

# Building Heating to Cooling Switchover: What Should I Expect this Spring?

TOM MOORE

FACILITIES MANAGEMENT

WELCOME TO IOWA  
WINTER IS AT 6AM  
SPRING STARTS AT 10AM  
SUMMER IS AT 2PM  
FALL STARTS AROUND 4:30ISH  
DRESS ACCORDINGLY

5:08

abc kcrg.com

February 26, 2024 5:23 PM

**FORECAST VS RECORD HIGHS**  
MONDAY

	FORECAST	RECORD
Cedar Rapids	75	68 1896
Dubuque	72	62 1896
Iowa City	76	63 1896
Waterloo	76	64 1896

Record warmth today, snow and a big dip in temperatures not far off

February 26, 2024 2:19 PM

# *Flush and Fill*

## Purpose:

- To prepare cooling coils for the transition and summer months
  - Flush Cooling coils to prevent high turbidity (debris) at the cooling plants

## High-Level Procedure:

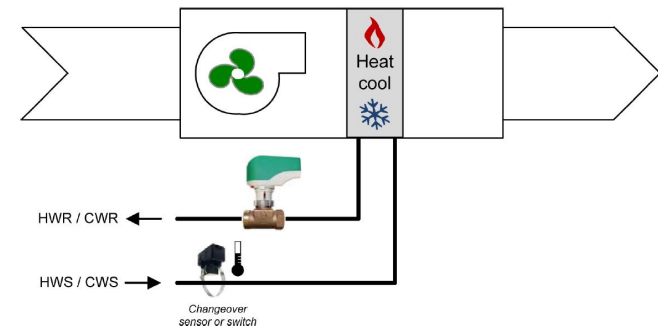
- Isolate and flush cooling coils with chilled water
- Leave filled and ready to go where it is possible

# 2-Pipe Systems

## Two-Pipe HVAC Systems

A two-pipe system uses half the hydronic piping required by a four-pipe system, which results in a lower cost and a shorter installation time. The system is also more compact, reducing the space requirements of mechanical rooms. Maintenance is also simpler in a two-pipe system, thanks to the reduced number of piping fixtures and valves.

The main limitation of a two-pipe HVAC system is lack of operating flexibility. The hydronic piping circuit that runs through the building connects to either the boiler or the chiller depending on overall needs, and all building areas must operate in the same mode; heating some areas while cooling others is not possible with this system configuration.



These buildings cannot provide heating and cooling at the same time due to capability of the systems

*\*These buildings do not typically have air handling units, but rather fan coils or radiant heat*

# 2-Pipe Buildings

- Halsey Hall
- Van Allen
- Phillips Hall
- English-Philosophy Building
- Iowa Memorial Union
- Iowa Bioscience Innovation Facility
- Field House
- Wendell Johnson Speech and Hearing
- Medical Education Building
- Westlawn
- Medical Research Facility
- Medical Research Center
- Jefferson Building  
(\*Treated like a 2-pipe building because of boiler\*)

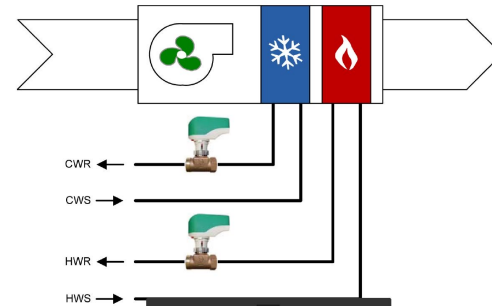
*Note: HH, JB, College of Dentistry, and IMU-Hotel have special circumstances that may require an early switchover*



# 4-Pipe Systems

## Four-Pipe HVAC System

This system configuration uses twice as much piping as a two-pipe HVAC system, and thus it is more expensive and takes longer to install. In addition, a four-pipe system requires more space to accommodate two hydronic piping circuits that run through the building. The increased number of fixtures, valves and connection points also results in a more demanding system in terms of maintenance.



*\*These buildings typically have air handling units that supply conditioned air to the entire building*

# University of Iowa Guidelines

We have established a data-driven approach based on weather conditions

Principles for flushing and filling our 4-pipe buildings to enable Cooling:

- Overnight temperatures are consistently above freezing (this is necessary to avoid freezing & damaging the coils)

This work is currently active in 4-pipe buildings

Principles for Initiating a Switchover from Heating to Cooling for our 2-pipe buildings:

- Daytime temperature highs are consistently between 60F - 65F
- Critical spaces will be given higher priority and evaluated on a case-by-case basis

# *What Should I Expect?*

Until buildings have been transitioned to cooling mode,

- Warmer temperatures in the afternoon
- Slightly humid air

Once buildings have been transitioned to cooling mode,

- Cooler temperatures and drier air in buildings
- Slightly reduced airflow within a 24 hour window while units are off for the switchover



# *What Can Building Coordinators Do This Spring?*

- Remind occupants to please plan to dress in layers during the spring season to help with comfort!
- Remind occupants to please be patient during this time.
- Consider asking that temperature portal requests flow through a single point of contact during the spring transition months to reduce duplication of effort

**Thank you for your partnership!**

# Tool to Help With Occupant Communication:

Dear Building Coordinators,

As discussed in the March Building Coordinator meeting, we will soon begin the switchover of your 2-pipe system from heating mode to cooling mode. Beginning the week of [redacted] 2024, Facilities Management will begin this annual spring process and we anticipate wrapping up the process by the end of [redacted] 2024.

Here is a template for you to send to your building occupants if you would like. Please feel free to modify as needed for your communication methods:

Please read this notice from Facilities Management regarding the seasonal switchover for [redacted] Building Name [redacted]:

Facilities Management will begin the building switchover process from heating mode to cooling mode soon. [redacted] Building Name [redacted] has a 2-pipe system. This means that once the switchover is done, the facility will not have heating capability. Facilities Management schedules this switchover based on the weather forecast. With long-term forecasts showing daytime highs consistently above 60F-65F, this process will begin soon.

Please remember that during these transition months, individual comfort is best addressed by wearing layers in either warm or cool weather situations. During the switchover, unusual noises that are not heard during a normal workday may occur.

Facilities Management will be working through our building switchover in addition to other buildings across campus with an anticipated completion date of [redacted] 2024. Thank you for your patience during this process! If you have any questions or concerns, please contact FM@YourService using the BLUE button on the portal.

**IOWA** | Facilities Management

200 University Services Building  
Iowa City, Iowa 52242

Email will be sent to Building Coordinators for 2-pipe buildings in advance of switchover