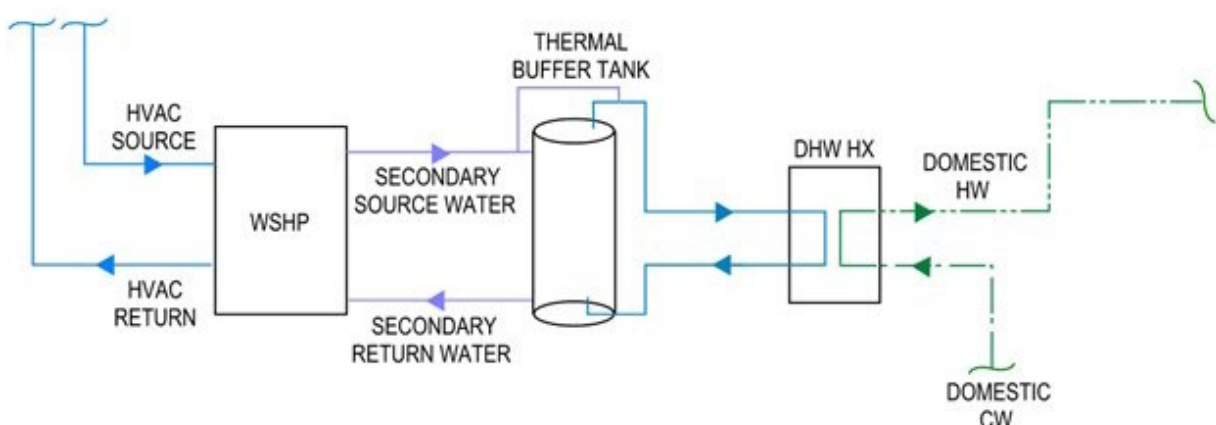
## LEGIONELLA CONTROL IN AN ELECTRIFIED WORLD

### Legionella and Building Electrification

In the wake of new legislation such as Local Law 97 in NYC, the design of mechanical and plumbing source equipment is undergoing significant transformations. The shift toward reducing CO2 emissions and replacing fossil fuel systems with electric alternatives is reshaping the landscape. Innovations such as domestic water heat pumps are quickly gaining momentum. Traditionally, these pumps were coupled with potable water storage tanks, but healthcare facilities are increasingly favoring an instantaneous domestic hot water approach capable of delivering 140 degrees to mitigate Legionella growth. To address this, various manufacturers have developed a healthcare-specific domestic water heat pump configuration. This configuration involves creating a thermal loop/break by introducing thermal buffer tanks that store non-potable water.



TRADITIONAL WSHP CONFIGURATION



HEALTHCARE WSHP CONFIGURATION

### Legionella and Domestic Hot Water Balancing

Mitigating waterborne pathogens such as Legionella remains a critical concern. Several technologies are available to address this issue, such as monochloramine and copper-silver ionization, but they rely heavily on a balanced domestic hot water system to take advantage of their residual effects. To achieve this, facilities should consider adopting thermostatic balancing valves in lieu of manual-type valves. Thermostatic valves adjust open/close based on temperature set points, eliminating the need for manual valve-setting. Additionally, these valves offer flexibility for future renovations and expansions, as there's no requirement for rebalancing.

### Legionella and Domestic Hot Water Distribution

Properly balancing the system is just one aspect of Legionella prevention. Minimizing stagnant water in the domestic hot water distribution system is equally crucial. This can be achieved through various methods, such as the Serpentine Method (breaking the riser and running a full-size distribution to each fixture); the Reverse-Return Method (running hot water and hot water return lines to each fixture); and the Venturi nozzle method (implementing a full-size loop and using venturi nozzle devices at each fixture or group of fixtures).

### Legionella and "Smart Fixtures"

Advancements in fixture technology are aiding in the fight against waterborne pathogens. For instance, there are faucets available that can be programmed to automatically purge with a simple push of a button via your phone or tablet, or they offer scheduled flush options. Additionally, some faucets come equipped with integral ASSE-certified mixing valves, reducing stagnant water in the dead-leg portion of the plumbing.

Until there's a cure or vaccine for Legionnaires' disease, Legionella will be an ongoing concern. But, as these technologies indicate, there are preventative solutions out there, more are being developed and, fortunately, it's the nature of both technology and healthcare to never give up.



**Adam C. Zuar**  
Senior Associate  
212.530.9423  
zuara@jbb.com

