MN Plumbing Board

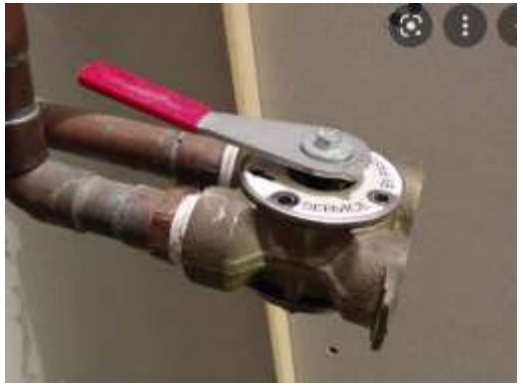
RFI: Bypass Requirements for Water Conditioning Installations

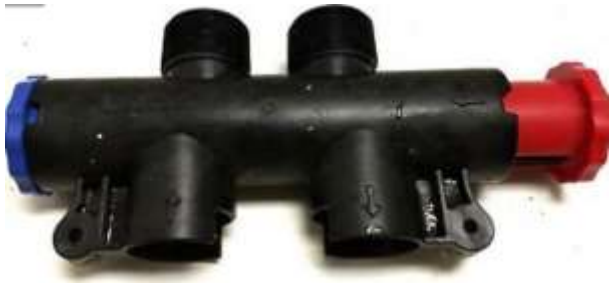
7/19/2022

Submitted by the MN Water Quality Association

Background

- Integral bypass appurtenances provided as a “standard” feature of residential water conditioning systems since the 1970’s.
  - Single or 2 valve assemblies allow for:
    - Isolation of water conditioning equipment for service
    - Temporary bypass of water conditioning equipment with untreated water
    - Removal of water conditioning equipment for service or direct replacement, without disruption of piping and untreated water flow
    - NSF-44 (and other) certifications. Integral bypass is an NSF requirement. Systems must be tested together with bypass. Removing it voids most NSF listings.





Old MN Plumbing Code Language (pre-UPC)

4715.5200 CONNECTION WITH WATER DISTRIBUTION SYSTEM:
Any water conditioning equipment may be installed only in connection with a water distribution system which has already been constructed. Such connection may be made either by cutting into a cold water line or by connecting to a joint specifically installed for the purpose. In connecting the equipment the contractor or installer may use only the type of pipe material which is permitted in the Minnesota Plumbing Code (parts 4715.0100 to 4715.2860).

Every Installation shall include the installation of a bypass valve which would allow the equipment to be serviced or removed without the need for shutting off the water service completely.

If the homeowner so requests, the installer or contractor is permitted to install a line which bypasses the water conditioning equipment and to connect this raw water line to any existing service outlet.

Source: 2012 MN Plumbing Code

2015 Minnesota Plumbing Code (UPC-based)

No language in section 4714.611.0 (Water Conditioning Equipment) which mentions bypass requirements.

Source: 2015 MN Plumbing Code

2017 Updates to MN Statutes

Sec. 9.

Minnesota Statutes 2016, section 326B.50, subdivision 3, is amended to read:

Subd. 3. Water conditioning installation.

"Water conditioning installation" means the installation of appliances, appurtenances, and fixtures designed to treat water so as to alter, modify, add or remove mineral, chemical or bacterial content, said installation to be made in a water distribution system serving:

(1) a single family residential unit, which has been initially established by a licensed plumber, and does not involve a direct connection without an air gap to a soil or waste pipe.; or

(2) a multifamily or nonresidential building, where the plumbing installation has been initially established by a licensed plumber. Isolation valves shall be required for all water conditioning installations and shall be readily accessible. Water conditioning installation does not include:

(i) a valve that allows isolation of the water conditioning installation;

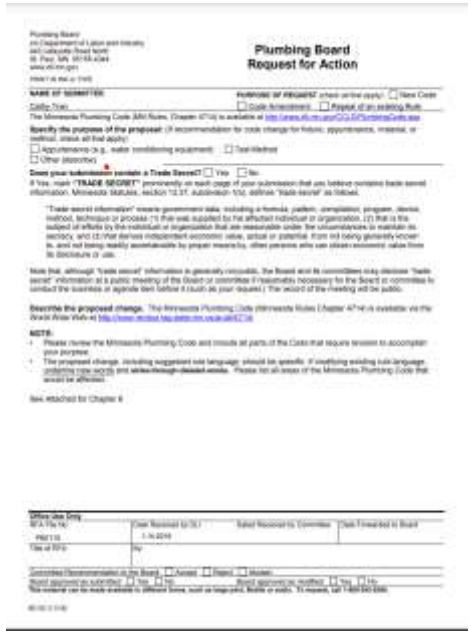
(ii) piping greater than two-inch nominal pipe size; or

(iii) a direct connection without an air gap to a soil or waste pipe.

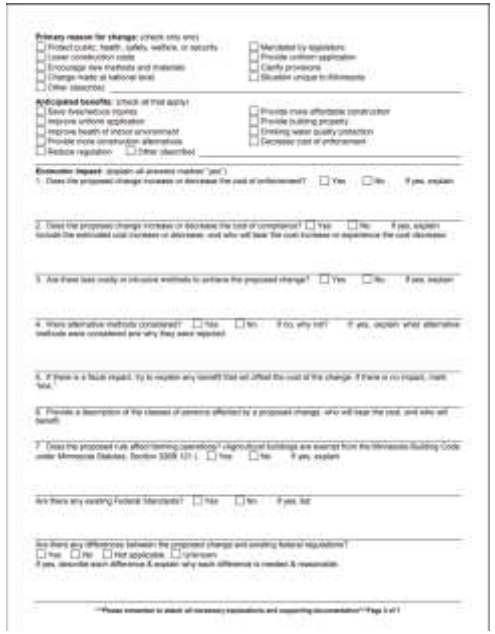
(mandates isolation valves on commercial installations)

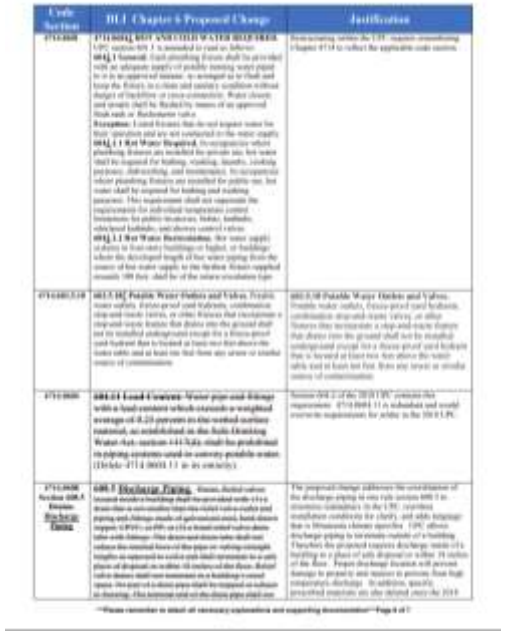
Source: Minnesota Statutes 2016, section 326B.50

RFA Submitted to Plumbing Board in 2019 by DOLI Staff

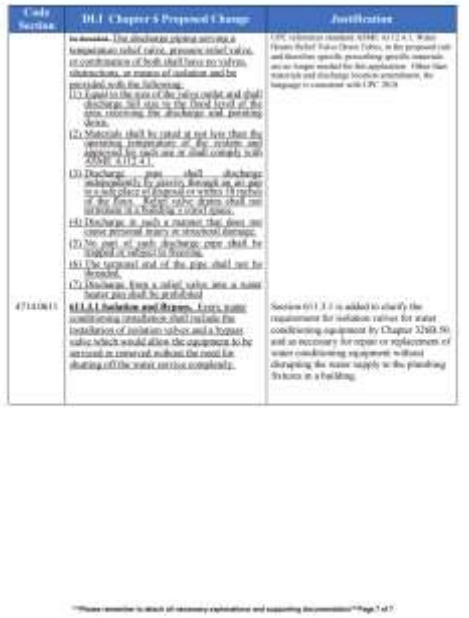


Plumbing Board
Request for Action





Code Section	DLI Chapter 6 Proposed Change	Justification



Code Section	DLI Chapter 6 Proposed Change	Justification

4714.0611	**611.3.1 Isolation and Bypass.** Every water conditioning installation shall include the installation of isolation valves and a bypass valve which would allow the equipment to be serviced or removed without the need for shutting off the water service completely.	Section 611.3.1 is added to clarify the requirement for isolation valves for water conditioning equipment by Chapter 326B.50, and as necessary for repair or replacement of water conditioning equipment without disrupting the water supply to the plumbing fixtures in a building.

Source: https://www.dli.mn.gov/sites/default/files/pdf/RFA-PB0115.pdf

Current Language (2020 MN Plumbing Code)

4714.611.5 Isolation and Bypass:
Every water conditioning installation shall include the installation of isolation valves and a bypass valve which would allow the equipment to be serviced or removed without the need for shutting off the water service completely.

- This is now being interpreted by DOLI to mean that a separate, 3-valve bypass assembly must be field-installed, and that the integral appurtenances used by the industry are not code compliant.
  - Note: Integral bypass appurtenances included with softeners/filters are still required to maintain NSF certifications.

Source: 2020 MN Plumbing Code

MWQA Concerns:

- Increased cost of water conditioning installations
  - Financial burden to consumers (less affordable: $200-$400 per install)
  - Is there a health benefit?
  - Is there a significant consumer benefit?
    - Equipment lasts 15-25 years
    - Water likely to be turned off anyway during replacement
- Inconsistent enforcement
- MN WQA does not believe it was the intent of the 2019 RFA to change existing practices (very little SONAR-related discussion when the RFA was introduced and approved).

  - WQA (National) is not aware of any other states with this requirement

MWQA Request:

That the MN Plumbing Board interpret section 4714.611.5 of the code such that the integral bypass appurtenances supplied with residential water softeners and filters DO in fact meet the intent and requirements of the code.

THANK YOU TO THE BOARD AND DOLI STAFF FOR YOUR TIME AND CONSIDERATION