

MN Plumbing Board

RFI: Bypass Requirements for Water Conditioning Installations

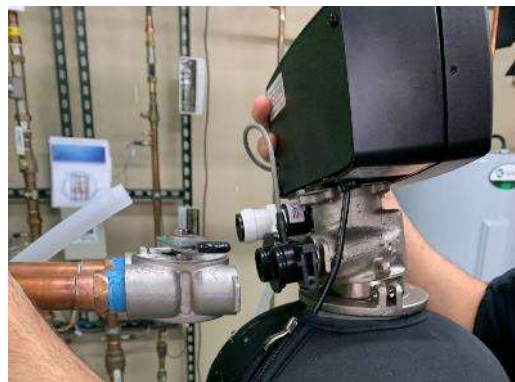
7/19/2022

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.

2015 Minnesota Plumbing Code (UPC-based)

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

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)

RFA Submitted to Plumbing Board in 2019 by DOLI Staff

Plumbing Board
 400 University Avenue
 St. Paul, MN 55104
 612.224.2421
 www.dli.mn.gov

**Plumbing Board
Request for Action**

NAME OF SUBMITTER: _____

DATE OF SUBMISSION: _____

Specify the purpose of the proposal (if accommodation for trade change for future, apprenticeship, insurance, or medical, attach all that apply):
 Apprenticeship - S.S., water conditioning equipment, Test Method
 Other (describe): _____

Does your submission include a Trade Study? Yes No

If Yes, attach "TRADE STUDY" prominently on next page of your submission that you believe contains basic trade information. Minnesota Statute 111.07, subdivision 100, defines "Trade Study" as follows:

"Trade study information" means government data, including a formula, graph, computer program, chart, method, technique or process that was developed for the affected individual or organization. It is the subject of a study by the individual or organization that was measurable under the circumstances to explain an activity, and it is not a trade secret, economic value, secret or patentable item being generally known, and not being readily ascertainable by proper means, other persons who can obtain economic value therefrom in accordance with the provisions of this section.

Mark that, although "Trade Study" information is generally confidential, the Board and its committees may disclose "Trade Study" information at a public meeting of the Board or committee if treatment necessary for the Board or committee to conduct the business or regulate trade is in the public interest. The Board or committee may also disclose "Trade Study" information at a public meeting of the Board or committee if treatment necessary for the Board or committee to conduct the business or regulate trade is in the public interest. The Board or committee may also disclose "Trade Study" information at a public meeting of the Board or committee if treatment necessary for the Board or committee to conduct the business or regulate trade is in the public interest.

Describe the proposed change. The Minnesota Plumbing Code Minnesota Rules Chapter 1314 is available via the Online Rule Book at <https://www.dli.mn.gov/rulebook>

NOTE:
 1. Please format the Minnesota Plumbing Code and include all parts of the Code that require revision to accomplish your purpose.
 2. The proposed change, including suggested rule language, should be specific. If anything existing rule language contains typographical or other errors, please list all errors of the Minnesota Plumbing Code the Board is affecting.

See Attached to Chapter 1314

Order the form
 RFA Title: _____
 Date Received: 1/11/2019
 Board Received by: Committee
 Task Forwarded to: Board
 RFA ID: _____
 Date of File: _____

Comments (Recommendation by the Board): Approved Denied Withdrawn
 Board Decision on Submission: Yes No Not Applicable Comment
 Board Meeting Date, Time, Location: _____

400.01.010

Primary reason for change (check only one):
 Protect public health, safety, welfare, or security
 Lower construction costs
 Encourage new materials and methods
 Change practice at national level
 Other (describe): _____

Motivated by equipment:
 Provide uniform application
 Clarify provisions
 Situation unique to Minnesota

Additional benefits (check all that apply):
 Save unnecessary expense
 Improve health of indoor environment
 Provide more construction alternatives
 Reduce regulation Other (describe): _____

Provide more affordable construction
 Provide building property
 Improve water quality protection
 Decrease cost of enforcement

Enclosure request (explain all previous market "yes")
 1. Does the proposed change increase or decrease the cost of enforcement? Yes No Yes, explain

2. Does the proposed change increase or decrease the cost of compliance? Yes No Yes, explain (attach the estimated cost increase or decrease, and who will bear the cost increase or experience the cost decrease)

3. Does the proposed change increase or decrease the cost of compliance? Yes No Yes, explain (attach the estimated cost increase or decrease, and who will bear the cost increase or experience the cost decrease)

4. Are there any other costs or benefits to enforce the proposed change? Yes No Yes, explain

4. Have alternative methods considered? Yes No Yes, why not? No Yes, explain what alternative methods were considered and why they were rejected

5. If there is a trade repair, try to explain why benefit that will offset the cost of the change. If there is no impact, mark "No"

6. Provide a description of the classes of persons affected by a proposed change, who will bear the cost, and why all benefit

7. Does the proposed rule affecting emergency egress of buildings are exempt from the Minnesota Building Code under Minnesota Statutes, Section 320B.127? Yes No Yes, explain

Do there any existing Federal Standards? Yes No Yes, list

Are there any differences between the proposed change and existing federal equipment? Yes No Not applicable Comment
 If yes, describe each difference & explain why each difference is needed & recommended.

*Please remember to attach all necessary explanations and supporting documentation** Page 2 of 2

Code Section	HLI Chapter & 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.	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.
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.	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.
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.	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.

Code Section	HLI Chapter & 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.	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.

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.
-----------	--	--

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

