Plumbing Board
c/o Department of Labor and Industry
443 Lafayette Road North
St. Paul, MN 55155-4344
www.dli.mn.gov
Email: DLI.ccldboards@state.mn.us

Plumbing Board
Request for Action

PRINT IN INK or TYPE

NAME OF SUBMITTER	PURPOSE OF REQUEST (check all that apply):	New Code
Scott Yarwood	✔ Code Amendment	Repeal of an existing Rule

The Minnesota Plumbing Code (MN Rules, Chapter 4714) is available at https://epubs.iapmo.org/2020/MPC/

Specify the purpose of the proposal: If recommendation for code change for appurtenance or method (check all that apply)

	Appurtenance (e.g., water conditioning equipment)		Test Method
X	Other (describe) To protect individuals from contaminated water in fire systems backflowing into potable water systems		

Does your submission contain a Trade Secret? [ ] Yes [X] No

If Yes, mark **"TRADE SECRET"** prominently on each page of your submission that you believe contains trade secret information. Minnesota Statutes, section 13.37, subdivision 1(b), defines "trade secret" as follows:

> "Trade secret information" means government data, including a formula, pattern, compilation, program, device, method, technique or process (1) that was supplied by the affected individual or organization, (2) that is the subject of efforts by the individual or organization that are reasonable under the circumstances to maintain its secrecy, and (3) that derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use.

Note that, although "trade secret" information is generally not public, the Board and its committees may disclose "trade secret" information at a public meeting of the Board or committee if reasonably necessary for the Board or committee to conduct the business or agenda item before it (such as your request.) The record of the meeting will be public.

Describe the proposed change. The Minnesota Plumbing Code (Minnesota Rules Chapter 4714) is available here: https://epubs.iapmo.org/2020/MPC/

NOTE:

- Please review the Minnesota Plumbing Code and include all parts of the Code that require revision to accomplish your purpose.
- The proposed change, including suggested rule language, should be *specific*. If modifying existing rule language, underline new words and ~~strike through deleted words~~.

Please list all areas of the Minnesota Plumbing Code that would be affected.

603.5.14 Protection from Fire Systems. Except as provided under Section 603.5.14.1 and Section 603.5.14.2, potable water supplies to fire protection systems that are normally under pressure, including but not limited to standpipes and automatic sprinkler systems, except, in one- or two-family or townhouse residential sprinkler systems with approval from the local water purveyor, piped in materials approved for potable water distribution systems shall be protected from backpressure and backsiphonage by one of the following testable devices:

For Office/Committee Use Only Proposal received completed? [ ] Yes [ ] No

Date Proposer notified of gaps:	Mode of notification (e.g., e-mail)	Date returned to Proposer:	Date materials re-received:

Office Use Only

RFA File No.	Date Received by DLI	Dated Received by Committee	Date of Forwarded to Board
PB0175	7/31/2024	8/7/2024	

Title of RFA :By
PB0175.RFA.City of Minneapolis.Rec'd 7.31.2024

Committee Recommendation to the Board:	[ ] Accept	[ ] Reject	[ ] Abstain
Board approved as submitted:	[ ] Yes	[ ] No	Board approved as modified: [ ] Yes [ ] No

Need and Reasons For the Change. Thoroughly explain the need and why you believe it is reasonable to make this change. During a rulemaking process, the need and reasonableness of all proposed rule changes must be justified; therefore, a detailed explanation is necessary to ensure the Board thoroughly considers all aspects of the proposal.

Water purveyors are responsible for water quality to the last free flowing tap according to the MN Department of Health and the USEPA. Minneapolis Water Treatment and Distribution Services (WTDS) has serious concerns about legionella concentrations in dead end water lines contaminating potable water systems. Minneapolis WTDS understood that the Ad Hoc Committee was already working on changes to the code to require dead ends be removed when piping is remodeled. We assumed the fire systems would be addressed in this as well.

A fire system is a dead leg if incorporated into a potable system without adequate backflow protection. Even if installed using materials that are approved for potable water contact, the water age coupled with the temperature of the environment where the fire system is installed, creates a hospitable environment for Legionella and other pathogen growth. Water purveyors should have the authority to make decisions about backflow protection if they are to be held responsible for water quality at the free-flowing tap by State and Federal regulators. The state code should be modified to allow water purveyors to determine the adequate protection for their individual distribution systems and the amount of risk they are willing to take in assuring water quality at the point of use. This decision needs to be based on the demographics of the population served, the treatment processes, distributed water quality, and the condition of the infrastructure itself. The housing exemption in this part of the code makes it impossible for water purveyors to act.

An example of this proposed change put into practice is that, in installations where a combination service line supplies fire protection and domestic supply to a residence, the local water purveyor could require a double check valve backflow prevention assembly on the branch supplying the automatic sprinkler system.

If your product/method standard(s) is not currently listed in a national code, your Request For Action will not be considered by the Board or its committees, however, you are welcome to present at any Board meeting during the Open Forum section of the Agenda.

The proposal must be accompanied by copies of any published standards, the results of testing, and copies of any product listings, as documentation of the health, sanitation and safety performance of any materials, methods, fixtures, and/or appurtenances. If none are available, please explain:

Please attach electronic scanned copies of any literature, standards and product approvals or listings. Printed or copyrighted materials, ***along with written permission from the publisher to distribute the materials at meetings***, and email to DLI.ccldboards@state.mn.us

Primary reason for change: (check only one)	
■ Protect public, health, safety, welfare, or security	☐ Mandated by legislature
☐ Lower construction costs	■ Provide uniform application
☐ Encourage new methods and materials	☐ Clarify provisions
☐ Change made at national level	☐ Situation unique to Minnesota
☐ Other (describe)	

Anticipated benefits: (check all that apply)	
■ Save lives/reduce injuries	☐ Provide more affordable construction
■ Improve uniform application	☐ Provide building property
■ Improve health of indoor environment	■ Drinking water quality protection
☐ Provide more construction alternatives	☐ Decrease cost of enforcement
☐ Reduce regulation ☐ Other (describe)	

The Following Information is Optional. This Information can Assist in Evaluating a Request for Action and in Rulemaking and Should be Provided if Known.

Economic impact: (explain all answers marked "yes")

1. Does the proposed change increase or decrease the cost of enforcement? ☐ Yes ☒ No If yes, explain
Backflow enforcement is self-sustaining through fees generated by the testing.

2. Does the proposed change increase or decrease the cost of compliance? ☒ Yes ☐ No If yes, explain
Include the estimated cost increase or decrease, and who will bear the cost increase or experience the cost decrease:
There will be the initial cost of installing the device of about $200 more than a single check and a yearly inspection of the device to ensure proper operation of about $150. The owner will bear that cost at the time of purchase or building of the home and yearly thereafter for compliance testing. (In cases where the purveyor requires containment of any fire systems from the purveyors distribution main, and isolates the entire building instead of just the fire system, all costs would be identical to isolating the fire system alone.)

3. Are there less costly or intrusive methods to achieve the proposed change? ☐ Yes ☒ No If yes, explain
There are no mechanical backflow devices that are 100% effective. The only way to minimize the risk currently is to utilize a testable device.

4. Were alternative methods considered? ☒ Yes ☐ No If no, why not? If yes, explain what alternative methods were considered and why they were rejected.
Non testable devices are generally not maintained well enough to be considered backflow protection. This has been proven time and time again.

5. If there is a fiscal impact, try to explain any benefit that will offset the cost of the change. If there is no impact, mark "N/A."
Less illness from water borne pathogens will decrease medical costs, especially in small children, the elderly, and people with compromised immune systems. There is also a potential for lawsuits against public entities.

6. Provide a description of the classes of persons affected by a proposed change, who will bear the cost, and who will benefit. These fire systems are required in new built or remodeled large square footage homes and townhomes by the MN Building Code. The builders and owners of these homes will bear the cost. The owners and their families or renters will benefit from clean potable water. The public will also benefit from the protection of the water main itself in a backflow situation.

7. Does the proposed rule affect farming operations? (Agricultural buildings are exempt from the Minnesota Building Code under Minnesota Statutes, Section 326B.121.) ☐ Yes ☒ No If yes, explain

Are there any existing Federal Standards? ☒ Yes ☐ No If yes, list: Excerpt from MN Department of Health https://www.health.state.mn.us/communities/environment/water/com/ccrespauth.html
In addition to state requirements, the Safe Drinking Water Act, enforced through the United States Environmental Protection Agency (EPA), holds the water purveyor responsible for ensuring the quality of the water all the way to the free-flowing outlet of the consumer.

Are there any differences between the proposed change and existing federal regulations? ☐ Yes ☐ No
☐ Not applicable ☒ Unknown If yes, describe each difference & explain why each difference is needed & reasonable.

Minnesota Statutes, section 14.127, requires the Board to determine if the cost of complying with proposed rule changes in the first year after the changes take effect will exceed $25,000 for any small business or small city. A small business is defined as a business (either for profit or nonprofit) with less than 50 full-time employees and a small city is defined as a city with less than ten full-time employees.

During the first year after the proposed changes go into effect, will it cost more than $25,000 for any small business or small city of comply with the change? ☐ Yes ☒ No If yes, identify by name the small business(es or small city(ies).

Will this proposed plumbing code amendment require any local government to adopt or amend an ordinance or other regulation in order to comply with the proposed plumbing code amendment? ☐ Yes ☒ No, If yes, identify by name the government(s) and ordinances(s) that will need to be amended in order to comply with the proposed plumbing code amendment.

With the proposed change a local water purveyor would be allowed to determine if they are comfortable with the level of risk either on a case-by-case basis or make a wholesale ordinance change.

Additional supporting documentation may also be attached to this form. Are there any additional comments you feel the Committee/Board may need to consider? If so, please state them here:

MN Rule 4720.0025 UNSAFE WATER CONNECTIONS. https://www.revisor.mn.gov/rules/4720.0025/ states "Backflow prevention for fire sprinkler systems must comply with American Water Works Association Standard M14" and references 4715 code.

The 2024 version of the AWWA M14 Chapter 6 specifically recommends a double check assembly on residential standalone fire systems and speaks of fixtures plumbed to flowing "ends" on flow thru systems.

The purveyor needs to have the authority to review the plans or require backflow as necessary to adhere to the intent of the AWWA M14. This code change would allow that to happen. The M14 is Copyrighted and a purchased document I could not supply. See page 10 of this guidance document from AWWA discussing the intent of M14 .

https://www.awwa.org/Portals/0/AWWA/ETS/Resources/ResidentialFireSprinklerSystems.pdf

Information regarding submitting this form:

- Submissions are received and heard by the Committee on an "as received" basis. **Any missing documentation will delay the process, and your proposal will be listed as the date it was received "Complete."**
- **Submit any supporting documentation to be considered,** such as manufacturer's literature, approvals by other states, and engineering data electronically to DLI.CCLDBOARDS@state.mn.us. Once your Request For Action form has been received, it will be assigned a file number. Please reference this file number on any correspondence and supplemental submissions.
- For copyrighted materials that must be purchased from publishers, such as published standards, product approvals or testing data, listings by agencies (IAPMO, ASSE, ASTM, etc.,) you may send (or email) two copies, *along with written permission from the publisher to distribute the materials at meetings*, via U.S. Mail to: Plumbing Board, c/o Department of Labor and Industry, 443 Lafayette Road No., St. Paul, MN 55155-4344.
- For materials that must be submitted by U.S. Mail, please include a copy of your "Request For Action" form originally submitted and reference your assigned RFA file number.

Information for presentation to the Committee and/or Board:

- Limit presentations to 5 minutes or less.
- Be prepared to answer questions regarding the proposal and any documentation.

Information regarding Committee and/or Board function:

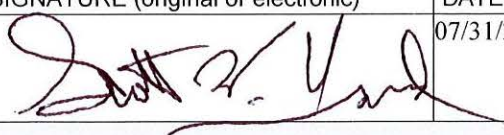
- The Plumbing Board or designated Committee.

I understand that any action is a recommendation to the Plumbing Board and is not to be considered final action.

NAME	EMAIL ADDRESS	FIRM NAME
Scott Yarwood	Scott.yarwood@minneapolimn.gov	Minneapolis Public Works Water Treatment and Distribution Services Division

NAME, PHONE NUMBER AND E-MAIL ADDRESS OF PRESENTER TO THE COMMITTEE (if different):

MAILING STREET ADDRESS	CITY	STATE	ZIP CODE
4100 Marshall Street NE	Minneapolis	MN	55421

PHONE	SIGNATURE (original or electronic)	DATE
612-716-7917		07/31/2024

For Assistance or questions on completing this form, contact Mike Westemeier, Department of Labor and Industry at michael.westemeier@state.mn.us or by phone 651-284-5898.

Supporting Websites for 603..5.14 RFA from City of Minneapolis

MN Rule 4720.0025 UNSAFE WATER CONNECTIONS

https://www.revisor.mn.gov/rules/4720.0025/

AWWA Guidance Page 10

https://www.awwa.org/Portals/0/AWWA/ETS/Resources/ResidentialFireSprinklerSystems.pdf