

Meeting Minutes: Ad hoc Storm Drainage Surcharge Committee of the Plumbing Board

Date: Sept. 28, 2023
Time: 1:00 p.m.
Minutes by: Lyndy Logan
Location: Minnesota Room, DLI, 443 Lafayette Rd. No., St. Paul, MN 55155

Committee Members

1. Karl Abrahamson
2. Richard Becker (Committee Secretary)
3. Bryce Pylkas (Committee Chair)
4. Rick Wahlen
5. Mike Westemeier (DLI CO's Designee)

Committee Members Absent

None

DLI Staff & Visitors

Brittany Wysokinski (Board. Counsel, DLI)
Lyndy Logan (DLI)
Brad Jensen (DLI)
Hannah Mardaus (DLI) – WebEx
Sean O'Neil (DLI) – WebEx
Thomas Eisert (DLI) – WebEx

DLI Staff & Visitors continued...

Grace Altier (Poulhaas) – WebEx
Ken Beck (City of Owatonna) – WebEx
Jon Boesche (MN ABC) – WebEx
Nico Cantarero (Stantec) – WebEx
Kent Erickson (Plumbing Board) – WebEx
Monica Heil (American Public Works) – WebEx
Tom Meyer (Landform) – WebEx
Sean Murphy (City of Owatonna) – WebEx
Jim Peterson (MN PHCC)
Bradley Rademacher (City of Owatonna) - WebEx
A.J. Schwidder (Upstream Technologies) – WebEx
Elizabeth Stout (City of Minneapolis) – WebEx
Brandon Wisner (City of Elk River) – WebEx

1. Call to Order

- A. The meeting was called to order by Committee Chair Pylkas at 1:03 p.m. Roll call was taken by the Committee Secretary and a quorum was declared with 5 of 5 Committee members present in person.
- B. Announcements – Introductions (members and attendees) – Chair Pylkas
 - Everyone present in person and remotely are able to hear all discussions.
 - All votes will be taken by roll call if any member is attending remotely.
 - All handouts discussed and WebEx instructions are posted on the Board's website.
 - WebEx instructions/procedures can be found on the board's website at: <https://www.dli.mn.gov/about-department/boards-and-councils/plumbing-board-ad-hoc-committee-storm-drainage-surcharge>

2. Approval of meeting agenda

A motion was made by Becker, seconded by Abrahamson, to approve the agenda as presented. The vote was unanimous with 5 votes in favor; the motion carried.

3. Approval of draft meeting minutes

A motion was made by Wahlen, seconded by Becker, to approve the Aug. 4, 2023, draft minutes as presented. The vote was unanimous with 5 votes in favor; the motion carried.

4. Regular Business

No expense reports.

5. Special Business

A. Consider potential rule language related to storm drain surcharge, including proposed language in Petition for Rulemaking – see **Attachment A**

- Pylkas posed the question, where does the committee start.
- Wysokinski clarified to the committee what the board had tasked them with and how they may proceed.
- Becker stated that based on previous meetings that the committee/board seems in agreement that restrictions in the system is not desired.
- Becker noted he felt that the issue may really come down to a terminology difference, that the term surcharge seems vague.
- Becker noted that the storm water systems are sized for a 4" per hour rainfall rate for plumbing systems, he then noted that it was his understanding that utility piping is typically sized for a different rate.
- Westemeier noted it is his understanding that utility piping is sized for a 10 year event. And based upon his discussions with various other engineers that a 10 year event covers 95-96% of the rain events in the state.
- Westemeier suggested that if the piping is sized for a 10 year event, then maybe that level of the pond from a 10 year event is what should be designed for.
- Abrahamson said the Committee needs to address three things, as follows:
 1. Do we open rulemaking, a special rulemaking just for this issue?
 2. Is the Board willing to rescind or stay PB?
 3. What can we do to lessen the restraints so there is a bare minimum for design?
- Becker and Pylkas noted that the Committee doesn't have the authority to make amendments to Chapter 1300, **Attachment 5, page 27 of Attachment A** – also shown below.

The Board considered each of the proposed changes in the Petition for Rulemaking, **Attachment 5 of Attachment A** (reproduced in part in offset text below) and determined whether to recommend those proposals to the Board as outline below.

Wording proposed to be deleted from the current rules is shown as red strikethrough text (*example*), while new language proposed is shown in blue italicized and underlined text (*example*). Rule language not shown below is assumed to remain unchanged.

1. **Amend Part 1300.0040 Subpart (Subp.) 1 to clarify the application of the Plumbing Code as follows:**
1300.0040 SCOPE.

Subpart 1. **Applicability.** The code applies to the design, construction, addition, alteration, moving, replacement, demolition, repair, equipment, installation, use and occupancy, location, maintenance, and inspection of any building, structure, or building service equipment in a municipality, except work located primarily in a public way, public utility towers and poles, mechanical equipment not specifically regulated in the code, *and* hydraulic flood control structures, *and exterior stormwater systems*.

**2. Amend Part 1300.0070 to include new subpart 11b and 19a as follows:
1300.0070 DEFINITIONS.**

Subp. 11b. Exterior stormwater system. "Exterior stormwater system" means constructed and natural features which function together to collect, convey, channel, hold, inhibit, retain, detain, infiltrate, divert, treat, or filter stormwater. "Exterior stormwater system" may include both public and privately-owned features, designed and certified on a plan by a licensed professional in the State of Minnesota in accordance with Minnesota Statute §326.12, intended to safely convey stormwater runoff from site development to provide flood control and water quality benefits, before discharging into a municipal separate storm sewer system (MS4) or waters of the state, as may be required under the 1972 Clean Water Act and regulated under the rules administered by the Minnesota Pollution Control Agency, or other state, regional, watershed, and local stormwater regulations.

Subp. 19a. Plumbing System. "Plumbing System" means all potable water, building supply, and distribution pipes; all plumbing fixtures and traps; all drainage and vent pipes; and all building drains and building sewers, including their respective joints and connections, devices, receptors, and appurtenances within the property lines of the premises and shall include potable water piping, potable water treating or using equipment, and nonpotable water piping serving plumbing fixtures, except exterior stormwater systems.

The Committee determined that the Board did not have the authority to amend Part 1300 and would therefore not recommend these proposals to the Board.

3. Amend Part 4714.0203, subpart 2 to include the clarified definition as follows:

4714.0203 TERMS DEFINED BEGINNING WITH A.

Subpart 1. **Added definitions.** UPC section 203.0 is modified by adding the following definition:

Administrative Authority - Means the commissioner.

Exception: When a governmental subdivision adopts and maintains a comprehensive plumbing enforcement program that is conducted by personnel who are knowledgeable about plumbing installation requirements, and includes enforcement of all code provisions including materials, methods, inspection, and testing, the administrative authority shall be the governing body of the adopting unit of government or a duly designated representative of the

governing body who is either an employee of the governing body or a person working under contract with the governing body.

Subp. 2. **Amended definitions.** UPC section 203.0 is modified by amending the following definitions:

Approved - Means approval by the administrative authority, pursuant to the Minnesota Plumbing Code, by reason of inspection, investigation, or testing; accepted principles; computer simulations; research reports; or testing performed by a nationally recognized testing laboratory.

Area Drain – A receptor design to collect surface or rainwater from an open area.

Authority Having Jurisdiction - Unless otherwise specified in this code, the term Authority Having Jurisdiction has the same meaning as administrative authority.

4. Amend Part 4714.0204 to include clarified definitions as follows:

4714.0204 TERMS DEFINED BEGINNING WITH B.

Subpart 1. **Added definitions.** UPC section 204.0 is modified by adding the following definitions:

Barometric Loop - Means a section of pipe in the shape of an inverted "u" located upstream and rising a minimum of 35 feet above the highest fixture it supplies.

Building Storm Drainage System – The collection of interior piping serving a building or structure subject to the State Building Code that receives and conveys only rainwater or perimeter sump discharges to a legal point of disposal. See also Drainage System and Exterior Stormwater System.

Subp. 2. **Amended definitions.** UPC section 204.0 is modified by amending the following definitions:

Building Drain (Storm) or Building Storm Drain – That part of the lowest piping of the building storm drainage system that receives only rainwater or perimeter sump discharges from the building rooftop, vents, shafts, and sumps inside the walls of the building and conveys it to the building storm sewer beginning 2 feet (610 mm) outside the building wall.

Building Sewer (Storm) or Building Storm Sewer – That part of the horizontal piping of the building storm drainage system that extends from the end of the building storm drain and that receives only the discharge from the building storm drain and conveys it to an exterior stormwater system.

Building Supply - Means the pipe carrying potable water from the municipal water supply or source of water supply to a building water meter, pressure tank, or other point of use or distribution on the lot.

5. Amend Part 4714.0205 to include clarified definitions as follows:

4714.0205 TERMS DEFINED BEGINNING WITH C.

Subpart 1. **Amended definitions.** UPC section 205.0 is modified by amending the following definitions:

Certified Backflow Assembly Tester - Has the same meaning as backflow prevention tester defined in Minnesota Statutes, section 326B.42, subdivision 1c.

Clear Water Waste - Uncontaminated water discharges, subsoil discharges, and similar discharges.

Code - For purposes of this chapter, "this code" or "the code" means the Minnesota Plumbing Code, Minnesota Rules, chapter 4714.

Conductor – *A pipe inside the building that conveys rainwater from the roof to a building storm drain, combined building sewer, or other approved point of disposal.*

Subp. 2. **Added definitions.** UPC section 205.0 is modified by adding the following definition:

Commissioner - Means the commissioner of labor and industry or a duly designated representative of the commissioner who is either an employee of the Department of Labor and Industry or a person working under contract with the department.

6. Amend Part 4714.0206 with clarified definitions as follows:

4714.0206 TERMS DEFINED BEGINNING WITH D.

UPC section 206.0 is modified by amending the following definition:

Drainage System - includes all the piping within public or private premises that conveys sewage, rainwater, or other liquid wastes to a legal point of disposal, but does not include the *exterior stormwater system*, mains of a public sewer system, or a public sewage treatment or disposal plant.

7. Amend Part 4714.0207 with clarified definitions as follows:

4714.0207 TERMS DEFINED BEGINNING WITH E.

Subpart 1. Added Definitions. UPC section 207.0 is modified by adding the following definitions:

Emergency Floor Drain - Means floor drains that do not serve as a receptor, are located in restrooms, are under emergency eyewash/shower equipment, or are in laundry rooms.

Exterior Stormwater Systems - *Means constructed and natural features which function together to collect, convey, channel, hold, inhibit, retain, detain, infiltrate, divert, treat, or filter stormwater. "Exterior stormwater systems" may include both public and privately-owned features, designed and certified on a plan by a licensed professional in the State of Minnesota in accordance with Minnesota Statute §326.12, intended to safely convey stormwater runoff from site development to provide flood control and water quality benefits, before discharging into a municipal separate storm sewer system (MS4) or waters of the state, as may be required under the 1972 Clean Water Act and regulated under the rules administered by the Minnesota Pollution Control Agency, or other state, regional, watershed, and local stormwater regulations.*

8. Amend Part 4714.0214 with clarified definitions as follows:

4714.0214 TERMS DEFINED BEGINNING WITH L.

Subpart 1. Added Definition. UPC section 214.0 is modified by adding the following definition:

Low Pressure Water Dispenser - Means a terminal fitting located downstream of a pressure-reducing valve that dispenses hot drinking water above 160 degrees Fahrenheit (71 degrees Celsius) or cold water or both at a pressure of 15 psi (105 kPa) or less.

Subp. 2. Amended Definition. UPC Section 214.0 is modified by amending the following definition:

Leader – An exterior vertical drainage pipe for conveying rainwater from roof to gutter drains. See Downspout.

9. Amend Part 4714.0221 with clarified definitions as follows:

4714.0221 TERMS DEFINED BEGINNING WITH S.

Subpart 1. Added Definition. UPC section 221.0 is modified by adding the following definition:

Stormwater - “Stormwater” or “storm water” means stormwater runoff, snow melt, runoff, and surface runoff and drainage as defined in Minnesota Rule 7090 and as amended.

Subp. 2. Amended Definitions. UPC section 221.0 is modified by amending the following definitions:

Single-Family Dwelling - Has the meaning of dwelling, single-family, in Minnesota Rules, part 1309.0202, subpart 1.

Storm Sewer – Means exterior storm sewer systems, including mains, holding areas and ponds, and other appurtenances and related facilities for the collection and disposal of stormwater, in Minnesota Statute Chapter 444.

The Committee worried that changes to definitions may have unintended consequences throughout the Code and determined that it would not recommend changes to definitions to address this specific issue.

10. Add new Part 4714.0310 for clarification on the applicability of UPC section 310.5 as follows:

4714.0310 PROHIBITED FITTINGS AND PRACTICES.

UPC section 310.5 is amended to read as follows:

Section 310.5 Obstruction of Flow. *No fitting, fixture and piping connection, appliance, device, or method of installation that obstructs or retards the flow of water, wastes, sewage, or air in the building storm drainage or venting systems, in an amount exceeding the normal frictional resistance to flow, shall be used unless it is indicated as acceptable in this code or is approved in accordance with Section 301.2 of this code or is exempt from this code as stated in Minnesota Rule 1300. The enlargement of a 3 inch (80 mm) closet bend or stub to 4 inches (100 mm) shall not be considered an obstruction.*

The Committee discussed the practical difficulties of this proposal because it references a proposed change to Chapter 1300 that is not within the Board's power to make. In addition, the Committee expressed concern with removing this issue from the Plumbing Code given the legislative mandate for the Board to prescribe minimum standards for plumbing installations and given the fact that the Board is comprised of experts in this subject area. Therefore, the Committee determined that it would not recommend this proposal to the Board.

**11. Amend Part 4714.0418 for clarification as follows:
4714.0418 FLOOR DRAINS.**

Subpart 1. **Section 418.4.** UPC section 418.4 is amended to read as follows:

418.4 Food Storage Areas. Where drains are provided in storerooms, walk-in freezers, walk-in coolers, refrigerated equipment, or other locations where food is stored, the drains shall have indirect waste piping. Separate waste pipes shall be run from each food storage area, each with an indirect connection to the building sanitary drainage system. Traps shall be provided in accordance with section 801.3.2 and shall be vented.

Indirect drains shall be permitted to be located in freezers or other spaces where freezing temperatures are maintained, provided that traps, where supplied, shall be located where the seal will not freeze.

Otherwise, the floor of the freezer shall be sloped to a floor drain located outside of the storage compartment.

Subp. 2. **Section 418.** UPC section 418 is amended by adding the following subsections.

418.6 Elevator Pit Drain. An elevator pit drain shall discharge to the sanitary sewer using an indirect connection that precludes the possibility of sewage backup into the pit. If a sump is used, it shall be outside the pit with a dry pan drain flowing to it.

418.7 Garage and Parking Area Floor Drains. Floor area drains in open parking areas, including open areas of parking ramps, shall discharge to the storm sewer or to a place of disposal satisfactory to the sewer authority *and as regulated under the rules administered by the Minnesota Pollution Control Agency or other state, regional, and local regulations.*

Floor drains in parking areas that are enclosed, and floor drains in areas open or enclosed that are used for maintenance or as vehicle wash bays, shall discharge to the sanitary sewer if a municipal sewer is available. An oil and flammable liquid interceptor shall comply with section 1017 and shall be provided if required by sections 1009.1, 1011.1, and 1017.1.

Exception: Floor drains in private garages serving one- and two-family dwellings may discharge to daylight if approved by the administrative authority.

The Committee found that the existing language requiring the place of disposal to be satisfactory to the sewer authority to already address the issue the proposed language seeks to solve and determined

the proposed language would be redundant. Therefore, the Committee determined that it would not recommend this proposal to the Board.

12. Add new Part 4714.1100 to reduce confusion over Chapter 11 intent as follows:

4714.1100 RAINWATER AND SUMP DRAINAGE.

UPC Chapter 11 is amended to read as follows: Chapter 11 Rainwater and Sump Drainage.

The Committee discussed the fact that rainwater and stormwater are essentially synonymous in this context, per the Merriam Webster Dictionary, and therefore determined that it would not recommend this proposal to the Board.

13. Amend Part 4714.1101 for clarification as follows:

4714.1101 GENERAL.

Subpart 1. **Section 1101.2.** UPC section 1101.2 is amended to read as follows:

1101.2 Where Required. Roofs, paved areas, yards, courts, courtyards, vent shafts, light wells, or similar areas having rainwater, shall be drained into a separate *building storm drainage storm sewer* system or into a combined sewer system where a separate *building storm drainage storm sewer* system is not available, or to some other place of disposal satisfactory to the Authority Having Jurisdiction. In no case shall *rainwater* from roofs or any building roof drainage flow onto the public sidewalk. In the case of one and two-family dwellings, *rainwater storm water* shall be permitted to be discharged on flat areas, such as lawns, so long as the *rainwater storm water* shall flow away from the building and away from adjoining property and shall not create a nuisance.

The Committee determined that these proposed changes were unnecessary given the Committee's decision not to recommend the changes to the definition section.

***1101.2.1 Exception.** Exterior storm drainage systems located more than ten horizontal feet from building perimeter, more than ten horizontal feet from buried water lines or more than 18 vertical inches as permitted by the Minnesota Department of Health, and more than 50 horizontal feet from water wells are excepted from the requirements of this code.*

The Committee discussed the fact the existing language in the Plumbing Code covers plumbing systems within the property line and that the existing exemption related to piping within ten feet of the building applies to testing, rather than jurisdiction. The Committee expressed reluctance to change the jurisdiction of the Plumbing Code in this manner and determined that it would not recommend this proposal to the Board.

Subp. 2. **Section 1101.3.** UPC section 1101.3 is amended to read as follows:

1101.3 Building Storm Water Drainage to Sanitary Sewer Prohibited.

Building storm drainage systems Storm water shall not be drained into

sewers intended for sanitary drainage unless approved by the municipal sewer authority or stated elsewhere in this code.

The Committee determined that this proposed change was unnecessary and that it would not recommend it to the Board.

Subp. 3. **Section 1101.4.** UPC section 1101.4 is amended to read as follows:

1101.4 Material Uses. Rainwater piping placed within the interior of a building or run within a vent or shaft shall be of cast-iron, galvanized steel, wrought iron, brass, copper, lead, Schedule 40 ABS DWV, Schedule 40 PVC DWV, stainless steel 304 or 316L [stainless steel 304 pipe and fittings shall not be installed underground and shall be kept not less than 6 inches (152 mm) aboveground], or other approved materials. Changes in direction shall be in accordance with Section 706.0. ABS and PVC DWV piping installations shall be installed in accordance with applicable standards referenced in Table 1701.1.

UPC subsections 1101.4.1 through 1101.4.6 are maintained without amendment.

*Subp. 4. **Section 1101.11.** UPC section 1101.11 is amended to read as follows:*

1101.11 Paved Areas. Where the occupant creates surface water drainage, the sumps, gradings, or floor drains shall be piped to a drainage system, consistent with the 1972 Clean Water Act and regulated under the rules administered by the Minnesota Pollution Control Agency or other state, regional, and local regulations.

*Subp. 54. **Section 1101.12.** UPC section 1101.12 is amended to read as follows:*

1101.12 Roof Drainage.

1101.12.1 Primary Roof Drainage. When roof areas of a building are drained by roof drains, the location and sizing of the drains shall be coordinated with the structural design and pitch of the roof in accordance with section 1103 or as permitted elsewhere in this code. The roof drainage system shall be sized on a basis of a rate of rainfall of at minimum 4 inches per hour.

1101.12.2 Secondary Drainage. Secondary (emergency) roof drainage shall be provided in accordance with Minnesota Rules, chapter 1305.

1101.12.2.1 Location. Unless roof design is certified by a Registered Design Professional specializing in Structural Engineering for the maximum possible depth of water that will pond in accordance with Minnesota Rules, chapter 1305, secondary roof drainage shall be located 2 inches above the lowest point of the roof surface.

1101.12.2.2 Engineered System. Engineered siphonic roof drainage systems must not be utilized in the design of a secondary roof drainage system.

UPC Table 1103.1 is not amended.

Subp. 65. Subsections 1101.12.2.2.1 and 1101.12.2.2.2. UPC subsections 1101.12.2.2.1 and 1101.12.2.2.2 are deleted in their entirety.

The Committee determined that it would not recommend this proposed change to the Board for similar reasons as Proposal 11, in that the existing language addresses the issue already. Because it would not recommend the proposed changes, the renumbering would be unnecessary.

A motion was made by Becker, seconded by Westemeier, recommend to the Board to not move forward with rulemaking based upon the submitted suggestions by the petitioner [see Attachment A]. The vote was unanimous with 5 votes in favor of the motion; the motion passed.

- Chair Pylkas asked if the Committee should address the three things brought up by Abrahamson earlier.
- Abrahamson asked if the Committee could recommend staying the final interpretation? Wysokinski recommended against making a formal motion, given that the full Board had already considered this issue.
- Wahlen wanted to clarify whether the Board had already determined that it is not within the Board's power to rescind the interpretation. Wysokinski said that there is nothing legally preventing it, although she had not seen it happen before. But she recalled that, even if rescinded, DLI would continue to interpret the language in the same manner. The Committee summarized the discussion from previous meetings outlining how the relevant jurisdictions are interpreting the language.
- Abrahamson said at the last meeting the Committee recommended that the petitioner could submit a new RFI – at this time does the Committee really want to make a suggestion to stay the previous RFI since it was very broad.
- The Committee agreed, other than Wahlen, to not rescind or stay the previous final interpretation.
- Wahlen reiterated that he agreed with the integrity of the initial decision but is interested in finding a way to collaborate with the petitioners.
- Abrahamson noted that he felt the task in front of the committee now is determining what is the minimum pond level that is needed, if it is a 10 year event then the pipe needs to be above that level so during a 10 year event the pipe doesn't surcharge.
- Becker asked, Where does the 100 water level come from? 4 inches per hour, this generally equates to a 100 year event; however, there isn't anywhere in the code where it says this should be referenced.
- Wahlen cautioned the Committee to remember that the petitioner did bring solutions to this meeting.
- Sean Murphy, Engineer, City of Owatonna, reiterated what Whalen had said and highlighted the fact that the petitioners did offer solutions, even if the Committee didn't find them viable. He said the biggest struggle for the industry is how to have this conversation and convey information and possible solutions.

A motion was made by Abrahamson, seconded by Wahlen, that more information has to be brought forward before the Board could consider any language changes and before language is considered there may have to be a workgroup established. The vote was unanimous with 5 votes in favor of the motion; the motion passed.

6. Announcements

The next regular board meeting will be held on October 17, 2023, at 9:30 a.m.

7. Adjournment

A motion was made by Becker, seconded by Westemeier, to adjourn the meeting at 4:02 p.m. The vote was unanimous with 5 votes in favor of the motion; the motion passed.

Respectfully submitted,

Richard Becker

Richard Becker
Committee Secretary

Green meeting practices

The State of Minnesota is committed to minimizing in-person environmental impacts by following green meeting practices. DLI is minimizing the environmental impact of its events by following green meeting practices. DLI encourages you to use electronic copies of handouts or to print them on 100% post-consumer processed chlorine-free paper, double-sided.



Minnesota Cities Stormwater Coalition

*Municipal stormwater professionals
working together for clean water*

Steering Committee:

Elizabeth Stout (Chair)

City of Minneapolis

Rick Baird (Vice Chair)

City of Mankato

Andrew Hogg (Vice Chair)

City of Saint Paul

Bob Bean

Bolton & Menk

Andy Bradshaw

City of Moorhead

Jane Byron

City of Rosemount

Erick Francis

City of Saint Louis Park

Cara Geheren

Focus Engineering

Bryan Gruidl

City of Bloomington

Lori Haak

City of Eden Prairie

Rebecca Haug

WSB

Ryan Johnson

City of Roseville

John Paulson

City of Hutchinson

Kristin Seaman

City of Woodbury

Staff:

Nico Cantarero

Stantec

One Carlson Parkway, Suite 100

Plymouth, MN 55447

(952) 334-3944

nicolas.cantarero@stantec.com

*MCSC is an affiliate of the
League of Minnesota Cities*



August 4, 2023

Mr. Richard Becker, PE
Chair, Minnesota Plumbing Board
Minnesota Department of Labor and Industry
443 Lafayette Road North
Saint Paul, MN 55155

Re: Petition for Temporary Relief and Rulemaking, Minnesota State Building Code and Minnesota Plumbing Code

Dear Chair Becker and Minnesota Plumbing Board:

The Minnesota Cities Stormwater Coalition (MCSC) and the undersigned organizations (Attachment 1) are writing to request a temporary suspension of the implementation of Minnesota Plumbing Board ruling PB0159 while rulewriting is completed to provide clarification on the Minnesota Plumbing Board (Board) authority under Minnesota Statutes (Minn. Stat.) §326B.106 and §326B.41 and its application of Minnesota Rules (Minn. R.) Chapter 1300 (State Building Code) and Chapter 4714 (Minnesota Plumbing Code or Plumbing Code), specifically concerning the design and management of stormwater outside of a building or structure, as this lack of clarity has led to severe unintended consequences caused by the inconsistent application of the Plumbing Code (Attachment 2), most recently highlighted by the Board's Final Interpretation PB0159, Storm Drainage Surcharge, signed on February 23, 2023 (Attachment 3).

We believe the interpretation made in PB0159 exceeds the Board's existing statutory authority, making its final interpretation invalid as it interferes with existing federal and state agency jurisdictional authorities, as well as impairs the legal right of permittees to develop in conformance with all applicable regulations (Attachment 4).

We therefore submit this petition for rulemaking under Minn. Stat. §14.09 to the Minnesota Department of Labor and Industry (DLI), as the oversight agency for the Minnesota Plumbing Board and responsible for the administration of the Minnesota State Building Code (Minn. Stat. §326B.02), including the Minnesota Plumbing Code. Clarification of the Board's statutory authority and jurisdiction regarding the collection and conveyance of stormwater is necessary to eliminate inconsistencies in interpretation, better streamline construction regulation and remove redundancies, and to improve procedures and coordination within and among jurisdictions.

We request the DLI amend Minn. R. Chapter 1300 (Building Code) and Chapter 4714 (Minnesota Plumbing Code) as shown in Attachment 5, in light of the supporting documentation provided, and suspend the implementation of PB0159 during the rulewriting process.

Respectfully,

Elizabeth Stout

Elizabeth Stout, PE, Steering Committee Chair
Minnesota Cities Stormwater Coalition
Elizabeth.Stout@minneapolismn.gov

Enclosures:

Attachment 1 - Signatory Letters of Support

Attachment 2 - Example Impacts of PB0159 and Inconsistent Stormwater Interpretations of the Minnesota Plumbing Code

Attachment 3 - PB0159—Storm drainage surcharge and February 10, 2023 Plumbing Board Meeting Minutes

Attachment 4 - Statutory Authority, State Building Code, Plumbing Code, and Stormwater Regulations

Attachment 5 - Proposed Amendments to Minnesota Rules 1300 and 4714

Cc:

Mike Herman, Minnesota Plumbing Board Vice Chair, Water Conditioning Contractor

Kent Erickson, Minnesota Plumbing Board Secretary, Municipal Plumbing Inspector (Non-Metro)

Michael Dryke, Minnesota Plumbing Board, Comm/Ind Plumbing Contractor (Non-Metro)

Jonathan Lemke, Minnesota Plumbing Board, Comm/Ind Journeyworker Plumber (Non-Metro)

Justin Parizek, Minnesota Plumbing Board, Residential Plumbing Journeyworker

Karl Abrahamson, Minnesota Plumbing Board, Municipal Plumbing Inspector (Metro)

Sam Arnold, Minnesota Plumbing Board, Comm/Ind Journeyworker Plumber (Non-Metro)

Bruce Pylkas, Minnesota Plumbing Board, Comm/Ind Plumbing Contractor (Metro)

Scott Stewart, Minnesota Plumbing Board, Residential Plumbing Contractor

Rick Wahlen, Minnesota Plumbing Board, Municipal Public Water Supply Sys Opr/Supt

Shane Willis, Minnesota Plumbing Board, Public Member

Mike Westemeier, Minnesota Plumbing Board, Minnesota Department of Labor and Industry

David Weum, Minnesota Plumbing Board, Minnesota Department of Health

Brittany Wysokinski, Attorney to the Minnesota Plumbing Board, Minnesota Department of Labor and Industry

Scott McLellan, Construction Codes and Licensing Division Director, Construction Codes Advisory Committee Chair

Jeff Lebowski, Attorney to the Board, Minnesota Department of Labor and Industry

Lyndy Logan, Executive Secretary, Minnesota Department of Labor and Industry

Kate Perushek, Deputy Commissioner, Minnesota Department of Labor and Industry

Nicole Blissenbach, Commissioner, Minnesota Department of Labor and Industry

Katrina Kessler, Commissioner, Minnesota Pollution Control Agency

Dana Vanderbosch, Assistant Commissioner, Minnesota Pollution Control Agency

Ryan Anderson, Municipal Stormwater Section Manager, Minnesota Pollution Control Agency

Brandon Smith, Stormwater Supervisor, Minnesota Pollution Control Agency



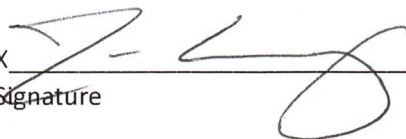
Minnesota Cities
Stormwater
Coalition

Attachment 1: Signatory Letters of Support

Attached are letters of support for rulemaking from the Minnesota Chapter of the American Public Works Association (APWA-MN), the American Council of Engineering Companies of Minnesota (ACEC), and the City Engineers Association of Minnesota (CEAM).

**Signatory Statement to Petition for Rulemaking, Minnesota State Building Code and Plumbing Code
(Minnesota Rules 1300 and 4714)**

X _____
Signature



Jonathan Curry, MPA - Executive Director

Printed Name

American Council of Engineering Companies of MN

Organization, Company, Profession Information

2725 Wells Fargo Place
30 East Seventh Street
Saint Paul, MN 55101

Address Line 1

Address Line 2

I hereby support the letter by the Minnesota Cities Stormwater Coalition (MCSC), dated August 4, 2023. I support the petition for rulemaking for Minnesota Rules 1300 and 4714. I would support action by the Plumbing Board and Department of Labor and Industry to revise the State Building and Plumbing Codes as recommended in the MCSC comment letter.

**Signatory Statement to Petition for Rulemaking, Minnesota State Building Code and Plumbing Code
(Minnesota Rules 1300 and 4714)**

X *Monica Heil*

Signature

Monica Heil, 2023 APWA-MN Chapter President

Printed Name

Minnesota Chapter of the American Public Works Association (APWA-MN)

Organization, Company, Profession Information

PO Box 46266

Address Line 1

Eden Prairie, MN 55344-9712

Address Line 2

I hereby support the letter by the Minnesota Cities Stormwater Coalition (MCSC), dated August 4, 2023. I support the petition for rulemaking for Minnesota Rules 1300 and 4714. I would support action by the Plumbing Board and Department of Labor and Industry to revise the State Building and Plumbing Codes as recommended in the MCSC comment letter.

**Signatory Statement to Petition for Rulemaking, Minnesota State Building Code and Plumbing Code
(Minnesota Rules 1300 and 4714)**

X _____

Signature

Jen Desrude

Printed Name

City Engineers Association of Minnesota

Organization, Company, Profession Information

145 University Ave. W.

Address Line 1

St. Paul, MN 55103

Address Line 2

I hereby support the letter by the Minnesota Cities Stormwater Coalition (MCSC), dated August 4, 2023. I support the petition for rulemaking for Minnesota Rules 1300 and 4714. I would support action by the Plumbing Board and Department of Labor and Industry to revise the State Building and Plumbing Codes as recommended in the MCSC comment letter.

**Signatory Statement to Petition for Rulemaking, Minnesota State Building Code and Plumbing Code
(Minnesota Rules 1300 and 4714)**

X 

Signature

David A Fautsch

Printed Name

Minnesota of Society of Professional Engineers

Organization, Company, Profession Information

3145 Lexington Ave. South PO Box 21100

Address Line 1

Eagan, MN 55121

Address Line 2

I hereby support the letter by the Minnesota Cities Stormwater Coalition (MCSC), dated August 4, 2023. I support the petition for rulemaking for Minnesota Rules 1300 and 4714. I would support action by the Plumbing Board and Department of Labor and Industry to revise the State Building and Plumbing Codes as recommended in the MCSC comment letter.



Minnesota Cities
Stormwater
Coalition

Attachment 2: Example Impacts of PB0159 and Inconsistent Stormwater Interpretations of the Minnesota Plumbing Code

We have compiled several recent examples of projects that have been affected by the DLI interpretation of the Minnesota Plumbing Board's authority over stormwater regulations in the 2020 Minnesota Plumbing Code. These represent a variety of project types both in the Twin Cities metro area and Greater Minnesota and the comments received from the Plumbing Board over the last six months. To protect the privacy of the applicants, we have redacted the details of the specific project location, instead providing the general outline of the proposed projects, the Plumbing Board's specific requirements for permit issuance, and consequences of the unanticipated revisions, costs, and delays caused by the Plumbing Board's interpretation of stormwater under PB0159.

1. High School Site (Public Applicant, Greater Minnesota)

In a Greater Minnesota community, a school district is proposing to expand a high school. In order to meet city, Minnesota Pollution Control Agency (MPCA), and federal stormwater discharge requirements under the Clean Water Act and National Pollutant Discharge Elimination System (NPDES), the plans included expanding an existing wet pond and adding two infiltration basins. The pipe inlet to the pond and the pond normal water level were unchanged from existing conditions.

The development was submitted for a permit from DLI and was denied because of the following key issue:

- The storm sewer inlet into the expanded wet pond is not located above the pond's 100-year high water level. The Plumbing Board has interpreted sections 206 and 310.5 of the Uniform Plumbing Code (UPC) and the 2020 Minnesota Plumbing Code to mean that all piping outside the building footprint but within the property lines is subject to the Plumbing Code and to prohibit the surcharge of all such piping under the high water event.

After a number of discussions with DLI staff, the development received DLI approval by modifying the design as follows:

- 700 feet of stormwater pipe were converted to perforated pipe and installed in a rock trench. With a 0.5% pipe slope, the upper end of the perforated pipe was above the 100-year high water level.
- The perforated pipe was stated to be an "underground infiltration tank system" rather than a stormwater pipe and thus not regulated by the Plumbing Code. DLI initially did not accept this definition; however, a letter from MPCA staff asserting that this was indeed an infiltration feature persuaded DLI to accept the definition.
- Because the upstream end of the infiltration feature, where a storm sewer entered it, was above the 100-year high water level, it met Plumbing Code requirements.

A few comments on the review process and eventual resolution:

- The large size of the site and available elevation change allowed the use of the infiltration feature to extend above the 100-year high water level, but not all projects and sites have this flexibility.
- MPCA intervention was required to get acceptance of the approach.
- The revised design to meet the Plumbing Board's requirements added approximately \$300,000 to the cost of the project and to the school district.
- The Plumbing Board review process delayed the project schedule by approximately six months.

2. Elementary School Site (Public Applicant, Metro)

In a metro area community, a school district is proposing to expand an elementary school. In order to meet city, watershed, state, and federal stormwater permitting requirements, the plans included the construction of a new stormwater pond. Given advance knowledge of DLI's new interpretation of its Plumbing Code, two options were developed for construction bidding and presented to DLI for plan review and approval:

- The base bid option was for a traditional storm sewer and pond design meeting City, watershed, and MPCA NPDES requirements.
- The alternate bid included an enlarged pond to lower the 100-year high water level and meet the new DLI interpretation. This option also required a watermain to be rerouted.

DLI reviewed both options but approved only the second option, which increased the school district's project cost by \$150,000.

3. Private Development (Private Applicant, Metro)

For a private development in a metro area community, a traditional stormwater design was developed that included a storm sewer system that was not connected to the proposed building drainage systems and provided to DLI for plan review. Because the storm sewer was designed to temporarily surcharge under the 100-year storm event, the plans were not approved by the Plumbing Board. The Board referred again to UPC Sections 206 and 310.5 as stating the Minnesota State Plumbing Code does not allow surcharged pipe.

The applicant was required to redesign the site to meet the Plumbing Board's requirements by raising and adjusting site grades and enlarging the stormwater management system. The redesign, additional earthwork and materials required by the Plumbing Board, added approximately \$100,000 to the cost of the project.

4. Industrial Site (Private Applicant, Metro)

For an industrial facility in a metro area community, grading operations had already begun when it was notified that the Plumbing Board rejected its design due to the Board's interpretation of UPC Sections 206 and 310.5 (i.e., storm sewer surcharges are prohibited by the Plumbing Code). The Board's rejection required redesigning the stormwater distribution system to find alternative routes and opportunities to daylight storm sewer into swales before discharging into basins. Alternatively, to maintain the storm sewer design after the applicant had already hired a contractor to begin construction would have required:

- Raising the entire 12.67-acre site by 6 feet, requiring approximately 130,000 cubic yards of additional structural fill at a cost of \$1,950,000.
- To raise the entire site and not affect neighboring properties, the applicant was required to design, construct, and now maintain approximately 6,000 square feet of retaining walls, at a cost of \$600,000.
- The total cost to revise the design to meet the Plumbing Board's "no surcharge" requirements was \$2,550,000.

5. Small Commercial Site (Private Applicant, Metro)

In a metro area community, a private developer is proposing to redevelop a currently vacant parcel with an office building. The site is relatively flat and small, under four acres, located on an existing street. The development went through the city zoning and stormwater review process, with several iterations until it was compliant with the city's Local Surface Water Management Plan and design standards, and it received city approval of its stormwater design. The development concurrently went through a similar watershed district review process, ultimately receiving watershed district approval of its stormwater design.

The developer then submitted for a permit from DLI and was denied due to the following key issues from the Plumbing Board:

- The storm sewer inlets into a proposed retention pond are not located above the pond's 100-year high water level.
- Proposed skimmer structures (based on the city's standard detail) and SAFL Baffle are not labeled by a third-party listing agency.

A resolution to the Plumbing Board's review comments is currently in progress. The developer's engineer has cited several specific issues in attempting to meet the Plumbing Board's requirements:

- It is a very small site with little topographic relief. They would need to import 3 to 4 feet of fill over the entire site in order to raise the storm sewers as required by the Plumbing Board, adding significant cost to the development.
- Raising the storm sewer inlets above the pond high water level will result in 3 to 4 feet of vertical and 9 to 12 feet of horizontal overland flow from the inlet to the pond normal water level, creating significant risk of site erosion. It will also expand the pond footprint and reduce the developable area, resulting in higher cost per developable acre for the site.
- Raising the entire site 3 to 4 feet will result in a significant driveway slope on this small site to get down to street level, potentially creating ADA access issues.
- The proposed skimmer structure and SAFL Baffle are typical designs that are standard practice for the metro area, supported by the University of Minnesota, watershed districts, and the MPCA to meet the requirements under the federal Clean Water Act and NPDES under constrained sites. The DLI has never required third-party labeling before, nor has the DLI or Plumbing Board provided clear direction on the process or time and cost implications to obtain this certification.

In order to address DLI review comments, the developer is proposing to remove the storm sewer entirely and route surface drainage entirely as overland flow to the stormwater pond, which will:

- Eliminate storm sewer inlets below the pond's 100-year high water level.
- Eliminate the skimmer structures.

The proposed revisions appear to meet DLI requirements, but will have the following consequences:

- All stormwater runoff will be conveyed in the parking lot, resulting in greater ponding depths in the parking lot during rain events. There will also be greater likelihood of ice buildup in the parking lot during the winter creating a public hazard.
- Directing all stormwater runoff to the parking lot removes the opportunity to provide pretreatment of stormwater before discharging into a pond or impaired water, which is in conflict with MPCA and NPDES requirements, as this reduces the effectiveness of the stormwater pond's water quality treatment and increases maintenance costs for the owner.
- Surface runoff into the pond will increase the potential for bank erosion and sediment release into the Minnesota River, which is impaired for total suspended solids, requiring cities and watersheds to reduce erosion and sediment contributions under the federal Clean Water Act.
- Removing the site's storm sewer will result in a portion of the developed site discharging untreated stormwater directly to storm sewer and eventually the Minnesota River.

The net result is that addressing the DLI and Plumbing Board stormwater comments will reduce the overall site stormwater management strategies and benefits to the public, increase public health hazards, and reduce water quality treatment upstream of an impaired water, inconsistent with the requirements of the federal Clean Water Act.

6. Stormwater Pond Erosion Caused by Elevated Storm Sewer Outlets (Public, Greater Minnesota)

A metropolitan area within Greater Minnesota has a residential subdivision stormwater pond that has developed a significant erosion issue because the storm sewer outlet pipe was constructed several feet above the pond's normal water level (NWL). The city has estimated the erosion caused by the pipe outlet placement will require:

- 100 cubic yards (CY) of material
- 100 linear feet of 54-inch diameter storm pipe
- 50 tons of riprap

These items will need to be completely replaced in a well-established area that will be difficult to access and disruption to residents. The city has estimated the cost of this repair to be \$125,000 and exemplifies what will occur if stormwater designs are required to outlet stormwater at the 100-year high water level (HWL) as opposed to the normal water level where energy can be more effectively dissipated.

The city's understanding of the current DLI interpretation of the building code in PB0159 could generate more situations like this across the state by requiring storm sewer outlets to be placed at the much higher 100-year HWL, as opposed to the NWL in stormwater basins. In areas with granular soils that are easily subject to erosion, this interpretation has the potential to create both chronic and highly expensive lifetime maintenance issues for communities across Minnesota.

7. Municipal Campus Project (Public Applicant, Metro)

A large suburban community on the outskirts of the Twin Cities metro area is currently in the process of designing a new Public Works Campus; the Campus will house both the city's Police and Public Works Departments. In order to meet the DLI's interpretation of the building code regarding surcharged storm sewer pipe (PB0159), the following changes would need to be made to elevate the site to install the storm sewer outlet at a higher than the initially engineered elevation:

- 60,500 cubic yards of fill and additional earthwork to elevate the proposed buildings, parking, and landscape berm: \$1,210,000
- 1,600 square feet of new retaining walls to contain the earthwork and fill: \$100,000
- Sanitary sewer structures' increased depth due to elevated site: \$5,000

To mitigate the \$1.315 million in increased construction costs caused by PB0159, the city would either need to shrink the size of the proposed buildings (which is not practical) or purchase more land to expand the grading area and reduce the need for retaining walls (but is cost prohibitive).



Minnesota Cities
Stormwater
Coalition

Attachment 3: PB0159—Storm Drainage Surcharge and February 10, 2023 Plumbing Board Meeting Minutes

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

NOTICE OF FINAL INTERPRETATION

On February 10, 2023 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 Brittany Wysokinski, telephone number: 651-284-5295, email: brittany.wysokinski@state.mn.us.

FINAL INTERPRETATION

Inquiry: PB0159
Subject: Storm drainage surcharge
Code Reference: 2020 Minnesota Plumbing Code: 2018 Uniform Plumbing Code (UPC) sections 310.5 and 206, as incorporated in the Minnesota Plumbing Code by Minnesota Rules, part 4714.0050.
Submitted by: Joel Maier
BKBM Engineers
6120 Earle Brown Dr., Suite 700, Minneapolis, MN 55430
Approved by: Minnesota Plumbing Board, by Richard Becker, P.E., Chair
Date Received: January 13, 2023
Issue Date: February 10, 2023

Question: Are storm sewers outside of the building footprint allowed to be surcharged?

Answer: No, the Plumbing Code does not allow storm sewers to be surcharged.

Analysis: The Plumbing Code states that “[n]o fitting, fixture and piping connection, appliance, device, or method of installation that obstructs or retards the flow of water, wastes, sewage, or air in the drainage or venting systems . . . shall be used unless it is indicated as acceptable in this code or is approved in accordance with Section 301.2 of this code.” The Board determined that this provision prohibits storm sewers from being surcharged.

Commentary: This request for interpretation was considered at the special meeting of the Board on February 10, 2023. 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: February 23, 2023



Richard Becker, P.E., Chair
Minnesota Plumbing Board

SPECIAL Meeting Minutes: Plumbing Board

Date: Feb. 10, 2023
 Time: 9:30 a.m.
 Minutes by: Lyndy Logan
 Location: Minnesota Room, DLI, 443 Lafayette Rd. No., St. Paul, MN 55155

Members

1. Karl Abrahamson
2. Richard Becker (Chair)
3. Kent Erickson (Secretary) – WebEx
4. Mike Herman (Vice Chair)
5. Jonathan Lemke
6. Justin Parizek
7. Troy Seitz – WebEx
8. Scott Stewart
9. Rick Wahlen – WebEx
10. Mike Westemeier (DLI CO's Designee)

Members Absent

Sam Arnold
 Mike Dryke
 David Weum (MDH CO's Designee)

DLI Staff & Visitors

Brittany Wysokinski (Board. Counsel, DLI)
 Lyndy Logan (DLI)
 Tom Eisert (DLI) – WebEx
 Brad Jensen (DLI)
 Chuck Olson (DLI)
 Anita Anderson (Dept. of Health) – WebEx
 Mike Arends (ADS)
 Kevin Bohl (BKBM)
 Jake Brunoehler (Adspipe)
 Nick Erickson (Housing First) – WebEx
 John Galt – WebEx
 Rick Jacobs (Plumbers Local 34) – WebEx
 Joel Maier (BKBM)
 Stephanie Menning (MUCA) – WebEx
 Tom Pahkala (Plumbers #15)
 David Skallet (City of St. Louis Park) - WebEx
 Gary Thaden (MMCA)

1. **Call to Order, Chair Presiding**

- A. The meeting was called to order by Chair Becker at 9:32 AM. Roll call was taken by the Secretary and a quorum was declared with 10 of 12 voting members present in person or via WebEx.
- A. Announcements – Introductions (members and attendees) – Chair Becker
 - Everyone present in person and remotely are able to hear all discussions.
 - All votes will be taken by roll call if any member is attending remotely.
 - All handouts discussed and WebEx instructions are posted on the Board's website.
 - WebEx instructions/procedures can be found on the board's website at:
<https://www.dli.mn.gov/about-department/boards-and-councils/plumbing-board>

2. **Approval of meeting agenda**

A motion was made by Herman, seconded by Westemeier, to approve the agenda as presented. The roll call vote was unanimous with 10 votes in favor; the motion carried.

3. Approval of previous meeting minutes

A motion was made by Herman, seconded by Lemke, to approve the Jan. 17, 2023, regular meeting minutes as presented. The roll call vote was unanimous with 10 votes in favor and two abstentions (Lemke, Herman); the motion carried.

4. Regular Business

Expense reports were approved.

5. Special Business

A. Request for Interpretation PB0159 – BKBM Engineers – see **Attachment A**

- Joel Maier and Kevin Bohl addressed the Board and summarized their request for interpretation on UPC sections 310.5 and 206, as incorporated in the Minnesota Plumbing Code by Minnesota Rules, part 4714.0050. They described the main issue is the surcharging of the storm sewer lines and the interplay between the plumbing code and MPCA policies.
- Bohl and Maier stated their question as:
 - *Are we allowed to surcharge the storm sewer within the site outside of the building footprint to account for stormwater management requirements by the Minnesota Pollution Control Agency?*
- Chair Becker said he believes what they are asking is:
 - *Are storm sewers outside the building footprint allowed to be surcharged to meet MPCA discharge requirements for retention systems?*
- Wysokinski reminded the Board that it has the authority to interpret the plumbing code, and that the Board cannot interpret MPCA requirements since that is beyond the scope of the plumbing code and, therefore, outside of the Board's authority.
- Maier said the way the code was written says that the sewer pipe for this site would have to come in at the high water level of the pond. The high water level is a 100-year flood event. Therefore, this pipe outlet would be up in the air, and they would need to somehow create a concrete plume or a rip grab channel to have it drop down to the pond. Other agencies insist that this pipe outlet be at the bottom of pond or in a wet pond condition at the normal water level of the pond so that they're not creating a scour. But what this code is saying is that this pipe outlet is elevated above the pond bottom.
- Westemeier explained the department's interpretation of the code. He stated that the department looks at 310.5 and finds that it effectively prohibits the surcharge of the piping. It's allowed if it's permitted elsewhere in the code; therefore, the department looks at chapter 11. There's nothing in chapter eleven that says you can do it or in 301.2, which is related to standards of materials. The only place that the department can find permission for surcharge, with regards to 301.2, is siphonic roof drains for ASME chapter 45. Westemeier reminded the Board that the department's interpretation is that all piping outside the building but within the property lines is part of the plumbing code. That is why the code applies all the way out to the pond. Westemeier stated that, the RFI made a statement about the restriction applying on the outlet side of the pond. Westemeier stated that the department does not consider the pond or the tank part of the plumbing code. The department just looks at the pipes on the inlet and outlet, and the department doesn't see a restriction when just looking at materials. Westemeier explained that the department understands that sites have differing conditions, so the department does try to find

an alternative means when necessary, such as looking at 4714.100 and the Basic Plumbing Principles A through W and item F, which requires the water to flow at a velocity to prevent deposition of solids. Anytime you surcharge the pipe, you're going to deposit solids into that pipe.

- Chair Becker asked for clarification as to why tanks don't fall within the plumbing code. Westemeier explained that the tank is part of the retention system, which is MPCA's territory.
- Chair Becker said item F of 4714.100 states *"drainage system shall be designed and constructed and maintained to conduct the wastewater with velocities that present fouling, deposition of solids, and clogging."* Chair Becker asked if stormwater is considered wastewater?
- Westemeier responded that a drainage system is defined as including storm and sanitary.
- Chair Becker said waste is defined as *"liquid waste and industrial waste."* Liquid waste is defined as *"the discharge from a fixture, appliance, or appurtenance in connection with a plumbing system that does not receive fecal matter."*
- Discussion of high water level determination:
 - Chair Becker asked how is that high water level for that pond or that retention tank determined
 - Westemeier said high water level is determined by MPCA requirements. The department has seen everything from a ten year high water level listed to a 100-year high water level listed. He noted that most of the plan's the department is reviewing are including the 100-year line.
 - Chair Becker asked what that duration of the rain event was at—an hour or 24 hours, for example?
 - Maier stated that for 100-year event in the metro area, the duration is anywhere from 7 to 7.5 inches over a 24 hour period.
 - Westemeier said that the department uses four inches per hour, and seven inches in 24 hours.
- Westemeier said the second thing to think about is the pipe materials. When you start surcharging and holding water, you're adding head pressure and most of the materials are not designed to handle pressure for piping outside the building.
 - Chair Becker said you would then be outside the listing of the material then and you can't do that because code says we have to install it per its listing. Westemeier agreed.
- Abrahamson said they have a lot of these systems going in in St. Paul, not using ponds but rather tanks right outside the footprint of the building. A lot of things that come to mind is a typical building that's kind of a slab on grade design. There's a bunch of different designs. Typically, an underground parking garage with hang. There's a lot of footing drains. There are elevator *footing* drains that are tied into these storm systems. He stated that while it was mentioned that water was not going to back up into the building, but that's the direction this is going with this if the Board approves surcharging. For example, if you have a check valve holding back all that water, you're going to flood out the building's footings, and take 48 hours to drain them. The plumbing code and plumbing system is not designed to surcharge the storm piping for all the reasons the Board has talked about here – deposits, settlement. Abrahamson explained that the piping is designed to flow and to scour and that the pipe needs to be scoured to keep it clean, to keep it from backing up

and keep it from creating issues in the building. He reiterated that they are fighting this big time in St. Paul and that it's not a pond. It's a seven foot diameter, 100 foot tank right up against the building and people are trying to tie the pipes in at the bottom of the tank for this reason and you can't do it. He stated that it's a bad practice. These water systems are going to create a problem in the future. So, he cannot support the request, he would have to support what the state is saying.

- Chair Becker summarized what Abrahamson said – *the plumbing code doesn't allow us to surcharge that pipe* – Abrahamson replied correct.
- Herman agreed the plumbing code does not allow for that and that's all we can do is interpret the plumbing code. You can't change it for the project. Other board members voiced their agreement.
- Chair Becker reminded the board their job is to interpret what the code says. It is outside the board's purview to look at it from an engineering standpoint.

A motion was made by Abrahamson, seconded by Parizek, to publish a formal interpretation with the question and answer below. The majority vote ruled with 9 in favor and one abstention (Westemeier); the motion carried.

- **Question: Are storm sewers outside the building footprint allowed to be surcharged?**
- **Answer: The MN State Plumbing code does not allow surcharged pipe.**

Chair Becker will coordinate a formal interpretation with Wysokinski to be published within 10 business days.

6. Announcements

Next regularly scheduled meeting, 9:30 a.m., in-person at DLI / WebEx

- April 18, 2023

7. Adjournment

A motion was made by Herman, seconded by Erickson, to adjourn the meeting at 10:09 a.m. The roll call vote was unanimous with 10 votes in favor of the motion; the motion passed.

Respectfully submitted,

Kent Erickson

Kent Erickson
Secretary

Green meeting practices

The State of Minnesota is committed to minimizing in-person environmental impacts by following green meeting practices. DLI is minimizing the environmental impact of its events by following green meeting practices. DLI encourages you to use electronic copies of handouts or to print them on 100% post-consumer processed chlorine-free paper, double-sided.

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

Plumbing Board Request for Interpretation

PRINT IN INK or TYPE

| | | |
|---|--|--|
| NAME OF SUBMITTER BKBM Engineers - Joel Maier | | Rule(s) to be interpreted (e.g., 4714.0330) Section 310.5 |
| The Minnesota Plumbing Code (MN Rules, Chapter 4714) is available at www.dli.mn.gov/CCLD/PlumbingCode.asp Has a request for interpretation been submitted to Department of Labor and Industry (DLI) staff, either as a verbal request or a written request? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If "No," contact DLI staff at 651-284-5898. The DLI is responsible for administration and interpretation of the Minnesota Plumbing Code, and all requests must be processed and provided a DLI interpretation before being referred to the Plumbing Board. This form is intended to be used to request an interpretation from the Plumbing Board only as a resolution of dispute with DLI interpretation. | | |
| Code/Rule to be interpreted: Section 310.5 | Name of DLI employee gave interpretation: Mike Westemeier | Date interpretation originally requested: 1/13/2023 |

Provide a copy of the DLI interpretation with this request (a copy must be provided as reference).

| | |
|--|--|
| Is there a local dispute with an Inspector of other official? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | If Yes, state the name or type of official |
|--|--|

State the circumstances of the initial dispute:

BKBM received a comment on a specific project stating:

Storm drainage pipes may not be surcharged by design (see Section 310.5 and Section 206.0, Drainage System). The highwater level of the ponds will surcharge all the storm sewers currently shown on the plan to their upper terminals. The highwater level of the pond must be at or below the inverts of all sewers discharging into the pond.

BKBM called Mike Westemeier and expressed our concern stating on a majority of our projects, site constraints will not allow for this type of elevation differential. These challenges will be most prevalent on sites with limited slope across them, sites with poorly draining soils, sites with shallow storm sewer in the public right of way, and sites where long stretches of sewer are needed to convey stormwater.

Explain what you disagree with the interpretation given to you by DLI staff:

We do not believe it is feasible to have the high-water level of a stormwater management system at or below the inverts of all site storm sewer discharging to a system. We contend that this rule is not consistent with and is not good engineering practice based on the MPCA's state stormwater permit guidance and permits through local watershed districts. The MPCA, cities, and watershed districts require that stormwater runoff from the site be rate controlled to match the existing site runoff conditions. These agencies also require that the stormwater management systems' inlet pipe should come into the bottom elevation of infiltration ponds or the normal water elevation of wet ponds so that as the basin fills with stormwater the energy at the inlet dissipates. As the stormwater elevation in the basin rises the inlet pipe becomes partially or fully submerged for a period of time until the surge of stormwater slowly draws down to pre-rainstorm conditions.

The current code interpretation suggests that the pond's inlet pipe must be above the 100-year high water elevation. This elevation could be on the order of 3 to 4-feet above the normal water elevation or bottom of pond elevation. Designing systems in this manner would increase potential for scour, shorten stormwater basin maintenance intervals, reduce efficiency of infiltration systems, and increase the cost of the stormwater system due to the increased size.

While making the stormwater management systems larger could potentially be a way to mitigate the current DLI code interpretation, the result could easily double or triple the size of the stormwater management systems. Making the stormwater management systems larger or deeper is not always a feasible practice as many times the site is constrained by site size, proximity to wetlands/waterbodies, slow draining soils, or shallow sewer in the public right of way. In addition, the MPCA has requirements on the maximum infiltration depth (0.8' sandy clay to 1.8' sand) which prohibits installing the systems deeper. This volume of water is required to be infiltrated within 48 hours after any rain event. Because of these requirements, a deeper stormwater system is not always feasible.

What is your interpretation of the language:

The storm drain system located within the footprint of the building cannot be surcharged by pond backwater.

List any other information you would like the Board to consider:

Based on the current code interpretation, site stormwater rate control systems that are required by other governing agencies would not be compliant with current Minnesota Plumbing Code because rate control systems work by restricting flow by decreasing the system's outlet size.

Information regarding submitting this form:

- Submit any supporting documentation to be considered electronically to DLI.CCLDBOARDS@state.mn.us. Once your Request For Interpretation form has been received, it will be assigned a file number. Please reference this file number on any correspondence and supplemental submissions.

Information for presentation to the Committee:

- You will be notified with the date of the Committee Meeting in which your Request For Interpretation will be heard.
- Limit presentations to 5 minutes or less.
- Be prepared to answer questions regarding the Code, the circumstances that led to the dispute and please bring copies of any documentation.

What you can do if you disagree with the Board's determination:

- You may appeal the Board's determination pursuant to Minn. Stat. Chapter 14.

Office Use Only

| | | | |
|--------------|----------------------|-------------------------|-----------------------|
| RFI File No. | Date Received by DLI | Dated Received by Board | Date of Board Meeting |
| PB0159 | 1/13/2023 | 2/3/2023 | 2/10/2023 |

Title of RFI

PB0159.RFI BKBM Engineers Joel Maier.310.5 and 206.0 Storm Drainage

This material can be made available in different forms, such as large print, Braille or on a tape. To request, call 1-800-342-5354 (DIAL-DLI).

Submitted by:

| | | | |
|---------------------------------|------------------------------------|----------------|----------------|
| NAME | | FIRM NAME | |
| Joel Maier | | BKBM Engineers | |
| ADDRESS | | CITY | STATE ZIP CODE |
| 6120 Earle Brown Dr., Suite 700 | | Minneapolis | MN 55430 |
| PHONE | SIGNATURE (original or electronic) | | DATE |
| 763-843-0477 | | | 1/13/2023 |

For assistance or questions on completing this form, please call 651-284-5898 or 651-284-5889.

Mailing address:

Plumbing Board
c/o Department of Labor and Industry
443 Lafayette Road North
St. Paul, MN 55155-4344

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



Division of Construction Codes and Licensing
REPORT ON PLUMBING PLANS

PROJECT: ISD 756 Blooming Prairie High School Additions and Renovation, 202 4th Avenue NW,
 Blooming Prairie, Steele County, Minnesota, *Plan No. PB-R2208-0101*

OWNERSHIP: Chris Staloch, Superintendent, Blooming Prairie Public Schools, 202 4th Avenue NW,
 Blooming Prairie, MN 55917

SUBMITTER: Paulson & Clark Engineering Inc., 2352 County Road J E, White Bear Lake, MN 55110

Plans Dated: August 29, 2022 with revisions dated through December 22, 2022.

Initial Date Received: August 10, 2022

Last Date Received: December 27, 2022

Date Approved: January 3, 2023

This review is limited to the provisions of the Minnesota Plumbing Code, Minnesota Rules, Chapter 4714 and assumes the data on which the design is based are correct. Approval is contingent upon meeting the requirements listed below. **A copy of the approved plans and this report must be retained at the project location.**

INSPECTIONS: The Minnesota Department of Labor and Industry (DLI) will be inspecting the plumbing for this project, including utility installations. Please contact Kara Topper at 651/279-3418 for all plumbing inspections. No plumbing work may be covered prior to inspection. The installer must verify that the required inspection fee has been submitted before scheduling. A separate permit may be required for interior plumbing and site utilities. For additional information, visit our website at: <http://www.dli.mn.gov/business/plumbing-contractors/plumbing-inspections>

REQUIREMENT(S):

1. This office has received the following alternate material/product requests from Chris Staloch, Superintendent, Independent School District 756; and Nathaniel Anderson, BKBM Engineers:
 - ASTM C76 RCP pipe for site storm drainage
 - ASTM F2306 HDPE pipe for site storm drainage
 - AWWA C515 water service gate valves for exterior installation
 - AWWA C800 water service corporation stop for greenhouse winterization
 - SNOUT Oil-Water-Debris Separator device for stormwater structure installation

These requests were reviewed under Section 301.3. These materials/products appear to be suitable, safe, and sanitary for their intended purpose. The approval of these materials/products apply to this project only. The Minnesota Department of Labor and Industry is in no way endorsing these products and is not responsible for any condition that may arise from their use.

2. Storm drainage pipes may not be surcharged by design (see Section 310.5 and Section 206.0, Drainage System). The high water level of the ponds (1295.29 feet and 1292.74 feet) will surcharge all the storm sewers currently shown on the plan to their upper terminals. The high water level of the pond must be at or below the inverts of all sewers discharging into the pond.
3. The following comments pertain to the roof drainage system and compliance with Table 1103.2:
 - a. The 5-inch horizontal storm conductor located near Grid G7/ H on Sheet M4.01b serving 3,854 square feet of roof area must be installed with a slope of at least ¼-inch per foot.
 - b. A 5-inch vertical storm conductor located near Grid EC/S on Sheet M4.00e is shown reducing to 4-inch in the direction of flow. Drainage pipe size cannot decrease in the direction of flow (see Section 315.2).



Minnesota Cities
Stormwater
Coalition

Attachment 4: Statutory Authority, State Building Code, Plumbing Code, and Stormwater Regulations

In support of our petition to amend Minnesota Rule (Minn. R.) Chapter 1300 (State Building Code) and Chapter 4714 (Minnesota Plumbing Code) we have conducted a review of the Minnesota Department of Labor and Industry (DLI) and Minnesota Plumbing Board (Board) authority under Minnesota Statutes (Minn. Stat.) §326B specifically concerning the design and management of stormwater outside of a building or structure, and to demonstrate the misinterpretation made with the Board's recent Final Interpretation for PB0159, *Storm Drainage Surcharge*, signed on February 23, 2023 (Attachment 3).

To eliminate inconsistencies in interpretation, better streamline construction regulation, and to improve procedures within and among jurisdictions, we request the DLI amend Minn. R. Chapter 1300 (Building Code) and Chapter 4714 (Minnesota Plumbing Code) as follows:

Minnesota Department of Labor and Industry

The Minnesota Department of Labor and Industry (DLI) website state the department's mission as ensuring "*Minnesota's work and living environments are equitable, healthy and safe....by **regulating buildings and workplaces** through education and enforcement.*" To ensure "buildings are safe and healthy for those who occupy them" the DLI is tasked under statute to establish, adopt and enforce the Minnesota State Building Code, as defined in Minn. R. Part 1300.0050, in consultation with each industry board and the Construction Codes Advisory Council. The State Building Code is clearly defined in Minn. Stat. §326B.101 as governing "*the construction, reconstruction, alteration, repair, and use of **buildings and other structures***" and "*be permitted at the least possible cost consistent with recognized standards of health and safety.*" Further the State Building Code specifies that the codes and standards referenced in a rule chapter, such as Minn. R. Chapter 4714, are considered part of the State Building Code.

In review of the DLI's governing statutes and rules on Office of the Revisor of Statutes website, the term "stormwater" is not mentioned in the State Building Code (Minn. R. Chapter 1300) nor under the DLI's statutory authority in Minn. Stat. Chapter 326B since the 1851 Territorial Statutes to present. The only DLI authority we found in our limited review was the Minn. Stat. §326B.49 which authorizes DLI to collect plan review fees for storm drainage systems as part of its "*plumbing system plans and specification...and audits of plumbing installations for public, commercial, and industrial **buildings**.*"

The State Building Code scope and applicability statement (Minn. R. Part 1300.0040 Subp.1) states that the code applies to "*any building, structure, or building service equipment in a municipality, **except work located primarily in a public way, public utility towers and poles, mechanical equipment not specifically regulated in the code, and hydraulic flood control structures.***" This explicit exception to the State Building Code, as well as the lack of any clear regulatory authority over stormwater discharges, indicate that the intent of the State Building Code and its subsequent chapters, are focused on the systems attached to or within the building envelope.

Minnesota Plumbing Board

Through Minn. Stat. §326B.101, Subdivision (Subd.) 3, DLI transferred authority to adopt and enforce the Minnesota Plumbing Code (Minn. R. 4714) to the Minnesota Plumbing Board with the purpose to “*promote the public health and safety through properly designed, acceptably installed, and adequately maintained **plumbing systems***” (Minn. Stat. §326B.41). The Board and DLI adopted the current 2020 Minnesota Plumbing Code on December 17, 2021, as well as the 2018 Uniform Plumbing Code (UPC) by reference.

Plumbing systems are defined in Minn. R. 4714.0218, as an amendment to UPC section 218.0, as including “***all potable water, building supply, and distribution pipes; all plumbing fixtures and traps; all drainage and vent pipes; and all building drains and building sewers, including their respective joints and connections, devices, receptors, and appurtenances within the property lines of the premises and shall include potable water piping, potable water treating or using equipment, and nonpotable water piping serving plumbing fixtures.***”

Because untreated stormwater is not considered potable water, nor is it used to supply plumbing fixtures, the Minnesota Plumbing Code definition of a plumbing system does not apply to stormwater drainage systems.

Additionally, drainage systems are defined in Minn. R. 4714.0206, as an amendment to UPC section 206.0, as including “*all the piping within public or private premises that conveys sewage, **rainwater**, or other liquid wastes to a legal point of disposal, but does not include the mains of a public sewer system or a public sewage treatment or disposal plant.*” It is important to note, the Plumbing Board intentionally modified the 2018 UPC definition of drainage system by removing the original reference to stormwater and replacing it with rainwater in the 2020 Minnesota Plumbing Code. This revision indicates that the Board never intended to regulate stormwater as a drainage system under the 2020 Minnesota Plumbing Code.

Unfortunately, Chapter 11 of the Minnesota Plumbing Code, called “Storm Drainage,” which is derived from 2018 UPC Chapter 11 and amended in Minn. R. Parts 4714.1101—1401, confuses the matter of the Board’s governance over stormwater. However, upon closer review of this chapter, a reasonable person could conclude that the intent of Chapter 11 and its amendments is actually to regulate the materials, design, and installation of rainwater and perimeter sump drainage systems that originate within, on top of, under, or are otherwise attached to a building or structure and discharge through the building storm sewer to an exterior stormwater system, such as private storm sewer, a municipal separate storm sewer system (MS4), or surface waters for several reasons:

1. Minn. R. Part 4714.1101 Subp. 3, which amends 2018 UPC section 1101.4 *Material Uses*, references only “**rainwater piping**,” “**building storm sewers**,” and “**subsoil drains**,” but does not reference either “stormwater” or “storm drainage,” the title of this section. In addition, neither “stormwater” nor “storm drainage” are included in the definitions listed in UPC Chapter 2 or amended by Minn. R. Part 4714.0221. Furthermore, the materials specified in this section are only for “**Rainwater piping placed within the interior of a building or run within a vent or shaft...**” and does not specify any materials consistent with stormwater management or storm sewer designs.
2. Minn. R. Part 4714.1101.4 also references 2018 UPC Table 701.2 “**Materials for Drain, Waste, Vent Pipe, and Fittings**” however the materials included in this table are not generally used for stormwater management or storm sewer design primarily because these materials often are not made in diameters large enough to convey stormwater flows.
3. As amended by Minn. R. 4714, UPC sections 1102 through 1106 appear to be devoted to the design of drains and piping systems exclusive to the collection and conveyance of rainwater from the building exterior and rooftop to the building storm sewer.
 - a. Minn. R. Part 4714.1103.0 *Size of Leaders, Conductors, and Storm Drains* refers to 2018 UPC Table 1103.1 “Sizing **Roof Drains**, Leaders, and Vertical **Rainwater Piping**.” This table includes pipe diameters from 2 to 8-inches and notes that “*a minimum rainfall rate of 4 inches per hours must be used to size the **rainwater piping***” for those not included in Table 1103.1.

- b. UPC section 1104 and Minn. R. Parts 4714.1105 and 1106 discuss “**building storm drain**,” “**building storm sewer**,” or “**roof drainage systems**” but provides no guidance to manage stormwater or size storm sewer outside of the building but still on the premises.
4. UPC section 1106.0 *Engineered Storm Drainage System* was amended by Minn. R. Part 4714.1106 and renamed “Siphonic Roof Drainage System” and eliminated the 2018 UPC section 1106.1, which stated “*The design and sizing of a storm drainage system shall be permitted to be determined by accepted engineering practices.*”
5. UPC section 1107.0 *Testing* and modified in Minn. R. Part 4714.1107 requires new, altered, extended, or repaired building storm drainage systems be tested to identify any leaks and defects. The Plumbing Board modified the 2018 UPC section to provide clear exceptions for exterior components of the building storm drainage system in Part 4714.1107.2, including:
 - a. Outside leaders (i.e. downspouts or leaders per 2018 UPC definitions);
 - b. Perforated or open drain tile; or
 - c. Portions of the storm drainage system and sewers that are located more than **ten feet from buildings, more than ten feet from buried water lines, and more than 50 feet from water wells, and do not pass through soil or water identified as being contaminated.**

In our review, Chapter 11 of the 2020 Minnesota Plumbing Code appears to have been intentionally limited through amendment to perimeter sump drainage and rainwater discharges from building surfaces and does not incorporate any design criteria, standards, or commonly accepted practices used for stormwater management and storm sewer designs. This section may be better named “Rainwater and Sump Drainage” and all references to stormwater should be removed to avoid confusion.

Furthermore the Board’s own definitions of plumbing systems and drainage systems, as well as the testing exceptions provided in the 2020 Minnesota Plumbing Code, show that the DLI and Board did not intend to have authority over stormwater, lending credibility to the common assumption that the Minnesota Plumbing Board’s review of stormwater systems terminates ten feet away from the building perimeter, ten feet from the centerline of water lines, and 50 feet away from water wells.

Minnesota Pollution Control Agency

Contrast the DLI’s limited stormwater authority and jurisdiction with that granted to the Minnesota Pollution Control Agency (MPCA) under Minn. Stat. §115.03 and requires the MPCA “*to administer and enforce all laws relating to the pollution of any of the waters of the state,*” as well as to issue permits, certifications, standards, and rules under the 1972 federal Clean Water Act (CWA), on behalf of the United States Environmental Protection Agency (EPA). As the CWA authority, the MPCA has been permitting the collection, treatment, and discharge of industrial wastewater, municipal wastewater, and stormwater sources since 1974 through the National Pollutant Discharge Elimination System (NPDES) program.

The MPCA, as well as the Minnesota Department of Natural Resources, the Environmental Quality Board (EQB), the Board of Soil and Water Resources, watershed districts and watershed management organizations, soil and water conservation districts, counties, and municipalities all are granted statutory authority to regulate land development and planning, public drainage systems, surface water conveyance, maintenance of water supplies for public use, and sanitation and public health through the Water Law enacted by the 1990 legislature and codified in Minn. Stat. Chapters 103A – 103G. The Water Law also requires coordinated comprehensive long-range water resources planning and policies, which often dictate the requirements for future site design and management of stormwater.

Recommendations

Given the number of federal and state agencies already tasked with regulating stormwater discharges and protecting water supplies under the Water Law, at a minimum, we recommend the Board and DLI, in conjunction with the Construction Codes Advisory Council under its authority in Minn. Stat. §326B.07 Subd. 2 (1), amend Minn. R. Chapter 1300 (Building Code) and Chapter 4714 (Minnesota Plumbing Code) to clarify its stormwater jurisdiction and review role to "interior building drainage systems extending ten feet from the building perimeter, ten feet from the centerline of potable water lines, and 50 feet from wells." We believe this will eliminate inconsistencies in interpretation of stormwater and stormwater conveyance systems, streamline existing regulation and remove redundancies, and to improve regulatory procedures within and among state agencies and jurisdictions.

Additionally, the Environmental Quality Board has jurisdiction to review state agency programs and facilitate interdepartmental coordination to ensure agency compliance with state environmental policies under Minn. Stat. 116C.04. Consultation with EQB may also ensure the DLI and Minnesota Plumbing Board are included at future annual congresses and State Water Plan discussions.



Minnesota Cities
Stormwater
Coalition

Attachment 5: Proposed Amendments to Minnesota Rules 1300 and 4714

Please accept this summary of our proposed amendments to Minnesota Rules 1300 and 4714 to clarify the Minnesota Plumbing Board's (Board's) authority, role, and jurisdiction over stormwater management systems. Wording proposed to be deleted from the current rules is shown as red strikethrough text (~~example~~), while new language proposed is shown in blue italicized and underlined text (*example*). Rule language not shown below is assumed to remain unchanged.

1. Amend Part 1300.0040 Subpart (Subp.) 1 to clarify the application of the Plumbing Code as follows:

1300.0040 SCOPE.

Subpart 1. **Applicability.** The code applies to the design, construction, addition, alteration, moving, replacement, demolition, repair, equipment, installation, use and occupancy, location, maintenance, and inspection of any building, structure, or building service equipment in a municipality, except work located primarily in a public way, public utility towers and poles, mechanical equipment not specifically regulated in the code, ~~and~~ hydraulic flood control structures, *and exterior stormwater systems*.

2. Amend Part 1300.0070 to include new subpart 11b and 19a as follows:

1300.0070 DEFINITIONS.

*Subp. 11b. **Exterior stormwater system.** "Exterior stormwater system" means constructed and natural features which function together to collect, convey, channel, hold, inhibit, retain, detain, infiltrate, divert, treat, or filter stormwater. "Exterior stormwater system" may include both public and privately-owned features, designed and certified on a plan by a licensed professional in the State of Minnesota in accordance with Minnesota Statute §326.12, intended to safely convey stormwater runoff from site development to provide flood control and water quality benefits, before discharging into a municipal separate storm sewer system (MS4) or waters of the state, as may be required under the 1972 Clean Water Act and regulated under the rules administered by the Minnesota Pollution Control Agency, or other state, regional, watershed, and local stormwater regulations.*

*Subp. 19a. **Plumbing System.** "Plumbing System" means all potable water, building supply, and distribution pipes; all plumbing fixtures and traps; all drainage and vent pipes; and all building drains and building sewers, including their respective joints and connections, devices, receptors, and appurtenances within the property lines of the premises and shall include potable water piping, potable water treating or using equipment, and nonpotable water piping serving plumbing fixtures, except exterior stormwater systems.*

3. Amend Part 4714.0203, subpart 2 to include the clarified definition as follows:

4714.0203 TERMS DEFINED BEGINNING WITH A.

Subpart 1. **Added definitions.** UPC section 203.0 is modified by adding the following definition:

Administrative Authority - Means the commissioner.

Exception: When a governmental subdivision adopts and maintains a comprehensive plumbing enforcement program that is conducted by personnel who are knowledgeable about plumbing installation requirements, and includes enforcement of all code provisions including materials, methods, inspection, and testing, the administrative authority shall be the governing body of the adopting unit of government or a duly designated representative of the governing body who is either an employee of the governing body or a person working under contract with the governing body.

Subp. 2. **Amended definitions.** UPC section 203.0 is modified by amending the following definitions:

Approved - Means approval by the administrative authority, pursuant to the Minnesota Plumbing Code, by reason of inspection, investigation, or testing; accepted principles; computer simulations; research reports; or testing performed by a nationally recognized testing laboratory.

Area Drain – A receptor design to collect surface or rainwater from an open area.

Authority Having Jurisdiction - Unless otherwise specified in this code, the term Authority Having Jurisdiction has the same meaning as administrative authority.

4. Amend Part 4714.0204 to include clarified definitions as follows:

4714.0204 TERMS DEFINED BEGINNING WITH B.

Subpart 1. **Added definitions.** UPC section 204.0 is modified by adding the following definitions:

Barometric Loop - Means a section of pipe in the shape of an inverted "u" located upstream and rising a minimum of 35 feet above the highest fixture it supplies.

Building Storm Drainage System – The collection of interior piping serving a building or structure subject to the State Building Code that receives and conveys only rainwater or perimeter sump discharges to a legal point of disposal. See also Drainage System and Exterior Stormwater System.

Subp. 2. **Amended definitions.** UPC section 204.0 is modified by amending the following definitions:

Building Drain (Storm) or Building Storm Drain – That part of the lowest piping of the building storm drainage system that receives only rainwater or perimeter sump discharges from the building rooftop, vents, shafts, and sumps inside the walls of the building and conveys it to the building storm sewer beginning 2 feet (610 mm) outside the building wall.

Building Sewer (Storm) or Building Storm Sewer – That part of the horizontal piping of the building storm drainage system that extends from the end of the building storm drain and that receives only the discharge from the building storm drain and conveys it to an exterior stormwater system.

Building Supply - Means the pipe carrying potable water from the municipal water supply or source of water supply to a building water meter, pressure tank, or other point of use or distribution on the lot.

5. Amend Part 4714.0205 to include clarified definitions as follows:

4714.0205 TERMS DEFINED BEGINNING WITH C.

Subpart 1. **Amended definitions.** UPC section 205.0 is modified by amending the following definitions:

Certified Backflow Assembly Tester - Has the same meaning as backflow prevention tester defined in Minnesota Statutes, section 326B.42, subdivision 1c.

Clear Water Waste - Uncontaminated water discharges, subsoil discharges, and similar discharges.

Code - For purposes of this chapter, "this code" or "the code" means the Minnesota Plumbing Code, Minnesota Rules, chapter 4714.

Conductor – A pipe inside the building that conveys rainwater from the roof to a building storm drain, combined building sewer, or other approved point of disposal.

Subp. 2. **Added definitions.** UPC section 205.0 is modified by adding the following definition:

Commissioner - Means the commissioner of labor and industry or a duly designated representative of the commissioner who is either an employee of the Department of Labor and Industry or a person working under contract with the department.

6. Amend Part 4714.0206 with clarified definitions as follows:

4714.0206 TERMS DEFINED BEGINNING WITH D.

UPC section 206.0 is modified by amending the following definition:

Drainage System - includes all the piping within public or private premises that conveys sewage, rainwater, or other liquid wastes to a legal point of disposal, but does not include the exterior stormwater system, mains of a public sewer system, or a public sewage treatment or disposal plant.

7. Amend Part 4714.0207 with clarified definitions as follows:

4714.0207 TERMS DEFINED BEGINNING WITH E.

Subpart 1. **Added Definitions.** UPC section 207.0 is modified by adding the following definitions:

Emergency Floor Drain - Means floor drains that do not serve as a receptor, are located in restrooms, are under emergency eyewash/shower equipment, or are in laundry rooms.

Exterior Stormwater Systems - Means constructed and natural features which function together to collect, convey, channel, hold, inhibit, retain, detain, infiltrate, divert, treat, or filter stormwater. "Exterior stormwater systems" may include both public and privately-owned features, designed and certified on a plan by a licensed professional in the State of Minnesota in accordance with Minnesota Statute §326.12, intended to safely convey stormwater runoff from site development to provide flood control and water quality benefits, before discharging into a municipal separate storm sewer system (MS4) or waters of the state, as may be required under the 1972 Clean Water Act and regulated under the rules administered by the Minnesota Pollution Control Agency, or other state, regional, watershed, and local stormwater regulations.

8. Amend Part 4714.0214 with clarified definitions as follows:

4714.0214 TERMS DEFINED BEGINNING WITH L.

Subpart 1. Added Definition. UPC section 214.0 is modified by adding the following definition:

Low Pressure Water Dispenser - Means a terminal fitting located downstream of a pressure-reducing valve that dispenses hot drinking water above 160 degrees Fahrenheit (71 degrees Celsius) or cold water or both at a pressure of 15 psi (105 kPa) or less.

Subp. 2. Amended Definition. UPC Section 214.0 is modified by amending the following definition:

Leader – An exterior vertical drainage pipe for conveying rainwater from roof to gutter drains. See Downspout.

9. Amend Part 4714.0221 with clarified definitions as follows:

4714.0221 TERMS DEFINED BEGINNING WITH S.

Subpart 1. Added Definition. UPC section 221.0 is modified by adding the following definition:

Stormwater - “Stormwater” or “storm water” means stormwater runoff, snow melt, runoff, and surface runoff and drainage as defined in Minnesota Rule 7090 and as amended.

Subp. 2. Amended Definitions. UPC section 221.0 is modified by amending the following definitions:

Single-Family Dwelling - Has the meaning of dwelling, single-family, in Minnesota Rules, part 1309.0202, subpart 1.

Storm Sewer – Means exterior storm sewer systems, including mains, holding areas and ponds, and other appurtenances and related facilities for the collection and disposal of stormwater, in Minnesota Statute Chapter 444.

10. Add new Part 4714.0310 for clarification on the applicability of UPC section 310.5 as follows:

4714.0310 PROHIBITED FITTINGS AND PRACTICES.

UPC section 310.5 is amended to read as follows:

Section 310.5 Obstruction of Flow. No fitting, fixture and piping connection, appliance, device, or method of installation that obstructs or retards the flow of water, wastes, sewage, or air in the building storm drainage or venting systems, in an amount exceeding the normal frictional resistance to flow, shall be used unless it is indicated as acceptable in this code or is approved in accordance with Section 301.2 of this code or is exempt from this code as stated in Minnesota Rule 1300. The enlargement of a 3 inch (80 mm) closet bend or stub to 4 inches (100 mm) shall not be considered an obstruction.

11. Amend Part 4714.0418 for clarification as follows:**4714.0418 FLOOR DRAINS.**

Subpart 1. **Section 418.4.** UPC section 418.4 is amended to read as follows:

418.4 Food Storage Areas. Where drains are provided in storerooms, walk-in freezers, walk-in coolers, refrigerated equipment, or other locations where food is stored, the drains shall have indirect waste piping. Separate waste pipes shall be run from each food storage area, each with an indirect connection to the building sanitary drainage system. Traps shall be provided in accordance with section 801.3.2 and shall be vented.

Indirect drains shall be permitted to be located in freezers or other spaces where freezing temperatures are maintained, provided that traps, where supplied, shall be located where the seal will not freeze. Otherwise, the floor of the freezer shall be sloped to a floor drain located outside of the storage compartment.

Subp. 2. **Section 418.** UPC section 418 is amended by adding the following subsections.

418.6 Elevator Pit Drain. An elevator pit drain shall discharge to the sanitary sewer using an indirect connection that precludes the possibility of sewage backup into the pit. If a sump is used, it shall be outside the pit with a dry pan drain flowing to it.

418.7 Garage and Parking Area Floor Drains. Floor area drains in open parking areas, including open areas of parking ramps, shall discharge to the storm sewer or to a place of disposal satisfactory to the sewer authority and as regulated under the rules administered by the Minnesota Pollution Control Agency or other state, regional, and local regulations. Floor drains in parking areas that are enclosed, and floor drains in areas open or enclosed that are used for maintenance or as vehicle wash bays, shall discharge to the sanitary sewer if a municipal sewer is available. An oil and flammable liquid interceptor shall comply with section 1017 and shall be provided if required by sections 1009.1, 1011.1, and 1017.1.

Exception: Floor drains in private garages serving one- and two-family dwellings may discharge to daylight if approved by the administrative authority.

12. Add new Part 4714.1100 to reduce confusion over Chapter 11 intent as follows:**4714.1100 RAINWATER AND SUMP DRAINAGE.**

UPC Chapter 11 is amended to read as follows: Chapter 11 Rainwater and Sump Drainage.

13. Amend Part 4714.1101 for clarification as follows:**4714.1101 GENERAL.**

Subpart 1. **Section 1101.2.** UPC section 1101.2 is amended to read as follows:

1101.2 Where Required. Roofs, paved areas, yards, courts, courtyards, vent shafts, light wells, or similar areas having rainwater, shall be drained into a separate building storm drainage ~~storm-sewer~~ system or into a combined sewer system where a separate building storm drainage ~~storm-sewer~~ system is not available, or to some other place of disposal satisfactory to the Authority Having Jurisdiction. In no case shall rainwater from roofs or any building roof drainage flow onto the public sidewalk. In the case of one- and two-family dwellings, rainwater ~~storm-water~~ shall be permitted to be discharged on flat areas, such as lawns, so long as the rainwater ~~storm-water~~ shall flow away from the building and away from adjoining property and shall not create a nuisance.

1101.2.1 Exception. Exterior storm drainage systems located more than ten horizontal feet from building perimeter, more than ten horizontal feet from buried water lines or more than 18 vertical inches as permitted by the Minnesota Department of Health, and more than 50 horizontal feet from water wells are excepted from the requirements of this code.

Subp. 2. **Section 1101.3.** UPC section 1101.3 is amended to read as follows:

1101.3 Building Storm Water Drainage to Sanitary Sewer Prohibited. Building storm drainage systems ~~Storm-water~~ shall not be drained into sewers intended for sanitary drainage unless approved by the municipal sewer authority or stated elsewhere in this code.

Subp. 3. **Section 1101.4.** UPC section 1101.4 is amended to read as follows:

1101.4 Material Uses. Rainwater piping placed within the interior of a building or run within a vent or shaft shall be of cast-iron, galvanized steel, wrought iron, brass, copper, lead, Schedule 40 ABS DWV, Schedule 40 PVC DWV, stainless steel 304 or 316L [stainless steel 304 pipe and fittings shall not be installed underground and shall be kept not less than 6 inches (152 mm) aboveground], or other approved materials. Changes in direction shall be in accordance with Section 706.0. ABS and PVC DWV piping installations shall be installed in accordance with applicable standards referenced in Table 1701.1.

UPC subsections 1101.4.1 through 1101.4.6 are maintained without amendment.

Subp. 4. **Section 1101.11.** UPC section 1101.11 is amended to read as follows:

11.01.11 Paved Areas. Where the occupant creates surface water drainage, the sumps, gradings, or floor drains shall be piped to a drainage system, consistent with the 1972 Clean Water Act and regulated under the rules administered by the Minnesota Pollution Control Agency or other state, regional, and local regulations.

Subp. 5. **Section 1101.12.** UPC section 1101.12 is amended to read as follows:

1101.12 Roof Drainage.

1101.12.1 Primary Roof Drainage. When roof areas of a building are drained by roof drains, the location and sizing of the drains shall be coordinated with the structural design and pitch of the roof in accordance with section 1103 or as permitted elsewhere in this code. The roof drainage system shall be sized on a basis of a rate of rainfall of at minimum 4 inches per hour.

1101.12.2 Secondary Drainage. Secondary (emergency) roof drainage shall be provided in accordance with Minnesota Rules, chapter 1305.

1101.12.2.1 Location. Unless roof design is certified by a Registered Design Professional specializing in Structural Engineering for the maximum possible depth of water that will pond in accordance with Minnesota Rules, chapter 1305, secondary roof drainage shall be located 2 inches above the lowest point of the roof surface.

1101.12.2.2 Engineered System. Engineered siphonic roof drainage systems must not be utilized in the design of a secondary roof drainage system.

UPC Table 1103.1 is not amended.

Subp. 6. **Subsections 1101.12.2.2.1 and 1101.12.2.2.2.** UPC subsections 1101.12.2.2.1 and 1101.12.2.2.2 are deleted in their entirety.