Plumbing Board
c/o Department of Labor and Industry
443 Lafayette Road North
St. Paul, MN 55155-4344
dli.ccldboard@state.mn.us

NOTICE OF FINAL INTERPRETATION

On October 15, 2019, the Minnesota Plumbing Board issued a Final Interpretation, which is printed below, pursuant to Minnesota Statutes §§ 326B.435, subd. 2(a)(4), and 326B.127, subd. 5.

Any person aggrieved by this Final Interpretation may appeal it within 30 days of its issuance in accordance with Minnesota Statutes chapter 14.

Questions may be directed to Suzanne Todnem, telephone number: 651-284-5851, email: suzanne.todnem@state.mn.us.

FINAL INTERPRETATION

Inquiry:	PB0152
Subject:	Backflow prevention within a pure water system
Code Reference:	Minnesota Plumbing Code: 2012 Uniform Plumbing Code (UPC) section 603.5.19, as incorporated in the Minnesota Plumbing Code by Minnesota Rules, part 4714.0050.
Submitted by:	Ryan Folin Dunham Associates 50 South Sixth Street, Suite 1100, Minneapolis, MN 55402
Approved by:	Minnesota Plumbing Board, by Richard Jacobs, Chair
Date Received:	June 25, 2020
Issue Date:	July 27, 2020

Question: Is additional backflow prevention required after the reduced-pressure principle backflow preventer required in section 603.5.19 for pure water process systems?

Answer: It depends. After the reduced-pressure principle backflow preventer required in section 603.5.19, if the water from a pure water system is intended for potable use, point of use backflow prevention is required per section 602.2. After the reduced-pressure principle backflow preventer required in section 603.5.19, if the water is intended for non-potable use, then additional backflow prevention is not required at each point of use. Piping is required to be labeled per section 601.2. All other code provisions still apply.

Analysis: The submitter and the Plumbing Board ("Board") agree that a reduced-pressure principle backflow preventer is required at the water supply entry point to a pure water process

system. The question is whether additional backflow prevention devices are required downstream of the pure water process system and particularly at individual points of use.

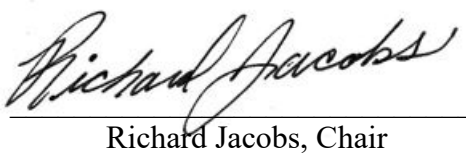
The two main concerns related to additional backflow prevention downstream of the reduced-pressure principle backflow preventer are 1) stagnant water and microbial growth created from the additional backflow prevention devices, and 2) preventing cross-contamination among the points of use.

The language in sections 603.5.19 and 603.5.19.1 is vague. While section 603.5.19.1 explicitly exempts dialysis water systems from having additional backflow prevention at individual points of use, it is unclear whether other systems may or must have additional backflow prevention. Section 602.2 requires each point of use to be separately protected where potential cross-contamination of individual units exists. It is unclear if additional backflow prevention is required in all cases where potential cross-contamination exists except for dialysis related equipment.

The Board discussed different applications and types of pure water process systems and whether the pure water process system downstream of the reduced-pressure principle backflow preventer is part of the domestic water system. Ultimately, the distinction came down to pure water process systems that result in potable water use and non-potable water use. For example, a potable water use is a water sprayer used to mist produce at a grocery store while a non-potable water use could be medical or manufacturing equipment cleaning. The typical designs of these different types of pure water systems present different risk levels of contamination within the system including to multiple points of use. Therefore, the Board interpreted sections 603.5.19 and 603.5.19.1 in the context of the whole of the Plumbing Code to mean that additional backflow prevention might be required downstream of the reduced-pressure principle backflow preventer and provided further clarification as to when that distinction is made.

Commentary: This request for interpretation was submitted on or about June 25, 2020. The Board considered this request for interpretation at the regular meeting of the Board on July 21, 2020. All parties had an opportunity to be heard. As required by Minnesota Statutes, section 326B.127, subd. 5, the Minnesota Plumbing Board will consider this final interpretation for adoption as part of the Minnesota Plumbing Code.

Date: July 24, 2020



Richard Jacobs, Chair
Minnesota Plumbing Board