Logan, Lyndy (DLI)

From: Eshenaur, Tannie (MDH)
Sent: Tuesday, September 23, 2025 6:47 PM
To: Logan, Lyndy (DLI)
Cc: Anderson, Anita.C (MDH); Rice, Nancy (MDH); Hogan, Tom (MDH); Higgins, Tom M (MDH)
Subject: MDH comments on UPC Chapter 15 for the Ad Hoc Committee
Attachments: NSF 350-2023 - Watermarked.pdf; Z1324-2022 Alternate Water Source Systems for Multi-Family, Residential, and Commercial Use (IAPMO).pdf; MDH Chapter 15 comments 250923.pdf

Lyndy,

I'm writing to provide you with MDH comments on the Uniform Plumbing Code, Chapter 15 which are in the attached document.

As stated in the comments, we are supportive of alternate water source systems because of the value they can provide in protecting water resources. These systems also add complexity to building plumbing, and we need to be sure the necessary resources are in place to support the safe, successful long-term implementation of the systems.

We are proposing in the comments that MDH be named as the Authority Having Jurisdiction that will set performance standards, minimum water quality criteria, and minimum monitoring, testing and maintenance frequencies for alternate water source systems. Having consistent standards set at the state level would make for easier and safer implementation. Water quality requirements that cover the range of sources and end uses, including performance standards and ongoing monitoring requirements, are fairly extensive and we do not have them fully drafted and ready at this time. MDH would envision these standards "housed" outside of the Minnesota Plumbing Code but available for reference.

The standards currently referenced in the UPC (NSF 350 and IAPMO/ANSI Z1324-2022) are attached in case the committee is interested. These standards primarily cover performance requirements needed for equipment to be acceptable for use in an alternate water source system. They do not cover ongoing operations and monitoring.

Our input is in the form of comments at this time. If you would prefer them to be in the form of a Request for Action, please let me know. We chose comments at this time because further discussion by the committee would be helpful. Another concern is whether MDH will have the requisite resources and staffing to serve as the Authority Having Jurisdiction as outlined in the comments document.

Thank you,

Tannie

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MDH Recommendations to the 2024 UPC Ad Hoc Rulemaking Committee

CHAPTER 15

Background

While alternate water source systems can provide value in protecting water resources and some are currently in use in Minnesota, the support system for ensuring the safe, successful long-term implementation of these systems is still developing. Supports needed include:

- design guidelines,
- risk management strategies,
- funding mechanisms,
- operator training,
- maintenance manuals,
- technical assistance, and
- oversight and monitoring.

Having a plumbing code that allows the safe integration of alternate source systems into building plumbing is one piece to the puzzle. In addition, as is the case for public water supplies, septic systems, and wastewater treatment plants, the Minnesota Pollution Control Agency (MPCA) and Minnesota Department of Health (MDH) also play roles that may include guidance, regulation, risk assessment and technical assistance.

Background on work being done to advance safe and sustainable water reuse in Minnesota can be found on the Clean Water Fund website: Clean Water Fund Water Reuse (https://www.health.state.mn.us/communities/environment/water/cwf/reuse.html).

Recommendations

The recommendations below refer to the following:

2020 Minnesota Plumbing Code (https://epubs.iapmo.org/2020/MPC/)

2024 Uniform Plumbing Code (https://epubs.iapmo.org/2024/UPC/)

Chapter 15: Alternate Water Sources for Nonpotable Applications

Alternate water sources addressed in Chapter 15 include reclaimed water, gray water, and on-site treated nonpotable water. The sources for on-site treated nonpotable water are understood to include blackwater, gray water, stormwater and foundation water among others. Each of these sources has unique implementation considerations, and any alternate water source system requires ongoing oversight and monitoring to be implemented safely. ***The Minnesota Department of Health (MDH) does not recommend adopting Chapter 15 in its entirety***.

- **General Recommendations:** While Minnesota wants to move forward with water reuse, as noted in the background section, the reuse community needs additional supports for the systems to be successful. These supports include design guidelines, risk management strategies, funding mechanisms, operator training, maintenance manuals, technical assistance, oversight and monitoring. ***MDH wants to make sure changes to the Minnesota Plumbing Code are aligned with the availability of the additional supports***. Work on these supports is underway, and MDH recommends the Plumbing Board coordinate and collaborate with other agencies and entities on the timing of moving forward with Chapter 15.
- **Gray Water:** Gray water is defined in Minnesota Rules, part 7080.1100 as "sewage that does not contain toilet wastes", and proper disposal is required to protect groundwater and public health. ***Sections 1503.0 to 1504.11 of the 2024 UPC appear to conflict with Minnesota Rules, part 7080.2240 and MDH does not recommend adoption of these sections without consulting the Minnesota Pollution Control Agency (MPCA).***
- **Reclaimed Water:** Reclaimed water is defined in Section 220.0 of the 2024 UPC as "nonpotable water provided by a water/wastewater utility that, as a result of tertiary treatment of domestic wastewater, meets requirements of the public health Authority Having Jurisdiction for its intended uses." ***MDH recommends changing "the public health Authority Having Jurisdiction" in this definition to "the Minnesota Pollution Control Agency."*** MPCA has guidance for reclaimed municipal wastewater (Municipal Wastewater Reuse) and regulates municipal wastewater through NPDES and SDS permits. Therefore, for reclaimed water applications, the Plumbing Code needs to provide protection against cross-connections, but water quality oversight is provided by MPCA in consultation with MDH. ***MDH is supportive of adopting code sections 1505.0 to 1505.14 related to the use of reclaimed water***.
- **Authority Having Jurisdiction:** If the Plumbing Board moves ahead with adopting additional sections of Chapter 15, ***MDH recommends that we be named as the Authority Having Jurisdiction that will set performance standards, minimum water quality criteria, and minimum monitoring, testing and maintenance frequencies for alternate water source systems***. Having consistency at the state level would make for easier and safer implementation. If the Committee is amenable to this recommendation, MDH will work on developing the requirements. Minimum Water Quality requirements for alternate source water systems are relatively complex given the number of source types and end uses that are possible. In addition, because filtration and disinfection treatment are required, there are performance standards for the equipment on the front end, and ongoing monitoring and testing that are required to ensure the equipment continues to operate and provide water that is safe for public exposure.
- **On-Site Treated Nonpotable Water Systems:** As described in Section 1506.10.2 of the 2024 UPC, on-site treated water needs to be disinfected, and meet the applicable water quality requirements as determined by the public health Authority Having Jurisdiction. Treatment systems that are providing public health protection require ongoing maintenance and oversight to ensure they meet water quality requirements and are operated properly. It is not clear if there is any Authority that has the resources and capacity for proper oversight at this time. MDH and MPCA do not currently have clear regulatory authority over operations of nonpotable water systems or a fee structure to enable devoted staff. Plumbing authorities may not have the expertise in inspection and oversight of treatment system operation and water quality monitoring. ***MDH does not recommend adoption of Sections 1506.0 to 1506.13 related to On-Site Treated Nonpotable Water Systems until a system for operational and water quality oversight is in place. Solutions such as delegation agreements, new agency authorities, and/or funding should be pursued.***

Sections and tables affected include:

Table 1501.5 Minimum Alternate Water Source Testing Inspection, and Maintenance Frequency

TABLE 1501.5
MINIMUM ALTERNATE WATER SOURCE TESTING, INSPECTION, AND MAINTENANCE FREQUENCY

DESCRIPTION	MINIMUM FREQUENCY
Inspect and clean filters and screens, and replace (where necessary).	Every 3 months
Inspect and verify that disinfection, filters, and water quality treatment devices and systems are operational and maintaining minimum water quality requirements as determined by the Authority Having Jurisdiction.	In accordance with manufacturer's instructions, and the Authority Having Jurisdiction.
Inspect pumps and verify operation.	After initial installation and every 12 months thereafter
Inspect valves and verify operation.	After initial installation and every 12 months thereafter
Inspect pressure tanks and verify operation.	After initial installation and every 12 months thereafter
Clear debris from and inspect storage tanks, locking devices, and verify operation.	After initial installation and every 12 months thereafter
Inspect caution labels and marking.	After initial installation and every 12 months thereafter
Inspect and maintain mulch basins for gray water irrigation systems.	As needed to maintain mulch depth and prevent ponding and runoff.
Cross-connection inspection and test*	After initial installation and every 12 months thereafter

* The cross-connection test shall be performed in the presence of the Authority Having Jurisdiction in accordance with the requirements of this chapter.

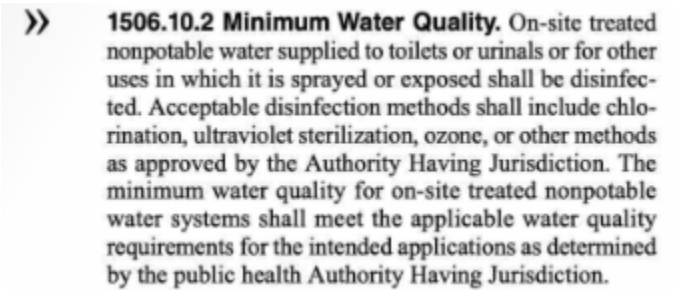
Section 1501.7 Minimum Water Quality Requirements

1501.7 Minimum Water Quality Requirements. The minimum water quality for alternate water source systems shall meet the applicable water quality requirements for the intended application as determined by the Authority Having Jurisdiction. In the absence of water quality requirements, for on-site treated nonpotable systems, the water quality requirements of IAPMO IGC 324 or NSF/ANSI 350 shall apply.

1506.8 On-Site Treated Nonpotable Water Devices and Systems

» **1506.8 On-Site Treated Nonpotable Water Devices and Systems.** Devices or equipment used to treat on-site treated nonpotable water to maintain the minimum water quality requirements determined by the Authority Having Jurisdiction shall be listed and labeled (third-party certified) by a listing agency (accredited conformity assessment body) or approved for the intended application. Devices or equipment used to treat on-site treated nonpotable water for use in the water closet and urinal flushing, surface irrigation, and similar applications shall comply with IAPMO IGC 324, NSF/ANSI 350 or approved by the Authority Having Jurisdiction.

1506.10.2 Minimum Water Quality



» **1506.10.2 Minimum Water Quality.** On-site treated nonpotable water supplied to toilets or urinals or for other uses in which it is sprayed or exposed shall be disinfected. Acceptable disinfection methods shall include chlorination, ultraviolet sterilization, ozone, or other methods as approved by the Authority Having Jurisdiction. The minimum water quality for on-site treated nonpotable water systems shall meet the applicable water quality requirements for the intended applications as determined by the public health Authority Having Jurisdiction.

Minnesota Department of Health
Environmental Health Division

09/23/25

To obtain this information in a different format, call: 651-201-4700.