

Proposed Change 2195

Code Reference(s):	NECB25 Div.B 6.2.6. (first printing)
Subject:	Service Water Heating - Other
Title:	Referencing the NPC for Hot Service Water Flow Rates and Shut-off
Description:	This proposed change introduces references to the NPC requirements related to maximum water flow rates and automatic shut-off devices.

This change could potentially affect the following topic areas:

- | | |
|--|---|
| ☐ Division A | ☒ Division B |
| ☐ Division C | ☒ Design and Construction |
| ☐ Building operations | ☒ Housing |
| ☒ Small Buildings | ☒ Large Buildings |
| ☐ Fire Protection | ☐ Occupant safety in use |
| ☐ Accessibility | ☐ Structural Requirements |
| ☐ Building Envelope | ☒ Energy Efficiency |
| ☐ Heating, Ventilating and Air Conditioning | ☒ Plumbing |
| | ☐ Construction and Demolition Sites |

Problem

Both the National Energy Code of Canada for Buildings (NECB) and the National Plumbing Code of Canada (NPC) prescribe maximum water flow rates for lavatory fittings and individual shower heads, and require devices to automatically shut off the flow of water when not in use. In the NECB, these limits are included to promote energy efficiency by reducing hot water consumption; in the NPC, identical requirements are included as part of its plumbing system performance and water conservation objectives.

This duplication of requirements between the two Codes introduces the risk of regulatory overlap and inconsistency. If one Code is updated, the other may not be revised simultaneously, resulting in conflicting requirements for designers, builders and building officials. Furthermore, it is unclear which Code would take precedence if differences arise in test methods or plumbing supply fitting types.

Justification

By referencing the NPC for requirements related to maximum water flow rates and automatic shut-off of water flow, the NECB could maintain alignment with the NPC and avoid redundancy. The NPC already specifies the design, installation and performance of plumbing supply fittings, including water flow limitations and references to the testing standard, ASME A112.18.1/CSA B125.1, "Plumbing Supply Fittings."

Cross-referencing the NPC would achieve the following:

- ensure consistency and harmonization between energy efficiency and plumbing provisions,
- prevent conflicting requirements,
- clarify which Code applies by keeping the performance and testing of plumbing supply fittings within the scope of the NPC, and
- simplify compliance and enforcement for designers, builders and building officials.

PROPOSED CHANGE

[6.2.6.] 6.2.6. Hot Service Water

[6.2.6.1.] 6.2.6.1. Showers

- [1] 1)** Except for emergency eye washes and emergency showers, individual shower heads shall have an integral means of limiting the maximum water flow rate in accordance with Article 2.2.10.6. of Division B of the NPC. ~~to 7.6 L/min when tested in accordance with ASME A112.18.1/CSA B125.1, "Plumbing Supply Fittings". (See Note A-6.2.6.1.(1).)~~
- [2] 2)** Where multiple shower heads installed in a public showering facility are served by one temperature control, each shower head shall be equipped with a device capable of automatically shutting off the flow of water in accordance with Article 2.2.10.6. of Division B of the NPC when the shower head is not in use. ~~(See Note A-6.2.6.1.(2) and 6.2.6.2.(2).)~~

[6.2.6.2.] 6.2.6.2. Lavatories

- [1] 1)** Except for lavatories in healthcare facilities and emergency eye washes, lavatories shall have an integral means of limiting the maximum water flow rate in accordance with Article 2.2.10.6. of Division B of the NPC. ~~to 5.7 L/min for private use and 1.9 L/min for public use, when tested in accordance with ASME A112.18.1/CSA B125.1, "Plumbing Supply Fittings".~~
- [2] 2)** Each lavatory in a public access washroom in a *building of assembly occupancy* shall be equipped with a device capable of automatically shutting off the flow of water in accordance with Article 2.2.10.6. of

Division B of the NPC when the lavatory is not in use. ~~(See Note A-6.2.6.1.(2) and 6.2.6.2.(2).)~~

~~Note A-6.2.6.1.(1) – Flow-Restricting Shower Heads.~~

~~A flow of 7.6 L/min is equivalent to 2.0 US gal./min.~~

~~To address concerns of thermal shock and scalding, refer to Sentence 2.2.10.6.(3) of Division B of the NPC, which deals with the matching of automatic compensating valves and showerheads.~~

~~Note A-6.2.6.1.(2) and 6.2.6.2.(2) – Water Shut-off Devices.~~

~~Examples of devices meeting the intent of Sentences 6.2.6.1.(2) and 6.2.6.2.(2) include occupant sensors and self-closing valves.~~

Impact analysis

Referring to the NPC for flow-rate and automatic shut-off provisions would enhance consistency, clarity and regulatory efficiency across the Codes. It would also simplify Code use for designers, builders and regulators by reducing duplication, minimizing interpretation conflicts, and streamlining compliance verification through a single source for plumbing performance requirements.

Enforcement implications

Referring to the NPC requirements in the NECB would clarify enforcement roles, reduce duplication of effort, and ensure the consistent application of plumbing performance requirements. Provinces and territories that adopt the National Model Codes should align the timing of the adoption of the NPC and NECB to maintain consistency between the Codes.

Who is affected

Designers and engineers would benefit from the clearer direction provided by using the NPC as the single reference for plumbing performance requirements. This proposed change would eliminate duplication between Codes and streamline compliance verification.

Building officials, when verifying compliance with the NECB, would benefit from the clearly defined enforcement scope, which would lead to more consistent inspections and reduced overlap or ambiguity between the NPC and NECB.

OBJECTIVE-BASED ANALYSIS OF NEW OR CHANGED PROVISIONS

[6.2.6.1.] 6.2.6.1. ([1] 1) [F96-OE1.1]

[6.2.6.1.] 6.2.6.1. ([1] 1) no attributions

[6.2.6.1.] 6.2.6.1. ([2] 2) [F96-OE1.1]

[6.2.6.2.] 6.2.6.2. ([1] 1) [F96-OE1.1]

[6.2.6.2.] 6.2.6.2. ([1] 1) no attributions

[6.2.6.2.] 6.2.6.2. ([2] 2) [F96-OE1.1]